STEEL

Investigation No. TA-201-73

VOLUME II: INFORMATION OBTAINED IN THE INVESTIGATION
(CARBON AND ALLOY STEEL FLAT, LONG,
AND TUBULAR PRODUCTS)

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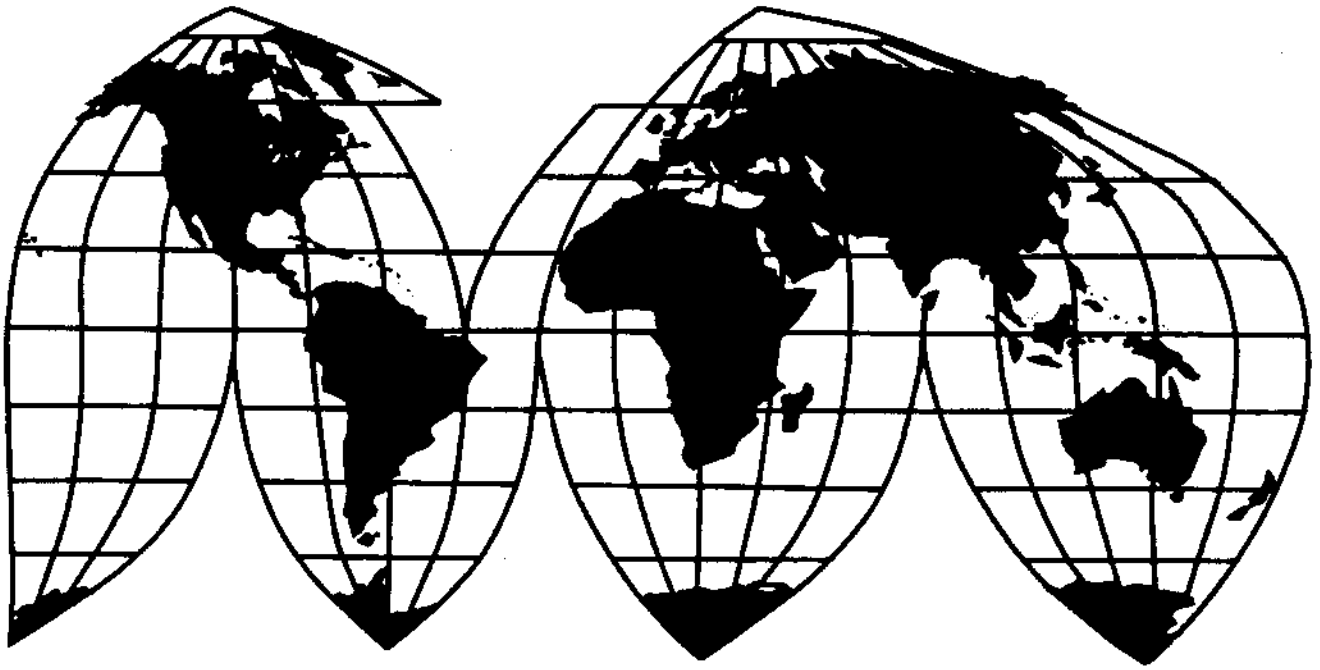
U.S. International Trade Commission



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Attorneys
Marc Bernstein, Bill Gearhart, Kathleen Hatfield, Mary Beth Jones, Mark Rees, Neal Reynolds, and Robin Turner

Senior Statistician
Steve Hudgens

Supervisory Investigator
Vera A. Libeau

Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436

U.S. International Trade Commission

Washington, DC 20436
www.usitc.gov

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CONTENTS

Page

INTRODUCTION AND GENERAL OVERVIEW

CARBON AND ALLOY FLAT PRODUCTS

CONTENTS

CONTENTS

CONTENTS

Page

STAINLESS AND TOOL STEEL PRODUCTS–*Continued*

APPENDICES

Note.--Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report. Such deletions are indicated by asterisks.

GLOSSARY OF ABBREVIATIONS

ABO	Accumulated benefit obligation
AIIS	American Institute for International Steel
AISI	American Iron and Steel Institute
AOD	Argon oxygen decarburization
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATPA	Andean Trade Preference Act
CBERA	Caribbean Basin Economic Recovery Act
C.i.f.	Cost, insurance, and freight
COGS	Cost of goods sold
COMECON	Council for Mutual Economic Assistance
Commerce	U.S. Department of Commerce
Commission/USITC	U.S. International Trade Commission
CTL plate	Cut-to-length plate
Customs	U.S. Customs Service
ERISA	Employee Retirement Income Security Act
EU	European Union
FASB	Financial Accounting Standards Board
F.o.b.	Free on board
FR	*Federal Register*
GAAP	Generally Accepted Accounting Principles
GOES	Grain-oriented electrical steel
GSX	Global Steel Exchange
HSLA	High strength low alloy
HTS	Harmonized Tariff Schedule of the United States
IF	Interstitial free
IISI	International Iron and Steel Institute
ISO	International Standards Organization
NAFTA	North American Free Trade Agreement
NOES	Non-grain-oriented electrical steel
OCTG	Oil country tubular goods
O.D.	Outside diameter
OEM	Original equipment manufacturer
PBGC	Pension Benefit Guaranty Corp.
PBO	Projected benefit obligation
PRW	Production and related worker
QSR	Quality System Requirements
R&D	Research and development
SAE	Society of Automotive Engineers
SFAS	Statements of Financial Accounting Standards
SG&A expenses	Selling, general, and administrative expenses
SIC	Standard Industrial Code
Ton	Short ton = 2,000 pounds
USSR	Union of Soviet Socialist Republics
VRA	Voluntary restraint agreement

INTRODUCTION AND GENERAL OVERVIEW

BACKGROUND

Following receipt of a request from the United States Trade Representative on June 22, 2001, the Commission instituted investigation No. TA-201-73, Steel, under section 202 of the Trade Act of 1974 (19 U.S.C. § 2252) (the "Act") to determine whether certain steel products are being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported article. On July 26, 2001, the Commission received a resolution from the Committee on Finance of the United States Senate requesting that the Commission conduct an investigation of the same scope. The Commission exercised its authority under section 603 of the Act and consolidated the investigation requested by the Committee on Finance with the Commission's previously-instituted investigation requested by the United States Trade Representative.[1]

The schedule of this investigation is as follows:[2]

Date	Action
June 22, 2001	Request letter received from the United States Trade Representative; institution of investigation No. TA-201-73 (66 FR 35267, July 3, 2001)
July 26, 2001	Resolution received from the Committee on Finance of the United States Senate; consolidation of the requested investigation with the previously-instituted investigation (66 FR 44158, August 22, 2001)
September 17, 19, 20, 24, 25, and 28 and October 1 and 5, 2001	Commission's hearings on injury[3]
October 22, 2001	Commission's vote on injury
November 6, 8, and 9, 2001	Commission's hearings on remedy[3]
December 7, 2001	Commission's vote on remedy
December 19, 2001	Commission's findings and recommendations transmitted to the President

PAST 201 INVESTIGATIONS AND OUTSTANDING TITLE VII ORDERS

The Commission has conducted six global safeguard investigations concerning certain steel products. These investigations are listed in the following tabulation:

[1] The request letter and the accompanying annexes listing the covered products by *HTS* categories, as well as the resolution adopted by the Committee on Finance of the United States Senate, are posted on the Commission's website at *www.usitc.gov*.

[2] *Federal Register* notices cited are presented in appendix A.

[3] Lists of witnesses appearing at the hearings are presented in appendix B.

Product	Date instituted	Investigation number	Disposition
Stainless steel and alloy tool steel	7-16-75	TA-201-5	Affirmative[1]
Round stainless steel wire	12-12-75	TA-201-13	Negative
Stainless steel and alloy tool steel	11-23-82	TA-201-48	Affirmative
Carbon and certain alloy steel products	1-24-84	TA-201-51	Affirmative[2]
Certain steel wire rod	1-12-99	TA-201-69	Tie vote[3]
Circular welded carbon quality line pipe	6-30-99	TA-201-70	Affirmative

[1] With respect to bars, wire rods, plates, and strip.
[2] With respect to ingots, blooms, billets, slabs and sheet bars, plates, sheets and strip, wire and wire products, and structural shapes and units.
[3] The President considered the determination of the Commissioners voting in the affirmative to be the determination of the Commission.

Source: Compiled from Commission records.

Outstanding title VII orders on steel products that are included in the scope of the present global safeguard investigation on steel are listed in table OVERVIEW-1.

STRUCTURE OF REPORT AND GENERAL ISSUES

The presentation of the information collected in this investigation has been organized in the following five parts: (1) introduction and general **OVERVIEW**, (2) carbon and alloy **FLAT** products, (3) carbon and alloy **LONG** products, (4) carbon and alloy **TUBULAR** products, and (5) **STAINLESS** and tool steel products. The introduction and general overview includes general information on the products, issues involving the global steel industry, and developments in the U.S. steel industry. The information contained in the remaining four parts follows the steel product categories outlined in the request letter from the United States Trade Representative. In addition, a further breakdown of information concerning 33 product categories on which the Commission decided to collect data is also presented separately in these four parts.[4]

Much of the data used in the preparation of this report is based on information received in response to the Commission's questionnaires. Secondary sources (*e.g.*, official Commerce statistics for U.S. imports) were also used where appropriate.[5] In addition to mailing questionnaires to domestic firms, the Commission posted blank copies of all questionnaires on its website.

The Commission mailed producer questionnaires to approximately 825 firms believed to have produced one or more of the subject steel products. These firms were identified by the Commission from information received in previous investigations concerning steel products and from a variety of other public industry sources. The Commission received 281 responses to the producer questionnaire.

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[4] Summaries of data presented in the four product parts are presented in appendix C; a list of U.S. producers that responded to the Commission's questionnaire and an indication of the products each produced is presented in appendix D; and supplemental presentations of import data for selected country groups are presented in appendix E.

[5] Publicly available data are not used for many of the indicators presented in this report for the following reasons: (1) the publicly available data involve double counting of the products in more than one category as the item is further processed; (2) the publicly available data are not a perfect match for the product categories presented in the report; (3) public data are not available for all product categories presented in the report; or (4) not all producing firms report information for many public data sets for the product categories presented in the report and the data may therefore be understated.

Table OVERVIEW-1
U.S. antidumping and countervailing duty orders on subject steel products in place as of October 12, 2001, by product

Product	Date of order	Investigation number	Country
Flat:			
Carbon steel plate	6-13-79	AA1921-197	Taiwan
Carbon steel plate	8-17-93	701-TA-319	Belgium
Carbon steel plate	8-17-93	701-TA-320	Brazil
Carbon steel plate	8-17-93	701-TA-322	Germany
Carbon steel plate	8-17-93	701-TA-325	Mexico
Carbon steel plate	8-17-93	701-TA-326	Spain
Carbon steel plate	8-17-93	701-TA-327	Sweden
Carbon steel plate	8-17-93	701-TA-328	United Kingdom
Corrosion-resistant carbon steel products	8-17-93	701-TA-348	France
Corrosion-resistant carbon steel products	8-17-93	701-TA-349	Germany
Corrosion-resistant carbon steel products	8-17-93	701-TA-350	Korea
Carbon steel plate	8-19-93	731-TA-573	Belgium
Carbon steel plate	8-19-93	731-TA-574	Brazil
Carbon steel plate	8-19-93	731-TA-576	Finland
Carbon steel plate	8-19-93	731-TA-578	Germany
Carbon steel plate	8-19-93	731-TA-582	Mexico
Carbon steel plate	8-19-93	731-TA-583	Poland
Carbon steel plate	8-19-93	731-TA-584	Romania
Carbon steel plate	8-19-93	731-TA-585	Spain
Carbon steel plate	8-19-93	731-TA-586	Sweden
Carbon steel plate	8-19-93	731-TA-587	United Kingdom
Corrosion-resistant carbon steel products	8-19-93	731-TA-612	Australia
Corrosion-resistant carbon steel products	8-19-93	731-TA-614	Canada
Corrosion-resistant carbon steel products	8-19-93	731-TA-615	France
Corrosion-resistant carbon steel products	8-19-93	731-TA-616	Germany
Corrosion-resistant carbon steel products	8-19-93	731-TA-617	Japan
Corrosion-resistant carbon steel products	8-19-93	731-TA-618	Korea
Grain-oriented silicon electrical steel	6-7-94	701-TA-355	Italy
Grain-oriented silicon electrical steel	6-10-94	731-TA-660	Japan
Grain-oriented silicon electrical steel	8-12-94	731-TA-659	Italy
Clad steel plate	7-2-96	731-TA-739	Japan
Carbon steel plate	10-24-97	731-TA-753	China
Carbon steel plate	10-24-97	731-TA-754	Russia
Carbon steel plate	10-24-97	731-TA-755	South Africa
Carbon steel plate	10-24-97	731-TA-756	Ukraine

Continued on next page.

Table OVERVIEW-1--*Continued*
U.S. antidumping and countervailing duty orders on subject steel products in place as of October 12, 2001, by product

Product	Date of order	Investigation number	Country
Flat--*Continued*			
Hot-rolled carbon steel flat products	6-29-99	731-TA-807	Japan
Hot-rolled carbon steel flat products	7-6-99	701-TA-384	Brazil
Hot-rolled carbon steel flat products	7-6-99	731-TA-806	Brazil
Hot-rolled carbon steel flat products	7-12-99	731-TA-808	Russia
Carbon steel plate	2-10-00	701-TA-387	France
Carbon steel plate	2-10-00	701-TA-388	India
Carbon steel plate	2-10-00	701-TA-389	Indonesia
Carbon steel plate	2-10-00	701-TA-390	Italy
Carbon steel plate	2-10-00	701-TA-391	Korea
Carbon steel plate	2-10-00	731-TA-816	France
Carbon steel plate	2-10-00	731-TA-817	India
Carbon steel plate	2-10-00	731-TA-818	Indonesia
Carbon steel plate	2-10-00	731-TA-819	Italy
Carbon steel plate	2-10-00	731-TA-820	Japan
Carbon steel plate	2-10-00	731-TA-821	Korea
Tin mill products	8-28-00	731-TA-860	Japan
Hot-rolled carbon steel flat products	9-11-01	701-TA-404	Argentina
Hot-rolled carbon steel flat products	9-19-01	731-TA-898	Argentina
Hot-rolled carbon steel flat products	9-19-01	731-TA-905	South Africa
Long:			
Prestressed concrete steel wire strand	12-8-78	AA1921-188	Japan
Steel rails	9-15-89	731-TA-422	Canada
Steel rails	9-22-89	701-TA-297	Canada
Steel concrete reinforcing bar	4-17-97	731-TA-745	Turkey
Collated roofing nails	11-19-97	731-TA-757	China
Collated roofing nails	11-19-97	731-TA-759	Taiwan
Structural steel beams	6-19-00	731-TA-853	Japan
Structural steel beams	8-14-00	701-TA-401	Korea
Structural steel beams	8-18-00	731-TA-854	Korea
Steel concrete reinforcing bar	9-7-01	731-TA-873	Belarus
Steel concrete reinforcing bar	9-7-01	731-TA-874	China
Steel concrete reinforcing bar	9-7-01	731-TA-875	Indonesia
Steel concrete reinforcing bar	9-7-01	731-TA-877	Korea
Steel concrete reinforcing bar	9-7-01	731-TA-878	Latvia
Steel concrete reinforcing bar	9-7-01	731-TA-879	Moldova
Steel concrete reinforcing bar	9-7-01	731-TA-880	Poland

Continued on next page.

Table OVERVIEW-1--*Continued*
U.S. antidumping and countervailing duty orders on subject steel products in place as of October 12, 2001, by product

Product	Date of order	Investigation number	Country
Long--*Continued*			
Steel concrete reinforcing bar	9-7-01	731-TA-882	Ukraine
Tubular:			
Small diameter carbon steel pipe	5-7-84	731-TA-132	Taiwan
Welded carbon steel pipe	3-7-86	701-TA-253	Turkey
Welded carbon steel pipe	3-11-86	731-TA-252	Thailand
Welded carbon steel pipe	5-12-86	731-TA-271	India
Welded carbon steel pipe	5-15-86	731-TA-273	Turkey
Carbon steel butt-weld pipe fittings	12-17-86	731-TA-308	Brazil
Carbon steel butt-weld pipe fittings	12-17-86	731-TA-310	Taiwan
Carbon steel butt-weld pipe fittings	2-10-87	731-TA-309	Japan
Light-walled rectangular tube	3-27-89	731-TA-410	Taiwan
Light-walled rectangular tube	5-26-89	731-TA-409	Argentina
Carbon steel butt-weld pipe fittings	7-6-92	731-TA-520	China
Carbon steel butt-weld pipe fittings	7-6-92	731-TA-521	Thailand
Circular welded nonalloy steel pipe	11-2-92	731-TA-532	Brazil
Circular welded nonalloy steel pipe	11-2-92	731-TA-533	Korea
Circular welded nonalloy steel pipe	11-2-92	731-TA-534	Mexico
Circular welded nonalloy steel pipe	11-2-92	731-TA-536	Taiwan
Seamless pipe	8-3-95	731-TA-707	Argentina
Seamless pipe	8-3-95	731-TA-708	Brazil
Seamless pipe	8-3-95	731-TA-709	Germany
Oil country tubular goods	8-10-95	701-TA-364	Italy
Oil country tubular goods	8-11-95	731-TA-711	Argentina
Oil country tubular goods	8-11-95	731-TA-713	Italy
Oil country tubular goods	8-11-95	731-TA-714	Japan
Oil country tubular goods	8-11-95	731-TA-715	Korea
Oil country tubular goods	8-11-95	731-TA-716	Mexico
Large diameter seamless pipe	6-26-00	731-TA-847	Japan
Small diameter seamless pipe	6-26-00	731-TA-847	Japan
Small diameter seamless pipe	6-26-00	731-TA-850	South Africa
Small diameter seamless pipe	8-10-00	731-TA-849	Romania
Large diameter seamless pipe	8-11-00	731-TA-848	Mexico
Small diameter seamless pipe	8-14-00	731-TA-846	Czech Republic
Stainless:			
Stainless steel butt-weld pipe fittings	3-25-88	731-TA-376	Japan
Welded ASTM A-312 stainless steel pipe	12-30-92	731-TA-540	Korea

Continued on next page.

Table OVERVIEW-1--*Continued*
U.S. antidumping and countervailing duty orders on subject steel products in place as of October 12, 2001, by product

Product	Date of order	Investigation number	Country
Stainless--*Continued*			
Welded ASTM A-312 stainless steel pipe	12-30-92	731-TA-541	Taiwan
Stainless steel butt-weld pipe fittings	2-23-93	731-TA-563	Korea
Stainless steel butt-weld pipe fittings	6-16-93	731-TA-564	Taiwan
Stainless steel wire rod	12-1-93	731-TA-638	India
Stainless steel wire rod	1-28-94	731-TA-636	Brazil
Stainless steel wire rod	1-28-94	731-TA-637	France
Forged stainless steel flanges	2-9-94	731-TA-639	India
Forged stainless steel flanges	2-9-94	731-TA-640	Taiwan
Stainless steel bar	2-21-95	731-TA-678	Brazil
Stainless steel bar	2-21-95	731-TA-679	India
Stainless steel bar	2-21-95	731-TA-681	Japan
Stainless steel bar	2-21-95	731-TA-682	Spain
Stainless steel wire rod	9-15-98	701-TA-373	Italy
Stainless steel wire rod	9-15-98	731-TA-770	Italy
Stainless steel wire rod	9-15-98	731-TA-771	Japan
Stainless steel wire rod	9-15-98	731-TA-772	Korea
Stainless steel wire rod	9-15-98	731-TA-773	Spain
Stainless steel wire rod	9-15-98	731-TA-774	Sweden
Stainless steel wire rod	9-15-98	731-TA-775	Taiwan
Stainless steel plate in coils	5-11-99	701-TA-376	Belgium
Stainless steel plate in coils	5-11-99	701-TA-377	Italy
Stainless steel plate in coils	5-11-99	701-TA-379	South Africa
Stainless steel plate in coils	5-21-99	731-TA-788	Belgium
Stainless steel plate in coils	5-21-99	731-TA-789	Canada
Stainless steel plate in coils	5-21-99	731-TA-790	Italy
Stainless steel plate in coils	5-21-99	731-TA-791	Korea
Stainless steel plate in coils	5-21-99	731-TA-792	South Africa
Stainless steel plate in coils	5-21-99	731-TA-793	Taiwan
Stainless steel butt-weld pipe fittings	2-23-01	731-TA-865	Italy
Stainless steel butt-weld pipe fittings	2-23-01	731-TA-866	Malaysia
Stainless steel butt-weld pipe fittings	2-23-01	731-TA-867	Philippines
Stainless steel angle	5-18-01	731-TA-888	Japan
Stainless steel angle	5-18-01	731-TA-889	Korea
Stainless steel angle	5-18-01	731-TA-890	Spain
Source: Compiled from Commission records.			

Importer questionnaires were included in the mailing to the 825 firms identified as possible U.S. producers of steel. The Commission also selected approximately 220 additional firms to receive importer questionnaires by identifying the largest 10 importers listed in Customs' Net Import File for each of the 33 steel product categories. The Commission received 326 responses to the importer questionnaire.

Four purchaser questionnaires (*i.e.*, one questionnaire for each broad steel product category) were included in the mailing to the 825 firms identified as possible U.S. producers of steel, as well as in the mailing to the 220 additional firms identified as U.S. importers of the subject merchandise. The Commission also asked these U.S. producers and importers to identify their three largest purchasers for each of the 33 steel products. The Commission then mailed the four purchaser questionnaires to approximately 1,100 additional firms identified in response to this request. The Commission received approximately 1,180 usable purchaser questionnaire responses.

The Commission posted the blank foreign producer questionnaire on its website and informed all persons indicating an interest in this investigation via e-mail that hard copies of the foreign producer questionnaire would not be mailed by the Commission but should be downloaded electronically for a response. The Commission received 475 foreign producer questionnaire responses.

A careful review of the data submitted by questionnaire respondents was undertaken by the Commission staff. Certain basic analytical procedures were conducted on data in questionnaires from all sources, including U.S. producers, foreign producers, U.S. purchasers, and U.S. importers. Each firm's unit values for major items such as shipments, prices, sales values, and costs were scrutinized and compared to public source data and to the aggregate unit values for all firms. Comments regarding data discrepancies from all parties in the investigation were considered and material problems with data submissions were resolved.

Additional procedures and reviews focused on U.S. producer questionnaires. Their reported data on sales, operating income, and capacity were reconciled with each firm's financial statements to the fullest extent possible, and reported sales values were compared with reported commercial shipment values. A limited-scope verification was also conducted on one of the largest U.S. steel producers, Nucor Corp., wherein its questionnaire data were reconciled with its corporate records.

MANUFACTURING PROCESSES AND BROAD PRODUCT DESCRIPTIONS AND USES

MANUFACTURING PROCESSES AND BROAD PRODUCT DESCRIPTIONS

The manufacturing processes for steel products are summarized below. In general, there are three distinct stages that include: (1) melting or refining raw steel, (2) casting molten steel into semi-finished forms, and (3) performing the finishing operations that produce the final product. The melting and casting processes produce and transform molten steel into a solid form ready for rolling and do not, by themselves, produce a finished product. More detailed information on specific products is included in subsequent chapters.

Melt Stage

Steel is produced either by the integrated or nonintegrated process.[6] The nonintegrated or scrap-based process (also referred to as the "minimill" process) produces molten steel by melting scrap or scrap

[6] Carbon and many alloy steels are made using both processes, but stainless steel is almost always made using the nonintegrated process.

substitutes in an electric arc furnace.[7] The integrated process typically smelts iron ore using coke in a blast furnace to produce molten iron, which is subsequently poured into a steelmaking furnace (generally a basic oxygen furnace), together with a lesser amount of scrap metal.[8] The hot metal is processed into steel when oxygen is blown into the metal bath. Lime is added to serve as a fluxing[9] agent; it combines with impurities to form a floating layer of slag, which is later removed. The molten steel is then typically poured or "tapped" from the furnace to a ladle[10] to be transported to a ladle metallurgy (or secondary steelmaking) station, and then to casting.

Regardless of whether they use the integrated or nonintegrated process, it is now common for steelmakers to utilize a ladle metallurgy station. Shifting the final refining stages to the ladle metallurgy station allows shorter cycles in the primary steelmaking vessel, effectively raising steelmaking capacity. Steelmakers employ additional techniques to further refine and improve the steel.[11] Steelmakers may adjust the chemical content of the steel by adding alloying elements or by lowering the carbon content (de-carburization), and may adjust the temperature of the steel for optimum casting. While carbon content may be reduced further by subsequent hydrogen annealing of the coiled steel, the steel's essential characteristics are established prior to the casting stage.

Casting Stage

Following the production of molten steel with the desired properties, the steel is typically continuously cast into one of three semifinished forms that can be further processed: slabs, billets, or blooms. Slabs are cast in a rectangular form with a thickness from 2 to 10 or more inches and a width between 30 and 80 inches. Billets are normally 2 to 6 inches square while blooms are similar in shape to billets but typically have cross-sections greater than 6 inches.[12] Producers also formerly used ingot teeming to cast steel, but continuous casting is now the preferred, lower-cost method and the vast majority of steels now produced in the United States are continuously cast.

In continuous casting, the molten steel is poured into a mold that has the cross-sectional shape of the desired semifinished form (see figure OVERVIEW-1). The mold is slightly tapered. The steel is poured continuously into the mold and solidifies as it passes through and out the bottom portion of the mold. The solidified steel is cut off below the mold into the desired lengths for further processing.

Although continuous casting is used by most steelmakers worldwide, some steel is cast into ingots before processing into semifinished forms (also depicted in figure OVERVIEW-1). In the ingot process, molten steel is poured into an ingot mold where it solidifies. After solidification, the ingot is

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[7] Scrap often has high levels of undesirable elements. To improve steel quality, all of the new thin-slab flat-rolled mills are making some use of scrap substitutes such as direct-reduced iron, hot-briquetted iron, and iron carbide.

[8] Open hearth furnaces are also used in the integrated process, but have been supplanted by basic oxygen furnaces in most countries.

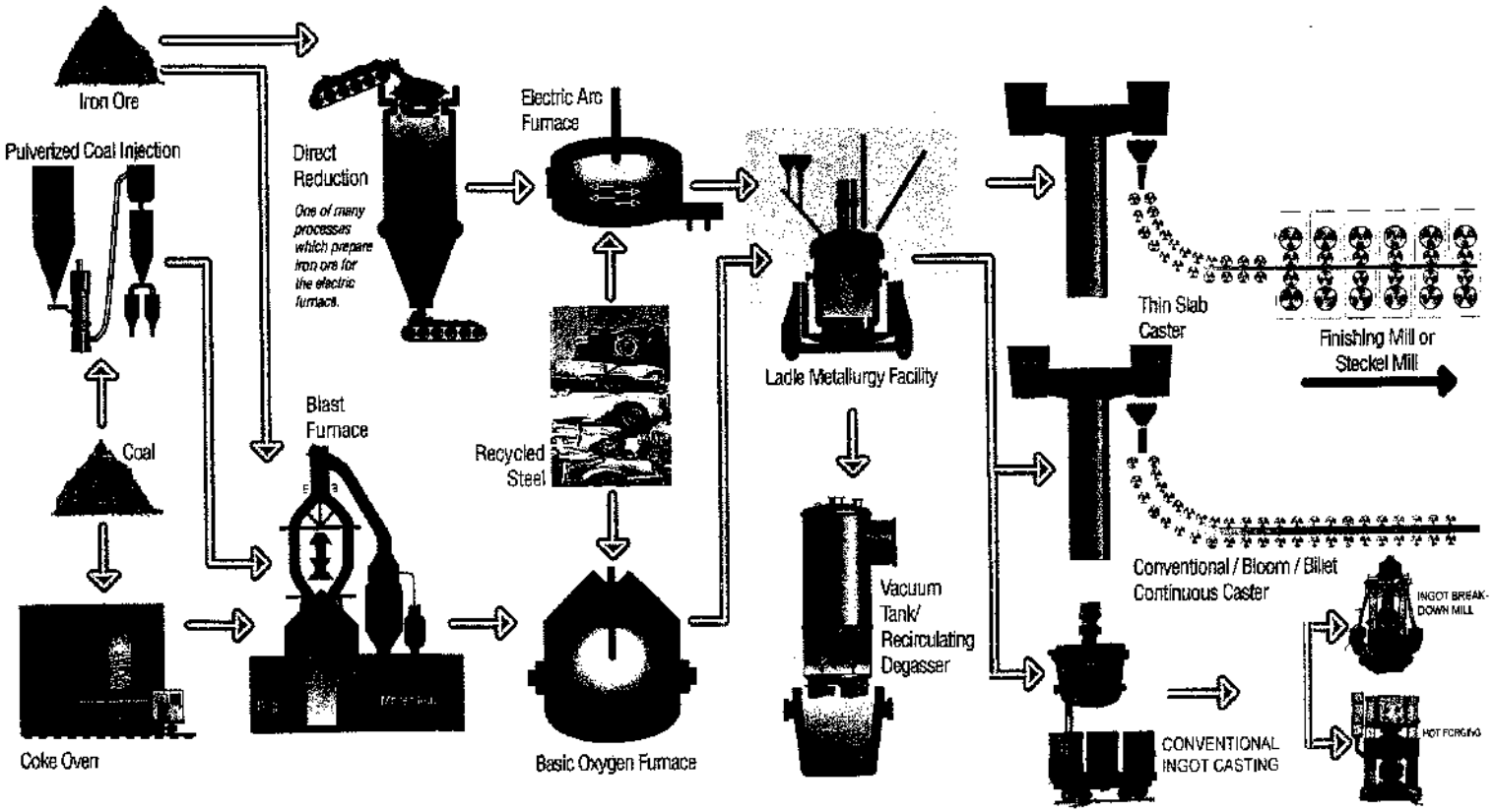
[9] A flux is a substance added to the molten steel for purification purposes.

[10] The ladle is a vessel into which the molten steel is poured from the furnace for transfer to the next processing stage.

[11] The goals of secondary steelmaking include controlling gases (*e.g.*, decreasing the concentration of oxygen, hydrogen, and nitrogen, called degassing), reducing sulfur, removing undesirable nonmetallic inclusions such as oxides and sulphides, changing the composition and/or shape of oxides and sulphides that cannot be completely removed, and improving the mechanical properties of the finished steel. United Stated Steel, *The Making, Shaping, and Treating of Steel, 10th edition,* p. 671.

[12] Billets and blooms may also have non-rectangular cross-sections.

Figure OVERVIEW-1
Steelmaking flowchart



Source: AISI.

removed from the mold and placed into a furnace to bring the ingot to a uniformly high temperature throughout. The ingot is then placed into a mill that shapes the ingot into a semifinished form.

Subsequent Processing

A semifinished product is transferred to a rolling mill where it is heated prior to rolling. The form is passed through one or more sets of revolving rolls that reduce its thickness and/or change its shape in a process known as "hot-rolling." After cooling, some of these products are then subjected to another rolling stage, called "cold-rolling" because the steel is at ambient temperature when it is rolled, which further reduces the thickness of the steel and improves its strength and surface quality. Other processing steps the steel may undergo include controlled reheating and cooling (annealing), cleaning in a bath of acid (pickling), a special cold-rolling that improves the texture or imparts a certain texture to the steel (temper rolling), cutting, slitting, shearing, and/or using a coiler to wind the product into a coil. Some of the finished products produced from the semifinished forms are discussed below.

Slabs

Slabs are generally used to produce flat products and, subsequently, welded pipes. Specific products produced directly and indirectly from slabs include the following:

- Cut-to-length or discrete plate - flat-rolled product that typically ranges between about 3/16 of an inch to more than a foot in thickness. In the most common production process, a slab is reduced on a reversing rolling mill to the desired thickness.

- Hot-rolled coils - flat-rolled product produced on a hot-strip (continuous) or Steckel-type (reversing) mill and wound into coils at the end of the process. The differences between coiled sheet, strip, and plate consist of differences in thickness and width. Only the lighter thicknesses of plate can be produced in a coiled form. Sheet and strip are thinner than 3/16 of an inch; sheet is rolled to a width of about 24 inches or more while strip is narrower.

- Cold-rolled flat products - hot-rolled flat products that are cold-rolled, improving the steel's surface quality and strength.

- Grain-oriented silicon electrical steel - a cold-rolled sheet product produced from steel that has been refined to have very low levels of carbon. Silicon is added to the molten steel to create an alloy with about 3 percent silicon. The addition of silicon creates a steel with excellent magnetic properties.

- Corrosion-resistant and other coated flat products - for hot-dipped zinc or aluminum coatings, sheet and strip are cleaned so the coating will stick better to the steel, then the steel is put into a bath of hot zinc and/or aluminum. As the strip emerges from the bath, it is cooled and the coating solidifies. Electrogalvanized products are produced by passing the steel through a solution containing dissolved zinc, which is deposited on the steel by an electrolytic reaction. For painted products, the steel is cleaned and the surface prepared for painting. The steel then moves to a paint coater where a primer is applied. After the steel moves to a baking oven to cure the primer, it is then cooled and conveyed to a second paint coater where the finishing coat is applied with rollers. The product then enters another oven for curing and cooling.

- Tin mill products - frequently the steel used for making tin mill products goes from cold-rolling through an annealing process, after which it is temper rolled or cold-rolled again. The steel is cleaned in a dilute acid solution, then it is electroplated with tin in a process similar to electrogalvanizing.

- Welded pipe - indirectly made from slabs in that it is formed by bending either flat-rolled sheet or plate so that the edges meet to form a cylinder. The edges are then welded together to form the pipe.

Blooms and Billets

Blooms and billets are generally used to produce long products and, subsequently, seamless pipe. Specific products produced directly and indirectly from blooms and billets include the following:

- Hot-rolled bar and light shapes - a billet is reheated, then passed through a set of grooved rolls to produce the desired shape for the bar or light shapes and cut into straight lengths. Bars may have a round, square, rectangular, or other solid polygonal cross-section. Light shapes include angles, channels, tees, etc. with no cross-sectional dimension greater than about 3 inches.

- Heavy shapes - the production process is similar to that of light shapes. Heavy shapes include I-beams and angles, etc. with at least one cross-sectional dimension greater than 3 inches.

- Cold-finished bar - hot-rolled bars that are cold-finished undergo certain other processes after cooling to ambient temperature, including cold-rolling, cold-drawing, machining, and grinding.

- Rebar - hot-rolled bar in which indentations such as grooves and ribs are rolled onto the surface.

- Rails - the production process is similar to that of shapes, although rails are subject to much more restrictive quality tolerances and are often subjected to specialized heat-treatment processes to improve wear characteristics.

- Rods - rods are rolled from reheated billets and coiled at the end of the process. Rods are usually of circular cross-section. They are often considered a semifinished product as they have limited uses without further processing.

- Wire - wire is drawn from rods. The rods are cleaned with acid, rinsed with water, treated with lime to neutralize the acid, then thoroughly dried. The rod is then drawn through a die to produce wire. Wire may go through subsequent processes such as heat treating and galvanizing.

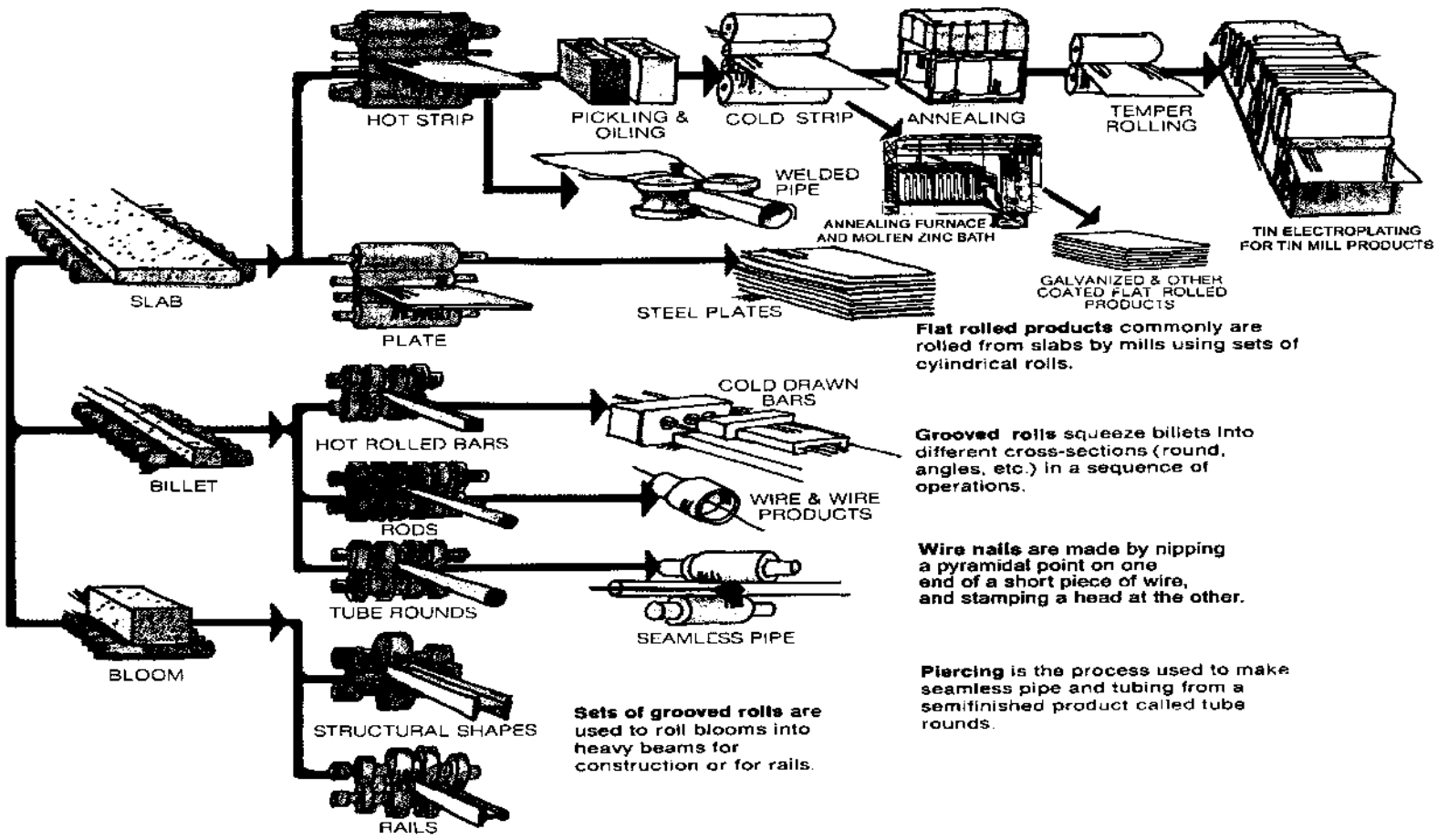
- Strand, rope, cable, and cordage - wires are twisted together to form the various products.

- Nails - wire nails are made by nipping a pyramidal point on one end of a short piece of wire, and stamping a head at the other.

- Seamless tube - billets or blooms with a solid circular cross-section, called tube rounds, are reheated and subjected to a forming process that creates a hole through the center.

A flowchart of the steel processing for the above-mentioned products is provided in figure OVERVIEW-2.

Figure OVERVIEW-2
Steel processing flowchart



Source: AISI.

USES

Table OVERVIEW-2 presents information on the primary end markets for major steel products.

Table OVERVIEW -2
Major markets for various steel products in the year 2000

Product	End markets
Flat: Plate	Construction, automotive, rail transportation, construction and materials-handling equipment
Tin plate	Containers, packaging and shipping material
Sheet, hot-rolled	Automotive, construction
Sheet, cold-rolled	Automotive, electrical equipment, appliances, utensils, cutlery, other domestic and commercial equipment, construction
Sheet, galvanized	Automotive, construction
Long: Wire rod	Construction
Heavy structural shapes	Construction
Rails and railroad accessories	Rail transportation
Bar	Construction, automotive
Wire (drawn)	Automotive
Tubular: Standard pipe	Oil and gas industry, electrical equipment, construction
OCTG	Oil and gas industry
Line pipe	Oil and gas industry
Source: AISI.	

GLOBAL DEVELOPMENTS, 1991-2000

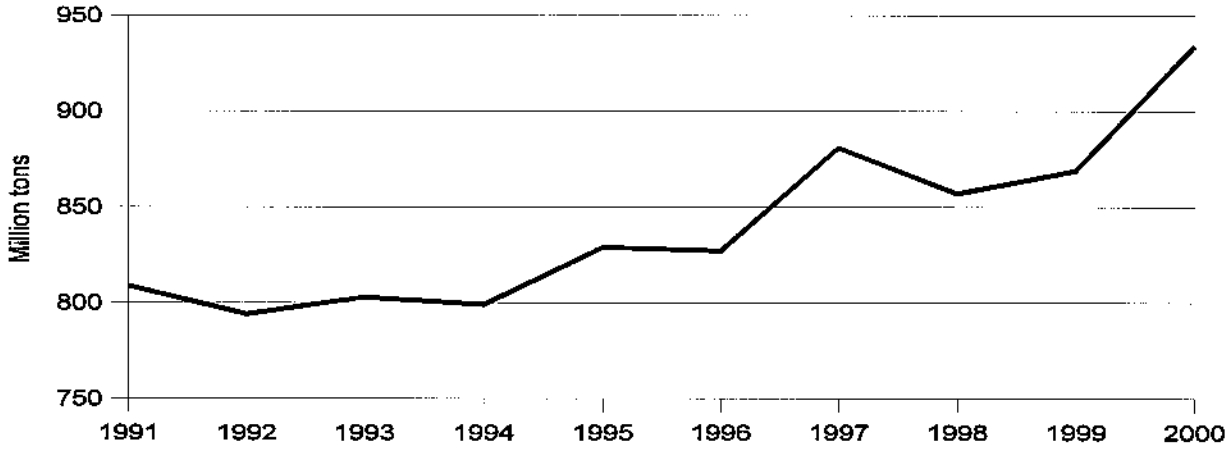
GLOBAL PRODUCTION, CAPACITY, AND EMPLOYMENT TRENDS

Between 1991 and 2000, world crude steel production increased by more than 15 percent from 809 to 934 million tons per year (figure OVERVIEW-3).[13] From 1991 to 1999, production increased by an average of less than 1 percent each year, although there were some sharp year-to-year increases during this period. Production again increased rapidly from 1999 to 2000, rising more than 7 percent. During the first six months of 2001, world crude steel production was 455 million tons, almost the same as in the comparable period in 2000.[14]

[13] IISI, *World Steel in Figures*, 2001. IISI data are in metric tons of hot metal and were converted to short tons using 0.907 metric ton = 1 short ton.

[14] *Metal Bulletin*, July 26, 2001.

Figure OVERVIEW-3
World crude steel production, 1991-2000



Source: IISI, *World Steel in Figures*, 2001.

In both 1991 and 2000, the four leading steel producing countries (the USSR/its former republics, Japan, the United States, and China) accounted for slightly more than 50 percent of world production, as shown in the following tabulation:[15]

Producer	Share of world production (*percent*)	
	1991	2000
Kazakhstan/Russia/Ukraine[1]	18	11
Japan	15	13
United States	11	12
China	10	15
EU[2]	20	19

[1] Data for 1991 are for the USSR; data for 2000 are for Kazakhstan, Russia, and Ukraine, the only former USSR republics for which data are available.
[2] EU production for 1991 is based on production in the 15 countries which presently comprise the EU.

China's share of world production grew from 10 percent in 1991 to 15 percent in 2000. The 18 percent share produced by the USSR in 1991 declined to 11 percent for Kazakhstan, Russia, and Ukraine in 2000. Japan's share of world production declined slightly from 15 percent in 1991 to 13 percent in 2000 and the U.S. share increased slightly from 11 percent to 12 percent. The 15 countries which today comprise the EU collectively accounted for 20 percent of world steel production in 1991. In 2000, the EU member countries produced slightly more than 19 percent of the world's steel.[16]

During the last 10 years, the proportion of steel produced using the oxygen process remained almost constant, at just under 59 percent of world production. The proportion of production by the electric arc process increased from 28 percent in 1991 to 34 percent in 2000, while production by the

[15] Based on data from IISI, *Steel Statistical Yearbook*, 1992 and *World Steel in Figures*, 2001.

[16] Ibid.

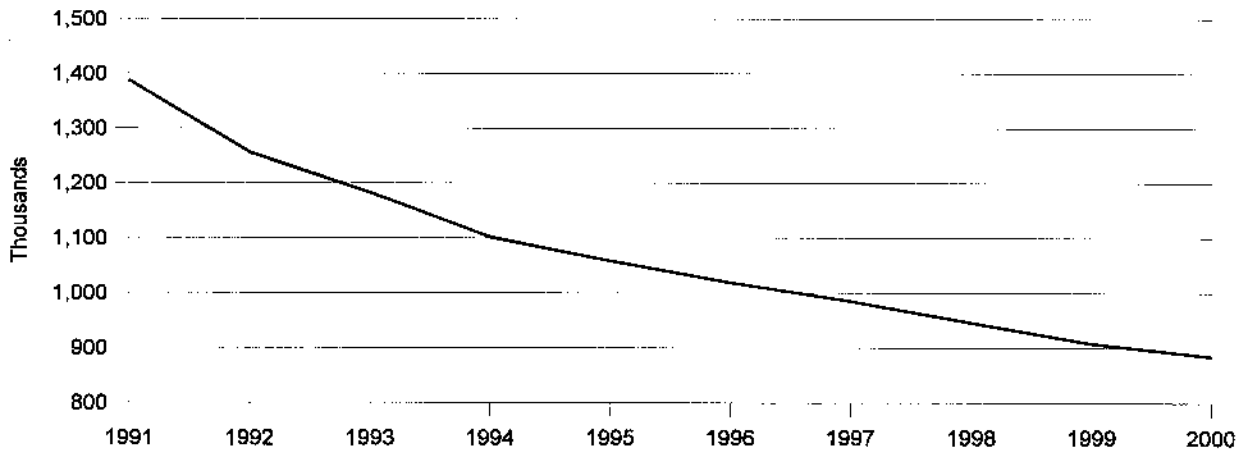
open hearth process declined from 14 percent of world production in 1991 to 5 percent in 2000.[17] Russia and Ukraine continue to produce significant amounts of steel using the open hearth process. In 2000, the open hearth process accounted for more than 27 percent of the steel produced in Russia and 50 percent of the steel produced in Ukraine.[18]

World production capacity is more difficult to quantify than actual production. All estimates suggest that global steel production capacity exceeds both actual production and current market demand. The difficulty in estimating capacity is two-fold. First, there may be significant differences between stated capacity and effective capacity. In almost all production facilities, effective capacity is less than stated production capacity. Second, stated capacity may be inflated by the inclusion of projected, inoperative, or obsolete capacity. Estimates of global annual production capacity for 2000 range from 1.1 to 1.2 billion tons.[19]

While world steel production increased between 1991 and 2000, measurable employment in steel production decreased (employment can be measured for more than 70 percent of world steel production during each year of the period examined). Employment data for steel production in China and the USSR/its former republics (collectively accounting for less than 29 percent of annual world production during 1991-2000) are not comparable to employment data for the rest of the world. Typically, China and the USSR/its former republics count all workers in steel-producing locales as steel production workers. In addition, labor policies intended to provide full employment in those countries distort the relationship between the number of employees and the quantity of output.

For the 70 percent of world steel production for which meaningful data are available, employment decreased by more than 36 percent between 1991 and 2000 (figure OVERVIEW-4).[20] Almost 80 percent of the employment decrease occurred during the first 6 years of that period, as steel employment dropped from 1.4 million production workers at the beginning of 1991 to 1.0 million by the end of 1996. By the end of 2000, fewer than 0.9 million workers produced approximately 70 percent of the world's steel.

Figure OVERVIEW-4
World steel industry employment, 1991-2000



Source: IISI, *World Steel in Figures*, 2001.

[17] Ibid.

[18] IISI, *World Steel in Figures*, 2001.

[19] Based on a survey by Peter F. Marcus, et al., in *The Steel Strategist No. 25*, World Steel Dynamics, 1999.

[20] IISI, *World Steel in Figures*, 2001.

GLOBAL IMPORT AND EXPORT TRENDS

Between 1991 and 1999, world trade in steel increased by 58 percent from 254 to 401 million tons.[21] As a percentage of world steel production, exports rose from 31 percent in 1991 to 46 percent in 1999. Almost 70 percent of the increase in exports occurred between 1991 and 1995.

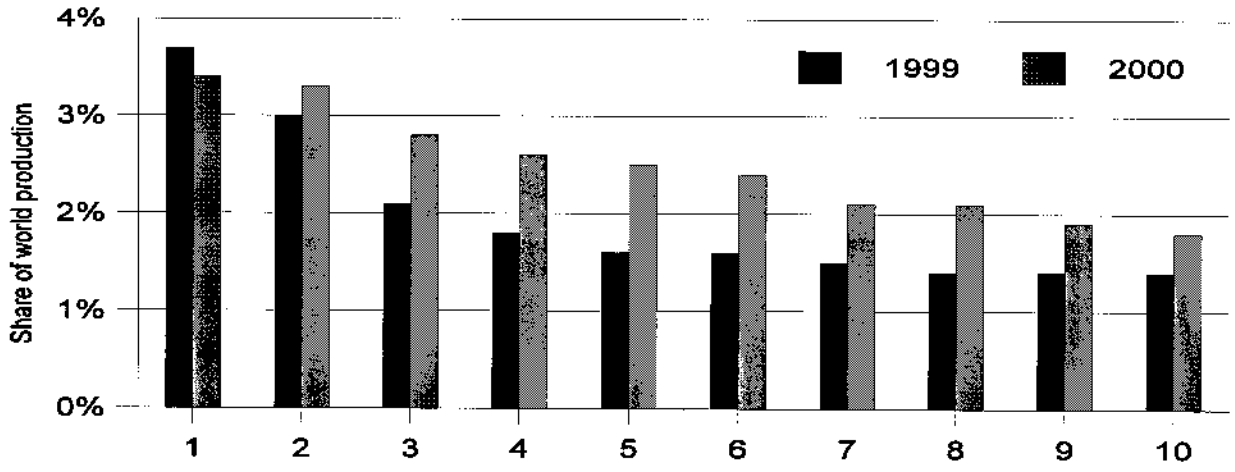
MARKET CONSOLIDATION TRENDS

Despite continuing mergers between European producers, alliances between Asian producers, and increasing foreign investment by producers throughout the world, global steel production remains fragmented. In 2000, 80 competing firms produced two-thirds of the world's steel. However, between 1990 and 2000, the largest producers collectively captured an increased share of world production, as shown in the following tabulation:[22]

Largest firms	Share of world production (*percent*)	
	1990	2000
5 largest firms	12	15
10 largest firms	20	25
20 largest firms	28	37

In 1990, the individual production shares of the 5 largest producers ranged from 1.6 percent to 3.7 percent of total world production, with an average share of 2.5 percent. In 2000, their individual production shares ranged from 2.5 percent to 3.4 percent, with the average individual share increasing to 2.9 percent. Average individual production shares for the 10 largest producers increased from 2.0 percent in 1990 to 2.5 percent in 2000, as shown in figure OVERVIEW-5.

Figure OVERVIEW-5
Shares of world steel production for the 10 largest producers, 1990 and 2000



Source: IISI, *World Steel in Figures*, 1991 and 2001.

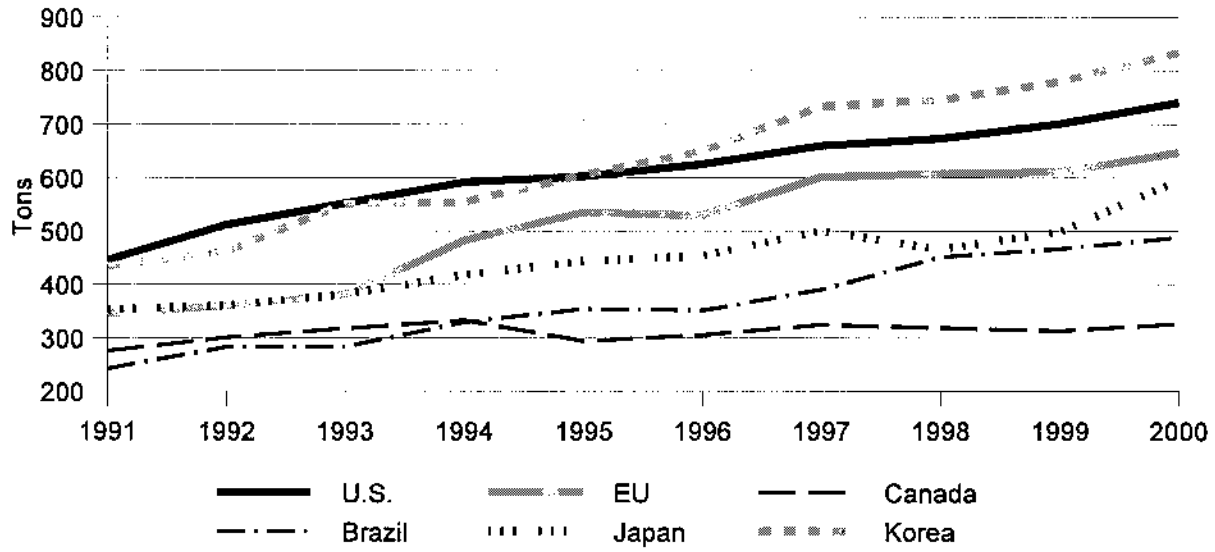
[21] IISI, *Steel Statistical Yearbook*, 2000.

[22] IISI, *World Steel in Figures*, 1991 and 2001.

PRODUCTIVITY

Figure OVERVIEW-6 shows annual productivity as measured by IISI, in tons of crude steel produced per employee, for Canada, Brazil, the EU, Japan, Korea, and the United States during 1991-2000. These data are primarily useful for observing trends within national industries over time. Productivity increases during this period for these countries ranged from a high of 102 percent for Brazil to a low of 19 percent for Canada. However, differences exist in the data collection methodologies among the countries and country-to-country comparisons are not necessarily valid.

Figure OVERVIEW-6
Annual crude steel production per employee for selected countries, 1991-2000

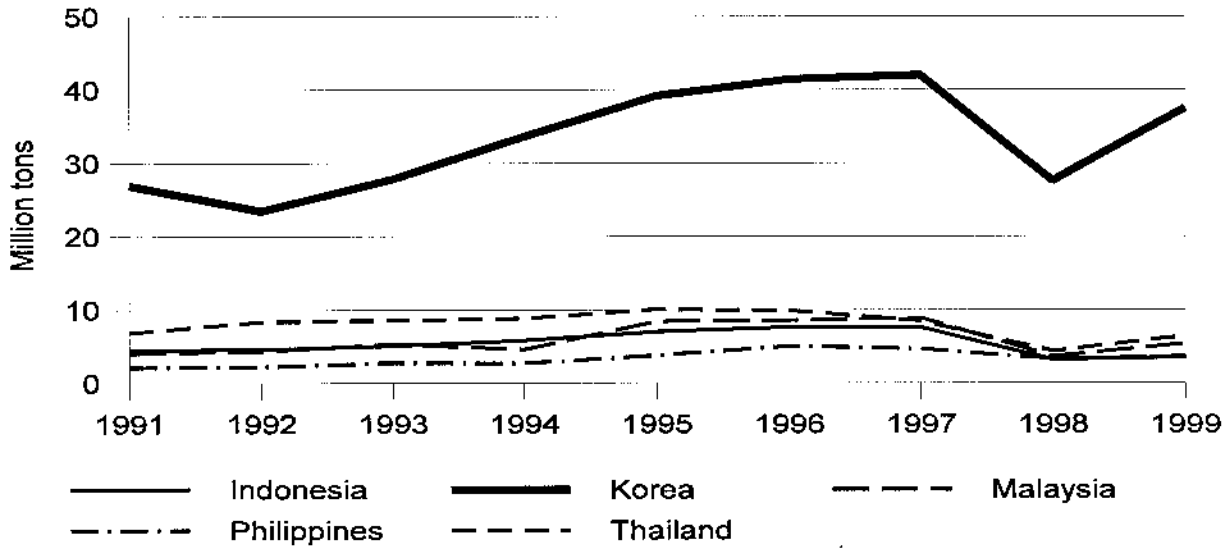


Source: IISI, *World Steel in Figures*, 1992 through 2001.

THE ASIAN FINANCIAL CRISIS

The "Asian Financial Crisis" began with the depreciation of the Thai baht in mid-1997, followed by depreciations in the currencies of the Philippines, Indonesia, Malaysia, and Korea. During January 1996-January 1998, the currencies of these five countries depreciated between 38 and 76 percent in nominal terms. As these economies slowed, their finished steel consumption fell significantly (figure OVERVIEW-7). Finished steel consumption in Indonesia, Korea, Malaysia, the Philippines, and Thailand together fell by 29.6 million tons during 1997-98, with the largest decline occurring with respect to Korean finished steel consumption, 14.5 million tons.

Figure OVERVIEW-7
Finished steel consumption in selected Asian countries, 1991-99



Source: IISI, *Steel Statistical Yearbook*, 2000.

POST-USSR DEVELOPMENTS

Changes in Russia and other states formerly part of the USSR during 1991-2000 have had an impact on the global steel market. The shift in these states toward market forces in 1992 precipitated a drop in overall economic activity, especially in industrial output and investment such as machine building, which has been a major focus of the USSR steel industry. The problems in the overall post-USSR economy resulted in sharp declines in both steel production (table OVERVIEW-3) and steel consumption (table OVERVIEW-4).

Table OVERVIEW-3
Production of crude steel in Russia, Ukraine, and the former USSR, 1991-2000

Country	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	Quantity (*1,000 tons*)									
Russia	[1]	73,902	64,329	53,817	56,879	54,303	53,475	48,315	56,792	65,160
Ukraine	[1]	46,041	35,953	26,550	24,596	24,622	28,257	26,951	30,268	34,620
Former USSR[2]	146,460	130,077	108,171	86,281	87,194	85,088	89,334	82,051	94,975	[1]

[1] Not available.
[2] Includes all of the states of the former USSR. Virtually all of the steel production is in Russia, Ukraine, and Kazakhstan (in order of the volume produced).

Source: IISI.

Table OVERVIEW-4
Apparent consumption of finished steel in Russia, Ukraine, and the former USSR, 1991-2000

Country	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
					Quantity (*1,000 tons*)					
Russia	[1]	50,539	34,026	21,904	20,728	18,082	17,200	16,979	18,633	25,358
Ukraine	[1]	27,901	16,510	7,718	6,505	6,946	9,041	5,954	9,592	10,695
Former USSR[2]	111,029	84,495	56,997	37,785	35,502	33,407	34,840	31,753	37,045	44,873

[1] Not available.
[2] Includes all of the states of the former USSR.

Source: IISI.

The movement toward a market economy also resulted in a disruption of traditional trade flows for steel within the former COMECON structure. COMECON was set up in 1949 to facilitate trade and economic cooperation between the USSR and certain communist countries. The organization attempted to integrate the economies of Eastern Europe with that of the USSR. From 1949 to 1991, USSR steel exports primarily went to COMECON members. With the breakup of the USSR and movement by the former USSR toward a market economy, COMECON became obsolete. The ending of COMECON in 1991 marked a loss to the former USSR of its traditional foreign buyers of its steel. The position of the former USSR in the global steel market changed from a minor player in 1991 to the largest steel exporter in the world by 1999. These developments have resulted in trade frictions in many markets. Antidumping investigations or orders have been initiated against imports of Russian steel by 21 trading partners including Argentina, Brazil, Canada, Chile, China, Colombia, the EU, India, Indonesia, Korea, Malaysia, Mexico, Peru, the Phillippines, South Africa, Taiwan, Thailand, Turkey, the United States, Venezuela, and Vietnam. In addition, both the EU and the United States have negotiated agreements setting quotas on imports of most Russian steel products. The United States also has two suspension agreements in place on imports of Russian hot-rolled steel and steel plate.

With the restructuring of the economy in the post-USSR period, energy and transportation costs are rising, resulting in a significant increase in production costs. Full restructuring and movement toward market relations is hindered in part because these mills continue to provide the entire wage base in some areas. Several also accounted for a sizable share of USSR regional agricultural production. Therefore, steel producers face decreased domestic demand and increased energy, transportation, and input costs while lacking the ability to cut costs by substantially reducing the number of employees. One way steel producers have tried to resolve these problems is to substantially increase exports (table OVERVIEW-5).

Table OVERVIEW-5
Exports of steel from Russia, Ukraine, and the former USSR, 1991-2000

Country	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
					Quantity (*1,000 tons*)					
Russia	[1]	7,912	18,388	28,275	30,178	29,762	28,798	27,377	30,313	[1]
Ukraine	[1]	8,580	12,083	12,831	12,848	13,387	17,803	17,583	20,896	[1]
Former USSR[2]	6,101	21,375	33,160	44,278	46,481	46,763	51,696	49,916	57,018	[1]

[1] Not available.
[2] Includes all of the states of the former USSR.

Source: IISI.

TECHNOLOGY TRENDS

For the decade beginning in 1991, the development and implementation of new technologies was evident in the investment behavior of steel companies in the United States and around the world. Although steel companies had historically developed much of their technology themselves, by the 1990s equipment suppliers had firmly taken the lead with respect to the development of major new production equipment. New technology needed to enhance quality and improve productivity levels became readily available to steelmakers in any country willing and able to invest adequate levels of capital. Adoption rates for new technology, therefore, have varied widely by company, country, and technology.

Several broad trends developed, affecting the make-up of the industry, its options with respect to raw materials, and its composition in serving the market. The major trends started, completed, or underway during the last decade include:

- The adoption of the basic oxygen process of steelmaking as the dominant process for producing steel from iron ore. The basic oxygen furnace was developed in the 1950s and flourished with widespread adoption through the 1960s and 1970s. In 1991, the last operating open hearth steelmaking shop in the United States was replaced by a basic oxygen furnace facility, making 1991 the final year during which the process that had dominated the industry for over one-half of a century was utilized in this country. However, the energy- and labor-intensive open hearth method still accounts for a significant share of production in some of the less advanced industries, such as Russia, Ukraine, and China.

- The adoption of continuous casting for converting molten steel into semifinished steel products. This process, which offers significant energy, labor, and capital savings compared to the ingot casting process, was developed in the 1960s and was widely adopted during the 1970s and 1980s. In 1991, 76 percent of the steel produced in the United States was continuous-cast. By the year 2000, with continued implementation and the shut-down of obsolete ingot casting facilities, over 97 percent of steel produced in the United States was continuous-cast, a similar share to that in other advanced industries around the world, such as Japan, Korea, and the EU.

- Continued growth of electric arc furnace steelmaking, which is the preferred method of producing steel from scrap. While the amount of steel produced by basic oxygen furnaces was relatively constant in the United States through the decade, the amount of steel produced by electric arc furnaces increased more than 50 percent. This increase was the result of heavy investment in new, greenfield electric arc furnace plants and in capacity increases in existing plants.

- The commercialization and widespread adoption of thin-slab casting for the production of flat-rolled products. This new technology was demonstrated in 1989 and was quickly adopted, especially in the United States. Thin slab casting makes the production of flat-rolled products practical in a minimill with an annual capacity of 1 to 2 million tons, with a much lower capital cost than would be required for an integrated blast furnace/basic oxygen furnace mill with a capacity of between 4 and 6 million tons. Minimills utilizing thin-slab technology accounted for most of the increase of capacity in the U.S. steel industry during the 1990s.

- The building of new finishing capacity to meet the growing demand for corrosion-resistant products, including hot-dip galvanizing, electrogalvanizing, zinc-aluminum coating, and fully alloyed zinc-iron coating. The demand for these products is partly as replacement for unbolted carbon steel in applications such as automotive.

- The trend for steel companies to increase their capabilities for producing higher value-added products in order to capture more of the total value of the products as used by the ultimate consumers and avoid low commodity-type pricing that has come to characterize the market for plain hot-rolled products.

- Incremental upgrading of existing technologies:

  - Improvements to blast furnace technology over the decade have resulted in increased production per furnace, reductions in fuel use, and increased life of furnaces between major rebuilding events. Greater flexibility in fuel use has been achieved though widespread adoption of pulverized coal injection and the use of natural gas and fuel oil, all reducing the amount of coke required.

  - Improvements in steelmaking technology include widespread adoption of ladle-refining, in which the refining of molten steel is completed in a ladle after its removal from the steelmaking furnace. This increases the overall productivity of the operation and allows the operator to perform a variety of refining and finishing processes that result in the production of cleaner (more defect free) steel of more consistent quality and of new grades that cannot be practically produced without such refining.

  - Improvements in electric melting furnaces have involved the replacement of older furnaces with ones of larger heat size and, usually, much higher rates of heat input, resulting in greatly increased productivity. New electric arc furnaces and the adoption of new operating practices have resulted in increased productivity with lower unit energy consumption and improved quality.

  - Rolling mill technology has also improved during the decade. Although the large hot-strip mills that are operating in the United States today were built before the 1990s, most of them dating to the 1960s, they were extensively modernized and upgraded during the 1990s. Investments have been made in instrumentation and control, and equipment to enable the production of steel of more consistent quality with less variation in properties, matching the capabilities of newer equipment installed in more recently developed industries such as those of Korea and Japan.

  - The development of new products, taking advantage of the capabilities of the new ladle refining technologies has made steel products available to the market that were not available at the start of the decade. The new products have combinations of strength and formability not previously available.

FOREIGN GOVERNMENT PROGRAMS

Many countries around the world have programs to support their domestic steel industries. There is extensive discussion of such programs in a recent Commerce report.[23] Specific programs that Commerce has found to be countervailable pursuant to Title VII of the Tariff Act of 1930 are summarized in table OVERVIEW-6.

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[23] International Trade Administration, Commerce, *Global Steel Trade: Structural Problems and Future Solutions*, July 2000.

Table OVERVIEW-6
Countervailable subsidies found by Commerce, 1991-2000

Country	Year	Product	Government practice
Austria	1993	OCTG	Assumption of loss at restructuring, equity infusion, grants
Austria	1991	Certain steel products	Assumption of loss at restructuring, equity infusion, grants
Belgium	2000	CTL plate	Assumption of financing costs, loan forgiveness, debt conversion into ordinary debt, loans, redeployment aid, equity infusion
Belgium	1998-99	Stainless plate in coils	Assumption of financing costs, industrial reconversion zones
Belgium	1997	Stainless plate in coils	Assumption of financing costs, loans, redeployment aid, industrial reconversion zones
Belgium	1996	CTL plate	Loans, redeployment aid
Belgium	1991	Certain steel	Assumption of financing costs, loan forgiveness, debt conversion into ordinary debt, loans, redeployment aid, subsidies, equity infusion
Brazil	2000	CTL plate	Infrastructure provisions
Brazil	1998	Cold-rolled carbon steel products	Debt-to-equity conversions, equity infusion
Brazil	1997	Hot-rolled carbon steel products	Debt-to-equity conversions, equity infusion
Brazil	1993	Certain steel products	Preferential financing, equity infusion, rebates, infrastructure provisions
Brazil	1991	Standard pipe	Equity infusion, government provision of operating capital, rebates
Brazil	1991	Hot-rolled lead and bismuth steel products	Preferential financing, equity infusion, exemptions on import duties, rebates
Canada	1999	New steel rail	Debenture guarantees, loan forgiveness, grants, iron ore freight subsidy
Canada	1996	Steel wire rod	Equity infusion, grants
France	2000	Carbon steel flat products	Loan, redeployment aid, debt cancellation, subsidies, shareholder's advances
France	1998	Sheet and strip in coils	Subsidies, shareholder's advances
France	1998	CTL plate	Redeployment aid, conditional advance, subsidies, shareholder's advances
France	1997	Sheet and strip in coils	Loan, redeployment aid, conditional advance
France	1996	CTL plate	Loan
France	1991	Carbon steel flat products	Equity infusion, loan, loan guarantee, redeployment aid, debt cancellation, subsidies, shareholder's advances
France	1991	Hot-rolled steel flat products	Loan guarantee, redeployment aid, equity infusion, R&D aid, shareholder's advances
Germany	2000	Certain steel products	Aid for the closure of steel plants, capital investment grants, loans, redeployment aid, interest rebates, Ruhr District Action Program, structural improvement assistance aid, subsidies
Germany	1997-98	CTL plate	Aid for the closure of steel plants, capital investment grants, interest rebates, loans, loan guarantees, redeployment aid, Ruhr District Action Program, social aid for workers, structural improvement assistance aid

Continued on next page.

Table OVERVIEW 6--*Continued*
Countervailable subsidies found by Commerce, 1991-2000

Country	Year	Product	Government practice
Germany	1997	Hot-rolled lead and bismuth steel	Debt forgiveness, subsidies
Germany	1996	Steel wire rod	Liquidity assurance, redeployment aid, debt forgiveness, structural improvement assistance aid
Germany	1991	Hot-rolled lead and bismuth steel	Debt forgiveness, redeployment aid, debt forgiveness
Germany	1991	Certain steel products	Aid for the closure of steel plants, capital investment grants, interest rebates, loans, loan guarantees, redeployment aid, Ruhr District Action Program, structural improvement assistance aid, subsidies
India	1999-2000	Hot-rolled carbon steel	Loan forgiveness, loans from the Steel Development Fund
India	1997-98	CTL plate	Loans from the Steel Development Fund
India	1993-94	Butt-weld pipe fittings	International Price Reimbursement Scheme
Italy	2000	Electrical steel	Debt forgiveness, loans, equity infusion, interest-free loans
Italy	2000	OCTG	Grants
Italy	2000	Stainless steel bar	Loans, equity infusion, early retirement, tax exemptions, pre-privatization assistance, debt forgiveness
Italy	2000	Seamless pipe	Grants
Italy	1998	Electrical steel	Debt forgiveness, loans, equity infusion, interest grants, interest subsidies, early retirement
Italy	1998	CTL plate	Debt forgiveness, loans, interest rebates, equity infusion, early retirement, tax exemptions
Italy	1997	Sheet and strip in coils	Debt forgiveness, loans, equity infusion, grants, interest subsidies, early retirement
Italy	1997	Stainless steel plate in coils	Debt forgiveness, loans, equity infusion, grants, interest subsidies, early retirement
Italy	1996	Steel wire rod	Debt forgiveness, loans, interest rebates, equity infusion, grants, early retirement, pre-privatization assistance, purchase and leaseback of industrial site
Italy	1993	Seamless pipe	Loans, grants
Italy	1993	OCTG	Loans, grants
Italy	1992	Electrical steel	Debt forgiveness, loans, equity infusion, loan guarantees, interest-free loans, interest grants, interest subsidies
Italy	1991	Certain steel products	Debt forgiveness, early retirement, loans, interest rebates, loan guarantees, grants, interest grants, interest subsidies
Korea	2000	Cold-rolled & corrosion-resistant flat products	Directed credit loans, equity infusion, waived port fees, two-tiered pricing structure, R&D grants
Korea	1998	Structural steel beams	Debt restructuring, directed credit loans, bond requirement exemption, price discount on land, R&D grants
Korea	1998	CTL plate	Directed credit loans, subsidies, two-tiered pricing structures, price discount on land, waived port fees, R&D grants
Korea	1997	Steel sheet and strip in coils	Directed credit loans, emergency loans, subsidies, waived port fees, two-tiered pricing structure

Continued on next page.

Table OVERVIEW 6--*Continued*
Countervailable subsidies found by Commerce, 1991-2000

Country	Year	Product	Government practice
Korea	1997	Steel plate in coils	Directed credit loans, subsidies, waived port fees
Korea	1991	Certain steel products	Equity infusion
Mexico	2000	CTL plate	Debt restructuring, assumption of foreign debt payments, equity infusions, pre-privatization assistance
Mexico	1998	CTL plate	Debt restructuring, assumption of foreign debt payments, equity infusions, pre-privatization assistance
Mexico	1997	CTL plate	Debt restructuring, equity infusion, assumption of foreign debt payments, equity infusions, pre-privatization assistance
Mexico	1991	Certain steel products	Debt restructuring, assumption of foreign debt payments, equity infusions, pre-privatization assistance
Spain	2000	CTL plate	Loans, loan guarantees employment promotion, early retirement, loan forgiveness
Spain	1991	Certain steel products	Loans, loan guarantees employment promotion, early retirement, grants
Sweden	2000	CTL plate	Equity infusions, grants, loan forgiveness, equity guarantees, employment subsidies, loans
Sweden	2000	Carbon steel products	Equity infusions, loan forgiveness, employment subsidies, loans
Sweden	1994	Carbon steel products	Equity infusions, loan forgiveness, loans
Sweden	1994	Carbon steel plate	Equity infusions, loan forgiveness, loans
Sweden	1993	Carbon steel products	Equity infusions, loan forgiveness, loans
Sweden	1992-93	Carbon steel plate	Equity infusions, loan forgiveness, loans
Sweden	1991	Certain steel products	Building and construction grants, loans, equity infusions, grants, loan forgiveness
Sweden	1991	Carbon steel products	Equity infusions, grants, loan forgiveness, employment subsidies, loans
United Kingdom	2000	CTL plate	Equity infusions, loan cancellation
United Kingdom	1997	Lead and bismuth steel	Equity infusions, loan cancellation
United Kingdom	1996	Lead and bismuth steel	Equity infusions, loan cancellation
United Kingdom	1995	Lead and bismuth steel	Equity infusions, loan cancellation
United Kingdom	1994	Lead and bismuth steel	Subsidies, equity infusions, loan cancellation
United Kingdom	1992-93	Lead and bismuth steel	Subsidies, equity infusions, loan cancellation
United Kingdom	1991-92	Certain steel	Equity infusions, loan cancellation
United Kingdom	1991	Lead and bismuth steel	Subsidies, equity infusions, loan cancellation
Source: Compiled from Commerce information.			

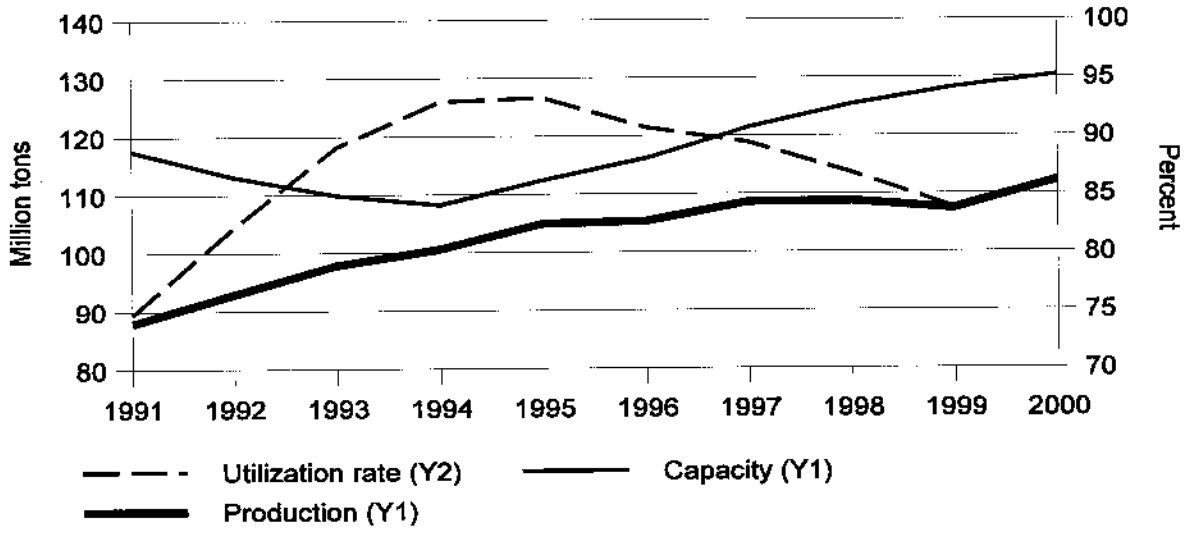
U.S. DEVELOPMENTS, 1991-2000

CAPACITY, PRODUCTION, SHIPMENTS, INVENTORIES, AND MATERIAL COSTS

The United States was the third-largest steel producer in the world in 2000, producing 112 million tons of raw steel (12 percent of the world's total raw steel output), a 27-percent increase from the 1991 level of 88 million tons (figure OVERVIEW-8).[24] Raw steel production is widely dispersed among 65 minimills and 13 integrated steel producers.[25] Indiana leads all states in steel production, followed by Ohio.[26] While production via both methods has increased, production in the electric arc furnaces has grown faster than that in basic oxygen furnaces (figure OVERVIEW-9).

During the period from 1991 to 1994, total domestic raw steel capacity fell from 118 million tons to 108 million tons, for a reduction of about 9 percent. However, capacity began to increase significantly in 1995, spurred by an 84-percent increase in the capacity of flat-rolled minimills in that year.[27] Although raw steel production has risen by over 10 percent since 1994, capacity increases have exceeded production increases, leading to a long-term decrease in utilization rates from the 1995 peak of 93.3 percent to 86.1 percent in 2000.

Figure OVERVIEW-8
U.S. raw steel production, capacity, and utilization rate, 1991-2000



Source: AISI, *Annual Statistical Report*, 2000.

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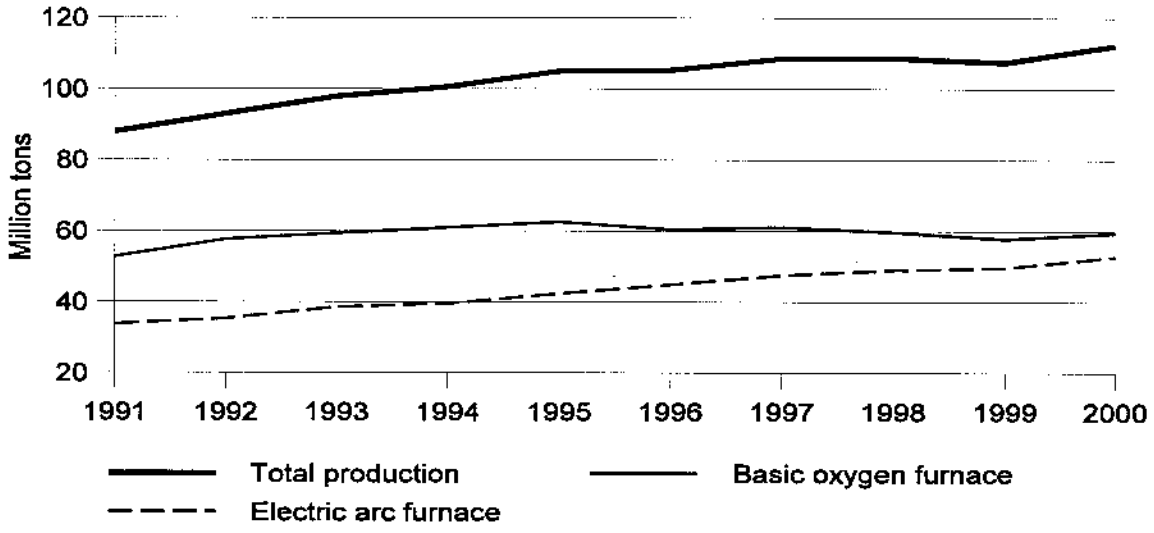
[24] AISI, *Annual Statistical Report*, 2000, p. 4.

[25] A. Wilson, "Market Share for Minis Growing Steadily," Steelmaking & Finishing, special report, *American Metal Market*, August 10, 2000.

[26] AISI, *Annual Statistical Report*, 2000, p. 76.

[27] In 1995, minimills increased their flat-rolling capacity by 3.3 million tons. See World Steel Dynamics, *Steel Strategist No. 27*, July 2001, exhibit N (2 of 8), p. 145.

Figure OVERVIEW-9
U.S. raw steel production, by process, 1991-2000



Source: AISI, *Annual Statistical Report*, 2000.

During the period from 1991 to 2000, total net shipments by U.S. producers as reported by AISI[28] increased by about 30 million tons, or 38 percent,[29] while imports increased by roughly 22 million tons from 16 million in 1991 to 38 million in 2000,[30] or by more than 130 percent (figure OVERVIEW-10). In contrast, U.S. exports increased from only 6 million tons in 1991 to 6.5 million tons in 2000. The share of apparent U.S. consumption accounted for by finished steel imports rose from 15.8 percent in 1991 to a peak of 26.4 percent in 1998, before declining to 22.3 percent in 2000.[31]

Steel inventories are held by numerous market participants, including producers, end users, importers, and service centers. Public data on inventory holdings are only available for those inventories held in storage at steel mills or at service centers. As shown in figure OVERVIEW-11, annual averages of end-of-quarter inventories held by these two sources have both exhibited generally increasing trends since 1996, although examination of monthly data shows more variation in short-term movements.[32]

The production of raw steel requires a variety of raw materials and energy inputs. The average nominal prices for some of these inputs, such as iron ore, coal, and electricity, have been relatively steady between 1991 and 2000 and have experienced modest declines over the period. However, average prices for coke, scrap, and natural gas have been more dynamic and were on an upward trend as the decade ended (figure OVERVIEW-12).

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[28] Shipment data on the products specifically covered by the scope of this investigation are not publicly available. The AISI data depict general trends for the industry and are presented for illustrative purposes.

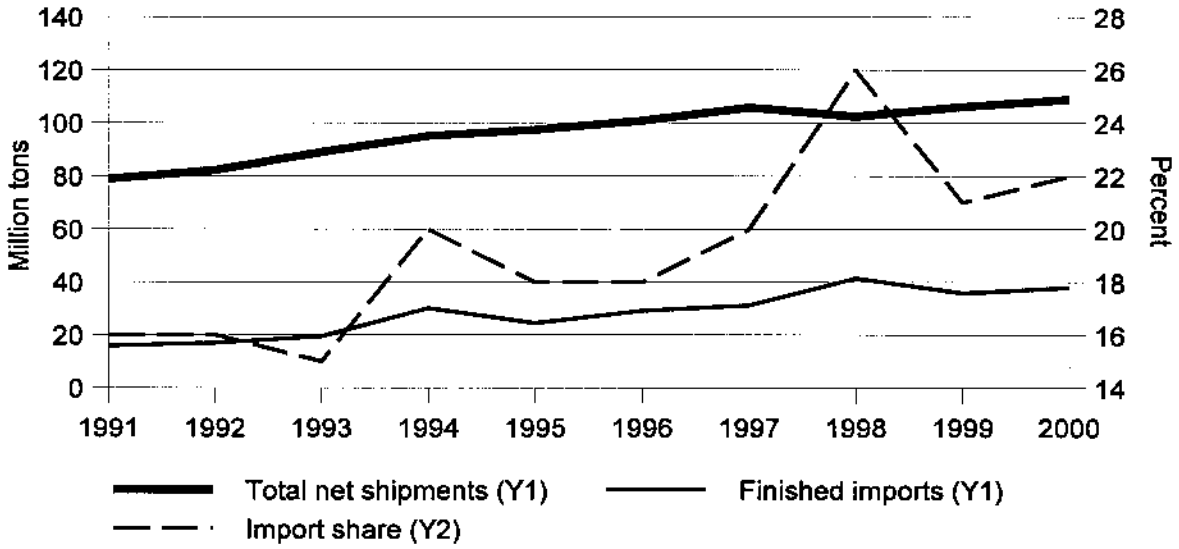
[29] Increase from 79 million tons to 110 million tons. See AISI, *Annual Statistical Report*, 2000, p. 4.

[30] Ibid.

[31] Ibid., table 1A, p. 4.

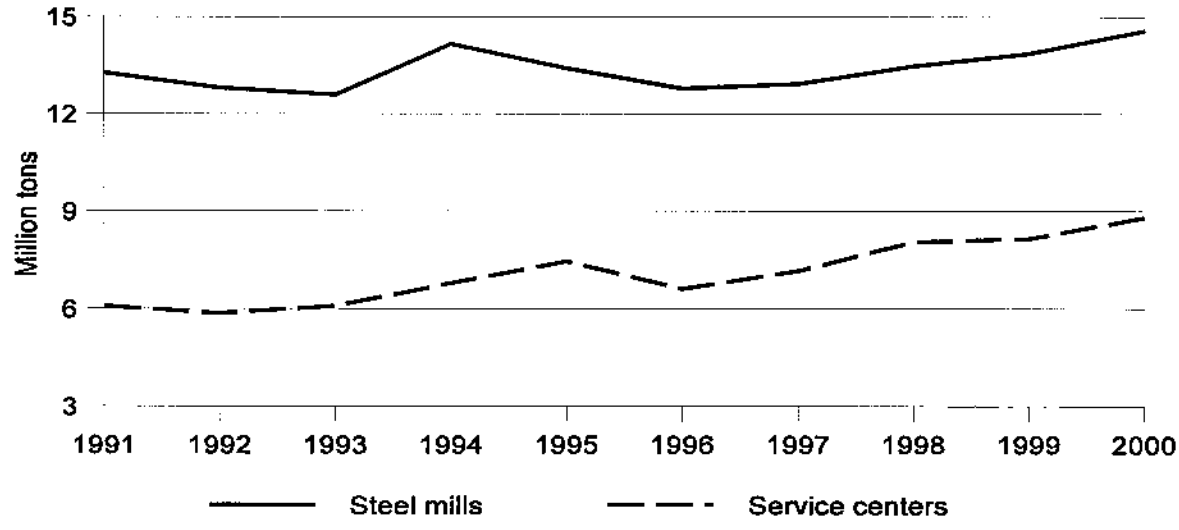
[32] As above, the products included in these data do not exactly match those included in the scope of the investigation.

Figure OVERVIEW-10
Total net shipments of U.S. producers, finished U.S. imports, and import share of apparent U.S. consumption, 1991-2000



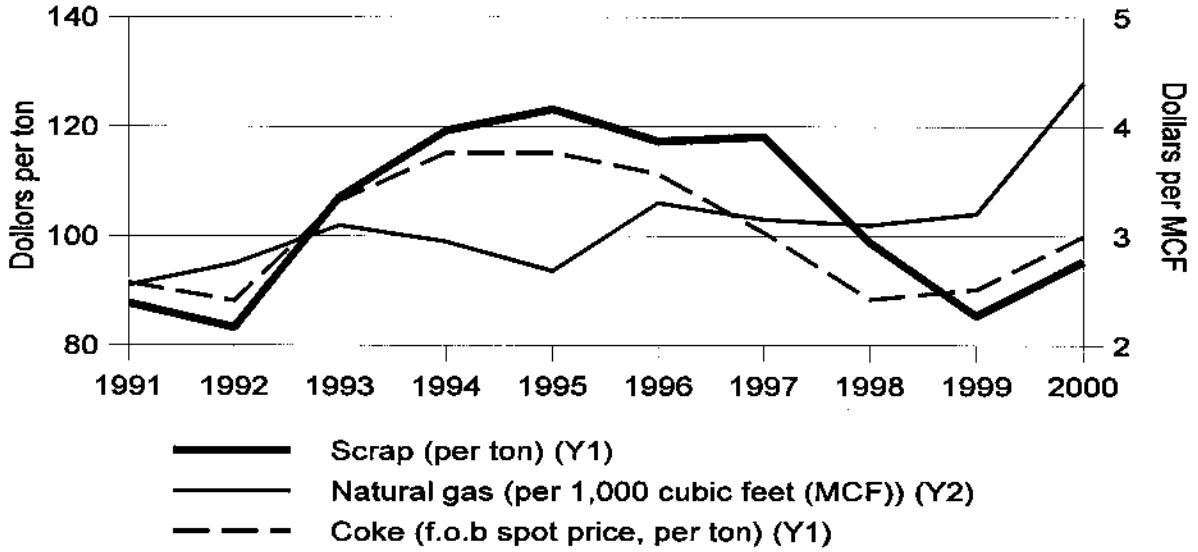
Source: AISI, *Annual Statistical Report,* 2000.

Figure OVERVIEW-11
Steel mill products: Inventory levels based on quarterly averages, 1991-2000



Source: Commerce, *Current Industrial Reports*, various years.

Figure OVERVIEW-12
Average U.S. prices for steel scrap, natural gas, and coke, 1991-2000



Source: World Steel Dynamics, *Steel Strategist* No. 27.

EMPLOYMENT AND RELATED COST ISSUES

Employment

In contrast to the trend for manufacturing in general, which has had both periods of increase and decline during the 1990s and ended the decade with a small increase, employment in the U.S. steel industry has shown an almost steady decline since 1991 (table OVERVIEW-7). A recent Bureau of Labor Statistics study[33] includes the steel industry in the group of the 20 U.S. industries showing the largest employment declines in the 1990s (table OVERVIEW-8).

The trend in average hours worked, including overtime, for production workers for manufacturing in general and the steel industry in particular show the same general trend until 1998 (as the Asian financial crisis ended). While the average hours worked in the manufacturing sector continued to decline after 1998, they increased in the steel industry, a reflection of continued job losses as production levels rebounded. Production workers in the industry were averaging 46 to 47 hours per week in 2000 (figure OVERVIEW-13).

Despite the increase in the average weekly hours worked in the steel industry during 1991-2000, the large decrease in employment caused a decrease in the aggregate hours worked during the same period (figure OVERVIEW-14).

The steel industry experienced a greater increase in average hourly earnings during 1991-2000 than did the manufacturing sector as a whole (figure OVERVIEW-15). Average hourly earnings are influenced not only by changes in normal wage rates but also by overtime pay and occupational shifts within an industry sector. Therefore, trends in the figure may not reflect changes in base pay.

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[33] Julie Hatch and Angela Clinton, "Job Growth in the 1990s: A Retrospect," *Monthly Labor Review*, December 2000, p. 7.

Table OVERVIEW-7
Employment: All manufacturing, basic steel products, and blast furnaces and steel mills, 1991 and 2000

SIC code	Industry	Employment (*1,000 workers*)		Change	
		1991	2000	Number	Percent
20-39	All manufacturing	18,406	18,469	63	0.3
331	Basic steel products[1]	263	225	-35	-13.5
3312	Blast furnaces and steel mills	199	151	-46	-23.9

[1] Includes blast furnaces, steel mills, and manufacturers of basic steel products produced from purchased steel (for example, certain pipe and wire manufacturers).

Note.--Calculations are made from the unrounded figures.

Source: Bureau of Labor Statistics, *Current Employment Survey*.

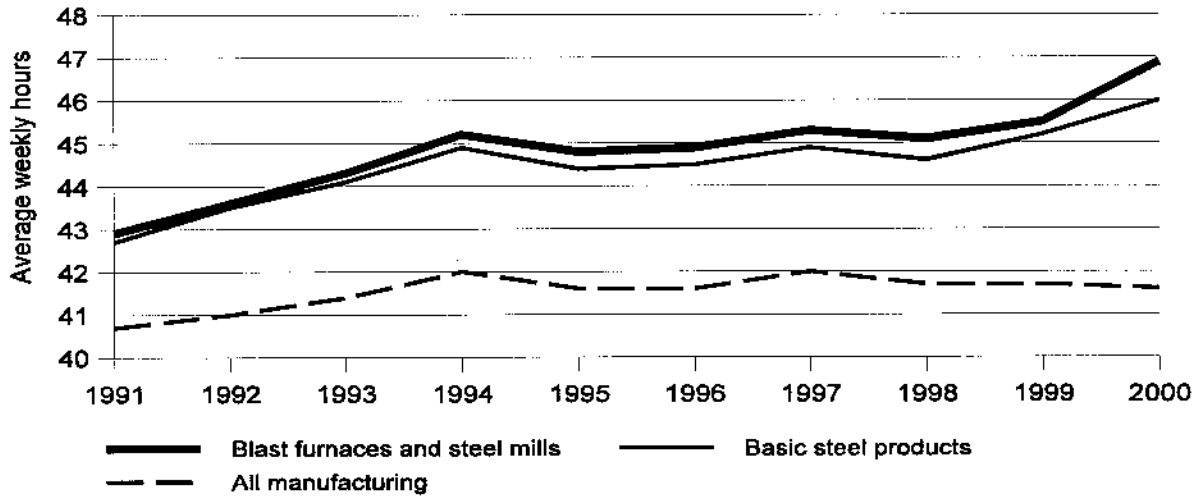
Table OVERVIEW-8
The 20 industries losing the most jobs over the 1989-99 period

Rank	SIC code	Industry	Employment (*1,000 workers*)		Change	
			1989	1999	Number	Percent
1	-	Federal government, except Postal Service	2,155.4	1,796.1	-359.3	-16.7
2	603	Savings institutions	481.5	251.5	-230.0	-47.8
3	372	Aircraft and parts manufacturing	711.0	494.9	-216.1	-30.4
4	562	Women's clothing stores	422.7	278.4	-144.3	-34.1
5	233	Women's and misses' outerwear manufacturing	342.4	205.2	-137.2	-40.1
6	381	Search and navigation equipment manufacturing	299.5	166.3	-133.2	-44.5
7	232	Men's and boys' furnishings manufacturing	287.0	157.2	-129.8	-45.2
8	376	Guided missiles, space vehicles, and parts manufacturing	194.1	88.1	-106.0	-54.6
9	357	Computer and office equipment manufacturing	458.7	370.2	-88.5	-19.3
10	491	Electric services	448.2	360.0	-88.2	-19.7
11	602	Commercial banks	1,555.0	1,475.9	-79.1	-5.1
12	225	Knitting mills manufacturing	214.8	141.0	-73.8	-34.4
13	533	Variety stores	209.8	138.0	-71.8	-34.2
14	40	Railroad transportation	292.5	229.7	-62.8	-21.5
15	131	Crude petroleum and natural gas extraction	192.7	133.1	-59.6	-30.9
16	122	Bituminous coal and lignite mining	134.2	79.8	-54.4	-40.5
17	517	Petroleum and petroleum products distribution	206.9	155.2	-51.7	-25.0
18	331	**Basic steel products**[1]	279.1	227.6	**-51.5**	**-18.5**
19	314	Footwear, except rubber manufacturing	77.3	32.9	-44.4	-57.4
20	631	Life insurance	550.2	506.0	-44.2	-8.0

[1] Includes blast furnaces, steel mills, and manufacturers of basic steel products produced from purchased steel (for example, certain pipe and wire manufacturers).

Source: Julie Hatch and Angela Clinton, "Job Growth in the 1990s: A Retrospect," *Monthly Labor Review*, December 2000, p. 7.

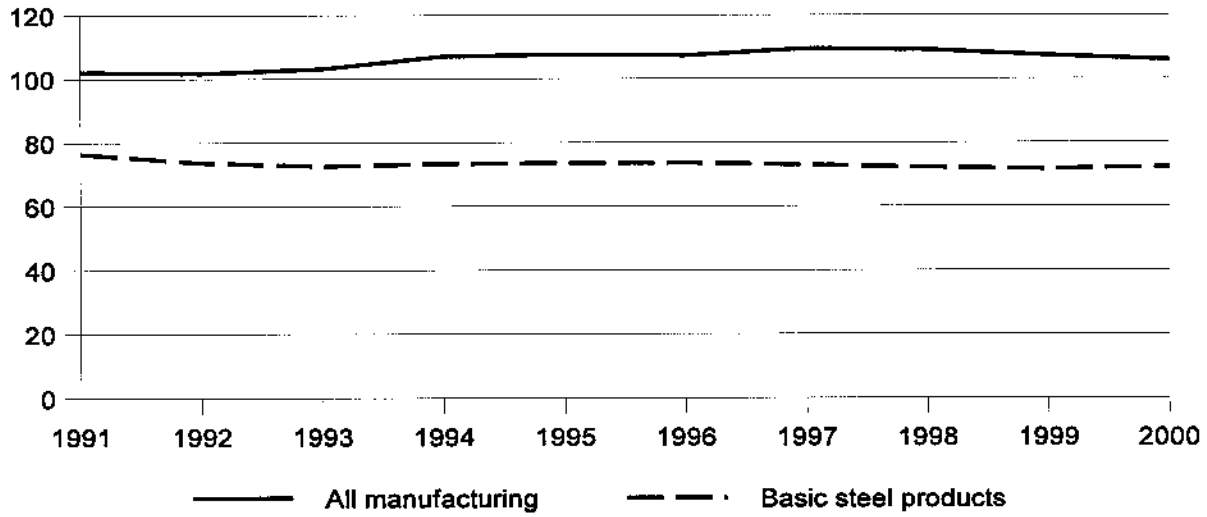
Figure OVERVIEW-13
Average weekly hours of production workers: All manufacturing, basic steel products, and blast furnaces and steel mills, 1991-2000



Note.--"Basic steel products" includes blast furnaces, steel mills, and manufacturers of basic steel products produced from purchased steel (for example, certain pipe and wire manufacturers).

Source: Bureau of Labor Statistics, *Current Employment Survey*.

Figure OVERVIEW-14
Indexes of aggregate weekly hours: All manufacturing and basic steel products, 1991-2000

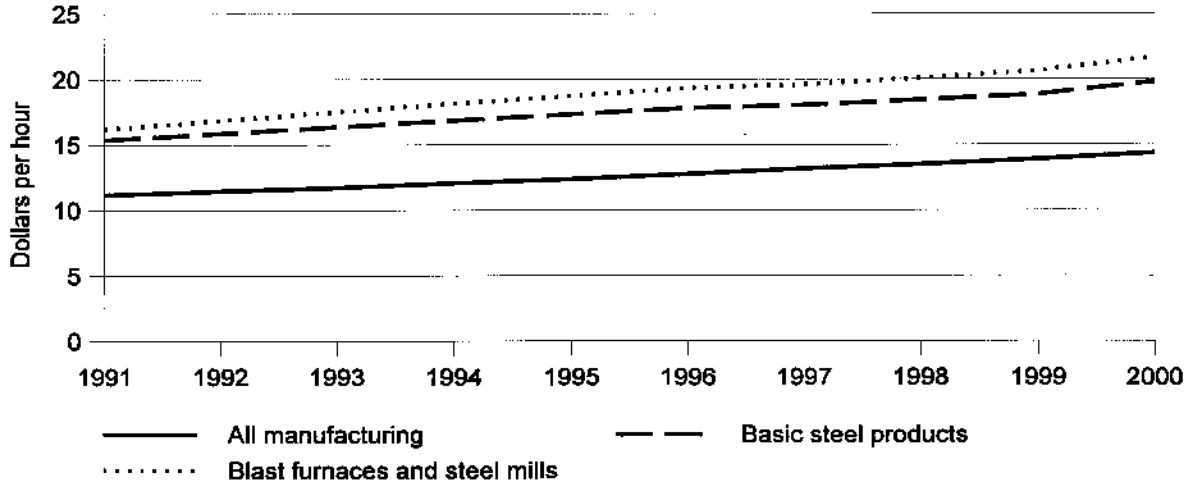


Note.--1982=100. These indexes compare annual aggregate weekly hours (including overtime) for each industry segment during 1991-2000 with aggregate weekly hours for that same industry segment in 1982.

"Basic steel products" includes blast furnaces, steel mills, and manufacturers of basic steel products produced from purchased steel (for example, certain pipe and wire manufacturers).

Source: Bureau of Labor Statistics, *Current Employment Survey*.

Figure OVERVIEW-15
Average hourly earnings of production workers: All manufacturing, basic steel products, and blast furnaces and steel mills, 1991-2000



Note.--"Basic steel products" includes blast furnaces, steel mills, and manufacturers of basic steel products produced from purchased steel (for example, certain pipe and wire manufacturers).

Source: Bureau of Labor Statistics, *Current Employment Survey*.

Pensions and Other Post-Employment Benefits

Pensions and other post-employment benefits cover specified groups of company employees, generally hourly workers, and costs for such benefits for steel company retirees are often significant for their former employers.[34] In the past, many of the companies funded only current expenses, leaving the potential liabilities not fully funded, or funded their pension plans only to the minimum extent they were required to do so by federal law,[35] and some companies that had gone into bankruptcy proceedings

[34] Under labor contracts, steelworkers meeting certain conditions were eligible to receive supplemental unemployment benefits from the company; to this was added retirement eligibility and retirement benefits for workers affected by periods of prolonged layoffs or a plant shutdown. There were two such retirement benefit plans, known as the rule of 65 or the rule of 70/80. When these plans were negotiated, the cost was estimated at about 5 cents per hour. In the 1980s, however, steel industry restructuring occurred across a broad front and companies had to grant early pensions to many thousands of workers with 20 or more years of service, and plant shutdown costs were estimated to exceed $75,000 per worker. For a discussion of some of the retirement benefits and related costs see John P. Hoerr, *And the Wolf Finally Came* (University of Pittsburgh Press: 1988), pp. 78-80 and 512.

[35] The PBGC was established in 1974 by the ERISA. After a plan is terminated, PBGC becomes trustee of the plan and administers benefits. According to the agency's 2000 annual report, the PBGC became trustee of 103 single-employer plans covering 27,500 persons in 2000, and currently administers a total of 2,840 trusteed plans.

terminated underfunded pension plans. The magnitude of such liabilities became more evident following the promulgation of applicable accounting and reporting (GAAP) standards.[36]

Data on sales revenue, operating income, and costs and liabilities related to steel company post-employment obligations were compiled from 23 companies' annual public reports on form 10-K to the Securities and Exchange Commission (table OVERVIEW-9). Although the majority of the 23 companies surveyed have defined benefit plans,[37] several have defined contribution plans.[38] The data reflect amendments to post-employment benefit plans and the initiation or termination of plans.[39]

The net periodic cost (or benefit, shown in parentheses) for pension benefits ranged from a cost of $346 million to a benefit of $147 million for the companies with defined benefit plans, and from a cost of $3 million to a cost of $82 million for the companies with defined contribution plans between 1996 and 2000. Pension expense is reported in a company's cost of goods sold (stemming from overhead in the determination of product costs) in its current-period income statement, and is included in the cost of inventories in the company's balance sheet. However, pension expense in defined benefit plans is not simply the amount that the company currently funds its plan obligations; instead, pension expense is a net amount calculated by adding together five components.[40] The calculation may result in a benefit (*i.e.*,

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[36] Public companies have to adhere to certain standards of reporting current and noncurrent pension and other benefits expenses and liabilities. These standards are the FASB SFAS number 87, "Employers' Accounting for Pensions," issued December 1985; number 88, "Employers' Accounting for Settlements and Curtailments of Defined Benefit Pension Plans and for Termination Benefits," issued December 1985; number 106, "Employers' Accounting for Postretirement Benefits Other than Pensions," issued December 1990; and number 132, "Employers' Disclosures About Pensions and Other Postretirement Benefit Plans," issued December 1998 (SFAS 132 does not change the measurement or recognition of plans, but addresses the financial statement footnote disclosures and schedules needed by reporting companies).

[37] Under a defined benefit plan the employer agrees to provide a benefit at retirement that is fixed by a formula. Because the benefits are defined, the employer accepts the risk associated with changes in the variables that determine the amounts needed to meet the obligation to plan participants. Most noncontributory defined benefit plans have pensions that are based on final pay and years of service. The companies in this compilation that have defined benefit plans are Acme Metals, Inc.; AK Steel Corp.; AmeriSteel; Bethlehem Steel Corp.; Carpenter Technology Corp.; Geneva Steel Co.; Ispat Inland, Inc.; Laclede Steel Co.; Lone Star Steel Co.; LTV Steel Co., Inc.; National Steel Corp.; Oregon Steel Mills, Inc.; Rouge Steel Co.; The Timken Co.; United States Steel LLC; WCI Steel, Inc.; Weirton Steel Corp.; and WHX (Wheeling-Pittsburgh Steel Corp.). Pension accounting is complex and involves the use of special terminology, discussed briefly later. There are two accounting entities involved: (1) the employer sponsor of the pension plan and (2) the pension plan which is usually under the control of a pension trustee.

[38] Under a defined contribution plan the employer agrees to make a defined contribution to a pension plan as determined by the provisions of the plan. Consequently, plan participants will receive at retirement whatever benefits the contributions can provide. The accounting is relatively straight-forward: each year the employer records an expense for the contribution. The companies that have defined contribution plans are Birmingham Steel Corp.; California Steel Industries, Inc.; Commercial Metals (parent of Structural Metals Inc); Nucor Corp.; and Steel Dynamics, Inc.

[39] For example, Lone Star Steel Co. amended its plans so that new employees (hired after 1996 in the case of the largest plan and after 1998 in the case of two other plans) do not participate in the defined benefit plans. WCI Steel, Inc. and Geneva Steel Co. instituted defined benefit plans in 1995 and 1999, respectively. Commercial Metals terminated its defined benefit plan in 1997 (the plan was settled in 1998) and instituted discretionary-contribution profit-sharing or savings plans (company contributions were $18 million in 2000).

[40] The annual funding of the pension or other post-employment benefit plan increases the amount of the fund's assets, but the amount is not used in the calculation of current pension cost. Pension cost is based on actuarial assumptions using the following components: (1) service cost (accrued present value of service of the retirees

(continued...)

Table OVERVIEW-9
Post-employment benefit data of selected steelmakers, fiscal years 1996-2000

Item	1996	1997	1998	1999	2000
Defined benefit plans					
			Value (*million dollars*)		
Total net commercial sales	36,521	37,400	35,771	34,351	34,046
Operating income or (loss)	1,320	2,256	1,829	69	(519)
Total assets	37,585	38,713	39,074	42,584	38,645
Post-employment pension benefits: Net periodic cost or (benefit)	346	323	41	(54)	(147)
Funded status–fund assets (less than)/greater than benefit obligation	(522)	1,381	1,902	3,619	1,967
Amount recognized in financial statements: Current (liability) or asset	(26)	(1)	(5)	(4)	(7)
Amount recognized in financial statements: Noncurrent (liability) or asset	1,012	1,747	971	1,168	1,647
Post-employment benefits other than pensions: Net periodic cost (benefit)	774	704	711	733	742
Funded status–fund assets (less than)/greater than benefit obligation	(8,454)	(8,669)	(9,340)	(9,037)	(8,569)
Amount recognized in financial statements: Current (liability) or asset	(177)	(168)	(182)	(175)	(175)
Amount recognized in financial statements: Noncurrent (liability) or asset	(8,204)	(8,898)	(9,045)	(9,290)	(8,023)
Defined contribution plans					
Total net commercial sales	7,749	8,564	8,843	8,547	9,594
Operating income	3,462	3,976	3,982	3,904	4,189
Total assets	4,562	5,336	5,912	6,245	6,351
Net pension plan expense	3	10	82	67	78
Net expense for other post-employment benefits	0	0	0	4	3
Source: Compiled from data reported in company form 10-K reports filed with the Securities and Exchange Commission.					

[40] (...continued)
during the present period); (2) interest on the projected benefit obligation; (3) expected return on plan assets; (4) amortization of unrecognized prior service cost; and (5) the effect of gains and losses that result from experience being different from that assumed, or from a change in an actuarial assumption. On the other hand, defined contribution plans (which often take the form of 401(k) plans) are established to allow plan participants to contribute a percentage of their compensation, not to exceed statutory limits, and often provide for discretionary matching by the company of the participant's contribution. Participants are usually vested in full to the amount of their own contribution, but must meet length-of-service requirements to become fully vested in the company's contribution. The net current cost under a defined contribution plan is the company's actual payment. Jan R. Williams, Joseph V. Carcello, and Judith Weiss (ed.), *2000 Miller GAAP Practice Manual* (New York: Harcourt Professional Publishing, 2001), pp. 29.05-29.38.

income) and a reduction to cost of goods sold, as was the case for the combined companies in 1999 and 2000, accounted for mainly by AK Steel Corp., Carpenter Technology Corp., and United States Steel LLC. In 2000, for example, these three companies recorded net benefits of $47.7 million, $42.6 million, and $273 million, respectively.[41] In contrast, Bethlehem Steel Corp. and LTV Steel Co., Inc. recorded net pension costs of $55 million and $107 million, respectively, in 2000.[42] [43] Net current pension costs or benefits are relatively small in relation to total net commercial sales of the defined-benefit companies, but are large in relation to those companies' combined operating income. Such costs for the defined-contribution companies were small in relation to both their combined net sales and their operating incomes during 1996-2000.

Currently, several steel companies in bankruptcy proceedings have classified their pension liabilities as "at risk." Laclede Steel Co., for example, states that "as a result of the filing under Chapter 11 on November 30, 1998, the Company is not permitted to make contributions to the pension plans related to prepetition liabilities. Due to the size of the underfunding of the hourly and salaried pension plans, the Company expects the plans will be terminated and the pension obligations assumed by the PBGC."[44] Acme Metals, Inc., operating under bankruptcy since 1998, also states that it is not permitted to make contributions to its pension plans related to prepetition liabilities without court approval, although it has not been prevented from making any contributions through year-end 2000; Acme Metals, Inc. states that it has no funding requirements for 2001.[45] LTV Steel Co., Inc., which filed for bankruptcy protection on December 29, 2000, states that the bankruptcy court has allowed the payment of certain employee benefits. While it states that there will be no significant pension funding requirements before 2004,[46] it has nonetheless classified as "at risk" pension benefits of $642 million and post-employment health care and insurance benefits of $1.6 billion.[47]

Post-employment benefits other than pensions generally include health and medical benefits and life insurance plans.[48] The data show that their net periodic cost to steelmakers was significantly greater in each period than the net periodic cost of the companies' pension plans; like pension plan costs, these costs are also included in cost of goods sold and in inventory. The data also indicate that the combined plans for post-employment benefits other than pensions are underfunded. There are several important differences between pension plans and those for other post-employment benefits. Compared with defined benefit pension plans, other post-employment benefit plans generally (1) are less well funded; (2) include an uncapped benefit with high variability; (3) cover the retiree as well as a range of dependents;

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[41] AK Steel Holding Corp., 2000 Form 10-K, p. 36 (as filed); Carpenter Technology Corp., 2000 Form 10-K, Note 11; and USX Corp., 2000 Form 10-K, p. S-13 (as filed).

[42] Bethlehem Steel Corp., 2000 Form 10-K, p. 16 (as filed) and LTV Corp., 2000 Form 10-K, p. 63 (as filed).

[43] Bethlehem Steel Corp. employed an average of 14,700 employees during 2000 compared to 73,700 pensioners receiving benefits at year end 2000. The corporation's employment costs, including pensions and other post-employment benefits, were $1.3 billion out of total operating costs of $4.3 billion in 2000. Salaries and wages accounted for $818 million of Bethlehem's employment costs compared with employee benefit costs of $513 million. Current net pension and other post-employment benefit costs were $55 million and $358 million in 2000, respectively. Bethlehem Steel Corp., 2000 Form 10-K, pp. 17 and 23 (as filed).

[44] Laclede Steel Co., Item 7, Employee Benefits, 2000 Form 10-K, p. 38 (as filed).

[45] Acme Metals, Inc., 2000 Form 10-K405, p. 52 (as filed).

[46] LTV Corp., 2000 Form 10-K405, p. 62 (as filed).

[47] Ibid., p. 58 (as filed).

[48] Many of the steel companies surveyed for this section reported making contributions to a Voluntary Employee Benefit Association Trust, established January 1, 1994 for payment of health care benefits made to United Steelworkers of America retirees; funding of the trust is made as claims are submitted for payment or according to a schedule based on hours worked.

(4) have a benefit that is payable as needed and used; and (5) have less predictable benefit utilization and costs.[49] Moreover, in contrast to pension benefits, plans for other post-employment benefits are not insured by the PBGC.[50]

Data showing the funding status and amounts recognized on the companies' balance sheets (as an asset or a liability in parentheses) for their defined benefit plans also are presented in table OVERVIEW-9. The funded (unfunded) amounts shown represent the difference between the combined companies' actuarial present value of plan obligations and fair value of plan assets at the end of a fiscal year.[51] Adjustments to the value of plan obligations and assets are made to incorporate service and interest costs, plan amendments, gains, employer contributions, and distributions. The amount recognized and shown in a company's balance sheet is the funded status of its defined benefit plan at year end with adjustments to incorporate unrecognized costs and actuarial gains, as well as any additional minimum liability. The company data indicate that total plan assets generally are greater than total benefit obligations of the companies' combined defined pension benefit plans. The data also indicate that because these plans are over-funded, the amounts recognized are noncurrent assets, while a small amount ($7 million in 2000) is recognized as a current liability. This funding status and recognition in 2000 is accounted for mainly by United States Steel LLC ($2.4 billion over-funded pension plan and $2.6 billion recognized), while many of the remaining companies with defined benefit pension plans have underfunded plans and recognize both current and noncurrent liabilities.

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[49] Patrick R. Delaney, *Wiley CPA Examination Review 2000, Financial Accounting and Reporting* (New York, NY: John Wiley & Sons, 2000), pp. 350-363.

[50] PBGC, *2000 Annual Report*, Mission Statement.

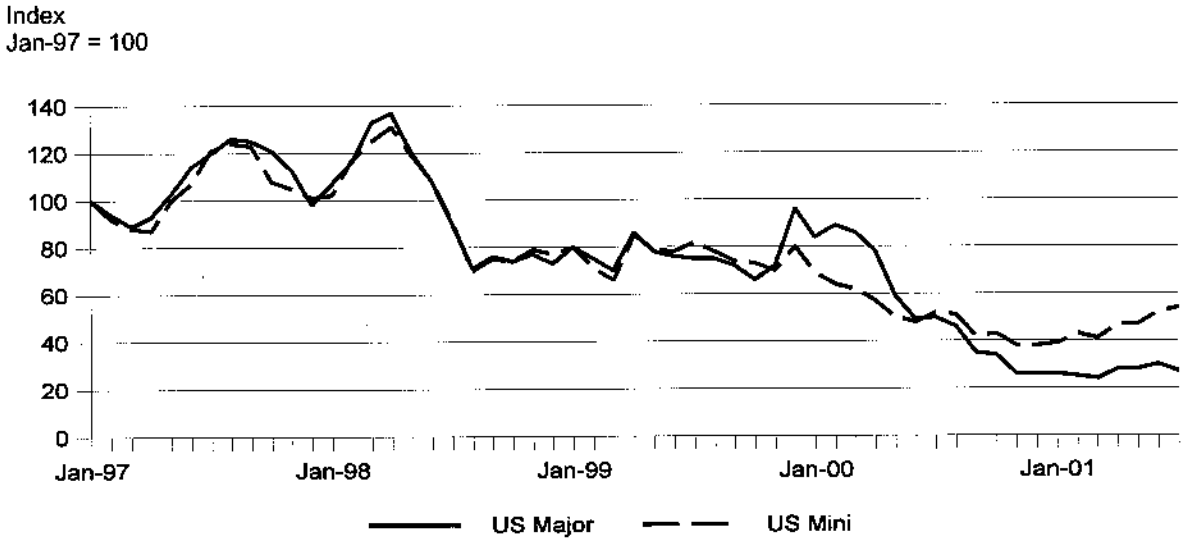
[51] Actual pension payments may be based on projected salary or wage levels; the present value of plan obligations, based on service to date, actuarial assumptions, and projected salary levels, is referred to as the PBO. The present value of plan obligations using current salary or wage levels and these other assumptions is the ABO. If wage or salary increases are not incorporated into the pension benefit formula (*e.g.*, a retiree receives a fixed amount for each month worked), the ABO and PBO would be equal. Companies are required to recognize a "minimum pension liability" in their financial statements, which is the amount by which the ABO exceeds the fair value of plan assets at year end. Two balance sheet accounts are used to show the minimum liability: (1) Intangible Asset-Deferred Pension Cost and (2) Additional Pension Liability (which is closed at year end to accumulated other comprehensive income, a component of stockholders' equity). The requirement to report a minimum liability (ABO in excess of the fair value of plan assets) is independent of other reporting requirements for defined benefit plans, but an employer may not record an asset when the fair value of plan assets exceeds the accumulated benefit obligation. A company may reconcile its ABO and PBO at year end to calculate and recognize its minimum pension liability; this reconciliation is presented in footnote disclosures to its financial statements. Many of the companies surveyed reported that they fund at least the minimum contribution required by ERISA.

FINANCIAL AND INVESTMENT TRENDS

Financial Trends

The production of most steel products included in this investigation is a highly capital intensive undertaking. Companies require regular infusions of capital both for new equipment and regular maintenance and upkeep of existing capital stock. The sources of such investment have traditionally been retained earnings, debt, and equity. All of these avenues have been constrained in the last decade. Since 1991, the market value of the stocks of steel companies in the United States has been in the decline. Figure OVERVIEW-16 shows the performance of the World Steel Dynamics major mill and minimill stock indices, which it began tracking in 1997. Stock prices of both groups, which are indicators of past or expected future financial performance, have declined significantly since that time, inhibiting companies' ability to raise money in equity markets.

Figure OVERVIEW-16
World Steel Dynamics' index of steel stock prices, U.S. major mills and U.S. minimills



Major mills include AK Steel Corp.; Bethlehem Steel Corp.; Ispat Inland, Inc.; LTV Steel Co., Inc.; National Steel Corp.; Rouge Steel Co.; United States Steel LLC; Weirton Steel Corp.; and Wheeling-Pittsburgh Steel Corp. Minimills include Bayou Steel Corp.; Birmingham Steel Corp.; CMC Steel Group; Keystone Steel & Wire; Nucor Corp.; Oregon Steel Mills, Inc.; and Steel Dynamics, Inc.

Source: World Steel Dynamics.

Only a few U.S. steel companies are in a position to raise capital or refinance their existing debt through the issuance of unsecured bonds. Table OVERVIEW-10 shows the history of the ratings of the senior debt of representative steel companies over the past decade, as rated by Moody's Investment Service.

Table OVERVIEW-10
Moody's ratings[1] of senior unsecured debt of selected[2] U.S. steel producers, 1991-2001

Company	Rating 1/1/91[3]	Changes										Rating 2001
		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	
AK Steel Corp.					B1	⇑Ba3	⇑Ba2					Ba2
Bethlehem Steel Corp.	Ba3		⇓B1						⇑Ba3		⇓B2	⇓Caa1
Carpenter Technology Corp.	A3										⇓Baa1	Baa1
CMC Steel Corp.						Baa2		⇑Baa1				Baa1
Geneva Steel Co.				B1			⇓ B2		⇓Caa1	⇓ Ca ⇓ C	WR[4]	
Northwestern Steel & Wire Co.				B1				⇓B3		⇓Caa1 ⇓Ca		WR
Nucor Corp.			A1									A1
Quanex	Ba3		⇑ Ba2									Ba2
Weirton Steel Corp.	Ba2	⇓Ba3	⇓B2									⇓Caa1
Wheeling-Pittsburgh Steel Corp.								B2			⇓B3 ⇓Caa3	⇓C WR

[1] Moody's ratings range from Aaa (highest) to C (lowest). Ratings of Baa and higher are considered "investment grade." The numerical modifiers run from 1 (highest) to 3 (lowest).
[2] Moody's did not provide histories for all rated steel companies.
[3] Companies with no rating as of January 1, 1991 either did not exist in their present form or did not have a rating.
[4] WR indicates "withdrawn rating," an action which usually occurs upon the bankruptcy of the rated firm.

Source: Moody's Investors Service.

The senior debt[52] of only five U.S. steel companies is rated "investment grade."[53] The debt of the rest of the companies is rated lower than investment grade or not rated at all, limiting companies' access to capital from such sources as pension funds and fiduciaries. Even for those firms rated as investment grade, ratings at the lower end of the range will require offering higher interest rates, making repayment more expensive. Moreover, over the last three years, the debt ratings of steel companies have been repeatedly lowered as companies have had difficulty earning a return on their invested capital.

Since December 1997, 25 steel companies have sought the protection of the bankruptcy courts because of their lack of resources. Of these, 23 are producers of products subject to these investigations (table OVERVIEW-11). Most of these companies have continued to operate while they develop a plan to refinance their debts, but several have been forced to shut down. Many of the companies that have been forced into bankruptcies are those that invested during the 1990s with the plan of improving their capabilities.

[52] Subordinated debt, such as debentures, has historically been rated lower than senior debt.

[53] The five companies are Allvac, an Allegheny Technologies Co.; Carpenter Technology Corp.; CMC Steel Group; Nucor Corp.; and United States Steel LLC. "Investment grade" is defined by Moody's as Baa or better.

Table OVERVIEW-11
U.S. producers of subject products that have filed for bankruptcy, December 1997 to October 2001

Company and location	Date of bankruptcy filing	Products	Raw steel capacity (*million tons*)	Employees affected[1]	Status	Comments	ITC questionnaire response?	Periods in which data are provided in questionnaire response
Bethlehem Steel Corp. Baltimore, MD; Portage, IN; and Steelton, Coatesville, and Conshohocken, PA	October 2001	Plate, hot- and cold-rolled sheet, galvanized sheet, tin plate, and rail	11.3		Operating		***	***
Riverview Steel Corp. Glassport, PA	August 2001	Rebar	None		Operating	Privately owned by Sherman International Corp.	***	***
Laclede Steel Co. Alton, IL and Fairless Hills, PA	November 1998 and July 2001	Welded tubular products other than OCTG	0.6	525	Shut down September 2001	Emerged from bankruptcy January 2001. Filed for bankruptcy July 2001.	***	***
Excaliber Holdings Corp. St. Louis, MO	July 2001	Tubing producer	None		Operating	Company is a fabricator of tube subassemblies for automotive, RV, construction, trucking, and agricultural industries. In October 2001, it announced that it would be shut down by year end.	***	***
Freedom Forge (Standard Steel) Burnham and Latrobe, PA	July 2001	Railway wheels and axles and other forged products, ingots and billets	0.3		Operating		***	***
Great Lakes Metals, LLC E. Chicago, IN	April 2001	Electrogalvanizing processor	None	40	Shut down July 2001		***	***

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Table OVERVIEW-11--*Continued*
U.S. producers of subject products that have filed for bankruptcy, December 1997 to October 2001

Company and location	Date of bankruptcy filing	Products	Raw steel capacity (*million tons*)	Employees affected[1]	Status	Comments	ITC questionnaire response?	Periods in which data are provided in questionnaire response
Republic Technologies International Lorain and Canton, OH and others	April 2001	Long products: Ingots, billets, and blooms Hot-rolled bar and light shapes Cold-finished bar Wire Stainless: Bar and light shapes	3		Operating	Joint venture of Blackstone Capital Partners (68%), United States Steel (16%), and Kobe Steel (Japan) (16%).	***	***
Trico Steel Decatur, AL	March 2001	Hot-rolled sheet	2.2	320	Shut down March 2001	Joint venture of LTV Steel Co., Inc. (50%), Corus (UK) (25%), and Sumitomo Metals (Japan) (25%).	***	***
GS Industries Georgetown, SC and Kansas City, MO	February 2001	Wire rod, bars, grinding media (balls and rods)	2	800	Operating SC plant	Announced permanent shutdown of Kansas city operations with 1 million tons capacity and 800 employees.	***	***
Heartland Steel, Terre Haute, IN	January 2001	Cold-rolled sheet processor	None		Operating		***	***
CSC Ltd. Warren, OH	January 2001	Carbon and alloy steel bar	0.5	1,400	Shut down March 2001	Privately owned by Reserve Group, Akron, OH.	***	***
Northwestern Steel & Wire Co. Sterling, IL	December 2000	Long products: Ingots, billets, and blooms Heavy structural shapes and sheet piling	2.4	1,400	Shut down May 2001		***	***

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Table OVERVIEW-11--*Continued*
U.S. producers of subject products that have filed for bankruptcy, December 1997 to October 2001

Company and location	Date of bankruptcy filing	Products	Raw steel capacity (*million tons*)	Employees affected[1]	Status	Comments	ITC questionnaire response?	Periods in which data are provided in questionnaire response
LTV Steel Co., Inc. Cleveland, OH, Indiana Harbor, IN, and others	December 2000	Flat products: Slabs Hot-rolled sheet, strip, & coils Cold-rolled sheet and strip, (other than GOES) Corrosion-resistant & other coated sheet and strip Tin mill products	8	2,000	Operating	Announced plan to permanently close wholly-owned iron ore mine employing 1,100. Announced plans in June 2001 to close Cleveland-West operations, which employ 900 persons and have capacity of 2 million tons.	***	***
Erie Forge and Steel, Inc. Erie, PA	December 2000	Long products: Ingots, billets, and blooms Stainless products: Slabs, ingots, billets, and blooms	0.5		Operating		***	***
Vision Metals, Inc., South Lyon, MI and Rosenberg, TX	November 2000	Tubular products: Seamless tubular products other than OCTG Welded tubular products other than OCTG	None		Operating		***	***
Wheeling-Pittsburgh Steel Corp. Steubenville, OH	November 2000	Flat products: Slabs Hot-rolled sheet, strip, & coils Cold-rolled sheet and strip, other than GOES Corrosion-resistant & other coated sheet and strip Tin mill products	3		Operating	Subsidiary of WHX Corp. Announced layoff of 50 salaried employees. To receive $400,000 from State of West Virginia contingency fund to complete construction of coil processing line.	***	***
J&L Structural, Inc. Aliquippa, PA	June 2000	Long products: Heavy structural shapes and sheet piling	None		Operating		***	***

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Table OVERVIEW-11--*Continued*
U.S. producers of subject products that have filed for bankruptcy, December 1997 to October 2001

Company and location	Date of bankruptcy filing	Products	Raw steel capacity (*million tons*)	Employees affected[1]	Status	Comments	ITC questionnaire response?	Periods in which data are provided in questionnaire response
Gulf States Steel, Inc. of Alabama Gadsden, AL	July 1999	Flat products: Slabs Plate Hot-rolled sheet, strip, & coils Cold-rolled sheet and strip, other than GOES Corrosion-resistant & other coated sheet and strip	1.5	1,600	Shut down August 2000		***	***
Qualitech Steel Corp. Pittsboro, IN	March 1999	Round bars	0.6	400	Shut down January 2001	Wholly owned iron carbide direct reduction plant in Corpus Christi, TX also shut down.	***	***
Geneva Steel Co. Provo, UT	February 1999	Flat products: Slab Plate Hot-rolled sheet, strip, & coils	2.5		Operating	Emerged from bankruptcy as Geneva Steel Holdings Corp., January 2001, with federally guaranteed loan of $110 million.	***	***
WorldClass Processing Inc. Ambridge, PA	December 1998	Pickling of hot-rolled sheet	None		Operating	Acquired by Samuel Manu-Tech Inc. (Canadian processing company) June 2000	***	***
Acme Metals, Inc. Riverdale, IL	September 1998	Hot-and cold-rolled sheet, including high-carbon and HSLA grades	1.2		Operating		***	***
AL Tech Specialty Steel Corp./Empire Specialty Steel, Inc. Dunkirk, NY	December 1997	Stainless products: Bar and light shapes Rod Tool steel, all forms Wire	None	280	Shut down June 2001	Bankruptcy was due to failure of its Korean parent company, Sammi. Emerged from bankruptcy November 1999 as Empire Specialty Steel, Inc.	***	***

[1] Number of employees at closed facilities.

Source: Compiled from various public sources and responses to Commission questionnaires.

Investment Trends

Although the U.S. steel industry has not experienced consolidation of large firms similar to the European experience, there has been some merger and acquisition activity in the industry, as both U.S.- and foreign-based firms have consolidated operations. Table OVERVIEW-12 lists significant mergers and acquisitions in the U.S. industry producing subject products over the last decade.

The U.S. steel industry has devoted much of its available capital to investments intended to expand both total capacity and to improve product mix by expanding the capacity to produce higher value-added products. Table OVERVIEW-13 is a listing of projects undertaken in the United States during 1996 through 2000. While not exhaustive, it is intended to illustrate the type of investments that have been undertaken.

U.S. GOVERNMENT PROGRAMS (FEDERAL, STATE, AND LOCAL)

Within the United States, there has been government support for the steel industry at the federal, state, and local levels. These programs consist of VRAs, grants, inexpensive land on which to locate, debt forgiveness, infrastructure support, and R&D assistance.[54]

The VRA Program

The Steel Trade Stabilization Act passed by Congress in 1984 authorized the President to negotiate VRAs with supplying nations. Those agreements supplemented the VRA negotiated with the EU in 1982.[55] The VRAs limited imports of a variety of steel products, with product coverage varying by country. In some cases, the agreement specified market share limits as a percentage of projected U.S. apparent consumption. In other cases, the agreement set fixed quantitative limits. Some countries were subject to both kinds of restrictions for different products.[56]

The program was extended in 1989 by the Steel Trade Liberalization Act for another 2½ years to permit the negotiation of an international consensus to remove unfair trade practices and to provide more time for the industry to adjust and modernize.[57] This extension was also seen as a method to gradually phase out the VRAs.[58] The VRA program ended in March 1992.

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[54] See the Department of Energy, Office of Industrial Technologies Industrial Project Locator at *http://iplocator.y12.doe.gov/IPLocator/Scripts/Frameset.cfm?NoVar=Emptyv* for more information on such projects.

[55] The VRA with the EU did not apply to Portugal and Spain, which were not members of the EU in 1982. Imports from Portugal and Spain were restricted by separate agreements that remained in force after they joined the EU in 1986. Other countries covered by VRAs included Australia, Austria, Brazil, China, Czechoslovakia, East Germany, Finland, Hungary, Japan, Korea, Mexico, Poland, Romania, South Africa, Trinidad and Tobago, Venezuela, and Yugoslavia.

[56] USITC, *The Effects of the Steel Voluntary Restraint Agreements on U.S. Steel-Consuming Industries*, May 1989, USITC Publication 2182, p. 1-1.

[57] The White House Office of the Press Secretary, "Statement by the President," July 25, 1989.

[58] Letter from former United States Trade Representative Carla Hills to former Commission Chairman Anne Brunsdale, January 17, 1990.

Table OVERVIEW-12
Significant steel company mergers and acquisitions, 1991-2001

Year	Company	Merger description
2001	Lone Star Steel Co.	Announced that it will acquire the assets of North Star Steel's Tubular Division, resulting in the merger of a major producer of welded tubular products for the energy industries (Lone Star Steel Co.) with a leading producer of seamless tubular products (North Star Steel).
2001	Nucor Corp.	Nucor Corp., a multiplant minimill producer, acquired Auburn Steel, a minimill.
2000	United States Steel LLC	United States Steel LLC, the largest of the U.S. integrated companies, acquired VSZ a.s., an integrated company located in Slovakia.
2000	LTV Steel Co., Inc.	LTV Steel Co., Inc., a large integrated steel company, acquired Copperweld Steel, a major producer of pipe and tubing, including carbon, alloy and stainless steel.
2000	Republic Technologies International	Formed in a merger of Republic Engineered Steels, USS-Kobe Steel, and Bar Technologies. Bar Technologies was itself the result of a merger in 1996 (see below).
2000	Maverick Tube Corp.	Acquired Prudential Steel Ltd., a Canadian producer of tubular products with a major tubemaking operation in Longview WA.
1999	AK Steel Corp.	AK Steel Corp., a major integrated steel company acquired Armco, Inc., a major producer of stainless and silicon steel flat products and carbon steel pipe.
1999	Roanoke Electric Steel Corp.	Roanoke Electric Steel Corp., a minimill company, acquired Steel of West Virginia, Inc., a minimill.
1999	AmeriSteel	Controlling interest in AmeriSteel was acquired by Gerdau, a Brazilian company with ownership of minimill operations in Canada and Latin America. In 2001, management of AmeriSteel and Gerdau-Courtice, a Canadian company, were merged to operate as a single entity.
1998-99	Allegheny Ludlum Corp.	Allegheny Ludlum Corp., a major producer of stainless and tool steel products, acquired from Bethlehem Steel Corp. certain operating facilities that were previously operations of Lukens, Inc.
1998	Bethlehem Steel Corp.	Bethlehem Steel Corp., a major integrated steel company, acquired Lukens, Inc., an electric furnace-based producer of carbon and alloy steel plate, and stainless steel flat-rolled products. The stainless steel operations were sold mostly to Allegheny Ludlum Corp.
1998	Ispat Inland, Inc.	Inland Steel, a major U.S. integrated producer, was acquired by Ispat International, Inc., a London-based holding company of mostly minimill steel companies in Canada, Mexico, Trinidad, and the EU.
1998	Co-Steel (Canada)	Acquired New Jersey Steel Corp. and renamed it Co-Steel Sayreville. Operates as a single entity with Co-Steel Raritan, Perth Amboy, NJ. Co-Steel is a half-owner of Gallatin Steel Co., Gallatin, KY, and operates a minimill and scrap operations in Canada.
1997	Carpenter Technology Corp.	Carpenter Technology Corp., a major producer of stainless steel long products, acquired Talley Metals, a diversified company that included a stainless long products mill. Operations other than the stainless steel mill were disposed of.
1996	Bar Technologies	Merger of BRW Steel Corp., a stand-alone entity that was formerly the BRW (Bar-Wire-Rod) Division of Bethlehem Steel Corp. and Bliss & Laughlin Steel, a bar finishing company.
1994	Allegheny Ludlum Corp.	Allegheny Ludlum Corp., a major producer of stainless steel and specialty steel, acquired Jessop Steel, a producer of stainless and tool steel plate.
1994	CMC Steel Group	CMC Steel Corp., a multiplant minimill company, acquired Owen Steel, a minimill.
1993	Oregon Steel Mills, Inc.	Oregon Steel Mills, Inc., a minimill producer of carbon and alloy plate products, acquired Rocky Mountain Steel Mills, a producer of carbon and alloy rod, seamless tubular products, and railway rail.
1992	Armco	Armco, then a major integrated steel producer as well as a major stainless and specialty steel producer, acquired Cyclops Corp., a producer of stainless steel, carbon steel sheet, and tubular products.
Source: Compiled from various public sources.		

Table OVERVIEW-13
Major capital investments of U.S. steel companies

Year	Company and location	Facility	Reported investment *(million dollars)*[1]
2000	Bethlehem Steel Corp. Sparrows Point, MD	New cold mill complex, including a continuous coupled pickling line and tandem mill, hydrogen batch annealing, combination skin pass/tension leveling line, coil build-up, inspection, packaging and shipping facilities.	300
2000	Bethlehem Steel Corp. Sparrows Point, MD	Pulverized coal injection on blast furnace. Facility owned and operated by DTE Energy Services.	52
2000	Bethlehem Steel Corp. Sparrows Point, MD	Widening slab caster from 88 to 104 inches for plate products.	60
2000	BethNova Tube Jeffersonville, IN (joint venture of Bethlehem Steel Corp. and Novamerican Steel)	New tubing plant for automotive hydro forming applications.	
2000	Charter Manufacturing Co. Saukville, WI	Increased electric arc furnace power to boost annual capacity and added annealing equipment for stainless steel bars, a new product.	
2000	Co-Steel Sayerville Sayreville, NJ	New melting transformer to increase capacity and rolling mill modifications to increase range of product sizes and improve quality.	
2000	Duferco Farrell Corp. Farrell, PA	Upgraded 5-stand tandem cold-rolling mill to restart a previously shut-down facility.	
2000	IPSCO Enterprises, Inc. Mobile, AL	Construction of new steelworks to be finished in 2001. Includes new melting and plate rolling capacity.	395
2000	IPSCO Tubulars Camanche, IA	Equipment to process high-strength steels and heavier gages for OCTG casing products.	
2000	Ispat Inland, Inc. Indiana Harbor, IN	Upgraded transformer of electric arc furnace to increase capacity.	
2000	North Star Steel Co. Youngstown, OH	New electric arc furnace and ladle furnace. Increase capacity from 480,000 to 650,000 tons per year.	27
2000	Northwestern Steel & Wire Co. Sterling, IL	New 415-ton electric arc furnace and continuous caster improvements.	10
2000	Nucor Corp. Berkeley, SC	Second thin-slab caster commissioned, increasing capacity from 1.5 to 2.3 million tons. Second cold-reversing mill to increase cold-rolling capacity from 750,000 to 1.5 million tons of cold-rolled product to be completed in 2001.	80
2000	Nucor Corp. Hertford County, NC	Completion of new 1 million tons per year plate mill.	350
2000	Nucor Corp. Crawfordsville, IN	Agreed with IHI (Japan) to jointly develop, commercialize, and license direct strip casting. Will build a demonstration strip casting facility.	
2000	Nucor Corp. Charlotte, NC	Agreed with Rio Tinto and Lurgi to construct a HiSmelt plant at a Nucor Corp. facility.	
1999	AK Steel Corp. Rockport, IN	Completed installation of 1.8 million tons per year carbon and stainless flat-rolled finishing facility.	1,100

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Table OVERVIEW-13--*Continued*
Major capital investments of U.S. steel companies

Year	Company and location	Facility	Reported investment (*million dollars*)[1]
1999	Columbus Coatings Co. Columbus, OH Joint venture of Bethlehem Steel Corp. and LTV Steel Co., Inc.	500,000 tons per year hot-dip galvanizing facility, replacing an electrolytic galvanizing facility. A second joint venture is a slitting and warehousing operation.	125 for both
1999	LTV Steel Co., Inc. Marion, OH	New 146,000 tons per year automotive structural tubing facility.	66
1999	National Steel Corp. Ecorse, MI	450,000 tons per year hot-dip galvanized and galvanneal line.	175
1999	Carpenter Technology Corp. Reading, PA	New 4,500-tons forging press for stainless steel and specialty alloys.	42
1999	Universal Stainless & Alloy Products, Inc. Bridgeville, PA	New stainless steel round bar finishing facility.	10
1999	Birmingham Southeast Cartersville, GA (owned by Birmingham Steel Corp.-85% and Ivaco of Canada-15%)	New 800,000 tons per year medium section structural mill.	75
1999	Steel Dynamics, Inc. Butler, IN	Began construction of new 750,000 tons per year structural/rail mill. Construction has been delayed by problems in obtaining the necessary building permits.	250
1999	TXI Chaparral Steel Dinwiddie County, VA	1.2 million tons per year structural mill.	400
1999	Heartland Steel Terre Haute, IN	1.1 million tons per year flat-rolled steel processing facility, including pickling line, reversing cold-rolling mill, batch annealing, hot-dip galvanizing line.	285
1999	Nova Steel Bucks County, PA	150,000 tons per year structural tube mill and processing center.	
1999	Prudential Steel Longview, WA	110,000 tons per year tubular manufacturing operation for standard and line pipe, and OCTG.	
1999	Vision Metals, Inc. Rosenberg, TX	Improvements, including an Assel mill and a 24 stand stretch reduction mill for seamless pipe to improve quality and reduce cost.	30
1999	Maverick Tube Corp. Hickman, AR	New large diameter pipe manufacturing plant.	40
1998	National Steel Corp. Portage, IN	New 270,000 tons per year Galvalume line.	
1998	GalvPro L.P. Jeffersonville, IN (joint venture of Weirton Steel Corp. and Hoogovens-Netherlands)	New 300,000 tons per year hot dip galvanizing line.	
1998	Allegheny Ludlum Corp. Vandergrift, PA	New 63-inch wide Sendzimir cold mill and width increase of temper mill to allow production of 60-inch wide stainless steel sheets.	40

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Table OVERVIEW-13--*Continued*
Major capital investments of U.S. steel companies

Year	Company and location	Facility	Reported investment (*million dollars*)[1]
1998	Nucor Corp. Hickman, AR	500,000 tons per year hot dip galvanizing line. 800,000 tons per year cold-rolling facility with associated pickling and annealing.	120 for the cold-rolling facility
1998	Qualitech Steel Pittsboro, IN	500,000 tons per year special quality bar mill complex.	200
1998	BHP Coated Steel Kalama, WA	400,000 tons per year finishing plant includes pickling, cold-rolling, galvanizing/Zincalume line and painting line.	200
1998	Damascus-Bishop Tube Homestead, PA	New stainless tube and pipe mill.	25
1998	Worthington Industries Decatur, GA	New 900,000 tons per year cold-rolling facility includes pickling, cold-rolling, annealing and temper rolling.	180
1998	Worthington Industries Delta, OH	New 500,000 tons per year galvanizing facility for hot-rolled steel. Includes pickling line.	
1999	North American Stainless Ghent, KY (owned by Acerinox-Spain) 95%	New Steckel hot strip mill for stainless steel.	
1998	Hanna Steel Tuscaloosa, AL	New 150,000 tons per year large structural tube mill.	
1997	Acme Metals, Inc. Riverdale, IL	New "MiniGrated" steel mill comprising a continuous slab caster and a 7-stand hot strip mill complex.	370
1997	Inland Steel Indiana Harbor, IN	1.33 million tons non-recovery coke plant, owned and operated by an affiliate of Sun Coal & Coke. Inland Steel purchased the coke and electricity produced by the complex.	350
1997	Cliffs & Associates Point Lisas, Trinidad Joint venture of Cleveland Cliffs, LTV-46.5%, and Lurgi	Direct-reduced iron plant.	150
1997	Spartan Steel Coating LLC Monroe, MI Joint venture of Rouge Steel Co. and Worthington, Inc.	450,000 tons per year galvanizing operation.	
1997	Lukens Massillon, OH	New anneal and pickle line to process 96 inch wide stainless steel coils.	
1997	Oregon Steel Mills, Inc. Portland, OR	1.2 million tons per year, 148 inch, combination coiled plate/discrete plate rolling facility.	230
1997	Corus Mobile Mobile, AL	800,000 tons per year direct reduced iron installation.	
1997	Birmingham Steel Corp. Memphis, TN	New melt shop to produce 1 million tons per year of billets.	210
1997	American Iron Reduction Convent, LA, joint venture of Birmingham Steel Corp. and GS Technologies	1.2 million tons per year direct reduced iron operation.	

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Table OVERVIEW-13–*Continued*
Major capital investments of U.S. steel companies

Year	Company and location	Facility	Reported investment (*million dollars*)[1]
1997	North Star BHP Steel LLC Delta, OH, joint venture of North Star Steel and BHP-Australia	1.5 million tons per year flat-rolling plant.	400
1997	Trico Steel Joint venture of LTV Steel Co., Inc., British Steel (now Corus) and Sumitomo Special Metals, Cleveland, OH	2.2 million tons per year minimill.	465
1997	Chicago Cold Rolling Burns Harbor, IN, joint venture of Bethlehem Steel Corp. and MECO Investment Corp.	Cold-rolling facility including reversing mill, annealing and temper mill.	52
1997	Cold Metal Products, Inc. Ottawa, OH	Cold-rolling facility including reversing mill, annealing and temper mill.	25
1996	National Steel Corp. Granite City, IL	270,000 tons per year galvanizing/Galvalume line.	
1996	J & L Specialty Steel, Inc. Midland, PA	DRAP Line-a continuous cleaning, cold-rolling, annealing and pickling line for stainless steel.	95

[1] Where no value is given, data were not reported in source.

Source: Selected entries from annual reports entitled "Developments in the North American Iron and Steel Industry," *Iron and Steel Engineer*, February 1997-2000 for 1996-99 data and *AISE Steel Technology*, February 2001 for 2000 data.

The Administration's Steel Action Plan/The President's Steel Action Program

The Steel Action Plan of January 1999 featured a steel import monitoring program designed to identify sudden price drops or import increases, as well as monthly steel import data released by Commerce. The Program was set up in August 1999. It led to bilateral consultations with Korea and Japan and a steel agreement with Russia that set annual quotas on imports of Russian steel products.[59]

Emergency Steel and Oil and Gas Loan Guarantee Program

This is a temporary steel loan guarantee program designed to assist steel companies that are unable to obtain loans in the private sector.[60] It is administered by the Emergency Loan Guarantee Board

[59] International Trade Administration, Commerce, *Global Steel Trade: Structural Problems and Future Solutions,* July 2000, p. 112.

[60] Authority for this program is contained in P.L. 106-51; U.S.C. 15, Chapter 45, "Emergency Steel Loan Guarantee Act of 1999 and Emergency Oil and Gas Guaranteed Loan Program Act."

and provides guaranteed loans of up to $250 million to a single company, with the total amount outstanding not to exceed $1 billion.[61] The loans must be repaid by year-end 2005.

Seven steel companies have been approved for these loans, which are 85 percent guaranteed by the U.S. Government. However, as of May 2001, only one loan for $100 million had been disbursed by a private lender to these companies.[62]

Community Economic Adjustment Initiative

For fiscal year 2001, $35 million of the U.S. budget had been set aside for communities facing economic dislocations. Under this program, communities will be eligible for grants and technical assistance to help them adopt an economic adjustment strategy.[63] This money can be used to help all community businesses, including those in the steel industry.

The Steel and Aluminum Energy Conservation and Technology Competitiveness Act of 1988

This Act,[64] also known as the Metals Initiative, helped finance R&D in the steel industry and is administered by the U.S. Department of Energy. The Direct Steelmaking Project that was concluded in March 1994 developed a possible replacement for the coke oven/blast furnace process used to produce molten pig iron.[65] Another project is the Electrochemical Dezincing of Steel Scrap project. Its purpose is to design, construct, and operate a plant to demonstrate a two-step process for the continuous dezincing of steel scrap. A third project under the Metals Initiative is the Rapid Analysis of Molten Metals Using Laser-Produced Plasmas, which was implemented to develop a sensor-probe that will rapidly determine the chemical composition of molten iron and steel through spectroscopic analysis of laser-produced plasmas.

A cooperative agreement was initiated between the Department of Energy and the AISI for the Advanced Process Control Program in 1993. The program consists of six diverse sensor and control system research tasks that focus on many aspects of steelmaking, with the common goal of on-line measurement of critical product properties. One part of this project aimed to develop a new sensor that would result in energy conservation in steel production. The Department of Energy provided most of the funding for this $1.2 million sensor project that was successfully completed in 1999.[66] Seventy percent of the funding for the $7.7 million Advanced Process Control Program was provided by the Department of Energy.

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[61] "Emergency Steel Loan Guarantee Board Loan Guarantee Program," General Accounting Office Briefing for the Staff of the Senate Committee on Commerce, Science, and Transportation, May 1, 2001.

[62] Letter from the General Accounting Office to the Honorable John McCain of the Senate Committee on Commerce, Science, and Transportation, May 25, 2001.

[63] International Trade Administration, Commerce, *Global Steel Trade: Structural Problems and Future Solutions,* July 2000, p. 178.

[64] U.S.C. Title 15, Chapter 77.

[65] "Steel: Industry of the Future," Office of Industrial Technologies, found at *http://www.oit.doe.gov/steel/exsum.shtml.*

[66] "Timken's New Sensor Prototype a Success," The Timken Company Press Release, October 12, 1999. Found at *www.timken.com.*

Additional Programs

A summary of the above programs and additional federal programs can be found in table OVERVIEW-14. Table OVERVIEW-15 describes state and local programs within the United States that assist the steel industry.

Table OVERVIEW-14
Federal programs concerning steel

Year	Program name and/or administrator	Description of program
1998	Transportation Equity Act for the 21st Century	Authorizes federal highway and mass transit programs, with preferences given to the domestic industry as in previous such laws.
1996	U.S. Department of Energy Clean Coal Technology Project	$150 million in funding for Geneva Steel Co.'s "Clean Power from Integrated Coal/Ore Reduction" project.
1993	Department of Energy Office of Industrial Technologies Advanced Process Control Research Program	$7.7 million project to develop new methods of measuring steel-processing parameters and steel properties from production though casting. Seventy percent of this funding comes from the Department of Energy.
1992	Energy Policy Act	Extended the Metals Initiative of the Steel and Aluminum Energy Conservation and Technology Competitiveness Act of 1988, which sought to develop new technologies to produce steel more efficiently.
1992	Department of the Interior Appropriations Bill	$1.8 million in funding to Weirton Steel Corp. for its Integrated Manufacturing Information System.
1991	Intermodal Surface Transportation Efficiency Act	Continued the preferences for domestic steel set forth in the Surface Transportation Assistance Act of 1982, which provided funding for federal highways, as long as the steel used was produced in the United States.
1990	Department of the Interior Appropriations Bill	$3 million in funding to Weirton Steel Corp. for its Integrated Manufacturing information System.
1990s	Department of Energy Office of Industrial Technologies Direct Steel Making/Steel Plant Dust and Sludge Recycling Project	$47 million to develop a smelter to produce pig iron without coke, leading to a discussion of developing a process for recycling smelter dust and sludge.
1988	Steel and Aluminum Energy Conservation and Technology Competitiveness Act	Provided help to steel companies to increase their energy efficiency and enhance their competitiveness.

Source: Economic, industry, and trade literature; *Paying the Price for Big Steel*, AIIS, 2000; International Trade Administration, Commerce, *Global Steel Trade: Structural Problems and Future Solutions*, July 2000.

Table OVERVIEW-15
State and local programs concerning steel

State	Year	Description of program	Approximate value
Alabama	1994	20-year tax abatement, infrastructure grants, job training, and tax credits as well as free land, grants for grading and excavation to Trico Steel in Decatur. Power is subsidized and tax-free bonds are offered due to Trico Steel being classified as a recycling unit.	$100 million
Arkansas	1996	Waste disposal and enterprise disposal bonds issued on behalf of Harsco Corp., Blytheville.	$7 million
Arkansas	1993	Income tax credits and sales tax credits on gas and electricity to Nucor Corp., Hickman.	$11.7 million
Arkansas	1992	Tax-free bonds issued on behalf of Nucor Corp., Hickman.	$34 million
California	1993	State loan granted to Schnitzer Steel Industries, Inc.	$750,000
Illinois	2000	Industrial revenue bond issued on behalf of to Unimast for building and equipment.	$3.5 million
Illinois	1997	Package to Hanna Steel Corp., Pekin, IL, including a workforce training grant, a low-interest loan, and roadway construction.	$2.7 million
Illinois	1995	Package to Granite City Steel included employee training grants and tax advantages over 10 years.	$60.5 million
Illinois	1992	Grant to American Steel Foundries in Granite City, IL.	$2 million
Indiana	2000	Steel Dynamics, Inc., Whitley County, was given a package from Economic Development for a Growing Economy, Training 2000, the Industrial Development Loan Fund, and a stripper well overcharge rebate from the U.S. Department of Energy.	$9 billion
Indiana	2000	Tax incentives including 10 years of tax abatement and a state-guaranteed bond issued on behalf of Steel Dynamics, Inc. in Butler.	$96 million
Indiana	1998	Training grants and 10-year income tax credits given to Galvstar LP, Jeffersonville, IN.	(1)
Indiana	1997	Training grants and tax packages given to Heartland Steel by state and county.	$25 million
Indiana	1997	State incentive package to AK Steel Corp. Rockport.	$71 million
Indiana	1996	State grants, revenue bonds, incremental financing bonds, and funds for road work and job training to benefit Qualitech Steel Corp., Pittsboro.	$50 million
Indiana	1995	Loan package to Metro Metals Corp.	$4.4 million
Indiana	1995	10-year tax abatement on equipment purchases by Detroit Steel Products.	(1)
Indiana	1995	Revenue bonds issued on behalf of to Nova Steel Processing, Anderson.	$8.5 million
Indiana	1995	Five-year tax abatement on new equipment purchases by S&S Steel.	(1)
Indiana	1994	Grants for employee training, hiring assistance, and energy-efficient equipment; road improvements; property tax abatement; and a bond issued on behalf of Steel Dynamics, Inc., Dekalb County.	$78 million
Indiana	1994	Property tax abatement for United States Steel LLC, Gary.	$35 million

Continued on next page.

Table OVERVIEW-15--*Continued*
State and local programs concerning steel

State	Year	Description of program	Approximate value
Indiana	1990s	Incentive package to Nucor Corp. Crawfordsville.	$14 million
Iowa	1990s	IPSCO Montpelier received an incentive package that includes tax breaks to be issued over 20 years.	$73 million
Kentucky	1995	State income tax credits, county revenue bonds, loans, and training grants to Gallatin Steel Co.	$145 million
Kentucky	1994	Tax credits, training grants, and financing to Taubensee Steel & Wire Co.	$5.5 million
Maryland	1997	Grants and low interest loans provided to the Bethlehem Steel Corp., Sparrows Point.	$75 million
Minnesota	1998-99	Loan, state bond issue, and 20-year property tax abatement granted to Minnesota Iron and Steel, Nashwauk.	$80 million
Minnesota	1993	Aid given to National Steel Pellet Co., Keewatin.	$6 million
Nebraska	1995	Sales tax exemptions on inputs granted for two years to Nucor Corp., Norfolk.	$774,000
Nevada	1998	State-backed revenue bonds issued on behalf of Wheeling-Pittsburgh Steel Corp.	$3.5 million
Nevada	1998	State-backed revenue bonds issued on behalf of Wheeling-Pittsburgh Steel Corp.	$3.5 million
North Carolina	1998	Income tax credits, payroll tax credits for hiring locally, and credits for infrastructure improvements and recycling given to Nucor Corp., Hertford.	$155 million
North Carolina	1996	William S. Lee Act was passed in 1996, setting up an incentive program allowing tax credits for jobs, and sales tax exemptions and refunds in order to attract business in the state.	([1])
Ohio	2001	State program initiated to include $50 million in direct assistance (training, grants, and direct loans) and $60 million in tax relief.	$110 million over 3 years
Ohio	2000	10-year tax abatement for renovations and construction to Worthington Industries, Columbus.	$1.29 million
Ohio	1997	State and local funds given to LTV Steel Co., Inc. to purchase land for a new industrial park.	$850,000
Ohio	1997	Grant for R&D, a 40 percent local property tax abatement for 13 years and a 45 percent tax abatement for 10 years on new equipment given to American Spring Wire Corp.	$50,000
Ohio	1997	State development funds to pay for environmental assessments associated with the relocation of Buckeye Steel allocated to the town of Barnesville.	$25,000
Ohio	1996	Transportation improvements between Armco Inc.'s facilities.	$250,000
Ohio	1995	State tax credits, a low-interest loan, grants, and technical assistance awarded to American Steel and Wire.	$20.2 million
Ohio	1995	Loans, grants, and 80 percent tax credit for 10 years given to North Star BHP Steel LLC.	$55 million
Ohio	1994	Training grant, property tax break, and two-year deferred interest loan awarded to Washington Steel.	$14.7 million Massillon

Continued on next page.

Table OVERVIEW-15--*Continued*
State and local programs concerning steel

State	Year	Description of program	Approximate value
Ohio	1990s	State grants, pollution control bonds, low-interest loans to Republic Engineered Steel.	$20 million
Ohio	1990s	Low-interest loans and tax breaks to Wirt Metal Products.	$5.1 million
Ohio	1990s	Low-interest loan and 10-year tax abatement to J&L Specialty Steel, Inc.	$5.5 million
Pennsylvania and New York	1995	Low-interest loans and loan guarantees to Veritas Capital.	(1)
Pennsylvania	1996	Low-interest loans to Franklin Industries.	$3.65 million
Pennsylvania	1995	Incentive package to Caparo Steel.	$6.1 million
Pennsylvania	1995	Loan and other incentives given to World Class Steel, Ambridge.	$24 million
Pennsylvania	1995	Loan given to AMG Resources Corp. for a recycling facility.	$750,000
Pennsylvania	1995	Loan to J&L Specialty Steel, Inc.	$500,000
Pennsylvania	1994	Low-interest loan to Commercial Steel Corp.	$200,000
Pennsylvania	1994	Loan, financing, and job training given to J-Pitt Steel, Gautier Mills.	(1)
Pennsylvania	1993	Loan to Pennsylvania Steel Technologies.	$500,000
South Carolina	1998	Tax credits and employee training to American Metal Steel International Corp.	(1)
South Carolina	1997	State and local tax reductions and road improvements to SMI Steel, Cayce.	(1)
South Carolina	1997	A $2,500 tax credit per job for Kiswire, Ltd.	(1)
South Carolina	1995	30-year state property tax cut, investment tax credit, and exemption from state sales tax for Nucor Corp. Berkeley County, for creating a "qualified recycling facility." Under this program, Nucor Corp. Berkeley County will pay a fee of 3 percent of the plant's assessed value instead of state taxes.	(1)
Texas	1999	10-year property tax abatement package granted to Nucor Corp.	(1)
Utah	1999	Tax breaks authorized for Geneva Steel Co. and Nucor Corp.	$660,000
Utah	1987-96	Sales tax exemption for Geneva Steel Co.	$1.5 million
Virginia	1997	Tax incentives to Chaparral Steel, Dinwiddie, to build a steel-recycling mill.	(1)
West Virginia	1997	Committee given more duties and broader powers to help the steel industry.	(1)
West Virginia	1992	County loan for new equipment to Levelteck, Inc.	$80,000

[1] Not available.

Source: Economic, industry, and trade literature; *Paying the Price for Big Steel*, AIIS, 2000.

DISTRIBUTION TRENDS

Importers and Channels of Distribution

U.S. steel production is either internally consumed by steel producers and their subsidiaries or sold to converters, processors,[67] distributors, service centers,[68] or end users. Some U.S. companies will convert purchased steel, such as hot-rolled or cold-rolled steel, into other steel mill products, such as corrosion-resistant steel or pipe and tube. Stainless steel bar has another layer of distribution, "master distributors," who purchase primarily from U.S. importers because of their affiliations with foreign mills and resell principally to regional service centers and not directly to end users.

Reported U.S. shipments to steel service centers and distributors rose steadily to account for 27.6 percent of net U.S. tonnage shipments of steel mill products in 2000 from 24.7 percent in 1991.[69] In contrast, steel for converting or processing accounted for 11.7 percent of net U.S. shipments of steel mill products in 2000. Including U.S. imports, steel service centers distribute over one-half of certain steel products consumed in the United States, such as major carbon and stainless steel products.[70] In many product areas, the majority of U.S. imports are shipped to distributors, processors, or service centers, as opposed to end users, including OEMs.[71]

U.S. steel producers generally do not own and are not financially linked to processors or service centers.[72] Only two U.S. steel companies, producers of stainless steel, specialty alloys, and other metals, own U.S. service centers.[73] In contrast, foreign steel producers, particularly those in Europe, tend to control a greater share of service centers and other channels of distribution in their home markets. There is also a significant European, South African, and Canadian foreign ownership presence in the U.S. service center industry, notably among the largest service centers in the United States. For example, Thyssen Inc. (North America), wholly owned by Thyssen Krupp AG of Germany, ranks second with

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[67] Processors fill a market niche that exists between the primary steel producers and end users, performing various value-added operations. Intermediate processing operations include a variety of activities, such as slitting, cutting-to-length, pickling and oiling, edge trimming, leveling, painting, blanking, and so forth. Processors may either purchase the steel, process and then resell it, or perform these services for a fee (a toll) and not take title to the steel being processed.

[68] U.S. service centers serve as distributors and processors not only of carbon and stainless steel, but of other metals, such as aluminum, copper, bronze, and brass. Many service centers maintain extensive inventories of a variety of steel products which they own and resell, thus providing availability and inventory management services for customers of all sizes, including those with smaller purchasing needs that must place low-volume orders. Increasingly, service centers perform a wide range of value-added processing, such as uncoiling, flattening, and cutting products to length, for their customers.

[69] AISI, *Annual Statistical Report*, 2000, table 11, "Net Shipments of Steel Mill Products by Market Classifications, All Grades," pp. 30-31. During 1991-2000, between 8.9 percent to 12.5 percent of net shipments were classified by AISI as nonclassified shipments, and it is possible that some of these shipments were to steel service centers and distributors.

[70] Steel Service Center Institute, "Statement of The Steel Service Center Institute Before The Congressional Steel Caucus," March 21, 2001, found at Internet address *http://www.ssci.org/final_causcus.adp,* retrieved August 15, 2001.

[71] Based upon review of numerous Commission antidumping and countervailing duty investigation reports.

[72] Steel Service Center Institute, "Statement of Robert J. Carragher on Behalf of the Steel Service Center Institute before the Organization for Economic Co-Operation and Development," Paris, France, November 30, 2000, found at Internet address *http://www.ssci.org/oecd_statement.adp,* retrieved August 16, 2001.

[73] Carpenter Technology Corp. and Crucible Materials Corp.

sales of $2.3 billion (including products and services other than steel or steel related) in 2000 among the top 100 metal service centers in the United States[74] and several other European steel producers either operate service centers or have U.S. service centers as subsidiaries.[75] Fifth-ranked MacSteel Service Centers USA, with sales of $1.4 billion in 2000, is owned by MacSteel Holdings of South Africa, a global metals trader and distributor. Canadian investment in the U.S. service center industry is primarily by Canadian service centers and processors of metals.[76]

The U.S. service center industry has undergone significant industry consolidation in recent years. Many service centers have pursued acquisitions or constructed new facilities in order to expand into geographical markets where they did not have a presence, to enhance their ability to service national accounts, to broaden fabrication and processing capability, or to expand their product line. During 1996-2000, there were at least 144 acquisitions made by service centers in the United States and Canada.[77] Service center firms have also increased their size by constructing new facilities in order to expand into geographical markets and service national accounts. This strategy has been pursued by almost all of the large service companies; however, some companies have pursued this strategy in lieu of acquisitions.

Growth in the service center industry has been driven by the requirements of the manufacturing industry for further processing of metals prior to the production of parts. This trend has also resulted in an expanding toll/contract processor industry, thereby eliminating processing operations at some original equipment manufacturers. However, the service center customer base has also been consolidating. In early 1999, a new development began in the distribution channel for the automotive market when General Motors' Regional Steel Distribution Center in Michigan streamlined its supply chain by maintaining steel inventories and preforming processing in-house, rather than contracting with toll processors.[78]

Importers of steel tend to be the foreign steel companies or their steel trading subsidiaries, Japanese trading companies, international metal trading companies, U.S. service centers, U.S. steel producers, or U.S. end users. The volume of imports shipped to either distributors, service centers, or end users varies greatly by type of product (*e.g.*, carbon versus stainless, flat-rolled versus long products; and degree of value-added, such as hot-rolled versus corrosion-resistant steel), market (OEM or replacement), and supplier country. Products from Russia, Ukraine, Kazakhstan, and developing countries tend to be imported by distributors. Products from the EU and Japan tend to be imported more by end users.[79]

E-Commerce

The nature of the role of E-commerce in the steel industry has changed considerably over the past two years. As originally conceived by some in the steel industry, business-to-business E-commerce would affect the entire nature of the steel industry, from the procurement of raw materials to the

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[74] Purchasing Magazine Online, "Top 100 Metal Service Centers," May 3, 2001, found at Internet address *http://www.manufacturing.net,* retrieved August 6, 2001.

[75] This includes Preussag North American, Inc. with sales of $931 million in 2000 owned by Preussag AG of Germany and Namasco Corp., with sales of $800 million, owned by Klockner AG of Germany. ARBED Americas, Inc., owned by Arbed Group of Luxembourg, owns several distributors and fabricators of steel products.

[76] These include Samuel, Son & Co., Russel Metals, Inc., and Maksteel, Inc.

[77] Compiled from various trade magazines, newspapers, company Internet sites, and financial filings with the Securities and Exchange Commission.

[78] Tom Bagsarian, Metal Center News Online, "RSDC Delivers," August 2001, found at Internet address *http://www.metalcenternews.com/2001/Aug01/mcn0108f4rsdc.htm,* retrieved August 6, 2001.

[79] Based upon review of numerous Commission antidumping and countervailing duty investigation reports.

production of steel and to the selling of finished steel products, through operation of a public exchange for steel products.[80] The primary benefit promised by the creation of such an electronic network, featuring auctions and reverse auctions of steel products, was cost reduction resulting from price transparency and reductions of inventories. Allowing information on pricing to be determined on a public site rather than in secret by steel trading intermediaries such as trading companies and brokers would lead to reduced price volatility and lower transaction costs related to the buying and selling of steel. Inventories would be reduced as steel suppliers established electronic links between their production systems and their customers. In addition to lowered costs and reduced inventories, creation of a public exchange promised to expand the universe of potential customers by allowing information on steel to be made available in a public forum.

In actual practice, E-commerce in steel has evolved somewhat differently from the original model.[81] Some of the reasons advanced by steel producers for the limited success,[82] thus far, of public steel exchange web sites include:[83]

- a public exchange is often not appropriate for an engineered product such as steel, which must be processed to achieve certain physical properties required to meet a particular specification;

- steel producers have been reluctant to participate in public steel exchanges because they feel that such exchanges tend to favor buyers of steel at the expense of sellers as sellers are encouraged to compete against each other to satisfy a bid;

- unlike other markets where potential customers for a product appear to be unlimited, the number of participants in the relevant steel markets tends to be small and most suppliers are already aware of the entire universe of possible users of the product; and

- the steel industry has thus far appeared unwilling to accept the transaction fees associated with public exchange sales.

The latest effort to create a public electronic steel exchange is that of the GSX,[84] which began operations in May 2001 and sold its 1 millionth metric ton of steel in September.[85] GSX differs from earlier attempts at public steel exchanges in that it is targeting the international, rather than a regional or national, market for steel. According to GSX, steel buyers or sellers are often not aware of the existence of potential clients in other nations and such an international public exchange fills a market niche by putting buyers and sellers in direct contact with each other, reducing the role of middlemen. The site allows members to negotiate for the purchase and sale of steel products in the spot market and arranges for trading services such as financing, insurance, transportation, customs clearing, and warehousing.

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[80] Scott Robertson, "Key Role Seen for E-commerce in Steel," *American Metal Market*, March 22, 2000, at *http://www.amm.com/SUBSCRIB/2000/Mar/special/0322-1.htm*.

[81] Recently, a number of the original public steel trading exchanges, including MetalSite and MaterialNet, have ceased operations while other public exchange companies, including E-Steel, CoreMarkets, and Metal Suppliers Online, have decided to supplement the public exchange side of their business by designing E-commerce supply management platforms for steel companies.

[82] Thus far, less than 1 percent of all steel traded is traded on public E-commerce web sites.

[83] Drawn from a telephone survey of leading U.S. steel producers.

[84] The four founding members of GSX are Cargill Steel (U.S.), Duferco (Switzerland), Samsung (Korea), and TradeArbed (Luxembourg). GSX trades more than 50 steel products, ranging from raw products to finished steel.

[85] *American Metal Market*, "GSX E-Site Logs Sale of 1 Millionth Tonne," September 18, 2001, p. 3.

GSX has indicated that it already has $5 billion in trading commitments from participants for the next two years and that 13 global steel mills have committed to trade on the exchange.

The Growth of Private Exchanges

Due to some lack of satisfaction with public exchanges, the trend in the steel industry within the past year has been moving to the creation of private steel exchanges on company web sites as many of the major integrated and nonintegrated U.S. steel companies have established, or are in the process of establishing, such exchanges. An on-line private exchange differs significantly from a public exchange in that a private exchange is maintained by a single company with a select group of suppliers and customers that are regulated by the owner of the exchange. In addition, private exchanges can be tailored to serve specific projects and customers, unlike public exchanges, which are generic in nature in order to accommodate all users.[86] As presently constituted, private exchanges permit customers to enter orders, check order status, obtain chemical analysis information, and acquire information on delivery of the product, thereby eliminating or reducing many of the costs associated with the administration of these functions. The material that is traded is done so through a bidding process. A customer will bid on material listed on the exchange and is notified through the exchange if it has been awarded the material. The customer can then submit a purchase order via e-mail or fax. A principal advantage of a private exchange is that it does not force participants to give up sensitive information to competitors or to suppliers serving those competitors, while the earlier public exchanges encountered resistance because they required the public sharing of price information.[87] By encouraging suppliers and customers to exchange information on a secure site, a private exchange gives suppliers a more accurate picture of customer needs, allowing manufacturers to tailor production cycles to better match customer demand requirements, resulting in reduced inventories, better management of distribution channels, and reduced transaction time and costs. Another advantage of a private electronic exchange is that it permits aggregation of transactions when a customer orders a variety of products from a company with multiple product lines or when a supplier sells to different divisions of a company, resulting in cost and time savings.[88] Presently, these situations require separate purchase orders. U.S. steel producers contacted by the Commission indicated that up to 6 percent of total steel sales were made through company web sites.

The Emergence of EnronOnline

In November 1999, Enron Corp. launched EnronOnline, an electronic transaction platform offering real-time pricing information for approximately 850 commodities.[89] In the fourth quarter of 2000 EnronOnline began buying and selling hot-rolled and cold-rolled carbon steel and some galvanized steel products using an on-line bid and offer process. Domestic steel mills have accounted for less than 50 percent of Enron's purchases with much of the remaining steel coming from service centers with excess inventories. Unlike earlier attempts at establishing an on-line exchange of steel, EnronOnline does not play a neutral role, matching buyers with sellers. Instead Enron Corp. acts as a principal in the

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[86] Pimm Fox, "Private Exchanges Drive B2B Success," *Computerworld*, May 7, 2001, at *http://www.itworld.com/Tech/3478/CWD010507ST.*

[87] Jennifer Caplan, "Private Exchanges Reinvent B2B: Private E-Marketplaces May Improve upon the Model Created by Public B2B Sites," *CFO.com*, April 2, 2001, at *http://www.cfo.com/pr...1,4580,87%7C88%7CAD%7C2484,00.html.*

[88] Ibid.

[89] Commodities initially traded on EnronOnline include electricity, natural gas, coal, pulp and paper, clean air credits, bandwidth, weather and credit derivatives, petrochemicals and plastics, and oil and refined products.

transaction, buying steel for its own account, providing storage in various company-owned regional warehouses, selling the steel to customers and profiting from the spread between the two prices. According to Enron Corp., the advantages of its electronic trading platform are improved price transparency and competition, increased liquidity, management of price volatility, increased transaction efficiency and reduced transaction costs, and convenience.[90] In addition to trading physical steel, since November 1999 Enron Corp. has bought and sold steel financial futures contracts on-line, allowing producers and customers to hedge against the risks of steel price volatility through the trading of financial futures contracts.

PRICING

Publicly available pricing series for steel products are available for only a limited number of steel products (figures OVERVIEW-17, 18, 19, and 20). The data are based on information collected from purchasing managers and represent average transaction prices for the product.

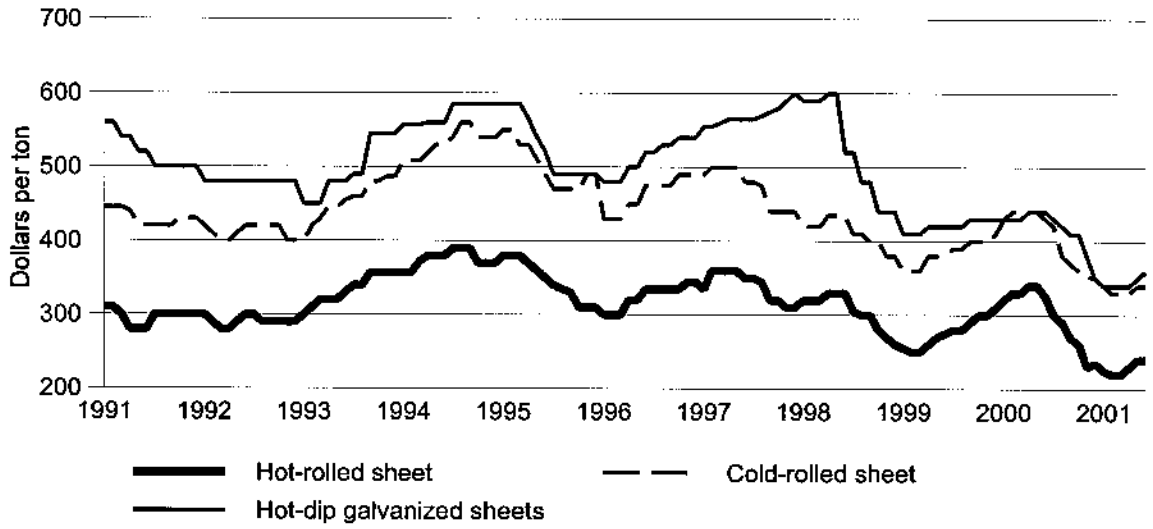
EXCHANGE RATES

Exchange rate fluctuations between the U.S. dollar and foreign currencies can have a significant effect on the relative competitiveness of global steelmakers selling products in the U.S. market. As shown in table OVERVIEW-16, the dollar has strengthened considerably against the currencies of many of the major import sources for subject steel products during the period examined. As a country's currency depreciates against the dollar, the foreign producer can lower product prices expressed in dollars in the U.S. market while still receiving the same price expressed in its home currency. These shifts are mitigated somewhat in many countries as the major raw materials used in steelmaking, such as iron ore, scrap, and metallurgical coal and coke, are sold on a dollar-basis throughout the world. However, for countries that purchase raw materials in the global market, an estimated two-thirds of the costs of steelmaking are still in local currencies.[91]

[90] E-mail response from Enron Corp., received August 28, 2001.

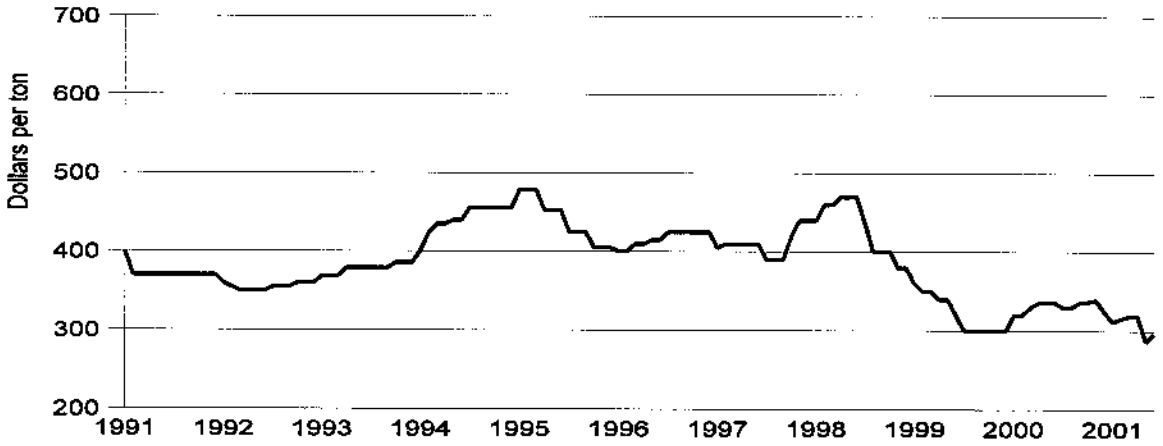
[91] Peter Marcus and Karlis Kirsis, *Steel in 2001: Constraints Unparalleled, Opportunities Unmatched*, presentation to Steel Success Strategies XVI, World Steel Dynamics, June 19, 2001.

Figure OVERVIEW-17
Carbon steel sheet transaction prices, January 1991-June 2001



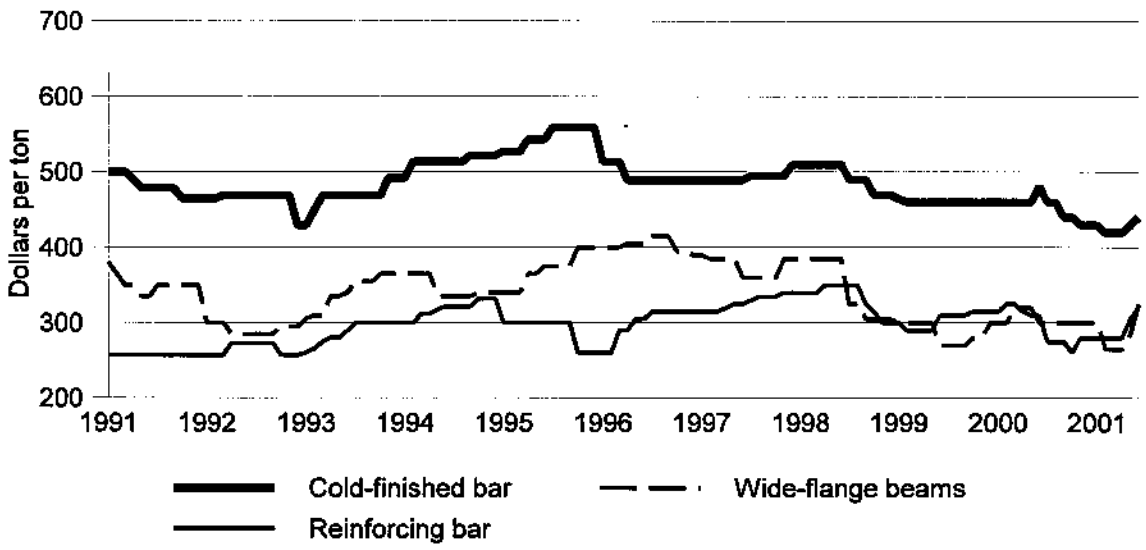
Source: *Purchasing Magazine.*

Figure OVERVIEW-18
Hot-rolled plate transaction prices, January 1991-June 2001



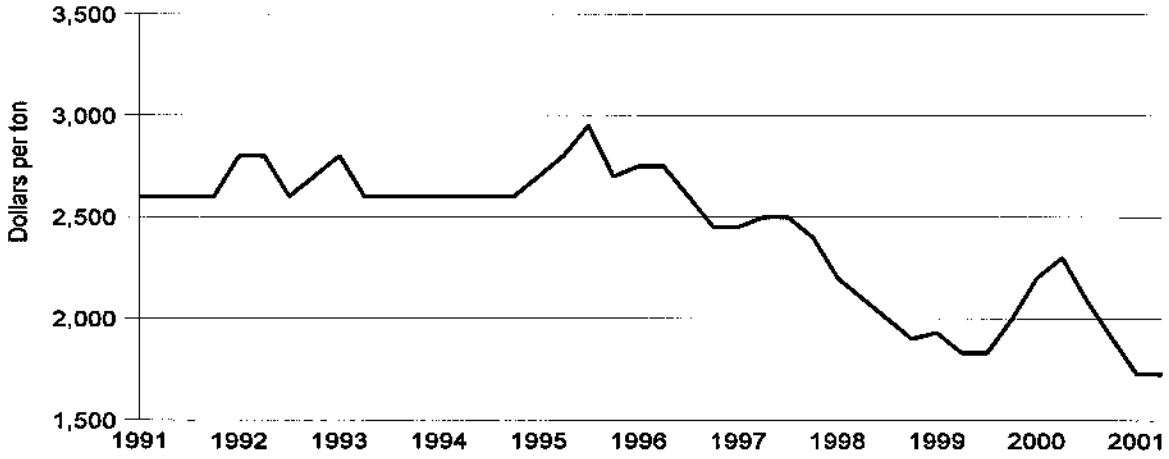
Source: *Purchasing Magazine.*

Figure OVERVIEW-19
Carbon steel long products transaction prices, January 1991-June 2001



Source: *Purchasing Magazine.*

Figure OVERVIEW-20
Stainless steel hot-rolled plate transaction prices, January 1991-June 2001



Source: *Purchasing Magazine.*

Table OVERVIEW-16
Overall appreciation and depreciation amounts for currencies of selected countries relative to the U.S. dollar, January-March 1996 through January-March 2001

Country	Nominal exchange rate		Real exchange rate	
	Appreciation	Depreciation	Appreciation	Depreciation
Argentina	-	-	-	11.5
Australia	43.4	-	48.1	-
Brazil	-	52.0	-	24.9
Canada	-	10.5	-	9.1
Germany	-	30.4	-	36.0
India	-	33.5	-	8.2
Indonesia	-	76.3	-	31.1
Italy	-	24.8	-	25.0
Japan	-	10.4	-	20.1
Korea	-	38.4	-	31.7
Latvia	-	11.3	-	13.8
Mexico	-	22.4	36.7	-
Netherlands	-	31.1	-	33.6
Poland	-	37.9	55.8	-
Romania	-	89.7	10.9	-
Russia	-	83.3	-	45.6
South Africa	-	51.9	-	37.1
Spain	-	31.2	-	31.2
Thailand	-	41.5	-	37.0
Turkey	-	91.9	-	19.2
United Kingdom	4.8	-	2.2	-

Source: International Monetary Fund, *International Financial Statistics*, December 1999 and July 2001.

CARBON AND ALLOY FLAT PRODUCTS

DESCRIPTION AND USES

SLABS

A slab is a semifinished steel product produced by continuous casting or by hot-rolling or forging.[1] Slabs of carbon steel have a rectangular cross-section with a width at least two times the thickness. Slabs of other alloy steel have a width at least four times the thickness. All slabs are considered semifinished steel products that are consumed by steel producers to make downstream steel products, such as sheet, strip, and plate. All reporting U.S. slab-producing firms also produced one or more downstream flat-rolled products during the period for which data were collected in this investigation. The vast majority of U.S.-produced slabs are internally consumed by the domestic slab producers in the production of other steel products, with a very minor portion being sold on the commercial market.[2] Carbon and alloy steel slabs are provided for in the following *HTS* subheadings: 7207.12.0010, 7207.12.0050, 7207.20.0025, 7207.20.0045, and 7224.90.0055.

PLATE

This category includes both CTL plate and clad plate (collectively referred to in this section as "plate"). CTL plate is a flat-rolled product of rectangular cross-section, having a thickness of 4.75 mm or more and a width which exceeds 150 mm and measures at least twice the thickness. It is flat, *i.e.*, not in coil,[3] and may be of any shape (rectangular, circular, or other). CTL plate is produced by rolling on a reversing mill, on a Steckel mill, or on a continuous hot-strip mill. If produced from a coiled form, plate is flattened and cut to length from the coiled plate at the mill or at a service center. It may have patterns-in-relief derived directly from rolling (floor plate). It may be perforated, corrugated, or polished. Plate may also have been subjected to heat-treatment and may have been descaled or pickled. Clad plate is a flat-rolled product of more than one metal layer, of which the predominating metal is non-alloy steel, and the layers are joined by molecular interpenetration of the surfaces in contact. The metal other than non-alloy steel used for clad plate may be stainless steel, titanium, or any other metal. The clad plate may be in the form of a flat plate or a coiled plate, may be of any thickness, and may be either hot- or cold-rolled. Made from slab, plate is used in welded load-bearing and structural applications, such as bridgework, machine parts (*e.g.*, the body of the machine or its frame), transmission towers and light poles, buildings, self-propelled machinery such as cranes and bulldozers, railway cars, tanks, oceangoing ships, and floor plate or formed into pipe, oilwell rigs, and platforms.

Products in this category are provided for in the following *HTS* subheadings: 7208.40.3030, 7208.40.3060, 7208.51.0030, 7208.51.0045, 7208.51.0060, 7208.52.0000, 7208.90.0000, 7210.90.1000, 7211.13.0000, 7211.14.0030, 7211.14.0045, 7225.40.3005, 7225.40.3050, 7225.50.6000, and 7226.91.5000.

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[1] Thin slabs, which are typically produced in minimills, are immediately consumed in the hot-rolling process and are thus not available for the merchant market.

[2] During 2000, 99.4 percent of the quantity of domestic producers' total U.S. shipments of slabs were internally consumed.

[3] Plate in coil, which is not included in this category, is included in the hot-rolled category.

HOT-ROLLED

Products in this category are hot-rolled sheet and strip, as well as plate in coils (collectively referred to in this section as "hot-rolled" products). These are carbon and alloy steel flat-rolled products of rectangular cross-section, produced by hot-rolling on hot-strip (continuous) mills, reversing mills, or Steckel mills. If the product is in coils, it may be of any thickness. If it is in straight lengths, it must be of a thickness of less than 4.75 mm and a width measuring at least 10 times the thickness. It may have patterns-in-relief derived directly from rolling (floor plate). It may be perforated, corrugated, or polished. It may be either unpickled or pickled. It may have been subjected to various processing steps after hot reduction, including pickling or descaling, rewinding, flattening, temper rolling, or heat treatment, and it may have been cut into shapes other than rectangular. A substantial amount of hot-rolled products are consumed internally or transferred to an affiliated company to make cold-rolled and/or galvanized or other coated products, formed and welded to make pipe, or cut to length to produce discrete sheet.[4] Hot-rolled sheet and strip is also used in the manufacture of structural parts of automobiles and appliances. Hot-rolled plate, which may be cut to length, is used in the same applications identified above for CTL plate.

Products in this category are provided for in the following *HTS* subheadings: 7208.10.1500, 7208.10.3000, 7208.10.6000, 7208.25.3000, 7208.25.6000, 7208.26.0030, 7208.26.0060, 7208.27.0030, 7208.27.0060, 7208.36.0030, 7208.36.0060, 7208.37.0030, 7208.37.0060, 7208.38.0015, 7208.38.0030, 7208.38.0090, 7208.39.0015, 7208.39.0030, 7208.39.0090, 7208.40.6030, 7208.40.6060, 7208.53.0000, 7208.54.0000, 7211.14.0090, 7211.19.1500, 7211.19.2000, 7211.19.3000, 7211.19.4500, 7211.19.6000, 7211.19.7530, 7211.19.7560, 7211.19.7590, 7225.30.3005, 7225.30.3050, 7225.30.7000, 7225.40.7000, 7226.91.7000, and 7226.91.8000.

COLD-ROLLED

Products in this category include cold-rolled sheet and strip other than GOES ("cold-rolled"). These are carbon and alloy steel flat-rolled products of rectangular cross-section, produced by cold-rolling. If the product is in coils, it may be of any thickness. If it is in straight lengths, it must be of a thickness of less than 4.75 mm and a width measuring at least 10 times the thickness. The product may have patterns-in-relief derived directly from rolling. It may be perforated, corrugated, or polished. It may have been subjected to various processing steps after cold reduction, including flattening, temper rolling, or heat treatment, and it may have been cut into shapes other than rectangular. Much of the cold-rolled steel is used internally or transferred to affiliates for production of downstream products including corrosion-resistant steel, tin plate, and other products.[5] Cold-rolled steel that is not further processed is used for such applications as panels in electrical equipment and appliances, or for body parts in automobiles, where surface finish or strength-to-weight ratio is important but resistance to corrosion is not important. Cold-rolled steel is also used for automotive transmission and seat belt components,[6] and serves as a material for utensils, cutting tools, and cutlery.

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[4] During 2000, 66.0 percent of the quantity of domestic producers' total U.S. shipments of hot-rolled products were internally consumed.

[5] During 2000, domestic producers of cold-rolled products internally consumed 58.7 percent of the quantity of total U.S. shipments (including internal consumption) of domestically produced cold-rolled products.

[6] *See Certain Carbon Steel Products*, Invs. Nos. AA1921-197 (Review), 701-TA-231, 319-320, 322, 325-328, 340, 342, and 348-350 (Review), and 731-TA-573-576, 578, 582-587, 604, 607-608, 612, and 614-618 (Review), publication No. 3364, November 2000, pp. Cold-I-14-16 for discussion of seat belt retractor steel.

Products in this category are provided for in the following *HTS* subheadings: 7209.15.0000, 7209.16.0030, 7209.16.0060, 7209.16.0090, 7209.17.0030, 7209.17.0060, 7209.17.0090, 7209.18.1530, 7209.18.1560, 7209.18.2510, 7209.18.2550, 7209.18.6000, 7209.25.0000, 7209.26.0000, 7209.27.0000, 7209.28.0000, 7209.90.0000, 7211.23.1500, 7211.23.2000, 7211.23.3000, 7211.23.4500, 7211.23.6030, 7211.23.6060, 7211.23.6075, 7211.23.6085, 7211.29.2030, 7211.29.2090, 7211.29.4500, 7211.29.6030, 7211.29.6080, 7211.90.0000, 7225.19.0000, 7225.50.7000, 7225.50.8010, 7225.50.8015, 7225.50.8085, 7226.92.7050, 7226.92.8005, 7226.92.8050, 7226.19.1000, 7226.19.9000, 7226.92.5000, and 7226.92.7005.

GOES

Grain-oriented electrical steel ("GOES") includes low-carbon, silicon-iron alloys with a silicon content of approximately 3.2 percent, in which low core loss and high permeability in the direction of rolling have been achieved by appropriate metallurgical processing.[7] It is a flat-rolled cold-rolled steel product sold in sheet or strip form and has a grain structure that permits it to conduct a magnetic field with a high degree of efficiency. It is used in the manufacture of power distribution transformers as well as specialty transformers because of its superior magnetic properties and low energy loss. Products in this category are provided for in the following *HTS* subheadings: 7225.11.0000, 7226.11.1000, 7226.11.9030, and 7226.11.9060.

COATED

Products in this category include corrosion-resistant and other coated sheet and strip (collectively referred to in this section as "coated" products). These products are flat-rolled products of carbon or alloy steel with a metallic or nonmetallic coating, other than tin mill products, and other than clad. Corrosion resistance is used to prolong the useful life of end products in areas where the product is visible or exposed to weather or other corroding agents. The category includes steel that is galvanized (*i.e.*, coated with zinc), aluminized, coated with zinc-aluminum alloy, galvannealed (heat-treated after coating), coated with a mixture of lead and tin (*i.e.*, terne plate and terne coated sheets), painted, and coated with plastic. Galvanized steel is used to provide corrosion resistance in automobile parts, garbage cans, storage tanks, and building products. Terne principally is used in the manufacture of gasoline tanks, although it also can be found in chemical containers, oil filters, television chassis, highway equipment (*e.g.*, guardrails, bridgedecks, and signs), and agricultural buildings and equipment.

Products in this category are provided for in the following *HTS* subheadings: 7210.20.0000, 7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0090, 7210.61.0000, 7210.69.0000, 7210.70.3000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, 7212.60.0000, 7225.91.0000, 7225.92.0000, 7225.99.0010, 7225.99.0090, 7226.93.0000, 7226.94.0000, and 7226.99.0000.

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[7] Electrical steel exhibits certain magnetic properties, that make it optimum for use in transformers, power generators, and electric motors. Both GOES and NOES are types of electrical steel created by introducing silicon during the steelmaking process; however, GOES undergoes a special annealing (heat treatment) process after cold-rolling that NOES does not. For GOES, the grain of the steel runs parallel within the steel, permitting easy magnetization along the length of the steel. Although GOES may be twice as expensive to produce, its magnetic directional characteristics enable power transformers made from this metal to absorb less energy during operation. Because there is no preferential direction for magnetization, NOES is best used in rotating apparatus such as electric motors. For purposes of this investigation, NOES is included in the cold-rolled product category.

TIN

Tin mill products (collectively referred to in this section as "tin" products) are flat-rolled products of carbon or alloy steel, plated or coated with tin or with chromium oxides or with chromium and chromium oxides (tin-free steel). The products may be either in coils or in straight lengths. Tin products are made by electrolytically coating flat-rolled steel with tin or chromium. Major end uses of tin plate are in the manufacture of welded cans used to contain food, beverages, aerosols, and paint. Chromium-coated steel sheet is used primarily for beer and soft drink two-piece cans and ends, as well as ends for food cans and caps and crowns for glass containers. Products in this category are provided for in the following *HTS* subheadings: 7210.11.0000, 7210.12.0000, 7210.50.0000, and 7212.10.0000.

U.S. PRODUCERS

Domestic producers of flat products that provided a response to the Commission's producers' questionnaire in this investigation are listed, by products, in table FLAT-1. The aggregate quantities of these producers' commercial U.S. shipments are estimated to account for the following percentages of the totals for each product category listed:[8] slab (53-87 percent); plate (101-119 percent); hot-rolled (80-101 percent); cold-rolled (81-95 percent); coated (93-126 percent); and tin (91-106 percent).[9]

Table FLAT-1
Flat: U.S. producers and 2000 production, by product

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POSITIONS ON RELIEF

The Commission's questionnaire asked U.S. producers to indicate their position with regard to the granting of import relief for each of the seven flat product categories. The number of U.S. producers indicating their positions on relief are presented in table FLAT-2.

[8] The coverage figures are calculated based on publicly available data for 1996-2000 (as available) from AISI and U.S. Census Bureau MA33B.

[9] An estimate of coverage for GOES is not presented because there are no publicly available data on that product. However, staff believes that the two domestic producers of GOES that provided a response to the Commission's questionnaire are the only producers of the product in the United States.

Table FLAT-2
Positions on relief

Product category	Support	Oppose	No position	No response	Total
Slabs	12	5	2	1	20
Plate	13	1	4	1	19
Hot-rolled	21	1	6	0	28
Cold-rolled	17	4	6	1	28
GOES	2	0	0	0	2
Coated	18	1	3	0	22
Tin	7	0	1	0	8

Source: Compiled from data submitted in response to Commission questionnaires.

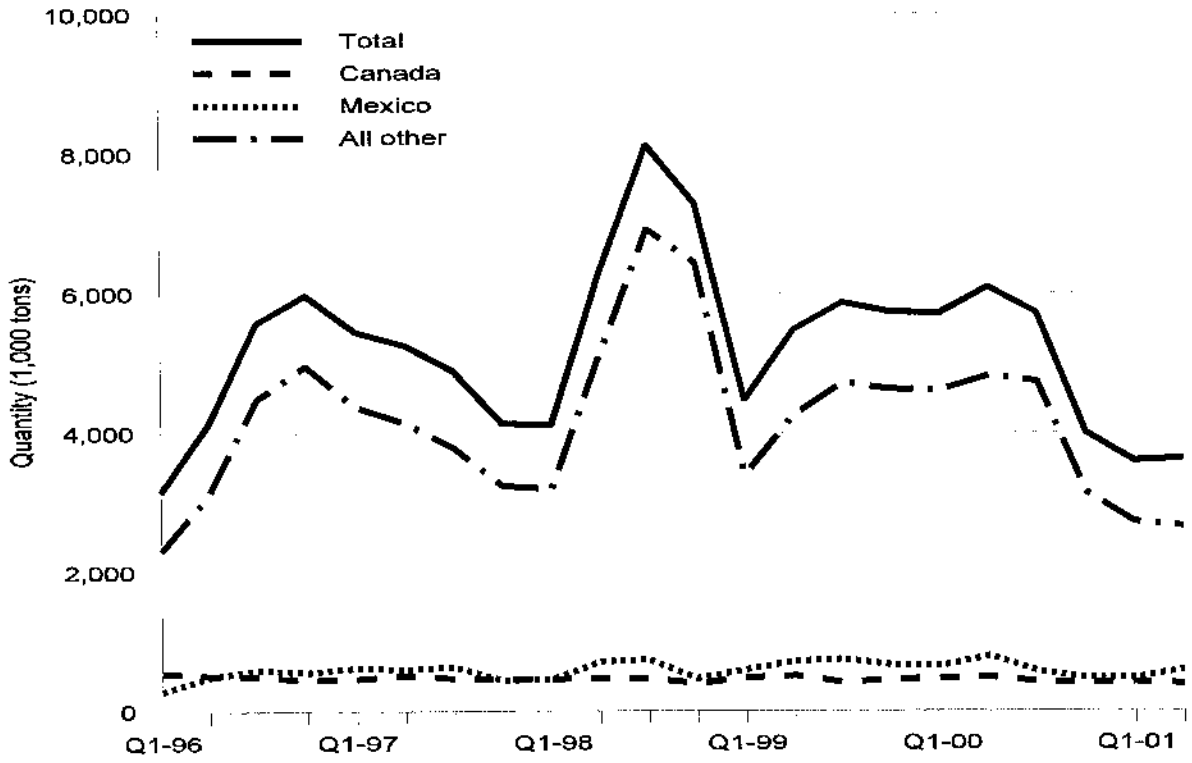
QUESTION OF INCREASED IMPORTS

Data concerning U.S. imports of all carbon and alloy flat products are presented in figure FLAT-1 and table FLAT-3. Data concerning U.S. imports of slabs, plate, hot-rolled, cold-rolled, GOES, coated, and tin are presented in tables FLAT-4 through FLAT-10 (data presented in table FLAT-3 are the sum of data presented in tables FLAT-4 through FLAT-10).[10] Import data presented are for Canada, Mexico, and all other sources combined. A complete listing of import data concerning this investigation, by individual country, may be accessed at the Commission's website (*www.USITC.gov*).

During the 1998-2000 time period, Mexico was among the top five sources of imports for slabs and coated products and Canada was among the top five sources of imports for plate, hot-rolled, cold-rolled, coated, and tin products. Neither Canada nor Mexico were among the top five sources of imports for GOES during the same three-year period.

[10] Import data are overstated to the extent that basket *HTS* categories include products that were excluded from the scope of the investigation in the President's request.

Figure FLAT-1
Total flat: U.S. imports from all sources, Canada, Mexico, and all other sources, by quarters, January 1996-June 2001



Source: Official Commerce statistics.

Table FLAT-3
Total flat: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Canada	2,013,674	1,897,616	1,790,667	1,847,897	1,743,492	938,982	794,279
Mexico	1,943,496	2,290,308	2,372,195	2,707,655	2,466,828	1,430,384	1,052,256
All other sources	14,893,990	15,555,456	21,659,576	16,989,393	17,299,977	9,425,244	5,363,565
Total	18,851,160	19,743,380	25,822,437	21,544,945	21,510,296	11,794,609	7,210,099
Value[1] (*$1,000*)							
Canada	923,082	877,776	815,502	778,777	770,580	415,136	341,484
Mexico	671,322	778,786	745,420	704,303	737,678	438,983	252,785
All other sources	5,545,636	5,917,312	7,518,328	5,170,675	5,782,829	3,040,631	1,738,102
Total	7,140,040	7,573,873	9,079,250	6,653,755	7,291,087	3,894,750	2,332,371
Unit value (*dollars per ton*)							
Canada	458	463	455	421	442	442	430
Mexico	345	340	314	260	299	307	240
All other sources	372	380	347	304	334	323	324
Average	379	384	352	309	339	330	323
Share of quantity (*percent*)							
Canada	10.7	9.6	6.9	8.6	8.1	8.0	11.0
Mexico	10.3	11.6	9.2	12.6	11.5	12.1	14.6
All other sources	79.0	78.8	83.9	78.9	80.4	79.9	74.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	12.9	11.6	9.0	11.7	10.6	10.7	14.6
Mexico	9.4	10.3	8.2	10.6	10.1	11.3	10.8
All other sources	77.7	78.1	82.8	77.7	79.3	78.1	74.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	***	***	***	***	***	***	***
Mexico	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***
Total	***	***	***	***	***	***	***

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table FLAT-4
Slabs: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	184,676	228,347	153,175	217,142	221,355	173,201	22,699
Mexico	1,258,424	1,429,150	1,560,334	1,747,137	1,635,969	914,199	685,239
All other sources	4,854,304	3,758,875	3,638,137	5,403,797	5,402,489	3,008,748	1,666,092
Total	6,297,405	5,416,372	5,351,647	7,368,076	7,259,814	4,096,148	2,374,030
Value[1] (*$1,000*)							
Canada	52,485	63,187	44,214	54,053	53,991	43,195	4,142
Mexico	344,757	366,058	365,827	318,766	381,793	220,611	129,131
All other sources	1,193,786	932,275	826,392	932,668	1,171,646	645,247	294,058
Total	1,591,028	1,361,520	1,236,432	1,305,487	1,607,430	909,053	427,331
Unit value (*dollars per ton*)							
Canada	284	277	289	249	244	249	182
Mexico	274	256	234	182	233	241	188
All other sources	246	248	227	173	217	214	176
Average	253	251	231	177	221	222	180
Share of quantity (*percent*)							
Canada	2.9	4.2	2.9	2.9	3.0	4.2	1.0
Mexico	20.0	26.4	29.2	23.7	22.5	22.3	28.9
All other sources	77.1	69.4	68.0	73.3	74.4	73.5	70.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	3.3	4.6	3.6	4.1	3.4	4.8	1.0
Mexico	21.7	26.9	29.6	24.4	23.8	24.3	30.2
All other sources	75.0	68.5	66.8	71.4	72.9	71.0	68.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	0.3	0.3	0.2	0.3	0.3	0.5	0.1
Mexico	2.0	2.2	2.4	2.7	2.4	2.6	2.2
All other sources	7.6	5.7	5.5	8.4	8.1	8.5	5.4
Total	9.9	8.2	8.1	11.4	10.9	11.6	7.7

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table FLAT-5
Plate: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	185,683	174,895	173,957	154,918	167,712	76,253	106,122
Mexico	727	481	50,418	74,770	211	80	94
All other sources	1,750,946	1,202,508	1,889,545	665,292	782,844	321,833	280,918
Total	1,937,357	1,377,884	2,113,920	894,981	950,768	398,167	387,134
Value[1] (*$1,000*)							
Canada	83,743	75,200	75,611	61,015	66,527	31,072	40,001
Mexico	283	208	17,018	21,805	80	31	47
All other sources	691,643	508,638	893,250	275,405	311,815	135,141	118,136
Total	775,669	584,047	985,879	358,226	378,421	166,244	158,184
Unit value (*dollars per ton*)							
Canada	451	430	435	394	397	407	377
Mexico	390	433	338	292	377	389	498
All other sources	395	423	473	414	398	420	421
Average	400	424	466	400	398	418	409
Share of quantity (*percent*)							
Canada	9.6	12.7	8.2	17.3	17.6	19.2	27.4
Mexico	0.0	0.0	2.4	8.4	0.0	0.0	0.0
All other sources	90.4	87.3	89.4	74.3	82.3	80.8	72.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	10.8	12.9	7.7	17.0	17.6	18.7	25.3
Mexico	0.0	0.0	1.7	6.1	0.0	0.0	0.0
All other sources	89.2	87.1	90.6	76.9	82.4	81.3	74.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	3.1	2.9	2.4	2.6	2.6	2.2	3.3
Mexico	0.0	0.0	0.7	1.3	0.0	0.0	0.0
All other sources	29.3	19.6	25.9	11.3	12.2	9.3	8.6
Total	32.5	22.5	29.0	15.2	14.8	11.5	11.9

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table FLAT-6
Hot-rolled: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
				Quantity (*tons*)			
Canada	742,053	573,574	554,435	610,362	459,954	227,729	238,127
Mexico	232,004	269,782	234,887	297,824	335,401	224,549	158,985
All other sources	4,291,030	5,673,944	10,708,033	5,610,258	6,664,289	3,977,260	1,362,547
Total	5,265,087	6,517,301	11,497,355	6,518,444	7,459,644	4,429,538	1,759,659
				Value[1] (*$1,000*)			
Canada	269,464	219,517	205,018	202,128	163,838	82,849	75,655
Mexico	73,133	89,324	73,706	78,271	110,621	74,883	37,136
All other sources	1,399,259	1,807,494	3,036,929	1,473,844	1,989,057	1,168,108	373,149
Total	1,741,856	2,116,335	3,315,652	1,754,243	2,263,517	1,325,840	485,939
				Unit value (*dollars per ton*)			
Canada	363	383	370	331	356	364	318
Mexico	315	331	314	263	330	333	234
All other sources	326	319	284	263	298	294	274
Average	331	325	288	269	303	299	276
				Share of quantity (*percent*)			
Canada	14.1	8.8	4.8	9.4	6.2	5.1	13.5
Mexico	4.4	4.1	2.0	4.6	4.5	5.1	9.0
All other sources	81.5	87.1	93.1	86.1	89.3	89.8	77.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
				Share of value (*percent*)			
Canada	15.5	10.4	6.2	11.5	7.2	6.2	15.6
Mexico	4.2	4.2	2.2	4.5	4.9	5.6	7.6
All other sources	80.3	85.4	91.6	84.0	87.9	88.1	76.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
				Ratio to U.S. production (*percent*)			
Canada	1.2	0.9	0.9	0.9	0.7	0.6	0.7
Mexico	0.4	0.4	0.4	0.4	0.5	0.6	0.5
All other sources	6.8	8.7	16.8	8.4	9.8	10.9	4.1
Total	8.3	10.0	18.1	9.7	10.9	12.1	5.3

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table FLAT-7
Cold-rolled: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	231,488	229,095	222,968	215,888	219,104	96,824	107,665
Mexico	120,917	160,133	123,511	148,086	206,291	126,258	104,745
All other sources	2,238,969	3,192,071	3,698,876	3,012,422	2,338,379	1,058,950	1,213,645
Total	2,591,374	3,581,299	4,045,356	3,376,396	2,763,774	1,282,032	1,426,055
Value[1] (*$1,000*)							
Canada	115,342	118,309	109,319	104,332	103,233	48,893	43,464
Mexico	48,550	65,486	46,821	46,788	74,674	45,363	30,426
All other sources	1,143,747	1,553,467	1,650,129	1,207,755	1,109,140	499,451	495,236
Total	1,307,639	1,737,262	1,806,269	1,358,875	1,287,047	593,707	569,126
Unit value (*dollars per ton*)							
Canada	498	516	490	483	471	505	404
Mexico	402	409	379	316	362	359	290
All other sources	511	487	446	401	474	472	408
Average	505	485	447	402	466	463	399
Share of quantity (*percent*)							
Canada	8.9	6.4	5.5	6.4	7.9	7.6	7.5
Mexico	4.7	4.5	3.1	4.4	7.5	9.8	7.3
All other sources	86.4	89.1	91.4	89.2	84.6	82.6	85.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	8.8	6.8	6.1	7.7	8.0	8.2	7.6
Mexico	3.7	3.8	2.6	3.4	5.8	7.6	5.3
All other sources	87.5	89.4	91.4	88.9	86.2	84.1	87.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	0.7	0.7	0.6	0.6	0.6	0.5	0.6
Mexico	0.4	0.5	0.3	0.4	0.5	0.6	0.6
All other sources	6.5	9.4	10.4	8.0	6.2	5.3	7.2
Total	7.5	10.5	11.4	9.0	7.3	6.4	8.4

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table FLAT-8
GOES: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	79	144	36	24	3	0	0
Mexico	0	156	10	119	274	157	84
All other sources	34,868	31,061	36,274	29,794	36,496	15,921	17,333
Total	34,946	31,361	36,320	29,937	36,773	16,077	17,417
Value[1] (*$1,000*)							
Canada	85	188	57	34	2	0	0
Mexico	0	255	16	192	429	218	146
All other sources	40,697	37,080	43,681	31,171	39,887	17,800	18,577
Total	40,782	37,523	43,755	31,398	40,318	18,017	18,723
Unit value (*dollars per ton*)							
Canada	1,082	1,306	1,594	1,426	832	(2)	(2)
Mexico	(2)	1,634	1,591	1,621	1,562	1,387	1,732
All other sources	1,167	1,194	1,204	1,046	1,093	1,118	1,072
Average	1,167	1,196	1,205	1,049	1,096	1,121	1,075
Share of quantity (*percent*)							
Canada	0.2	0.5	0.1	0.1	0.0	0.0	0.0
Mexico	0.0	0.5	0.0	0.4	0.7	1.0	0.5
All other sources	99.8	99.0	99.9	99.5	99.2	99.0	99.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	0.2	0.5	0.1	0.1	0.0	0.0	0.0
Mexico	0.0	0.7	0.0	0.6	1.1	1.2	0.8
All other sources	99.8	98.8	99.8	99.3	98.9	98.8	99.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	***	***	***	***	***	***	***
Mexico	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***
Total	***	***	***	***	***	***	***

[1] Landed, duty-paid.
[2] Not applicable.

Source: Compiled from official Commerce statistics.

Table FLAT-9
Coated: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Canada	624,363	613,019	601,487	552,281	583,794	319,073	262,584
Mexico	331,366	430,586	402,749	439,563	288,642	165,140	103,108
All other sources	1,324,578	1,337,437	1,291,992	1,666,725	1,586,893	792,463	617,022
Total	2,280,307	2,381,043	2,296,228	2,658,569	2,459,329	1,276,676	982,714
Value[1] (*$1,000*)							
Canada	371,722	351,430	327,068	297,499	324,057	179,132	139,382
Mexico	204,558	257,431	241,807	238,390	170,047	97,877	55,900
All other sources	810,598	840,282	800,355	893,058	878,661	432,507	315,217
Total	1,386,878	1,449,143	1,369,230	1,428,948	1,372,765	709,515	510,498
Unit value (*dollars per ton*)							
Canada	595	573	544	539	555	561	531
Mexico	617	598	600	542	589	593	542
All other sources	612	628	619	536	554	546	511
Average	608	609	596	537	558	556	519
Share of quantity (*percent*)							
Canada	27.4	25.7	26.2	20.8	23.7	25.0	26.7
Mexico	14.5	18.1	17.5	16.5	11.7	12.9	10.5
All other sources	58.1	56.2	56.3	62.7	64.5	62.1	62.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	26.8	24.3	23.9	20.8	23.6	25.2	27.3
Mexico	14.7	17.8	17.7	16.7	12.4	13.8	10.9
All other sources	58.4	58.0	58.5	62.5	64.0	61.0	61.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	3.6	3.5	3.2	2.6	2.8	2.9	2.8
Mexico	1.9	2.4	2.1	2.1	1.4	1.5	1.1
All other sources	7.7	7.6	6.8	8.0	7.6	7.3	6.5
Total	13.3	13.5	12.0	12.7	11.8	11.7	10.4

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table FLAT-10
Tin: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Canada	45,332	78,542	84,608	97,282	91,570	45,902	57,082
Mexico	57	21	286	156	39	0	0
All other sources	399,295	359,558	396,717	601,105	488,587	250,068	206,009
Total	444,684	438,121	481,611	698,543	580,196	295,971	263,091
Value[1] (*$1,000*)							
Canada	30,240	49,945	54,215	59,716	58,932	29,995	38,841
Mexico	39	23	225	89	34	0	0
All other sources	265,907	238,075	267,593	356,774	282,624	142,378	123,730
Total	296,186	288,043	322,033	416,579	341,589	172,373	162,571
Unit value (*dollars per ton*)							
Canada	667	636	641	614	644	653	680
Mexico	689	1,088	789	569	863	[2]	[2]
All other sources	666	662	675	594	578	569	601
Average	666	657	669	596	589	582	618
Share of quantity (*percent*)							
Canada	10.2	17.9	17.6	13.9	15.8	15.5	21.7
Mexico	0.0	0.0	0.1	0.0	0.0	0.0	0.0
All other sources	89.8	82.1	82.4	86.1	84.2	84.5	78.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	10.2	17.3	16.8	14.3	17.3	17.4	23.9
Mexico	0.0	0.0	0.1	0.0	0.0	0.0	0.0
All other sources	89.8	82.7	83.1	85.6	82.7	82.6	76.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	1.2	2.1	2.4	2.8	2.8	2.6	3.8
Mexico	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All other sources	10.8	9.5	11.4	17.3	14.7	14.4	13.8
Total	12.0	11.6	13.9	20.1	17.4	17.1	17.7

[1] Landed, duty-paid.
[2] Not applicable.

Source: Compiled from official Commerce statistics.

QUESTION OF SERIOUS INJURY

TRADE AND EMPLOYMENT

Trade and employment data on all carbon and alloy flat products provided by U.S. producers are presented in table FLAT-11. Trade and employment data concerning slabs, plate, hot-rolled, cold-rolled, GOES, coated, and tin are presented in tables FLAT-12 through FLAT-18, respectively (data presented in table FLAT-11 are the sum of data presented in tables FLAT-12 through FLAT-18).[11]

Table FLAT-11
Total flat: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

* * * * * * *

[11] Significant double-counting issues arise for some of the items presented in table FLAT-11 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs.

Counsel to domestic producers Bethlehem Steel Corp.; LTV Steel Co., Inc.; National Steel Corp.; and United States Steel LLC proposed that the Commission should focus on slab-making capacity as the best measure of domestic flat-rolled capacity. They argue that any rolling capacity in excess of slab-making capacity requires imported slab and such capacity should not be considered part of the flat-rolled industry. Counsel also proposed that for aggregate flat-rolled rolling capacity, the most appropriate measure is the aggregation of hot-rolled and plate capacity data since all slabs must be either rolled in a hot-strip mill or rolled in a reversing or Steckel (plate) mill. In counsel's calculation of capacity utilization, the aggregation of hot-rolled and plate capacities was used. Posthearing brief of joint domestic producers, p. 31, exhibit A, pp. 17-18, and appendix 5. Staff agrees that this surrogate measure of aggregate capacity is appropriate.

Counsel for the domestic producers also proposes that aggregate production figures may be estimated by either summing U.S. commercial shipments and exports or by summing production while netting out internal consumption. In their calculation of aggregate production and capacity utilization presented in appendix 5 of their posthearing brief, counsel used the sum of commercial shipments and exports. Posthearing brief of joint domestic producers, exhibit A, pp. 18-19 and appendix 5. On the other hand, respondents argue that the production assets of the domestic industry are invoked at each stage of production and that that production effort should be reflected in the analysis of the data. Therefore, they purport that all production data may simply be added. They add, however, that the approach used does not affect the analysis of the trends. Posthearing brief of joint respondents: flat-rolled steel, volume II, exhibit D, pp. 5-6. In order to avoid obvious double-counting, staff believes that the appropriate aggregate measure of production is the summing of commercial shipments and exports.

Table FLAT-12
Slabs: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	66,925,161	69,746,463	73,344,000	74,252,269	75,066,950	37,464,305	36,558,833
Production	63,457,778	65,986,893	65,754,181	64,455,285	66,813,694	35,398,241	31,017,850
Internal consumption	64,370,693	66,321,239	65,114,309	66,051,977	66,747,891	35,688,380	31,363,334
U.S. commercial shipments	696,697	767,717	418,737	667,235	432,617	227,386	33,296
U.S. shipments	65,067,390	67,088,956	65,533,046	66,719,212	67,180,508	35,915,766	31,396,630
Export shipments	0	45,130	40,074	21,038	6,870	3,902	27,952
Total shipments	65,067,390	67,134,086	65,573,120	66,740,250	67,187,378	35,919,668	31,424,582
Ending inventories	2,548,123	2,693,557	3,499,363	2,706,668	2,962,748	2,908,765	2,606,274
Value (*$1,000*)							
Internal consumption	14,224,617	15,009,473	14,812,511	13,364,130	14,646,792	7,891,900	6,432,462
U.S. commercial shipments	172,665	192,843	104,487	143,205	92,535	50,921	6,817
U.S. shipments	14,397,282	15,202,316	14,916,998	13,507,335	14,739,327	7,942,821	6,439,279
Export shipments	0	13,075	11,071	4,902	1,563	866	4,998
Total shipments	14,397,282	15,215,391	14,928,069	13,512,237	14,740,890	7,943,687	6,444,277
Unit value (*dollars per ton*)							
Internal consumption	223	228	229	204	221	223	206
U.S. commercial shipments	248	251	250	215	214	224	205
U.S. shipments	223	228	229	204	221	223	206
Export shipments	(1)	290	276	233	228	222	179
Total shipments	223	228	229	204	221	223	206
Ratios and shares (*percent*)							
Capacity utilization	94.8	94.6	89.7	86.8	89.0	94.5	84.8
U.S. shipments to distributors	0.5	0.4	0.2	0.2	0.4	0.3	0.1
U.S. shipments to end users	99.5	99.6	99.8	99.8	99.6	99.7	99.9
Inventories/total shipments	3.9	4.0	5.3	4.1	4.4	4.0	4.1
Employment data							
PRWs (*number*)	19,413	19,154	18,662	18,231	18,066	18,193	16,798
Hours worked (*1,000*)	42,966	41,494	42,213	40,833	40,150	20,683	18,454
Wages paid (*$1,000*)	1,018,442	1,006,579	1,044,412	1,035,340	1,034,117	536,767	478,712
Hourly wages	$23.70	$24.26	$24.74	$25.36	$25.76	$25.95	$25.94
Productivity (*tons/1,000 hours*)	1,165.6	1,260.3	1,252.7	1,254.3	1,337.0	1,376.1	1,350.3
Unit labor costs (*per ton*)	$20.34	$19.25	$19.75	$20.22	$19.26	$18.86	$19.21

[1] Not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-13
Plate: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	7,391,464	9,179,593	9,973,865	9,237,459	10,551,572	4,833,514	5,116,835
Production	5,969,876	6,125,330	7,282,378	5,895,338	6,404,594	3,454,711	3,261,472
Internal consumption	34,320	246,814	435,176	388,901	132,500	51,102	190,853
U.S. commercial shipments	5,834,872	5,628,153	6,517,586	5,362,125	6,023,568	3,250,990	2,990,132
U.S. shipments	5,869,192	5,874,967	6,952,762	5,751,026	6,156,068	3,302,092	3,180,985
Export shipments	87,498	183,242	234,794	214,694	249,124	131,619	76,701
Total shipments	5,956,690	6,058,209	7,187,556	5,965,720	6,405,192	3,433,711	3,257,686
Ending inventories	367,671	434,793	529,617	458,934	458,236	479,946	443,022
Value (*$1,000*)							
Internal consumption	15,748	117,804	194,670	141,201	51,286	19,607	72,185
U.S. commercial shipments	2,812,694	2,663,352	3,061,923	2,154,694	2,417,648	1,300,318	1,132,987
U.S. shipments	2,828,442	2,781,156	3,256,593	2,295,895	2,468,934	1,319,925	1,205,172
Export shipments	50,558	90,620	115,591	91,800	99,955	51,096	33,553
Total shipments	2,879,000	2,871,776	3,372,184	2,387,695	2,568,889	1,371,021	1,238,725
Unit value (*dollars per ton*)							
Internal consumption	459	477	447	363	387	384	378
U.S. commercial shipments	482	473	470	402	401	400	379
U.S. shipments	482	473	468	399	401	400	379
Export shipments	578	495	492	428	401	388	437
Total shipments	483	474	469	400	401	399	380
Ratios and shares (*percent*)							
Capacity utilization	80.7	66.7	73.0	63.8	60.7	71.4	63.7
U.S. shipments to distributors	43.5	50.2	52.3	56.6	54.8	55.3	56.9
U.S. shipments to end users	56.5	49.8	47.7	43.4	45.2	44.7	43.1
Inventories/total shipments	6.2	7.2	7.4	7.7	7.2	7.0	6.8
Employment data							
PRWs (*number*)	7,319	7,328	8,947	6,147	6,281	5,331	5,238
Hours worked (*1,000*)	16,680	16,589	17,426	13,371	13,707	5,921	5,780
Wages paid (*$1,000*)	362,444	366,183	393,497	306,454	318,335	137,490	133,305
Hourly wages	$22.27	$22.65	$23.09	$23.34	$23.65	$23.72	$23.54
Productivity (*tons/1,000 hours*)	357.9	369.2	417.9	440.9	467.2	583.5	564.3
Unit labor costs (*per ton*)	$61.01	$60.19	$54.32	$52.16	$49.89	$39.93	$41.02

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-14
Hot-rolled: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	69,192,943	71,743,364	76,062,922	78,392,464	78,952,677	39,666,070	40,073,901
Production	63,476,549	65,111,144	63,644,097	67,034,929	68,231,538	36,534,368	33,217,812
Internal consumption	41,763,004	42,317,767	42,513,013	44,181,150	44,636,264	24,015,835	20,300,107
U.S. commercial shipments	21,472,810	22,459,169	20,877,177	22,668,825	22,996,700	12,468,809	11,856,050
U.S. shipments	63,235,814	64,776,936	63,390,190	66,849,975	67,632,964	36,484,644	32,156,157
Export shipments	328,341	311,009	183,065	356,602	616,677	319,910	180,554
Total shipments	63,564,155	65,087,945	63,573,255	67,206,577	68,249,641	36,804,554	32,336,711
Ending inventories	2,517,133	2,522,369	2,553,802	2,517,247	2,532,184	2,600,295	2,460,684
Value (*$1,000*)							
Internal consumption	13,332,730	13,683,547	13,251,239	12,410,592	12,940,666	7,493,846	5,094,282
U.S. commercial shipments	7,475,337	7,994,166	6,995,907	6,658,938	7,166,320	4,101,993	3,042,810
U.S. shipments	20,808,067	21,677,713	20,247,146	19,069,530	20,106,986	11,595,839	8,137,092
Export shipments	107,707	115,558	68,827	119,516	204,802	112,850	54,507
Total shipments	20,915,774	21,793,271	20,315,973	19,189,046	20,311,788	11,708,689	8,191,599
Unit value (*dollars per ton*)							
Internal consumption	319	323	312	281	290	312	251
U.S. commercial shipments	348	356	335	294	312	329	257
U.S. shipments	329	335	319	285	297	318	253
Export shipments	328	372	376	335	332	353	302
Total shipments	329	335	320	286	298	318	253
Ratios and shares (*percent*)							
Capacity utilization	91.7	90.8	83.7	85.5	86.4	92.1	82.9
U.S. shipments to distributors	38.9	36.6	37.6	41.4	40.0	40.2	42.8
U.S. shipments to end users	61.1	63.4	62.4	58.6	60.0	59.8	57.2
Inventories/total shipments	4.0	3.9	4.0	3.7	3.7	3.5	3.8
Employment data							
PRWs (*number*)	30,796	30,747	29,251	29,472	29,409	29,824	27,844
Hours worked (*1,000*)	68,563	68,155	66,672	66,900	66,260	34,185	30,696
Wages paid (*$1,000*)	1,642,086	1,668,773	1,654,873	1,700,695	1,715,903	890,470	795,434
Hourly wages	$23.95	$24.48	$24.82	$25.42	$25.90	$26.05	$25.91
Productivity (*tons/1,000 hours*)	924.6	954.2	953.4	1,001.1	1,029.0	1,067.9	1,081.3
Unit labor costs (*per ton*)	$25.90	$25.66	$26.03	$25.39	$25.17	$24.39	$23.96

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-15
Cold-rolled: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	39,051,793	40,016,633	41,985,643	42,454,033	44,678,133	22,258,117	21,298,892
Production	34,378,774	33,953,172	35,423,140	37,590,345	37,626,027	19,937,466	16,942,813
Internal consumption	19,886,333	19,511,510	20,821,323	22,514,709	21,854,265	11,433,087	10,366,795
U.S. commercial shipments	13,919,165	14,017,506	14,109,247	14,677,944	15,363,388	8,240,587	6,584,569
U.S. shipments	33,805,498	33,529,016	34,930,570	37,192,653	37,217,653	19,673,674	16,951,364
Export shipments	253,073	252,177	228,313	268,642	364,657	169,259	177,860
Total shipments	34,058,571	33,781,193	35,158,883	37,461,295	37,582,310	19,842,933	17,129,224
Ending inventories	2,045,481	2,055,055	2,112,194	2,143,904	2,056,791	2,141,284	1,824,731
Value (*$1,000*)							
Internal consumption	8,616,692	8,504,661	8,857,877	8,960,679	8,701,059	4,620,828	3,766,988
U.S. commercial shipments	6,841,435	6,948,668	6,659,384	6,454,097	6,839,493	3,724,993	2,695,578
U.S. shipments	15,458,127	15,453,329	15,517,261	15,414,776	15,540,552	8,345,821	6,462,566
Export shipments	133,026	137,903	125,719	149,198	201,285	94,778	92,323
Total shipments	15,591,153	15,591,232	15,642,980	15,563,974	15,741,837	8,440,599	6,554,889
Unit value (*dollars per ton*)							
Internal consumption	433	436	425	398	398	404	363
U.S. commercial shipments	492	496	472	440	445	452	409
U.S. shipments	457	461	444	414	418	424	381
Export shipments	526	547	551	555	552	560	519
Total shipments	458	462	445	415	419	425	383
Ratios and shares (*percent*)							
Capacity utilization	87.5	84.3	83.9	88.1	83.9	89.1	79.3
U.S. shipments to distributors	28.2	29.5	26.7	27.5	28.7	28.9	27.9
U.S. shipments to end users	71.8	70.5	73.3	72.5	71.3	71.1	72.1
Inventories/total shipments	6.0	6.1	6.0	5.7	5.5	5.4	5.3
Employment data							
PRWs (*number*)	26,273	26,138	25,938	25,352	26,507	26,344	24,078
Hours worked (*1,000*)	58,217	58,895	57,765	57,432	59,255	30,838	26,448
Wages paid (*$1,000*)	1,474,931	1,518,173	1,526,358	1,543,485	1,613,034	827,860	721,989
Hourly wages	$25.34	$25.78	$26.42	$26.87	$27.22	$26.85	$27.30
Productivity (*tons/1,000 hours*)	586.9	572.5	609.5	651.6	632.3	643.3	638.8
Unit labor costs (*per ton*)	$43.17	$45.03	$43.36	$41.24	$43.05	$41.73	$42.73

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-16
GOES: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

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Table FLAT-17
Coated: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Capacity	19,754,450	20,060,600	22,982,680	25,387,560	25,303,690	12,579,900	12,803,470
Production	17,131,014	17,595,498	19,077,330	20,858,349	20,789,317	10,885,261	9,449,439
Internal consumption	473,122	149,623	469,381	568,079	598,858	321,203	296,095
U.S. commercial shipments	16,357,879	17,027,781	17,866,674	19,532,364	19,282,571	10,301,606	9,073,394
U.S. shipments	16,831,001	17,177,404	18,336,055	20,100,443	19,881,429	10,622,809	9,369,489
Export shipments	169,619	279,436	344,836	407,009	669,361	301,960	347,599
Total shipments	17,000,620	17,456,840	18,680,891	20,507,452	20,550,790	10,924,769	9,717,088
Ending inventories	1,614,725	1,623,899	1,853,312	2,014,775	2,090,197	1,907,407	1,766,419
Value (*$1,000*)							
Internal consumption	276,150	83,149	248,761	259,623	298,892	161,080	144,899
U.S. commercial shipments	10,072,338	10,571,953	10,617,581	10,716,670	10,296,552	5,597,466	4,518,349
U.S. shipments	10,348,488	10,655,102	10,866,342	10,976,293	10,595,444	5,758,546	4,663,248
Export shipments	117,748	193,011	226,749	264,648	428,999	193,605	225,138
Total shipments	10,466,236	10,848,113	11,093,091	11,240,941	11,024,443	5,952,151	4,888,386
Unit value (*dollars per ton*)							
Internal consumption	584	556	546	491	544	541	527
U.S. commercial shipments	616	621	597	557	544	553	508
U.S. shipments	615	620	596	556	544	552	509
Export shipments	694	691	658	650	641	641	648
Total shipments	616	621	597	557	547	555	514
Ratios and shares (*percent*)							
Capacity utilization	86.7	87.7	83.0	82.2	82.2	86.5	73.8
U.S. shipments to distributors	34.0	34.4	37.2	37.6	35.7	36.4	36.1
U.S. shipments to end users	66.0	65.6	62.8	62.4	64.3	63.6	63.9
Inventories/total shipments	9.5	9.3	9.9	9.8	10.2	8.7	9.1
Employment data							
PRWs (*number*)	23,679	23,715	24,619	23,657	22,449	23,089	21,490
Hours worked (*1,000*)	47,734	48,807	50,628	49,536	46,671	24,197	22,296
Wages paid (*$1,000*)	1,223,322	1,281,174	1,347,842	1,335,255	1,266,115	660,859	595,950
Hourly wages	$25.63	$26.25	$26.62	$26.96	$27.13	$27.31	$26.73
Productivity (*tons/1,000 hours*)	358.9	360.5	376.8	421.1	445.4	449.9	423.8
Unit labor costs (*per ton*)	$71.41	$72.81	$70.65	$64.02	$60.90	$60.71	$63.07

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-18
Tin: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	4,740,145	4,855,145	4,869,145	4,773,145	4,566,145	2,282,023	2,069,823
Production	3,712,688	3,770,043	3,473,771	3,474,863	3,329,528	1,733,488	1,489,852
Internal consumption	0	69,750	140,480	205,195	237,000	136,321	85,473
U.S. commercial shipments	3,493,306	3,489,133	3,146,078	3,034,158	2,926,331	1,460,449	1,350,809
U.S. shipments	3,493,306	3,558,883	3,286,558	3,239,353	3,163,331	1,596,770	1,436,282
Export shipments	195,971	185,900	194,160	244,030	194,443	116,070	57,546
Total shipments	3,689,277	3,744,783	3,480,718	3,483,383	3,357,774	1,712,840	1,493,828
Ending inventories	356,864	374,810	367,863	359,343	331,097	379,991	345,262
Value (*$1,000*)							
Internal consumption	0	41,900	84,300	123,100	142,400	80,300	50,500
U.S. commercial shipments	2,154,680	2,156,894	1,926,793	1,784,190	1,723,409	861,716	796,957
U.S. shipments	2,154,680	2,198,794	2,011,093	1,907,290	1,865,809	942,016	847,457
Export shipments	117,093	111,802	109,302	129,834	108,246	66,386	32,642
Total shipments	2,271,773	2,310,596	2,120,395	2,037,124	1,974,055	1,008,402	880,099
Unit value (*dollars per ton*)							
Internal consumption	(1)	601	600	600	604	608	595
U.S. commercial shipments	617	618	612	588	589	591	590
U.S. shipments	617	617	612	589	590	592	591
Export shipments	598	601	562	533	558	573	569
Total shipments	616	617	609	585	589	591	590
Ratios and shares (*percent*)							
Capacity utilization	78.3	77.7	71.3	72.8	72.9	76.0	71.7
U.S. shipments to distributors	20.7	23.0	23.2	23.8	24.6	25.6	17.2
U.S. shipments to end users	79.3	77.0	76.8	76.2	75.4	74.4	82.8
Inventories/total shipments	9.7	10.0	10.6	10.3	9.9	11.1	11.6
Employment data							
PRWs (*number*)	7,536	7,074	6,322	6,075	5,733	5,884	5,584
Hours worked (*1,000*)	16,191	15,594	13,831	13,534	15,382	6,548	5,792
Wages paid (*$1,000*)	395,784	390,559	352,597	359,628	330,225	170,969	149,574
Hourly wages	$24.44	$25.05	$25.49	$26.57	$21.47	$26.11	$25.82
Productivity (*tons/1,000 hours*)	229.3	241.8	251.2	256.8	216.5	264.7	257.2
Unit labor costs (*per ton*)	$106.60	$103.60	$101.50	$103.49	$99.18	$98.63	$100.40

[1] Not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

FINANCIAL

Financial data on all carbon and alloy flat products provided by U.S. producers are presented in table FLAT-19. Financial data concerning slabs, plate, hot-rolled, cold-rolled, GOES, coated, and tin are presented in tables FLAT-20 through FLAT-26, respectively (data presented in table FLAT-19 are the sum of data presented in FLAT-20 through FLAT-26).[12]

Table FLAT-19
Total flat: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

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[12] Significant double-counting issues arise for some of the items presented in table FLAT-19 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs. No comments specific to financial indicators were filed by parties; their recommendations concerning the calculation of production, capacity, and consumption are summarized in footnotes 11 and 14 of this section of the report.

Table FLAT-20
Slabs: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	806,098	808,806	497,124	699,158	395,650	243,785	61,248
Value (*$1,000*)							
Net commercial sales	200,455	205,423	126,762	148,824	87,358	54,770	11,815
COGS	198,742	204,270	122,004	173,479	88,536	53,636	12,571
Gross profit or (loss)	1,713	1,153	4,758	(24,655)	(1,178)	1,134	(756)
SG&A expenses	9,606	24,208	6,680	10,042	6,024	3,797	739
Operating income or (loss)	(7,893)	(23,055)	(1,922)	(34,697)	(7,202)	(2,663)	(1,495)
Interest expense	10,171	9,520	8,934	7,158	2,957	2,057	1,012
Other (income)/expenses, net	578	(4,042)	424	1,336	(553)	(309)	71
Net income or (loss)	(18,642)	(28,533)	(11,280)	(43,191)	(9,606)	(4,411)	(2,578)
Depreciation/amortization	7,549	16,310	6,646	8,414	5,291	2,889	923
Cash flow	(11,093)	(12,223)	(4,634)	(34,777)	(4,315)	(1,522)	(1,655)
Capital expenditures	95,487	189,774	163,159	75,861	43,727	33,531	21,039
R&D expenses	7,751	9,901	10,183	7,189	6,130	3,195	2,841
Ratio to net commercial sales (*percent*)							
COGS	99.1	99.4	96.2	116.6	101.3	97.9	106.4
Gross profit or (loss)	0.9	0.6	3.8	(16.6)	(1.3)	2.1	(6.4)
SG&A expenses	4.8	11.8	5.3	6.7	6.9	6.9	6.3
Operating income or (loss)	(3.9)	(11.2)	(1.5)	(23.3)	(8.2)	(4.9)	(12.7)
Net income or (loss)	(9.3)	(13.9)	(8.9)	(29.0)	(11.0)	(8.1)	(21.8)
Unit value (*dollars per ton*)							
Net commercial sales	249	254	255	213	221	225	193
COGS total	247	253	245	248	224	220	205
Raw materials	128	120	129	131	121	124	125
Direct labor	41	35	37	40	39	43	27
Other factory costs	78	98	79	77	63	53	53
Gross profit or (loss)	2	1	10	(35)	(3)	5	(12)
SG&A expenses	12	30	13	14	15	16	12
Operating income or (loss)	(10)	(29)	(4)	(50)	(18)	(11)	(24)
Number of firms reporting							
Operating losses	5	6	4	5	8	6	5
Data	7	8	9	5	10	9	7

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-21
Plate: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	5,899,654	5,809,622	6,910,673	5,668,800	6,244,074	3,386,665	3,070,638
Value (*$1,000*)							
Net commercial sales	2,843,056	2,750,570	3,223,058	2,269,313	2,489,871	1,348,006	1,170,991
COGS	2,589,113	2,523,919	2,903,010	2,295,790	2,500,850	1,304,383	1,231,672
Gross profit or (loss)	253,943	226,651	320,048	(26,477)	(10,979)	43,623	(60,681)
SG&A expenses	104,393	110,813	133,707	126,976	129,731	58,095	47,680
Operating income or (loss)	149,550	115,838	186,341	(153,453)	(140,710)	(14,472)	(108,361)
Interest expense	52,609	53,716	113,951	94,474	96,099	48,271	35,220
Other (income)/expenses, net	7,884	4,686	9,179	17,078	7,755	(193)	1,854
Net income or (loss)	89,057	57,436	63,211	(265,005)	(244,564)	(62,550)	(145,435)
Depreciation/amortization	118,626	117,787	152,484	124,728	113,326	62,576	81,736
Cash flow	207,683	175,223	215,695	(140,277)	(131,238)	26	(63,699)
Capital expenditures	129,374	146,422	172,577	330,258	315,445	27,884	42,582
R&D expenses	5,286	4,998	5,015	4,159	8,346	2,026	2,017
Ratio to net commercial sales (*percent*)							
COGS	91.1	91.8	90.1	101.2	100.4	96.8	105.2
Gross profit or (loss)	8.9	8.2	9.9	(1.2)	(0.4)	3.2	(5.2)
SG&A expenses	3.7	4.0	4.1	5.6	5.2	4.3	4.1
Operating income or (loss)	5.3	4.2	5.8	(6.8)	(5.7)	(1.1)	(9.3)
Net income or (loss)	3.1	2.1	2.0	(11.7)	(9.8)	(4.6)	(12.4)
Unit value (*dollars per ton*)							
Net commercial sales	482	473	466	400	399	398	381
COGS total	439	434	420	405	401	385	401
Raw materials	208	197	195	178	195	192	174
Direct labor	62	63	60	56	52	50	53
Other factory costs	169	174	166	172	153	143	175
Gross profit or (loss)	43	39	46	(5)	(2)	13	(20)
SG&A expenses	18	19	19	22	21	17	16
Operating income or (loss)	25	20	27	(27)	(23)	(4)	(35)
Number of firms reporting							
Operating losses	3	3	3	7	9	6	11
Data	16	17	17	17	18	17	17

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-22
Hot-rolled: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	21,754,158	23,166,051	21,509,284	22,496,434	23,812,058	12,788,256	12,036,560
Value (*$1,000*)							
Net commercial sales	7,561,331	8,232,275	7,172,196	6,664,122	7,354,831	4,203,972	3,090,655
COGS	7,218,289	7,528,389	6,780,007	6,624,103	7,184,069	3,820,708	3,526,026
Gross profit or (loss)	343,042	703,886	392,189	40,019	170,762	383,264	(435,371)
SG&A expenses	381,914	363,663	376,852	396,376	392,322	200,970	178,278
Operating income or (loss)	(38,872)	340,223	15,337	(356,357)	(221,560)	182,294	(613,649)
Interest expense	172,516	178,767	166,598	185,877	187,956	96,751	96,779
Other (income)/expenses, net	(1,773)	24,811	2,129	(14,253)	(7,518)	(23,653)	(12,926)
Net income or (loss)	(209,615)	136,645	(153,390)	(527,981)	(401,998)	109,196	(697,502)
Depreciation/amortization	399,156	435,446	456,091	475,339	500,615	253,463	236,015
Cash flow	189,541	572,091	302,701	(52,642)	98,617	362,659	(461,487)
Capital expenditures	1,065,619	543,121	473,366	396,272	491,947	171,262	114,943
R&D expenses	10,288	9,522	8,943	9,142	8,248	4,153	4,230
Ratio to net commercial sales (*percent*)							
COGS	95.5	91.5	94.5	99.4	97.7	90.9	114.1
Gross profit or (loss)	4.5	8.6	5.5	0.6	2.3	9.1	(14.1)
SG&A expenses	5.1	4.4	5.3	5.9	5.3	4.8	5.8
Operating income or (loss)	(0.5)	4.1	0.2	(5.3)	(3.0)	4.3	(19.9)
Net income or (loss)	(2.8)	1.7	(2.1)	(7.9)	(5.5)	2.6	(22.6)
Unit value (*dollars per ton*)							
Net commercial sales	348	355	333	296	309	329	257
COGS total	332	325	315	294	302	299	293
Raw materials	148	150	149	134	141	145	134
Direct labor	34	31	31	31	30	30	30
Other factory costs	150	144	135	130	131	123	129
Gross profit or (loss)	16	30	18	2	7	30	(36)
SG&A expenses	18	16	18	18	16	16	15
Operating income or (loss)	(2)	15	1	(16)	(9)	14	(51)
Number of firms reporting							
Operating losses	13	9	13	18	14	10	19
Data	24	25	25	26	26	26	25

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-23
Cold-rolled: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	14,164,235	14,252,411	14,345,958	14,918,406	15,599,928	8,399,595	6,775,084
Value (*$1,000*)							
Net commercial sales	6,968,524	7,086,020	6,790,559	6,595,221	6,980,602	3,809,578	2,778,917
COGS	6,387,426	6,441,648	6,338,018	6,466,177	6,789,266	3,567,910	3,012,569
Gross profit or (loss)	581,098	644,372	452,541	129,044	191,336	241,668	(233,652)
SG&A expenses	265,104	267,076	283,331	295,684	307,313	154,439	134,646
Operating income or (loss)	315,994	377,296	169,210	(166,640)	(115,977)	87,229	(368,298)
Interest expense	92,210	87,536	90,228	125,918	163,790	79,017	77,719
Other (income)/expenses, net	(10,183)	(14,125)	(24,714)	(50,412)	(48,196)	(36,572)	(8,201)
Net income or (loss)	233,967	303,885	103,696	(242,146)	(231,571)	44,784	(437,816)
Depreciation/amortization	349,926	358,639	358,982	392,429	422,982	213,134	183,103
Cash flow	583,893	662,524	462,678	150,283	191,411	257,918	(254,713)
Capital expenditures	526,745	524,339	467,218	400,711	315,710	111,059	108,290
R&D expenses	17,238	16,355	15,600	15,587	15,710	7,665	7,166
Ratio to net commercial sales (*percent*)							
COGS	91.7	90.9	93.3	98.0	97.3	93.7	108.4
Gross profit or (loss)	8.3	9.1	6.7	2.0	2.7	6.3	(8.4)
SG&A expenses	3.8	3.8	4.2	4.5	4.4	4.1	4.8
Operating income or (loss)	4.5	5.3	2.5	(2.5)	(1.7)	2.3	(13.3)
Net income or (loss)	3.4	4.3	1.5	(3.7)	(3.3)	1.2	(15.8)
Unit value (*dollars per ton*)							
Net commercial sales	492	497	473	442	447	454	410
COGS total	451	452	442	433	435	425	445
Raw materials	174	175	176	159	161	163	163
Direct labor	66	64	66	64	64	62	65
Other factory costs	211	213	199	210	210	200	216
Gross profit or (loss)	41	45	32	9	12	29	(34)
SG&A expenses	19	19	20	20	20	18	20
Operating income or (loss)	22	26	12	(11)	(7)	10	(54)
Number of firms reporting							
Operating losses	5	4	6	11	12	10	19
Data	22	23	23	24	25	25	25

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-24
GOES: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

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Table FLAT-25
Coated: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	16,200,531	17,018,839	18,078,275	19,687,289	19,176,181	10,401,748	9,173,272
Value (*$1,000*)							
Net commercial sales	10,030,231	10,621,523	10,726,961	10,882,245	10,436,971	5,699,917	4,646,657
COGS	8,872,919	9,237,983	9,522,250	9,894,677	9,865,361	5,190,722	4,685,648
Gross profit or (loss)	1,157,312	1,383,540	1,204,711	987,568	571,610	509,195	(38,991)
SG&A expenses	400,731	423,703	455,926	458,159	455,864	223,378	216,070
Operating income or (loss)	756,581	959,837	748,785	529,409	115,746	285,817	(255,061)
Interest expense	146,587	159,503	153,474	215,388	251,279	120,820	135,294
Other (income)/expenses, net	(18,524)	(39,365)	(46,926)	(73,544)	(78,071)	(49,136)	(29,193)
Net income or (loss)	628,518	839,699	642,237	387,565	(57,462)	214,133	(361,162)
Depreciation/amortization	463,910	489,861	519,438	593,927	626,883	320,642	304,621
Cash flow	1,092,428	1,329,560	1,161,675	981,492	569,421	534,775	(56,541)
Capital expenditures	520,690	1,082,293	1,050,956	637,806	353,510	134,486	74,299
R&D expenses	27,216	27,450	26,287	29,023	26,768	14,647	13,160
Ratio to net commercial sales (*percent*)							
COGS	88.5	87.0	88.8	90.9	94.5	91.1	100.8
Gross profit or (loss)	11.5	13.0	11.2	9.1	5.5	8.9	(0.8)
SG&A expenses	4.0	4.0	4.3	4.2	4.4	3.9	4.7
Operating income or (loss)	7.5	9.0	7.0	4.9	1.1	5.0	(5.5)
Net income or (loss)	6.3	7.9	6.0	3.6	(0.6)	3.8	(7.8)
Unit value (*dollars per ton*)							
Net commercial sales	619	624	593	553	544	548	507
COGS total	548	543	527	503	514	499	511
Raw materials	201	202	198	187	189	195	173
Direct labor	70	71	69	63	61	60	63
Other factory costs	277	269	260	253	265	244	274
Gross profit or (loss)	71	81	67	50	30	49	(4)
SG&A expenses	25	25	25	23	24	21	24
Operating income or (loss)	47	56	41	27	6	27	(28)
Number of firms reporting							
Operating losses	3	5	5	5	9	4	13
Data	18	20	20	21	21	21	21

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-26
Tin: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	3,689,224	3,755,602	3,478,344	3,480,818	3,356,522	1,709,119	1,493,279
Value (*$1,000*)							
Net commercial sales	2,271,710	2,315,744	2,120,415	2,033,465	1,974,097	1,008,414	880,078
COGS	2,257,584	2,239,984	2,088,582	2,068,047	1,993,737	987,922	903,146
Gross profit or (loss)	14,126	75,760	31,833	(34,582)	(19,640)	20,492	(23,068)
SG&A expenses	102,764	106,189	109,830	106,095	99,801	45,451	41,750
Operating income or (loss)	(88,638)	(30,429)	(77,997)	(140,677)	(119,441)	(24,959)	(64,818)
Interest expense	32,530	32,262	27,213	31,946	35,374	15,049	20,828
Other (income)/expenses, net	(5,860)	(7,857)	(6,005)	(56)	(11,427)	(7,717)	(860)
Net income or (loss)	(115,308)	(54,834)	(99,205)	(172,567)	(143,388)	(32,291)	(84,786)
Depreciation/amortization	93,998	92,610	110,400	111,769	118,240	56,471	49,131
Cash flow	(21,310)	37,776	11,195	(60,798)	(25,148)	24,180	(35,655)
Capital expenditures	107,548	83,987	119,624	145,872	97,401	28,856	15,360
R&D expenses	5,321	4,789	4,302	4,452	3,941	2,128	1,617
Ratio to net commercial sales (*percent*)							
COGS	99.4	96.7	98.5	101.7	101.0	98.0	102.6
Gross profit or (loss)	0.6	3.3	1.5	(1.7)	(1.0)	2.0	(2.6)
SG&A expenses	4.5	4.6	5.2	5.2	5.1	4.5	4.7
Operating income or (loss)	(3.9)	(1.3)	(3.7)	(6.9)	(6.1)	(2.5)	(7.4)
Net income or (loss)	(5.1)	(2.4)	(4.7)	(8.5)	(7.3)	(3.2)	(9.6)
Unit value (*dollars per ton*)							
Net commercial sales	616	617	610	584	588	590	589
COGS total	612	596	600	594	594	578	605
Raw materials	237	232	240	236	236	240	230
Direct labor	122	112	111	106	100	102	111
Other factory costs	253	253	250	252	257	236	264
Gross profit or (loss)	4	20	9	(10)	(6)	12	(15)
SG&A expenses	28	28	32	30	30	27	28
Operating income or (loss)	(24)	(8)	(22)	(40)	(36)	(15)	(43)
Number of firms reporting							
Operating losses	5	5	5	5	4	3	6
Data	7	8	7	7	7	7	7

Source: Compiled from data submitted in response to Commission questionnaires.

QUESTION OF THREAT OF SERIOUS INJURY

FOREIGN PRODUCER DATA

Total Flat

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of all carbon and alloy flat products. These data are presented for all non-U.S. countries, Canada, and Mexico in tables FLAT-27 through FLAT-29, respectively (data presented in table FLAT-27 are the sum of data for subordinate product categories presented in tables FLAT-30, 33, 36, 39, 42, 43, and 46; data presented in table FLAT-28 are similarly the sum of data presented in tables FLAT-31, 34, 37, 40, 44, and 47; and data presented in table FLAT-29 are the sum of data presented in tables FLAT-32, 35, 38, 41, 45, and 48.[13]

Table FLAT-27
Total flat: All non-U.S. countries' production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
	Quantity (*tons*)								
Production	670,877,273	733,997,652	721,045,768	742,428,763	803,658,197	403,324,691	398,596,333	727,497,910	750,486,632
Shipments: Internal consumption	418,059,791	458,033,461	443,979,184	451,194,010	483,895,231	243,949,168	241,939,614	445,176,397	456,627,117
Home market	153,227,312	164,887,255	162,412,829	169,878,189	186,190,139	90,739,294	95,249,339	167,709,625	172,794,817
Exports to– United States	17,386,138	16,242,548	22,311,453	19,922,316	18,060,203	10,219,745	6,507,265	13,081,259	16,154,828
All other	84,299,145	93,588,686	89,845,549	104,377,394	115,817,114	58,890,372	56,964,151	104,309,534	105,902,261
Total exports	101,685,283	109,831,234	112,157,002	124,299,710	133,877,317	69,110,117	63,471,416	117,390,793	122,057,089
Total shipments	672,972,387	732,751,950	718,549,016	745,371,909	803,962,687	403,798,579	400,660,369	730,276,814	751,479,023
Ending inventories	23,511,936	24,840,327	27,904,122	25,943,111	29,022,961	26,705,149	27,981,863	25,845,179	25,535,600
	Ratios and shares (*percent*)								
Inventories/total shipments	3.5	3.4	3.9	3.5	3.6	3.3	3.5	3.5	3.4
Share of total shipments: Internal consumption	62.1	62.5	61.8	60.5	60.2	60.4	60.4	61.0	60.8
Home market	22.8	22.5	22.6	22.8	23.2	22.5	23.8	23.0	23.0
Exports to– United States	2.6	2.2	3.1	2.7	2.2	2.5	1.6	1.8	2.1
All other	12.5	12.8	12.5	14.0	14.4	14.6	14.2	14.3	14.1
Total exports	15.1	15.0	15.6	16.7	16.7	17.1	15.8	16.1	16.2

Source: Compiled from data submitted in response to Commission questionnaires.

[13] Significant double-counting issues arise for some of the items presented in tables FLAT-27-29 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs. Their comments are summarized in footnote 11 of this section of the report.

Table FLAT-28
Total flat: Canada's production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Production	26,259,710	27,595,046	27,905,985	29,350,909	29,887,691	15,473,744	14,358,313	18,676,320	19,854,341
Shipments: Internal consumption	18,280,649	18,899,803	19,353,047	20,250,915	20,287,787	10,532,320	9,893,158	13,375,800	14,134,983
Home market	8,076,812	8,505,424	8,059,891	8,779,054	8,769,170	4,560,529	4,467,358	5,599,690	5,844,629
Exports to– United States	836,356	737,649	725,832	870,896	784,573	447,339	338,896	220,875	218,699
All other	204,469	110,636	101,300	83,566	145,117	48,763	70,367	12,013	10,485
Total exports	1,040,825	848,285	827,132	954,462	929,690	496,102	409,262	232,888	229,384
Total shipments	27,398,286	28,253,512	28,240,070	29,984,431	29,986,647	15,588,951	14,769,778	19,208,378	20,208,996
Ending inventories	1,361,851	1,492,878	1,928,224	1,680,569	1,973,479	1,740,272	1,794,893	1,308,055	1,290,718
					Ratios and shares (*percent*)				
Inventories/total shipments	5.0	5.3	6.8	5.6	6.6	5.6	6.1	6.8	6.4
Share of total shipments: Internal consumption	66.7	66.9	68.5	67.5	67.7	67.6	67.0	69.6	69.9
Home market	29.5	30.1	28.5	29.3	29.2	29.3	30.2	29.2	28.9
Exports to– United States	3.1	2.6	2.6	2.9	2.6	2.9	2.3	1.1	1.1
All other	0.7	0.4	0.4	0.3	0.5	0.3	0.5	0.1	0.1
Total exports	3.8	3.0	2.9	3.2	3.1	3.2	2.8	1.2	1.1

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-29
Total flat: Mexico's production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Production	10,145,171	11,640,083	12,013,224	13,143,068	13,455,221	7,099,570	5,707,018	6,171,201	7,914,729
Shipments:									
Internal consumption	1,921,488	2,370,753	2,375,886	2,324,690	2,396,028	1,222,071	1,092,194	776,695	857,582
Home market	4,557,886	5,743,545	6,190,908	6,665,848	7,243,036	3,686,004	3,211,535	3,313,716	3,707,489
Exports to–									
United States	2,362,852	2,287,609	2,408,998	2,548,646	2,463,693	1,394,726	988,616	1,606,773	2,105,129
All other	1,217,882	1,298,479	847,046	1,482,859	1,281,592	838,751	338,555	460,812	1,218,164
Total exports	3,580,734	3,586,088	3,256,044	4,031,505	3,745,285	2,233,477	1,327,171	2,067,585	3,323,293
Total shipments	10,060,108	11,700,386	11,822,838	13,022,043	13,384,349	7,141,552	5,630,900	6,157,996	7,888,364
Ending inventories	422,283	401,786	483,770	579,631	490,378	444,688	463,512	259,439	204,055
					Ratios and shares (*percent*)				
Inventories/total shipments	4.2	3.4	4.1	4.5	3.7	3.1	4.1	4.2	2.6
Share of total shipments:									
Internal consumption	19.1	20.3	20.1	17.9	17.9	17.1	19.4	12.6	10.9
Home market	45.3	49.1	52.4	51.2	54.1	51.6	57.0	53.8	47.0
Exports to–									
United States	23.5	19.6	20.4	19.6	18.4	19.5	17.6	26.1	26.7
All other	12.1	11.1	7.2	11.4	9.6	11.7	6.0	7.5	15.4
Total exports	35.6	30.6	27.5	31.0	28.0	31.3	23.6	33.6	42.1

Source: Compiled from data submitted in response to Commission questionnaires.

Slabs

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of slabs. These data are presented for all non-U.S. countries, Canada, and Mexico in tables FLAT-30 through FLAT-32, respectively.

Table FLAT-30
Slabs: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Capacity	289,282,643	297,969,389	302,832,481	306,593,808	312,447,425	155,812,929	155,187,751	295,331,385	298,169,952
Production	257,776,514	282,056,910	274,624,364	279,308,556	299,560,427	150,315,298	147,949,845	276,526,704	283,128,854
Shipments: Internal consumption	240,777,148	261,744,077	252,805,445	254,897,394	272,393,524	136,790,657	136,188,442	253,732,444	258,553,632
Home market	4,462,859	5,155,496	5,705,586	5,863,113	7,453,305	3,439,390	3,830,495	6,089,459	6,411,320
Exports to– United States	6,041,237	4,292,789	5,106,928	7,611,149	6,546,635	3,782,029	2,456,540	5,890,937	7,180,762
All other	8,786,688	11,010,187	10,149,848	13,137,810	15,127,355	7,453,564	6,897,432	13,366,330	13,381,778
Total exports	14,827,925	15,302,975	15,256,776	20,748,959	21,673,991	11,235,592	9,353,973	19,257,266	20,562,540
Total shipments	260,067,932	282,202,548	273,767,807	281,509,465	301,520,819	151,465,640	149,372,909	279,079,170	285,527,492
Ending inventories	5,402,371	5,989,115	7,871,502	6,878,263	7,818,872	6,820,661	7,523,863	7,326,216	6,961,508
					Ratios and shares (*percent*)				
Capacity utilization	87.8	93.3	89.5	89.8	94.6	95.2	95.3	93.6	94.9
Inventories/total shipments	2.1	2.1	2.9	2.4	2.6	2.3	2.5	2.6	2.4
Share of total shipments: Internal consumption	92.6	92.8	92.3	90.5	90.3	90.3	91.2	90.9	90.6
Home market	1.7	1.8	2.1	2.1	2.5	2.3	2.6	2.2	2.2
Exports to– United States	2.3	1.5	1.9	2.7	2.2	2.5	1.6	2.1	2.5
All other	3.4	3.9	3.7	4.7	5.0	4.9	4.6	4.8	4.7
Total exports	5.7	5.4	5.6	7.4	7.2	7.4	6.3	6.9	7.2

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-31
Slabs: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Capacity	9,848,515	10,444,523	10,952,150	11,267,867	11,718,150	6,064,575	5,854,488	10,668,976	10,768,976
Production	9,487,682	10,107,605	10,421,806	11,127,491	11,462,679	5,920,999	5,383,037	10,137,439	10,550,926
Shipments:									
Internal consumption	10,466,557	10,689,095	10,779,176	11,427,643	11,435,571	5,910,730	5,659,212	10,532,738	10,916,144
Home market	248	295	4,536	11,670	31,026	31,006	387	50	50
Exports to–									
United States	10,770	92	7,105	84,834	111,327	91,270	6	50	50
All other	0	0	0	0	0	0	0	0	0
Total exports	10,770	92	7,105	84,834	111,327	91,270	6	50	50
Total shipments	10,477,574	10,689,482	10,790,817	11,524,147	11,577,924	6,033,006	5,659,604	10,532,838	10,916,244
Ending inventories	665,902	710,932	905,598	835,563	945,308	826,159	895,106	771,600	743,600
					Ratios and shares (*percent*)				
Capacity utilization	96.3	96.8	95.2	98.8	97.8	97.6	91.9	95.0	98.0
Inventories/total shipments	6.4	6.7	8.4	7.3	8.2	6.8	7.9	7.3	6.8
Share of total shipments:									
Internal consumption	99.9	100.0	99.9	99.2	98.8	98.0	100.0	100.0	100.0
Home market	0.0	0.0	0.0	0.1	0.3	0.5	0.0	0.0	0.0
Exports to–									
United States	0.1	0.0	0.1	0.7	1.0	1.5	0.0	0.0	0.0
All other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total exports	0.1	0.0	0.1	0.7	1.0	1.5	0.0	0.0	0.0

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-32
Slabs: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Plate

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of plate. These data are presented for all non-U.S. countries, Canada, and Mexico in tables FLAT-33 through FLAT-35, respectively.

Table FLAT-33
Plate: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Capacity	46,098,427	47,378,963	49,944,997	50,309,487	50,476,159	25,058,670	25,931,293	50,230,900	50,354,496
Production	42,342,623	43,900,260	44,043,784	40,723,188	44,077,390	20,839,254	24,007,859	44,840,597	44,663,796
Shipments:									
Internal consumption	3,936,079	4,401,437	3,748,002	4,060,793	3,489,292	1,749,196	1,785,992	3,705,202	3,726,427
Home market	25,425,446	27,177,083	26,385,649	25,165,795	28,012,229	13,266,294	15,131,873	28,043,391	27,607,339
Exports to–									
United States	1,579,384	928,869	2,088,019	765,301	849,010	422,014	483,357	778,689	621,060
All other	10,876,430	11,319,809	10,983,637	11,018,706	12,066,066	5,861,748	6,731,982	12,848,425	13,069,754
Total exports	12,455,814	12,248,678	13,071,656	11,784,007	12,915,076	6,283,762	7,215,339	13,627,114	13,690,814
Total shipments	41,817,339	43,827,199	43,205,308	41,010,595	44,416,597	21,299,252	24,133,204	45,375,707	45,024,581
Ending inventories	2,706,027	2,677,523	2,921,360	2,755,237	2,614,518	2,441,347	2,560,288	2,193,119	2,174,023
					Ratios and shares (*percent*)				
Capacity utilization	90.2	91.1	86.7	79.4	85.8	81.6	92.5	89.2	88.6
Inventories/total shipments	6.5	6.1	6.8	6.7	5.9	5.7	5.3	4.8	4.8
Share of total shipments:									
Internal consumption	9.4	10.0	8.7	9.9	7.9	8.2	7.4	8.2	8.3
Home market	60.8	62.0	61.1	61.4	63.1	62.3	62.7	61.8	61.3
Exports to–									
United States	3.8	2.1	4.8	1.9	1.9	2.0	2.0	1.7	1.4
All other	26.0	25.8	25.4	26.9	27.2	27.5	27.9	28.3	29.0
Total exports	29.8	27.9	30.3	28.7	29.1	29.5	29.9	30.0	30.4

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-34
Plate: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Table FLAT-35
Plate: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Hot-rolled

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of hot-rolled products. These data are presented for all non-U.S. countries, Canada, and Mexico in tables FLAT-36 through FLAT-38, respectively.

Table FLAT-36
Hot-rolled: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	244,765,159	255,170,004	266,510,638	271,801,025	284,714,412	143,991,677	162,418,959	257,047,303	260,607,187
Production	215,081,170	237,938,440	235,526,650	248,367,719	267,876,458	135,963,450	132,256,834	235,627,641	244,279,167
Shipments: Internal consumption	122,959,351	135,865,663	131,160,130	135,840,987	145,764,066	73,849,831	72,141,799	130,620,028	136,305,902
Home market	59,544,360	64,485,037	64,926,633	68,319,849	75,430,134	36,739,425	39,412,391	67,060,446	67,821,817
Exports to– United States	5,006,971	5,650,963	9,109,148	6,078,627	5,896,915	3,626,021	1,331,980	2,101,982	2,947,009
All other	28,416,983	31,730,131	30,887,520	37,777,285	40,100,863	21,165,347	19,976,117	34,505,253	34,917,080
Total exports	33,423,954	37,381,094	39,996,668	43,855,912	45,997,778	24,791,368	21,308,096	36,607,235	37,864,090
Total shipments	215,927,666	237,731,794	236,083,431	248,016,748	267,191,978	135,380,624	132,862,287	234,287,709	241,991,808
Ending inventories	7,056,130	7,534,036	7,723,631	8,041,363	8,921,950	8,644,570	8,258,993	7,970,725	7,868,001
					Ratios and shares (*percent*)				
Capacity utilization	86.6	92.0	87.3	90.2	93.0	93.3	81.4	91.6	93.7
Inventories/total shipments	3.3	3.2	3.3	3.2	3.3	3.2	3.1	3.4	3.3
Share of total shipments: Internal consumption	56.9	57.2	55.6	54.8	54.6	54.5	54.3	55.8	56.3
Home market	27.6	27.1	27.5	27.5	28.2	27.1	29.7	28.6	28.0
Exports to– United States	2.3	2.4	3.9	2.5	2.2	2.7	1.0	0.9	1.2
All other	13.2	13.3	13.1	15.2	15.0	15.6	15.0	14.7	14.4
Total exports	15.5	15.7	16.9	17.7	17.2	18.3	16.0	15.6	15.6

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-37
Hot-rolled: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Capacity	9,984,942	10,318,300	10,436,838	10,738,912	11,137,266	5,600,181	5,770,002	6,388,967	6,353,982
Production	9,507,548	9,870,594	9,925,107	10,316,859	10,478,118	5,414,366	5,192,929	5,524,003	5,832,873
Shipments: Internal consumption	5,256,370	5,448,340	5,731,018	5,904,281	5,962,215	3,111,911	2,834,456	2,080,942	2,344,993
Home market	3,845,247	4,103,826	3,830,801	4,220,256	4,264,528	2,171,436	2,243,928	3,376,875	3,319,125
Exports to– United States	461,131	357,894	322,349	388,683	295,483	162,782	142,705	145,573	154,592
All other	37,841	32,519	20,764	17,195	35,185	15,435	15,228	0	0
Total exports	498,972	390,413	343,113	405,878	330,668	178,217	157,933	145,573	154,592
Total shipments	9,600,589	9,942,579	9,904,932	10,530,415	10,557,411	5,461,564	5,236,317	5,603,390	5,818,710
Ending inventories	309,538	365,087	569,221	394,644	477,238	419,695	437,855	304,934	319,097
					Ratios and shares (*percent*)				
Capacity utilization	95.2	95.7	95.1	96.1	94.1	96.7	90.0	86.5	91.8
Inventories/total shipments	3.2	3.7	5.7	3.7	4.5	3.8	4.2	5.4	5.5
Share of total shipments: Internal consumption	54.8	54.8	57.9	56.1	56.5	57.0	54.1	37.1	40.3
Home market	40.1	41.3	38.7	40.1	40.4	39.8	42.9	60.3	57.0
Exports to– United States	4.8	3.6	3.3	3.7	2.8	3.0	2.7	2.6	2.7
All other	0.4	0.3	0.2	0.2	0.3	0.3	0.3	0.0	0.0
Total exports	5.2	3.9	3.5	3.9	3.1	3.3	3.0	2.6	2.7

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-38
Hot-rolled: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Cold-rolled

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of cold-rolled products. These data are presented for all non-U.S. countries, Canada, and Mexico in tables FLAT-39 through FLAT-41, respectively.

Table FLAT-39
Cold-rolled: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	117,639,802	122,972,599	125,531,140	131,028,665	134,002,294	67,941,785	68,903,902	122,890,025	124,714,294
Production	101,340,225	109,908,022	105,581,579	110,214,185	120,668,998	60,577,360	59,162,217	106,604,622	110,691,799
Shipments: Internal consumption	47,517,503	52,520,150	52,114,771	52,116,623	57,403,863	29,107,582	29,692,516	53,149,581	53,852,014
Home market	32,101,228	33,424,248	31,553,035	34,976,131	37,058,509	18,214,117	17,499,620	31,954,265	34,134,509
Exports to– United States	2,572,669	3,200,462	3,787,502	2,854,705	2,369,004	1,143,923	1,256,927	2,477,386	3,383,944
All other	18,932,726	19,985,299	17,774,472	20,587,627	23,094,921	11,768,063	10,690,202	19,901,486	19,842,585
Total exports	21,505,395	23,185,761	21,561,974	23,442,332	25,463,926	12,911,986	11,947,129	22,378,873	23,226,530
Total shipments	101,124,126	109,130,159	105,229,779	110,535,087	119,926,298	60,233,686	59,139,265	107,482,718	111,213,052
Ending inventories	4,359,224	4,506,422	4,500,998	3,955,538	4,718,388	4,307,307	4,580,032	3,781,886	3,918,967
					Ratios and shares (*percent*)				
Capacity utilization	84.9	88.3	83.1	83.1	88.9	88.0	85.8	86.7	88.7
Inventories/total shipments	4.3	4.1	4.3	3.6	3.9	3.6	3.9	3.5	3.5
Share of total shipments: Internal consumption	47.0	48.1	49.5	47.1	47.9	48.3	50.2	49.4	48.4
Home market	31.7	30.6	30.0	31.6	30.9	30.2	29.6	29.7	30.7
Exports to– United States	2.5	2.9	3.6	2.6	2.0	1.9	2.1	2.3	3.0
All other	18.7	18.3	16.9	18.6	19.3	19.5	18.1	18.5	17.8
Total exports	21.3	21.2	20.5	21.2	21.2	21.4	20.2	20.8	20.9

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-40
Cold-rolled: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
Quantity (*tons*)									
Capacity	4,962,361	5,052,134	5,309,662	5,363,205	5,476,812	2,742,479	2,733,007	2,295,000	2,294,000
Production	4,050,250	4,236,905	4,243,377	4,454,484	4,416,480	2,276,292	2,064,849	1,643,516	1,976,792
Shipments: Internal consumption	2,502,642	2,669,092	2,701,473	2,830,693	2,813,305	1,443,364	1,373,715	742,120	853,846
Home market	1,431,984	1,495,611	1,420,696	1,546,390	1,479,049	781,473	699,190	900,164	1,092,915
Exports to– United States	75,755	77,804	75,848	100,461	66,079	33,747	26,943	39,263	30,031
All other	55,488	12,085	15,445	16,226	13,814	4,783	9,996	0	0
Total exports	131,243	89,889	91,293	116,687	79,893	38,530	36,939	39,263	30,031
Total shipments	4,065,869	4,254,592	4,213,462	4,493,770	4,372,247	2,263,367	2,109,844	1,681,547	1,976,792
Ending inventories	147,413	158,110	188,024	148,877	193,525	161,900	148,530	91,045	91,045
Ratios and shares (*percent*)									
Capacity utilization	81.6	83.9	79.9	83.1	80.6	83.0	75.6	71.6	86.2
Inventories/total shipments	3.6	3.7	4.5	3.3	4.4	3.6	3.5	5.4	4.6
Share of total shipments: Internal consumption	61.6	62.7	64.1	63.0	64.3	63.8	65.1	44.1	43.2
Home market	35.2	35.2	33.7	34.4	33.8	34.5	33.1	53.5	55.3
Exports to– United States	1.9	1.8	1.8	2.2	1.5	1.5	1.3	2.3	1.5
All other	1.4	0.3	0.4	0.4	0.3	0.2	0.5	0.0	0.0
Total exports	3.2	2.1	2.2	2.6	1.8	1.7	1.8	2.3	1.5

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-41
Cold-rolled: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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GOES

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of GOES. These data are presented for all non-U.S. countries in table FLAT-42. There was no reported production of GOES in Canada or Mexico.

Table FLAT-42
GOES: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	886,055	899,055	922,487	923,720	947,708	485,179	488,843	970,984	928,901
Production	796,556	780,198	691,394	758,738	836,749	418,915	436,034	877,564	896,896
Shipments: Internal consumption	407	1,195	1,842	851	381	740	132	0	0
Home market	272,694	280,823	271,457	267,753	287,616	141,564	165,704	309,893	318,972
Exports to– United States	32,488	36,515	32,411	21,312	22,994	7,660	7,706	19,059	20,736
All other	438,738	417,959	355,889	419,945	494,283	239,892	222,008	503,841	517,957
Total exports	471,226	454,474	388,300	441,257	517,277	247,552	229,714	522,900	538,693
Total shipments	744,327	736,492	661,599	709,861	805,274	389,856	395,550	832,793	857,665
Ending inventories	51,848	46,973	37,613	36,480	36,285	48,283	42,446	32,499	31,700
					Ratios and shares (*percent*)				
Capacity utilization	89.9	86.8	74.9	82.1	88.3	86.3	89.2	90.4	96.6
Inventories/total shipments	7.0	6.4	5.7	5.1	4.5	6.2	5.4	3.9	3.7
Share of total shipments: Internal consumption	0.1	0.2	0.3	0.1	0.0	0.2	0.0	0.0	0.0
Home market	36.6	38.1	41.0	37.7	35.7	36.3	41.9	37.2	37.2
Exports to– United States	4.4	5.0	4.9	3.0	2.9	2.0	1.9	2.3	2.4
All other	58.9	56.7	53.8	59.2	61.4	61.5	56.1	60.5	60.4
Total exports	63.3	61.7	58.7	62.2	64.2	63.5	58.1	62.8	62.8

Source: Compiled from data submitted in response to Commission questionnaires.

Coated

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of coated products. These data are presented for all non-U.S. countries, Canada, and Mexico in tables FLAT-43 through FLAT-45, respectively.

Table FLAT-43
Coated: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	48,759,254	51,493,771	53,996,294	57,994,834	63,116,988	31,967,158	32,725,075	56,441,052	58,648,108
Production	42,630,089	48,222,025	49,253,947	51,827,622	58,813,595	29,305,006	28,919,637	51,672,310	55,265,207
Shipments: Internal consumption	2,701,571	3,293,301	3,943,364	4,033,631	4,644,622	2,316,898	1,982,240	3,771,617	3,940,362
Home market	25,550,887	28,431,295	27,733,096	29,401,838	32,021,283	15,953,019	16,357,168	28,792,809	31,065,645
Exports to– United States	1,749,929	1,697,370	1,700,712	1,950,644	1,913,751	1,013,614	745,143	1,383,374	1,539,626
All other	12,450,676	14,378,488	15,087,911	16,791,377	19,634,433	9,831,830	9,854,571	17,935,275	18,864,956
Total exports	14,200,606	16,075,858	16,788,622	18,742,021	21,548,184	10,845,444	10,599,715	19,318,648	20,404,582
Total shipments	42,453,064	47,800,455	48,465,082	52,177,490	58,214,089	29,115,361	28,939,123	51,883,074	55,410,590
Ending inventories	2,968,012	3,260,037	3,850,696	3,422,805	4,096,334	3,604,122	4,111,101	3,779,348	3,765,374
					Ratios and shares (*percent*)				
Capacity utilization	86.9	93.0	90.6	88.9	92.7	91.2	88.4	91.6	94.2
Inventories/total shipments	7.0	6.8	7.9	6.6	7.0	6.2	7.1	7.3	6.8
Share of total shipments: Internal consumption	6.4	6.9	8.1	7.7	8.0	8.0	6.8	7.3	7.1
Home market	60.2	59.5	57.2	56.3	55.0	54.8	56.5	55.5	56.1
Exports to– United States	4.1	3.6	3.5	3.7	3.3	3.5	2.6	2.7	2.8
All other	29.3	30.1	31.1	32.2	33.7	33.8	34.1	34.6	34.0
Total exports	33.5	33.6	34.6	35.9	37.0	37.2	36.6	37.2	36.8

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-44
Coated: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Table FLAT-45
Coated: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Tin

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of tin products. These data are presented for all non-U.S. countries, Canada, and Mexico in tables FLAT-46 through FLAT-48, respectively.

Table FLAT-46
Tin: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Capacity	12,555,101	12,554,408	13,093,149	12,822,154	13,282,214	6,633,561	6,728,141	12,803,899	13,133,506
Production	10,910,096	11,191,797	11,324,049	11,228,755	11,824,579	5,905,408	5,863,908	11,348,472	11,560,914
Shipments: Internal consumption	167,732	207,637	205,630	243,731	199,483	134,264	148,493	197,524	248,780
Home market	5,869,838	5,933,274	5,837,373	5,883,710	5,927,064	2,985,484	2,852,088	5,459,383	5,435,215
Exports to– United States	403,460	435,580	486,734	640,578	461,893	224,484	225,612	429,832	461,690
All other	4,396,903	4,746,813	4,606,273	4,644,643	5,299,193	2,569,928	2,591,838	5,248,924	5,308,149
Total exports	4,800,363	5,182,393	5,093,007	5,285,221	5,761,086	2,794,412	2,817,450	5,678,756	5,769,840
Total shipments	10,837,933	11,323,304	11,136,010	11,412,663	11,887,633	5,914,160	5,818,031	11,335,644	11,453,834
Ending inventories	968,324	826,221	998,322	853,425	816,613	838,859	905,140	761,365	816,027
					Ratios and shares (*percent*)				
Capacity utilization	86.0	88.0	85.4	86.5	87.9	87.8	87.2	88.6	88.0
Inventories/total shipments	8.9	7.3	9.0	7.5	6.9	7.1	7.8	6.7	7.1
Share of total shipments: Internal consumption	1.5	1.8	1.8	2.1	1.7	2.3	2.6	1.7	2.2
Home market	54.2	52.4	52.4	51.6	49.9	50.5	49.0	48.2	47.5
Exports to– United States	3.7	3.8	4.4	5.6	3.9	3.8	3.9	3.8	4.0
All other	40.6	41.9	41.4	40.7	44.6	43.5	44.5	46.3	46.3
Total exports	44.3	45.8	45.7	46.3	48.5	47.2	48.4	50.1	50.4

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-47
Tin: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Table FLAT-48
Tin: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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IMPORTERS' INVENTORIES

The Commission requested information from importers concerning their end-of-period inventories of all carbon and alloy flat products. End-of-period inventory data for imported product from all sources combined are presented for all carbon and alloy flat products in table FLAT-49.

Table FLAT-49
U.S. importers' inventories, by products, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
				Quantity (*tons*)			
Slabs	390,004	364,522	539,776	954,356	1,132,633	838,128	926,152
Plate	75,652	63,928	125,102	53,439	21,908	20,729	12,284
Hot-rolled	63,078	123,057	341,281	98,123	131,917	121,010	44,886
Cold-rolled	66,057	94,048	115,390	89,993	103,857	77,225	94,406
GOES	0	0	847	1,332	6,665	2,673	7,052
Coated	127,249	143,145	200,917	238,534	318,406	205,583	196,828
Tin	23,204	22,273	21,549	22,971	24,037	26,287	26,736
Total	745,244	810,973	1,344,862	1,458,748	1,739,423	1,291,635	1,308,343
				Ratio to reporting firms' U.S. shipments of imports (*percent*)			
Slabs	11.7	16.4	25.8	37.9	63.6	33.7	103.4
Plate	8.2	9.8	8.1	9.4	3.6	3.2	1.8
Hot-rolled	1.8	3.2	5.1	2.2	3.1	2.4	1.9
Cold-rolled	3.3	3.6	3.4	3.2	4.7	3.1	5.5
GOES	0.0	0.0	5.6	9.8	30.5	15.5	29.6
Coated	9.7	10.9	15.5	14.6	20.5	12.1	14.5
Tin	5.7	5.3	4.0	1.7	2.2	1.6	6.5
Total	6.5	7.3	8.6	11.0	15.1	9.3	17.5

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

QUESTION OF THE CAUSAL RELATIONSHIP BETWEEN THE ALLEGED INJURY/THREAT AND IMPORTS

U.S. CONSUMPTION AND MARKET SHARES

Data on apparent U.S. consumption and market shares of all carbon and alloy flat products based on U.S. producers' shipments and U.S. imports are presented in table FLAT-50.[14] These data are presented for slabs, plate, hot-rolled, cold-rolled, GOES, coated, and tin in tables FLAT-51 through FLAT-57, respectively.

Table FLAT-50
Total flat: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

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Table FLAT-51
Slabs: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	71,364,795	72,505,328	70,884,693	74,087,288	74,440,322	40,011,914	33,770,660
U.S. consumption (*$1,000*)	15,988,310	16,563,836	16,153,430	14,812,822	16,346,757	8,851,874	6,866,610
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	91.2	92.5	92.5	90.1	90.2	89.8	93.0
Canada	0.3	0.3	0.2	0.3	0.3	0.4	0.1
Mexico	1.8	2.0	2.2	2.4	2.2	2.3	2.0
All other sources	6.8	5.2	5.1	7.3	7.3	7.5	4.9
Total imports	8.8	7.5	7.5	9.9	9.8	10.2	7.0
U.S. market share based on value (*percent*)							
U.S. producers' shipments	90.0	91.8	92.3	91.2	90.2	89.7	93.8
Canada	0.3	0.4	0.3	0.4	0.3	0.5	0.1
Mexico	2.2	2.2	2.3	2.2	2.3	2.5	1.9
All other sources	7.5	5.6	5.1	6.3	7.2	7.3	4.3
Total imports	10.0	8.2	7.7	8.8	9.8	10.3	6.2

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

[14] Significant double-counting issues arise for the consumption data presented in table FLAT-50 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs.

Both counsel for domestic producers Bethlehem Steel Corp.; LTV Steel Co., Inc.; National Steel Corp.; and United States Steel LLC and counsel for joint respondents agree that only commercial shipments for domestic material should be used in the calculation of apparent consumption. However, counsel for the domestic producers argues that commercial shipments of slabs should be excluded because the only end uses for slabs are as inputs for downstream products. Posthearing brief of joint domestic producers, exhibit A, p. 18 and appendix 5. Posthearing brief of joint respondents: flat-rolled steel, volume II, exhibit D, p. 6.

Table FLAT-52
Plate: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	7,806,549	7,252,851	9,066,682	6,646,007	7,106,836	3,700,259	3,568,119
U.S. consumption (*$1,000*)	3,604,111	3,365,203	4,242,472	2,654,121	2,847,355	1,486,169	1,363,356
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	75.2	81.0	76.7	86.5	86.6	89.2	89.2
Canada	2.4	2.4	1.9	2.3	2.4	2.1	3.0
Mexico	0.0	0.0	0.6	1.1	0.0	0.0	0.0
All other sources	22.4	16.6	20.8	10.0	11.0	8.7	7.9
Total imports	24.8	19.0	23.3	13.5	13.4	10.8	10.8
U.S. market share based on value (*percent*)							
U.S. producers' shipments	78.5	82.6	76.8	86.5	86.7	88.8	88.4
Canada	2.3	2.2	1.8	2.3	2.3	2.1	2.9
Mexico	0.0	0.0	0.4	0.8	0.0	0.0	0.0
All other sources	19.2	15.1	21.1	10.4	11.0	9.1	8.7
Total imports	21.5	17.4	23.2	13.5	13.3	11.2	11.6

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table FLAT-53
Hot-rolled: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	68,500,901	71,294,237	74,887,545	73,368,419	75,092,608	40,914,182	33,915,816
U.S. consumption (*$1,000*)	22,549,923	23,794,048	23,562,798	20,823,773	22,370,503	12,921,679	8,623,031
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	92.3	90.9	84.6	91.1	90.1	89.2	94.8
Canada	1.1	0.8	0.7	0.8	0.6	0.6	0.7
Mexico	0.3	0.4	0.3	0.4	0.4	0.5	0.5
All other sources	6.3	8.0	14.3	7.6	8.9	9.7	4.0
Total imports	7.7	9.1	15.4	8.9	9.9	10.8	5.2
U.S. market share based on value (*percent*)							
U.S. producers' shipments	92.3	91.1	85.9	91.6	89.9	89.7	94.4
Canada	1.2	0.9	0.9	1.0	0.7	0.6	0.9
Mexico	0.3	0.4	0.3	0.4	0.5	0.6	0.4
All other sources	6.2	7.6	12.9	7.1	8.9	9.0	4.3
Total imports	7.7	8.9	14.1	8.4	10.1	10.3	5.6

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table FLAT-54
Cold-rolled: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	36,396,872	37,110,315	38,975,926	40,569,049	39,981,427	20,955,706	18,377,419
U.S. consumption (*$1,000*)	16,765,766	17,190,591	17,323,530	16,773,651	16,827,599	8,939,528	7,031,692
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	92.9	90.3	89.6	91.7	93.1	93.9	92.2
Canada	0.6	0.6	0.6	0.5	0.5	0.5	0.6
Mexico	0.3	0.4	0.3	0.4	0.5	0.6	0.6
All other sources	6.2	8.6	9.5	7.4	5.8	5.1	6.6
Total imports	7.1	9.7	10.4	8.3	6.9	6.1	7.8
U.S. market share based on value (*percent*)							
U.S. producers' shipments	92.2	89.9	89.6	91.9	92.4	93.4	91.9
Canada	0.7	0.7	0.6	0.6	0.6	0.5	0.6
Mexico	0.3	0.4	0.3	0.3	0.4	0.5	0.4
All other sources	6.8	9.0	9.5	7.2	6.6	5.6	7.0
Total imports	7.8	10.1	10.4	8.1	7.6	6.6	8.1

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table FLAT-55
GOES: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

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Table FLAT-56
Coated: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	19,111,308	19,558,447	20,632,283	22,759,012	22,340,758	11,899,485	10,352,203
U.S. consumption (*$1,000*)	11,735,366	12,104,245	12,235,572	12,405,241	11,968,209	6,468,061	5,173,746
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	88.1	87.8	88.9	88.3	89.0	89.3	90.5
Canada	3.3	3.1	2.9	2.4	2.6	2.7	2.5
Mexico	1.7	2.2	2.0	1.9	1.3	1.4	1.0
All other sources	6.9	6.8	6.3	7.3	7.1	6.7	6.0
Total imports	11.9	12.2	11.1	11.7	11.0	10.7	9.5
U.S. market share based on value (*percent*)							
U.S. producers' shipments	88.2	88.0	88.8	88.5	88.5	89.0	90.1
Canada	3.2	2.9	2.7	2.4	2.7	2.8	2.7
Mexico	1.7	2.1	2.0	1.9	1.4	1.5	1.1
All other sources	6.9	6.9	6.5	7.2	7.3	6.7	6.1
Total imports	11.8	12.0	11.2	11.5	11.5	11.0	9.9

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table FLAT-57
Tin: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	3,937,990	3,997,004	3,768,169	3,937,896	3,743,527	1,892,741	1,699,373
U.S. consumption (*$1,000*)	2,450,866	2,486,837	2,333,126	2,323,869	2,207,398	1,114,389	1,010,028
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	88.7	89.0	87.2	82.3	84.5	84.4	84.5
Canada	1.2	2.0	2.2	2.5	2.4	2.4	3.4
Mexico	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All other sources	10.1	9.0	10.5	15.3	13.1	13.2	12.1
Total imports	11.3	11.0	12.8	17.7	15.5	15.6	15.5
U.S. market share based on value (*percent*)							
U.S. producers' shipments	87.9	88.4	86.2	82.1	84.5	84.5	83.9
Canada	1.2	2.0	2.3	2.6	2.7	2.7	3.8
Mexico	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All other sources	10.8	9.6	11.5	15.4	12.8	12.8	12.3
Total imports	12.1	11.6	13.8	17.9	15.5	15.5	16.1

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

PRICES AND RELATED INFORMATION

Supply-Related Information on U.S. Producers

Based on available information, U.S. flat producers are likely to respond to changes in price with moderate changes in the quantity of shipments of U.S.-produced flat products to the U.S. market. Supply responsiveness is constrained by relatively low inventories, but is enhanced by a depressed capacity utilization and increasing sales to alternate markets.

Industry Capacity

Domestic flat products capacity rose during 1996-2000 for ***. However, capacity declined between the first half of 2000 and 2001 for ***. U.S. producers reported declining levels of capacity utilization for the period for which data was collected; however, they remained above 82 percent in all periods for *** (table FLAT-58). Capacity utilization rates decreased from 1996 to 2000 for ***, and fell for *** in interim 2001. These data indicate that U.S. producers have some unused capacity with which they could increase production of flat steel products in the event of price changes.

Table FLAT-58
Flat products: U.S. producers' year 2000 capacity utilization, export shipments as a percentage of total shipments, and inventories as a percentage of total shipments, by product

Product	Capacity utilization (*percent*)	Exports/total shipments (*percent*)	Inventories/total shipments (*percent*)
Slabs	89.0	0.0	4.4
Plate	60.7	3.9	7.2
Hot-rolled	86.4	0.9	3.7
Cold-rolled	83.9	1.0	5.5
GOES	***	***	***
Coated	82.2	3.3	10.2
Tin	72.9	5.8	9.9

Source: Compiled from data submitted in response to Commission questionnaires.

Alternate Markets

Available data and past investigations[15] indicate that exports typically have accounted for a relatively small portion of total shipments of flat products. The amount of exports varies by product. Exports of flat products (in value terms) ranged from slightly greater than zero percent of domestic shipments for slab in 2000 to ***. Exports of flat products as a percentage of total shipments (in value terms) in general rose from 1996 to 2000 and in interim 2001. While the percentage of exports is low (*i.e.*, less than two percent), the data do indicate a general trend toward increased exports. The

[15] *See Certain Carbon Steel Products*, Invs. Nos. AA1921-197 (Review), 701-TA-231, 319-320, 322, 325-328, 340, 342, and 348-350 (Review), and 731-TA-573-576, 578, 582-587, 604, 607-608, 612, and 614-618 (Review), publication No. 3364, November 2000, pp. PLATE-II-2, COLD-II-2, and CORROSION-II-2.

consistency of these numbers indicates that U.S. producers can increasingly divert shipments to or from alternate markets in response to changes in the price of flat products. Though exports have increased, over the past few years the strong U.S. dollar has had a depressing effect on the domestic producers' ability to export flat products, as purchasers have noted in their questionnaire responses. Information for 2000 is contained in table FLAT-58.

Inventory Levels

U.S. producers' inventories of flat products accounted for a small percentage of total shipments during the period for which data were collected. As a ratio to total shipments, inventories varied between ***. In general, if a flat-rolled product is farther downstream, its ratio of inventories to domestic shipments has been higher than its upstream feedstock. This ratio is reported for each product for 2000 in table FLAT-58. These data indicate that U.S. producers have some ability to use inventories as a means of increasing shipments of flat products to the U.S. market.

Subject Import Supply

All Sources

Capacity in all non-U.S. countries for producing flat products has increased from 1996 to 2000 and in the interim period of 2001.[16] Capacity utilization rates for these producers in 2000 were between 86 and 95 percent, thus indicating that these producers have the ability to increase production somewhat. Inventories for all non-U.S. countries relative to total shipments peaked in 1998 for all products except GOES, which declined throughout 1996 to 2000, and have declined since, reaching their period lows in either the end of 2000 or one of the two interim periods for all products excluding slabs. The ratios of ending inventories to total shipments were below seven percent during this time. In 2000, foreign producers shipped a fair amount of their production beyond their borders, with between 4 and 30 percent of these exports going to the United States. However, these account for only 1.9 to 3.9 percent of total shipments by these firms in 2000. Specific data are listed in table FLAT-59. These data indicate that foreign producers will be able to respond moderately with increased supply to the U.S. market in the event of price changes.

Canada

Capacity in Canada for producing all flat products increased from 1996 to 2000, but decreased in the interim period of 2001 for four out of the six flat products Canadian producers manufacture. Capacity utilization rates in 2000 for Canadian producers were dichotomized: producers of ***, whereas the rest ran at over ***.[17] This indicates that producers of some products have a greater ability to increase production than others. Canadian inventories relative to total shipments increased irregularly from 1996 to 2000 and have ranged between *** during that time. Throughout the period, Canada shipped a small amount of its production beyond its borders, with greater than *** of these exports going to the United States in each year for each product. Further Canadian supply data can be found in table FLAT-60. These data indicate that Canadian producers will be able to respond at least somewhat with increased supply to the U.S. market in the event of price changes.

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[16] These data include data for Canada and Mexico, which are discussed in additional detail below.

[17] There is no GOES production in Canada or Mexico.

Table FLAT-59
Flat products: Foreign producers' year 2000 capacity utilization, export shipments as a percentage of total shipments, and inventories as a percentage of total shipments, by product

Product	Capacity utilization (*percent*)	Exports to United States/total shipments (*percent*)	Inventories/total shipments (*percent*)
Slabs	94.6	2.2	2.6
Plate	85.8	1.9	5.9
Hot-rolled	93.0	2.2	3.3
Cold-rolled	88.9	2.0	3.9
GOES	88.3	2.9	4.5
Coated	92.7	3.3	7.0
Tin	87.9	3.9	6.9

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-60
Flat products: Canadian producers' year 2000 capacity utilization, export shipments as a percentage of total shipments, and inventories as a percentage of total shipments, by product

Product	Capacity utilization (*percent*)	Exports to United States/total shipments (*percent*)	Inventories/total shipments (*percent*)
Slabs	97.6	1.5	6.8
Plate	***	***	***
Hot-rolled	94.1	2.8	4.5
Cold-rolled	80.6	1.5	4.4
GOES	(1)	(1)	(1)
Coated	***	***	***
Tin	***	***	***

[1] Not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Mexico

Capacity in Mexico for producing flat products increased in general from 1996 to 2000 and remained the same in the interim period of 2001 for half of the flat products Mexican producers manufacture.[18] Capacity utilization rates for Mexican producers were between *** in 2000, thus indicating that these producers have the ability to increase production by a moderate amount. Mexican

[18] Capacity to produce *** fell in interim 2001, while *** increased.

ending inventories relative to total shipments have varied within each category, and were between *** during 2000. Also in 2000, Mexico shipped a large amount of its production beyond its borders, with most (at least ***) of these exports going to the United States for all products except ***, which Mexico did not ship to the United States. Data for exports to the United States as a portion of total shipments is presented in table FLAT-61, along with other Mexican producer data. These data indicate that Mexican producers will be able to respond with moderately increased supply to the U.S. market in the event of price changes.

Table FLAT-61
Flat products: Mexican producers' year 2000 capacity utilization, export shipments as a percentage of total shipments, and inventories as a percentage of total shipments, by product

* * * * * * *

U.S. Demand

Based on available information, the overall demand for flat products will change slightly to moderately in response to changes in the price of flat products. The main factors contributing to this low to moderate degree of price sensitivity are a lack of substitute products, the portion of the final cost of the end-use product (which can vary greatly), demand characteristics, factors affecting purchasing decisions, and the fact that demand for flat products is derived from demand for the goods in which they are used, following loosely the business cycle of the economy. The responsiveness of demand to price changes varies by product category. It may be somewhat higher for flat products such as tin products, which have more significant competing substitutes, than a product like slabs, which is the main raw material to continue the steelmaking process, as well as a large portion of its cost.

Demand Characteristics and Trends

The overall demand for flat products depends upon the demand for a variety of end-use applications. The demand for slabs is influenced by the demand for downstream flat products such as hot-rolled, cold-rolled, and coated. Respondents argued that the U.S. industry presently has a shortage of slab-making capacity compared to the sum of domestic hot-rolling and plate capacity.[19] During 2000, all 11 domestic steel producers which bought slabs purchased imported slabs. Between interim 2000 and 2001, domestic slab production plus imports decreased by eight percent, with imports accounting for about half of the total decline. Six of eight slab purchasers noted a change in demand from the start to the end of the period of study. Three stated that demand for their end-use products had increased, one described demand increasing in 1996-98 and decreasing since, and another replied that demand increased in 1996, 1997, and 2000, but decreased in 1998-99.

The overall demand for plate is influenced by the production of ships and barges, storage tanks, heavy machinery, bridges, railcars, machine parts, pressure vessels, and off-shore drilling platforms.[20] From 1996 through the first half of 2000 aggregate demand expanded, but it became depressed in the second half of 2000 through the end of the period as the economy in general began to decline. In some

[19] Prehearing brief of joint respondents on slab, pp. 45-47.

[20] *Certain Carbon Steel Products*, Invs. Nos. AA1921-197 (Review), 701-TA-231, 319-320, 322, 325-328, 340, 342, and 348-350 (Review), and 731-TA-573-576, 578, 582-587, 604, 607-608, 612, and 614-618 (Review), publication No. 3364, November 2000, p. PLATE-II-13.

end-use applications, the outlook still is positive, *e.g.*, road and bridge steel.[21] Apparent consumption of plate decreased irregularly by about nine percent between 1996 and 2000, and declined by four percent from interim 2000 to interim 2001. Thirty-seven of 83 plate purchasers have seen a change in demand for their products, with 17 noting an increase, seven noting a decrease, and five specifically referencing a general increase then a recent decline.

Demand for hot-rolled sheet and strip is dependent on demand for further-processed steel, such as cold-rolled, as well as those products in which it is a direct raw material, such as construction or automobiles. Apparent consumption increased by 10 percent from 1996 to 2000, but has dropped 17 percent between the interim periods. Of the 136 responding purchasers of hot-rolled, 79 replied that there has been a change in demand for their products, with 43 witnessing an increase, 11 a decline, and 10 an initial increase but a more recent decrease.

Demand for cold-rolled depends on demand in the appliance, automotive, construction, container, and other industries in which it is used.[22] Apparent consumption of cold-rolled also increased by 10 percent from 1996 to 2000, but has dropped by 12 percent between the interim periods. Similar results as hot-rolled regarding the change in demand for cold-rolled purchasers' products were reported. Of the 138 responding purchasers, 81 replied that there has been a change in demand for their products, with 50 seeing an increase, 11 a decline, and 9 an increase followed by a recent decrease.

Demand for GOES is primarily influenced by the demand for electrical transformers. This demand has increased over the past few years, as the demand for transformers has increased greatly.[23] It also is expected to continue to grow domestically as well as worldwide in the next few years due to increased housing starts and the need to replace aging electricity-related infrastructure.[24] Apparent consumption of GOES increased by around *** percent between 1996 and 2000, but decreased by *** percent from interim 2000 to interim 2001. Nine of 14 responding GOES purchasers noted that demand for their products has changed since 1996, with five seeing an increase, two a decrease, and one an initial increase but a recent decrease.

The demand for coated is influenced by demand in the automotive and construction industries.[25] The recent economic downturn and decline in automotive demand has decreased the demand for coated.[26] Apparent consumption of coated increased irregularly by about 17 percent between 1996 and 2000, but declined by 13 percent from interim 2000 to interim 2001. Fifty-three of 88 responding purchasers of coated responded that they have seen a change in demand for their products since 1996. Specifically, 34 have noticed an increase in demand for their products, six have witnessed a decline, and seven have seen an initial increase followed by a decrease.

Tin's demand is derived from the demand for containers, primarily food containers, but also aerosol cans. For tin, demand has continued its decline over the entire period of study due to the

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[21] Prehearing brief of respondents on carbon and alloy plate, p. 27.

[22] *Certain Carbon Steel Products*, Invs. Nos. AA1921-197 (Review), 701-TA-231, 319-320, 322, 325-328, 340, 342, and 348-350 (Review), and 731-TA-573-576, 578, 582-587, 604, 607-608, 612, and 614-618 (Review), publication No. 3364, November 2000, p. COLD-II-7.

[23] *Grain-Oriented Silicon Electrical Steel from Italy and Japan*, Invs. Nos. 701-TA-355 (Review) and 731-TA-659-660 (Review), publication No. 3396, February 2001, pp. 14 and II-1.

[24] Prehearing brief of Japanese producers, pp. 37-42, and prehearing injury brief of respondents Acciai Speciali Terni S.p.A., EBG Gesellschaft fur Elektromagnetische Werkstoffe GmbH, and UGO, S.A., pp. 42-51.

[25] *Certain Carbon Steel Products*, Invs. Nos. AA1921-197 (Review), 701-TA-231, 319-320, 322, 325-328, 340, 342, and 348-350 (Review), and 731-TA-573-576, 578, 582-587, 604, 607-608, 612, and 614-618 (Review), publication No. 3364, November 2000, p. CORROSION-II-10.

[26] Prehearing brief of joint respondents on corrosion-resistant steel, pp. 57-59.

increased usage of lighter gauge tin mill, continued switching to plastic containers, and the switch from using three-piece cans to two-piece cans (which use less steel).[27] Consolidation of purchasers has also reportedly decreased the prices which tin mill producers can charge.[28] Apparent consumption of tin fluctuated between 3.9 million and 4.1 million tons during the period 1996 to 2000, but fell by 11 percent from interim 2000 to interim 2001. Nineteen of 26 responding tin purchasers noted that demand for their products has changed over the period of study, with 12 seeing an increase and six a decrease. Of the five largest tin purchasers, however, two noted a decrease in demand, two noticed no change, and one had its purchases increase ***.

Substitute Products

The majority of purchasers (259 of 300) reported that there are no substitutes for flat products. The few that indicated substitutes existed cited aluminum, composite materials, concrete, copper, fiberglass products, plastics, stainless steel, and wood. More specifically, for hot-rolled, the following can be used as substitutes (but only in limited applications): aluminum, wood, or concrete. Substitutability is limited due to strength, weight, structural integrity, cost, and elemental resistance factors.[29] For cold-rolled, the following can be used as substitutes: thin gauge hot-rolled products, galvanized steel products, and wood.[30] For plate, rolled formed shapes and castings, coil, and prestressed/precast concrete structural components may be used as substitutes.[31] For coated, the following may be used as substitutes: thin gauge hot-rolled steel, fiberglass, copper, stainless steel, tin plate, aluminum, and wood.[32] For GOES, there are very few substitutes. Purchasers from the February 2001 investigations noted that NOES, amorphous steel, and "mu metal" could be used, but there are effectively no commercially viable substitutes.[33] Because tin is used mostly to manufacture food, cosmetic, and paint containers, the following may be used as substitutes: cold-rolled, zinc-plated, and stainless steel; plastic; glass; paperboard; and aluminum.[34] Since slab is the core product from which carbon and alloy flat products are produced, there are no substitutes for this form of steel. None of the purchasers indicated that they have switched to substitute products.

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[27] Prehearing brief of Can Manufacturers' Coalition, pp. 8-11, and prehearing brief of joint respondents on tin mill products, pp. 15-17.

[28] Prehearing brief of Can Manufacturers' Coalition, pp. 12-13, and prehearing brief of joint respondents on tin mill products, p. 14.

[29] *Hot-Rolled Steel Products from Argentina, China, India, Indonesia, Kazakhstan, Netherlands, Romania, South Africa, Taiwan, Thailand, and Ukraine*, Invs. Nos. 701-TA-404-408 (Preliminary) and 731-TA-898-908 (Preliminary), publication No. 3381, January 2001, p. II-4.

[30] *Certain Carbon Steel Products*, Invs. Nos. AA1921-197 (Review), 701-TA-231, 319-320, 322, 325-328, 340, 342, and 348-350 (Review), and 731-TA-573-576, 578, 582-587, 604, 607-608, 612, and 614-618 (Review), publication No. 3364, November 2000, p. COLD-II-8.

[31] Ibid., p. PLATE-II-14.

[32] Ibid., p. CORROSION-II-11.

[33] *Grain-Oriented Silicon Electrical Steel from Italy and Japan*, Invs. Nos. 701-TA-355 (Review) and 731-TA-659-660 (Review), publication No. 3396, February 2001, pp. II-16-17.

[34] *Tin- and Chromium-Coated Steel Sheet from Japan*, Inv. No. 731-TA-860 (Final), publication No. 3337, August 2000, p. II-3.

Cost Share

Since there are a large number of end uses for flat products, the percentage of the cost of the end product accounted for by the flat product varies significantly. Purchasers were asked to report the end uses for which they purchased flat products as a component part and to report the percentage of the total cost accounted for by the flat products. Purchasers reported end uses of flat products that included air ducts, automotive parts, barbecue grills, battery components, building and bridge components, cans, compressors, display panels, doctor blades, fasteners, fencing, furniture, handsaws and blades, ladders, pipe and tube, scaffolds, springs, transformers and transformer components, steel drums, wire and cable, and other flat products. Estimates of the cost share of the steel inputs in the end-use products, excluding other downstream flat products, ranged from less than one percent for steel fencing and screen sections, for example, to recreational vehicle frame components at 100 percent. When flat products were used as the input for other flat products, the cost share ranged from 50 percent to 100 percent.

Substitutability of Domestic and Imported Flat Products

The degree of substitution between domestic and imported flat products depends upon relative prices, quality (*e.g.*, grade specifications, flatness, surface condition, strength, tolerance consistency, defect rates, etc.) and conditions of sale (*e.g.*, price discounts, lead times between order and delivery dates, reliability of supply, payment terms, etc.). Based on available data discussed below, staff believes that while there are some differences in U.S.-produced and imported flat products, overall there is a moderate to high degree of substitution between U.S.-produced and imported flat products.

U.S. Purchasers

The Commission received responses from 347 purchasers that provided information on the type of purchaser and the flat products that they purchased during the period 1996 to 2001.[35] The majority of responding purchasers were end users, as shown in table FLAT-62. Many purchasers indicated that they had purchased more than one type of flat product during the period examined. The most common flat product purchases were hot-rolled, cold-rolled, and plate. Slabs were the only product in which more purchasers purchased from foreign sources than domestic sources (table FLAT-63).

[35] Questionnaires were sent to purchasers of all flat products. Unless noted otherwise, each purchaser's replies are only counted once throughout this chapter even if the firm reported purchasing more than one flat product.

Table FLAT-62
Flat products: Types of purchasers reporting information

Type of firm	Number of firms reporting[1]
Distributor	66
End user	205
Other[2]	30

[1] Some purchasers indicated more than one type of firm.
[2] Other includes brokers, trading companies, and processors.

Source: Compiled from data submitted in Commission questionnaires.

Table FLAT-63
Flat products: Number of firms reporting purchases of domestic and imported products, by products[1]

Product	Purchases of domestic product	Purchases of imported product
	Number of firms reporting	
Slabs	6	9
Plate	108	64
Hot-rolled	145	89
Cold-rolled	135	94
GOES	13	10
Coated	90	57
Tin	26	22

[1] Since some firms purchased more than one product, these data will be greater than the total number of purchasers.

Source: Compiled from data submitted in Commission questionnaires.

Purchasers were asked to report their frequency of purchases and whether their pattern has changed over the last five years. Ninety-two reported daily purchases, 87 reported weekly purchases, 94 reported monthly purchases, 27 reported quarterly purchases, and 11 reported annual purchases. The majority of purchasers responded that their pattern of purchasing had not changed. Two hundred nine purchasers responded that they were "always" aware the flat products were U.S.-produced or imported, 80 purchasers reported they were "usually" aware, 37 indicated they were "sometimes" aware, and 10 said they "never" know the origin of their purchases. Twenty-seven distributing purchasers responded that their buyers were "always" aware of the source of their purchases, 18 reported that their buyers are "usually" aware, 37 indicated that their buyers were "sometimes" aware, and 2 said their buyers "never" know the origin of their purchases.

Eighty-nine purchasers reported that their suppliers set terms at purchase, 247 responded that terms are negotiable, and three indicated that it depends on the supplier.[36]

[36] One purchaser indicated that its domestic suppliers set the terms and terms are negotiable with foreign
(continued...)

Lead Times

Purchasers reported lead times of less than a week to 6 months.[37] The majority of purchasers did not provide separate lead times for domestic and imported product, but for those that did, the lead time for domestic sources ranged from three weeks to three months and for imported product, the lead time ranged from two months to six months. The Commission asked purchasers to report if average lead times for domestic and imported flat products had changed since January 1, 1996. For domestic lead times, 169 purchasers reported they have remained the same, 79 reported that they have decreased, and 14 responded that they have increased at some point during the period. For imports, 192 purchasers reported that lead times have remained the same, 15 indicated that they have decreased, and 8 said they had increased at some point during the period. Many purchasers also indicated that lead times have fluctuated during the period, but did not specify whether they increased or decreased on the whole.

Factors Affecting Purchasing Decisions

Table FLAT-64 shows how purchasers ranked the most important factors in their purchasing decisions.

Table FLAT-64
Flat products: Ranking of factors used in purchasing decisions as reported by purchasers

Factor	Number of firms reporting		
	Number 1 factor	Number 2 factor	Number 3 factor
Price	80	104	114
Quality	186	81	41
Availability	36	63	57
Delivery	7	39	50
Other[1]	39	46	55

[1] Other includes source, pre-arranged contracts, service, reliability, terms, credit availability, performance, traditional supplier, range of supplier, and supplier's reputation.

Source: Compiled from data submitted in Commission questionnaires.

Purchasers were asked to describe what characteristics they use in determining quality of a supplier's product. Some purchasers reported that quality is based on meeting the firm's or customer's specifications or meeting industry certifications/specifications such as ISO 9000 and above, QS-9000,[38] AISI, ASME, or ASTM. Other purchasers described different physical and chemical properties that were

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[36] (...continued)
suppliers.

[37] One purchaser stated lead times can range up to nine months. Others reported lead times starting at one day. These purchasers, however, buy mainly from distributors and service centers that warehouse steel.

[38] ISO 9000 is the name of the international series of quality management and quality assurance standards as adopted by the ISO. QS-9000 is the name used by the automotive OEMs and heavy truck OEMs to define their QSR for suppliers. QS-9000 is the automotive OEMs' interpretation of the ISO 9000 standards for the automotive industry.

important for determining quality. These characteristics included chemistry, gauge, surface conditions, flatness, coil size capability, cleanliness, dimensional tolerances, width, formability, hardness, finish, coating weight, defects, and yield. As expected, some distributors noted that the ability to meet their customers' end-use specifications is an important factor.

When asked how often they purchase the lowest price flat products offered, 10 purchasers reported "always," 154 responded "usually," 155 indicated "sometimes," 21 said "never," and one reported only on rare occasions.[39]

Two hundred fifty-one purchasers reported requiring supplier certification, in between 10 and 100 percent of their purchases. Certification may include meeting AISI, ASME, ASTM, ISO 9000 and above, QS-9000, and/or Japanese Industrial Standards, as well as specific firm or customer specifications. In addition, the certification process may include on-site quality audits, a review of financial status of the potential supplier, trial samples to analyze quality and delivery, and an evaluation of the supplier's product line range. Although the period for obtaining certification ranged from a few hours to six years, the majority of purchasers indicated that it takes approximately two to six months for certification. A few of the purchasers indicated that they do not require pre-certification or qualification for suppliers since they only purchase ASTM, ASME, or AISI specification materials.

Purchasers were asked if any supplier had failed to qualify or lost its qualification during the period examined. Of the 325 purchasers responding to the question, 102 reported at least one instance in which a supplier either failed to qualify or lost its qualification. Quality shortcomings or poor delivery performance were usually the reason for the failure or lost qualification.

Purchasers were asked to rank the relative importance of the following 14 factors in their purchasing decision: availability, delivery terms, delivery time, discounts offered, lower price, minimum quantity requirements, packaging, product consistency, product quality, product range, reliability of supply, technical support/service, transportation network, and U.S. transportation costs. The relative importance of the 14 factors is found in the first and second columns of table FLAT-65. The most important factors were product quality, product consistency, reliability of supply, availability, delivery time, and lowest price.

[39] One purchaser that responded "usually" provided the caveat that it would only purchase at the lowest price if its quality requirements were met.

Table FLAT-65
Flat products: Average purchase factor ratings and reported comparisons between U.S., Canadian, Mexican, and non-NAFTA products

Factor	Average importance score[1]	U.S. vs. Canada[2]			U.S. vs. Mexico[2]			U.S. vs non-NAFTA imports[2]		
		S	C	I	S	C	I	S	C	I
Availability	2.90	13	32	3	18	26	8	68	114	45
Delivery terms	2.42	8	41	0	15	34	2	52	151	23
Delivery time	2.77	13	33	3	24	23	4	114	74	37
Discounts offered	2.29	5	35	6	4	36	9	21	157	37
Lowest price	2.67	10	29	10	7	20	23	29	99	97
Minimum quantity requirements	2.06	10	35	2	7	37	6	54	146	23
Packaging	2.10	0	47	1	7	41	3	18	171	33
Product consistency	2.91	3	43	3	15	30	5	37	136	51
Product quality	2.98	3	43	3	13	32	5	33	129	64
Product range	2.28	8	36	4	19	26	5	32	139	53
Reliability of supply	2.88	14	30	5	18	25	7	55	132	39
Technical support	2.38	12	37	0	23	23	5	73	124	28
Transportation network	2.11	10	39	0	19	27	4	65	141	17
U.S. transportation costs	2.29	10	35	3	11	34	5	37	156	25

[1] 3 = very important, 2 = somewhat important, 1 = not important.
[2] S = U.S. superior, C = products comparable, I = U.S. inferior.

Source: Compiled from data submitted in response to Commission questionnaires.

Comparisons of Domestic Products and Subject Imports

Purchasers were asked to indicate the countries of origin for carbon and alloy steel flat products for which their firm has actual marketing/pricing knowledge. Of the 327 responding purchasers, 123 reported that they had knowledge only of domestic product and 17 indicated they only had knowledge of foreign product. Purchasers listed knowledge of carbon and alloy steel flat products from the following countries: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Czech Republic, France, Germany, Hungary, India, Italy, Japan, Korea, Luxembourg, Malaysia, Mexico, Netherlands, New Zealand, Norway, Romania, Russia, Slovakia, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, Ukraine, United Kingdom, United States, and Venezuela.

Purchasers were asked whether U.S.-produced product was interchangeable with product produced in Canada, Mexico, and all other countries. In the comparison with Canadian-produced product, 193 purchasers reported the products were interchangeable and 20 responded the products cannot be used in the same applications. Reasons for indicating "no" included: the purchaser has never purchased from a Canadian source, the flat product used by the purchaser was not available from a Canadian mill, and the U.S.-produced product has better quality. In the comparison with Mexican-

produced product, 189 purchasers reported that the products can be used in the same applications and 42 indicated the products were not interchangeable. Those that responded "no" provided the following reasons: Mexican product is lower quality or does not meet needed specifications; for some products, Mexican quality is superior; Mexican mills do not produce the needed product; only use domestic; and never purchased Mexican product. In comparing U.S.-produced products to all other products, 211 purchasers responded that the products can be used in the same applications and 28 reported the products could not be used in the same applications. The following reasons were provided for "no" responses: domestic mills do not make the product needed, have not purchased foreign steel, the difference between plate and pipe yield strengths (the Bauschinger effect), some foreign mills have limited experience with ASTM standards, domestic steel has inferior quality for some products, buy domestics only, and customer specifies which steel to buy.

Purchasers were asked to compare U.S.-produced product with Canadian-produced product, Mexican-produced products, and all other products for 14 characteristics. The tabulation of these results is in table FLAT-65. The majority of purchasers found U.S. products superior in delivery time compared to the Mexican and non-NAFTA products. In the comparison between U.S.-produced products and Mexican-produced products, the majority of purchasers were evenly split as to whether the United States was superior or comparable in technical support. The United States was found to be inferior in lower price compared to Mexican products.

One hundred eighteen purchasers indicated that they have ordered flat products specifically from the United States, citing Buy American/domestic requirements, quality, shorter lead times, reliability, existing arrangement, and long-term relationship as reasons for the preference for domestic product. Eighty-four purchasers reported that they have ordered flat products specifically from foreign sources, citing price, quality, product range, and lack of domestic availability as reasons for specifying foreign product.

Two hundred fifty-one purchasers indicated that they have or would purchase flat products from one source even though a comparable product was available at a lower price. The most common reasons included availability/lead times, Buy American clauses or a domestic preference, delivery, reliability, and quality.

Purchasers were asked if there were products unavailable or in short supply from domestic producers.[40] These shortages ran across all types of flat products, and both carbon and alloy flat products. Five of 11 slab purchasers specified a shortage in slab, along with 13 of 115 plate purchasers, 23 of 177 hot-rolled purchasers, 32 of 170 cold-rolled purchasers, 5 of 18 GOES purchasers, 23 of 110 coated purchasers, and 7 of 37 tin purchasers in each of their respective products. Reasons cited most often for the non-availability of domestic product were: lack of quality of domestic flat products, lack of production capability (*e.g.*, U.S. mills do not roll wide or thick enough products), and U.S. production locations are too far to cost-effectively purchase domestic material (*e.g.*, one purchaser noted electro-galvanized is not produced on the West Coast). A few purchasers noted that this is occurring less now with the recent economic downturn, but two to three years ago, the market was tight. One hundred ninety-six purchasers stated that to their knowledge, no specific flat products were in short supply from the United States.

Elasticity Estimates

This section discusses the elasticity estimates that will be used in the economic analysis concerning any remedy options.

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[40] In this section, purchasers that bought more than one type of flat-rolled steel are counted once for each type of steel they purchased.

U.S. Supply Elasticity

The domestic supply elasticity for flat products measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of flat products. The elasticity of domestic supply depends on several factors, including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift production to other products, the existence of inventories, and the availability of alternate markets for U.S.-produced flat products. Analysis of these factors earlier indicates that the U.S. industry is somewhat likely to be able to increase or decrease shipments to the U.S. market in response to changes in price; an estimate in the range of 3 to 6 is suggested.[41]

U.S. Demand Elasticity

The U.S. demand elasticity for flat products measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of flat products. This estimate depends on factors discussed earlier such as the existence of substitute products and the component share of flat products in the production of downstream products. Based on available information, the aggregate demand for flat products is likely to be inelastic; a range of -0.2 to -0.6 is suggested.

Substitution Elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[42] Product differentiation, in turn, depends upon such factors as quality, delivery times, and conditions of sale. Based on available information, the elasticity of substitution between U.S.-produced and imported flat products is likely to be in the range of 2 to 6.

Factors Affecting Prices

Raw Material Costs

Most flat products subject to this investigation start out as slab. Slab itself is created either from scrap or iron that comes from iron ore, or some combination of the two, depending on the firm producing it. Information on pricing for the raw materials that go into the production of slab is provided in the overview chapter. Hot-rolled and plate are rolled from slab, and thus have the same raw materials. Hot-rolled is the main raw material used in the production of cold-rolled, which in turn is the main raw material in coated and tin products. Steel scrap and silicon are the predominant material input costs to produce GOES.[43]

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[41] This estimate is a composite for all flat products. Some products may be lower, while others may be higher. For example, there is relatively more available unused capacity in the production of tin mill products than in most other flat-rolled products, indicating the market supply elasticity for tin mill products is likely to be at the higher end of the suggested spectrum.

[42] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and U.S. like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject imports (or vice versa) when prices change.

[43] *Grain-Oriented Silicon Electrical Steel from Italy and Japan*, Invs. Nos. 701-TA-355 (Review) and 731-TA-659-660 (Review), publication No. 3396, February 2001, p. V-1.

Transportation Costs to the U.S. Market

Transportation costs for flat products from all import sources (based on 2000 import data) to the United States (excluding U.S. inland costs) are estimated to be an average of 9.9 percent of the customs value of the flat products. This estimate is derived from the official U.S. import data by subtracting the c.i.f. value and duties from the landed, duty-paid value, and represents the transportation and other charges on imports.

U.S. Inland Transportation Costs

Purchasers estimated that U.S. inland transportation costs accounted for between 0.5 and 40 percent of the total delivered cost of flat products, with a simple average of 5.1 percent for those purchasers reporting a cost other than zero. One hundred sixty-eight purchasers reported that their supplier generally arranges the transportation to their location, while 77 stated that the purchaser usually arranges transportation.

Pricing Methods and Sales Terms

One hundred five purchasers reported that all of their purchases were on a spot basis, while 128 reported that 90 to 100 percent of their purchases were on a contract basis. The rest of the purchasers (73) reported some mix of contract and spot pricing, with more than twice as many purchasers making a greater percentage of their purchases on a contract basis than a spot basis (45 compared to 20). Contracts were usually three to 12 months, with renegotiation generally only coming at the end of a contract. Some purchasers noted contracts as short as 30 days, while a few noted some with a length of three to five years. One hundred nine purchasers reported contracts that fixed both price and quantity, while 89 reported contracts that fixed a price with some estimating a quantity.[44] Few purchasers reported price premiums for sub-minimum shipments or meet-or-release provisions. Though contract and spot market pricing may differ, Ispat Inland, Inc. noted that the two are somewhat interrelated.[45]

Also, a trend that has occurred in the coated and tin product lines is that of increasing purchaser market power due to consolidation. Respondents stated that consolidation in the automotive, construction, and appliance sectors over the period of study has contributed to increasing market power on the side of buyers of coated products.[46] The number of large tin purchasers has declined from 49 in 1990 to 26 in 2000, with four to six can manufacturers accounting for 75 to 80 percent of all consumption. In addition, respondents noted that since 1990 some can manufacturers have formed buying cooperatives to increase their market power.[47]

Price Data

The Commission asked for quarterly sales value and quantity data for U.S. producers' and importers' sales of the following seven products during January 1996 to June 2001:

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[44] Two reported solely fixing a quantity, and one noted fixing a quantity in addition to price only in times of shortage.

[45] Prehearing brief of Ispat Inland, Inc., exhibits 5 and 6.

[46] Prehearing brief of joint respondents on corrosion-resistant, pp. 56-57.

[47] Prehearing brief of joint respondents on tin, pp. 27-29.

Product 1.--Low carbon slabs with chemistries of up to 0.15 max carbon and 0.60 max manganese exclusive of IF or specialty chemistries.

Product 2.--Hot-rolled carbon steel plate, ASTM A-36 or equivalent as rolled, sheared edge, not heat treated, not cleaned or oiled, in cut lengths, over 72" through 96" in width, 1.00" through 2.00" in thickness. Not including high-strength or mill proprietary products, or products tested to other specifications, unless otherwise noted.

Product 3A.--Hot-rolled carbon steel sheet and plate in coils, as-rolled (unprocessed), not pickled or temper-rolled, not high-strength, produced to AISI-1006-1025 grade (including, but not limited to, ASTM A-36), 0.187" through 0.625" in nominal or actual thickness, 40" through 72" in width.

Product 3B.--Hot-rolled carbon sheet in coils, commercial quality, SAE 1006-1015 or ASTM A-569 equivalent, not high-strength, not pickled and oiled, not temper-rolled, 0.090" through 0.171" in nominal or actual thickness, 40" to 60" in width.

Product 4A.--Cold-rolled carbon steel sheet, in coils, commercial quality (ASTM A-366), not IF, box annealed and temper rolled, 36" to 72" in width, 0.022" to less than 0.028" in thickness.

Product 4B.--Cold-rolled carbon steel sheet in coils, commercial quality (ASTM A-366), not IF, box annealed and temper-rolled, 36" to 72" in width, 0.028" to less than 0.090" in thickness.

Product 5.--Conventional GOES, ASTM A-876 Type 23G045, Condition F5; 0.23 mm thickness, maximum core loss 0.54 W/lb (1.5 T; 60 Hz), shearing quality.

Product 6A.--Aluminum-zinc alloy coated carbon steel sheet, in coils, hot dipped, structural quality, ASTM A-792, grade 50, AZ50, 40" to 49" in width, 0.019" to 0.0219" in thickness. This product has a coating of 55 percent aluminum, 43.5 percent zinc, and 1.5 percent silicon, and has a variety of product names worldwide including "Galvalume," "Zincalume," "Aluzink," "Zinkalit," and "Zalutite." This product is not pre-painted, has no organic coating, and is not high-strength.

Product 6B.--Electrolytically zinc coated carbon steel sheet, in coils, ASTM A-879, 50-90 grams/square meter per side coating, without organic coating, forming steel, 40" to under 60" in width, 0.022" to under 0.044" in thickness. This product is not prepainted, is not high-strength, and is not mill proprietary.

Product 7.--Base price for single-reduced, electrolytic tin plate (1CRETP), 70-75 pound per base box.

Responses from producers and importers are shown in tables FLAT-66 through FLAT-75 and figures FLAT-2 through FLAT-11.[48] Table FLAT-76 shows pricing trends from January 1996 to June 2001 and table FLAT-77 summarizes the instances of overselling and underselling for Canada, Mexico, and all non-NAFTA countries.

[48] Brazilian respondents have submitted that slab import data gathered are not representative of the market, as most sales do not take place via the merchant market.

Table FLAT-66
Slabs: Weighted-average price and quantity data for U.S.-produced and imported product 1[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price (per ton)	Quantity (tons)	Price (per ton)	Qty (tons)	Margin (percent)	Price (per ton)	Qty (tons)	Margin (percent)	Price (per ton)	Qty (tons)	Margin (percent)
1996:											
Jan.-Mar.	$***	***	(2)	(2)	(2)	$***	***	***	$252.96	229,303	***
Apr.-June	***	***	$***	***	***	***	***	***	239.75	287,101	***
July-Sept.	***	***	***	***	***	250.82	165,503	***	257.87	290,946	***
Oct.-Dec.	225.65	41,674	(2)	(2)	(2)	***	***	***	245.07	200,709	-8.6
1997:											
Jan.-Mar.	228.31	69,159	***	***	***	***	***	***	245.53	245,060	-7.5
Apr.-June	227.21	52,628	***	***	***	***	***	***	231.04	222,221	-1.7
July-Sept.	228.59	59,918	***	***	***	251.03	220,489	-9.8	214.38	140,960	6.2
Oct.-Dec.	244.36	147,377	***	***	***	***	***	***	***	***	***
1998:											
Jan.-Mar.	256.84	115,658	(2)	(2)	(2)	***	***	***	221.70	109,767	13.7
Apr.-June	261.92	80,777	(2)	(2)	(2)	***	***	***	224.43	173,982	14.3
July-Sept.	248.47	33,105	(2)	(2)	(2)	***	***	***	224.85	152,179	9.5
Oct.-Dec.	176.68	25,926	(2)	(2)	(2)	***	***	***	225.82	98,965	-27.8
1999:											
Jan.-Mar.	168.49	36,244	(2)	(2)	(2)	***	***	***	158.26	236,575	6.1
Apr.-June	179.40	39,079	(2)	(2)	(2)	***	***	***	169.79	362,947	5.4
July-Sept.	217.19	9,083	***	***	***	***	***	***	184.90	271,282	14.9
Oct.-Dec.	224.98	28,944	***	***	***	***	***	***	185.95	246,239	17.3
2000:											
Jan.-Mar.	225.12	91,676	***	***	***	***	***	***	211.97	263,461	5.8
Apr.-June	224.39	25,987	***	***	***	***	***	***	221.53	227,208	1.3
July-Sept.	223.50	50,590	***	***	***	***	***	***	220.81	125,819	1.2
Oct.-Dec.	***	***	***	***	***	***	***	***	***	***	***
2001:											
Jan.-Mar.	***	***	***	***	***	***	***	***	***	***	***
Apr.-June	***	***	(2)	(2)	(2)	***	***	***	***	***	***

[1] Low carbon slabs with chemistries of up to 0.15 max carbon and 0.60 max manganese exclusive of IF or specialty chemistries.
[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-67
Plate: Weighted-average price and quantity data for U.S.-produced and imported product 2[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price (*per ton*)	Quantity (*tons*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)
1996:											
Jan.-Mar.	$414.89	106,026	(2)	(2)	(2)	(2)	(2)	(2)	$287.91	31,879	30.6
Apr.-June	419.28	107,148	$***	***	***	(2)	(2)	(2)	331.57	39,521	20.9
July-Sept.	422.84	109,915	***	***	***	(2)	(2)	(2)	326.86	98,720	22.7
Oct.-Dec.	418.11	93,310	***	***	***	(2)	(2)	(2)	361.20	89,591	13.6
1997:											
Jan.-Mar.	414.62	96,217	(2)	(2)	(2)	(2)	(2)	(2)	379.62	51,433	8.4
Apr.-June	412.79	92,886	(2)	(2)	(2)	(2)	(2)	(2)	313.83	64,710	24.0
July-Sept.	410.09	94,483	(2)	(2)	(2)	(2)	(2)	(2)	313.96	51,705	23.4
Oct.-Dec.	403.85	97,516	(2)	(2)	(2)	(2)	(2)	(2)	309.63	32,566	23.3
1998:											
Jan.-Mar.	410.31	114,989	***	***	***	(2)	(2)	(2)	319.36	79,167	22.2
Apr.-June	417.62	122,486	***	***	***	(2)	(2)	(2)	347.67	63,545	16.8
July-Sept.	415.17	104,074	***	***	***	(2)	(2)	(2)	377.55	175,280	9.1
Oct.-Dec.	385.15	71,884	***	***	***	(2)	(2)	(2)	374.84	102,887	2.7
1999:											
Jan.-Mar.	348.05	78,114	***	***	***	(2)	(2)	(2)	368.83	24,195	-6.0
Apr.-June	327.56	104,048	***	***	***	(2)	(2)	(2)	288.83	41,578	11.8
July-Sept.	314.54	95,028	***	***	***	(2)	(2)	(2)	306.81	49,990	2.5
Oct.-Dec.	322.67	93,032	***	***	***	(2)	(2)	(2)	310.41	52,067	3.8
2000:											
Jan.-Mar.	328.26	113,844	***	***	***	(2)	(2)	(2)	306.12	53,565	6.7
Apr.-June	343.32	102,880	***	***	***	(2)	(2)	(2)	319.33	34,480	7.0
July-Sept.	339.60	89,503	***	***	***	(2)	(2)	(2)	329.99	32,149	2.8
Oct.-Dec.	329.33	76,765	***	***	***	(2)	(2)	(2)	326.35	33,562	0.9
2001:											
Jan.-Mar.	307.65	83,590	***	***	***	(2)	(2)	(2)	309.80	25,145	-0.7
Apr.-June	306.75	84,885	***	***	***	(2)	(2)	(2)	331.70	14,417	-8.1

[1] Hot-rolled carbon steel plate, ASTM A-36 or equivalent as rolled, sheared edge, not heat treated, not cleaned or oiled, in cut lengths, over 72" through 96" in width, 1.00" through 2.00" in thickness. Not including high-strength or mill proprietary products, or products tested to other specifications, unless otherwise noted.

[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-68

Hot-rolled: Weighted-average price and quantity data for U.S.-produced and imported product 3A[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price (*per ton*)	Quantity (*tons*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)
1996:											
Jan.-Mar.	$307.01	686,831	$***	***	***	$***	***	***	$376.11	16,578	-22.5
Apr.-June	308.74	706,321	***	***	***	***	***	***	301.15	64,496	2.5
July-Sept.	327.86	687,287	***	***	***	***	***	***	279.43	73,197	14.8
Oct.-Dec.	332.93	727,263	***	***	***	***	***	***	284.19	94,306	14.6
1997:											
Jan.-Mar.	335.24	758,385	***	***	***	***	***	***	288.87	101,407	13.8
Apr.-June	336.41	760,807	***	***	***	***	***	***	274.36	122,679	18.4
July-Sept.	332.59	794,736	***	***	***	***	***	***	278.69	79,034	16.2
Oct.-Dec.	323.63	815,909	***	***	***	***	***	***	289.06	69,652	10.7
1998:											
Jan.-Mar.	321.72	869,831	***	***	***	***	***	***	260.01	116,359	19.2
Apr.-June	326.06	815,880	***	***	***	***	***	***	262.25	156,380	19.6
July-Sept.	311.18	685,049	***	***	***	***	***	***	270.04	183,275	13.2
Oct.-Dec.	276.79	466,025	469.52	127	-69.6	([2])	([2])	([2])	245.92	186,903	11.2
1999:											
Jan.-Mar.	258.43	611,959	***	***	***	([2])	([2])	([2])	248.30	76,104	3.9
Apr.-June	263.59	728,023	([2])	([2])	([2])	***	***	***	244.49	125,536	7.2
July-Sept.	275.99	844,306	***	***	***	***	***	***	250.03	78,993	9.4
Oct.-Dec.	287.34	900,000	***	***	***	***	***	***	295.50	65,466	-2.8
2000:											
Jan.-Mar.	308.77	924,136	***	***	***	***	***	***	263.42	110,932	14.7
Apr.-June	319.30	825,490	***	***	***	***	***	***	270.19	100,375	15.4
July-Sept.	289.99	677,056	***	***	***	([2])	([2])	([2])	279.17	81,402	3.7
Oct.-Dec.	251.07	614,148	***	***	***	***	***	***	264.03	43,314	-5.2
2001:											
Jan.-Mar.	236.84	743,471	***	***	***	***	***	***	275.70	19,328	-16.4
Apr.-June	238.25	852,222	***	***	***	***	***	***	260.26	22,539	-9.2

[1] Hot-rolled carbon steel sheet and plate in coils, as-rolled (unprocessed), not pickled or temper-rolled, not high-strength, produced to AISI-1006-1025 grade (including, but not limited to, ASTM A-36), 0.187" through 0.625" in nominal or actual thickness, 40" through 72" in width.

[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-69
Hot-rolled: Weighted-average price and quantity data for U.S.-produced and imported product 3B[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price (*per ton*)	Quantity (*tons*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)
1996:											
Jan.-Mar.	$302.91	636,825	$***	***	***	$***	***	***	$289.93	122,497	4.3
Apr.-June	307.14	641,572	***	***	***	***	***	***	262.68	142,005	14.5
July-Sept.	321.45	638,878	308.08	655	4.2	***	***	***	306.18	162,054	4.8
Oct.-Dec.	330.21	693,893	(2)	(2)	(2)	***	***	***	296.33	217,557	10.3
1997:											
Jan.-Mar.	330.54	758,930	(2)	(2)	(2)	***	***	***	313.41	191,621	5.2
Apr.-June	331.51	704,096	(2)	(2)	(2)	***	***	***	298.59	201,031	9.9
July-Sept.	330.47	700,904	(2)	(2)	(2)	***	***	***	296.44	134,485	10.3
Oct.-Dec.	322.99	702,989	(2)	(2)	(2)	***	***	***	291.07	188,880	9.9
1998:											
Jan.-Mar.	318.36	705,378	(2)	(2)	(2)	***	***	***	322.78	258,198	-1.4
Apr.-June	324.33	710,254	(2)	(2)	(2)	419.49	2,037	-29.3	307.59	331,839	5.2
July-Sept.	306.72	563,038	(2)	(2)	(2)	***	***	***	277.45	358,166	9.5
Oct.-Dec.	279.49	448,233	(2)	(2)	(2)	***	***	***	263.09	458,236	5.9
1999:											
Jan.-Mar.	256.30	557,157	(2)	(2)	(2)	***	***	***	249.44	188,388	2.7
Apr.-June	263.43	670,086	***	***	***	***	***	***	249.18	159,568	5.4
July-Sept.	276.26	715,944	***	***	***	***	***	***	242.49	194,083	12.2
Oct.-Dec.	285.56	718,213	(2)	(2)	(2)	***	***	***	248.87	200,101	12.9
2000:											
Jan.-Mar.	309.68	638,823	(2)	(2)	(2)	***	***	***	261.91	198,582	15.4
Apr.-June	319.74	599,434	(2)	(2)	(2)	***	***	***	274.52	262,168	14.1
July-Sept.	289.58	537,332	***	***	***	(2)	(2)	(2)	279.25	155,837	3.6
Oct.-Dec.	242.84	567,801	(2)	(2)	(2)	***	***	***	267.19	115,856	-10.0
2001:											
Jan.-Mar.	237.83	590,202	(2)	(2)	(2)	***	***	***	252.39	99,686	-6.1
Apr.-June	235.54	586,688	(2)	(2)	(2)	***	***	***	242.57	51,284	-3.0

[1] Hot-rolled carbon sheet in coils, commercial quality, SAE 1006-1015 or ASTM A-569 equivalent, not high-strength, not pickled and oiled, not temper-rolled, 0.090" through 0.171" in nominal or actual thickness, 40" to 60" in width.
[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-70
Cold-rolled: Weighted-average price and quantity data for U.S.-produced and imported product 4A[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price (*per ton*)	Quantity (*tons*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)
1996:											
Jan.-Mar.	$474.87	56,849	([2])	([2])	([2])	([2])	([2])	([2])	$542.21	15,034	-14.2
Apr.-June	477.26	58,275	([2])	([2])	([2])	([2])	([2])	([2])	454.13	28,737	4.8
July-Sept.	491.07	51,053	([2])	([2])	([2])	$***	***	***	424.30	43,742	13.6
Oct.-Dec.	492.29	52,642	([2])	([2])	([2])	***	***	***	459.45	40,961	6.7
1997:											
Jan.-Mar.	491.43	68,437	$***	***	***	***	***	***	443.75	29,365	9.7
Apr.-June	488.82	63,365	([2])	([2])	([2])	***	***	***	411.00	53,115	15.9
July-Sept.	486.79	65,940	([2])	([2])	([2])	***	***	***	428.02	37,417	12.1
Oct.-Dec.	483.05	61,137	***	***	***	***	***	***	400.38	47,625	17.1
1998:											
Jan.-Mar.	464.98	73,682	***	***	***	***	***	***	432.75	34,267	6.9
Apr.-June	465.93	79,618	***	***	***	***	***	***	407.05	57,014	12.6
July-Sept.	456.64	82,302	***	***	***	***	***	***	350.21	47,758	23.3
Oct.-Dec.	446.98	65,982	***	***	***	***	***	***	372.56	44,335	16.6
1999:											
Jan.-Mar.	424.49	72,366	***	***	***	***	***	***	377.81	30,943	11.0
Apr.-June	422.75	75,274	***	***	***	***	***	***	359.63	39,413	14.9
July-Sept.	420.22	86,830	***	***	***	***	***	***	374.10	26,375	11.0
Oct.-Dec.	424.32	83,027	***	***	***	***	***	***	372.09	21,015	12.3
2000:											
Jan.-Mar.	433.59	98,196	***	***	***	***	***	***	346.31	27,252	20.1
Apr.-June	443.38	110,703	***	***	***	***	***	***	346.12	36,880	21.9
July-Sept.	438.39	93,533	***	***	***	***	***	***	411.06	16,842	6.2
Oct.-Dec.	420.53	81,530	***	***	***	***	***	***	366.12	15,930	12.9
2001:											
Jan.-Mar.	388.88	98,396	***	***	***	***	***	***	332.74	29,362	14.4
Apr.-June	387.78	87,556	***	***	***	***	***	***	457.37	13,691	-17.9

[1] Cold-rolled carbon steel sheet, in coils, commercial quality (ASTM A-366), not IF, box annealed and temper rolled, 36" to 72" in width, 0.022" to less than 0.028" in thickness.

[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-71
Cold-rolled: Weighted-average price and quantity data for U.S.-produced and imported product 4B[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA Imports		
	Price (*per ton*)	Quantity (*tons*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)
1996:											
Jan.-Mar.	$443.64	548,805	$***	***	***	$***	***	***	$435.38	69,892	1.9
Apr.-June	447.79	545,821	***	***	***	***	***	***	450.71	64,553	-0.7
July-Sept.	458.31	463,289	***	***	***	***	***	***	439.56	84,018	4.1
Oct.-Dec.	463.40	449,862	***	***	***	458.05	5,352	1.2	438.03	117,992	5.5
1997:											
Jan.-Mar.	470.64	486,725	***	***	***	463.13	3,958	1.6	428.92	118,233	8.9
Apr.-June	469.57	473,473	***	***	***	483.06	2,392	-2.9	440.28	112,194	6.2
July-Sept.	464.67	456,191	***	***	***	***	***	***	434.27	134,982	6.5
Oct.-Dec.	454.39	454,208	***	***	***	***	***	***	441.29	113,337	2.9
1998:											
Jan.-Mar.	443.10	594,101	***	***	***	***	***	***	420.86	143,996	5.0
Apr.-June	441.89	593,641	***	***	***	483.02	372	-9.3	389.88	238,380	11.8
July-Sept.	436.27	479,316	***	***	***	***	***	***	387.56	235,428	11.2
Oct.-Dec.	418.76	420,008	***	***	***	***	***	***	358.33	273,251	14.4
1999:											
Jan.-Mar.	389.07	512,395	***	***	***	***	***	***	350.97	192,718	9.8
Apr.-June	393.01	517,897	***	***	***	322.54	3,499	17.9	355.33	130,897	9.6
July-Sept.	394.34	566,871	***	***	***	325.80	2,472	17.4	340.67	135,566	13.6
Oct.-Dec.	400.84	631,462	***	***	***	***	***	***	402.80	67,742	-0.5
2000:											
Jan.-Mar.	416.85	688,163	***	***	***	***	***	***	422.53	58,634	-1.4
Apr.-June	427.44	658,963	***	***	***	***	***	***	429.29	73,568	-0.4
July-Sept.	416.02	584,893	***	***	***	***	***	***	428.44	78,033	-3.0
Oct.-Dec.	369.35	628,569	***	***	***	***	***	***	413.77	73,976	-12.0
2001:											
Jan.-Mar.	358.65	602,138	***	***	***	***	***	***	372.18	66,885	-3.8
Apr.-June	341.92	416,772	***	***	***	***	***	***	341.34	102,663	0.2

[1] Cold-rolled carbon steel sheet in coils, commercial quality (ASTM A-366), not IF, box annealed and temper-rolled, 36" to 72" in width, 0.028" to less than 0.090" in thickness.

[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-72
GOES: Weighted-average price and quantity data for U.S.-produced and imported product 5 from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

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Table FLAT-73

Coated: Weighted-average price and quantity data for U.S.-produced and imported product 6A[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price (*per ton*)	Quantity (*tons*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)
1996:											
Jan.-Mar.	$***	***	(2)	(2)	(2)	(2)	(2)	(2)	$***	***	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
July-Sept.	594.34	13,987	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
1997:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	862.63	1,139	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	842.53	1,341	***
July-Sept.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	900.60	1,205	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	937.41	866	***
1998:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	999.41	2,489	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	1,027.86	5,015	***
July-Sept.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	594.55	28,542	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
1999:											
Jan.-Mar.	578.92	26,363	(2)	(2)	(2)	$***	***	***	799.29	423	-38.1
Apr.-June	565.10	30,388	(2)	(2)	(2)	***	***	***	593.46	3,220	-5.0
July-Sept.	555.25	29,983	(2)	(2)	(2)	***	***	***	493.33	971	11.2
Oct.-Dec.	560.85	29,815	(2)	(2)	(2)	***	***	***	743.80	427	-32.6
2000:											
Jan.-Mar.	556.02	31,954	(2)	(2)	(2)	***	***	***	527.88	5,928	5.1
Apr.-June	558.88	37,495	(2)	(2)	(2)	***	***	***	724.34	6,409	-29.6
July-Sept.	553.70	40,390	(2)	(2)	(2)	***	***	***	611.97	1,486	-10.5
Oct.-Dec.	536.44	31,861	(2)	(2)	(2)	***	***	***	548.69	4,767	-2.3
2001:											
Jan.-Mar.	495.21	21,893	(2)	(2)	(2)	***	***	***	522.46	9,432	-5.5
Apr.-June	481.71	26,165	(2)	(2)	(2)	(2)	(2)	(2)	571.93	1,074	-18.7

[1] Aluminum-zinc alloy coated carbon steel sheet, in coils, hot dipped, structural quality, ASTM A-792, grade 50, AZ50, 40" to 49" in width, 0.019" to 0.0219" in thickness. This product has a coating of 55 percent aluminum, 43.5 percent zinc, and 1.5 percent silicon, and has a variety of product names worldwide including "Galvalume," "Zincalume," "Aluzink," "Zinkalit," and "Zalutite." This product is not pre-painted, has no organic coating, and is not high-strength.

[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-74
Coated: Weighted-average price and quantity data for U.S.-produced and imported product 6B[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA Imports		
	Price (*per ton*)	Quantity (*tons*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)
1996:											
Jan.-Mar.	$645.04	91,005	(2)	(2)	(2)	(2)	(2)	(2)	$***	***	***
Apr.-June	622.98	99,652	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
July-Sept.	624.45	90,901	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	644.38	90,682	(2)	(2)	(2)	(2)	(2)	(2)	845.95	3,053	-31.3
1997:											
Jan.-Mar.	654.39	94,159	(2)	(2)	(2)	(2)	(2)	(2)	712.50	4,809	-8.9
Apr.-June	648.26	103,562	(2)	(2)	(2)	(2)	(2)	(2)	645.84	3,298	0.4
July-Sept.	646.00	90,972	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	652.80	100,758	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
1998:											
Jan.-Mar.	660.24	79,023	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	664.95	58,055	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
July-Sept.	657.93	53,574	(2)	(2)	(2)	(2)	(2)	(2)	648.15	1,775	1.5
Oct.-Dec.	664.98	65,085	(2)	(2)	(2)	(2)	(2)	(2)	627.16	1,114	5.7
1999:											
Jan.-Mar.	656.94	69,502	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	630.32	86,710	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
July-Sept.	692.45	88,307	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	620.63	102,024	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
2000:											
Jan.-Mar.	607.47	86,206	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	610.94	83,944	(2)	(2)	(2)	(2)	(2)	(2)	680.21	3,286	-11.3
July-Sept.	598.13	76,348	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	588.70	67,408	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
2001:											
Jan.-Mar.	585.41	66,498	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	583.13	70,583	(2)	(2)	(2)	(2)	(2)	(2)	561.10	4,871	3.8

[1] Electrolytically zinc coated carbon steel sheet, in coils, ASTM A-879, 50-90 grams/square meter per side coating, without organic coating, forming steel, 40" to under 60" in width, 0.022" to under 0.044" in thickness. This product is not prepainted, is not high-strength, and is not mill proprietary.

[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-75

Tin: Weighted-average price and quantity data for U.S.-produced and imported product 7[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price (*per ton*)	Quantity (*tons*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)
1996:											
Jan.-Mar.	$651.61	77,624	$***	***	***	(2)	(2)	(2)	$658.01	8,912	-1.0
Apr.-June	652.84	69,432	***	***	***	(2)	(2)	(2)	705.77	4,377	-8.1
July-Sept.	646.41	71,238	***	***	***	(2)	(2)	(2)	683.49	7,381	-5.7
Oct.-Dec.	646.20	73,822	***	***	***	(2)	(2)	(2)	650.77	4,968	-0.7
1997:											
Jan.-Mar.	645.79	64,120	***	***	***	(2)	(2)	(2)	632.91	9,138	2.0
Apr.-June	646.15	72,153	***	***	***	(2)	(2)	(2)	681.62	8,232	-5.5
July-Sept.	648.13	75,656	***	***	***	(2)	(2)	(2)	672.96	9,950	-3.8
Oct.-Dec.	638.14	77,122	***	***	***	(2)	(2)	(2)	664.47	5,880	-4.1
1998:											
Jan.-Mar.	640.28	70,415	***	***	***	(2)	(2)	(2)	619.97	17,407	3.2
Apr.-June	634.15	71,752	***	***	***	(2)	(2)	(2)	758.05	7,599	-19.5
July-Sept.	623.11	67,732	***	***	***	(2)	(2)	(2)	622.96	8,795	0.0
Oct.-Dec.	617.85	68,279	***	***	***	(2)	(2)	(2)	657.06	10,523	-6.3
1999:											
Jan.-Mar.	614.85	68,796	***	***	***	(2)	(2)	(2)	661.36	16,922	-7.6
Apr.-June	569.74	65,740	***	***	***	(2)	(2)	(2)	662.80	22,326	-16.3
July-Sept.	604.56	67,282	***	***	***	(2)	(2)	(2)	685.86	14,995	-13.4
Oct.-Dec.	596.06	66,892	***	***	***	(2)	(2)	(2)	671.70	15,722	-12.7
2000:											
Jan.-Mar.	602.42	52,188	***	***	***	(2)	(2)	(2)	671.67	22,700	-11.5
Apr.-June	612.94	66,787	***	***	***	(2)	(2)	(2)	688.50	13,914	-12.3
July-Sept.	623.65	56,395	***	***	***	(2)	(2)	(2)	664.69	19,634	-6.6
Oct.-Dec.	623.58	52,418	***	***	***	(2)	(2)	(2)	646.39	20,373	-3.7
2001:											
Jan.-Mar.	601.85	57,651	***	***	***	(2)	(2)	(2)	636.24	18,247	-5.7
Apr.-June	608.97	66,057	***	***	***	(2)	(2)	(2)	653.89	14,857	-7.4

[1] Base price for single-reduced, electrolytic tin plate (1CRETP), 70-75 pound per base box.
[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure FLAT-2
Slabs: Weighted-average price data for U.S.-produced and imported product 1 from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure FLAT-3
Plate: Weighted-average price data for U.S.-produced and imported product 2 from Canada and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure FLAT-4
Hot-rolled: Weighted-average price data for U.S.-produced and imported product 3A from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure FLAT-5
Hot-rolled: Weighted-average price data for U.S.-produced and imported product 3B from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure FLAT-6
Cold-rolled: Weighted-average price data for U.S.-produced and imported product 4A from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure FLAT-7
Cold-rolled: Weighted-average price data for U.S.-produced and imported product 4B from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure FLAT-8
GOES: Weighted-average price data for U.S.-produced and imported product 5 from non-NAFTA countries, by quarters, January 1996-June 2001

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Figure FLAT-9
Coated: Weighted-average price data for U.S.-produced and imported product 6A from Mexico and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure FLAT-10
Coated: Weighted-average price data for U.S.-produced and imported product 6B from non-NAFTA countries, by quarters, January 1996-June 2001

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Figure FLAT-11
Tin: Weighted-average price data for U.S.-produced and imported product 7 from Canada and non-NAFTA countries, by quarters, January 1996-June 2001

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Table FLAT-76
Overall trends in weighted-average prices for flat products, by sources and by products, January 1996-June 2001

Product	United States	Imports from Canada	Imports from Mexico	Non-NAFTA imports
		(*Percent change*)		
Slabs	***	(1)	-36.5	***
Plate	-26.1	(1)	(1)	15.2
Hot-rolled 1	-22.4	-16.1	-28.0	-30.8
Hot-rolled 2	-22.2	(1)	-15.9	-16.3
Cold-rolled 1	-18.3	(1)	(1)	-15.6
Cold-rolled 2	-22.9	0.1	-34.1	-21.6
GOES	-9.0	(1)	(1)	4.6
Coated 1	***	(1)	(1)	***
Coated 2	-9.6	(1)	(1)	***
Tin	-6.5	-10.5	(1)	-0.6

[1] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table FLAT-77
Flat products: Summary of instances of underselling/overselling for imports from Canada, Mexico, and non-NAFTA countries, January 1996-June 2001

Country	Underselling		Overselling	
	Instances	Range	Instances	Range
	(*Number*)	(*Percent*)	(*Number*)	(*Percent*)
Canada	9	1.3 - 18.2	108	0.0 - 84.2
Mexico	35	0.6 - 36.0	78	0.1 - 44.5
Non-NAFTA countries	124	0.0 - 44.1	89	0.3 - 73.1
All countries	168	0.6 - 44.1	275	0.0 - 84.2

Source: Compiled from data submitted in response to Commission questionnaires.

Domestic Price Trends

In general, prices of flat-rolled carbon steel were lower at the end of the period of study than at the beginning, with the sole exception of slab. Slab was also the most volatile of the flat products for which pricing data were collected. Many of the same pricing trends were noticed across products with respect to domestic prices. Larger decreases in the price of nearly all flat products were seen during the third or fourth quarter of 1998, in some cases stopping an upward or relatively stationary trend (slab, plate, hot-rolled, coated), while increasing the rate of decline in others (cold-rolled). These drops persisted for different lengths of time. The prices of the hot-rolled products began to rebound in the second quarter of 1999, whereas the price of tin did not really begin to recover until the first quarter of 2000.

In the majority of quarters, the prices of non-NAFTA country flat-rolled imports were lower than the prices of domestic flat-rolled products, with the exception of coated and tin products. The prices of non-NAFTA slabs were lower at the beginning and end of the period of study, but lower in between. For

Canadian flat-rolled products, prices were higher in almost all quarters of comparison. While following somewhat similar trends to those experienced by domestic producers, Canadian prices were much more erratic for hot-rolled and cold-rolled products. The prices of Mexican slabs and one cold-rolled product (4B) danced around the domestic price, in some quarters being higher and in some quarters being lower. Mexican hot-rolled product 3A stayed very close to the domestic price throughout the period of study, whereas products 3B and 4A, a hot-rolled and a cold-rolled product, generally remained higher during the 22 quarters.

FACTORS AFFECTING THE DOMESTIC INDUSTRY

The Commission requested information from U.S. producers regarding factors that are having an adverse impact on the operation of the domestic industry. The reported factors and number of U.S. producers indicating each are presented in table FLAT-78.

Table FLAT-78
U.S. producers' assessment of factors affecting the domestic industry

Slabs	Plate	Hot-rolled	Cold-rolled	GOES	Coated	Tin
Imports						
12	9	18	16	***	18	6
General economic downturn in the United States						
2	5	6	3	***	2	0
Asian financial crisis						
2	4	5	2	***	2	1
Strong U.S. dollar relative to other foreign currencies						
1	2	2	2	***	3	1
Global steel overcapacity						
1	1	2	2	***	3	2
Increased energy costs						
0	0	1	1	***	1	1
Increased labor costs						
0	1	1	1	***	1	1
Shift of U.S. steel purchaser operations to Mexico						
1	1	1	1	***	1	0
U.S. steel overcapacity						
0	0	0	0	***	3	0
Decline in U.S. steel consumption						
0	0	1	0	***	1	0
Russian economic crisis						
0	1	0	0	***	0	0
Consolidation of U.S. steel customers						
0	0	0	0	***	0	1
Number of reported U.S. producers						
20	19	28	28	***	22	8

Source: Compiled from data submitted in response to Commission questionnaires.

COMPETITIVE EFFORTS AND PROPOSED ADJUSTMENTS

COMPETITIVE EFFORTS

In the Commission's questionnaire, U.S. producers were asked to report any efforts made by their firm to compete more effectively in the U.S. market for steel products. The reported efforts and number of U.S. producers reporting each are presented in table FLAT-79.

Table FLAT-79
U.S. producers' reported competitive efforts

Slabs	Plate	Hot-rolled	Cold-rolled	GOES	Coated	Tin
Additional capital investment						
13	11	19	19	***	18	7
Cost reductions						
10	9	18	14	***	12	6
Increased capacity and/or production						
8	6	14	15	***	12	5
Improved product quality						
7	7	15	15	***	11	4
Developed new or innovative product lines						
4	5	7	6	***	10	3
Increased productivity/speed in manufacturing process						
4	6	11	11	***	9	3
Reduction in work force						
5	4	5	5	***	5	3
Improved customer service						
3	4	4	5	***	4	3
No reported efforts						
5	4	3	0	***	1	0
Utilization of e-commerce to reduce transaction costs or increase sales						
1	2	2	2	***	2	1
Increased employee training						
1	2	2	1	***	1	1
Attained ISO certification						
0	1	1	1	***	1	0
Chapter 11 bankruptcy protection						
0	0	1	1	***	1	1
R&D						
0	0	0	0	***	2	0
Increased access to foreign raw material						
1	1	0	0	***	0	0
Number of reported U.S. producers						
20	19	28	28	***	22	8

Source: Compiled from data submitted in response to Commission questionnaires.

PROPOSED ADJUSTMENTS

The Commission requested U.S. producers to indicate whether they would make any adjustments in their steel operations if they were to receive import relief that would permit them to compete more effectively with imports of steel products after such relief expires. The reported adjustments and number of U.S. producers indicating each are presented in table FLAT-80.

Table FLAT-80
U.S. producers' proposed adjustments

Slabs	Plate	Hot-rolled	Cold-rolled	GOES	Coated	Tin
Additional capital investment						
11	11	18	14	***	14	7
Further cost reductions						
11	7	15	12	***	10	6
Improve product quality						
7	7	11	9	***	8	3
Increase capacity and/or production						
6	8	9	11	***	6	3
Develop new or innovative product lines						
3	7	8	7	***	7	4
Increase productivity/speed in manufacturing process						
1	2	6	5	***	6	3
Reduction in work force						
3	3	4	4	***	4	3
Improved customer service						
2	4	4	4	***	5	1
No planned adjustments						
2	4	3	0	***	0	0
Utilization of e-commerce to reduce transaction costs or increase sales						
1	1	1	1	***	1	1
Increase employee training						
1	0	1	0	***	1	0
Increase employment						
0	1	1	1	***	0	0
Relocation or closing of facility						
1	0	1	0	***	1	0
R&D						
0	0	0	0	***	2	0
Expand geographic reach of current customer base						
1	0	0	0	***	0	0
Number of reported U.S. producers						
20	19	28	28	***	22	8

Source: Compiled from data submitted in response to Commission questionnaires.

CARBON AND ALLOY LONG PRODUCTS

DESCRIPTION AND USES

INGOTS

Ingots are the primary form into which molten steel is cast when produced by other than continuous casting. Blooms and billets are semifinished products of rectangular cross-section with a width less than two times the thickness if of carbon steel, or less than four times the thickness if of other alloy steel. This category includes other products of solid section, which have not been further worked than subjected to primary hot-rolling or roughly shaped by forging, including tube rounds and blanks for angles, shapes, or sections. Some facilities produce all of the products in this category, but typically, ingots are produced in facilities which are different from facilities which produce billets or blooms. The vast majority of these products are consumed internally. The products in this category that enter the open market are typically sold directly from the manufacturer to the firms that process them into downstream products. End-user markets of carbon and alloy ingots, blooms, and billets ("ingots") include independent forgers, the automotive market, and the market for steel for conversion and processing into finished products. Ingots are principally used by steelmakers in the production of more advanced products such as plates, sheets, bars, and structural shapes. Ingots are provided for in the following *HTS* subheadings: 7206.10.0000, 7206.90.0000, 7207.11.0000, 7207.19.0030, 7207.19.0090, 7207.20.0075, 7207.20.0090, 7224.10.0005, 7224.10.0075, 7224.90.0005, 7224.90.0045, 7224.90.0065, and 7224.90.0075.

HOT BAR

Carbon and alloy hot-rolled bar and light shapes ("hot bar") are products which have a solid cross-section in the shape of circles, segments of circles, ovals, triangles, rectangles (including squares), or other convex polygons including flattened circles and modified rectangles of which two opposite sides are convex arcs and the other two sides are straight, of equal length, and parallel. This category includes the following: bars of a diameter of 19 mm or more in irregularly wound coils; free-machining carbon steel and high-nickel alloy steel bars and rods of any diameter; angles, shapes, and sections (such as U, I, or H sections) not further worked than hot-rolled, hot-drawn, or extruded, of a height of less than 80 mm; and hollow drill bars and rods of which the greatest external dimension of the cross-section exceeds 15 mm but does not exceed 52 mm, and of which the greatest internal dimension does not exceed one half of the greatest external dimension. This category excludes carbon and alloy (including free-machining alloy steel) wire rod having a diameter of 5 mm or more but less than 19 mm (which are covered by a section 201 relief on wire rod) and hollow bars and rods of iron or steel not conforming to this definition (which are included in the pipe and tubing product categories). Some types of hot bar are produced in shared facilities, but no single facility produces all of the products in this category. Hot bar reaches end users through both direct sales from producers and through service centers and distributors. Major markets for hot bar are in automotive and construction applications. Channels of distribution for hot bar also overlap. Special bar quality steel bars tend to be sold directly to end users more often than merchant quality bars. Service centers tend to distribute many types of hot bar, but there are no known firms that distribute all of the products in this category. Hot bars are used in the production of parts of bridges, buildings, ships, agricultural implements, motor vehicles, road building equipment, railway equipment, and general types of machinery. Hot bars are provided for in the following *HTS* subheadings: 7213.20.0000, 7213.99.0060, 7213.99.0090, 7214.10.0000, 7214.30.0000, 7214.91.0015, 7214.91.0060, 7214.91.0090, 7214.99.0015, 7214.99.0030, 7214.99.0045, 7214.99.0060, 7214.99.0075, 7214.99.0090, 7215.90.1000, 7215.90.5000, 7216.10.0010, 7216.10.0050, 7216.21.0000, 7216.22.0000, 7216.50.0000, 7216.61.0000, 7216.69.0000, 7216.91.0000, 7216.99.0000, 7227.20.0000, 7227.20.0010, 7227.20.0090,

7227.90.1030, 7227.90.2030, 7227.90.6005, 7227.90.6058, 7228.20.1000, 7228.30.2000, 7228.30.8005, 7228.30.8050, 7228.40.0000, 7228.60.1030, 7228.60.6000, 7228.70.3020, 7228.70.3040, 7228.70.3060, 7228.70.3080, 7228.70.6000, and 7228.80.0000.

COLD BAR

Carbon and alloy cold-finished bar ("cold bar") are products defined by shape in the hot bar category, not in coils, which have been subjected to a cold-finishing operation such as cold-rolling, cold-drawing, grinding, or polishing. The facilities and equipment used to transform hot bar into cold bar are different, and separate, from the facilities that transform semifinished products into hot bar. Firms that cold-finish bars often will be able to perform several of the different finishing operations. Similar to hot bar, cold bar is sold through service centers and end users. End users of cold bar include the same industries described in the hot bar category. However, cold bar is used for different applications within those industries. Cold bar is used for applications where precise dimensional and surface finish requirements are specified. Cold bars are provided for in the following *HTS* subheadings: 7215.10.0000, 7215.50.0015, 7215.50.0060, 7215.50.0090, 7215.90.3000, 7228.20.5000, 7228.50.1010, 7228.50.5005, 7228.50.5050, and 7228.60.8000.

REBAR

Carbon and alloy rebar ("rebar") are hot-rolled steel products which have a solid cross-section (as described for hot bars) and contain indentations, ribs, grooves, or other deformations produced during the rolling process or by twisting after rolling, for the purpose of improving the bond with concrete. Rebar is used for structural reinforcement within cast concrete structures. All sizes of rebar are produced in shared facilities, and some facilities produce all sizes of rebar. Rebar distribution channels include direct sales by producers to end users and sales by producers to wholesale distributors, such as service centers. In addition, many rebar distribution channels also distribute other steel products used in construction. End users for rebar include construction firms and specialized firms which fabricate reinforcing assemblies for construction firms. Rebar is provided for in *HTS* subheadings 7213.10.0000 and 7214.20.0000.

RAILS

Carbon and alloy rails and railway products ("rails") are railway and track construction material including rails, check-rails and rack-rails, sleepers (cross-ties), fish-plates, and sole-plates (base plates). The bulk of the products in this category are produced in dedicated facilities. Rails, check-rails, and rack rails are produced in facilities separate and distinct from facilities which produce sleepers, fish-plates, and sole plates. Fish plates and sole plates, however, are produced on equipment that is also used to produce some products included in the hot bar and shapes product categories. A large share of the sales of railway products are standard and premium rails which are sold directly from the manufacturers to the railroads. The majority of railway products are used by the rail-transportation market. Rails are used in open track construction on main and secondary rail lines and in tracks embedded in pavement. Rails are provided for in the following *HTS* subheadings: 7302.10.1010, 7302.10.1015, 7302.10.1025, 7302.10.1035, 7302.10.1045, 7302.10.5020, 7302.10.1055, 7302.20.0000, and 7302.40.0000.

WIRE

Carbon and alloy wire ("wire") are cold-formed products in coils, of any uniform solid cross-section along their entire length, which do not conform to the definition of flat-rolled products (described earlier in this report). Some types of wire are produced in shared facilities, but no single facility produces all of the products in this category. Wire is sold to end users, producers of downstream wire products, and wholesale distributors. Wire is used as an end product and is also used as an intermediate product to make nails, staples, industrial fasteners and woven products. Wire is provided for in the following *HTS* subheadings: 7217.10.1000, 7217.10.2000, 7217.10.3000, 7217.10.4030, 7217.10.4090, 7217.10.5030, 7217.10.5090, 7217.10.6000, 7217.10.7000, 7217.10.8010, 7217.10.8020, 7217.10.8025, 7217.10.8030, 7217.10.8045, 7217.10.8060, 7217.10.8075, 7217.10.8090, 7217.10.9000, 7217.20.1500, 7217.20.3000, 7217.20.4510, 7217.20.4520, 7217.20.4530, 7217.20.4540, 7217.20.4550, 7217.20.4560, 7217.20.4570, 7217.20.4580, 7217.20.6000, 7217.20.7500, 7217.30.1530, 7217.30.1560, 7217.30.3000, 7217.30.4510, 7217.30.4520, 7217.30.4530, 7217.30.4540, 7217.30.4550, 7217.30.4560, 7217.30.4590, 7217.30.6000, 7217.30.7500, 7217.90.1000, 7217.90.5030, 7217.90.5060, 7217.90.5090, 7229.20.0000, 7229.90.1000, 7229.90.5015, 7229.90.5030, 7229.90.5050, and 7229.90.9000.

ROPE

Carbon and alloy strand, rope, cable, and cordage ("rope") are stranded wire (two or more wires twisted closely together), ropes, and cables, not electrically insulated. Wire rope and cable are typically used in dynamic applications. Strand is typically used in static applications. Some types of rope are produced in shared facilities, but no single facility produces all types of rope. Channels of distribution vary. Rope is used to lift, support, or secure loads and materials in industrial and construction activities. Rope is a component of certain structures, such as bridges, and is also a component of certain industrial products, such as elevators, construction cranes, mining equipment, and commercial fishing vessels. The market for rope includes distributors, equipment manufacturers, and end users such as construction firms and commercial fishing vessels. Rope is provided for in the following *HTS* subheadings: 7312.10.3005, 7312.10.3010, 7312.10.3012, 7312.10.3020, 7312.10.3045, 7312.10.3065, 7312.10.3070, 7312.10.3074, 7312.10.3080, 7312.10.8000, 7312.10.9030, 7312.10.9060, and 7312.10.9090.

NAILS

Carbon and alloy nails, staples, and woven cloth ("nails") are woven cloth of carbon or alloy steel wire and nails, tacks, drawing pins, corrugated nails, staples, and similar articles of iron or steel, whether or not with heads of other material, but excluding such articles with heads of copper. Some products in this category are produced in shared facilities, but no single facility produces all of the products in this category. Nails are used to secure objects in place and to close openings. The market for nails include distributors, manufacturers, construction firms, and retail establishments. Woven cloth may be sold to producers who incorporate it into their products. Nails are provided for in the following *HTS* subheadings: 7314.19.0000, 7317.00.5504, 7317.00.5506, 7317.00.5510, 7317.00.5520, 7317.00.5530, 7317.00.5540, 7317.00.5550, 7317.00.5560, 7317.00.5570, 7317.00.5580, 7317.00.5590, 7317.00.6530, 7317.00.6560, 7317.00.7500, and 8305.20.0000.

SHAPES

Carbon and alloy heavy structural shapes and sheet piling ("shapes") are angles, shapes, and sections (such as U, I, or H sections) of a height equal to or more than 80 mm. Typically, heavy

structural shapes are produced in shared facilities. Cold-formed sheet piling is produced on separate equipment by different firms. The channels of distribution for shapes vary. The larger shapes, especially beams, are often sold directly to fabricators. However, service centers and distributors may also stock a variety of shapes. Some service centers distribute all of the products in this category. In addition, service centers and distributors distribute shapes as well as other steel products used in construction. Shapes are used in the construction of buildings, ships, railcars, bridges and other heavy structures. The markets for shapes include distributors, fabricators, and end users. Shapes are provided for in the following *HTS* subheadings: 7216.31.0000, 7216.32.0000, 7216.33.0030, 7216.33.0060, 7216.33.0090, 7216.40.0010, 7216.40.0050, 7301.10.0000, 7301.20.1000, and 7301.20.5000.

FABRICATED

Carbon and alloy fabricated structural units ("fabricated") are structures (excluding prefabricated buildings) and parts of structures (*i.e.*, bridges and bridge sections, lock gates, towers, lattice masts, roofs, roofing frameworks, pillars, and columns) made from iron or steel plates, rods, angles, shapes, sections, tubes, and the like. This category includes sheet-metal roofing, siding, flooring, and roofing drainage equipment and excludes doors, windows, their frames and thresholds, and architectural and ornamental work. Due to the wide variety of products included in this group, no single facility produces all of them. Channels of distribution for fabricated products are also quite varied, again due to the variety of products. Fabricated structural units are typically produced to order for a specific job, and are therefore normally sold directly to steel erection firms or general contractors. Products such as roofing, siding, flooring, and drainage equipment are more likely to move through wholesale distribution networks. Fabricated products are provided for in the following *HTS* subheadings: 7308.10.0000, 7308.20.0000, 7308.40.0000, 7308.90.3000, 7308.90.6000, 7308.90.7000, 7308.90.9530, and 7308.90.9590.

U.S. PRODUCERS

Domestic producers of long products that provided a response to the Commission's producers' questionnaire in this investigation are listed, by products, in table LONG-1. The aggregate quantities of these producers' commercial U.S. shipments are estimated to account for the following percentages of the totals for each product category listed:[1] hot bar (70-78 percent); cold bar (60-85 percent); rebar (72-88 percent); rails (83-103 percent); wire (63-76 percent); rope (68-84 percent); nails (88-94 percent); and shapes (90-104 percent).[2]

Table LONG-1
Long products: U.S. producers and 2000 production, by product

* * * * * * *

[1] The coverage figures are calculated based on publicly available data for 1996-2000 (as available) from AISI and U.S. Census Bureau MA33B.

[2] An estimate of coverage for fabricated structural units is not presented because there are no publicly available data on that product group.

POSITIONS ON RELIEF

The Commission's questionnaire asked U.S. producers to indicate their position with regard to the granting of import relief for each of the 10 long product categories. The number of U.S. producers indicating their positions on relief are presented in table LONG-2.

Table LONG-2
Positions on relief

Product category	Support	Oppose	No position	No response	Total
Ingots	24	4	0	0	28
Hot bar	26	4	2	0	32
Cold bar	16	1	1	0	18
Rebar	12	3	2	0	17
Rails	5	2	1	0	8
Wire	25	7	6	7	45
Rope	12	2	1	2	17
Nails	13	4	2	1	20
Shapes	10	1	2	0	13
Fabricated	34	0	3	0	37

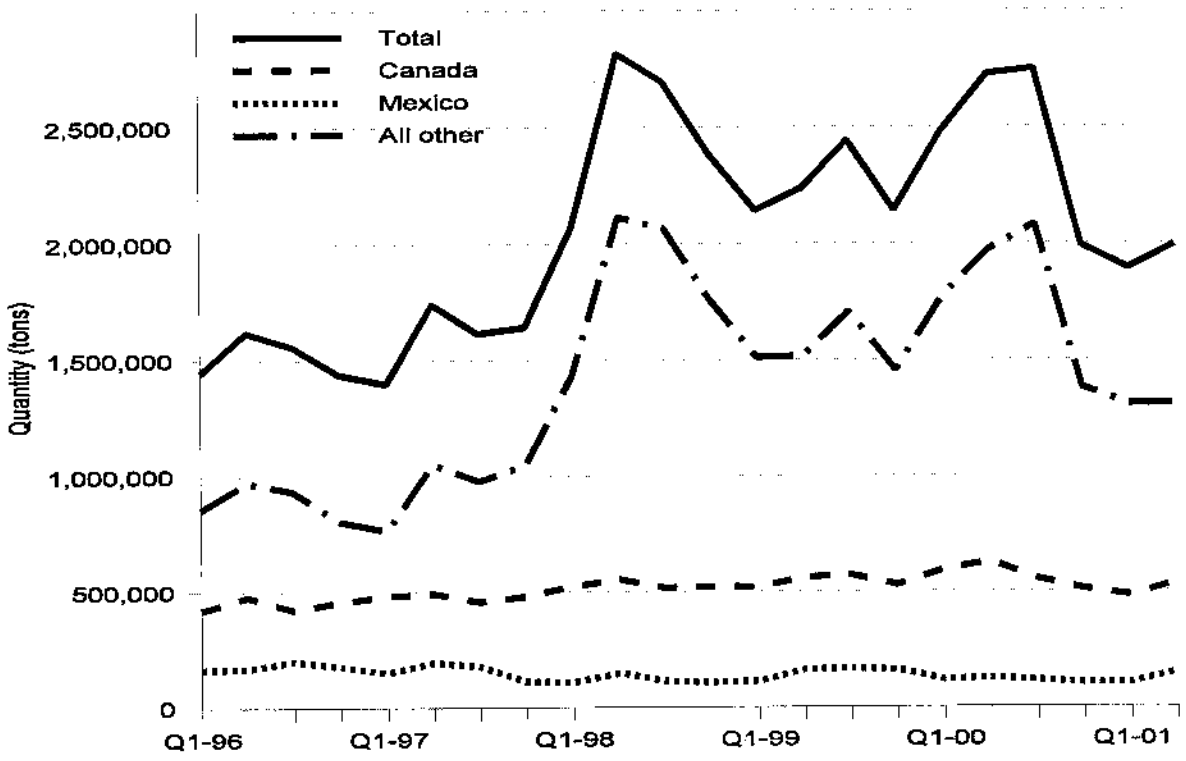
Source: Compiled from data submitted in response to Commission questionnaires.

QUESTION OF INCREASED IMPORTS

Data concerning U.S. imports of all carbon and alloy long products are presented in figure LONG-1 and table LONG-3.[3] Data concerning U.S. imports of ingots, hot bar, cold bar, rebar, rails, wire, rope, nails, shapes, and fabricated are presented in tables LONG-4 through LONG-13 (data presented in table LONG-3 are the sum of data presented in tables LONG-4 through LONG-13). Import data presented are for Canada, Mexico, and all other sources combined. Canada was among the top five sources of imports for all carbon and alloy long product categories except rebar during 1998-2000. Mexico was among the top five sources of imports for all carbon and alloy long product categories except for cold bar, rails, and shapes during 1998-2000. A complete listing of import data concerning this investigation, by individual country, may be accessed at the Commission's website (*www.USITC.gov*).

[3] Import data are overstated to the extent that basket *HTS* categories include products that were excluded from the scope of the investigation in the President's request.

Figure LONG-1
Total long: U.S. imports from all sources, Canada, Mexico, and all other sources, by quarters, January 1996-June 2001



Source: Official Commerce statistics.

Table LONG-3
Total long: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	1,780,266	1,912,484	2,109,953	2,174,342	2,282,595	1,222,110	1,015,981
Mexico	712,137	639,029	478,666	601,114	459,431	241,421	253,525
All other sources	3,567,698	3,843,108	7,367,443	6,186,231	7,199,090	3,739,416	2,614,239
Total	6,060,100	6,394,621	9,956,062	8,961,687	9,941,116	5,202,947	3,883,745
Value[1] (*$1,000*)							
Canada	989,950	1,097,038	1,263,441	1,269,367	1,437,787	741,735	678,089
Mexico	245,564	238,256	219,865	293,443	291,238	141,156	139,418
All other sources	2,260,795	2,405,735	3,662,700	2,957,350	3,482,381	1,720,980	1,427,514
Total	3,496,309	3,741,029	5,146,006	4,520,161	5,211,405	2,603,871	2,245,022
Unit value (*dollars per ton*)							
Canada	556	574	599	584	630	607	667
Mexico	345	373	459	488	634	585	550
All other sources	634	626	497	478	484	460	546
Average	577	585	517	504	524	500	578
Share of quantity (*percent*)							
Canada	29.4	29.9	21.2	24.3	23.0	23.5	26.2
Mexico	11.8	10.0	4.8	6.7	4.6	4.6	6.5
All other sources	58.9	60.1	74.0	69.0	72.4	71.9	67.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	28.3	29.3	24.6	28.1	27.6	28.5	30.2
Mexico	7.0	6.4	4.3	6.5	5.6	5.4	6.2
All other sources	64.7	64.3	71.2	65.4	66.8	66.1	63.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	3.7	3.6	3.9	4.2	4.1	4.2	4.0
Mexico	1.5	1.2	0.9	1.2	0.8	0.8	1.0
All other sources	7.4	7.3	13.5	11.8	12.9	12.8	10.4
Total	12.6	12.1	18.3	17.2	17.8	17.8	15.4

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table LONG-4
Ingots: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	85,037	75,585	127,798	132,308	92,644	64,346	62,764
Mexico	135,056	18,642	50,364	86,438	19,871	11,879	4,853
All other sources	900,103	763,910	1,066,890	647,684	839,641	464,734	148,168
Total	1,120,196	858,137	1,245,052	866,430	952,156	540,959	215,785
Value[1] (*$1,000*)							
Canada	25,588	24,106	37,489	30,110	21,854	14,959	13,149
Mexico	35,451	7,818	14,303	19,900	6,498	3,463	2,662
All other sources	292,456	254,680	321,165	182,319	228,948	120,461	50,218
Total	353,495	286,604	372,957	232,329	257,300	138,883	66,028
Unit value (*dollars per ton*)							
Canada	301	319	293	228	236	232	209
Mexico	262	419	284	230	327	292	548
All other sources	325	333	301	281	273	259	339
Average	316	334	300	268	270	257	306
Share of quantity (*percent*)							
Canada	7.6	8.8	10.3	15.3	9.7	11.9	29.1
Mexico	12.1	2.2	4.0	10.0	2.1	2.2	2.2
All other sources	80.4	89.0	85.7	74.8	88.2	85.9	68.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	7.2	8.4	10.1	13.0	8.5	10.8	19.9
Mexico	10.0	2.7	3.8	8.6	2.5	2.5	4.0
All other sources	82.7	88.9	86.1	78.5	89.0	86.7	76.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	0.4	0.3	0.5	0.6	0.4	0.5	0.6
Mexico	0.6	0.1	0.2	0.4	0.1	0.1	0.0
All other sources	4.1	3.2	4.4	2.9	3.4	3.6	1.3
Total	5.1	3.6	5.1	3.8	3.9	4.2	2.0

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table LONG-5
Hot bar: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	940,283	1,009,968	1,078,167	1,144,407	1,154,173	610,280	478,360
Mexico	135,715	154,756	166,932	192,205	163,086	97,620	70,867
All other sources	584,126	644,577	1,098,248	925,711	1,214,149	630,673	403,165
Total	1,660,123	1,809,301	2,343,347	2,262,323	2,531,409	1,338,573	952,392
Value[1] (*$1,000*)							
Canada	391,872	418,541	458,257	453,622	463,419	246,127	190,734
Mexico	47,883	54,134	61,998	61,351	58,921	35,031	23,948
All other sources	396,807	424,216	611,659	484,150	580,950	289,408	223,570
Total	836,562	896,891	1,131,913	999,123	1,103,290	570,566	438,251
Unit value (*dollars per ton*)							
Canada	417	414	425	396	402	403	399
Mexico	353	350	371	319	361	359	338
All other sources	679	658	557	523	478	459	555
Average	504	496	483	442	436	426	460
Share of quantity (*percent*)							
Canada	56.6	55.8	46.0	50.6	45.6	45.6	50.2
Mexico	8.2	8.6	7.1	8.5	6.4	7.3	7.4
All other sources	35.2	35.6	46.9	40.9	48.0	47.1	42.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	46.8	46.7	40.5	45.4	42.0	43.1	43.5
Mexico	5.7	6.0	5.5	6.1	5.3	6.1	5.5
All other sources	47.4	47.3	54.0	48.5	52.7	50.7	51.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	10.9	10.3	10.9	12.6	12.6	12.3	12.4
Mexico	1.6	1.6	1.7	2.1	1.8	2.0	1.8
All other sources	6.8	6.6	11.1	10.2	13.2	12.7	10.4
Total	19.2	18.4	23.8	24.9	27.5	27.0	24.6

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table LONG-6
Cold bar: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Canada	67,212	69,763	70,239	79,782	80,348	47,430	35,642
Mexico	1,225	1,201	1,259	939	670	431	246
All other sources	137,834	167,256	201,473	154,971	233,940	122,028	99,082
Total	206,272	238,221	272,972	235,693	314,958	169,889	134,971
Value[1] (*$1,000*)							
Canada	56,743	57,511	57,063	62,156	65,415	37,924	27,920
Mexico	779	721	835	557	381	258	112
All other sources	126,714	151,766	182,431	128,884	177,297	88,109	77,982
Total	184,235	209,998	240,329	191,597	243,093	126,291	106,013
Unit value (*dollars per ton*)							
Canada	844	824	812	779	814	800	783
Mexico	636	600	663	593	569	598	454
All other sources	919	907	905	832	758	722	787
Average	893	882	880	813	772	743	785
Share of quantity (*percent*)							
Canada	32.6	29.3	25.7	33.9	25.5	27.9	26.4
Mexico	0.6	0.5	0.5	0.4	0.2	0.3	0.2
All other sources	66.8	70.2	73.8	65.8	74.3	71.8	73.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	30.8	27.4	23.7	32.4	26.9	30.0	26.3
Mexico	0.4	0.3	0.3	0.3	0.2	0.2	0.1
All other sources	68.8	72.3	75.9	67.3	72.9	69.8	73.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	5.7	5.1	5.0	5.8	6.0	6.6	6.3
Mexico	0.1	0.1	0.1	0.1	0.1	0.1	0.0
All other sources	11.8	12.1	14.4	11.2	17.6	17.0	17.5
Total	17.6	17.3	19.5	17.0	23.7	23.6	23.9

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table LONG-7
Rebar: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Canada	1,258	790	962	3,625	1,996	1,387	1,161
Mexico	278,255	296,633	83,387	109,252	51,723	23,979	72,528
All other sources	302,217	403,881	1,144,846	1,719,731	1,616,111	960,625	778,799
Total	581,731	701,303	1,229,195	1,832,608	1,669,829	985,991	852,488
Value[1] (*$1,000*)							
Canada	462	323	471	1,506	932	648	466
Mexico	70,502	72,150	23,070	28,292	13,858	6,406	17,257
All other sources	90,605	117,104	315,048	356,105	347,441	201,270	174,349
Total	161,569	189,576	338,589	385,903	362,231	208,323	192,072
Unit value (*dollars per ton*)							
Canada	368	409	489	415	467	467	401
Mexico	253	243	277	259	268	267	238
All other sources	300	290	275	207	215	210	224
Average	278	270	275	211	217	211	225
Share of quantity (*percent*)							
Canada	0.2	0.1	0.1	0.2	0.1	0.1	0.1
Mexico	47.8	42.3	6.8	6.0	3.1	2.4	8.5
All other sources	52.0	57.6	93.1	93.8	96.8	97.4	91.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	0.3	0.2	0.1	0.4	0.3	0.3	0.2
Mexico	43.6	38.1	6.8	7.3	3.8	3.1	9.0
All other sources	56.1	61.8	93.0	92.3	95.9	96.6	90.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Mexico	5.6	5.4	1.4	1.7	0.8	0.8	2.1
All other sources	6.1	7.4	18.6	27.3	24.4	30.1	22.2
Total	11.7	12.8	19.9	29.1	25.2	30.9	24.3

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table LONG-8
Rails: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	13,761	17,571	15,302	10,456	13,365	5,268	6,329
Mexico	0	2	850	353	0	0	65
All other sources	187,950	220,613	321,115	273,624	261,484	148,136	129,406
Total	201,711	238,187	337,268	284,433	274,849	153,403	135,799
Value[1] (*$1,000*)							
Canada	4,714	6,741	6,593	4,931	5,819	2,057	2,691
Mexico	0	5	385	162	0	0	10
All other sources	107,915	118,099	178,882	141,106	133,032	76,538	65,282
Total	112,629	124,844	185,860	146,199	138,852	78,594	67,983
Unit value (*dollars per ton*)							
Canada	343	384	431	472	435	390	425
Mexico	([2])	2,215	453	459	([2])	([2])	160
All other sources	574	535	557	516	509	517	504
Average	558	524	551	514	505	512	501
Share of quantity (*percent*)							
Canada	6.8	7.4	4.5	3.7	4.9	3.4	4.7
Mexico	0.0	0.0	0.3	0.1	0.0	0.0	0.0
All other sources	93.2	92.6	95.2	96.2	95.1	96.6	95.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	4.2	5.4	3.5	3.4	4.2	2.6	4.0
Mexico	0.0	0.0	0.2	0.1	0.0	0.0	0.0
All other sources	95.8	94.6	96.2	96.5	95.8	97.4	96.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	1.9	2.0	1.6	1.6	1.6	1.2	1.9
Mexico	0.0	0.0	0.1	0.1	0.0	0.0	0.0
All other sources	26.2	24.6	33.6	41.0	30.9	33.2	38.6
Total	28.1	26.6	35.3	42.6	32.5	34.3	40.5

[1] Landed, duty-paid.
[2] Not applicable.

Source: Compiled from official Commerce statistics.

Table LONG-9
Wire: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	229,202	251,740	251,379	277,229	247,990	141,302	125,035
Mexico	41,266	40,614	48,070	47,798	44,191	23,065	20,798
All other sources	264,678	335,925	370,396	391,796	417,968	205,776	192,181
Total	535,147	628,279	669,845	716,823	710,148	370,142	338,014
Value[1] (*$1,000*)							
Canada	146,664	163,400	160,364	166,925	152,044	85,557	75,296
Mexico	24,304	25,238	31,381	32,493	32,105	16,137	15,617
All other sources	283,334	328,995	350,632	352,045	363,743	179,130	163,562
Total	454,302	517,634	542,378	551,463	547,892	280,824	254,475
Unit value (*dollars per ton*)							
Canada	640	649	638	602	613	605	602
Mexico	589	621	653	680	727	700	751
All other sources	1,070	979	947	899	870	871	851
Average	849	824	810	769	772	759	753
Share of quantity (*percent*)							
Canada	42.8	40.1	37.5	38.7	34.9	38.2	37.0
Mexico	7.7	6.5	7.2	6.7	6.2	6.2	6.2
All other sources	49.5	53.5	55.3	54.7	58.9	55.6	56.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	32.3	31.6	29.6	30.3	27.8	30.5	29.6
Mexico	5.3	4.9	5.8	5.9	5.9	5.7	6.1
All other sources	62.4	63.6	64.6	63.8	66.4	63.8	64.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	8.6	8.5	8.0	8.5	7.5	8.2	8.4
Mexico	1.5	1.4	1.5	1.5	1.3	1.3	1.4
All other sources	9.9	11.3	11.7	12.1	12.6	11.9	12.9
Total	20.0	21.1	21.2	22.0	21.4	21.5	22.7

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table LONG-10
Rope: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Canada	16,465	19,605	17,933	19,417	20,113	10,721	11,678
Mexico	25,338	21,400	15,836	29,314	23,620	9,990	14,043
All other sources	191,651	234,614	244,394	247,909	254,517	130,389	120,473
Total	233,454	275,619	278,163	296,640	298,250	151,100	146,194
Value[1] (*$1,000*)							
Canada	23,393	24,328	23,805	25,404	27,952	13,879	14,423
Mexico	14,691	12,630	9,725	18,703	16,176	6,843	9,893
All other sources	333,408	340,673	325,056	307,938	305,856	154,948	141,775
Total	371,492	377,631	358,586	352,044	349,984	175,669	166,091
Unit value (*dollars per ton*)							
Canada	1,421	1,241	1,327	1,308	1,390	1,295	1,235
Mexico	580	590	614	638	685	685	704
All other sources	1,740	1,452	1,330	1,242	1,202	1,188	1,177
Average	1,591	1,370	1,289	1,187	1,173	1,163	1,136
Share of quantity (*percent*)							
Canada	7.1	7.1	6.4	6.5	6.7	7.1	8.0
Mexico	10.9	7.8	5.7	9.9	7.9	6.6	9.6
All other sources	82.1	85.1	87.9	83.6	85.3	86.3	82.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	6.3	6.4	6.6	7.2	8.0	7.9	8.7
Mexico	4.0	3.3	2.7	5.3	4.6	3.9	6.0
All other sources	89.7	90.2	90.6	87.5	87.4	88.2	85.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	3.9	4.0	3.3	3.4	3.0	2.9	3.5
Mexico	6.1	4.4	2.9	5.1	3.6	2.7	4.2
All other sources	45.8	47.7	45.0	43.0	38.4	35.8	36.3
Total	55.8	56.0	51.2	51.4	45.0	41.5	44.0

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table LONG-11
Nails: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Canada	98,741	92,646	88,087	88,021	92,430	51,021	44,269
Mexico	11,269	20,169	29,994	44,883	48,998	25,701	20,818
All other sources	297,991	321,942	398,334	492,086	515,740	246,200	219,981
Total	408,001	434,756	516,416	624,990	657,168	322,921	285,069
Value[1] (*$1,000*)							
Canada	75,709	77,127	82,399	84,735	89,955	48,073	43,337
Mexico	9,328	15,306	21,716	41,139	49,663	25,390	20,497
All other sources	287,174	309,180	336,028	411,712	427,609	206,255	187,524
Total	372,210	401,613	440,143	537,586	567,227	279,718	251,358
Unit value (*dollars per ton*)							
Canada	767	832	935	963	973	942	979
Mexico	828	759	724	917	1,014	988	985
All other sources	964	960	844	837	829	838	852
Average	912	924	852	860	863	866	882
Share of quantity (*percent*)							
Canada	24.2	21.3	17.1	14.1	14.1	15.8	15.5
Mexico	2.8	4.6	5.8	7.2	7.5	8.0	7.3
All other sources	73.0	74.1	77.1	78.7	78.5	76.2	77.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	20.3	19.2	18.7	15.8	15.9	17.2	17.2
Mexico	2.5	3.8	4.9	7.7	8.8	9.1	8.2
All other sources	77.2	77.0	76.3	76.6	75.4	73.7	74.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	16.4	15.0	14.0	14.2	15.4	16.4	17.5
Mexico	1.9	3.3	4.8	7.3	8.2	8.3	8.2
All other sources	49.5	52.1	63.5	79.7	85.9	79.3	86.7
Total	67.8	70.3	82.3	101.2	109.4	104.0	112.4

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table LONG-12
Shapes: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Canada	184,398	194,205	215,676	141,448	215,950	123,122	52,549
Mexico	39,338	30,910	26,701	11,798	7,982	6,317	1,228
All other sources	672,179	705,868	2,457,785	1,189,658	1,649,468	763,392	399,097
Total	895,916	930,983	2,700,163	1,342,904	1,873,400	892,832	452,874
Value[1] (*$1,000*)							
Canada	67,750	72,487	82,662	50,672	74,883	43,313	19,344
Mexico	12,495	10,142	9,405	3,833	2,713	2,145	400
All other sources	261,075	274,108	902,157	372,012	622,901	289,791	148,970
Total	341,320	356,737	994,225	426,518	700,497	335,249	168,714
Unit value (*dollars per ton*)							
Canada	367	373	383	358	347	352	368
Mexico	318	328	352	325	340	340	326
All other sources	388	388	367	313	378	380	373
Average	381	383	368	318	374	375	373
Share of quantity (*percent*)							
Canada	20.6	20.9	8.0	10.5	11.5	13.8	11.6
Mexico	4.4	3.3	1.0	0.9	0.4	0.7	0.3
All other sources	75.0	75.8	91.0	88.6	88.0	85.5	88.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	19.8	20.3	8.3	11.9	10.7	12.9	11.5
Mexico	3.7	2.8	0.9	0.9	0.4	0.6	0.2
All other sources	76.5	76.8	90.7	87.2	88.9	86.4	88.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	3.2	3.2	3.5	2.3	3.0	3.2	1.7
Mexico	0.7	0.5	0.4	0.2	0.1	0.2	0.0
All other sources	11.7	11.6	39.8	19.0	22.6	20.0	12.8
Total	15.6	15.2	43.7	21.5	25.6	23.4	14.6

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table LONG-13
Fabricated: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Canada	143,908	180,611	244,409	277,648	363,587	167,232	198,193
Mexico	44,673	54,703	55,272	78,134	99,290	42,439	48,078
All other sources	28,968	44,522	63,961	143,060	196,073	67,464	123,887
Total	217,550	279,836	363,642	498,842	658,950	277,135	370,158
Value[1] (*$1,000*)							
Canada	197,055	252,475	354,339	389,307	535,514	249,198	290,731
Mexico	30,132	40,112	47,046	87,013	110,922	45,484	49,023
All other sources	81,307	86,916	139,642	221,080	294,603	115,071	194,283
Total	308,495	379,502	541,027	697,400	941,039	409,753	534,036
Unit value (*dollars per ton*)							
Canada	1,369	1,398	1,450	1,402	1,473	1,490	1,467
Mexico	675	733	851	1,114	1,117	1,072	1,020
All other sources	2,807	1,952	2,183	1,545	1,503	1,706	1,568
Average	1,418	1,356	1,488	1,398	1,428	1,479	1,443
Share of quantity (*percent*)							
Canada	66.1	64.5	67.2	55.7	55.2	60.3	53.5
Mexico	20.5	19.5	15.2	15.7	15.1	15.3	13.0
All other sources	13.3	15.9	17.6	28.7	29.8	24.3	33.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	63.9	66.5	65.5	55.8	56.9	60.8	54.4
Mexico	9.8	10.6	8.7	12.5	11.8	11.1	9.2
All other sources	26.4	22.9	25.8	31.7	31.3	28.1	36.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	11.9	14.1	17.5	19.3	24.5	22.9	28.5
Mexico	3.7	4.3	4.0	5.4	6.7	5.8	6.9
All other sources	2.4	3.5	4.6	10.0	13.2	9.2	17.8
Total	18.1	21.8	26.1	34.8	44.4	37.9	53.3

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

QUESTION OF SERIOUS INJURY

TRADE AND EMPLOYMENT

Trade and employment data on all carbon and alloy long products provided by U.S. producers are presented in table LONG-14. Trade and employment data concerning ingots, hot bar, cold bar, rebar, rails, wire, rope, nails, shapes, and fabricated are presented in tables LONG-15 through LONG-24, respectively (data presented in table LONG-14 are the sum of data presented in LONG-15 through LONG-24).[4]

[4] Significant double-counting issues arise for some of the items presented in table LONG-14 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs. However, they offered no techniques to resolve any double-counting other than making their arguments on the basis of subordinate categories or aggregations of sub-categories.

Table LONG-14
Total long: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	61,558,691	64,343,988	68,132,396	69,797,634	72,493,598	36,127,415	35,986,272
Production	47,936,200	52,894,436	54,485,448	52,223,355	55,932,183	29,220,526	25,182,426
Internal consumption	22,244,647	24,517,108	24,686,939	24,707,602	26,474,463	13,893,612	12,267,263
U.S. commercial shipments	25,141,570	27,933,078	28,158,280	26,812,638	28,005,650	14,737,741	12,901,428
U.S. shipments	47,386,217	52,450,185	52,845,219	51,520,239	54,480,113	28,631,353	25,168,691
Export shipments	652,648	751,509	725,913	860,820	921,952	505,790	485,987
Total shipments	48,038,865	53,201,694	53,571,132	52,381,060	55,402,065	29,137,144	25,654,678
Ending inventories	4,042,673	3,786,999	4,735,844	4,579,314	5,114,764	4,648,461	4,571,200
Value (*$1,000*)							
Internal consumption	5,440,276	6,011,991	5,776,474	5,326,649	5,810,198	3,228,457	2,666,484
U.S. commercial shipments	12,666,408	14,125,576	14,262,981	12,810,586	13,504,488	7,092,185	5,865,980
U.S. shipments	18,106,684	20,137,567	20,039,455	18,137,235	19,314,686	10,320,643	8,532,464
Export shipments	325,616	385,389	362,946	373,410	410,651	223,104	207,422
Total shipments	18,432,300	20,522,956	20,402,402	18,510,645	19,725,337	10,543,747	8,739,886
Unit value (*dollars per ton*)							
Internal consumption	245	245	234	216	219	232	217
U.S. commercial shipments	504	506	507	478	482	481	455
U.S. shipments	382	384	379	352	355	361	339
Export shipments	499	513	500	434	445	441	427
Total shipments	384	386	381	353	356	362	341
Ratios and shares (*percent*)							
Capacity utilization	77.7	82.1	79.8	74.7	77.0	80.7	69.8
U.S. shipments to distributors	20.4	19.8	19.4	20.5	20.5	21.1	20.9
U.S. shipments to end users	79.6	80.2	80.6	79.5	79.5	78.9	79.1
Inventories/total shipments	8.4	7.1	8.8	8.7	9.2	8.0	8.9
Employment data							
PRWs (*number*)	38,017	39,458	40,071	39,991	40,954	40,832	37,396
Hours worked (*1,000*)	78,169	82,670	83,408	83,061	85,366	43,033	38,496
Wages paid (*$1,000*)	1,570,587	1,694,176	1,757,164	1,764,356	1,887,450	962,231	868,996
Hourly wages	$20.09	$20.49	$21.07	$21.24	$22.11	$22.36	$22.57
Productivity (*tons/1,000 hours*)	607.9	634.2	644.7	619.7	646.4	672.0	647.1
Unit labor costs (*per ton*)	$33.05	$32.31	$32.68	$34.28	$34.20	$33.27	$34.89

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-15
Ingots: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	24,352,236	25,362,236	26,816,875	28,035,625	28,900,092	14,405,546	14,380,546
Production	21,801,625	23,868,182	24,200,855	22,644,923	24,572,841	12,950,489	11,019,600
Internal consumption	19,389,743	21,444,312	21,314,852	21,162,029	22,797,151	12,011,662	10,577,980
U.S. commercial shipments	2,510,201	2,620,972	2,579,613	1,528,826	1,638,373	933,288	624,667
U.S. shipments	21,899,944	24,065,284	23,894,465	22,690,855	24,435,524	12,944,951	11,202,647
Export shipments	5,469	5,615	4,587	3,786	7,312	4,444	2,284
Total shipments	21,905,413	24,070,899	23,899,052	22,694,641	24,442,836	12,949,395	11,204,931
Ending inventories	1,151,365	990,682	1,318,222	1,270,169	1,412,274	1,262,645	1,207,298
Value (*$1,000*)							
Internal consumption	4,369,157	4,824,891	4,391,000	3,982,373	4,398,731	2,500,860	2,042,559
U.S. commercial shipments	761,795	853,547	780,511	426,856	470,463	264,509	182,815
U.S. shipments	5,130,952	5,678,438	5,171,511	4,409,229	4,869,194	2,765,369	2,225,375
Export shipments	1,838	2,325	1,446	1,280	2,224	1,334	695
Total shipments	5,132,790	5,680,763	5,172,957	4,410,509	4,871,418	2,766,703	2,226,070
Unit value (*dollars per ton*)							
Internal consumption	225	225	206	188	193	208	193
U.S. commercial shipments	303	326	303	279	287	283	293
U.S. shipments	234	236	216	194	199	214	199
Export shipments	336	414	315	338	304	300	304
Total shipments	234	236	216	194	199	214	199
Ratios and shares (*percent*)							
Capacity utilization	89.4	94.0	90.1	80.7	85.0	89.9	76.5
U.S. shipments to distributors	0.0	0.0	0.0	0.0	0.1	0.1	0.0
U.S. shipments to end users	100.0	100.0	100.0	100.0	99.9	99.9	100.0
Inventories/total shipments	5.3	4.1	5.5	5.6	5.8	4.9	5.4
Employment data							
PRWs (*number*)	6,502	6,672	6,726	6,696	6,588	6,545	5,621
Hours worked (*1,000*)	13,988	14,812	14,410	14,498	14,572	7,013	5,953
Wages paid (*$1,000*)	377,030	397,253	392,660	392,059	409,486	203,229	172,710
Hourly wages	$26.95	$26.82	$27.25	$27.04	$28.10	$28.98	$29.01
Productivity (*tons/1,000 hours*)	1,558.6	1,611.3	1,679.4	1,561.9	1,686.2	1,844.2	1,847.9
Unit labor costs (*per ton*)	$17.29	$16.64	$16.23	$17.31	$16.66	$15.71	$15.70

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-16
Hot bar: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Capacity	12,843,637	13,262,967	13,277,999	12,948,276	13,126,430	6,612,878	6,417,755
Production	8,631,901	9,815,907	9,864,337	9,079,894	9,191,687	4,963,322	3,867,987
Internal consumption	1,009,781	1,064,312	1,046,421	1,069,922	1,072,896	552,299	486,209
U.S. commercial shipments	7,382,269	8,404,128	8,285,930	7,740,970	7,628,639	4,157,149	3,457,626
U.S. shipments	8,392,049	9,468,441	9,332,350	8,810,892	8,701,535	4,709,448	3,943,835
Export shipments	229,266	271,691	272,067	350,912	361,699	198,392	140,960
Total shipments	8,621,315	9,740,132	9,604,417	9,161,803	9,063,234	4,907,840	4,084,795
Ending inventories	1,188,115	1,248,310	1,484,826	1,370,260	1,485,216	1,420,070	1,253,695
Value (*$1,000*)							
Internal consumption	351,416	367,366	374,224	347,192	357,222	185,272	145,240
U.S. commercial shipments	3,200,502	3,677,726	3,626,007	3,105,776	3,108,337	1,711,494	1,324,067
U.S. shipments	3,551,918	4,045,093	4,000,231	3,452,968	3,465,559	1,896,766	1,469,307
Export shipments	90,403	112,474	107,706	123,497	133,475	74,306	48,126
Total shipments	3,642,321	4,157,566	4,107,938	3,576,465	3,599,033	1,971,072	1,517,433
Unit value (*dollars per ton*)							
Internal consumption	348	345	358	325	333	335	299
U.S. commercial shipments	434	438	438	401	407	412	383
U.S. shipments	423	427	429	392	398	403	373
Export shipments	394	414	396	352	369	375	341
Total shipments	422	427	428	390	397	402	371
Ratios and shares (*percent*)							
Capacity utilization	67.2	74.0	74.3	70.1	70.0	75.1	60.3
U.S. shipments to distributors	30.7	30.3	30.1	31.3	30.1	30.3	30.2
U.S. shipments to end users	69.3	69.7	69.9	68.7	69.9	69.7	69.8
Inventories/total shipments	13.8	12.8	15.5	15.0	16.4	14.5	15.3
Employment data							
PRWs (*number*)	8,718	9,023	8,980	8,250	8,965	9,268	8,309
Hours worked (*1,000*)	18,209	19,264	18,966	17,422	18,957	9,938	8,491
Wages paid (*$1,000*)	417,392	446,762	462,929	428,863	478,934	253,769	219,766
Hourly wages	$22.92	$23.19	$24.41	$24.62	$25.26	$25.53	$25.88
Productivity (*tons/1,000 hours*)	474.0	509.6	520.1	521.2	484.9	499.4	455.5
Unit labor costs (*per ton*)	$48.35	$45.51	$46.93	$47.23	$52.11	$51.13	$56.82

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-17
Cold bar: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Capacity	2,799,012	3,008,972	3,204,263	2,853,945	2,958,991	1,498,429	1,408,446
Production	1,172,481	1,378,214	1,401,146	1,385,650	1,331,009	719,693	565,900
Internal consumption	10,955	13,167	13,912	15,382	13,856	7,823	6,681
U.S. commercial shipments	1,190,158	1,345,921	1,381,582	1,356,761	1,311,992	727,472	558,550
U.S. shipments	1,201,113	1,359,088	1,395,494	1,372,143	1,325,848	735,295	565,231
Export shipments	9,177	12,570	16,687	15,890	16,783	8,579	8,964
Total shipments	1,210,290	1,371,658	1,412,181	1,388,032	1,342,631	743,874	574,195
Ending inventories	193,694	219,434	216,765	247,281	231,258	216,926	211,325
Value (*$1,000*)							
Internal consumption	7,141	7,904	8,947	8,850	8,275	4,660	4,000
U.S. commercial shipments	905,410	977,786	1,000,700	921,582	880,626	489,881	377,606
U.S. shipments	912,551	985,690	1,009,647	930,432	888,901	494,541	381,606
Export shipments	10,337	14,730	15,964	12,481	14,809	8,413	7,081
Total shipments	922,888	1,000,420	1,025,611	942,913	903,710	502,954	388,687
Unit value (*dollars per ton*)							
Internal consumption	652	600	643	575	597	596	599
U.S. commercial shipments	761	726	724	679	671	673	676
U.S. shipments	760	725	724	678	670	673	675
Export shipments	1,126	1,172	957	785	882	981	790
Total shipments	763	729	726	679	673	676	677
Ratios and shares (*percent*)							
Capacity utilization	41.9	45.8	43.7	48.6	45.0	48.0	40.2
U.S. shipments to distributors	30.3	30.4	30.0	30.6	30.4	30.7	30.9
U.S. shipments to end users	69.7	69.6	70.0	69.4	69.6	69.3	69.1
Inventories/total shipments	16.0	16.0	15.3	17.8	17.2	14.6	18.4
Employment data							
PRWs (*number*)	1,693	1,697	1,701	1,966	1,915	1,992	1,793
Hours worked (*1,000*)	3,723	3,760	3,863	4,384	4,336	2,324	1,996
Wages paid (*$1,000*)	57,574	60,088	61,464	69,596	69,159	36,777	32,056
Hourly wages	$15.47	$15.98	$15.91	$15.88	$15.95	$15.82	$16.06
Productivity (*tons/1,000 hours*)	291.6	340.7	335.4	293.2	285.3	288.2	263.9
Unit labor costs (*per ton*)	$53.04	$46.90	$47.44	$54.15	$55.91	$54.92	$60.84

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-18
Rebar: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Capacity	7,633,621	8,154,297	9,156,915	9,540,620	9,661,204	4,685,796	4,801,024
Production	4,953,429	5,460,521	6,164,161	6,304,540	6,617,278	3,189,271	3,512,857
Internal consumption	826,934	778,182	938,279	1,007,166	1,102,148	540,751	525,281
U.S. commercial shipments	4,069,575	4,590,728	4,886,299	5,210,894	5,340,541	2,579,277	2,808,801
U.S. shipments	4,896,509	5,368,910	5,824,578	6,218,060	6,442,689	3,120,028	3,334,082
Export shipments	124,136	126,128	137,859	142,775	160,643	98,964	98,856
Total shipments	5,020,645	5,495,039	5,962,438	6,360,835	6,603,332	3,218,992	3,432,938
Ending inventories	494,221	461,681	687,769	629,283	645,885	599,627	708,308
Value (*$1,000*)							
Internal consumption	236,573	230,840	278,886	271,742	289,994	142,086	134,761
U.S. commercial shipments	1,212,047	1,388,983	1,475,557	1,433,806	1,445,057	706,528	747,843
U.S. shipments	1,448,620	1,619,823	1,754,443	1,705,548	1,735,051	848,614	882,604
Export shipments	36,735	38,242	40,760	38,242	41,041	25,959	25,481
Total shipments	1,485,355	1,658,065	1,795,203	1,743,790	1,776,092	874,573	908,085
Unit value (*dollars per ton*)							
Internal consumption	286	297	297	270	263	263	257
U.S. commercial shipments	298	303	302	275	271	274	266
U.S. shipments	296	302	301	274	269	272	265
Export shipments	296	303	296	268	255	262	258
Total shipments	296	302	301	274	269	272	265
Ratios and shares (*percent*)							
Capacity utilization	64.9	67.0	67.3	66.1	68.5	68.1	73.2
U.S. shipments to distributors	30.6	29.4	29.9	28.9	28.9	31.8	33.6
U.S. shipments to end users	69.4	70.6	70.1	71.1	71.1	68.2	66.4
Inventories/total shipments	9.8	8.4	11.5	9.9	9.8	9.3	10.3
Employment data							
PRWs (*number*)	2,968	2,988	3,084	3,153	3,169	2,970	3,304
Hours worked (*1,000*)	5,828	6,143	6,279	6,348	6,042	2,985	3,425
Wages paid (*$1,000*)	113,207	126,452	134,515	142,630	144,723	71,950	84,828
Hourly wages	$19.43	$20.58	$21.42	$22.47	$23.95	$24.10	$24.77
Productivity (*tons/1,000 hours*)	850.0	888.9	952.6	960.8	1,062.4	1,068.4	1,025.6
Unit labor costs (*per ton*)	$22.85	$23.16	$22.49	$23.38	$22.55	$22.56	$24.15

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-19
Rails: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	1,040,000	1,040,000	1,111,000	1,111,000	1,111,000	555,500	555,500
Production	717,082	895,985	955,292	667,823	845,350	446,743	334,962
Internal consumption	0	299	1,799	929	828	569	307
U.S. commercial shipments	658,680	822,554	877,148	613,759	774,192	409,316	290,164
U.S. shipments	658,680	822,853	878,947	614,688	775,020	409,885	290,471
Export shipments	81,696	68,029	81,030	41,289	65,130	43,405	56,380
Total shipments	740,376	890,882	959,977	655,977	840,150	453,290	346,851
Ending inventories	33,465	38,568	35,464	47,441	52,493	40,751	40,655
Value (*$1,000*)							
Internal consumption	0	175	878	440	415	285	149
U.S. commercial shipments	324,900	398,360	431,905	291,842	359,389	194,626	135,643
U.S. shipments	324,900	398,535	432,783	292,282	359,804	194,911	135,792
Export shipments	37,451	33,500	44,909	19,016	30,012	20,170	25,552
Total shipments	362,351	432,035	477,692	311,298	389,816	215,081	161,344
Unit value (*dollars per ton*)							
Internal consumption	(1)	585	488	474	501	501	485
U.S. commercial shipments	493	484	492	475	464	475	467
U.S. shipments	493	484	492	475	464	476	467
Export shipments	458	492	554	461	461	465	453
Total shipments	489	485	498	475	464	474	465
Ratios and shares (*percent*)							
Capacity utilization	69.0	86.2	86.0	60.1	76.1	80.4	60.3
U.S. shipments to distributors	16.0	13.6	13.7	21.7	16.7	14.0	24.7
U.S. shipments to end users	84.0	86.4	86.3	78.3	83.3	86.0	75.3
Inventories/total shipments	4.5	4.3	3.7	7.2	6.2	4.5	5.9
Employment data							
PRWs (*number*)	856	932	989	676	830	884	756
Hours worked (*1,000*)	1,761	1,959	2,085	1,424	1,753	936	793
Wages paid (*$1,000*)	39,026	41,939	45,103	31,371	39,429	21,887	18,584
Hourly wages	$22.16	$21.41	$21.63	$22.03	$22.50	$23.40	$23.45
Productivity (*tons/1,000 hours*)	407.1	457.3	458.2	469.0	482.3	477.5	422.6
Unit labor costs (*per ton*)	$54.42	$46.81	$47.21	$46.98	$46.64	$48.99	$55.48

[1] Not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-20
Wire: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	3,188,213	3,475,306	3,700,064	3,825,108	3,931,518	1,957,285	2,027,448
Production	2,676,331	2,973,053	3,154,265	3,251,230	3,311,614	1,722,390	1,489,178
Internal consumption	855,301	1,000,924	1,110,632	1,142,043	1,222,497	645,609	568,175
U.S. commercial shipments	1,798,108	1,946,269	2,019,910	2,053,994	2,024,422	1,078,544	917,214
U.S. shipments	2,653,409	2,947,193	3,130,542	3,196,037	3,246,919	1,724,153	1,485,389
Export shipments	23,423	29,642	33,530	51,839	43,598	18,334	18,847
Total shipments	2,676,832	2,976,835	3,164,072	3,247,876	3,290,517	1,742,487	1,504,236
Ending inventories	161,161	155,267	144,791	147,737	168,710	130,270	144,342
Value (*$1,000*)							
Internal consumption	410,054	487,065	548,704	534,103	585,371	306,918	271,667
U.S. commercial shipments	1,170,256	1,359,253	1,391,234	1,330,411	1,339,199	678,305	587,522
U.S. shipments	1,580,310	1,846,318	1,939,938	1,864,514	1,924,570	985,223	859,189
Export shipments	26,057	36,529	37,369	53,133	48,653	22,067	18,631
Total shipments	1,606,367	1,882,847	1,977,307	1,917,647	1,973,223	1,007,290	877,820
Unit value (*dollars per ton*)							
Internal consumption	479	487	494	468	479	475	478
U.S. commercial shipments	651	698	689	648	662	629	641
U.S. shipments	596	626	620	583	593	571	578
Export shipments	1,112	1,232	1,114	1,025	1,116	1,204	989
Total shipments	600	632	625	590	600	578	584
Ratios and shares (*percent*)							
Capacity utilization	82.8	84.4	84.0	83.7	83.0	86.6	72.3
U.S. shipments to distributors	27.4	27.5	24.9	23.8	21.5	20.5	20.1
U.S. shipments to end users	72.6	72.5	75.1	76.2	78.5	79.5	79.9
Inventories/total shipments	6.0	5.2	4.6	4.5	5.1	3.7	4.8
Employment data							
PRWs (*number*)	4,733	5,474	5,445	5,455	5,591	5,600	4,983
Hours worked (*1,000*)	8,939	10,749	10,883	10,988	11,258	5,642	4,886
Wages paid (*$1,000*)	120,164	149,922	153,290	157,584	169,226	84,160	72,330
Hourly wages	$13.44	$13.95	$14.09	$14.34	$15.03	$14.92	$14.80
Productivity (*tons/1,000 hours*)	281.3	260.4	272.8	277.9	276.7	287.5	285.6
Unit labor costs (*per ton*)	$47.79	$53.57	$51.63	$51.60	$54.32	$51.88	$51.82

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-21
Rope: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	521,839	606,927	677,395	694,861	809,578	408,096	411,448
Production	418,159	491,907	543,306	577,102	663,191	364,096	332,228
Internal consumption	3,924	3,898	41,418	45,356	49,027	24,002	17,294
U.S. commercial shipments	403,003	469,016	494,939	511,915	596,955	324,148	312,554
U.S. shipments	406,927	472,914	536,357	557,271	645,982	348,150	329,848
Export shipments	10,192	11,599	10,163	7,676	16,443	9,573	10,282
Total shipments	417,119	484,513	546,520	564,947	662,425	357,723	340,130
Ending inventories	58,868	68,770	63,797	76,260	80,838	83,994	70,358
Value (*$1,000*)							
Internal consumption	5,102	5,268	74,508	74,762	76,158	38,606	32,989
U.S. commercial shipments	538,503	611,851	627,301	623,891	655,849	348,303	329,655
U.S. shipments	543,605	617,119	701,809	698,653	732,007	386,908	362,643
Export shipments	16,366	19,614	17,040	12,620	16,770	9,371	10,847
Total shipments	559,971	636,733	718,848	711,273	748,777	396,279	373,490
Unit value (*dollars per ton*)							
Internal consumption	1,300	1,351	1,799	1,648	1,553	1,608	1,908
U.S. commercial shipments	1,336	1,305	1,267	1,219	1,099	1,075	1,055
U.S. shipments	1,336	1,305	1,308	1,254	1,133	1,111	1,099
Export shipments	1,606	1,691	1,677	1,644	1,020	979	1,055
Total shipments	1,342	1,314	1,315	1,259	1,130	1,108	1,098
Ratios and shares (*percent*)							
Capacity utilization	80.1	81.0	80.2	83.1	81.9	89.2	80.7
U.S. shipments to distributors	37.3	37.0	35.9	37.0	45.1	46.1	48.2
U.S. shipments to end users	62.7	63.0	64.1	63.0	54.9	53.9	51.8
Inventories/total shipments	14.1	14.2	11.7	13.5	12.2	11.7	10.3
Employment data							
PRWs (*number*)	2,271	2,405	2,517	2,662	2,666	2,620	2,511
Hours worked (*1,000*)	3,474	3,742	3,848	3,597	3,844	1,956	1,901
Wages paid (*$1,000*)	45,989	51,475	57,507	52,829	61,457	31,106	31,113
Hourly wages	$13.24	$13.76	$14.95	$14.69	$15.99	$15.90	$16.37
Productivity (*tons/1,000 hours*)	71.7	81.5	80.0	92.3	106.9	119.0	112.6
Unit labor costs (*per ton*)	$184.61	$168.77	$186.94	$159.18	$149.52	$133.66	$145.32

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-22
Nails: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	792,267	825,192	840,492	852,364	894,142	452,337	423,655
Production	601,961	618,245	627,720	617,711	600,481	310,563	253,691
Internal consumption	3,899	14,947	20,461	24,430	29,421	15,866	10,194
U.S. commercial shipments	592,166	581,412	593,980	576,677	565,753	299,672	254,600
U.S. shipments	596,064	596,359	614,441	601,107	595,174	315,538	264,794
Export shipments	12,464	13,526	11,698	9,324	8,783	4,451	3,772
Total shipments	608,528	609,885	626,139	610,431	603,957	319,989	268,566
Ending inventories	63,884	74,655	75,481	82,572	82,155	74,346	67,684
Value (*$1,000*)							
Internal consumption	7,327	14,989	20,440	21,192	25,058	13,833	9,917
U.S. commercial shipments	1,086,339	1,112,180	1,074,712	1,041,406	974,504	506,164	441,550
U.S. shipments	1,093,666	1,127,169	1,095,152	1,062,598	999,561	519,996	451,468
Export shipments	34,883	37,802	32,946	28,714	27,702	13,961	12,150
Total shipments	1,128,549	1,164,971	1,128,098	1,091,312	1,027,263	533,958	463,618
Unit value (*dollars per ton*)							
Internal consumption	1,879	1,003	999	867	852	872	973
U.S. commercial shipments	1,835	1,913	1,809	1,806	1,722	1,689	1,734
U.S. shipments	1,835	1,890	1,782	1,768	1,679	1,648	1,705
Export shipments	2,799	2,795	2,816	3,080	3,154	3,137	3,221
Total shipments	1,855	1,910	1,802	1,788	1,701	1,669	1,726
Ratios and shares (*percent*)							
Capacity utilization	75.3	74.3	74.0	72.3	67.2	68.7	59.9
U.S. shipments to distributors	62.4	62.4	61.6	64.4	65.8	66.5	68.4
U.S. shipments to end users	37.6	37.6	38.4	35.6	34.2	33.5	31.6
Inventories/total shipments	10.5	12.2	12.1	13.5	13.6	11.6	12.6
Employment data							
PRWs (*number*)	2,652	2,702	2,684	2,728	2,418	2,515	2,074
Hours worked (*1,000*)	5,560	5,532	5,729	5,652	5,021	2,593	1,986
Wages paid (*$1,000*)	79,522	80,875	88,318	90,718	81,074	41,605	33,636
Hourly wages	$14.30	$14.62	$15.42	$16.05	$16.15	$16.05	$16.94
Productivity (*tons/1,000 hours*)	108.3	111.8	109.6	109.3	119.6	119.8	127.7
Unit labor costs (*per ton*)	$132.10	$130.81	$140.70	$146.86	$135.02	$133.97	$132.59

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-23
Shapes: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Capacity	7,078,500	7,222,500	7,813,500	8,366,500	9,484,500	4,749,250	4,751,250
Production	5,758,282	6,108,767	6,181,368	6,259,037	7,314,425	3,823,045	3,111,505
Internal consumption	135,618	187,634	187,834	227,723	175,831	89,607	70,489
U.S. commercial shipments	5,354,687	5,882,391	5,670,558	5,791,072	6,661,739	3,534,330	3,004,102
U.S. shipments	5,490,305	6,070,024	5,858,391	6,018,795	6,837,570	3,623,937	3,074,591
Export shipments	147,982	205,886	155,666	233,703	238,822	118,451	140,788
Total shipments	5,638,287	6,275,910	6,014,057	6,252,498	7,076,393	3,742,389	3,215,379
Ending inventories	634,541	467,397	634,708	641,247	879,280	723,900	780,396
Value (*$1,000*)							
Internal consumption	45,929	65,400	69,304	75,032	59,051	31,256	20,890
U.S. commercial shipments	2,158,714	2,341,519	2,314,769	2,018,952	2,577,314	1,375,042	953,676
U.S. shipments	2,204,643	2,406,919	2,384,073	2,093,984	2,636,365	1,406,299	974,566
Export shipments	60,233	81,750	62,367	81,473	93,828	46,584	50,521
Total shipments	2,264,876	2,488,669	2,446,440	2,175,458	2,730,193	1,452,882	1,025,087
Unit value (*dollars per ton*)							
Internal consumption	339	349	369	329	336	349	296
U.S. commercial shipments	403	398	408	349	387	389	317
U.S. shipments	402	397	407	348	386	388	317
Export shipments	407	397	401	349	393	393	359
Total shipments	402	397	407	348	386	388	319
Ratios and shares (*percent*)							
Capacity utilization	81.3	84.6	79.1	74.8	77.1	80.5	65.5
U.S. shipments to distributors	50.5	50.2	49.0	53.5	53.5	54.6	51.6
U.S. shipments to end users	49.5	49.8	51.0	46.5	46.5	45.4	48.4
Inventories/total shipments	11.3	7.4	10.6	10.3	12.4	9.7	12.1
Employment data							
PRWs (*number*)	3,053	3,110	3,259	3,678	3,860	3,878	3,494
Hours worked (*1,000*)	7,118	7,173	7,394	8,414	8,901	4,489	3,956
Wages paid (*$1,000*)	169,354	175,356	187,230	218,948	243,694	125,888	111,133
Hourly wages	$23.79	$24.45	$25.32	$26.02	$27.38	$28.04	$28.09
Productivity (*tons/1,000 hours*)	809.0	851.6	836.0	743.9	821.8	851.6	786.4
Unit labor costs (*per ton*)	$29.41	$28.71	$30.29	$34.98	$33.32	$32.93	$35.72

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-24
Fabricated: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Capacity	1,309,366	1,385,591	1,533,893	1,569,335	1,616,143	802,297	809,201
Production	1,204,949	1,283,654	1,392,998	1,435,445	1,484,308	730,915	694,517
Internal consumption	8,492	9,432	11,331	12,621	10,808	5,424	4,653
U.S. commercial shipments	1,182,724	1,269,687	1,368,322	1,427,771	1,463,044	694,545	673,150
U.S. shipments	1,191,216	1,279,119	1,379,653	1,440,392	1,473,852	699,969	677,803
Export shipments	8,843	6,822	2,626	3,628	2,738	1,197	4,854
Total shipments	1,200,059	1,285,941	1,382,279	1,444,020	1,476,590	701,166	682,657
Ending inventories	63,361	62,236	74,021	67,065	76,655	95,930	87,140
Value (*$1,000*)							
Internal consumption	7,576	8,093	9,583	10,962	9,924	4,682	4,312
U.S. commercial shipments	1,307,943	1,404,370	1,540,286	1,616,064	1,693,750	817,333	785,603
U.S. shipments	1,315,519	1,412,463	1,549,868	1,627,026	1,703,674	822,015	789,915
Export shipments	11,313	8,424	2,439	2,954	2,137	940	8,338
Total shipments	1,326,832	1,420,887	1,552,308	1,629,980	1,705,811	822,955	798,253
Unit value (*dollars per ton*)							
Internal consumption	892	858	846	869	918	863	927
U.S. commercial shipments	1,112	1,112	1,132	1,139	1,167	1,187	1,175
U.S. shipments	1,111	1,110	1,130	1,136	1,165	1,184	1,174
Export shipments	1,279	1,235	929	814	780	785	1,718
Total shipments	1,112	1,111	1,130	1,136	1,164	1,184	1,178
Ratios and shares (*percent*)							
Capacity utilization	90.1	90.9	89.0	89.5	89.4	88.2	83.3
U.S. shipments to distributors	0.3	0.3	0.3	0.3	0.3	0.2	0.3
U.S. shipments to end users	99.7	99.7	99.7	99.7	99.7	99.8	99.7
Inventories/total shipments	5.3	4.8	5.4	4.6	5.2	6.8	6.4
Employment data							
PRWs (*number*)	4,572	4,455	4,685	4,728	4,952	4,560	4,552
Hours worked (*1,000*)	9,570	9,536	9,951	10,335	10,682	5,157	5,108
Wages paid (*$1,000*)	151,330	164,053	174,147	179,759	190,266	91,859	92,841
Hourly wages	$15.81	$17.20	$17.50	$17.39	$17.81	$17.81	$18.18
Productivity (*tons/1,000 hours*)	125.6	134.3	139.7	138.4	138.2	141.0	135.4
Unit labor costs (*per ton*)	$125.85	$128.05	$125.29	$125.67	$128.88	$126.37	$134.26

Source: Compiled from data submitted in response to Commission questionnaires.

FINANCIAL

Financial data on all carbon and alloy long products provided by U.S. producers are presented in table LONG-25. Financial data concerning ingots, hot bar, cold bar, rebar, rails, wire, rope, nails, shapes, and fabricated are presented in tables LONG-26 through LONG-35, respectively (data presented in table LONG-25 are the sum of data presented in LONG-26 through LONG-35).[5]

[5] Unit values were computed for those producers providing quantities and values. Unit values for raw materials, direct labor, and other factory costs were computed for those producers providing the detail of COGS. Significant double-counting issues arise for some of the items presented in table LONG-25 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs. However, they offered no techniques to resolve any double-counting other than making their arguments on the basis of subordinate categories or aggregations of sub-categories.

Table LONG-25
Total long: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	26,635,602	29,068,391	28,780,450	28,457,365	28,598,313	15,254,215	13,293,257
Value (*$1,000*)							
Net commercial sales	12,794,931	13,934,869	13,825,529	12,915,148	13,041,245	7,004,086	5,759,503
COGS	11,046,216	11,921,427	11,791,749	11,010,057	11,340,867	5,982,657	5,173,179
Gross profit or (loss)	1,748,715	2,013,442	2,033,780	1,905,091	1,700,378	1,021,429	586,324
SG&A expenses	804,899	881,635	888,373	921,969	927,923	444,158	433,654
Operating income or (loss)	943,816	1,131,807	1,145,407	983,122	772,455	577,271	152,670
Interest expense	181,815	205,091	215,852	294,087	344,344	161,925	143,741
Other (income)/expenses, net	63,888	68,943	32,800	237,641	(11,962)	27,767	1,497
Net income or (loss)	698,113	857,773	896,755	451,394	440,073	387,579	7,432
Depreciation/amortization	482,498	518,177	547,816	576,484	596,519	297,993	290,570
Cash flow	1,180,612	1,375,950	1,444,571	1,027,879	1,036,592	685,572	298,002
Capital expenditures	650,594	705,701	1,202,814	603,461	441,952	197,966	191,459
R&D expenses	13,708	12,398	13,299	12,945	13,781	7,106	5,947
Ratio to net commercial sales (*percent*)							
COGS	86.3	85.6	85.3	85.2	87.0	85.4	89.8
Gross profit or (loss)	13.7	14.4	14.7	14.8	13.0	14.6	10.2
SG&A expenses	6.3	6.3	6.4	7.1	7.1	6.3	7.5
Operating income or (loss)	7.4	8.1	8.3	7.6	5.9	8.2	2.7
Net income or (loss)	5.5	6.2	6.5	3.5	3.4	5.5	0.1
Unit value (*dollars per ton*)							
Net commercial sales	478	477	478	452	453	457	431
COGS total	413	408	408	385	395	390	387
Raw materials	225	219	215	185	186	193	173
Direct labor	45	44	46	46	49	47	49
Other factory costs	130	131	132	140	146	139	153
Gross profit or (loss)	65	69	70	66	59	66	43
SG&A expenses	30	30	31	32	32	29	32
Operating income or (loss)	35	39	40	34	27	38	11

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-26
Ingots: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	2,584,759	2,612,673	2,392,961	1,585,821	1,606,352	922,959	606,010
Value (*$1,000*)							
Net commercial sales	782,026	854,128	733,999	442,945	460,484	260,068	174,630
COGS	782,852	834,573	712,834	423,859	433,996	243,593	173,548
Gross profit or (loss)	(826)	19,555	21,165	19,086	26,488	16,475	1,082
SG&A expenses	31,119	26,821	19,644	31,612	30,879	16,051	12,448
Operating income or (loss)	(31,945)	(7,266)	1,521	(12,526)	(4,391)	424	(11,366)
Interest expense	14,413	14,807	14,788	18,491	26,397	12,489	8,052
Other (income)/expenses, net	9,624	5,309	2,348	26,073	14,683	13,757	3,211
Net income or (loss)	(55,981)	(27,382)	(15,615)	(57,089)	(45,472)	(25,822)	(22,629)
Depreciation/amortization	38,192	41,498	40,724	29,892	29,265	16,369	12,647
Cash flow	(17,790)	14,116	25,109	(27,197)	(16,207)	(9,453)	(9,982)
Capital expenditures	80,331	65,678	95,285	44,751	42,096	17,993	9,960
R&D expenses	172	194	221	268	79	26	39
Ratio to net commercial sales (*percent*)							
COGS	100.1	97.7	97.1	95.7	94.2	93.7	99.4
Gross profit or (loss)	(0.1)	2.3	2.9	4.3	5.8	6.3	0.6
SG&A expenses	4.0	3.1	2.7	7.1	6.7	6.2	7.1
Operating income or (loss)	(4.1)	(0.9)	0.2	(2.8)	(1.0)	0.2	(6.5)
Net income or (loss)	(7.2)	(3.2)	(2.1)	(12.9)	(9.9)	(9.9)	(13.0)
Unit value (*dollars per ton*)							
Net commercial sales	303	327	307	279	287	282	288
COGS total	303	319	298	267	270	264	286
Raw materials	152	151	131	106	111	112	105
Direct labor	37	38	41	40	39	36	45
Other factory costs	111	128	118	117	116	117	137
Gross profit or (loss)	0	7	9	12	16	18	2
SG&A expenses	12	10	8	20	19	17	21
Operating income or (loss)	(12)	(3)	1	(8)	(3)	0	(19)
Number of firms reporting							
Operating losses	12	11	11	10	11	9	10
Data	20	20	22	22	21	20	21

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-27
Hot bar: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
				Quantity (*tons*)			
Net commercial sales	7,950,537	9,098,984	8,821,971	8,474,876	7,966,701	4,478,797	3,652,540
				Value (*$1,000*)			
Net commercial sales	3,534,581	3,932,842	3,802,387	3,384,785	3,179,037	1,828,636	1,390,105
COGS	3,170,148	3,526,345	3,411,065	3,071,008	3,028,650	1,720,409	1,391,528
Gross profit or (loss)	364,433	406,497	391,322	313,777	150,387	108,227	(1,423)
SG&A expenses	172,807	193,114	197,772	189,689	177,269	81,568	87,541
Operating income or (loss)	191,626	213,383	193,550	124,088	(26,881)	26,659	(88,963)
Interest expense	56,835	74,370	76,480	102,925	117,862	54,477	46,706
Other (income)/expenses, net	42,541	57,298	29,484	172,877	(37,793)	(8)	(6,847)
Net income or (loss)	92,249	81,715	87,586	(151,714)	(106,950)	(27,809)	(128,822)
Depreciation/amortization	141,300	154,427	168,401	150,460	160,695	79,918	77,014
Cash flow	233,549	236,141	255,986	(1,254)	53,744	52,108	(51,809)
Capital expenditures	206,032	180,124	183,504	135,351	122,114	59,950	57,526
R&D expenses	4,569	4,200	4,179	3,196	3,565	1,775	1,197
				Ratio to net commercial sales (*percent*)			
COGS	89.7	89.7	89.7	90.7	95.3	94.1	100.1
Gross profit or (loss)	10.3	10.3	10.3	9.3	4.7	5.9	(0.1)
SG&A expenses	4.9	4.9	5.2	5.6	5.6	4.5	6.3
Operating income or (loss)	5.4	5.4	5.1	3.7	(0.8)	1.5	(6.4)
Net income or (loss)	2.6	2.1	2.3	(4.5)	(3.4)	(1.5)	(9.3)
				Unit value (*dollars per ton*)			
Net commercial sales	445	432	431	399	399	408	381
COGS total	399	388	387	362	380	384	381
Raw materials	178	171	169	138	135	149	122
Direct labor	56	52	55	52	61	58	61
Other factory costs	165	164	162	172	184	178	199
Gross profit or (loss)	46	45	44	37	19	24	0
SG&A expenses	22	21	22	22	22	18	24
Operating income or (loss)	24	23	22	15	(3)	6	(24)
				Number of firms reporting			
Operating losses	3	2	6	6	10	7	16
Data	23	23	25	25	25	25	25

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-28
Cold bar: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
				Quantity (*tons*)			
Net commercial sales	1,145,517	1,295,618	1,312,257	1,302,204	1,264,760	696,448	550,691
				Value (*$1,000*)			
Net commercial sales	851,341	922,726	932,976	868,061	844,715	468,711	369,610
COGS	762,623	805,054	817,518	793,648	765,467	420,468	343,997
Gross profit or (loss)	88,718	117,672	115,458	74,414	79,248	48,243	25,613
SG&A expenses	55,461	57,514	57,835	64,207	55,339	29,251	26,164
Operating income or (loss)	33,257	60,158	57,622	10,207	23,909	18,992	(551)
Interest expense	16,442	19,611	20,399	27,357	31,183	14,453	11,569
Other (income)/expenses, net	3,512	2,898	2,537	42,024	18,234	13,307	4,726
Net income or (loss)	13,303	37,650	34,686	(59,174)	(25,509)	(8,768)	(16,846)
Depreciation/amortization	13,074	13,607	15,419	28,320	27,040	14,085	12,907
Cash flow	26,378	51,256	50,104	(30,855)	1,532	5,317	(3,939)
Capital expenditures	13,267	11,378	14,166	21,734	19,878	7,714	12,654
R&D expenses	207	216	303	346	280	144	62
				Ratio to net commercial sales (*percent*)			
COGS	89.6	87.2	87.6	91.4	90.6	89.7	93.1
Gross profit or (loss)	10.4	12.8	12.4	8.6	9.4	10.3	6.9
SG&A expenses	6.5	6.2	6.2	7.4	6.6	6.2	7.1
Operating income or (loss)	3.9	6.5	6.2	1.2	2.8	4.1	(0.1)
Net income or (loss)	1.6	4.1	3.7	(6.8)	(3.0)	(1.9)	(4.6)
				Unit value (*dollars per ton*)			
Net commercial sales	743	712	711	667	668	673	671
COGS total	666	621	623	609	605	604	625
Raw materials	518	485	480	347	368	363	364
Direct labor	48	44	45	51	54	50	58
Other factory costs	100	93	98	212	184	191	203
Gross profit or (loss)	77	91	88	57	63	69	47
SG&A expenses	48	44	44	49	44	42	48
Operating income or (loss)	29	46	44	8	19	27	(1)
				Number of firms reporting			
Operating losses	0	0	0	3	4	3	9
Data	15	15	15	16	16	16	17

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-29
Rebar: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	4,664,903	4,953,428	5,193,407	5,525,883	5,697,391	2,802,074	2,980,560
Value (*$1,000*)							
Net commercial sales	1,386,211	1,505,861	1,514,490	1,501,180	1,514,078	765,096	791,346
COGS	1,307,002	1,373,786	1,341,016	1,334,748	1,425,652	683,094	707,686
Gross profit or (loss)	79,209	132,075	173,474	166,432	88,426	82,002	83,660
SG&A expenses	79,281	79,511	85,229	92,020	113,095	47,365	63,802
Operating income or (loss)	(72)	52,564	88,244	74,412	(24,669)	34,637	19,858
Interest expense	22,238	22,399	26,899	27,451	30,494	14,156	13,630
Other (income)/expenses, net	1,507	3,849	5,401	3,033	4,785	2,972	672
Net income or (loss)	(23,817)	26,316	55,945	43,928	(59,948)	17,509	5,556
Depreciation/amortization	68,307	67,261	74,798	77,116	83,655	40,040	42,848
Cash flow	44,490	93,577	130,743	121,043	23,708	57,550	48,404
Capital expenditures	108,711	104,118	74,907	62,050	49,436	22,113	29,825
R&D expenses	458	448	471	468	401	192	244
Ratio to net commercial sales (*percent*)							
COGS	94.3	91.2	88.5	88.9	94.2	89.3	89.4
Gross profit or (loss)	5.7	8.8	11.5	11.1	5.8	10.7	10.6
SG&A expenses	5.7	5.3	5.6	6.1	7.5	6.2	8.1
Operating income or (loss)	0.0	3.5	5.8	5.0	(1.6)	4.5	2.5
Net income or (loss)	(1.7)	1.7	3.7	2.9	(4.0)	2.3	0.7
Unit value (*dollars per ton*)							
Net commercial sales	297	304	292	272	266	273	266
COGS total	280	277	258	242	250	244	237
Raw materials	158	157	141	126	122	135	116
Direct labor	23	23	24	24	23	22	24
Other factory costs	98	95	92	92	105	86	98
Gross profit or (loss)	17	27	33	30	16	29	28
SG&A expenses	17	16	16	17	20	17	21
Operating income or (loss)	0	11	17	13	(4)	12	7
Number of firms reporting							
Operating losses	5	5	5	6	6	5	4
Data	14	14	15	15	15	15	15

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-30
Rails: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	740,670	892,109	958,578	657,375	840,620	453,290	347,347
Value (*$1,000*)							
Net commercial sales	362,278	432,614	477,389	311,429	390,148	215,122	161,507
COGS	342,560	394,936	414,223	262,328	344,012	187,820	153,454
Gross profit or (loss)	19,718	37,678	63,166	49,101	46,136	27,302	8,053
SG&A expenses	12,251	18,866	20,655	17,855	18,097	8,783	8,386
Operating income or (loss)	7,467	18,812	42,511	31,246	28,039	18,519	(333)
Interest expense	12,843	12,391	14,950	12,830	15,849	7,902	6,305
Other (income)/expenses, net	1,737	1,330	813	(464)	439	(754)	(144)
Net income or (loss)	(7,113)	5,091	26,748	18,880	11,751	11,371	(6,494)
Depreciation/amortization	20,545	22,918	19,286	15,958	18,970	9,926	7,478
Cash flow	13,432	28,009	46,034	34,838	30,721	21,297	984
Capital expenditures	28,843	16,252	30,261	17,668	16,956	8,753	3,686
R&D expenses	588	758	594	866	779	422	317
Ratio to net commercial sales (*percent*)							
COGS	94.6	91.3	86.8	84.2	88.2	87.3	95.0
Gross profit or (loss)	5.4	8.7	13.2	15.8	11.8	12.7	5.0
SG&A expenses	3.4	4.4	4.3	5.7	4.6	4.1	5.2
Operating income or (loss)	2.1	4.3	8.9	10.0	7.2	8.6	(0.2)
Net income or (loss)	(2.0)	1.2	5.6	6.1	3.0	5.3	(4.0)
Unit value (*dollars per ton*)							
Net commercial sales	489	485	498	474	464	475	465
COGS total	463	443	432	399	409	414	442
Raw materials	221	225	218	190	191	199	177
Direct labor	92	80	77	82	84	85	105
Other factory costs	170	154	151	141	150	147	188
Gross profit or (loss)	27	42	66	75	55	60	23
SG&A expenses	17	21	22	27	22	19	24
Operating income or (loss)	10	21	44	48	33	41	(1)
Number of firms reporting							
Operating losses	3	3	3	2	2	1	2
Data	5	5	6	6	6	6	6

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-31
Wire: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
				Quantity (*tons*)			
Net commercial sales	1,890,314	1,942,190	2,124,662	2,181,265	2,156,197	1,089,146	927,262
				Value (*$1,000*)			
Net commercial sales	1,337,654	1,370,424	1,472,945	1,460,620	1,444,708	720,222	596,739
COGS	1,122,319	1,141,582	1,222,786	1,179,064	1,187,575	576,877	499,565
Gross profit or (loss)	215,335	228,842	250,159	281,556	257,133	143,345	97,174
SG&A expenses	88,162	99,154	115,517	118,618	119,966	57,573	50,219
Operating income or (loss)	127,174	129,688	134,641	162,938	137,167	85,773	46,955
Interest expense	16,784	17,767	20,647	23,422	25,954	9,054	9,697
Other (income)/expenses, net	1,076	3,132	3,161	3,959	3,121	1,002	1,873
Net income or (loss)	109,314	108,789	110,833	135,557	108,092	75,717	35,385
Depreciation/amortization	37,890	40,954	47,113	49,792	50,622	20,685	21,019
Cash flow	147,204	149,743	157,947	185,350	158,713	96,402	56,405
Capital expenditures	39,422	56,893	73,166	66,687	53,223	23,813	19,488
R&D expenses	1,844	2,139	2,957	2,678	2,705	1,616	1,339
				Ratio to net commercial sales (*percent*)			
COGS	83.9	83.3	83.0	80.7	82.2	80.1	83.7
Gross profit or (loss)	16.1	16.7	17.0	19.3	17.8	19.9	16.3
SG&A expenses	6.6	7.2	7.8	8.1	8.3	8.0	8.4
Operating income or (loss)	9.5	9.5	9.1	11.2	9.5	11.9	7.9
Net income or (loss)	8.2	7.9	7.5	9.3	7.5	10.5	5.9
				Unit value (*dollars per ton*)			
Net commercial sales	708	706	693	670	670	661	644
COGS total	594	588	576	541	551	530	539
Raw materials	391	386	379	343	349	342	336
Direct labor	39	36	36	37	40	37	38
Other factory costs	131	133	128	129	132	121	136
Gross profit or (loss)	114	118	118	129	119	132	105
SG&A expenses	47	51	54	54	56	53	54
Operating income or (loss)	67	67	63	75	64	79	51
				Number of firms reporting			
Operating losses	5	6	3	7	9	3	11
Data	34	35	35	36	36	33	33

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-32
Rope: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	527,118	558,565	610,081	641,031	609,171	329,205	319,340
Value (*$1,000*)							
Net commercial sales	638,100	698,024	722,803	716,958	679,563	359,802	341,525
COGS	514,171	558,542	589,544	581,480	554,303	291,596	283,277
Gross profit or (loss)	123,929	139,482	133,259	135,478	125,260	68,206	58,248
SG&A expenses	62,170	71,203	71,094	66,454	59,583	32,929	30,640
Operating income or (loss)	61,759	68,279	62,165	69,024	65,677	35,277	27,608
Interest expense	11,579	14,578	12,706	15,835	18,915	10,596	9,708
Other (income)/expenses, net	1,484	1,674	1,553	1,186	166	97	524
Net income or (loss)	48,696	52,027	47,906	52,003	46,596	24,584	17,376
Depreciation/amortization	37,812	41,604	44,173	46,002	45,038	22,892	23,193
Cash flow	86,508	93,631	92,079	98,005	91,634	47,476	40,569
Capital expenditures	59,292	31,847	31,379	39,001	26,318	11,236	18,150
R&D expenses	437	511	1,313	1,455	1,731	925	976
Ratio to net commercial sales (*percent*)							
COGS	80.6	80.0	81.6	81.1	81.6	81.0	82.9
Gross profit or (loss)	19.4	20.0	18.4	18.9	18.4	19.0	17.1
SG&A expenses	9.7	10.2	9.8	9.3	8.8	9.2	9.0
Operating income or (loss)	9.7	9.8	8.6	9.6	9.7	9.8	8.1
Net income or (loss)	7.6	7.5	6.6	7.3	6.9	6.8	5.1
Unit value (*dollars per ton*)							
Net commercial sales	1,211	1,250	1,185	1,118	1,116	1,093	1,069
COGS total	975	1,000	966	907	910	886	887
Raw materials	508	509	479	441	443	454	422
Direct labor	148	152	137	139	172	163	167
Other factory costs	209	232	233	231	239	202	228
Gross profit or (loss)	235	250	218	211	206	207	182
SG&A expenses	118	127	117	104	98	100	96
Operating income or (loss)	117	122	102	108	108	107	86
Number of firms reporting							
Operating losses	2	2	3	4	4	2	4
Data	12	13	13	12	11	11	12

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-33
Nails: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
				Quantity (*tons*)			
Net commercial sales	493,127	466,412	486,064	470,635	451,007	241,769	199,804
				Value (*$1,000*)			
Net commercial sales	582,299	581,827	602,544	591,909	538,889	285,353	242,450
COGS	417,494	421,793	431,198	420,380	403,101	214,731	186,494
Gross profit or (loss)	164,805	160,034	171,346	171,529	135,788	70,622	55,956
SG&A expenses	103,706	108,059	112,371	103,269	94,798	44,148	40,981
Operating income or (loss)	61,099	51,975	58,975	68,260	40,990	26,474	14,975
Interest expense	4,915	5,563	5,803	3,557	3,437	1,595	1,556
Other (income)/expenses, net	(1,100)	(857)	(2,129)	365	1,509	1,188	1,313
Net income or (loss)	57,284	47,269	55,301	64,338	36,044	23,691	12,106
Depreciation/amortization	12,769	14,146	13,842	14,626	16,457	8,050	8,543
Cash flow	70,053	61,415	69,143	78,964	52,501	31,741	20,649
Capital expenditures	12,429	13,015	15,948	24,751	16,984	10,969	2,186
R&D expenses	4,321	2,824	2,415	2,485	2,574	1,338	1,171
				Ratio to net commercial sales (*percent*)			
COGS	71.7	72.5	71.6	71.0	74.8	75.3	76.9
Gross profit or (loss)	28.3	27.5	28.4	29.0	25.2	24.7	23.1
SG&A expenses	17.8	18.6	18.6	17.4	17.6	15.5	16.9
Operating income or (loss)	10.5	8.9	9.8	11.5	7.6	9.3	6.2
Net income or (loss)	9.8	8.1	9.2	10.9	6.7	8.3	5.0
				Unit value (*dollars per ton*)			
Net commercial sales	1,181	1,247	1,240	1,258	1,195	1,180	1,213
COGS total	847	904	887	893	894	888	933
Raw materials	452	495	482	470	473	465	486
Direct labor	129	137	132	140	141	133	142
Other factory costs	227	242	247	257	261	268	290
Gross profit or (loss)	334	343	353	364	301	292	280
SG&A expenses	210	232	231	219	210	183	205
Operating income or (loss)	124	111	121	145	91	110	75
				Number of firms reporting			
Operating losses	3	5	0	2	6	5	6
Data	14	15	14	14	14	12	12

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-34
Shapes: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
				Quantity (*tons*)			
Net commercial sales	5,603,691	6,123,046	5,659,555	6,333,146	6,718,470	3,646,395	3,133,961
				Value (*$1,000*)			
Net commercial sales	2,242,885	2,448,071	2,227,151	2,237,116	2,535,524	1,422,697	1,059,238
COGS	1,831,167	1,963,681	1,833,109	1,914,015	2,101,475	1,126,341	958,721
Gross profit or (loss)	411,718	484,390	394,042	323,101	434,049	296,356	100,517
SG&A expenses	79,627	102,190	76,588	94,051	110,277	58,259	48,743
Operating income or (loss)	332,091	382,200	317,454	229,050	323,772	238,097	51,774
Interest expense	20,887	18,017	19,262	57,269	62,757	31,882	30,928
Other (income)/expenses, net	8,530	(5,411)	(10,690)	(10,164)	(13,979)	(2,650)	(4,813)
Net income or (loss)	302,674	369,594	308,882	181,945	274,994	208,865	25,660
Depreciation/amortization	97,045	104,434	104,853	144,029	143,712	73,999	72,157
Cash flow	399,719	474,028	413,735	325,974	418,707	282,864	97,817
Capital expenditures	91,284	207,271	672,035	177,222	75,979	27,252	29,484
R&D expenses	230	219	10	217	223	156	84
				Ratio to net commercial sales (*percent*)			
COGS	81.6	80.2	82.3	85.6	82.9	79.2	90.5
Gross profit or (loss)	18.4	19.8	17.7	14.4	17.1	20.8	9.5
SG&A expenses	3.6	4.2	3.4	4.2	4.3	4.1	4.6
Operating income or (loss)	14.8	15.6	14.3	10.2	12.8	16.7	4.9
Net income or (loss)	13.5	15.1	13.9	8.1	10.8	14.7	2.4
				Unit value (*dollars per ton*)			
Net commercial sales	400	400	394	353	377	390	338
COGS total	327	321	324	302	313	309	306
Raw materials	194	190	183	157	161	167	145
Direct labor	25	26	29	32	31	31	33
Other factory costs	107	105	113	113	121	111	128
Gross profit or (loss)	73	79	70	51	65	81	32
SG&A expenses	14	17	14	15	16	16	16
Operating income or (loss)	59	62	56	36	48	65	17
				Number of firms reporting			
Operating losses	1	1	1	3	5	3	5
Data	11	11	11	11	11	11	11

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-35
Fabricated: Results of operations[1] of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
				Quantity (*tons*)			
Net commercial sales	1,034,965	1,125,365	1,220,913	1,285,129	1,287,643	594,132	575,742
				Value (*$1,000*)			
Net commercial sales	1,077,556	1,188,352	1,338,845	1,400,146	1,454,099	678,380	632,353
COGS	795,880	901,136	1,018,455	1,029,528	1,096,636	517,729	474,909
Gross profit or (loss)	281,676	287,216	320,390	370,618	357,463	160,651	157,444
SG&A expenses	120,316	125,203	131,667	144,195	148,621	68,232	64,730
Operating income or (loss)	161,360	162,014	188,723	226,423	208,842	92,419	92,714
Interest expense	4,879	5,588	3,917	4,951	11,495	5,322	5,592
Other (income)/expenses, net	(5,022)	(279)	322	(1,248)	(3,127)	(1,144)	982
Net income or (loss)	161,503	156,704	184,483	222,720	200,474	88,241	86,140
Depreciation/amortization	15,565	17,329	19,207	20,290	21,065	12,029	12,764
Cash flow	177,068	174,034	203,690	243,010	221,539	100,271	98,904
Capital expenditures	10,982	19,124	12,163	14,245	18,969	8,173	8,500
R&D expenses	882	889	836	966	1,444	512	518
				Ratio to net commercial sales (*percent*)			
COGS	73.9	75.8	76.1	73.5	75.4	76.3	75.1
Gross profit or (loss)	26.1	24.2	23.9	26.5	24.6	23.7	24.9
SG&A expenses	11.2	10.5	9.8	10.3	10.2	10.1	10.2
Operating income or (loss)	15.0	13.6	14.1	16.2	14.4	13.6	14.7
Net income or (loss)	15.0	13.2	13.8	15.9	13.8	13.0	13.6
				Unit value (*dollars per ton*)			
Net commercial sales	988	1,001	1,049	1,043	1,072	1,085	1,039
COGS total	725	756	795	765	807	828	782
Raw materials	462	476	478	438	463	487	433
Direct labor	120	127	128	122	127	128	139
Other factory costs	135	148	158	159	157	153	151
Gross profit or (loss)	263	245	253	279	265	258	257
SG&A expenses	110	105	102	107	108	109	105
Operating income or (loss)	153	140	151	172	156	149	152
				Number of firms reporting			
Operating losses	4	3	3	2	1	4	4
Data	26	26	27	27	28	21	23

[1] Some of the producers of fabricated structural units included the revenue and related costs of erection services in the financial data.

Source: Compiled from data submitted in response to Commission questionnaires.

QUESTION OF THREAT OF SERIOUS INJURY

FOREIGN PRODUCER DATA

Total Long

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of all carbon and alloy long products. These data are presented for all non-U.S. countries, Canada, and Mexico in tables LONG-36 through LONG-38, respectively (data presented in table LONG-36 are the sum of data for subordinate product categories presented in tables LONG-39, 42, 45, 48, 51, 52, 55, 58, 61, and 64; data presented in table LONG-37 are similarly the sum of data presented in tables LONG-40, 43, 46, 49, 53, 56, 59, 62, and 65; and data presented in table LONG-38 are the sum of data presented in tables LONG-41, 44, 47, 50, 54, 57, 60, 63, and 66).[6]

Table LONG-36
Total long: All non-U.S. countries' production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
	Quantity (*tons*)								
Production	139,305,103	151,380,335	149,520,109	152,709,283	162,160,762	81,188,716	81,856,344	149,839,827	152,861,829
Shipments: Internal consumption	61,842,853	66,167,231	64,456,179	63,298,816	65,565,587	32,977,803	33,090,477	61,900,257	62,546,636
Home market	56,270,076	60,194,739	58,209,731	60,756,811	65,426,551	32,810,841	32,559,981	62,874,404	65,142,706
Exports to– United States	4,039,944	4,451,207	5,864,792	5,024,252	5,970,127	3,133,711	1,901,806	3,862,091	4,668,810
All other	20,122,827	22,850,921	21,884,500	23,103,490	24,223,636	12,499,631	13,941,395	25,378,266	25,006,376
Total exports	24,162,771	27,302,128	27,749,292	28,127,742	30,193,762	15,633,342	15,843,201	29,240,357	29,675,186
Total shipments	142,275,700	153,664,098	150,415,202	152,183,370	161,185,900	81,421,986	81,493,660	154,015,018	157,364,528
Ending inventories	5,971,643	6,305,863	7,270,643	7,049,750	7,955,990	7,544,024	7,844,202	7,094,300	6,939,313
	Ratios and shares (*percent*)								
Inventories/total shipments	4.2	4.1	4.8	4.6	4.9	4.6	4.8	4.6	4.4
Share of total shipments: Internal consumption	43.5	43.1	42.9	41.6	40.7	40.5	40.6	40.2	39.7
Home market	39.6	39.2	38.7	39.9	40.6	40.3	40.0	40.8	41.4
Exports to– United States	2.8	2.9	3.9	3.3	3.7	3.8	2.3	2.5	3.0
All other	14.1	14.9	14.5	15.2	15.0	15.4	17.1	16.5	15.9
Total exports	17.0	17.8	18.4	18.5	18.7	19.2	19.4	19.0	18.9

Source: Compiled from data submitted in response to Commission questionnaires.

[6] Significant double-counting issues arise for some of the items presented in tables LONG-36-38 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs. However, they offered no techniques to resolve any double-counting other than making their arguments on the basis of subordinate categories or aggregations of sub-categories.

Table LONG-37
Total long: Canada's production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Production	7,342,565	7,596,132	7,567,209	7,200,575	7,262,194	3,766,132	2,829,499	5,809,964	6,610,878
Shipments: Internal consumption	3,729,873	3,810,368	3,780,279	3,476,025	3,409,982	1,765,025	1,275,169	2,715,645	3,091,295
Home market	2,225,950	2,336,512	2,297,213	2,321,542	2,111,813	1,120,356	966,598	1,777,259	2,099,115
Exports to– United States	1,247,420	1,304,234	1,308,118	1,276,205	1,402,085	751,466	564,919	1,139,912	1,245,086
All other	123,718	140,545	179,550	199,729	226,705	92,775	123,592	272,705	209,270
Total exports	1,371,138	1,444,779	1,487,668	1,475,934	1,628,790	844,241	688,511	1,412,617	1,454,356
Total shipments	7,326,961	7,591,659	7,565,160	7,273,501	7,150,585	3,729,622	2,930,278	5,905,521	6,644,766
Ending inventories	525,334	537,229	552,856	478,552	591,584	516,406	490,174	427,008	390,940
					Ratios and shares (*percent*)				
Inventories/total shipments	7.2	7.1	7.3	6.6	8.3	6.9	8.4	7.2	5.9
Share of total shipments: Internal consumption	50.9	50.2	50.0	47.8	47.7	47.3	43.5	46.0	46.5
Home market	30.4	30.8	30.4	31.9	29.5	30.0	33.0	30.1	31.6
Exports to– United States	17.0	17.2	17.3	17.5	19.6	20.1	19.3	19.3	18.7
All other	1.7	1.9	2.4	2.7	3.2	2.5	4.2	4.6	3.1
Total exports	18.7	19.0	19.7	20.3	22.8	22.6	23.5	23.9	21.9

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-38
Total long: Mexico's production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Production	5,112,502	5,064,418	5,293,578	5,139,492	5,156,251	2,553,208	2,397,124	4,780,482	5,545,503
Shipments:									
Internal consumption	1,566,122	1,598,716	1,634,212	1,576,710	1,540,208	725,653	625,215	1,292,928	1,652,497
Home market	2,644,827	2,698,246	3,165,695	3,173,018	3,177,179	1,592,387	1,577,418	3,108,412	3,374,253
Exports to–									
United States	350,420	364,013	256,154	284,016	263,205	146,599	175,436	379,523	451,228
All other	471,553	364,990	114,006	87,994	38,022	17,680	37,116	54,208	68,366
Total exports	821,973	729,003	370,160	372,010	301,227	164,279	212,552	433,731	519,594
Total shipments	5,032,922	5,025,965	5,170,067	5,121,738	5,018,614	2,482,319	2,415,185	4,835,071	5,546,344
Ending inventories	156,450	174,022	232,139	190,990	319,378	257,831	284,165	238,453	238,815
					Ratios and shares (*percent*)				
Inventories/total shipments	3.1	3.5	4.5	3.7	6.4	5.2	5.9	4.9	4.3
Share of total shipments:									
Internal consumption	31.1	31.8	31.6	30.8	30.7	29.2	25.9	26.7	29.8
Home market	52.6	53.7	61.2	62.0	63.3	64.1	65.3	64.3	60.8
Exports to–									
United States	7.0	7.2	5.0	5.5	5.2	5.9	7.3	7.8	8.1
All other	9.4	7.3	2.2	1.7	0.8	0.7	1.5	1.1	1.2
Total exports	16.3	14.5	7.2	7.3	6.0	6.6	8.8	9.0	9.4

Source: Compiled from data submitted in response to Commission questionnaires.

Ingots

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of ingots. These data are presented for all non-U.S. countries, Canada, and Mexico in tables LONG-39 through LONG-41, respectively.

Table LONG-39
Ingots: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	84,628,657	87,883,422	88,754,119	90,589,466	91,195,628	44,878,311	44,420,225	87,791,270	86,862,492
Production	70,099,786	75,682,320	73,901,371	74,490,954	77,626,968	38,520,068	39,334,542	71,097,704	71,227,155
Shipments: Internal consumption	57,720,954	61,651,493	59,955,584	58,828,617	60,789,983	30,533,096	30,773,483	57,514,153	58,086,597
Home market	9,525,177	10,076,355	10,168,287	10,952,638	10,668,162	5,379,410	5,335,895	9,654,528	9,796,045
Exports to– United States	656,143	742,748	680,602	743,953	762,015	372,195	216,614	378,836	386,038
All other	4,489,100	5,700,101	4,931,921	5,716,891	6,759,564	3,411,812	4,006,506	7,365,742	6,932,244
Total exports	5,145,243	6,442,849	5,612,523	6,460,844	7,521,579	3,784,007	4,223,120	7,744,577	7,318,282
Total shipments	72,391,374	78,170,697	75,736,395	76,242,099	78,979,724	39,696,513	40,332,477	74,913,259	75,200,924
Ending inventories	2,528,072	2,705,275	2,977,810	2,622,406	3,071,672	2,808,098	2,977,444	2,750,650	2,676,689
					Ratios and shares (*percent*)				
Capacity utilization	82.7	86.0	83.2	82.2	85.1	84.9	87.6	81.0	81.9
Inventories/total shipments	3.5	3.5	3.9	3.4	3.9	3.5	3.7	3.7	3.6
Share of total shipments: Internal consumption	79.7	78.9	79.2	77.2	77.0	76.9	76.3	76.8	77.2
Home market	13.2	12.9	13.4	14.4	13.5	13.6	13.2	12.9	13.0
Exports to– United States	0.9	1.0	0.9	1.0	1.0	0.9	0.5	0.5	0.5
All other	6.2	7.3	6.5	7.5	8.6	8.6	9.9	9.8	9.2
Total exports	7.1	8.2	7.4	8.5	9.5	9.5	10.5	10.3	9.7

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-40
Ingots: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
Quantity (*tons*)									
Capacity	4,018,220	4,011,358	4,062,272	3,786,879	3,743,032	1,760,516	1,746,086	3,687,172	3,735,552
Production	3,821,784	3,878,966	3,795,443	3,523,189	3,610,153	1,805,857	1,303,629	2,812,921	3,087,690
Shipments: Internal consumption	3,685,449	3,767,733	3,739,669	3,443,014	3,380,471	1,747,759	1,265,509	2,688,926	3,064,309
Home market	37,558	41,525	23,167	7,778	9,481	3,227	3,072	4,510	4,350
Exports to– United States	34,366	10,156	47,179	106,408	97,705	46,289	60,403	103,684	44,350
All other	45,508	28,593	11,358	13,303	58,986	5,574	31,181	75,278	10,000
Total exports	79,874	38,749	58,537	119,711	156,691	51,863	91,584	178,962	54,350
Total shipments	3,802,881	3,848,007	3,821,373	3,570,503	3,546,643	1,802,849	1,360,165	2,872,398	3,123,009
Ending inventories	236,382	266,511	242,789	195,061	261,205	200,673	205,426	197,280	161,961
Ratios and shares (*percent*)									
Capacity utilization	95.1	96.7	93.4	93.0	96.4	102.6	74.7	76.3	82.7
Inventories/total shipments	6.2	6.9	6.4	5.5	7.4	5.6	7.6	6.9	5.2
Share of total shipments: Internal consumption	96.9	97.9	97.9	96.4	95.3	96.9	93.0	93.6	98.1
Home market	1.0	1.1	0.6	0.2	0.3	0.2	0.2	0.2	0.1
Exports to– United States	0.9	0.3	1.2	3.0	2.8	2.6	4.4	3.6	1.4
All other	1.2	0.7	0.3	0.4	1.7	0.3	2.3	2.6	0.3
Total exports	2.1	1.0	1.5	3.4	4.4	2.9	6.7	6.2	1.7

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-41
Ingots: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

* * * * * * *

Hot Bar

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of hot bar. These data are presented for all non-U.S. countries, Canada, and Mexico in tables LONG-42 through LONG-44, respectively.

Table LONG-42
Hot bar: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Capacity	26,654,879	28,859,489	29,221,275	29,097,292	29,764,942	15,005,760	15,265,607	30,178,677	30,217,397
Production	19,910,053	22,927,429	21,930,483	21,633,165	23,637,415	11,988,577	11,761,989	21,761,894	22,043,982
Shipments: Internal consumption	1,149,604	1,265,088	1,241,152	1,141,818	1,372,179	719,668	690,364	1,322,643	1,260,378
Home market	14,072,544	15,397,137	14,501,826	14,222,408	15,576,891	7,811,538	7,836,158	14,651,175	14,995,128
Exports to– United States	1,122,911	1,218,979	1,343,889	1,199,838	1,464,240	751,527	484,034	963,037	1,169,652
All other	3,986,598	4,790,668	4,548,614	4,421,183	4,449,763	2,333,384	2,526,153	4,537,203	4,481,755
Total exports	5,109,509	6,009,645	5,892,503	5,621,021	5,914,004	3,084,911	3,010,187	5,500,240	5,651,407
Total shipments	20,331,657	22,671,870	21,635,481	20,985,248	22,863,074	11,816,117	11,536,709	21,474,057	21,906,913
Ending inventories	1,088,977	1,210,170	1,279,253	1,240,544	1,374,302	1,275,490	1,262,143	1,224,647	1,142,234
					Ratios and shares (*percent*)				
Capacity utilization	74.7	79.4	75.0	74.3	79.4	77.2	74.4	72.1	73.0
Inventories/total shipments	5.4	5.3	5.9	5.9	6.0	5.5	5.5	5.7	5.2
Share of total shipments: Internal consumption	5.7	5.6	5.7	5.4	6.0	6.2	6.0	6.2	5.8
Home market	69.2	67.9	67.0	67.8	68.1	67.2	67.9	68.2	68.4
Exports to– United States	5.5	5.4	6.2	5.7	6.4	6.5	4.2	4.5	5.3
All other	19.6	21.1	21.0	21.1	19.5	20.1	21.9	21.1	20.5
Total exports	25.1	26.5	27.2	26.8	25.9	26.6	26.1	25.6	25.8

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-43
Hot bar: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	2,621,850	2,661,168	2,711,691	2,718,773	2,735,076	1,255,079	1,153,777	2,818,071	2,952,776
Production	1,884,386	1,930,406	2,015,849	1,961,066	2,099,841	1,152,016	842,728	1,549,025	1,860,484
Shipments: Internal consumption	43,985	42,116	40,234	32,441	29,532	17,402	9,186	25,710	26,097
Home market	1,057,016	1,073,368	1,103,163	1,132,005	1,174,793	648,520	537,737	876,553	1,045,400
Exports to– United States	695,748	723,871	692,462	624,347	674,148	362,344	248,949	479,219	591,782
All other	69,302	108,231	164,251	183,540	165,616	86,017	91,459	195,475	196,638
Total exports	765,050	832,102	856,713	807,887	839,764	448,361	340,408	674,694	788,420
Total shipments	1,866,051	1,947,586	2,000,110	1,972,333	2,044,089	1,114,283	887,331	1,576,957	1,859,917
Ending inventories	195,631	177,704	204,575	192,544	247,085	228,797	201,094	155,839	156,226
					Ratios and shares (*percent*)				
Capacity utilization	71.9	72.5	74.3	72.1	76.8	78.7	59.6	55.0	63.0
Inventories/total shipments	10.5	9.1	10.2	9.8	12.1	10.3	11.3	9.9	8.4
Share of total shipments: Internal consumption	2.4	2.2	2.0	1.6	1.4	1.6	1.0	1.6	1.4
Home market	56.6	55.1	55.2	57.4	57.5	58.2	60.6	55.6	56.2
Exports to– United States	37.3	37.2	34.6	31.7	33.0	32.5	28.1	30.4	31.8
All other	3.7	5.6	8.2	9.3	8.1	7.7	10.3	12.4	10.6
Total exports	41.0	42.7	42.8	41.0	41.1	40.2	38.4	42.8	42.4

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-44
Hot bar: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	802,682	816,337	840,303	889,000	889,647	444,381	626,859	1,172,422	1,184,522
Production	696,806	705,306	713,297	688,863	680,178	356,938	338,570	729,702	870,144
Shipments: Internal consumption	0	0	0	0	0	0	0	0	0
Home market	557,995	554,014	562,918	571,088	571,088	302,402	275,507	582,075	695,198
Exports to– United States	103,781	115,649	119,635	112,374	102,159	59,020	51,324	115,702	153,788
All other	31,051	27,561	20,277	13,448	7,934	3,357	6,380	4,347	15,750
Total exports	134,832	143,210	139,912	125,822	110,093	62,377	57,704	120,049	169,538
Total shipments	692,827	697,224	702,830	696,910	681,181	364,779	333,211	702,124	864,736
Ending inventories	16,997	26,349	37,754	29,745	29,288	21,985	31,246	48,408	53,816
					Ratios and shares (*percent*)				
Capacity utilization	86.8	86.4	84.9	77.5	76.5	80.3	54.0	62.2	73.5
Inventories/total shipments	2.5	3.8	5.4	4.3	4.3	3.0	4.7	6.9	6.2
Share of total shipments: Internal consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Home market	80.5	79.5	80.1	81.9	83.8	82.9	82.7	82.9	80.4
Exports to– United States	15.0	16.6	17.0	16.1	15.0	16.2	15.4	16.5	17.8
All other	4.5	4.0	2.9	1.9	1.2	0.9	1.9	0.6	1.8
Total exports	19.5	20.5	19.9	18.1	16.2	17.1	17.3	17.1	19.6

Source: Compiled from data submitted in response to Commission questionnaires.

Cold Bar

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of cold bar. These data are presented for all non-U.S. countries, Canada, and Mexico in tables LONG-45 through LONG-47, respectively.

Table LONG-45
Cold bar: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	1,630,560	1,863,572	1,923,722	1,913,443	2,029,963	1,063,876	1,088,770	2,105,032	2,188,651
Production	1,245,554	1,478,387	1,561,541	1,438,603	1,710,741	888,984	901,228	1,740,074	1,793,251
Shipments: Internal consumption	9,238	7,884	7,721	6,573	57,371	28,785	25,975	51,009	56,147
Home market	868,454	1,062,551	1,038,749	982,509	1,069,103	558,418	544,735	839,832	834,979
Exports to– United States	84,981	81,238	91,508	59,296	108,951	62,656	56,287	119,029	148,994
All other	334,285	414,654	448,241	414,899	528,267	268,372	304,284	543,943	574,512
Total exports	419,266	495,892	539,749	474,195	637,218	331,028	360,571	662,972	723,506
Total shipments	1,296,958	1,566,327	1,586,219	1,463,277	1,763,692	918,231	931,281	1,553,813	1,614,632
Ending inventories	113,151	115,940	124,516	121,305	129,679	122,340	128,193	131,261	125,923
					Ratios and shares (*percent*)				
Capacity utilization	76.4	79.3	81.2	75.2	84.3	82.1	81.6	82.7	81.9
Inventories/total shipments	8.7	7.4	7.8	8.3	7.4	6.7	6.9	8.4	7.8
Share of total shipments: Internal consumption	0.7	0.5	0.5	0.4	3.3	3.1	2.8	3.3	3.5
Home market	67.0	67.8	65.5	67.1	60.6	60.8	58.5	54.0	51.7
Exports to– United States	6.6	5.2	5.8	4.1	6.2	6.8	6.0	7.7	9.2
All other	25.8	26.5	28.3	28.4	30.0	29.2	32.7	35.0	35.6
Total exports	32.3	31.7	34.0	32.4	36.1	36.1	38.7	42.7	44.8

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-46
Cold bar: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
Quantity (*tons*)									
Capacity	21,900	21,900	20,050	18,550	18,700	9,400	9,400	18,700	18,700
Production	18,634	19,042	17,334	15,054	13,994	7,080	7,614	15,317	16,420
Shipments: Internal consumption	0	0	0	0	0	0	0	0	0
Home market	12,662	12,707	11,459	8,184	7,131	3,738	3,979	6,632	6,732
Exports to– United States	5,789	4,969	5,291	6,372	6,573	3,163	3,416	8,288	8,288
All other	300	466	563	560	359	282	221	400	400
Total exports	6,089	5,435	5,854	6,932	6,932	3,445	3,637	8,688	8,688
Total shipments	18,751	18,142	17,313	15,116	14,063	7,183	7,616	15,320	15,420
Ending inventories	433	333	354	292	223	189	221	220	220
Ratios and shares (*percent*)									
Capacity utilization	85.1	86.9	86.5	81.2	74.8	75.3	81.0	81.9	87.8
Inventories/total shipments	2.3	1.8	2.0	1.9	1.6	1.3	1.5	1.4	1.4
Share of total shipments: Internal consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Home market	67.5	70.0	66.2	54.1	50.7	52.0	52.2	43.3	43.7
Exports to– United States	30.9	27.4	30.6	42.2	46.7	44.0	44.9	54.1	53.7
All other	1.6	2.6	3.3	3.7	2.6	3.9	2.9	2.6	2.6
Total exports	32.5	30.0	33.8	45.9	49.3	48.0	47.8	56.7	56.3

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-47
Cold bar: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

* * * * * * *

Rebar

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of rebar. These data are presented for all non-U.S. countries, Canada, and Mexico in tables LONG-48 through LONG-50, respectively.

Table LONG-48
Rebar: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Capacity	23,958,993	24,976,896	25,789,808	28,846,054	29,635,635	16,104,594	16,956,543	27,914,288	28,040,676
Production	19,580,249	21,119,994	21,726,315	24,377,255	25,640,764	12,592,327	13,756,076	22,653,129	23,211,569
Shipments:									
Internal consumption	464,444	604,389	573,923	641,943	599,788	304,636	370,375	677,139	702,349
Home market	13,752,520	15,227,624	15,015,011	16,112,113	18,155,434	9,033,747	9,219,903	17,580,692	18,246,251
Exports to–									
United States	433,571	430,073	545,070	953,018	1,111,268	671,909	430,538	716,503	787,398
All other	5,204,737	4,964,651	5,467,346	5,275,435	4,659,294	2,426,656	3,000,830	4,826,824	4,665,973
Total exports	5,638,308	5,394,724	6,012,416	6,228,454	5,770,562	3,098,565	3,431,368	5,543,327	5,453,371
Total shipments	19,855,273	21,226,738	21,601,350	22,982,510	24,525,785	12,436,948	13,021,646	23,801,158	24,401,971
Ending inventories	842,914	808,225	1,013,092	1,186,234	1,153,575	1,007,694	1,117,268	925,095	900,727
					Ratios and shares (*percent*)				
Capacity utilization	81.7	84.6	84.2	84.5	86.5	78.2	81.1	81.2	82.8
Inventories/total shipments	4.2	3.8	4.7	5.2	4.7	4.1	4.3	3.9	3.7
Share of total shipments:									
Internal consumption	2.3	2.8	2.7	2.8	2.4	2.4	2.8	2.8	2.9
Home market	69.3	71.7	69.5	70.1	74.0	72.6	70.8	73.9	74.8
Exports to–									
United States	2.2	2.0	2.5	4.1	4.5	5.4	3.3	3.0	3.2
All other	26.2	23.4	25.3	23.0	19.0	19.5	23.0	20.3	19.1
Total exports	28.4	25.4	27.8	27.1	23.5	24.9	26.4	23.3	22.3

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-49
Rebar: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
Quantity (*tons*)									
Capacity	1,056,884	1,061,348	1,085,502	1,074,198	1,065,520	544,081	547,005	1,073,969	1,122,525
Production	360,751	381,254	310,589	383,771	283,306	109,738	126,066	281,955	357,327
Shipments: Internal consumption	336	436	303	317	71	36	125	125	0
Home market	373,814	378,977	300,597	397,636	275,827	118,425	132,257	291,075	356,463
Exports to– United States	170	0	179	548	0	0	0	0	0
All other	0	0	0	0	0	0	0	0	0
Total exports	170	0	179	548	0	0	0	0	0
Total shipments	374,320	379,413	301,079	398,501	275,898	118,461	132,382	291,200	356,463
Ending inventories	16,017	17,858	27,368	12,638	20,046	3,915	13,730	10,801	11,665
Ratios and shares (*percent*)									
Capacity utilization	34.1	35.9	28.6	35.7	26.6	20.2	23.0	26.3	31.8
Inventories/total shipments	4.3	4.7	9.1	3.2	7.3	1.7	5.2	3.7	3.3
Share of total shipments: Internal consumption	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0
Home market	99.9	99.9	99.8	99.8	100.0	100.0	99.9	100.0	100.0
Exports to– United States	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
All other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total exports	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-50
Rebar: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	1,872,266	1,840,414	1,966,414	2,011,388	3,053,191	1,628,331	1,576,525	2,939,821	2,707,425
Production	1,795,795	1,713,805	1,756,288	1,776,967	1,966,624	989,746	980,133	1,878,528	2,051,911
Shipments: Internal consumption	0	3,237	0	0	0	0	0	0	0
Home market	1,248,060	1,355,571	1,607,617	1,720,508	1,807,967	899,725	924,217	1,808,456	1,889,007
Exports to– United States	160,527	148,829	23,638	40,224	27,635	14,075	61,246	124,252	138,278
All other	371,596	205,937	58,987	51,541	5,133	3,828	18,767	28,000	30,000
Total exports	532,123	354,766	82,625	91,765	32,768	17,903	80,013	152,252	168,278
Total shipments	1,780,183	1,713,574	1,690,242	1,812,273	1,840,735	917,628	1,004,230	1,958,708	2,057,285
Ending inventories	53,839	53,771	116,781	79,344	202,336	148,480	176,744	120,662	115,287
					Ratios and shares (*percent*)				
Capacity utilization	95.9	93.1	89.3	88.3	64.4	60.8	62.2	63.9	75.8
Inventories/total shipments	3.0	3.1	6.9	4.4	11.0	8.1	8.8	6.2	5.6
Share of total shipments: Internal consumption	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Home market	70.1	79.1	95.1	94.9	98.2	98.0	92.0	92.2	91.8
Exports to– United States	9.0	8.7	1.4	2.2	1.5	1.5	6.1	6.3	6.7
All other	20.9	12.0	3.5	2.8	0.3	0.4	1.9	1.4	1.5
Total exports	29.9	20.7	4.9	5.1	1.8	2.0	8.0	7.8	8.2

Source: Compiled from data submitted in response to Commission questionnaires.

Rails

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of rails. These data are presented for all non-U.S. countries in table LONG-51. The Commission received no usable data from rail producers in Canada and Mexico.

Table LONG-51
Rails: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Capacity	2,055,908	2,704,694	2,740,198	2,714,722	2,701,579	1,363,511	1,365,740	2,725,037	2,794,163
Production	1,831,352	2,203,226	2,446,763	2,124,663	2,109,005	1,023,884	1,061,960	2,245,559	2,353,530
Shipments:									
Internal consumption	10,193	6,542	8,682	6,703	8,873	3,957	2,822	4,300	3,246
Home market	1,160,918	1,317,239	1,411,817	1,289,443	1,313,362	621,013	620,497	1,287,883	1,294,006
Exports to–									
United States	100,572	114,502	171,395	119,990	100,260	54,292	31,680	84,148	126,403
All other	573,020	826,177	832,502	718,249	674,397	315,963	429,671	895,111	915,979
Total exports	673,592	940,680	1,003,897	838,238	774,658	370,255	461,352	979,259	1,042,382
Total shipments	1,844,702	2,264,461	2,424,396	2,134,384	2,096,893	995,225	1,084,670	2,271,442	2,339,634
Ending inventories	166,372	168,607	191,124	178,299	186,120	210,720	157,312	147,546	162,923
					Ratios and shares (*percent*)				
Capacity utilization	76.4	81.5	89.3	78.3	78.1	75.1	77.8	82.4	84.2
Inventories/total shipments	9.0	7.4	7.9	8.4	8.9	10.6	7.3	6.5	7.0
Share of total shipments:									
Internal consumption	0.6	0.3	0.4	0.3	0.4	0.4	0.3	0.2	0.1
Home market	62.9	58.2	58.2	60.4	62.6	62.4	57.2	56.7	55.3
Exports to–									
United States	5.5	5.1	7.1	5.6	4.8	5.5	2.9	3.7	5.4
All other	31.1	36.5	34.3	33.7	32.2	31.7	39.6	39.4	39.2
Total exports	36.5	41.5	41.4	39.3	36.9	37.2	42.5	43.1	44.6

Source: Compiled from data submitted in response to Commission questionnaires.

Wire

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of wire. These data are presented for all non-U.S. countries, Canada, and Mexico in tables LONG-52 through LONG-54, respectively.

Table LONG-52
Wire: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Capacity	8,310,756	8,522,649	8,977,259	9,691,943	9,935,465	3,624,218	3,960,295	8,484,081	8,441,464
Production	7,382,250	7,820,055	7,999,683	8,376,634	8,667,197	4,437,170	4,392,866	8,774,815	8,798,373
Shipments: Internal consumption	688,235	713,821	727,939	634,938	654,663	280,283	309,300	610,203	672,113
Home market	5,483,142	5,877,873	6,082,611	6,480,597	6,786,663	3,524,906	3,499,325	6,961,843	6,934,520
Exports to– United States	362,036	445,827	468,842	519,689	486,223	261,964	220,353	490,149	524,948
All other	852,667	804,771	713,491	726,933	782,565	393,372	422,703	849,817	904,464
Total exports	1,214,703	1,250,598	1,182,333	1,246,622	1,268,787	655,336	643,055	1,339,966	1,429,413
Total shipments	7,386,080	7,842,292	7,992,883	8,362,156	8,710,114	4,460,525	4,451,660	8,912,012	9,036,045
Ending inventories	233,636	272,300	306,560	360,025	388,245	383,041	376,398	380,978	388,813
					Ratios and shares (*percent*)				
Capacity utilization	88.8	91.8	89.1	86.4	87.2	76.6	70.0	103.4	104.2
Inventories/total shipments	3.2	3.5	3.8	4.3	4.5	4.3	4.2	4.3	4.3
Share of total shipments: Internal consumption	9.3	9.1	9.1	7.6	7.5	6.3	6.9	6.8	7.4
Home market	74.2	75.0	76.1	77.5	77.9	79.0	78.6	78.1	76.7
Exports to– United States	4.9	5.7	5.9	6.2	5.6	5.9	4.9	5.5	5.8
All other	11.5	10.3	8.9	8.7	9.0	8.8	9.5	9.5	10.0
Total exports	16.4	15.9	14.8	14.9	14.6	14.7	14.4	15.0	15.8

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-53
Wire: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
Quantity (*tons*)									
Capacity	540,000	557,000	555,000	555,000	567,000	291,600	286,600	568,000	573,000
Production	443,017	507,869	518,751	543,535	498,004	289,969	229,072	477,393	514,387
Shipments: Internal consumption	9	25	41	34	(315)	(172)	(189)	(185)	(215)
Home market	258,690	292,576	292,424	308,137	269,537	160,416	120,540	256,237	277,932
Exports to– United States	179,841	221,518	221,324	239,348	226,463	126,800	110,105	224,016	236,068
All other	5,435	2,718	1,641	1,119	1,108	555	690	1,312	1,232
Total exports	185,276	224,236	222,965	240,467	227,571	127,355	110,795	225,328	237,300
Total shipments	443,975	516,837	515,430	548,638	496,793	287,599	231,146	481,380	515,017
Ending inventories	27,667	28,699	32,220	26,917	28,128	29,287	26,054	24,621	23,991
Ratios and shares (*percent*)									
Capacity utilization	82.0	91.2	93.5	97.9	87.8	99.4	79.9	84.0	89.8
Inventories/total shipments	6.2	5.6	6.3	4.9	5.7	5.1	5.6	5.1	4.7
Share of total shipments: Internal consumption	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0
Home market	58.3	56.6	56.7	56.2	54.3	55.8	52.1	53.2	54.0
Exports to– United States	40.5	42.9	42.9	43.6	45.6	44.1	47.6	46.5	45.8
All other	1.2	0.5	0.3	0.2	0.2	0.2	0.3	0.3	0.2
Total exports	41.7	43.4	43.3	43.8	45.8	44.3	47.9	46.8	46.1

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-54
Wire: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	1,691,193	1,812,832	1,842,287	1,926,653	2,035,047	1,014,043	1,041,641	1,019,437	1,054,443
Production	720,913	763,882	855,560	825,918	868,699	359,173	383,466	851,376	955,627
Shipments:									
Internal consumption	528,909	553,391	584,875	514,568	541,253	217,598	246,341	491,300	552,580
Home market	127,693	180,142	201,544	227,435	259,340	117,858	118,891	291,934	324,370
Exports to–									
United States	24,631	31,222	46,931	64,415	58,627	32,097	23,895	65,437	67,854
All other	8,333	6,398	7,761	10,041	12,628	5,755	5,119	11,077	13,438
Total exports	32,964	37,620	54,692	74,456	71,255	37,852	29,014	76,514	81,292
Total shipments	689,566	771,153	841,111	816,459	871,848	373,308	394,246	859,748	958,242
Ending inventories	39,225	31,956	35,348	46,319	43,167	32,183	32,386	26,057	26,561
					Ratios and shares (*percent*)				
Capacity utilization	42.6	42.1	46.4	42.9	42.7	35.4	36.8	83.5	90.6
Inventories/total shipments	5.7	4.1	4.2	5.7	5.0	4.3	4.1	3.0	2.8
Share of total shipments:									
Internal consumption	76.7	71.8	69.5	63.0	62.1	58.3	62.5	57.1	57.7
Home market	18.5	23.4	24.0	27.9	29.7	31.6	30.2	34.0	33.9
Exports to–									
United States	3.6	4.0	5.6	7.9	6.7	8.6	6.1	7.6	7.1
All other	1.2	0.8	0.9	1.2	1.4	1.5	1.3	1.3	1.4
Total exports	4.8	4.9	6.5	9.1	8.2	10.1	7.4	8.9	8.5

Source: Compiled from data submitted in response to Commission questionnaires.

Rope

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of rope. These data are presented for all non-U.S. countries, Canada, and Mexico in tables LONG-55 through LONG-57, respectively.

Table LONG-55
Rope: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	1,020,971	1,090,824	1,147,144	1,217,589	1,251,259	607,969	645,735	1,254,130	1,228,256
Production	837,231	908,501	964,718	1,020,099	1,034,634	522,144	523,513	1,071,047	1,076,799
Shipments:									
Internal consumption	1,176	1,962	2,981	951	1,374	649	678	795	535
Home market	434,251	466,270	474,716	525,758	548,623	277,932	265,568	557,280	556,412
Exports to–									
United States	80,442	99,307	121,164	126,205	115,071	57,410	58,540	117,733	119,952
All other	319,841	349,436	361,187	367,537	372,718	182,722	202,861	408,265	404,374
Total exports	400,283	448,743	482,351	493,743	487,789	240,132	261,401	525,998	524,326
Total shipments	835,710	916,975	960,049	1,020,452	1,037,786	518,713	527,647	1,084,073	1,081,273
Ending inventories	80,965	72,596	79,777	79,312	82,546	82,076	78,461	68,888	71,357
					Ratios and shares (*percent*)				
Capacity utilization	82.0	83.3	84.1	83.8	82.7	85.9	81.1	85.4	87.7
Inventories/total shipments	9.7	7.9	8.3	7.8	8.0	7.9	7.4	6.4	6.6
Share of total shipments:									
Internal consumption	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.0
Home market	52.0	50.8	49.4	51.5	52.9	53.6	50.3	51.4	51.5
Exports to–									
United States	9.6	10.8	12.6	12.4	11.1	11.1	11.1	10.9	11.1
All other	38.3	38.1	37.6	36.0	35.9	35.2	38.4	37.7	37.4
Total exports	47.9	48.9	50.2	48.4	47.0	46.3	49.5	48.5	48.5

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-56
Rope: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Table LONG-57
Rope: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Nails

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of nails. These data are presented for all non-U.S. countries, Canada, and Mexico in tables LONG-58 through LONG-60, respectively.

Table LONG-58
Nails: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	465,146	465,098	496,205	497,588	526,816	277,246	279,920	525,144	522,169
Production	347,371	347,198	360,971	377,502	379,834	198,176	186,353	362,164	376,141
Shipments: Internal consumption	0	0	0	336	674	225	806	1,505	1,633
Home market	124,384	141,291	112,847	138,180	156,882	83,421	76,831	151,752	157,621
Exports to– United States	192,501	167,735	211,862	201,528	185,206	94,602	94,177	178,583	176,564
All other	35,672	35,893	37,846	36,299	34,782	18,579	17,377	36,420	40,736
Total exports	228,173	203,628	249,708	237,827	219,988	113,181	111,554	215,003	217,300
Total shipments	352,557	344,919	362,555	376,343	377,544	196,827	189,191	368,260	376,554
Ending inventories	27,700	30,928	30,501	31,461	33,787	32,106	31,712	28,616	28,148
					Ratios and shares (*percent*)				
Capacity utilization	74.7	74.7	72.7	75.2	71.2	70.6	65.8	68.3	71.1
Inventories/total shipments	7.9	9.0	8.4	8.4	8.9	8.2	8.4	7.8	7.5
Share of total shipments: Internal consumption	0.0	0.0	0.0	0.1	0.2	0.1	0.4	0.4	0.4
Home market	35.3	41.0	31.1	36.7	41.6	42.4	40.6	41.2	41.9
Exports to– United States	54.6	48.6	58.4	53.5	49.1	48.1	49.8	48.5	46.9
All other	10.1	10.4	10.4	9.6	9.2	9.4	9.2	9.9	10.8
Total exports	64.7	59.0	68.9	63.2	58.3	57.5	59.0	58.4	57.7

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-59
Nails: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Table LONG-60
Nails: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Shapes

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of shapes. These data are presented for all non-U.S. countries, Canada, and Mexico in tables LONG-61 through LONG-63, respectively.

Table LONG-61
Shapes: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	20,423,438	21,067,577	23,223,520	23,189,716	25,387,888	12,895,933	12,360,737	24,043,617	25,016,816
Production	17,835,941	18,572,557	18,219,977	18,349,106	20,811,350	10,765,860	9,658,420	19,587,602	21,415,375
Shipments: Internal consumption	1,799,008	1,916,052	1,938,197	2,036,938	2,080,682	1,106,503	916,695	1,718,509	1,763,638
Home market	10,674,952	10,386,524	9,110,799	9,661,775	10,787,463	5,351,658	4,977,445	10,820,362	11,946,032
Exports to– United States	949,364	1,078,191	2,122,535	971,948	1,472,924	729,115	218,083	640,817	1,047,806
All other	4,322,149	4,962,542	4,538,751	5,422,352	5,958,048	3,147,112	3,025,984	5,908,309	6,080,091
Total exports	5,271,513	6,040,733	6,661,287	6,394,300	7,430,972	3,876,227	3,244,047	6,549,126	7,127,897
Total shipments	17,745,472	18,343,309	17,710,282	18,093,012	20,299,118	10,334,388	9,138,186	19,087,997	20,837,568
Ending inventories	882,133	910,166	1,253,757	1,213,014	1,507,624	1,601,356	1,688,421	1,413,717	1,424,144
					Ratios and shares (*percent*)				
Capacity utilization	87.3	88.2	78.5	79.1	82.0	83.5	78.1	81.5	85.6
Inventories/total shipments	5.0	5.0	7.1	6.7	7.4	7.7	9.2	7.4	6.8
Share of total shipments: Internal consumption	10.1	10.4	10.9	11.3	10.3	10.7	10.0	9.0	8.5
Home market	60.2	56.6	51.4	53.4	53.1	51.8	54.5	56.7	57.3
Exports to– United States	5.3	5.9	12.0	5.4	7.3	7.1	2.4	3.4	5.0
All other	24.4	27.1	25.6	30.0	29.4	30.5	33.1	31.0	29.2
Total exports	29.7	32.9	37.6	35.3	36.6	37.5	35.5	34.3	34.2

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-62
Shapes: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Table LONG-63
Shapes: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Fabricated

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of fabricated. These data are presented for all non-U.S. countries, Canada, and Mexico in tables LONG-64 through LONG-66, respectively.

Table LONG-64
Fabricated: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Capacity	377,711	407,647	469,814	677,805	678,136	338,018	357,788	715,117	742,534
Production	235,316	320,667	408,287	521,302	542,855	251,528	279,396	545,838	565,655
Shipments: Internal consumption	1	0	0	0	0	0	0	0	0
Home market	173,734	241,873	293,067	391,390	363,967	168,798	183,625	369,058	381,713
Exports to– United States	57,424	72,607	107,924	128,787	163,969	78,042	91,519	173,255	181,054
All other	4,757	2,029	4,601	3,712	4,236	1,658	5,027	6,633	6,247
Total exports	62,181	74,636	112,526	132,499	168,205	79,700	96,546	179,888	187,301
Total shipments	235,916	316,509	405,592	523,889	532,172	248,498	280,171	548,946	569,014
Ending inventories	7,725	11,656	14,252	17,150	28,441	21,103	26,850	22,901	18,354
					Ratios and shares (*percent*)				
Capacity utilization	62.3	78.7	86.9	76.9	80.1	74.4	78.1	76.3	76.2
Inventories/total shipments	3.3	3.7	3.5	3.3	5.3	4.2	4.8	4.2	3.2
Share of total shipments: Internal consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Home market	73.6	76.4	72.3	74.7	68.4	67.9	65.5	67.2	67.1
Exports to– United States	24.3	22.9	26.6	24.6	30.8	31.4	32.7	31.6	31.8
All other	2.0	0.6	1.1	0.7	0.8	0.7	1.8	1.2	1.1
Total exports	26.4	23.6	27.7	25.3	31.6	32.1	34.5	32.8	32.9

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-65
Fabricated: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
Quantity (*tons*)									
Capacity	260,816	270,826	285,075	323,100	327,615	163,758	168,260	333,620	335,620
Production	150,384	208,463	258,910	287,120	315,778	144,925	157,383	303,769	299,380
Shipments: Internal consumption	0	0	0	0	0	0	0	0	0
Home market	107,680	159,186	191,346	211,197	211,138	95,115	94,946	192,655	192,674
Exports to– United States	40,362	47,139	65,566	72,363	103,624	45,637	58,517	111,061	105,706
All other	2,607	537	1,737	1,207	636	347	41	240	1,000
Total exports	42,969	47,676	67,302	73,570	104,260	45,984	58,558	111,301	106,706
Total shipments	150,649	206,862	258,648	284,767	315,398	141,099	153,504	303,956	299,380
Ending inventories	3,859	5,460	5,722	8,075	8,455	12,101	12,334	6,531	5,531
Ratios and shares (*percent*)									
Capacity utilization	57.7	77.0	90.8	88.9	96.4	88.5	93.5	91.1	89.2
Inventories/total shipments	2.6	2.6	2.2	2.8	2.7	4.3	4.0	2.1	1.8
Share of total shipments: Internal consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Home market	71.5	77.0	74.0	74.2	66.9	67.4	61.9	63.4	64.4
Exports to– United States	26.8	22.8	25.3	25.4	32.9	32.3	38.1	36.5	35.3
All other	1.7	0.3	0.7	0.4	0.2	0.2	0.0	0.1	0.3
Total exports	28.5	23.0	26.0	25.8	33.1	32.6	38.1	36.6	35.6

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-66
Fabricated: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	109,143	126,064	173,982	211,666	206,383	102,192	117,459	237,359	249,548
Production	77,778	104,518	140,419	167,531	162,042	77,674	92,577	184,501	208,161
Shipments: Internal consumption	0	0	0	0	0	0	0	0	0
Home market	59,107	74,772	92,653	112,233	97,103	42,345	59,228	118,290	130,385
Exports to– United States	17,062	25,468	42,359	56,319	60,300	32,405	32,711	61,144	74,341
All other	2,148	1,491	2,840	2,294	2,494	994	109	1,443	1,515
Total exports	19,210	26,959	45,199	58,613	62,794	33,399	32,820	62,587	75,856
Total shipments	78,317	101,731	137,852	170,846	159,897	75,744	92,048	180,877	206,241
Ending inventories	2,892	5,518	8,029	4,664	6,503	6,412	6,932	10,127	11,892
					Ratios and shares (*percent*)				
Capacity utilization	71.3	82.9	80.7	79.1	78.5	76.0	78.8	77.7	83.4
Inventories/total shipments	3.7	5.4	5.8	2.7	4.1	4.2	3.8	5.6	5.8
Share of total shipments: Internal consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Home market	75.5	73.5	67.2	65.7	60.7	55.9	64.3	65.4	63.2
Exports to– United States	21.8	25.0	30.7	33.0	37.7	42.8	35.5	33.8	36.0
All other	2.7	1.5	2.1	1.3	1.6	1.3	0.1	0.8	0.7
Total exports	24.5	26.5	32.8	34.3	39.3	44.1	35.7	34.6	36.8

Source: Compiled from data submitted in response to Commission questionnaires.

IMPORTERS' INVENTORIES

The Commission requested information from importers concerning their end-of-period inventories of all carbon and alloy long products. End-of-period inventory data for imported products are presented for all carbon and alloy long products and by product category in table LONG-67.

Table LONG-67
U.S. importers' inventories, by products, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
				Quantity (*tons*)			
Ingots	21,222	24,153	68,634	86,182	112,060	94,260	57,841
Hot bar	117,758	120,141	207,314	168,421	200,647	192,496	149,574
Cold bar	8,786	9,653	21,901	24,288	29,641	33,131	22,195
Rebar	10,070	7,925	18,152	7,578	5,299	15,475	11,177
Rails	0	0	0	0	2,883	0	4,495
Wire	13,818	14,624	16,140	59,101	306,775	142,437	317,017
Rope	14,361	16,126	13,434	14,603	14,822	16,736	16,431
Nails	3,260	4,935	5,002	5,632	30,386	22,644	25,055
Shapes	15,524	23,477	109,907	27,982	42,959	68,998	43,425
Fabricated	67	97	78	109	91	62	69
Total	204,866	221,132	460,564	393,895	745,562	586,239	647,279
				Ratio to reporting firms' U.S. shipments of imports (*percent*)			
Ingots	3.0	3.2	6.7	12.8	14.0	10.7	14.2
Hot bar	8.9	7.8	13.1	10.9	11.0	10.7	9.2
Cold bar	2.6	1.6	4.8	4.6	5.3	6.0	3.7
Rebar	8.4	2.3	1.9	0.7	0.5	1.2	0.8
Rails	0.0	0.0	0.0	0.0	1.1	0.0	6.1
Wire	4.5	4.2	4.3	14.0	78.1	33.1	86.7
Rope	13.6	13.5	9.8	9.4	11.0	12.1	14.0
Nails	1.9	0.2	0.1	0.1	0.4	0.3	0.6
Shapes	2.8	3.5	5.1	2.6	2.6	4.4	5.7
Fabricated	0.2	0.2	0.1	0.1	0.1	0.0	0.0
Total	5.3	2.8	4.3	3.5	5.0	3.9	6.9

Source: Compiled from data submitted in response to Commission questionnaires.

QUESTION OF THE CAUSAL RELATIONSHIP BETWEEN THE ALLEGED INJURY/THREAT AND IMPORTS

U.S. CONSUMPTION AND MARKET SHARES

Data on apparent U.S. consumption and market shares of all carbon and alloy long products based on U.S. producers' shipments and U.S. imports are presented in table LONG-68.[7] These data are presented for ingots, hot bar, cold bar, rebar, rails, wire, rope, nails, shapes, and fabricated in tables LONG-69 through LONG-78, respectively.

Table LONG-68
Total long: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	53,446,317	58,844,807	62,801,281	60,481,926	64,421,229	33,834,300	29,052,436
U.S. consumption (*$1,000*)	21,602,993	23,878,596	25,185,461	22,657,396	24,526,091	12,924,514	10,777,486
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	88.7	89.1	84.1	85.2	84.6	84.6	86.6
Canada	3.3	3.3	3.4	3.6	3.5	3.6	3.5
Mexico	1.3	1.1	0.8	1.0	0.7	0.7	0.9
All other sources	6.7	6.5	11.7	10.2	11.2	11.1	9.0
Total imports	11.3	10.9	15.9	14.8	15.4	15.4	13.4
U.S. market share based on value (*percent*)							
U.S. producers' shipments	83.8	84.3	79.6	80.0	78.8	79.9	79.2
Canada	4.6	4.6	5.0	5.6	5.9	5.7	6.3
Mexico	1.1	1.0	0.9	1.3	1.2	1.1	1.3
All other sources	10.5	10.1	14.5	13.1	14.2	13.3	13.2
Total imports	16.2	15.7	20.4	20.0	21.2	20.1	20.8

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

[7] Significant double-counting issues arise for the consumption data presented in table LONG-68 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs. However, they offered no techniques to resolve any double-counting other than making their arguments on the basis of subordinate categories or aggregations of sub-categories.

Table LONG-69
Ingots: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	23,020,140	24,923,421	25,139,517	23,557,285	25,387,680	13,485,910	11,418,432
U.S. consumption (*$1,000*)	5,484,447	5,965,042	5,544,467	4,641,558	5,126,494	2,904,252	2,291,403
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	95.1	96.6	95.0	96.3	96.2	96.0	98.1
Canada	0.4	0.3	0.5	0.6	0.4	0.5	0.5
Mexico	0.6	0.1	0.2	0.4	0.1	0.1	0.0
All other sources	3.9	3.1	4.2	2.7	3.3	3.4	1.3
Total imports	4.9	3.4	5.0	3.7	3.8	4.0	1.9
U.S. market share based on value (*percent*)							
U.S. producers' shipments	93.6	95.2	93.3	95.0	95.0	95.2	97.1
Canada	0.5	0.4	0.7	0.6	0.4	0.5	0.6
Mexico	0.6	0.1	0.3	0.4	0.1	0.1	0.1
All other sources	5.3	4.3	5.8	3.9	4.5	4.1	2.2
Total imports	6.4	4.8	6.7	5.0	5.0	4.8	2.9

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table LONG-70
Hot bar: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	10,052,172	11,277,742	11,675,698	11,073,215	11,232,944	6,048,021	4,896,227
U.S. consumption (*$1,000*)	4,388,480	4,941,983	5,132,145	4,452,091	4,568,848	2,467,332	1,907,558
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	83.5	84.0	79.9	79.6	77.5	77.9	80.5
Canada	9.4	9.0	9.2	10.3	10.3	10.1	9.8
Mexico	1.4	1.4	1.4	1.7	1.5	1.6	1.4
All other sources	5.8	5.7	9.4	8.4	10.8	10.4	8.2
Total imports	16.5	16.0	20.1	20.4	22.5	22.1	19.5
U.S. market share based on value (*percent*)							
U.S. producers' shipments	80.9	81.9	77.9	77.6	75.9	76.9	77.0
Canada	8.9	8.5	8.9	10.2	10.1	10.0	10.0
Mexico	1.1	1.1	1.2	1.4	1.3	1.4	1.3
All other sources	9.0	8.6	11.9	10.9	12.7	11.7	11.7
Total imports	19.1	18.1	22.1	22.4	24.1	23.1	23.0

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table LONG-71
Cold bar: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	1,407,385	1,597,309	1,668,466	1,607,836	1,640,806	905,184	700,202
U.S. consumption (*$1,000*)	1,096,786	1,195,688	1,249,976	1,122,029	1,131,994	620,832	487,619
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	85.3	85.1	83.6	85.3	80.8	81.2	80.7
Canada	4.8	4.4	4.2	5.0	4.9	5.2	5.1
Mexico	0.1	0.1	0.1	0.1	0.0	0.0	0.0
All other sources	9.8	10.5	12.1	9.6	14.3	13.5	14.2
Total imports	14.7	14.9	16.4	14.7	19.2	18.8	19.3
U.S. market share based on value (*percent*)							
U.S. producers' shipments	83.2	82.4	80.8	82.9	78.5	79.7	78.3
Canada	5.2	4.8	4.6	5.5	5.8	6.1	5.7
Mexico	0.1	0.1	0.1	0.0	0.0	0.0	0.0
All other sources	11.6	12.7	14.6	11.5	15.7	14.2	16.0
Total imports	16.8	17.6	19.2	17.1	21.5	20.3	21.7

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table LONG-72
Rebar: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	5,478,240	6,070,213	7,053,773	8,050,669	8,112,518	4,106,019	4,186,571
U.S. consumption (*$1,000*)	1,610,188	1,809,399	2,093,032	2,091,451	2,097,282	1,056,937	1,074,676
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	89.4	88.4	82.6	77.2	79.4	76.0	79.6
Canada	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mexico	5.1	4.9	1.2	1.4	0.6	0.6	1.7
All other sources	5.5	6.7	16.2	21.4	19.9	23.4	18.6
Total imports	10.6	11.6	17.4	22.8	20.6	24.0	20.4
U.S. market share based on value (*percent*)							
U.S. producers' shipments	90.0	89.5	83.8	81.5	82.7	80.3	82.1
Canada	0.0	0.0	0.0	0.1	0.0	0.1	0.0
Mexico	4.4	4.0	1.1	1.4	0.7	0.6	1.6
All other sources	5.6	6.5	15.1	17.0	16.6	19.0	16.2
Total imports	10.0	10.5	16.2	18.5	17.3	19.7	17.9

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table LONG-73
Rails: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	860,391	1,061,040	1,216,215	899,121	1,049,869	563,288	426,270
U.S. consumption (*$1,000*)	437,529	523,379	618,643	438,481	498,656	273,505	203,775
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	76.6	77.6	72.3	68.4	73.8	72.8	68.1
Canada	1.6	1.7	1.3	1.2	1.3	0.9	1.5
Mexico	0.0	0.0	0.1	0.0	0.0	0.0	0.0
All other sources	21.8	20.8	26.4	30.4	24.9	26.3	30.4
Total imports	23.4	22.4	27.7	31.6	26.2	27.2	31.9
U.S. market share based on value (*percent*)							
U.S. producers' shipments	74.3	76.1	70.0	66.7	72.2	71.3	66.6
Canada	1.1	1.3	1.1	1.1	1.2	0.8	1.3
Mexico	0.0	0.0	0.1	0.0	0.0	0.0	0.0
All other sources	24.7	22.6	28.9	32.2	26.7	28.0	32.0
Total imports	25.7	23.9	30.0	33.3	27.8	28.7	33.4

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table LONG-74
Wire: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	3,188,556	3,575,472	3,800,388	3,912,860	3,957,067	2,094,295	1,823,404
U.S. consumption (*$1,000*)	2,034,612	2,363,952	2,482,316	2,415,977	2,472,462	1,266,047	1,113,664
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	83.2	82.4	82.4	81.7	82.1	82.3	81.5
Canada	7.2	7.0	6.6	7.1	6.3	6.7	6.9
Mexico	1.3	1.1	1.3	1.2	1.1	1.1	1.1
All other sources	8.3	9.4	9.7	10.0	10.6	9.8	10.5
Total imports	16.8	17.6	17.6	18.3	17.9	17.7	18.5
U.S. market share based on value (*percent*)							
U.S. producers' shipments	77.7	78.1	78.2	77.2	77.8	77.8	77.1
Canada	7.2	6.9	6.5	6.9	6.1	6.8	6.8
Mexico	1.2	1.1	1.3	1.3	1.3	1.3	1.4
All other sources	13.9	13.9	14.1	14.6	14.7	14.1	14.7
Total imports	22.3	21.9	21.8	22.8	22.2	22.2	22.9

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table LONG-75
Rope: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	640,381	748,532	814,520	853,910	944,232	499,251	476,042
U.S. consumption (*$1,000*)	915,097	994,750	1,060,395	1,050,697	1,081,990	562,578	528,734
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	63.5	63.2	65.8	65.3	68.4	69.7	69.3
Canada	2.6	2.6	2.2	2.3	2.1	2.1	2.5
Mexico	4.0	2.9	1.9	3.4	2.5	2.0	2.9
All other sources	29.9	31.3	30.0	29.0	27.0	26.1	25.3
Total imports	36.5	36.8	34.2	34.7	31.6	30.3	30.7
U.S. market share based on value (*percent*)							
U.S. producers' shipments	59.4	62.0	66.2	66.5	67.7	68.8	68.6
Canada	2.6	2.4	2.2	2.4	2.6	2.5	2.7
Mexico	1.6	1.3	0.9	1.8	1.5	1.2	1.9
All other sources	36.4	34.2	30.7	29.3	28.3	27.5	26.8
Total imports	40.6	38.0	33.8	33.5	32.3	31.2	31.4

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table LONG-76
Nails: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	1,004,065	1,031,115	1,130,857	1,226,097	1,252,341	638,459	549,862
U.S. consumption (*$1,000*)	1,465,876	1,528,782	1,535,295	1,600,184	1,566,788	799,715	702,825
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	59.4	57.8	54.3	49.0	47.5	49.4	48.2
Canada	9.8	9.0	7.8	7.2	7.4	8.0	8.1
Mexico	1.1	2.0	2.7	3.7	3.9	4.0	3.8
All other sources	29.7	31.2	35.2	40.1	41.2	38.6	40.0
Total imports	40.6	42.2	45.7	51.0	52.5	50.6	51.8
U.S. market share based on value (*percent*)							
U.S. producers' shipments	74.6	73.7	71.3	66.4	63.8	65.0	64.2
Canada	5.2	5.0	5.4	5.3	5.7	6.0	6.2
Mexico	0.6	1.0	1.4	2.6	3.2	3.2	2.9
All other sources	19.6	20.2	21.9	25.7	27.3	25.8	26.7
Total imports	25.4	26.3	28.7	33.6	36.2	35.0	35.8

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table LONG-77
Shapes: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	6,386,221	7,001,007	8,558,554	7,361,699	8,710,971	4,516,769	3,527,465
U.S. consumption (*$1,000*)	2,545,963	2,763,656	3,378,298	2,520,502	3,336,863	1,741,548	1,143,280
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	86.0	86.7	68.5	81.8	78.5	80.2	87.2
Canada	2.9	2.8	2.5	1.9	2.5	2.7	1.5
Mexico	0.6	0.4	0.3	0.2	0.1	0.1	0.0
All other sources	10.5	10.1	28.7	16.2	18.9	16.9	11.3
Total imports	14.0	13.3	31.5	18.2	21.5	19.8	12.8
U.S. market share based on value (*percent*)							
U.S. producers' shipments	86.6	87.1	70.6	83.1	79.0	80.7	85.2
Canada	2.7	2.6	2.4	2.0	2.2	2.5	1.7
Mexico	0.5	0.4	0.3	0.2	0.1	0.1	0.0
All other sources	10.3	9.9	26.7	14.8	18.7	16.6	13.0
Total imports	13.4	12.9	29.4	16.9	21.0	19.3	14.8

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table LONG-78
Fabricated: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	1,408,766	1,558,955	1,743,295	1,939,234	2,132,802	977,104	1,047,961
U.S. consumption (*$1,000*)	1,624,013	1,791,966	2,090,896	2,324,426	2,644,713	1,231,768	1,323,951
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	84.6	82.0	79.1	74.3	69.1	71.6	64.7
Canada	10.2	11.6	14.0	14.3	17.0	17.1	18.9
Mexico	3.2	3.5	3.2	4.0	4.7	4.3	4.6
All other sources	2.1	2.9	3.7	7.4	9.2	6.9	11.8
Total imports	15.4	18.0	20.9	25.7	30.9	28.4	35.3
U.S. market share based on value (*percent*)							
U.S. producers' shipments	81.0	78.8	74.1	70.0	64.4	66.7	59.7
Canada	12.1	14.1	16.9	16.7	20.2	20.2	22.0
Mexico	1.9	2.2	2.3	3.7	4.2	3.7	3.7
All other sources	5.0	4.9	6.7	9.5	11.1	9.3	14.7
Total imports	19.0	21.2	25.9	30.0	35.6	33.3	40.3

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

PRICES AND RELATED INFORMATION

Supply-Related Information on U.S. Producers

Based on available information, U.S. long product producers are likely to respond to changes in demand with moderate to large changes in the quantity of shipments of U.S.-produced long steel products to the U.S. market. The main factors contributing to the responsiveness of supply are low capacity utilization, a lack of large alternate markets, and increased inventory levels.

Industry Capacity

Reported U.S. aggregate capacity to produce long products grew at a slower rate than apparent consumption from 1996 to 2000. U.S. producers' reported annual capacity utilization over the five year period for which data were collected reached a high of 82.1 percent in 1997, and a low of 74.7 percent in 1999. Reported capacity utilization was 77.0 percent in 2000, and was lower in interim 2001 than interim 2000. This unused capacity could be used to increase production of long steel products in response to price changes in the U.S. market.

Within the long steel products group, from 1996 through 2000 the capacity utilization rates reported by producers of fabricated, rope, and wire were above this average. Reported capacity utilization rates were highest for the fabricated category, followed by wire, rope, and ingots. Reported capacity utilization rates for hot bar, shapes, rails, and rebar were slightly below this average. The reported capacity utilization rates for the cold bar category were below the reported capacity utilization rates for every other long category in every period. Responding producers in each product category except rebar reported lower capacity utilization rates in interim 2001 compared to 2000. Producers in the nails category reported the largest decline in capacity utilization between the interim periods.

Alternate Markets

Exports have accounted for a small portion of total shipments of long products since 1996, regardless of market conditions. Exports as a percentage of total shipments increased only slightly from 1996 to 2000, and accounted for a very small share of total shipments in every period. Export shipments were lower in the first six months of 2001 than the first six months of 2000, but accounted for a larger share of total shipments. Exports accounted for less than one percent of total shipments in the fabricated category and for less than one tenth of one percent in the ingots category in every period. The only product category for which exports accounted for more than five percent of total shipments was rails. The consistently low ratio of export shipments to total shipments indicates that U.S. producers have little ability to divert shipments to or from alternate markets in response to changes in the price of long products.

Inventory Levels

U.S. producers' inventories of long products accounted for a fairly constant percentage of total shipments during the period for which data were collected. As a ratio to total shipments, inventories were between 7.1 and 9.3 percent during 1996-2000. The ratio of inventories to total shipments was higher in the first six months of 2001 than in the first six months of 2000, although the quantity of inventories was lower. For the ingots, rails, wire, and fabricated product categories, inventories as a share of total shipments were lower than this average. For the hot bar, rope, nails, and shapes categories, imports as a share of shipments were higher than this average. Inventories as a share of total shipments

were higher for the cold bar product category than for every other category in the long products group in every period. These data indicate that U.S. producers have moderate ability to use inventories as a means of increasing shipments of long products to the U.S. market. Data on domestic producers' capacity, capacity utilization, exports as a share of total shipments, and inventories as a share of total shipments are presented in table LONG-79.

Table LONG-79
LONG PRODUCTS: U.S. producers' year 2000 capacity, capacity utilization, export shipments as a percentage of total shipments, and inventories as a percentage of total shipments, by product

Product	Capacity (*short tons*)	Capacity utilization (*percent*)	Exports/total shipments (*percent*)	Inventories/total shipments (*percent*)
Ingots	28,900,092	85.0	0.01	5.8
Hot bar	13,126,430	70.0	4.0	16.4
Cold bar	2,958,991	45.0	1.3	17.2
Rebar	9,661,204	68.5	2.4	9.8
Rail	1,111,000	76.1	7.8	6.2
Wire	3,931,518	83.0	1.3	5.1
Rope	809,578	81.9	2.5	12.2
Nails	894,142	67.2	1.5	13.6
Shapes	9,484,500	77.1	3.4	12.4
Fabricated	1,616,143	89.4	0.2	5.2

Source: Compiled from data submitted in response to Commission questionnaires.

Subject Import Supply

All Sources

Reported production of long products by responding foreign producers increased 17.5 percent from 1996 to 2000 and was 1.1 percent higher in interim 2001 than in interim 2000. From 1996 to 2000, reported production in every product category increased; from 12.7 percent for the ingots category to 127.9 percent for the fabricated category.

Inventories relative to total shipments showed little change from 1996 to 2000. Aggregate end-of-period inventories of long products as a share of total shipments ranged from 4.2 to 4.9 percent during this time. Inventories as a share of shipments were higher for the rails, rope, and nails categories. Exports of long products by responding foreign producers, to the United States and to other markets, increased from 1996 to 2000. In 2000, exports accounted for approximately 18.3 percent of total shipments, with most of these exports going to countries other than the United States.[8] The only product

[8] Responding foreign producers reported that internal consumption/transfers accounted for 40.7 percent of total shipments of long shipments in 2000. Exports to the United States accounted for 3.7 percent. To the extent that
(continued...)

categories for which reported exports to the United States were higher than exports to all other destinations were nails and fabricated. In these categories, exports to the United States accounted for more than half of all exports in every period.

Reported capacity utilization rates for the various long steel products in 2000 ranged from 71.2 percent for nails to 86.5 percent for rebar, with the rate for most products over 80 percent. These data (*see* table LONG-80) indicate that foreign producers have the ability to alter shipments to the U.S. market in response to price changes.

Table LONG-80
LONG PRODUCTS: Foreign producers' year 2000 capacity, capacity utilization, export shipments as a percentage of total shipments, and inventories as a percentage of total shipments, by product

Product	Capacity (*short tons*)	Capacity utilization (*percent*)	Exports to United States/total shipments (*percent*)	Inventories/total shipments (*percent*)
Ingots	91,195,628	85.1	1.0	3.9
Hot bar	29,764,942	79.4	6.4	6.0
Cold bar	2,029,963	84.3	6.2	7.4
Rebar	29,635,635	86.5	4.5	4.7
Rail	2,701,579	78.1	4.8	8.9
Wire	3,624,218	76.6	5.9	4.3
Rope	1,251,259	82.7	11.1	8.0
Nails	526,816	71.2	49.1	8.9
Shapes	25,387,888	82.0	7.3	7.4
Fabricated	678,136	80.1	30.8	5.3

Source: Compiled from data submitted in response to Commission questionnaires.

Canada

Reported production of long products in Canada by responding foreign producers declined slightly from 1996 to 2000 and was 27.8 percent lower in interim 2001 than in interim 2000. Reported production declined over this period for ingots, cold bar, rebar, rope, nails, and shapes and increased for hot bar, wire, and fabricated.[9] The greatest percentage increase was in the fabricated category.

Canadian inventories relative to total shipments showed little change from 1996 to 2000. End-of-period inventories as a share of total shipments ranged from 6.6 to 8.3 percent during this time. Inventories of hot bar and nails as a share of shipments were higher than this average figure, and inventories of cold bar, rope, and fabricated were lower.

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[8] (...continued)
internal consumption represents production of downstream long products, this would lessen the ability of these producers to shift sales to or from the U.S. market in response to price changes.

[9] No responding Canadian producers reported production of rails in any period.

Canadian exports of long steel products, both to the United States and to other markets, increased from 1996 to 2000. In 2000, exports accounted for approximately 21.4 percent of Canadian shipments of long products, with most of these exports going to the United States. Exports to the United States in 2000 accounted for more than half of all exports in the ingots, hot bar, cold bar, wire, nails, shapes, and fabricated categories. Exports to the United States as a share of all shipments were highest for ***. There were no reported exports of rebar ***. These data (*see* table LONG-81) indicate that Canadian producers have moderate ability to alter shipments to the U.S. market in response to price changes.[10]

Table LONG-81
LONG PRODUCTS: Canadian producers' year 2000 capacity, capacity utilization, export shipments as a percentage of total shipments, and inventories as a percentage of total shipments, by product

Product	Capacity (*short tons*)	Capacity utilization (*percent*)	Exports to United States/total shipments (*percent*)	Inventories/total shipments (*percent*)
Ingots	3,743,032	96.4	2.8	7.4
Hot bar	2,735,076	76.8	33.0	12.1
Cold bar	18,700	74.8	46.7	1.6
Rebar	1,065,520	26.6	0.0	7.3
Rail	***	***	***	***
Wire	567,000	87.8	45.6	5.7
Rope	***	***	***	***
Nails	***	***	***	***
Shapes	***	***	***	***
Fabricated	327,615	96.4	32.9	2.7

Source: Compiled from data submitted in response to Commission questionnaires.

Mexico

Reported production of long products in Mexico was virtually unchanged from 1996 to 2000 and was 6.1 percent lower in interim 2001 compared to interim 2000. Reported production declined in the ingots, hot bar, and *** categories from 1996 to 2000 and was higher for ***, rebar, wire, ***, ***, and fabricated. There was no reported production of rails.

Mexican inventories of long products relative to total shipments increased from 1996 to 2000 and reached a high of 6.4 percent in 2000. In 2000, inventories as a share of total shipments were lower than this average for products in the ***, hot bar, ***, wire, ***, ***, ***, and fabricated categories; and

[10] Responding Canadian producers reported that internal consumption/transfers accounted for 46.6 percent of total shipments of long products in 2000. Exports to the United States accounted for 17.3 percent. To the extent that internal consumption represents production of downstream long steel products, this would lessen the ability of Canadian producers to shift sales to or from the U.S. market in response to price changes.

higher only for rebar. In 2000, exports accounted for approximately 6.0 percent of total shipments, with most of these exports going to the United States.[11]

Exports to the United States in 2000 were more than half of all Mexican exports of long products in the hot bar, rebar, wire, ***, ***, and fabricated categories. Exports to the United States as a share of total shipments were highest in the fabricated steel category in 2000. Mexican producers' capacity utilization rates for the different long steel products ranged from about 42.7 to *** percent in 2000. These data (*see* table LONG-82) indicate that Mexican producers have the ability to alter shipments to the U.S. market in response to price changes.

Table LONG-82
LONG PRODUCTS: Mexican producers' year 2000 capacity, capacity utilization, export shipments as a percentage of total shipments, and inventories as a percentage of total shipments, by product

Product	Capacity (*short tons*)	Capacity utilization (*percent*)	Exports to United States/total shipments (*percent*)	Inventories/total shipments (*percent*)
Ingots	***	***	***	***
Hot bar	889,647	76.5	15.0	4.3
Cold bar	***	***	***	***
Rebar	3,053,191	64.4	1.5	11.0
Rail	***	***	***	***
Wire	2,035,047	42.7	6.7	5.0
Rope	***	***	***	***
Nails	***	***	***	***
Shapes	***	***	***	***
Fabricated	206,383	78.5	37.7	4.1

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. Demand

Based on available information, the overall consumption of long products is relatively insensitive to changes in the price of long products. The main factors contributing to this low degree of price sensitivity include the lack of substitute products and the relatively low share of the overall cost of final end-use products accounted for by long products. The responsiveness of demand to price changes varies somewhat by product category, with wire and cold-finished bar more responsive due to the larger share of total costs accounted for by these products, and rebar less responsive because of the small share of total construction costs accounted for by rebar.

[11] Responding Mexican producers reported that internal consumption/transfers accounted for 30.7 percent of total shipments of long products in 2000. Exports to the United States accounted for 5.2 percent. To the extent that internal consumption represents production of downstream long products, this would lessen the ability of Mexican producers to shift sales to or from the U.S. market in response to price changes.

Demand Characteristics

A wide range of products are produced from long products. Hot bar, shapes, wire rod, and rebar are produced from billets. Cold bar is produced from hot bar. Wire strand, rope, and cordage are produced from wire. Support beams, columns, and other fabricated steel units used in the construction of buildings and bridges are produced from shapes.

Some producers in the long products group are vertically integrated, and internally consume much of the long products produced. Internal consumption as a share of total shipments is a measure of this integration. Reported internal consumption as a share of total shipments in 2000 was highest for the ingots and wire categories (93.3 and 37.2 percent, respectively).

A number of end-use products are also produced from long products. Reinforced concrete is produced using rebar or wire strand. Steel cord and wire are used in the production of tires. Hot bar and light shapes are used to produce ladder frames and joists. Wire is used to produce balls, rollers, screws, and fencing. Demand for products such as rebar, light structural shapes, heavy structural shapes, and fabricated steel is dependent on construction activity. Demand for other long products is derived from demand for the various end use products.

Long products are sold to end users directly and through a distribution network (table LONG-83). Approximately one-third of the purchaser questionnaires received were from distributors, or firms that both distribute and are end users of long products. Distributors are more likely to maintain inventories than are end users. Many purchasers reported purchases of both domestic and imported long products (table LONG-84).

Table LONG-83
Long products: Types of purchasers reporting information

Type of firm	Number of firms reporting
Distributor	108
End user	180
Other[1]	51

[1] Other includes firms that classified themselves as importers or "other" plus firms that are both distributers and end users.

Source: Compiled from data submitted in response to Commission questionnaires.

Demand Trends

Most responding purchasers reported no overall trends in demand for their products since 1996, or reported cyclical changes in demand. Of those that reported a change in demand since 1996, 69 reported that demand for their products has increased and 34 reported decreased demand. When asked to report factors that contributed to changes in demand, 12 purchasers reported that increased imports of long products since 1996 have caused a decrease in demand for the firm's domestic product. Additionally, two purchasers reported that the strong dollar has lowered demand for the product and five reported that demand for the product is tied to the oil and gas market. In the ingots and wire categories, the majority of purchasers that responded to this question reported that demand had declined since 1996.

Table LONG-84
Long products: Number of firms reporting purchases of domestic and imported products, by products

Product	Number of firms reporting purchases			
	Domestic product only	Imported product only	Both domestic and imported	Total
Ingots	10	3	12	25
Hot bar	65	16	79	160
Cold bar	50	4	30	84
Rebar	27	9	23	59
Rails	7	3	8	18
Wire	33	8	44	85
Rope	10	14	27	51
Nails	5	9	16	30
Shapes	32	6	37	75
Fabricated	3	2	6	11

Source: Compiled from data submitted in response to Commission questionnaires.

Substitute Products

There are few viable substitutes for long products. Only 32 of the 327 purchasers that responded to the Commission's purchaser questionnaire covering long products reported any substitutes for the long products purchased, and only two of these reported switching to substitute products because of price changes. Many of the responding purchasers produce other long products and substitution is limited by the production process.

Cost Share

Because there are a large number of end uses for long products, the percentage of the cost of the end product accounted for by long products varies significantly. Purchasers were asked to report the end uses for which they purchased long products as a component part and to report the percentage of the total cost accounted for by the long products. Billets account for approximately 70 percent of the cost of hot bars, shapes, wire rod, and rebar.[12] Cold bar accounts for approximately 70 percent of the cost of some oilfield drilling tools and 2.7 percent to 30 percent of the cost of some valves.[13] Shapes account for approximately 30 percent of the cost of commercial buildings and bridges.[14] Wire accounts for over 60 percent of the cost of some springs, and approximately 25 to 30 percent of the cost of some screws and bolts.[15] A high cost component tends to indicate a higher degree of price sensitivity of demand.

[12] Purchaser questionnaire responses from ***.

[13] Purchaser questionnaire responses from ***.

[14] Purchaser questionnaire responses from ***.

[15] Purchaser questionnaire responses from ***.

Substitutability of Domestic and Imported Long Products

U.S. Purchasers

The Commission received useable questionnaire responses from 346 purchasers of long products. Many purchase more than one long product (table LONG-85). Unless noted otherwise, each purchaser's reply is only counted once throughout this chapter. Responding purchasers were asked if the firm has the ability to produce the long products purchased, and if so, why the products were purchased rather than produced internally. Most purchasers reported no capacity to produce the long products purchased. This includes firms that produce a downstream long product. Of the purchasers that reported the ability to produce the long products purchased, the most common reasons for purchasing the product were production capacity limitations (16 firms), cheaper price (8 firms), and purchase from an affiliated firm (4 firms).

Table LONG-85
Long products: Number of firms reporting purchases of multiple products, by products

	Number of firms reporting purchases of:									
Product	Ingots	Hot bar	Cold Bar	Rebar	Rails	Wire	Rope	Nails	Shapes	Fab.
Ingots	25	11	4	3	0	3	3	1	2	1
Hot bar		160	65	29	8	27	9	6	52	5
Cold Bar			84	16	7	20	7	7	27	4
Rebar				59	7	13	10	10	24	2
Rails					18	4	3	1	7	0
Wire						85	15	11	7	1
Rope							51	6	4	2
Nails								30	6	3
Shapes									75	4
Fabricated										11

Source: Compiled from data submitted in response to Commission questionnaires.

Purchasers were fairly evenly divided between those that reported making daily purchases (87) and those that reported weekly (89) or monthly purchases (82). Relatively few reported purchases on a quarterly or longer basis.[16] A majority of purchasers reported that they were "always" aware of whether the long products were U.S. produced or imported (231 of the 338 that responded to this question), and most of the remainder reported that they are "usually" aware of the source. Of 108 distributors that responded to this question, 37 reported that their buyers were "always" aware of whether the long products were U.S. produced or imported, 21 said their buyers were "usually" aware, and 48 said their buyers were "sometimes" aware. Approximately one-third of responding purchasers (106 of 336 that responded to this question) reported that their supplier sets terms at a purchase, while 216 reported that terms are negotiable.

[16] Most of the remaining purchasers reported purchasing on an "as needed" basis, or with no set pattern.

Lead Times

Most purchasers reported lead times of three months or less. Of the 327 responding purchasers, 45 reported average lead times of one week or less, an additional 62 purchasers reported average lead times of one month or less, and a further 154 purchasers reported lead times of three months or less. The few purchasers that reported lead times separately for domestic and import sources generally reported lead times of two to three months for imports, and shorter lead times for domestic product.

The Commission asked purchasers to report if average lead times for domestic and imported long products had changed since January 1, 1996. Most responding purchasers reported no overall change in lead times since 1996 for either domestic or imported product.[17]

Factors Affecting Purchasing Decisions

Product quality was reported to be the most important factor in the purchasing decision for approximately half of all responding purchasers, followed by price. Table LONG-86 reports the most important factors in the purchasing decisions for long products in the aggregate. Most responding purchasers reported that product quality was the most important factor for every product category except rebar and shapes. More purchasers of rebar and shapes reported that price is the most important factor in the purchase decision.[18]

Table LONG-86
Long products: Ranking of factors used in purchasing decisions as reported by purchasers

Factor	Number of firms reporting		
	Number 1 factor	Number 2 factor	Number 3 factor
Quality	159	73	37
Price	92	110	94
Availability/delivery	32	109	110
Contract/traditional Supplier	26	9	16
Other[1]	25	29	66

[1] Other includes domestic supplier/origin of material, customer specification, product range, lot size, credit terms, affiliated company, and service.

Source: Compiled from data submitted in response to Commission questionnaires.

When asked how often they purchase the lowest priced long products offered, 14 purchasers said "always," 179 said "usually," 120 said "sometimes," and 24 said "never." Most responding purchasers reported requiring supplier certification for 95 to 100 percent of their purchases. Commonly mentioned certifications or specifications included ASTM, ASME, API, ANSI, ISO 9000, and AISI. Few purchasers reported requiring in-house certification. Thirty-seven purchasers reported that a domestic

[17] One hundred eighty-three purchasers reported no change in lead time from domestic sources since 1996, compared to 25 that reported increased lead times, and 34 that reported decreased lead times. One hundred ninety-three purchasers reported no overall change in lead time for imported long products, compared to eight that reported increased lead times, and 19 that reported decreased lead times.

[18] Within each product category, responses of all purchasers that reported purchases in the product category are included. Thus responses are not additive across categories.

producer had failed to qualify or had lost qualified status, and 26 reported that a foreign producer had failed to qualify, or had lost qualified status.

Comparisons of Domestic Products and Subject Imports

Purchasers tended to indicate familiarity with a wide variety of countries' long products. Two hundred two of 347 responding purchasers reported familiarity with long products produced in more than one country. Quality, reliability of supply, product consistency, and availability are the factors considered to be very important by most responding purchasers (see table LONG-87).

Table LONG-87
Long products: Average purchase factor ratings and reported comparisons between U.S., Canadian, Mexican, and non-NAFTA products

Factor	Average importance score[1]	U.S. vs. Canada[2]			U.S. vs. Mexico[2]			U.S. vs non-NAFTA imports[2]		
		S	C	I	S	C	I	S	C	I
Availability	2.86	15	47	5	13	14	4	61	97	46
Delivery terms	2.41	3	62	1	9	18	4	55	133	14
Delivery time	2.77	11	50	5	15	9	7	94	83	26
Discounts offered	2.27	3	54	6	3	19	7	22	139	35
Lowest price	2.62	9	45	11	8	12	11	38	79	85
Minimum quantity requirements	2.06	5	56	3	7	22	2	51	129	23
Packaging	2.16	3	61	2	5	24	2	20	162	17
Product consistency	2.90	3	58	5	10	17	5	20	150	33
Product quality	2.94	7	51	8	10	18	4	22	136	44
Product range	2.25	15	47	3	12	18	2	37	131	35
Reliability of supply	2.92	7	55	4	14	10	7	51	114	37
Technical support	2.32	12	52	2	18	8	5	66	109	27
Transportation network	2.11	7	59	0	15	12	5	49	124	22
U.S. transportation costs	2.25	9	51	2	10	15	3	56	131	15

[1] 3 = very important, 2 = somewhat important, 1 = not important.
[2] S = U.S. superior, C = products comparable, I = U.S. inferior.

Source: Compiled from data submitted in response to Commission questionnaires.

Most responding purchasers stated that imported and domestically produced long products that are produced to the same grade and specification are generally used in the same applications. For Canada, 221 purchasers agreed, and for Mexico, 186 purchasers agreed. For non-NAFTA countries, 237 reported that domestic and imported long products are generally used in the same applications.

Ninety-eight purchasers stated that they ordered long products specifically from the United States. The most commonly reported reasons cited were their customers' preference, "Buy America" provisions, quality, and timely delivery. Many of these same purchasers stated they preferentially ordered long products from a specific foreign country or countries, citing customer preference and quality. One hundred ninety-three purchasers stated that they never order long products from one

country in particular over other sources of supply. Eighty-five purchasers stated that there were products unavailable or in short supply from domestic producers.

Elasticity Estimates

This section discusses the elasticity estimates that will be used in the economic analysis concerning any remedy options.

U.S. Supply Elasticity

The domestic supply elasticity for long products measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of long products. The elasticity of domestic supply depends on several factors, including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift production to other products, the existence of inventories, and the availability of alternate markets for U.S.-produced long products. Analysis of these factors earlier indicates that the U.S. industry is likely to be able to increase or decrease shipments to the U.S. market in response to price changes. The ability of individual producers to respond to price changes depends on, among other factors, the range of products affected. For the long products group in the aggregate, an estimate in the range of 3 to 5 is suggested. Domestic producers of cold bar are predicted to be most responsive to price changes, because of low levels of capacity utilization and high inventories. Domestic producers of fabricated, rails, and wire are anticipated to be less responsive to price changes.

U.S. Demand Elasticity

The U.S. demand elasticity for long products measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of long products. This estimate depends on factors discussed earlier such as the existence of substitute products and the component share of long products in the production of downstream products. Based on available information, the aggregate demand for long products is likely to be inelastic; a range of -0.5 to -0.75 is suggested.

Substitution Elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[19] Product differentiation, in turn, depends upon such factors as quality and conditions of sale. Based on available information, the elasticity of substitution between U.S.-produced and imported long products is likely to be in the range of 2 to 4.

Factors Affecting Prices

Raw Material Costs

Hot bar, shapes, and rebar are produced from billets. Cold bar is produced from hot-rolled bar. Wire is produced from wire rod. Wire strand, rope, and cordage are produced from wire. Support

[19] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and U.S. like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

beams, columns, and other fabricated steel units used in the construction of buildings and bridges are produced from heavy structural shapes. The main raw material used in the production of billets is scrap. See the overview section for a discussion of raw material costs.

Transportation Costs to the U.S. Market

Transportation costs for long products from all import sources (based on year 2000 import data) to the United States (excluding U.S. inland costs) are estimated to be an average of 8.1 percent of the customs value of the long products. This estimate is derived from official U.S. import data and is calculated as the difference between the c.i.f. value and the customs value, as a share of the customs value. This figure represents the transportation and other charges on imports. Transportation costs were 2.6 percent of the value of long products from Canada, 3.4 percent of the value of long products from Mexico, generally 10 to 12 percent of the value of products from Western Europe, and slightly higher for products from most Asian countries.

U.S. Inland Transportation Costs

Purchasers estimated that U.S. inland transportation costs accounted for between 0 and 30 percent of the total delivered cost of long products. The median reported was five percent.[20] Most purchasers (252) reported that their supplier generally arranges the transportation to their location, while 76 stated that the purchaser itself usually arranges transportation.

Pricing Methods and Sales Terms

Of 310 purchasers that answered this question, 148 reported that all of their purchases are on a spot basis, while 99 reported that 90-100 percent of their purchases are on a contract basis. The rest of the purchasers reported some mix of contract and spot pricing. Contracts were usually six months to one year in length, with renegotiation generally only coming at the end of a contract. Eighty-four of 161 purchasers with purchases under contracts reported contracts that fixed both price and quantity, while 62 reported contracts that fixed price only. Few purchasers reported price premiums for sub-minimum shipments or meet-or-release provisions.

Pricing Products

The Commission asked for quarterly sales value and quantity data for U.S. producers' and importers' sales of the following 10 products during January 1996 to June 2001:

Product 8. --Carbon billets with chemistries of up to 0.25 percent max carbon, exclusive of special chemistries.

Product 9. --Hot-rolled bars, grade ASTM A36 or equivalent in sizes three inches and under.

Product 10A. --Cold-finished bar, C1045, one inch round.

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[20] Overall, of the 307 purchasers that responded to the question concerning shipment distance, 141 reported that none of their purchases occur within 100 miles of the storage or production facility and 54 reported that 90 to 100 percent of their purchases occur over 1,000 miles from the storage or production facility.

Product 10B. --Cold-finished bar, C12L14, one inch round.

Product 11. --Rebar, straight ASTM A615, Nos. 4 and 5, grade 60.

Product 12. --New rails of iron or non-alloy steel, standard tee, head hardened, 78 to 80 feet in length, over 30 kilograms per meter.

Product 13. --Low-carbon galvanized wire, grades 1006 to 1020, coated with regular or commercial weights of zinc, 13 gauge (0.0915 inch or 2.3241 mm in diameter), medium or hard temper.

Product 14. --Bright wire rope, ½" 6X19 class, independent wire rope core.

Product 15. --Bulk nails, 16d (called "16 penny") coated sinkers used primarily in framing applications.

Product 16. --Wide-flange beams, 8 to 14 inches, ASTM A-36, A-575-50, or A-992, and excluding any beam that is certified or multi-certified to a grade higher than grade 50 or to grades A588, A690, or A913.

In addition, the Commission requested data on bids and contracts awarded for:

PRODUCT 17. --Fabricated structural units.

Price Trends

Prices received by domestic producers showed a general decline throughout the period examined, particularly since mid-1998. The prices received by domestic producers of product 8 (carbon steel billets with chemistries of up to 0.25 percent carbon) increased slightly from the first quarter of 1999 through the first quarter of 2001, then declined in the second quarter to the lowest point in the period. The prices received by domestic producers of product 11 (Nos. 4 and 5 rebar, straight, grade 60) increased slightly from the first quarter of 1996 through the second quarter of 1998 and have since declined. The prices received by domestic producers of product 16 (wide-flange beams 8 to 14 inches) reached a high in the second quarter of 1998, declined through the second quarter of 1999, increased through the second quarter of 2000, and have since declined. Product 15 (16-penny nails) was the only product for which the prices received by domestic producers increased slightly over the period examined.

There is some seasonal fluctuation in sales of several of the pricing products. Sales of product 10B by domestic producers were higher in the first quarter of each calendar year than in each of the three subsequent quarters. Sales of both product 11 (Nos. 4 and 5 rebar) and product 15 (16 penny nails) by domestic producers were higher in the second and third quarters of each year than in the first and fourth quarters, due to the fact that demand for these products is dependent on construction activity. Sales of product 16 (wide-flange beams 8 to 14 inches) showed evidence of a longer cycle with higher sales in late 1997/early 1998 and late 1999/early 2000. Sales of product 12 (head-hardened rails) by domestic producers have gone through two cycles of increasing sales followed by marked declines since 1996. Reported U.S. sales of product 12 by responding importers followed a roughly similar pattern, but with

less variation in sales volume. This may reflect the purchasing patterns of the relatively few major purchasers of head-hardened rail.[21]

Price Data

The share of sales in each product category and source of supply accounted for by the pricing products in 2000 varied from zero to *** percent. For products produced in the United States, coverage was highest for rebar, hot bar, ingots, and shapes. Coverage was generally lower for imports, and for the wire and wire rope product categories, as shown in table LONG-88. Data from domestic producers were compared to reported U.S. shipment values, and shipments of imports were compared to import values. Reported pricing data are presented in tables LONG-89-98 and figures LONG-2-21. Trends and underselling/overselling summaries are presented in tables LONG-99 and 100.

Table LONG-88
Long products: Pricing product coverage, by product category and source of supply, 2000

Product	United States			Canada			Mexico			All other		
	Pricing data	Total U.S.	Share	Pricing data	Total imports	Share	Pricing data	Total imports	Share	Pricing data	Total imports	Share
	Million dollars		*Percent*	*Million dollars*		*Percent*	*Million dollars*		*Percent*	*Million dollars*		*Percent*
Ingots	170.9	470.5	36.3	***	21.9	***	0.0	6.5	0.0	64.9	228.9	28.3
Hot bar	1,444	3,106	44.5	62.0	463.4	13.4	***	58.9	***	44.0	581.0	7.6
Cold bar	***	880.6	***	1.1	65.4	1.7	0.0	0.4	0.0	7.9	177.3	4.5
Rebar	680.8	1,445	47.1	0.0	0.9	0.0	***	14.3	***	100.0	347.4	28.8
Rails	***	359.4	***	0.0	5.8	0.0	0.0	0.0	–	***	133.0	***
Wire	1.2	1,339	0.1	***	152.0	***	***	32.1	***	0.1	363.7	0.04
Rope	2.8	655.8	0.4	0.0	28.0	0.0	0.05	16.2	0.3	2.9	305.9	0.9
Nails	***	1,041	***	***	90.0	***	***	49.7	***	24.3	427.6	5.7
Shapes	869.7	2,577	33.7	***	74.9	***	0.0	2.7	0.0	150.8	622.9	24.2

Source: Compiled from responses to Commission questionnaires.

[21] Testimony of John Gillette of Burlington Northern Santa Fe Railway, hearing transcript, pp. 1,497-99, and Gary Zaversnik of Union Pacific, pp. 1,501-03.

Table LONG-89
Ingots: Weighted-average price and quantity data for U.S.-produced and imported product 8[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price ($/ton)	Quantity (tons)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)
1996:											
Jan.-Mar.	244.77	294,449	***	***	***	(2)	(2)	(2)	384.13	65,626	-56.9
Apr.-June	234.65	404,571	***	***	***	(2)	(2)	(2)	285.69	66,532	-21.7
July-Sept.	244.30	314,662	***	***	***	(2)	(2)	(2)	366.75	66,193	-50.1
Oct.-Dec.	246.65	222,562	***	***	***	(2)	(2)	(2)	340.47	64,452	-38.0
1997:											
Jan.-Mar.	246.51	341,931	***	***	***	(2)	(2)	(2)	342.74	66,989	-39.0
Apr.-June	243.57	380,761	***	***	***	(2)	(2)	(2)	341.78	99,257	-40.3
July-Sept.	244.02	351,092	***	***	***	(2)	(2)	(2)	354.36	87,510	-45.2
Oct.-Dec.	246.14	381,755	***	***	***	(2)	(2)	(2)	311.22	67,525	-26.4
1998:											
Jan.-Mar.	253.12	438,359	***	***	***	(2)	(2)	(2)	301.12	93,921	-19.0
Apr.-June	248.35	389,631	***	***	***	(2)	(2)	(2)	269.99	82,218	-8.7
July-Sept.	234.92	369,369	***	***	***	(2)	(2)	(2)	227.79	117,138	3.0
Oct.-Dec.	208.40	277,377	***	***	***	(2)	(2)	(2)	233.61	101,139	-12.1
1999:											
Jan.-Mar.	220.55	193,104	***	***	***	(2)	(2)	(2)	***	***	***
Apr.-June	223.78	182,569	***	***	***	(2)	(2)	(2)	227.81	66,886	-1.8
July-Sept.	222.36	220,829	***	***	***	(2)	(2)	(2)	209.01	17,794	6.0
Oct.-Dec.	230.09	207,211	***	***	***	(2)	(2)	(2)	264.74	53,816	-15.1
2000:											
Jan.-Mar.	231.46	227,474	***	***	***	(2)	(2)	(2)	238.70	102,565	-3.1
Apr.-June	233.77	201,040	***	***	***	(2)	(2)	(2)	227.03	66,532	2.9
July-Sept.	233.91	224,324	***	***	***	(2)	(2)	(2)	197.54	85,806	15.6
Oct.-Dec.	232.94	80,781	***	***	***	(2)	(2)	(2)	236.29	35,402	-1.4
2001:											
Jan.-Mar.	235.84	110,858	***	***	***	(2)	(2)	(2)	190.18	37,593	19.4
Apr.-June	208.32	188,681	***	***	***	(2)	(2)	(2)	***	***	***

[1] Carbon billets with chemistries of up to 0.25 percent max carbon, exclusive of special chemistries.
[2] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-90
Hot bar: Weighted-average price and quantity data for U.S.-produced and imported product 9[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA Imports		
	Price ($/ton)	Quantity (tons)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)
1996:											
Jan.-Mar.	410.51	943,084	416.36	22,343	-1.4	***	***	***	***	***	***
Apr.-June	401.35	949,100	417.82	22,681	-4.1	***	***	***	***	***	***
July-Sept.	402.73	915,961	414.51	21,518	-2.9	***	***	***	***	***	***
Oct.-Dec.	403.58	904,351	415.45	22,761	-2.9	***	***	***	***	***	***
1997:											
Jan.-Mar.	401.13	970,652	410.14	26,783	-2.2	***	***	***	***	***	***
Apr.-June	412.52	1,022,630	420.93	28,621	-2.0	***	***	***	***	***	***
July-Sept.	404.84	1,046,620	427.58	27,272	-5.6	***	***	***	***	***	***
Oct.-Dec.	411.57	1,033,048	423.44	29,697	-2.9	***	***	***	338.20	9,636	17.8
1998:											
Jan.-Mar.	416.55	1,083,781	***	***	***	***	***	***	342.89	15,509	17.7
Apr.-June	412.88	1,059,194	***	***	***	***	***	***	345.21	27,644	16.4
July-Sept.	412.84	979,060	439.72	26,703	-6.5	***	***	***	356.55	28,842	13.6
Oct.-Dec.	400.56	868,724	433.02	28,518	-8.1	***	***	***	323.88	35,062	19.1
1999:											
Jan.-Mar.	369.24	977,285	***	***	***	***	***	***	334.23	25,710	9.5
Apr.-June	364.96	1,010,136	***	***	***	***	***	***	348.02	27,228	4.6
July-Sept.	367.43	981,010	485.84	31,701	-32.2	***	***	***	***	***	***
Oct.-Dec.	367.78	979,324	467.95	32,303	-27.2	***	***	***	282.22	20,592	23.3
2000:											
Jan.-Mar.	379.68	1,075,643	418.53	37,180	-10.2	***	***	***	298.32	34,488	21.4
Apr.-June	382.61	1,043,978	420.84	38,379	-10.0	***	***	***	315.25	47,389	17.6
July-Sept.	359.25	963,584	400.51	39,987	-11.5	***	***	***	334.47	31,288	6.9
Oct.-Dec.	350.94	825,541	406.78	35,087	-15.9	***	***	***	322.16	25,826	8.2
2001:											
Jan.-Mar.	339.34	942,461	***	***	***	***	***	***	322.83	16,887	4.9
Apr.-June	338.39	948,216	***	***	***	***	***	***	292.08	20,936	13.7

[1] Hot-rolled bars, grade ASTM A36 or equivalent in sizes three inches and under.

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-91
Cold bar: Weighted-average price and quantity data for U.S.-produced and imported product 10A[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA Imports		
	Price ($/ton)	Quantity (tons)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)
1996:											
Jan.-Mar.	816.80	2,916	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	819.09	3,226	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
July-Sept.	831.33	3,270	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	845.39	2,969	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
1997:											
Jan.-Mar.	818.87	4,363	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	818.70	3,938	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
July-Sept.	813.87	3,843	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	800.73	2,977	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
1998:											
Jan.-Mar.	809.01	4,439	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	804.83	4,209	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
July-Sept.	865.25	3,637	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	761.50	3,200	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
1999:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	830.42	3,994	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
July-Sept.	845.61	4,005	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
2000:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
July-Sept.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
2001:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***

[1] Cold-finished bar, C1045, one inch round.
[2] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-92
Cold bar: Weighted-average price and quantity data for U.S.-produced and imported product 10B[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price ($/ton)	Quantity (tons)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)
1996:											
Jan.-Mar.	***	***	***	***	***	(2)	(2)	(2)	761.53	1,069	***
Apr.-June	***	***	***	***	***	(2)	(2)	(2)	741.78	1,630	***
July-Sept.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
Oct.-Dec.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
1997:											
Jan.-Mar.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
Apr.-June	***	***	***	***	***	(2)	(2)	(2)	***	***	***
July-Sept.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
Oct.-Dec.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
1998:											
Jan.-Mar.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
Apr.-June	***	***	***	***	***	(2)	(2)	(2)	713.01	2,330	***
July-Sept.	***	***	***	***	***	(2)	(2)	(2)	702.49	1,652	***
Oct.-Dec.	***	***	***	***	***	(2)	(2)	(2)	689.59	1,434	***
1999:											
Jan.-Mar.	***	***	***	***	***	(2)	(2)	(2)	668.50	1,689	***
Apr.-June	***	***	***	***	***	(2)	(2)	(2)	***	***	***
July-Sept.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
Oct.-Dec.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
2000:											
Jan.-Mar.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
Apr.-June	***	***	***	***	***	(2)	(2)	(2)	***	***	***
July-Sept.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
Oct.-Dec.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
2001:											
Jan.-Mar.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
Apr.-June	***	***	***	***	***	(2)	(2)	(2)	582.70	2,476	***

[1] Cold-finished bar, C12L14, one inch round.
[2] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-93
Rebar: Weighted-average price and quantity data for U.S.-produced and imported product 11[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price ($/ton)	Quantity (tons)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)
1996:											
Jan.-Mar.	295.10	371,353	(2)	(2)	(2)	***	***	***	***	***	***
Apr.-June	300.19	478,149	(2)	(2)	(2)	***	***	***	***	***	***
July-Sept.	306.15	445,784	(2)	(2)	(2)	***	***	***	***	***	***
Oct.-Dec.	305.72	398,912	(2)	(2)	(2)	***	***	***	329.11	4,450	-7.7
1997:											
Jan.-Mar.	304.73	467,267	(2)	(2)	(2)	***	***	***	***	***	***
Apr.-June	311.05	488,577	(2)	(2)	(2)	***	***	***	238.76	39,684	23.2
July-Sept.	311.68	485,283	(2)	(2)	(2)	***	***	***	220.89	50,875	29.1
Oct.-Dec.	315.10	465,192	(2)	(2)	(2)	***	***	***	230.16	47,849	27.0
1998:											
Jan.-Mar.	315.52	495,494	(2)	(2)	(2)	***	***	***	239.12	109,105	24.2
Apr.-June	317.57	566,637	(2)	(2)	(2)	***	***	***	248.56	160,778	21.7
July-Sept.	314.80	554,396	(2)	(2)	(2)	***	***	***	238.44	127,100	24.3
Oct.-Dec.	296.91	490,975	(2)	(2)	(2)	***	***	***	233.70	58,256	21.3
1999:											
Jan.-Mar.	282.15	545,597	(2)	(2)	(2)	***	***	***	213.52	151,072	24.3
Apr.-June	277.25	642,554	(2)	(2)	(2)	***	***	***	210.00	138,890	24.3
July-Sept.	281.19	622,469	(2)	(2)	(2)	***	***	***	214.65	175,747	23.7
Oct.-Dec.	277.55	544,445	(2)	(2)	(2)	***	***	***	217.50	56,905	21.6
2000:											
Jan.-Mar.	277.67	586,157	(2)	(2)	(2)	***	***	***	215.54	212,607	22.4
Apr.-June	280.97	639,561	(2)	(2)	(2)	***	***	***	216.06	98,796	23.1
July-Sept.	276.45	651,261	(2)	(2)	(2)	***	***	***	215.27	100,088	22.1
Oct.-Dec.	272.85	580,268	(2)	(2)	(2)	***	***	***	218.17	51,785	20.0
2001:											
Jan.-Mar.	270.89	634,254	(2)	(2)	(2)	***	***	***	213.64	160,566	21.1
Apr.-June	279.00	687,383	(2)	(2)	(2)	***	***	***	218.39	124,095	21.7

[1] Rebar, straight ASTM A615, Nos. 4 and 5, grade 60.
[2] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-94

Rails: Weighted-average price and quantity data for U.S.-produced and imported product 12[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price ($/ton)	Quantity (tons)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)
1996:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	465.23	39,228	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	590.58	20,307	***
July-Sept.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
1997:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
July-Sept.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
1998:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	549.89	61,221	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	566.04	59,258	***
July-Sept.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	559.83	48,907	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
1999:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	555.46	54,579	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	558.91	35,959	***
July-Sept.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
2000:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	534.39	61,994	***
July-Sept.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	500.09	63,250	***
2001:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***

[1] New rails of iron or non-alloy steel, standard tee, head hardened, 78 to 80 feet in length, over 30 kilograms per meter.
[2] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-95
Wire: Weighted-average price and quantity data for U.S.-produced and imported product 13[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price ($/lb)	Quantity (pounds)	Price ($/lb)	Qty (pounds)	Margin (percent)	Price ($/lb)	Qty (pounds)	Margin (percent)	Price ($/lb)	Qty (pounds)	Margin (percent)
1996:											
Jan.-Mar.	0.38	19,643,474	***	***	***	***	***	***	0.44	1,956,048	-14.3
Apr.-June	0.37	23,002,868	***	***	***	***	***	***	0.40	2,395,807	-8.5
July-Sept.	0.37	22,552,840	***	***	***	***	***	***	0.36	3,902,531	3.6
Oct.-Dec.	0.35	22,769,423	***	***	***	***	***	***	0.41	2,266,679	-17.4
1997:											
Jan.-Mar.	0.39	23,128,545	***	***	***	***	***	26.2	0.41	2,508,332	-4.3
Apr.-June	0.38	22,038,918	***	***	***	***	***	28.1	0.39	2,690,702	-2.7
July-Sept.	0.39	20,235,009	***	***	***	***	***	29.7	0.41	3,209,610	-3.7
Oct.-Dec.	0.40	18,136,183	***	***	***	***	***	30.1	0.43	2,695,213	-5.6
1998:											
Jan.-Mar.	0.40	28,371,458	***	***	***	***	***	31.3	0.40	2,533,949	-2.1
Apr.-June	0.40	28,137,766	***	***	***	***	***	34.4	0.40	2,987,640	-0.7
July-Sept.	0.42	24,905,424	***	***	***	***	***	36.7	0.39	2,642,583	7.7
Oct.-Dec.	0.36	24,626,457	***	***	***	***	***	26.2	0.35	3,811,861	2.2
1999:											
Jan.-Mar.	0.39	26,195,717	***	***	***	***	***	32.7	0.33	5,786,572	14.1
Apr.-June	0.39	27,825,914	***	***	***	***	***	32.9	0.32	7,002,833	17.4
July-Sept.	0.38	28,415,089	***	***	***	***	***	28.3	0.33	7,754,605	14.3
Oct.-Dec.	0.40	24,836,992	***	***	***	***	***	33.0	0.34	7,738,651	16.2
2000:											
Jan.-Mar.	0.41	30,109,151	***	***	***	***	***	34.2	0.33	11,321,023	18.3
Apr.-June	0.40	29,876,183	***	***	***	***	***	31.6	0.35	12,003,457	13.4
July-Sept.	0.42	28,058,848	***	***	***	***	***	36.5	0.31	8,011,196	24.6
Oct.-Dec.	0.38	28,037,136	***	***	***	***	***	28.1	0.40	10,936,997	-7.3
2001:											
Jan.-Mar.	0.39	32,745,083	***	***	***	***	***	***	0.38	5,094,646	3.3
Apr.-June	0.38	37,887,663	***	***	***	***	***	***	0.46	10,577,656	-22.1

[1] Low-carbon galvanized wire, grades 1006 to 1020, coated with regular or commercial weights of zinc, 13 gauge (0.0915 inch), medium or hard temper.

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-96
Rope: Weighted-average price and quantity data for U.S.-produced and imported product 14[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price ($/100')	Quantity (100')	Price ($/100')	Qty (100')	Margin (percent)	Price ($/100')	Qty (100')	Margin (percent)	Price ($/100')	Qty (100')	Margin (percent)
1996:											
Jan.-Mar.	57.65	12,900	(2)	(2)	(2)	(2)	(2)	(2)	32.81	5,173	43.1
Apr.-June	58.35	12,777	(2)	(2)	(2)	(2)	(2)	(2)	31.39	10,399	46.2
July-Sept.	59.14	14,101	(2)	(2)	(2)	(2)	(2)	(2)	***	***	***
Oct.-Dec.	58.05	13,065	(2)	(2)	(2)	(2)	(2)	(2)	33.25	5,965	42.7
1997:											
Jan.-Mar.	57.97	14,410	(2)	(2)	(2)	(2)	(2)	(2)	22.25	32,974	61.6
Apr.-June	57.21	14,759	(2)	(2)	(2)	(2)	(2)	(2)	19.90	48,169	65.2
July-Sept.	58.53	14,277	(2)	(2)	(2)	(2)	(2)	(2)	33.44	10,286	42.9
Oct.-Dec.	57.93	13,565	(2)	(2)	(2)	(2)	(2)	(2)	32.81	13,818	43.4
1998:											
Jan.-Mar.	58.96	11,274	(2)	(2)	(2)	(2)	(2)	(2)	19.72	26,842	66.6
Apr.-June	59.89	10,770	(2)	(2)	(2)	(2)	(2)	(2)	18.69	24,372	68.8
July-Sept.	58.15	12,317	(2)	(2)	(2)	(2)	(2)	(2)	20.09	28,875	65.5
Oct.-Dec.	59.84	10,519	(2)	(2)	(2)	(2)	(2)	(2)	19.63	30,980	67.2
1999:											
Jan.-Mar.	57.98	10,994	(2)	(2)	(2)	(2)	(2)	(2)	21.88	17,841	62.3
Apr.-June	56.59	12,696	(2)	(2)	(2)	23.20	150	59.0	23.26	19,454	58.9
July-Sept.	55.79	11,064	(2)	(2)	(2)	23.20	809	58.4	23.29	25,811	58.3
Oct.-Dec.	57.14	10,827	(2)	(2)	(2)	23.31	441	59.2	24.34	29,629	57.4
2000:											
Jan.-Mar.	57.49	14,449	(2)	(2)	(2)	25.83	554	55.1	25.53	23,888	55.6
Apr.-June	56.58	13,481	(2)	(2)	(2)	25.83	155	54.3	28.01	28,810	50.5
July-Sept.	59.00	11,770	(2)	(2)	(2)	25.83	981	56.2	25.53	26,857	56.7
Oct.-Dec.	57.45	9,863	(2)	(2)	(2)	25.83	431	55.0	27.90	27,095	51.4
2001:											
Jan.-Mar.	58.15	11,019	(2)	(2)	(2)	25.83	337	55.6	27.15	27,175	53.3
Apr.-June	33.42	22,154	(2)	(2)	(2)	25.83	113	22.7	25.33	37,904	24.2

[1] Bright wire rope, ½" 6X19 class, independent wire rope core.
[2] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-97
Nails: Weighted-average price and quantity data for U.S.-produced and imported product 15[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price ($/lb.)	Quantity (pounds)	Price ($/lb.)	Qty (pounds)	Margin (percent)	Price ($/lb.)	Qty (pounds)	Margin (percent)	Price ($/lb.)	Qty (pounds)	Margin (percent)
1996:											
Jan.-Mar.	0.28	16,815,141	***	***	***	***	***	***	0.34	8,832,089	-24.1
Apr.-June	0.28	19,190,742	***	***	***	***	***	***	0.37	7,654,078	-31.2
July-Sept.	0.28	21,600,344	***	***	***	***	***	***	0.33	14,775,398	-17.5
Oct.-Dec.	0.24	16,046,320	***	***	***	***	***	***	0.33	10,563,322	-35.9
1997:											
Jan.-Mar.	0.25	13,305,597	***	***	***	***	***	***	0.32	6,700,588	-27.8
Apr.-June	0.25	11,387,933	***	***	***	***	***	***	***	***	***
July-Sept.	0.29	17,205,776	***	***	***	***	***	***	0.34	3,008,952	-19.0
Oct.-Dec.	0.31	13,065,985	***	***	***	***	***	***	0.35	3,652,584	-12.3
1998:											
Jan.-Mar.	0.29	17,035,601	***	***	***	***	***	***	0.31	6,110,296	-5.5
Apr.-June	0.28	19,077,789	***	***	***	***	***	***	0.28	8,923,592	0.8
July-Sept.	0.30	15,030,272	***	***	***	***	***	***	0.23	10,882,382	23.6
Oct.-Dec.	0.30	16,238,668	***	***	***	***	***	***	0.23	14,088,482	25.0
1999:											
Jan.-Mar.	0.33	11,903,122	***	***	***	***	***	***	0.22	62,061,200	32.7
Apr.-June	0.32	13,636,284	***	***	***	***	***	***	0.23	46,995,850	29.3
July-Sept.	0.32	11,747,566	***	***	***	***	***	***	0.25	22,703,048	21.6
Oct.-Dec.	0.30	10,009,386	***	***	***	***	***	***	0.24	20,821,432	21.0
2000:											
Jan.-Mar.	***	***	***	***	***	***	***	***	0.23	25,790,049	***
Apr.-June	***	***	***	***	***	***	***	***	0.10	65,179,348	***
July-Sept.	0.25	11,773,228	***	***	***	***	***	***	0.22	27,831,233	13.2
Oct.-Dec.	0.29	5,783,564	***	***	***	***	***	***	0.17	34,666,319	41.6
2001:											
Jan.-Mar.	0.27	6,586,274	***	***	***	***	***	***	0.22	28,460,620	19.3
Apr.-June	0.24	11,518,346	***	***	***	***	***	***	0.23	16,524,187	3.1

[1] Bulk nails, 16d (called "16 penny") coated sinkers used primarily in framing applications.

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-98
Shapes: Weighted-average price and quantity data for U.S.-produced and imported product 16[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price ($/ton)	Quantity (tons)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)	Price ($/ton)	Qty (tons)	Margin (percent)
1996:											
Jan.-Mar.	397.07	438,515	***	***	***	***	***	***	394.94	99,432	0.5
Apr.-June	397.44	407,015	***	***	***	***	***	***	408.67	61,994	-2.8
July-Sept.	401.93	366,781	***	***	***	***	***	***	392.39	57,804	2.4
Oct.-Dec.	400.70	384,142	***	***	***	***	***	***	349.68	59,345	12.7
1997:											
Jan.-Mar.	391.82	402,015	***	***	***	***	***	***	357.12	34,060	8.9
Apr.-June	390.74	387,901	***	***	***	***	***	***	367.45	52,241	6.0
July-Sept.	395.49	416,705	***	***	***	***	***	***	364.39	51,231	7.9
Oct.-Dec.	407.31	555,195	***	***	***	***	***	***	373.92	80,067	8.2
1998:											
Jan.-Mar.	409.90	528,601	***	***	***	***	***	***	390.00	179,912	4.9
Apr.-June	418.80	478,092	***	***	***	***	***	***	359.09	175,932	14.3
July-Sept.	402.36	450,141	***	***	***	***	***	***	333.52	214,326	17.1
Oct.-Dec.	353.43	437,581	***	***	***	***	***	***	313.41	168,266	11.3
1999:											
Jan.-Mar.	319.80	443,634	***	***	***	***	***	***	300.74	154,497	6.0
Apr.-June	319.18	493,856	***	***	***	***	***	***	305.23	74,438	4.4
July-Sept.	329.76	564,679	***	***	***	***	***	***	294.53	97,894	10.7
Oct.-Dec.	363.06	615,254	***	***	***	***	***	***	302.68	38,678	16.6
2000:											
Jan.-Mar.	389.84	602,868	***	***	***	***	***	***	358.27	107,504	8.1
Apr.-June	395.76	614,647	***	***	***	***	***	***	385.28	96,699	2.6
July-Sept.	381.40	538,327	***	***	***	***	***	***	390.33	117,422	-2.3
Oct.-Dec.	355.47	523,608	***	***	***	***	***	***	377.46	77,338	-6.2
2001:											
Jan.-Mar.	330.55	548,973	***	***	***	***	***	***	357.38	28,094	-8.1
Apr.-June	324.40	471,649	***	***	***	***	***	***	303.31	33,516	6.5

[1] Wide-flange beams, 8 to 14 inches, ASTM A-36, A-575-50, or A-992, and excluding any beam that is certified or multi-certified to a grade higher than grade 50 or to grades A588, A690, or A913.
[2] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure LONG-2
Ingots: Weighted-average prices for U.S.-produced and imported product 8 from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-3
Ingots: Reported sales of product 8 produced in the United States and imported from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001.

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Figure LONG-4
Hot bar: Weighted-average prices for U.S.-produced and imported product 9 from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-5
Hot bar: Reported sales of product 9 produced in the United States and from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001.

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Figure LONG-6
Cold bar: Weighted-average prices for U.S.-produced and imported product 10A from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-7
Cold bar: Reported sales of product 10A produced in the United States and imported from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-8
Cold bar: Weighted-average prices for U.S.-produced and imported product 10B from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-9
Cold bar: Reported sales of product 10B produced in the United States and imported from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-10
Rebar: Weighted-average prices for U.S.-produced and imported product 11 from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-11
Rebar: Reported sales of product 11 produced in the United States and imported from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-12
Rails: Weighted-average prices for U.S.-produced and imported product 12 from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-13
Rails: Reported sales of product 12 produced in the United States and imported from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-14
Wire: Weighted-average prices for U.S.-produced and imported product 13 from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-15
Wire: Reported sales of product 13 produced in the United States and imported from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-16
Rope: Weighted-average prices for U.S.-produced and imported product 14 from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-17
Rope: Reported sales of product 14 produced in the United States and from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-18
Nails: Weighted-average prices for U.S.-produced and imported product 15 from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-19
Nails: Reported sales of product 15 produced in the United States and from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-20
Shapes: Weighted-average prices for U.S.-produced and imported product 16 from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure LONG-21
Shapes: Reported sales of product 16 produced in the United States and imported from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Table LONG-99
Overall trends in weighted-average prices for long products, by sources and by products, January 1996-June 2001

Product	United States	Imports from Canada	Imports from Mexico	Non-NAFTA imports
		(*Percent change*)		
Ingots	-14.9	-44.8	(1)	-9.6
Hot bar	-17.6	-7.7	-11.1	-19.0
Cold bar	-14.1	-16.1	(1)	-21.4
Rebar	-5.5	(1)	-45.5	+2.4
Rails	-13.7	(1)	(1)	-13.9
Wire	-0.5	+5.0	-6.2	+6.3
Rope	-42.0	(1)	(1)	-22.8
Nails	-14.5	+10.8	-13.4	-33.2
Shapes	-18.3	-7.8	(1)	-23.2

[1] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table LONG-100
Long products: Summary of instances of underselling/overselling for imports from Canada, Mexico, and non-NAFTA countries, January 1996-June 2001

Country	Underselling		Overselling	
	Instances	Range	Instances	Range
	(*Number*)	(*Percent*)	(*Number*)	(*Percent*)
Canada	45	0.0 to 36.6	86	0.0 to 62.9
Mexico	73	0.0 to 59.2	33	1.0 to 59.1
Non-NAFTA countries	143	0.1 to 68.8	76	0.0 to 121.5

Source: Compiled from data submitted in response to Commission questionnaires.

The Commission requested bid and contract information on sales of fabricated products. Twenty domestic producers and nine importers of fabricated provided bid and contract information. Fabricated is produced from structural steel, plate, and sometimes hot-rolled bar. Unlike most other steel products, fabricated is not commonly priced per unit of quantity, but by the job. Responding producers and importers of fabricated pointed out that the products are not priced per ton, and that design and engineering may account for more than the cost of the components. A comparison of average values per ton is complicated by the fact that contracts commonly include delivery to the job site and some include erection as well. Some producers and importers were unable to supply an estimate of the quantity of steel components involved in a particular job. For those producers and importers able to supply value and quantity data for successful contracts, the average value per ton varied from a minimum of $769 per ton to $11,483 per ton (table LONG-101).

Table LONG-101
Fabricated: Minimum, maximum, and average weighted values per ton of steel for contracts awarded to domestic producers and imports from Canada, 1996-2000

Year	United States			Imports from Canada		
	Minimum	Maximum	Average	Minimum	Maximum	Average
	Per ton					
1996	$1,252	$7,000	$1,792	$1,222	$5,038	$3,979
1997	$1,100	$4,000	$2,001	$933	$11,063	$2,622
1998	$1,508	$6,470	$1,918	$1,182	$11,483	$2,084
1999	$769	$9,927	$1,954	$1,314	$8,810	$2,404
2000	$1,410	$7,870	$2,405	$1,483	$5,131	$3,255

Source: Compiled from data submitted in response to Commission questionnaires.

Staff was able to match bids from domestic producers and importers for the same job in three instances in which the Canadian firm was awarded the contract; one in 1998 and two in 2000. Information on successful and unsuccessful bids is reported in the following tabulation:

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FACTORS AFFECTING THE DOMESTIC INDUSTRY

The Commission requested information from U.S. producers regarding factors that are having an adverse impact on the operation of the domestic industry. The reported factors and number of U.S. producers indicating each are presented in table LONG-102.

Table LONG-102
U.S. producers' assessment of factors affecting the domestic industry

Ingots	Hot bar	Cold bar	Rebar	Rails	Wire	Rope	Nails	Shapes	Fabricated
Imports									
21	24	12	13	5	23	9	10	12	31
General economic downturn in the United States									
2	4	1	4	0	4	2	1	1	3
Increased energy/transportation costs									
4	4	1	3	0	2	0	0	1	0
Strong U.S. dollar relative to other foreign currencies									
1	1	1	0	0	3	1	2	0	3
Global steel overcapacity									
1	2	3	0	0	2	0	0	0	0
Increased labor costs									
1	1	1	0	0	2	2	0	0	0
Increased Federal and State regulations and/or taxes									
0	1	1	0	0	1	1	0	0	1
Shortage of labor; labor strikes									
0	0	0	0	1	1	1	0	0	0
Asian financial crisis									
0	0	0	0	0	1	0	1	0	0
Consolidation of U.S. firms									
0	0	1	0	0	0	0	1	0	0
Increased domestic competition									
0	1	0	1	0	0	0	0	0	0
Insufficient supply of product in United States									
0	0	0	0	0	0	0	1	0	1
Cheap imports into non-U.S. countries									
0	0	0	0	0	0	0	0	0	1
Increased information technology costs									
0	0	0	0	0	1	0	0	0	0
All others									
0	0	1	0	0	0	0	0	0	0
Number of reported U.S. producers									
28	32	15	17	8	45	16	20	13	37

Source: Compiled from data submitted in response to Commission questionnaires.

COMPETITIVE EFFORTS AND PROPOSED ADJUSTMENTS

COMPETITIVE EFFORTS

In the Commission's questionnaire, U.S. producers were asked to report any efforts made by their firm to compete more effectively in the U.S. market for steel products. The reported efforts and number of U.S. producers reporting each are presented in table LONG-103.

Table LONG-103
U.S. producers' reported competitive efforts

Ingots	Hot bar	Cold bar	Rebar	Rails	Wire	Rope	Nails	Shapes	Fabricated
Capital investment									
17	23	6	11	5	13	9	9	12	20
Increased productivity/production									
13	11	4	5	4	13	3	6	7	14
Cost reductions									
8	16	3	3	3	14	7	7	4	7
Improved product quality									
5	9	2	5	3	12	3	2	3	2
Increased capacity/capacity utilization									
2	3	0	2	1	9	2	4	3	3
Increased work force/employee training/employee incentives									
2	4	2	1	2	5	4	1	2	3
Acquired, built, or expanded facility									
3	2	2	0	1	2	4	3	3	4
No reported efforts									
2	1	0	1	0	8	3	1	0	8
Reduced work force									
4	4	2	2	2	1	2	1	2	3
Developed new or innovative product lines									
6	4	0	2	1	2	2	2	3	0
Eliminated production of certain products; shut down and/or consolidated facilities									
3	2	0	1	2	3	1	2	6	0
Improved customer service									
2	3	1	1	1	2	2	0	2	1
New labor contract; reduced labor costs									
2	2	0	1	1	1	1	1	2	0
Reduced price									
1	2	1	2	0	0	0	1	2	2
Decreased energy/transportation costs									
2	1	0	3	0	0	0	0	3	0

Increased employee safety									
1	1	0	0	0	2	1	2	1	0
Increased marketing									
1	1	0	1	0	1	0	1	1	1
Attained ISO certification									
0	0	0	0	1	2	1	0	1	0
All others									
0	0	2	0	0	0	1	0	1	0
R&D									
1	0	0	0	0	1	0	0	0	2
Decreased plant operations									
0	0	0	1	0	0	0	1	0	0
Chapter 11 bankruptcy protection									
0	0	0	0	0	0	0	0	1	0
Environmental improvements									
0	0	0	0	0	0	0	1	0	0
Number of reported U.S. producers									
28	32	15	17	8	45	16	20	13	37

Source: Compiled from data submitted in response to Commission questionnaires.

PROPOSED ADJUSTMENTS

The Commission requested U.S. producers to indicate whether they would make any adjustments in their steel operations if they were to receive import relief that would permit them to compete more effectively with imports of steel products after such relief expires. The reported adjustments and number of U.S. producers indicating each are presented in table LONG-104.

Table LONG-104
U.S. producers' proposed adjustments

Ingots	Hot bar	Cold bar	Rebar	Rails	Wire	Rope	Nails	Shapes	Fabricated
Capital investment									
13	18	6	7	5	14	5	7	10	12
Increase productivity/production/capacity									
9	13	3	4	2	10	2	5	5	8
Cost reductions									
9	12	3	6	2	8	3	5	3	5
No planned adjustments									
3	2	1	1	0	14	3	4	0	11
Improve product quality									
4	7	1	3	2	5	2	1	2	2
Increase employee training/employment/employee incentives									
2	4	1	3	0	1	0	3	2	3

Pay off debt; restructure loans									
4	4	0	2	1	0	1	0	3	1
Decrease energy costs									
4	3	1	4	0	0	0	0	3	0
Acquire, build, or expand facility									
2	2	0	2	1	0	1	2	2	2
Develop new or innovative product lines; broaden product lines									
2	4	1	0	0	0	1	0	3	0
Relocate, close, or sell facility									
2	3	0	2	1	0	0	0	1	1
Improve customer service									
1	2	1	2	0	0	1	0	1	1
R&D									
0	1	0	2	1	2	2	0	0	0
Environmental improvements									
1	3	0	1	1	0	0	0	1	0
Increase employee safety; reduce workers' compensation									
1	0	0	0	0	1	1	1	1	0
Reduce work force									
1	1	0	1	0	0	0	1	1	0
Expand geographic reach of current customer base									
0	0	0	1	0	0	0	2	0	1
New labor contract; reduce labor costs									
1	0	0	1	0	1	1	0	0	0
All others									
1	1	0	1	0	0	0	0	0	0
Increase/improve marketing									
0	0	0	0	0	1	0	0	0	0
Number of reported U.S. producers									
28	32	15	17	8	45	16	20	13	37

Source: Compiled from data submitted in response to Commission questionnaires.

CARBON AND ALLOY TUBULAR PRODUCTS

DESCRIPTION AND USES

Carbon and alloy tubular products, both welded and seamless, are generally produced on equipment dedicated to the production of carbon and alloy steel tubular products. Welded and seamless tubular products are produced in different facilities and through different manufacturing processes. Welded carbon and alloy tubular products are produced from hot-rolled sheet or from plate, usually CTL plate, although for very large diameters, CTL plate may not be available and plate mill plate is used. Seamless carbon and alloy tubular products are produced from billets. Seamless OCTG and seamless tubular products other than OCTG may be produced on the same manufacturing line. Seamless and welded tubular products other than OCTG are often finished at the facility in which the pipe is produced. Seamless and welded OCTG, however, are generally shipped to a separate facility for finishing. Carbon and alloy fittings are made from seamless or welded tubular products but are generally fabricated in a separate facility from the pipe manufacturers.[1] Flanges are fabricated from forgings, which are produced using a casting process, and generally finished into flanges in a separate manufacturing facility.

SEAMLESS

Carbon and alloy seamless tubular products ("seamless tubular") are tubular products that have no joint, whether welded or not, along the longitudinal axis of the product. OCTG and cast iron pipe, tube, hollow profiles, hollow drill bars, fittings, flexible tubing, and insulated electrical conduit tubing are excluded from this category. Seamless tubular products are manufactured by several methods, including hot-rolling, hot extrusion, deep drawing of a disc, forging, and casting. Several hot-rolling processes are typically used, including piercing, or rolling on a mandrel or a plug. The end uses of seamless tubular products usually require the added strength and durability over tubular products that have a welded seam. Some examples include the conveyance of high pressure or temperature water, steam, petrochemicals, oil products, natural gas, and other substances in industrial piping systems. Seamless tubular products are provided for in the following *HTS* subheadings: 7304.10.1020, 7304.10.1030, 7304.10.1045, 7304.10.1060, 7304.10.1080, 7304.10.5020, 7304.10.5050, 7304.10.5080, 7304.31.3000, 7304.31.6010, 7304.31.6050, 7304.39.0002, 7304.39.0004, 7304.39.0006, 7304.39.0008, 7304.39.0016, 7304.39.0020, 7304.39.0024, 7304.39.0028, 7304.39.0032, 7304.39.0036, 7304.39.0040, 7304.39.0044, 7304.39.0048, 7304.39.0052, 7304.39.0056, 7304.39.0062, 7304.39.0068, 7304.39.0072, 7304.39.0076, 7304.39.0080, 7304.51.1000, 7304.51.5005, 7304.51.5015, 7304.51.5045, 7304.51.5060, 7304.59.1000, 7304.59.2030, 7304.59.2040, 7304.59.2045, 7304.59.2055, 7304.59.2060, 7304.59.2070, 7304.59.2080, 7304.59.6000, 7304.59.8010, 7304.59.8015, 7304.59.8020, 7304.59.8025, 7304.59.8030, 7304.59.8035, 7304.59.8040, 7304.59.8045, 7304.59.8050, 7304.59.8055, 7304.59.8060, 7304.59.8065, 7304.59.8070, 7304.59.8080, 7304.90.1000, 7304.90.3000, 7304.90.5000, and 7304.90.7000.

SEAMLESS OCTG

Carbon and alloy seamless oil country tubular goods ("seamless OCTG") are produced by the seamless processes described above but are used below ground in the drilling and completion of oil or gas wells. Seamless OCTG consist of casing, which is the structural retainer for the walls of oil and gas wells; tubing, which is used within casing to convey oil or gas to ground level; and drill pipe, which is used to convey power to a rotary drilling tool below ground level. Seamless OCTG are provided for in the following *HTS* subheadings: 7304.21.3000, 7304.21.6030, 7304.21.6045, 7304.21.6060,

[1] ***.

7304.29.1010, 7304.29.1020, 7304.29.1030, 7304.29.1040, 7304.29.1050, 7304.29.1060, 7304.29.1080, 7304.29.2010, 7304.29.2020, 7304.29.2030, 7304.29.2040, 7304.29.2050, 7304.29.2060, 7304.29.2080, 7304.29.3010, 7304.29.3020, 7304.29.3030, 7304.29.3040, 7304.29.3050, 7304.29.3060, 7304.29.3080, 7304.29.4010, 7304.29.4020, 7304.29.4030, 7304.29.4040, 7304.29.4050, 7304.29.4060, 7304.29.4080, 7304.29.5015, 7304.29.5030, 7304.29.5045, 7304.29.5060, 7304.29.5075, 7304.29.6015, 7304.29.6030, 7304.29.6045, 7304.29.6060, 7304.29.6075, and 8431.43.8040.

WELDED

Carbon and alloy welded tubular products ("welded tubular") are produced by bending flat-rolled steel products to form a hollow product with overlapping or abutting seams. These products are then fastened along the seam by welding, although clipping, riveting, and forging are also used to fasten a seam. The seam produced by the fastening method may run either longitudinally or spirally along the length of the product. Generally, welded tubular products are slightly less reliable and durable than seamless tubular products because of the presence of a welded seam. Welded tubular products are used in the conveyance of water, petrochemicals, oil products, natural gas, and other substances in industrial piping systems. Welded tubular products are provided for in the following *HTS* subheadings: 7305.11.1030, 7305.11.1060, 7305.11.5000, 7305.12.1030, 7305.12.1060, 7305.12.5000, 7305.19.1030, 7305.19.1060, 7305.19.5000, 7305.31.2000, 7305.31.4000, 7305.31.6000, 7305.39.1000, 7305.39.5000, 7305.90.1000, 7305.90.5000, 7306.30.1000, 7306.30.3000, 7306.30.5010, 7306.30.5015, 7306.30.5020, 7306.30.5025, 7306.30.5032, 7306.30.5035, 7306.30.5040, 7306.30.5055, 7306.30.5085, 7306.30.5090, 7306.50.1000, 7306.50.3000, 7306.50.5010, 7306.50.5030, 7306.50.5050, 7306.50.5070, 7306.60.1000, 7306.60.3000, 7306.60.5000, 7306.60.7060, 7306.90.1000, and 7306.90.5000.

The welded tubular goods covered in this category do not include OCTG and carbon quality steel welded line pipe of an outside diameter that does not exceed 406.7 mm (the latter product is covered by a prior section 201 relief request on line pipe (*see Circular Welded Carbon Quality Line Pipe*, Inv. No. TA-201-70, publication No. 3261, December 1999).

WELDED OCTG

Carbon and alloy welded oil country tubular goods ("welded OCTG") are produced by forming a flat-rolled product into a tubular shape and then welding the seam as described above. Welded OCTG are used below ground in the drilling and completion of oil or gas wells, and consist of casing, which is the structural retainer for the walls of oil and gas wells, and tubing, which is used within the casing to convey oil or gas to ground level. Welded OCTG do not include drill pipe. Welded OCTG are provided for in the following *HTS* subheadings: 7305.20.2000, 7305.20.4000, 7305.20.6000, 7305.20.8000, 7306.20.1030, 7306.20.1090, 7306.20.2000, 7306.20.3000, 7306.20.4000, 7306.20.6010, 7306.20.6050, 7306.20.8010, and 7306.20.8050.

FITTINGS

Carbon and alloy fittings and flanges ("fittings") are generally used for connecting the bores of two or more pipes or tubes together, or for connecting a pipe or tube to some other apparatus, or for closing the tube aperture. This category also includes tool joints for welding onto lengths of unfinished drill pipe to produce finished drill pipe. Fittings are provided for in the following *HTS* subheadings: 7307.91.5010, 7307.91.5030, 7307.91.5050, 7307.91.5070, 7307.92.3010, 7307.92.3030, 7307.92.9000, 7307.93.3000, 7307.93.6000, 7307.93.9030, 7307.93.9060, 7307.99.5015, 7307.99.5045, 7307.99.5060, and 8431.43.8020.

Fittings do not include valves or articles used for installing pipes and tubes but which do not form an integral part of the bore, *e.g.*, hangers, stays, and similar supports, clamping or tightening bands, or collars used for clamping flexible tubing or hose to rigid piping, taps, connecting pieces, etc.

U.S. PRODUCERS

Domestic producers of carbon and alloy tubular products that provided a response to the Commission's producers' questionnaire in this investigation are listed, by products, in table TUBULAR-1. The aggregate quantities of these producers' commercial shipments are estimated to account for the following percentages of the totals for each product category listed:[2] seamless (96-102 percent); seamless OCTG (125-140 percent); welded (59-81 percent); and welded OCTG (90-98 percent).[3]

Table TUBULAR-1
Tubular products: U.S. producers and 2000 production, by product

* * * * * * *

POSITIONS ON RELIEF

The Commission's questionnaire asked U.S. producers to indicate their position with regard to the granting of import relief for each of the five tubular product categories. The number of U.S. producers indicating their positions on relief are presented in table TUBULAR-2.

Table TUBULAR-2
Positions on relief

Product category	Support	Oppose	No position	No response	Total
Seamless	8	1	1	0	10
Seamless OCTG	4	1	1	0	6
Welded	25	2	4	1	32
Welded OCTG	7	1	0	0	8
Fittings	15	2	2	0	19
Source: Compiled from data submitted in response to Commission questionnaires.					

[2] The coverage figures are calculated based on publicly available data for 1996-2000 (as available) from the *Preston Pipe Report.*

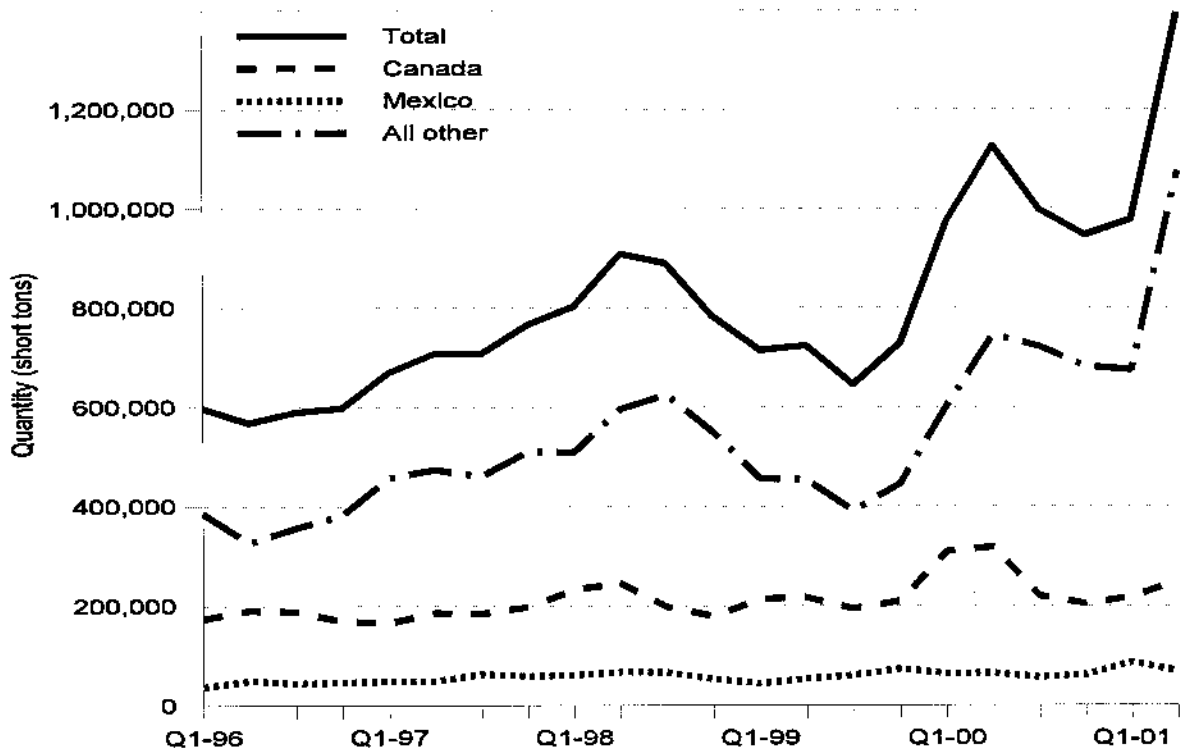
[3] An estimate of coverage for fittings is not presented because there are no publicly available data on that product.

QUESTION OF INCREASED IMPORTS

Data concerning U.S. imports of all carbon and alloy tubular products are presented in figure TUBULAR-1 and table TUBULAR-3. Data concerning U.S. imports of seamless, seamless OCTG, welded, welded OCTG, and fittings are presented in tables TUBULAR-4 through TUBULAR-8 (data presented in table TUBULAR-3 are the sum of data presented in tables TUBULAR-4 through TUBULAR-8). Import data presented are for Canada, Mexico, and all other sources combined.[4]

Imports from Canada were among the top five sources of imports during the 1998-2000 period[5] for the following tubular products: (1) welded; (2) welded OCTG; and (3) fittings. Imports from Mexico were among the top five sources of imports during the 1998-2000 period for the following tubular products: (1) seamless; (2) welded; and (3) fittings. Imports from Canada or Mexico were not among the top five import sources for seamless OCTG. A complete listing of import data concerning this investigation, by individual country, may be accessed at the Commission's website (*www.usitc.gov*).

Figure TUBULAR-1
Total tubular: U.S. imports from all sources, Canada, Mexico, and all other sources, by quarters, January 1996-June 2001



Source: Official Commerce statistics.

[4] Import data are overstated to the extent that basket *HTS* categories include products that were excluded from the scope of the investigation in the President's request.

[5] Imports from Canada or Mexico were determined to be in the top five during the 1998-2000 period if annual import data showed Canada or Mexico in the top five sources of imports for a given product for one or more of the years during the period.

Table TUBULAR-3
Total tubular: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	722,504	732,311	855,036	833,269	1,049,639	626,068	467,224
Mexico	178,891	218,654	248,286	231,523	245,641	127,372	154,951
All other sources	1,451,238	1,899,884	2,279,925	1,745,807	2,750,492	1,347,517	1,749,271
Total	2,352,634	2,850,849	3,383,247	2,810,599	4,045,772	2,100,957	2,371,446
Value[1] (*$1,000*)							
Canada	476,738	496,858	567,174	508,696	662,872	392,910	282,556
Mexico	112,352	141,656	178,649	144,556	172,198	86,242	115,302
All other sources	1,178,899	1,406,935	1,693,518	1,191,642	1,829,378	870,907	1,136,932
Total	1,767,989	2,045,448	2,439,341	1,844,894	2,664,448	1,350,059	1,534,790
Unit value (*dollars per ton*)							
Canada	660	678	663	610	632	628	595
Mexico	628	648	720	624	701	677	684
All other sources	812	741	743	683	665	646	646
Average	751	717	721	656	659	643	638
Share of quantity (*percent*)							
Canada	30.7	25.7	25.3	29.6	25.9	29.8	19.7
Mexico	7.6	7.7	7.3	8.2	6.1	6.1	6.5
All other sources	61.7	66.6	67.4	62.1	68.0	64.1	73.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	27.0	24.3	23.3	27.6	24.9	29.1	18.4
Mexico	6.4	6.9	7.3	7.8	6.5	6.4	7.5
All other sources	66.7	68.8	69.4	64.6	68.7	64.5	74.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	9.0	8.1	10.3	11.3	12.6	14.6	10.5
Mexico	2.2	2.4	3.0	3.1	2.9	3.0	3.5
All other sources	18.0	20.9	27.5	23.7	33.0	31.5	39.1
Total	29.2	31.4	40.8	38.1	48.5	49.1	53.1

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table TUBULAR-4
Seamless: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	16,382	25,104	32,270	19,384	13,083	7,899	6,704
Mexico	51,307	53,120	77,696	21,129	27,329	9,252	41,900
All other sources	377,186	391,528	551,562	366,620	522,509	270,667	251,996
Total	444,874	469,751	661,528	407,134	562,920	287,819	300,600
Value[1] (*$1,000*)							
Canada	19,888	23,770	30,796	20,013	15,818	8,899	10,102
Mexico	34,218	31,814	53,519	16,398	21,906	8,282	28,519
All other sources	404,378	384,273	538,041	358,827	474,192	240,401	229,487
Total	458,484	439,857	622,356	395,238	511,916	257,581	268,108
Unit value (*dollars per ton*)							
Canada	1,214	947	954	1,032	1,209	1,127	1,507
Mexico	667	599	689	776	802	895	681
All other sources	1,072	981	975	979	908	888	911
Average	1,031	936	941	971	909	895	892
Share of quantity (*percent*)							
Canada	3.7	5.3	4.9	4.8	2.3	2.7	2.2
Mexico	11.5	11.3	11.7	5.2	4.9	3.2	13.9
All other sources	84.8	83.3	83.4	90.0	92.8	94.0	83.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	4.3	5.4	4.9	5.1	3.1	3.5	3.8
Mexico	7.5	7.2	8.6	4.1	4.3	3.2	10.6
All other sources	88.2	87.4	86.5	90.8	92.6	93.3	85.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	1.6	2.5	3.4	2.6	1.6	1.8	1.7
Mexico	4.9	5.3	8.3	2.8	3.3	2.1	10.3
All other sources	36.1	38.7	58.8	49.1	62.2	60.3	62.2
Total	42.5	46.5	70.5	54.5	67.0	64.1	74.2

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table TUBULAR-5
Seamless OCTG: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	904	1,910	529	772	827	299	732
Mexico	12,747	12,948	1,389	1,377	2,357	1,012	2,702
All other sources	156,548	266,463	211,043	98,325	483,467	231,237	303,899
Total	170,199	281,321	212,962	100,474	486,650	232,548	307,333
Value[1] (*$1,000*)							
Canada	1,363	5,011	1,009	818	599	179	5,299
Mexico	2,989	4,468	1,117	565	1,202	484	3,958
All other sources	164,835	232,543	199,592	95,128	375,568	166,003	262,958
Total	169,187	242,023	201,718	96,512	377,369	166,666	272,215
Unit value (*dollars per ton*)							
Canada	1,508	2,624	1,906	1,061	725	597	842
Mexico	234	345	804	410	510	479	408
All other sources	1,053	873	946	967	777	718	863
Average	994	860	947	961	775	717	859
Share of quantity (*percent*)							
Canada	0.5	0.7	0.2	0.8	0.2	0.1	0.2
Mexico	7.5	4.6	0.7	1.4	0.5	0.4	0.9
All other sources	92.0	94.7	99.1	97.9	99.3	99.4	98.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	0.8	2.1	0.5	0.8	0.2	0.1	1.9
Mexico	1.8	1.8	0.6	0.6	0.3	0.3	1.5
All other sources	97.4	96.1	98.9	98.6	99.5	99.6	96.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	0.1	0.1	0.0	0.1	0.1	0.0	0.1
Mexico	1.0	0.9	0.1	0.2	0.2	0.2	0.3
All other sources	12.1	17.5	19.4	14.3	34.8	34.7	36.8
Total	13.1	18.5	19.6	14.6	35.0	34.9	37.2

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table TUBULAR-6
Welded: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Canada	689,516	687,490	809,348	800,826	1,017,378	610,225	444,852
Mexico	97,125	132,387	141,126	186,439	189,145	102,122	96,699
All other sources	786,151	1,044,087	1,310,998	1,128,570	1,420,685	724,859	870,944
Total	1,572,792	1,863,963	2,261,472	2,115,835	2,627,208	1,437,206	1,412,496
Value[1] (*$1,000*)							
Canada	411,297	414,909	478,666	432,725	572,980	348,461	225,356
Mexico	45,614	69,785	77,158	93,659	109,170	57,318	54,263
All other sources	440,457	577,544	720,997	538,635	676,370	337,158	437,864
Total	897,369	1,062,238	1,276,821	1,065,019	1,358,521	742,937	717,483
Unit value (*dollars per ton*)							
Canada	597	604	591	540	563	571	507
Mexico	470	527	547	502	577	561	561
All other sources	560	553	550	477	476	465	503
Average	571	570	565	503	517	517	508
Share of quantity (*percent*)							
Canada	43.8	36.9	35.8	37.8	38.7	42.5	31.5
Mexico	6.2	7.1	6.2	8.8	7.2	7.1	6.8
All other sources	50.0	56.0	58.0	53.3	54.1	50.4	61.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	45.8	39.1	37.5	40.6	42.2	46.9	31.4
Mexico	5.1	6.6	6.0	8.8	8.0	7.7	7.6
All other sources	49.1	54.4	56.5	50.6	49.8	45.4	61.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	14.8	13.4	15.0	15.4	21.3	24.1	17.6
Mexico	2.1	2.6	2.6	3.6	4.0	4.0	3.8
All other sources	16.9	20.4	24.3	21.7	29.7	28.6	34.5
Total	33.8	36.4	41.9	40.8	55.0	56.8	55.9

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table TUBULAR-7
Welded OCTG: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Canada	5,387	6,117	1,378	637	2,306	203	6,757
Mexico	599	1,108	206	4,310	8,049	6,376	3,675
All other sources	55,275	123,274	128,607	64,747	223,240	75,217	259,206
Total	61,260	130,500	130,192	69,694	233,595	81,796	269,638
Value[1] (*$1,000*)							
Canada	2,750	3,279	724	266	1,244	207	3,631
Mexico	132	942	124	2,403	4,401	3,492	1,975
All other sources	29,059	70,020	71,711	27,239	103,058	34,433	89,065
Total	31,941	74,241	72,560	29,909	108,704	38,131	94,671
Unit value (*dollars per ton*)							
Canada	510	536	525	417	539	1,020	537
Mexico	220	850	601	558	547	548	537
All other sources	526	568	558	421	462	458	344
Average	521	569	557	429	465	466	351
Share of quantity (*percent*)							
Canada	8.8	4.7	1.1	0.9	1.0	0.2	2.5
Mexico	1.0	0.8	0.2	6.2	3.4	7.8	1.4
All other sources	90.2	94.5	98.8	92.9	95.6	92.0	96.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	8.6	4.4	1.0	0.9	1.1	0.5	3.8
Mexico	0.4	1.3	0.2	8.0	4.0	9.2	2.1
All other sources	91.0	94.3	98.8	91.1	94.8	90.3	94.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	0.6	0.5	0.2	0.1	0.2	0.0	1.1
Mexico	0.1	0.1	0.0	0.8	0.7	1.2	0.6
All other sources	6.4	10.3	19.5	11.5	19.6	14.2	41.8
Total	7.1	10.9	19.8	12.4	20.5	15.4	43.5

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

Table TUBULAR-8
Fittings: U.S. imports, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Canada	10,315	11,690	11,510	11,649	16,046	7,441	8,178
Mexico	17,114	19,090	27,868	18,268	18,761	8,610	9,976
All other sources	76,079	74,533	77,715	87,545	100,592	45,537	63,226
Total	103,507	105,313	117,093	117,461	135,399	61,588	81,380
Value[1] (*$1,000*)							
Canada	41,439	49,888	55,979	54,873	72,231	35,163	38,168
Mexico	29,400	34,648	46,732	31,531	35,518	16,666	26,587
All other sources	140,171	142,555	163,175	171,812	200,190	92,913	117,558
Total	211,010	227,091	265,886	258,216	307,939	144,743	182,312
Unit value (*dollars per ton*)							
Canada	4,018	4,268	4,863	4,711	4,502	4,726	4,663
Mexico	1,718	1,815	1,677	1,726	1,893	1,936	2,013
All other sources	1,842	1,913	2,100	1,963	1,990	2,040	1,763
Average	2,039	2,156	2,271	2,198	2,274	2,350	2,085
Share of quantity (*percent*)							
Canada	10.0	11.1	9.8	9.9	11.9	12.1	10.0
Mexico	16.5	18.1	23.8	15.6	13.9	14.0	12.3
All other sources	73.5	70.8	66.4	74.5	74.3	73.9	77.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of value (*percent*)							
Canada	19.6	22.0	21.1	21.3	23.5	24.3	20.9
Mexico	13.9	15.3	17.6	12.2	11.5	11.5	14.6
All other sources	66.4	62.8	61.4	66.5	65.0	64.2	64.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ratio to U.S. production (*percent*)							
Canada	5.0	5.3	5.4	6.2	8.3	7.2	8.9
Mexico	8.3	8.6	13.2	9.8	9.7	8.3	10.9
All other sources	37.1	33.7	36.7	46.9	51.8	43.9	69.0
Total	50.5	47.7	55.3	63.0	69.7	59.4	88.8

[1] Landed, duty-paid.

Source: Compiled from official Commerce statistics.

QUESTION OF SERIOUS INJURY

TRADE AND EMPLOYMENT

Trade and employment data on all carbon and alloy tubular products provided by U.S. producers are presented in table TUBULAR-9. Trade and employment data concerning seamless, seamless OCTG, welded, welded OCTG, and fittings are presented in tables TUBULAR-10 through TUBULAR-14, respectively (data presented in table TUBULAR-9 are the sum of data presented in tables TUBULAR-10 through TUBULAR-14).[6]

[6] Significant double-counting issues arise for some of the items presented in table TUBULAR-9 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs. However, they offered no techniques to resolve any double-counting other than making their arguments on the basis of subordinate categories or aggregations of sub-categories.

Table TUBULAR-9
Total tubular: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	12,132,952	12,529,823	13,011,540	13,303,223	14,010,704	7,449,850	7,453,208
Production	8,063,467	9,079,268	8,291,494	7,375,458	8,343,911	4,280,736	4,469,585
Internal consumption	192,443	221,179	270,109	197,711	101,796	51,823	51,305
U.S. commercial shipments	7,348,387	8,121,150	7,306,971	6,825,240	7,548,561	3,892,413	4,170,282
U.S. shipments	7,540,830	8,342,329	7,577,080	7,022,951	7,650,357	3,944,236	4,221,587
Export shipments	460,306	683,906	702,019	367,124	449,366	200,832	206,581
Total shipments	8,001,136	9,026,235	8,279,099	7,390,076	8,099,723	4,145,068	4,428,168
Ending inventories	1,108,236	1,153,164	1,153,575	1,126,224	1,264,762	1,326,687	1,278,508
Value (*$1,000*)							
Internal consumption	126,190	150,529	177,971	130,090	69,439	34,764	33,214
U.S. commercial shipments	5,266,403	5,959,250	5,445,234	4,592,174	5,180,581	2,651,518	2,866,449
U.S. shipments	5,392,593	6,109,779	5,623,205	4,722,264	5,250,020	2,686,282	2,899,663
Export shipments	379,023	532,849	548,120	261,816	336,030	149,201	157,120
Total shipments	5,771,616	6,642,628	6,171,325	4,984,080	5,586,050	2,835,483	3,056,783
Unit value (*dollars per ton*)							
Internal consumption	656	681	659	658	682	671	647
U.S. commercial shipments	717	734	745	673	686	681	687
U.S. shipments	715	732	742	672	686	681	687
Export shipments	823	779	781	713	748	743	761
Total shipments	721	736	745	674	690	684	690
Ratios and shares (*percent*)							
Capacity utilization	65.9	71.9	63.2	54.9	59.0	56.9	59.5
U.S. shipments to distributors	76.4	78.5	74.6	76.6	82.4	82.3	82.3
U.S. shipments to end users	23.6	21.5	25.4	23.4	17.6	17.7	17.7
Inventories/total shipments	13.9	12.8	13.9	15.2	15.6	16.0	14.4
Employment data							
PRWs (*number*)	15,771	17,146	16,460	15,262	15,957	15,717	16,243
Hours worked (*1,000*)	35,341	38,798	36,221	33,256	36,291	18,548	18,616
Wages paid (*$1,000*)	600,436	681,841	641,762	585,040	643,166	325,367	341,535
Hourly wages	$16.99	$17.57	$17.72	$17.59	$17.72	$17.54	$18.35
Productivity (*tons/1,000 hours*)	228.2	234.0	228.9	221.8	229.9	230.8	240.1
Unit labor costs (*per ton*)	$74.47	$75.10	$77.40	$79.32	$77.08	$76.01	$76.41

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-10
Seamless: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Capacity	1,533,115	1,573,084	1,550,628	1,566,652	1,462,119	732,298	688,167
Production	1,045,700	1,010,774	937,932	746,838	839,701	448,868	404,993
Internal consumption	0	0	0	0	50	14	2,255
U.S. commercial shipments	928,262	1,013,674	882,122	695,252	751,553	413,408	385,761
U.S. shipments	928,262	1,013,674	882,122	695,252	751,603	413,422	388,016
Export shipments	70,728	59,189	62,045	61,671	85,652	33,634	24,693
Total shipments	998,990	1,072,863	944,167	756,923	837,255	447,056	412,709
Ending inventories	127,003	107,286	95,711	85,626	93,954	213,016	89,692
Value (*$1,000*)							
Internal consumption	0	0	0	0	103	32	2,913
U.S. commercial shipments	888,455	908,359	826,711	631,227	691,651	367,755	352,915
U.S. shipments	888,455	908,359	826,711	631,227	691,754	367,787	355,828
Export shipments	52,234	52,256	56,295	39,959	65,036	25,601	19,633
Total shipments	940,689	960,615	883,006	671,186	756,790	393,388	375,461
Unit value (*dollars per ton*)							
Internal consumption	(1)	(1)	(1)	(1)	2,060	2,286	1,292
U.S. commercial shipments	957	896	937	908	920	890	915
U.S. shipments	957	896	937	908	920	890	917
Export shipments	739	883	907	648	759	761	795
Total shipments	942	895	935	887	904	880	910
Ratios and shares (*percent*)							
Capacity utilization	68.2	64.3	60.5	47.7	57.4	61.3	58.9
U.S. shipments to distributors	67.0	60.6	58.0	57.6	60.7	61.1	67.6
U.S. shipments to end users	33.0	39.4	42.0	42.4	39.3	38.9	32.4
Inventories/total shipments	12.7	10.0	10.1	11.3	11.2	23.8	10.9
Employment data							
PRWs (*number*)	2,556	2,545	2,532	2,351	2,313	2,344	2,278
Hours worked (*1,000*)	4,971	4,930	4,890	4,412	4,553	2,454	2,307
Wages paid (*$1,000*)	120,859	123,358	124,495	111,165	113,080	56,533	54,119
Hourly wages	$24.31	$25.02	$25.46	$25.20	$24.84	$23.04	$23.46
Productivity (*tons/1,000 hours*)	210.4	205.0	191.8	169.3	184.4	182.9	175.5
Unit labor costs (*per ton*)	$115.58	$122.04	$132.73	$148.83	$134.67	$125.95	$133.63

[1] Not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-11
Seamless OCTG: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
Quantity (*tons*)							
Capacity	1,923,098	1,934,443	1,958,411	1,798,732	1,972,462	937,330	984,089
Production	1,297,681	1,520,159	1,085,144	688,963	1,389,983	666,127	826,878
Internal consumption	1,783	3,169	3,788	514	1,678	511	1,694
U.S. commercial shipments	1,177,099	1,378,402	945,017	606,963	1,131,383	540,187	709,572
U.S. shipments	1,178,882	1,381,571	948,805	607,477	1,133,061	540,698	711,266
Export shipments	137,476	151,523	131,429	51,417	136,889	56,202	89,586
Total shipments	1,316,358	1,533,094	1,080,234	658,894	1,269,950	596,900	800,852
Ending inventories	153,273	148,610	129,729	115,906	179,454	157,163	180,693
Value (*$1,000*)							
Internal consumption	4,006	7,782	10,753	1,472	4,145	1,042	3,476
U.S. commercial shipments	901,806	1,143,135	885,281	462,105	854,618	395,872	621,114
U.S. shipments	905,812	1,150,917	896,034	463,577	858,763	396,914	624,590
Export shipments	131,387	141,486	118,562	46,078	108,052	43,472	72,284
Total shipments	1,037,199	1,292,403	1,014,596	509,655	966,815	440,386	696,874
Unit value (*dollars per ton*)							
Internal consumption	2,247	2,456	2,839	2,864	2,470	2,039	2,052
U.S. commercial shipments	766	829	937	761	755	733	875
U.S. shipments	768	833	944	763	758	734	878
Export shipments	956	934	902	896	789	773	807
Total shipments	788	843	939	774	761	738	870
Ratios and shares (*percent*)							
Capacity utilization	67.5	78.6	55.4	38.3	70.5	71.1	84.0
U.S. shipments to distributors	94.5	93.6	90.2	91.4	94.8	95.3	93.7
U.S. shipments to end users	5.5	6.4	9.8	8.6	5.2	4.7	6.3
Inventories/total shipments	11.6	9.7	12.0	17.6	14.1	13.2	11.3
Employment data							
PRWs (*number*)	2,448	2,702	2,457	1,914	2,559	2,407	2,769
Hours worked (*1,000*)	5,344	6,108	5,220	3,928	5,869	2,851	3,498
Wages paid (*$1,000*)	102,479	117,799	101,408	80,380	115,507	54,173	70,540
Hourly wages	$19.18	$19.29	$19.43	$20.46	$19.68	$19.00	$20.17
Productivity (*tons/1,000 hours*)	242.8	248.9	207.9	175.4	236.8	233.6	236.4
Unit labor costs (*per ton*)	$78.97	$77.49	$93.45	$116.67	$83.10	$81.33	$85.31

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-12
Welded: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Capacity	6,863,777	7,037,321	7,536,117	8,023,662	8,375,401	4,670,135	4,691,234
Production	4,646,857	5,126,986	5,398,900	5,191,023	4,779,405	2,530,686	2,526,070
Internal consumption	189,485	213,912	263,035	195,761	99,212	50,796	46,985
U.S. commercial shipments	4,245,691	4,416,500	4,616,335	4,799,789	4,441,001	2,347,692	2,382,471
U.S. shipments	4,435,176	4,630,412	4,879,370	4,995,550	4,540,213	2,398,488	2,429,456
Export shipments	180,887	386,904	475,577	210,067	179,694	88,294	73,980
Total shipments	4,616,063	5,017,316	5,354,947	5,205,617	4,719,907	2,486,782	2,503,436
Ending inventories	678,744	726,153	778,333	778,785	790,173	788,609	814,008
Value (*$1,000*)							
Internal consumption	117,179	134,509	159,042	122,766	60,824	31,202	24,594
U.S. commercial shipments	2,570,616	2,742,282	2,877,911	2,821,883	2,615,552	1,383,865	1,298,587
U.S. shipments	2,687,795	2,876,791	3,036,953	2,944,649	2,676,376	1,415,067	1,323,181
Export shipments	139,115	270,706	341,501	142,883	125,365	62,356	48,658
Total shipments	2,826,910	3,147,497	3,378,454	3,087,532	2,801,741	1,477,423	1,371,839
Unit value (*dollars per ton*)							
Internal consumption	618	629	605	627	613	614	523
U.S. commercial shipments	605	621	623	588	589	589	545
U.S. shipments	606	621	622	589	589	590	545
Export shipments	769	700	718	680	698	706	658
Total shipments	612	627	631	593	594	594	548
Ratios and shares (*percent*)							
Capacity utilization	66.7	71.9	70.7	63.8	56.2	53.4	53.2
U.S. shipments to distributors	67.3	71.2	69.6	73.8	77.8	78.1	75.5
U.S. shipments to end users	32.7	28.8	30.4	26.2	22.2	21.9	24.5
Inventories/total shipments	14.7	14.5	14.5	15.0	16.7	15.9	16.3
Employment data							
PRWs (*number*)	6,539	6,994	7,097	6,890	6,736	6,741	6,820
Hours worked (*1,000*)	14,031	15,142	15,543	15,252	15,147	7,843	7,311
Wages paid (*$1,000*)	245,545	277,356	279,916	272,996	267,204	140,901	135,294
Hourly wages	$17.50	$18.32	$18.01	$17.90	$17.64	$17.96	$18.51
Productivity (*tons/1,000 hours*)	331.2	338.6	347.4	340.4	315.5	322.6	345.5
Unit labor costs (*per ton*)	$52.84	$54.10	$51.85	$52.59	$55.91	$55.68	$53.56

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-13
Welded OCTG: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Capacity	1,544,792	1,686,870	1,668,037	1,610,380	1,912,668	962,793	949,208
Production	868,257	1,200,468	657,870	562,144	1,140,647	531,348	619,975
Internal consumption	0	0	0	0	0	0	0
U.S. commercial shipments	806,088	1,102,200	654,404	530,782	1,036,167	495,344	599,895
U.S. shipments	806,088	1,102,200	654,404	530,782	1,036,167	495,344	599,895
Export shipments	66,420	79,825	27,318	38,210	41,134	19,373	15,781
Total shipments	872,508	1,182,025	681,722	568,992	1,077,301	514,717	615,676
Ending inventories	87,905	105,400	87,023	89,340	140,866	103,375	136,193
Value (*$1,000*)							
Internal consumption	0	0	0	0	0	0	0
U.S. commercial shipments	523,365	748,451	438,995	300,098	655,080	304,314	406,634
U.S. shipments	523,365	748,451	438,995	300,098	655,080	304,314	406,634
Export shipments	47,151	57,060	20,061	22,422	26,797	11,897	11,387
Total shipments	570,516	805,511	459,056	322,520	681,877	316,211	418,021
Unit value (*dollars per ton*)							
Internal consumption	[1]	[1]	[1]	[1]	[1]	[1]	[1]
U.S. commercial shipments	649	679	671	565	632	614	678
U.S. shipments	649	679	671	565	632	614	678
Export shipments	710	715	734	587	651	614	722
Total shipments	654	681	673	567	633	614	679
Ratios and shares (*percent*)							
Capacity utilization	56.2	70.8	39.4	34.9	59.6	55.2	64.9
U.S. shipments to distributors	100.0	100.0	100.0	100.0	100.0	100.0	100.0
U.S. shipments to end users	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inventories/total shipments	10.1	8.9	12.8	15.7	13.1	10.0	11.1
Employment data							
PRWs (*number*)	1,524	1,868	1,261	1,182	1,678	1,489	1,764
Hours worked (*1,000*)	3,431	4,257	2,467	2,507	3,575	1,729	1,917
Wages paid (*$1,000*)	67,393	84,610	51,952	45,787	73,384	36,219	44,058
Hourly wages	$19.64	$19.88	$21.06	$18.27	$20.53	$20.94	$22.99
Productivity (*tons/1,000 hours*)	253.0	282.0	266.7	224.3	319.1	307.3	323.6
Unit labor costs (*per ton*)	$77.62	$70.48	$78.97	$81.45	$64.34	$68.16	$71.04

[1] Not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-14
Fittings: U.S. producers' capacity, production, shipments, inventories, and employment data, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
Quantity (*tons*)							
Capacity	268,170	298,105	298,347	303,797	288,054	147,294	140,510
Production	204,972	220,881	211,648	186,490	194,175	103,707	91,669
Internal consumption	1,175	4,098	3,286	1,436	856	502	371
U.S. commercial shipments	191,247	210,374	209,093	192,454	188,457	95,782	92,583
U.S. shipments	192,422	214,472	212,379	193,890	189,313	96,284	92,954
Export shipments	4,795	6,465	5,650	5,759	5,997	3,329	2,541
Total shipments	197,217	220,937	218,029	199,650	195,310	99,613	95,495
Ending inventories	61,311	65,715	62,779	56,567	60,315	64,524	57,922
Value (*$1,000*)							
Internal consumption	5,005	8,238	8,176	5,852	4,367	2,488	2,231
U.S. commercial shipments	382,161	417,023	416,336	376,861	363,680	199,712	187,199
U.S. shipments	387,166	425,261	424,512	382,713	368,047	202,200	189,430
Export shipments	9,136	11,341	11,701	10,474	10,780	5,875	5,158
Total shipments	396,302	436,602	436,213	393,187	378,827	208,075	194,588
Unit value (*dollars per ton*)							
Internal consumption	4,261	2,010	2,488	4,075	5,101	4,956	6,014
U.S. commercial shipments	1,998	1,982	1,991	1,958	1,930	2,085	2,022
U.S. shipments	2,012	1,983	1,999	1,974	1,944	2,100	2,038
Export shipments	1,905	1,754	2,071	1,819	1,798	1,765	2,030
Total shipments	2,009	1,976	2,001	1,969	1,940	2,089	2,038
Ratios and shares (*percent*)							
Capacity utilization	76.3	74.1	70.9	61.4	67.4	70.4	65.2
U.S. shipments to distributors	100.0	100.0	99.9	99.2	99.4	99.7	99.8
U.S. shipments to end users	0.0	0.0	0.1	0.8	0.6	0.3	0.2
Inventories/total shipments	31.1	29.7	28.8	28.3	30.9	32.4	30.3
Employment data							
PRWs (*number*)	2,703	3,037	3,112	2,925	2,671	2,736	2,612
Hours worked (*1,000*)	7,563	8,360	8,101	7,158	7,148	3,670	3,583
Wages paid (*$1,000*)	64,160	78,718	83,991	74,712	73,991	37,541	37,524
Hourly wages	$8.48	$9.42	$10.37	$10.44	$10.35	$10.23	$10.47
Productivity (*tons/1,000 hours*)	27.1	26.4	26.1	26.1	27.2	28.3	25.6
Unit labor costs (*per ton*)	$313.52	$356.38	$396.84	$400.62	$381.05	$361.99	$409.34

Source: Compiled from data submitted in response to Commission questionnaires.

FINANCIAL

Financial data on all stainless and tool steel products provided by U.S. producers are presented in table TUBULAR-15. Financial data concerning seamless, seamless OCTG, welded, welded OCTG, and fittings are presented in tables TUBULAR-16 through TUBULAR-20, respectively (data presented in table TUBULAR-15 are the sum of data presented in tables TUBULAR-16 through TUBULAR-20).[7]

[7] Unit values were computed for those producers providing quantities and values. Unit values for raw materials, direct labor, and other factory costs were computed for those producers providing the detail of COGS. Significant double-counting issues arise for some of the items presented in table TUBULAR-15 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs. However, they offered no techniques to resolve any double-counting other than making their arguments on the basis of subordinate categories or aggregations of sub-categories.

Table TUBULAR-15
Total tubular: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
				Quantity (*tons*)			
Net commercial sales	7,824,116	8,851,059	8,044,110	7,275,446	8,093,154	4,139,331	4,358,479
				Value (*$1,000*)			
Net commercial sales	5,775,566	6,613,589	6,093,281	4,939,220	5,609,674	2,794,434	3,053,308
COGS	4,886,852	5,553,950	5,190,086	4,337,784	4,854,063	2,450,230	2,558,520
Gross profit or (loss)	888,714	1,059,639	903,195	601,436	755,611	344,204	494,788
SG&A expenses	378,278	411,817	428,628	430,308	426,816	213,716	224,132
Operating income or (loss)	510,436	647,823	474,567	171,128	328,795	130,488	270,656
Interest expense	68,125	73,567	66,607	69,385	103,082	49,267	52,380
Other (income)/expenses, net	24,634	13,096	5,035	1,185	5,219	2,263	3,661
Net income or (loss)	417,677	561,160	402,925	100,558	220,493	78,958	214,615
Depreciation/amortization	135,870	147,137	157,176	170,871	185,491	92,729	85,371
Cash flow	553,547	708,297	560,101	271,429	405,984	171,687	299,986
Capital expenditures	131,924	273,912	416,523	229,081	192,764	91,508	64,850
R&D expenses	11,674	12,397	12,577	10,552	11,453	6,707	6,388
				Ratio to net commercial sales (*percent*)			
COGS	84.6	84.0	85.2	87.8	86.5	87.7	83.8
Gross profit or (loss)	15.4	16.0	14.8	12.2	13.5	12.3	16.2
SG&A expenses	6.6	6.2	7.0	8.7	7.6	7.6	7.3
Operating income or (loss)	8.8	9.8	7.8	3.5	5.9	4.7	8.9
Net income or (loss)	7.2	8.5	6.6	2.0	3.9	2.8	7.0
				Unit value (*dollars per ton*)			
Net commercial sales	736	744	755	676	691	673	698
COGS total	623	626	643	594	598	590	585
Raw materials	352	358	366	334	330	334	313
Direct labor	72	70	75	73	73	71	72
Other factory costs	184	184	190	176	185	175	192
Gross profit or (loss)	113	119	111	82	93	83	113
SG&A expenses	48	46	53	59	52	51	51
Operating income or (loss)	65	73	59	23	40	31	62

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-16
Seamless: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
				Quantity (*tons*)			
Net commercial sales	1,000,223	1,091,233	912,154	782,651	844,123	446,485	411,263
				Value (*$1,000*)			
Net commercial sales	940,505	973,797	857,088	681,657	760,803	392,006	372,415
COGS	720,228	733,125	692,846	580,674	626,831	331,107	300,900
Gross profit or (loss)	220,277	240,672	164,242	100,983	133,972	60,899	71,515
SG&A expenses	64,340	64,894	62,890	60,736	53,461	26,247	24,729
Operating income or (loss)	155,937	175,778	101,352	40,247	80,511	34,652	46,786
Interest expense	10,943	10,555	9,772	12,324	16,322	8,608	9,170
Other (income)/expenses, net	3,185	925	30	(2,076)	(2,533)	(1,145)	(534)
Net income or (loss)	141,809	164,298	91,550	29,999	66,722	27,189	38,150
Depreciation/amortization	30,856	31,262	33,412	37,344	34,964	17,394	16,264
Cash flow	172,665	195,560	124,962	67,343	101,686	44,583	54,414
Capital expenditures	25,682	50,402	74,722	42,994	20,047	8,416	5,840
R&D expenses	3,570	3,383	3,520	3,135	2,387	1,220	617
				Ratio to net commercial sales (*percent*)			
COGS	76.6	75.3	80.8	85.2	82.4	84.5	80.8
Gross profit or (loss)	23.4	24.7	19.2	14.8	17.6	15.5	19.2
SG&A expenses	6.8	6.7	7.3	8.9	7.0	6.7	6.6
Operating income or (loss)	16.6	18.1	11.8	5.9	10.6	8.8	12.6
Net income or (loss)	15.1	16.9	10.7	4.4	8.8	6.9	10.2
				Unit value (*dollars per ton*)			
Net commercial sales	940	892	940	871	901	878	906
COGS total	720	672	760	742	743	742	732
Raw materials	265	259	265	271	264	297	290
Direct labor	132	115	140	149	140	135	141
Other factory costs	323	297	354	323	339	310	300
Gross profit or (loss)	220	221	180	129	159	136	174
SG&A expenses	64	59	69	78	63	59	60
Operating income or (loss)	156	161	111	51	95	78	114
				Number of firms reporting			
Operating losses	0	0	0	4	1	1	3
Data	8	8	8	9	9	9	9

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-17
Seamless OCTG: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	1,341,367	1,497,205	1,045,570	723,495	1,286,321	598,340	800,441
Value (*$1,000*)							
Net commercial sales	1,049,750	1,268,894	982,003	541,116	1,023,681	429,023	704,526
COGS	946,924	1,112,423	862,388	581,835	878,443	385,053	563,623
Gross profit or (loss)	102,826	156,471	119,615	(40,719)	145,238	43,970	140,903
SG&A expenses	45,679	58,483	52,584	43,599	54,811	24,194	33,591
Operating income or (loss)	57,147	97,988	67,031	(84,318)	90,427	19,776	107,312
Interest expense	18,887	16,991	7,608	7,282	15,113	6,445	12,860
Other (income)/expenses, net	12,770	6,705	1,870	1,165	2,482	1,114	2,313
Net income or (loss)	25,490	74,292	57,553	(92,765)	72,832	12,217	92,139
Depreciation/amortization	23,122	25,851	24,460	19,582	24,308	11,414	13,876
Cash flow	48,612	100,143	82,013	(73,183)	97,140	23,631	106,015
Capital expenditures	16,507	31,314	63,610	38,767	22,212	11,657	12,411
R&D expenses	3,065	2,960	3,224	2,735	2,921	2,485	2,463
Ratio to net commercial sales (*percent*)							
COGS	90.2	87.7	87.8	107.5	85.8	89.8	80.0
Gross profit or (loss)	9.8	12.3	12.2	(7.5)	14.2	10.2	20.0
SG&A expenses	4.4	4.6	5.4	8.1	5.4	5.6	4.8
Operating income or (loss)	5.4	7.7	6.8	(15.6)	8.8	4.6	15.2
Net income or (loss)	2.4	5.9	5.9	(17.1)	7.1	2.8	13.1
Unit value (*dollars per ton*)							
Net commercial sales	778	840	932	741	790	711	873
COGS total	703	738	820	799	679	639	700
Raw materials	320	326	336	326	293	302	295
Direct labor	80	83	97	108	86	82	82
Other factory costs	303	329	387	365	300	255	323
Gross profit or (loss)	75	102	112	(58)	111	72	173
SG&A expenses	33	38	49	59	42	40	41
Operating income or (loss)	42	64	63	(117)	69	33	132
Number of firms reporting							
Operating losses	1	0	2	4	0	1	0
Data	7	7	7	7	7	6	7

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-18
Welded: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
				Quantity (*tons*)			
Net commercial sales	4,427,235	4,872,681	5,141,066	5,061,360	4,701,951	2,480,849	2,439,585
				Value (*$1,000*)			
Net commercial sales	2,814,290	3,128,015	3,312,605	3,043,287	2,777,434	1,467,792	1,368,186
COGS	2,375,641	2,651,654	2,802,669	2,540,660	2,420,443	1,277,932	1,204,274
Gross profit or (loss)	438,649	476,361	509,936	502,627	356,991	189,860	163,912
SG&A expenses	197,603	207,138	233,654	256,001	238,527	120,986	120,624
Operating income or (loss)	241,046	269,223	276,282	246,626	118,464	68,874	43,288
Interest expense	25,243	27,766	34,377	34,597	47,594	22,993	17,868
Other (income)/expenses, net	7,307	5,220	3,081	192	963	989	2,150
Net income or (loss)	208,496	236,237	238,824	211,837	69,907	44,892	23,270
Depreciation/amortization	56,973	59,680	69,506	84,107	90,498	46,622	39,336
Cash flow	265,469	295,917	308,330	295,944	160,405	91,514	62,606
Capital expenditures	59,045	145,099	229,360	106,433	90,466	39,456	24,650
R&D expenses	3,239	3,550	3,928	3,604	3,871	1,935	1,735
				Ratio to net commercial sales (*percent*)			
COGS	84.4	84.8	84.6	83.5	87.1	87.1	88.0
Gross profit or (loss)	15.6	15.2	15.4	16.5	12.9	12.9	12.0
SG&A expenses	7.0	6.6	7.1	8.4	8.6	8.2	8.8
Operating income or (loss)	8.6	8.6	8.3	8.1	4.3	4.7	3.2
Net income or (loss)	7.4	7.6	7.2	7.0	2.5	3.1	1.7
				Unit value (*dollars per ton*)			
Net commercial sales	636	642	644	601	591	592	561
COGS total	537	544	545	502	515	515	494
Raw materials	368	380	373	331	340	337	319
Direct labor	49	48	52	51	51	52	51
Other factory costs	94	93	99	104	106	110	109
Gross profit or (loss)	99	98	99	99	76	77	67
SG&A expenses	45	43	45	51	51	49	49
Operating income or (loss)	54	55	54	49	25	28	18
				Number of firms reporting			
Operating losses	3	4	5	12	12	11	11
Data	31	31	32	32	32	32	32

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-19
Welded OCTG: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	843,567	1,166,899	732,063	520,986	1,077,301	514,717	615,676
Value (*$1,000*)							
Net commercial sales	551,888	790,224	498,375	288,299	681,877	316,211	418,321
COGS	511,527	692,026	463,010	309,620	611,719	295,855	332,651
Gross profit or (loss)	40,361	98,198	35,365	(21,321)	70,158	20,356	85,670
SG&A expenses	21,377	28,394	26,053	19,262	30,549	16,340	19,403
Operating income or (loss)	18,984	69,804	9,312	(40,583)	39,609	4,016	66,267
Interest expense	7,166	11,226	7,731	8,924	18,162	8,183	9,760
Other (income)/expenses, net	(525)	(1,070)	(1,113)	(1,495)	3,476	(87)	(619)
Net income or (loss)	12,343	59,648	2,694	(48,012)	17,971	(4,080)	57,126
Depreciation/amortization	15,528	18,567	17,673	17,165	23,392	10,519	10,130
Cash flow	27,871	78,215	20,367	(30,847)	41,363	6,439	67,256
Capital expenditures	11,362	28,527	31,809	25,944	48,720	26,631	14,475
R&D expenses	1,335	2,129	1,821	1,004	2,165	993	1,425
Ratio to net commercial sales (*percent*)							
COGS	92.7	87.6	92.9	107.4	89.7	93.6	79.5
Gross profit or (loss)	7.3	12.4	7.1	(7.4)	10.3	6.4	20.5
SG&A expenses	3.9	3.6	5.2	6.7	4.5	5.2	4.6
Operating income or (loss)	3.4	8.8	1.9	(14.1)	5.8	1.3	15.8
Net income or (loss)	2.2	7.5	0.5	(16.7)	2.6	(1.3)	13.7
Unit value (*dollars per ton*)							
Net commercial sales	654	677	681	553	633	614	679
COGS total	606	593	632	594	568	575	540
Raw materials	303	311	327	274	289	292	247
Direct labor	84	79	83	87	76	77	78
Other factory costs	219	203	222	232	203	206	216
Gross profit or (loss)	48	84	48	(41)	65	40	139
SG&A expenses	25	24	36	37	28	32	32
Operating income or (loss)	23	60	13	(78)	37	8	108
Number of firms reporting							
Operating losses	2	0	2	5	1	2	0
Data	6	7	7	6	7	6	7

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-20
Fittings: Results of operations of U.S. producers, fiscal years 1996-2000, January-June 2000, and January-June 2001

Item	Fiscal year					January-June	
	1996	1997	1998	1999	2000	2000	2001
Quantity (*tons*)							
Net commercial sales	211,724	223,041	213,257	186,954	183,458	98,940	91,514
Value (*$1,000*)							
Net commercial sales	419,133	452,659	443,210	384,861	365,879	189,402	189,860
COGS	332,532	364,722	369,173	324,995	316,627	160,283	157,072
Gross profit or (loss)	86,601	87,937	74,037	59,866	49,252	29,119	32,788
SG&A expenses	49,279	52,908	53,447	50,710	49,468	25,949	25,785
Operating income or (loss)	37,322	35,030	20,590	9,156	(216)	3,170	7,003
Interest expense	5,886	7,029	7,119	6,258	5,891	3,038	2,722
Other (income)/expenses, net	1,897	1,316	1,167	3,399	831	1,392	351
Net income or (loss)	29,539	26,685	12,304	(501)	(6,939)	(1,260)	3,930
Depreciation/amortization	9,391	11,777	12,125	12,673	12,329	6,780	5,765
Cash flow	38,930	38,462	24,429	12,172	5,390	5,520	9,695
Capital expenditures	19,328	18,570	17,022	14,943	11,319	5,348	7,474
R&D expenses	465	375	84	74	109	74	148
Ratio to net commercial sales (*percent*)							
COGS	79.3	80.6	83.3	84.4	86.5	84.6	82.7
Gross profit or (loss)	20.7	19.4	16.7	15.6	13.5	15.4	17.3
SG&A expenses	11.8	11.7	12.1	13.2	13.5	13.7	13.6
Operating income or (loss)	8.9	7.7	4.6	2.4	(0.1)	1.7	3.7
Net income or (loss)	7.0	5.9	2.8	(0.1)	(1.9)	(0.7)	2.1
Unit value (*dollars per ton*)							
Net commercial sales	1,913	1,966	2,005	1,987	1,927	1,850	2,004
COGS total	1,525	1,592	1,681	1,691	1,677	1,576	1,665
Raw materials	846	833	889	886	873	823	861
Direct labor	163	208	193	183	205	173	181
Other factory costs	516	551	600	622	600	579	622
Gross profit or (loss)	388	375	324	296	249	275	339
SG&A expenses	222	226	239	257	256	248	269
Operating income or (loss)	167	148	85	39	(7)	26	69
Number of firms reporting							
Operating losses	0	2	2	8	8	8	7
Data	16	17	17	18	17	17	17

Source: Compiled from data submitted in response to Commission questionnaires.

QUESTION OF THREAT OF SERIOUS INJURY

FOREIGN PRODUCER DATA

Total Tubular

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of all carbon and alloy tubular products. These data are presented for all non-U.S. countries, Canada, and Mexico in tables TUBULAR-21 through TUBULAR-23, respectively (data presented in table TUBULAR-21 are the sum of data for subordinate product categories presented in tables TUBULAR-24, 27, 30, 33, and 36; data presented in table TUBULAR-22 are similarly the sum of data presented in tables TUBULAR-25, 28, 31, 34, and 37; and data presented in table TUBULAR-23 are the sum of data presented in tables TUBULAR-26, 29, 32, 35, and 38).[8]

Table TUBULAR-21
Total tubular: All non-U.S. countries' production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Production	26,669,393	28,385,722	28,502,390	25,114,227	27,394,837	13,616,900	15,008,780	30,367,153	30,004,499
Shipments:									
Internal consumption	932,778	964,696	896,653	780,610	932,797	460,867	504,638	928,432	940,316
Home market	15,186,215	15,867,690	15,287,122	14,340,954	14,563,995	7,189,317	7,582,822	13,873,013	14,331,488
Exports to–									
United States	1,827,092	1,786,805	2,340,966	2,019,030	3,125,603	1,693,210	1,777,588	3,103,808	2,924,112
All other	8,903,702	9,891,120	10,475,088	8,563,430	9,142,740	4,370,431	5,528,308	11,317,567	11,983,232
Total exports	10,730,794	11,677,924	12,816,054	10,582,460	12,268,343	6,063,641	7,305,896	14,421,375	14,907,344
Total shipments	26,849,786	28,510,311	28,999,829	25,704,024	27,765,135	13,713,826	15,393,356	29,222,820	30,179,148
Ending inventories	1,758,339	1,980,767	1,980,541	1,794,711	1,899,549	1,854,868	1,937,809	1,690,747	1,660,299
					Ratios and shares (*percent*)				
Inventories/total shipments	6.5	6.9	6.8	7.0	6.8	6.8	6.3	5.8	5.5
Share of total shipments:									
Internal consumption	3.5	3.4	3.1	3.0	3.4	3.4	3.3	3.2	3.1
Home market	56.6	55.7	52.7	55.8	52.5	52.4	49.3	47.5	47.5
Exports to–									
United States	6.8	6.3	8.1	7.9	11.3	12.3	11.5	10.6	9.7
All other	33.2	34.7	36.1	33.3	32.9	31.9	35.9	38.7	39.7
Total exports	40.0	41.0	44.2	41.2	44.2	44.2	47.5	49.3	49.4

Source: Compiled from data submitted in response to Commission questionnaires.

[8] Significant double-counting issues arise for some of the items presented in tables TUBULAR-21-23 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs. However, they offered no techniques to resolve any double-counting other than making their arguments on the basis of subordinate categories or aggregations of sub-categories.

Table TUBULAR-22
Total tubular: Canada's production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
Quantity (*tons*)									
Production	1,662,808	2,003,962	2,156,255	2,024,336	2,015,983	1,105,219	993,480	1,616,986	1,673,821
Shipments: Internal consumption	1,066	1,757	2,099	848	450	0	550	750	0
Home market	1,211,555	1,457,010	1,457,124	1,385,511	1,188,291	598,523	656,406	731,031	782,122
Exports to-- United States	443,591	474,230	652,362	643,901	843,818	521,288	370,255	693,480	707,193
All other	1,959	8,681	2,839	55	4,046	275	18,755	60	80
Total exports	445,550	482,911	655,201	643,956	847,864	521,563	389,010	693,540	707,273
Total shipments	1,658,171	1,941,678	2,114,424	2,030,315	2,036,605	1,120,086	1,045,966	1,425,321	1,489,395
Ending inventories	132,751	205,575	251,384	213,296	213,623	203,010	178,921	132,634	133,059
Ratios and shares (*percent*)									
Inventories/total shipments	8.0	10.6	11.9	10.5	10.5	9.1	8.6	9.3	8.9
Share of total shipments: Internal consumption	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0
Home market	73.1	75.0	68.9	68.2	58.3	53.4	62.8	51.3	52.5
Exports to-- United States	26.8	24.4	30.9	31.7	41.4	46.5	35.4	48.7	47.5
All other	0.1	0.4	0.1	0.0	0.2	0.0	1.8	0.0	0.0
Total exports	26.9	24.9	31.0	31.7	41.6	46.6	37.2	48.7	47.5

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-23
Total tubular: Mexico's production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Production	1,384,353	1,635,320	1,673,164	1,367,162	1,649,844	821,503	888,794	1,791,999	1,938,101
Shipments: Internal consumption	36,012	62,114	61,561	23,698	33,322	14,062	25,715	46,365	48,541
Home market	673,600	844,009	928,010	855,814	929,536	467,125	463,729	990,501	1,141,957
Exports to– United States	136,301	167,079	188,576	188,525	200,192	104,943	108,605	195,434	208,752
All other	532,369	536,700	471,922	293,291	501,045	248,413	319,818	569,313	540,763
Total exports	668,670	703,779	660,498	481,816	701,237	353,356	428,423	764,747	749,515
Total shipments	1,378,282	1,609,902	1,650,069	1,361,328	1,664,095	834,543	917,867	1,801,613	1,940,013
Ending inventories	127,708	149,965	169,613	177,541	172,843	147,613	150,599	170,257	170,347
					Ratios and shares (*percent*)				
Inventories/total shipments	9.3	9.3	10.3	13.0	10.4	8.8	8.2	9.5	8.8
Share of total shipments: Internal consumption	2.6	3.9	3.7	1.7	2.0	1.7	2.8	2.6	2.5
Home market	48.9	52.4	56.2	62.9	55.9	56.0	50.5	55.0	58.9
Exports to– United States	9.9	10.4	11.4	13.8	12.0	12.6	11.8	10.8	10.8
All other	38.6	33.3	28.6	21.5	30.1	29.8	34.8	31.6	27.9
Total exports	48.5	43.7	40.0	35.4	42.1	42.3	46.7	42.4	38.6

Source: Compiled from data submitted in response to Commission questionnaires.

Seamless

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of seamless tubular products. These data are presented for all non-U.S. countries, Canada, and Mexico in tables TUBULAR-24 through TUBULAR-26, respectively.

Table TUBULAR-24
Seamless: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	8,947,600	8,989,046	9,080,923	8,614,542	8,417,374	4,372,027	4,557,827	8,553,693	8,617,495
Production	6,944,568	7,352,123	7,257,237	6,471,913	7,232,879	3,511,388	3,876,458	7,070,926	7,193,216
Shipments: Internal consumption	83,204	127,149	135,642	124,058	160,068	85,656	87,616	97,116	96,319
Home market	3,953,816	4,216,762	4,130,603	3,808,232	4,113,135	2,000,623	2,183,897	3,704,829	3,739,975
Exports to– United States	425,725	447,983	575,268	368,725	476,651	255,435	261,670	459,869	463,756
All other	2,622,104	2,741,494	2,695,366	2,420,257	2,726,910	1,320,083	1,498,573	3,021,152	3,069,080
Total exports	3,047,828	3,189,477	3,270,634	2,788,982	3,203,561	1,575,518	1,760,244	3,481,021	3,532,836
Total shipments	7,084,849	7,533,388	7,536,879	6,721,272	7,476,764	3,661,796	4,031,756	7,282,966	7,369,130
Ending inventories	443,407	460,270	438,721	420,402	422,580	400,865	398,898	355,803	343,476
					Ratios and shares (*percent*)				
Capacity utilization	77.6	81.8	79.9	75.1	85.9	80.3	85.1	82.7	83.5
Inventories/total shipments	6.3	6.1	5.8	6.3	5.7	5.5	4.9	4.9	4.7
Share of total shipments: Internal consumption	1.2	1.7	1.8	1.8	2.1	2.3	2.2	1.3	1.3
Home market	55.8	56.0	54.8	56.7	55.0	54.6	54.2	50.9	50.8
Exports to– United States	6.0	5.9	7.6	5.5	6.4	7.0	6.5	6.3	6.3
All other	37.0	36.4	35.8	36.0	36.5	36.1	37.2	41.5	41.6
Total exports	43.0	42.3	43.4	41.5	42.8	43.0	43.7	47.8	47.9

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-25
Seamless: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Table TUBULAR-26
Seamless: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Seamless OCTG

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of seamless OCTG products. These data are presented for all non-U.S. countries, Canada, and Mexico in tables TUBULAR-27 through TUBULAR-29, respectively.

Table TUBULAR-27
Seamless OCTG: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	4,875,608	5,056,305	4,967,961	4,338,130	4,736,333	2,277,360	2,558,842	4,931,544	4,855,519
Production	3,514,254	3,995,887	3,828,445	2,390,333	3,908,811	1,744,460	2,442,743	4,591,911	4,545,616
Shipments: Internal consumption	50,627	63,509	70,846	55,167	120,809	55,808	87,190	157,369	165,660
Home market	1,218,833	1,362,816	1,359,096	953,641	1,222,387	570,408	792,849	1,525,526	1,564,299
Exports to– United States	142,304	249,548	170,215	101,921	395,186	212,533	186,947	344,732	357,469
All other	2,054,089	2,343,164	2,271,764	1,325,239	2,161,430	916,779	1,423,469	2,597,752	2,464,331
Total exports	2,196,393	2,592,711	2,441,978	1,427,160	2,556,616	1,129,311	1,610,416	2,942,485	2,821,801
Total shipments	3,465,853	4,019,036	3,871,921	2,435,969	3,899,812	1,755,527	2,490,456	4,625,379	4,551,759
Ending inventories	217,138	198,081	192,776	174,363	215,812	177,277	193,597	182,916	190,603
					Ratios and shares (*percent*)				
Capacity utilization	72.1	79.0	77.1	55.1	82.5	76.6	95.5	93.1	93.6
Inventories/total shipments	6.3	4.9	5.0	7.2	5.5	5.0	3.9	4.0	4.2
Share of total shipments: Internal consumption	1.5	1.6	1.8	2.3	3.1	3.2	3.5	3.4	3.6
Home market	35.2	33.9	35.1	39.1	31.3	32.5	31.8	33.0	34.4
Exports to– United States	4.1	6.2	4.4	4.2	10.1	12.1	7.5	7.5	7.9
All other	59.3	58.3	58.7	54.4	55.4	52.2	57.2	56.2	54.1
Total exports	63.4	64.5	63.1	58.6	65.6	64.3	64.7	63.6	62.0

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-28
Seamless OCTG: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Table TUBULAR-29
Seamless OCTG: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Welded

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of welded tubular products. These data are presented for all non-U.S. countries, Canada, and Mexico in tables TUBULAR-30 through TUBULAR-32, respectively.

Table TUBULAR-30
Welded: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
					Quantity (*tons*)				
Capacity	20,189,033	20,569,940	21,251,332	21,028,637	20,796,977	10,738,178	10,888,652	21,123,786	21,267,808
Production	15,302,293	15,934,095	16,551,860	15,616,105	15,089,501	7,861,465	7,980,580	17,606,036	17,259,706
Shipments:									
Internal consumption	780,350	733,680	649,357	587,874	628,946	310,077	309,380	629,438	637,439
Home market	9,518,892	9,736,985	9,367,147	9,236,595	8,682,781	4,360,571	4,306,331	8,287,175	8,682,943
Exports to–									
United States	1,155,976	978,587	1,445,907	1,415,713	1,914,851	1,091,603	1,060,419	1,884,734	1,781,744
All other	3,930,958	4,407,624	5,227,165	4,650,393	3,975,568	2,017,274	2,456,819	5,390,340	6,119,792
Total exports	5,086,934	5,386,211	6,673,072	6,066,106	5,890,419	3,108,877	3,517,238	7,275,074	7,901,536
Total shipments	15,386,176	15,856,876	16,689,576	15,890,575	15,202,147	7,779,525	8,132,949	16,191,687	17,221,918
Ending inventories	1,000,784	1,211,189	1,258,249	1,099,090	1,143,573	1,173,467	1,233,960	1,055,885	1,052,556
					Ratios and shares (*percent*)				
Capacity utilization	73.2	73.8	73.9	70.9	70.0	69.0	69.1	80.0	76.8
Inventories/total shipments	6.5	7.6	7.5	6.9	7.5	7.5	7.6	6.5	6.1
Share of total shipments:									
Internal consumption	5.1	4.6	3.9	3.7	4.1	4.0	3.8	3.9	3.7
Home market	61.9	61.4	56.1	58.1	57.1	56.1	52.9	51.2	50.4
Exports to–									
United States	7.5	6.2	8.7	8.9	12.6	14.0	13.0	11.6	10.3
All other	25.5	27.8	31.3	29.3	26.2	25.9	30.2	33.3	35.5
Total exports	33.1	34.0	40.0	38.2	38.7	40.0	43.2	44.9	45.9

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-31
Welded: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
Quantity (*tons*)									
Capacity	2,493,835	2,425,189	2,467,296	2,570,632	2,578,023	1,162,374	1,163,037	2,661,010	2,590,659
Production	1,172,529	1,229,664	1,596,774	1,698,027	1,599,000	923,490	740,716	1,321,577	1,350,044
Shipments: Internal consumption	0	211	0	0	0	0	0	0	0
Home market	786,701	766,002	969,125	1,122,544	835,638	437,547	437,801	525,803	560,517
Exports to– United States	388,081	398,528	573,778	570,887	756,903	481,353	314,659	592,808	590,143
All other	1,696	8,602	2,190	0	3,986	242	18,719	0	0
Total exports	389,777	407,130	575,968	570,887	760,889	481,595	333,378	592,808	590,143
Total shipments	1,176,478	1,173,343	1,545,093	1,693,431	1,596,527	919,142	771,179	1,118,611	1,150,660
Ending inventories	70,684	137,545	188,735	143,676	141,597	139,261	114,243	103,635	104,019
Ratios and shares (*percent*)									
Capacity utilization	47.0	50.7	64.7	66.1	62.0	67.6	53.0	49.7	52.1
Inventories/total shipments	6.0	11.7	12.2	8.5	8.9	7.6	7.4	9.3	9.0
Share of total shipments: Internal consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Home market	66.9	65.3	62.7	66.3	52.3	47.6	56.8	47.0	48.7
Exports to– United States	33.0	34.0	37.1	33.7	47.4	52.4	40.8	53.0	51.3
All other	0.1	0.7	0.1	0.0	0.2	0.0	2.4	0.0	0.0
Total exports	33.1	34.7	37.3	33.7	47.7	52.4	43.2	53.0	51.3

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-32
Welded: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June		Projections	
						2000	2001	2001	2002
Quantity (*tons*)									
Capacity	1,029,266	1,167,346	1,400,663	1,393,068	1,430,715	714,882	726,452	1,474,500	1,602,703
Production	689,715	897,666	1,002,820	883,961	955,680	487,149	478,568	1,043,582	1,208,152
Shipments: Internal consumption	14,055	22,548	11,823	8,780	9,358	5,442	4,080	4,000	3,294
Home market	504,152	666,084	756,884	690,034	767,185	382,982	410,332	853,306	981,516
Exports to– United States	78,105	111,224	122,894	156,499	161,957	85,840	83,619	154,530	169,823
All other	86,058	78,359	90,520	17,058	28,997	19,173	19,306	40,503	55,592
Total exports	164,163	189,583	213,414	173,557	190,954	105,013	102,925	195,033	225,415
Total shipments	682,370	878,215	982,121	872,371	967,497	493,437	517,337	1,052,339	1,210,225
Ending inventories	53,757	70,049	87,303	100,988	98,726	77,812	66,804	95,803	95,750
Ratios and shares (*percent*)									
Capacity utilization	67.0	76.9	71.6	63.5	66.8	68.1	65.9	70.8	75.4
Inventories/total shipments	7.9	8.0	8.9	11.6	10.2	7.9	6.5	9.1	7.9
Share of total shipments: Internal consumption	2.1	2.6	1.2	1.0	1.0	1.1	0.8	0.4	0.3
Home market	73.9	75.8	77.1	79.1	79.3	77.6	79.3	81.1	81.1
Exports to– United States	11.4	12.7	12.5	17.9	16.7	17.4	16.2	14.7	14.0
All other	12.6	8.9	9.2	2.0	3.0	3.9	3.7	3.8	4.6
Total exports	24.1	21.6	21.7	19.9	19.7	21.3	19.9	18.5	18.6

Source: Compiled from data submitted in response to Commission questionnaires.

Welded OCTG

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of welded OCTG products. These data are presented for all non-U.S. countries, Canada, and Mexico in tables TUBULAR-33 through TUBULAR-35, respectively.

Table TUBULAR-33
Welded OCTG: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
					Quantity (*tons*)				
Capacity	2,858,968	3,010,580	2,976,337	2,863,529	2,418,588	1,287,908	1,345,878	2,332,744	2,324,598
Production	739,310	908,319	658,773	473,849	981,710	406,413	597,683	885,208	792,000
Shipments: Internal consumption	152	32	319	90	791	642	1,165	1,311	1,200
Home market	440,899	495,117	372,464	290,679	490,052	222,872	271,471	299,007	288,464
Exports to– United States	71,757	81,425	116,190	103,647	301,455	117,322	245,386	372,416	280,699
All other	224,545	319,004	192,406	89,760	196,968	75,103	99,473	219,946	236,292
Total exports	296,302	400,429	308,596	193,407	498,423	192,425	344,859	592,362	516,990
Total shipments	737,353	895,578	681,379	484,176	989,266	415,939	617,495	892,680	806,654
Ending inventories	65,533	78,274	60,137	67,353	85,298	71,171	80,262	66,985	46,431
					Ratios and shares (*percent*)				
Capacity utilization	25.9	30.2	22.1	16.5	40.6	30.9	43.6	37.9	34.1
Inventories/total shipments	8.9	8.7	8.8	13.9	8.6	8.6	6.5	7.5	5.8
Share of total shipments: Internal consumption	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1
Home market	59.8	55.3	54.7	60.0	49.5	53.6	44.0	33.5	35.8
Exports to– United States	9.7	9.1	17.1	21.4	30.5	28.2	39.7	41.7	34.8
All other	30.5	35.6	28.2	18.5	19.9	18.1	16.1	24.6	29.3
Total exports	40.2	44.7	45.3	39.9	50.4	46.3	55.8	66.4	64.1

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-34
Welded OCTG: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Table TUBULAR-35
Welded OCTG: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Fittings

The Commission requested information from foreign producers concerning their production, capacity, shipments, and inventories of fittings. These data are presented for all non-U.S. countries, Canada, and Mexico in tables TUBULAR-36 through TUBULAR-38, respectively.

Table TUBULAR-36
Fittings: All non-U.S. countries' capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001	Projections 2001	Projections 2002
Quantity (*tons*)									
Capacity	260,796	266,681	304,067	310,174	311,770	152,505	158,059	319,895	320,991
Production	168,968	195,298	206,077	162,028	181,937	93,173	111,315	213,071	213,960
Shipments: Internal consumption	18,444	40,326	40,489	13,421	22,183	8,684	19,287	43,198	39,698
Home market	53,775	56,010	57,812	51,807	55,640	34,844	28,274	56,476	55,808
Exports to– United States	31,331	29,263	33,386	29,024	37,460	16,318	23,165	42,057	40,443
All other	72,005	79,834	88,388	77,781	81,864	41,192	49,974	88,377	93,738
Total exports	103,336	109,097	121,774	106,805	119,324	57,510	73,139	130,434	134,181
Total shipments	175,555	205,433	220,075	172,033	197,147	101,038	120,700	230,108	229,687
Ending inventories	31,477	32,952	30,658	33,503	32,287	32,088	31,092	29,157	27,232
Ratios and shares (*percent*)									
Capacity utilization	64.8	73.2	67.8	52.2	58.4	61.1	70.4	66.6	66.7
Inventories/total shipments	17.9	16.0	13.9	19.5	16.4	15.9	12.9	12.7	11.9
Share of total shipments: Internal consumption	10.5	19.6	18.4	7.8	11.3	8.6	16.0	18.8	17.3
Home market	30.6	27.3	26.3	30.1	28.2	34.5	23.4	24.5	24.3
Exports to– United States	17.8	14.2	15.2	16.9	19.0	16.2	19.2	18.3	17.6
All other	41.0	38.9	40.2	45.2	41.5	40.8	41.4	38.4	40.8
Total exports	58.9	53.1	55.3	62.1	60.5	56.9	60.6	56.7	58.4

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-37
Fittings: Canada's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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Table TUBULAR-38
Fittings: Mexico's capacity, production, shipments, and inventories, 1996-2000, January-June 2000, January-June 2001, and projected 2001-02

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IMPORTERS' INVENTORIES

The Commission requested information from importers concerning their end-of-period inventories of all carbon and alloy tubular products. End-of-period inventory data for imported product from all importers are presented for carbon and alloy tubular products in table TUBULAR-39.

Table TUBULAR-39
U.S. importers' inventories, by products, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
				Quantity (*tons*)			
Seamless	9,567	13,330	13,456	13,183	17,678	18,188	18,626
Seamless OCTG	19,402	43,095	55,064	12,804	7,902	13,384	18,076
Welded	6,440	9,166	20,942	13,176	23,348	13,901	15,857
Welded OCTG	10,661	13,926	23,857	2,569	12,915	6,142	26,630
Fittings	17,292	19,040	19,009	25,874	22,900	23,208	27,934
Total	63,362	98,557	132,328	67,606	84,743	74,823	107,123
				Ratio to reporting firms' U.S. shipments of imports (*percent*)			
Seamless	2.7	3.7	2.5	3.6	3.3	3.2	3.3
Seamless OCTG	14.2	23.9	45.7	11.7	2.2	3.7	4.9
Welded	1.1	1.2	2.0	1.2	1.4	0.8	0.9
Welded OCTG	16.0	9.9	19.6	2.2	5.1	3.0	7.1
Fittings	45.1	42.9	39.5	47.2	38.5	38.8	38.6
Total	5.3	6.5	7.1	3.9	3.0	2.5	3.4

Source: Compiled from data submitted in response to Commission questionnaires.

QUESTION OF THE CAUSAL RELATIONSHIP BETWEEN THE ALLEGED INJURY/THREAT AND IMPORTS

U.S. CONSUMPTION AND MARKET SHARES

Data on apparent U.S. consumption and market shares of all carbon and alloy tubular products based on U.S. producers' shipments and U.S. imports are presented in table TUBULAR-40.[9] These data are presented for seamless, seamless OCTG, welded, welded OCTG, and fittings in tables TUBULAR-41 through TUBULAR-45, respectively.

[9] Significant double-counting issues arise for the consumption data presented in table TUBULAR-40 because they were calculated by summing the data reported for each of the subordinate product categories. Parties were asked to comment on the best technique to minimize the double-counting problem in their posthearing briefs. However, they offered no techniques to resolve any double-counting other than making their arguments on the basis of subordinate categories or aggregations of sub-categories.

Table TUBULAR-40
Total tubular: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	9,893,464	11,193,178	10,960,327	9,833,550	11,696,129	6,045,193	6,593,033
U.S. consumption (*$1,000*)	7,160,582	8,155,227	8,062,546	6,567,158	7,914,468	4,036,341	4,434,453
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	76.2	74.5	69.1	71.4	65.4	65.2	64.0
Canada	7.3	6.5	7.8	8.5	9.0	10.4	7.1
Mexico	1.8	2.0	2.3	2.4	2.1	2.1	2.4
All other sources	14.7	17.0	20.8	17.8	23.5	22.3	26.5
Total imports	23.8	25.5	30.9	28.6	34.6	34.8	36.0
U.S. market share based on value (*percent*)							
U.S. producers' shipments	75.3	74.9	69.7	71.9	66.3	66.6	65.4
Canada	6.7	6.1	7.0	7.7	8.4	9.7	6.4
Mexico	1.6	1.7	2.2	2.2	2.2	2.1	2.6
All other sources	16.5	17.3	21.0	18.1	23.1	21.6	25.6
Total imports	24.7	25.1	30.3	28.1	33.7	33.4	34.6

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table TUBULAR-41
Seamless: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	1,373,136	1,483,425	1,543,650	1,102,386	1,314,523	701,241	688,616
U.S. consumption (*$1,000*)	1,346,939	1,348,216	1,449,067	1,026,465	1,203,670	625,368	623,936
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	67.6	68.3	57.1	63.1	57.2	59.0	56.3
Canada	1.2	1.7	2.1	1.8	1.0	1.1	1.0
Mexico	3.7	3.6	5.0	1.9	2.1	1.3	6.1
All other sources	27.5	26.4	35.7	33.3	39.7	38.6	36.6
Total imports	32.4	31.7	42.9	36.9	42.8	41.0	43.7
U.S. market share based on value (*percent*)							
U.S. producers' shipments	66.0	67.4	57.1	61.5	57.5	58.8	57.0
Canada	1.5	1.8	2.1	1.9	1.3	1.4	1.6
Mexico	2.5	2.4	3.7	1.6	1.8	1.3	4.6
All other sources	30.0	28.5	37.1	35.0	39.4	38.4	36.8
Total imports	34.0	32.6	42.9	38.5	42.5	41.2	43.0

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table TUBULAR-42
Seamless OCTG: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	1,349,081	1,662,892	1,161,767	707,951	1,619,711	773,246	1,018,599
U.S. consumption (*$1,000*)	1,074,999	1,392,940	1,097,752	560,089	1,236,132	563,580	896,805
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	87.4	83.1	81.7	85.8	70.0	69.9	69.8
Canada	0.1	0.1	0.0	0.1	0.1	0.0	0.1
Mexico	0.9	0.8	0.1	0.2	0.1	0.1	0.3
All other sources	11.6	16.0	18.2	13.9	29.8	29.9	29.8
Total imports	12.6	16.9	18.3	14.2	30.0	30.1	30.2
U.S. market share based on value (*percent*)							
U.S. producers' shipments	84.3	82.6	81.6	82.8	69.5	70.4	69.6
Canada	0.1	0.4	0.1	0.1	0.0	0.0	0.6
Mexico	0.3	0.3	0.1	0.1	0.1	0.1	0.4
All other sources	15.3	16.7	18.2	17.0	30.4	29.5	29.3
Total imports	15.7	17.4	18.4	17.2	30.5	29.6	30.4

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table TUBULAR-43
Welded: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June 2000	January-June 2001
U.S. consumption (*tons*)	6,007,968	6,494,375	7,140,842	7,111,385	7,167,421	3,835,694	3,841,952
U.S. consumption (*$1,000*)	3,585,164	3,939,029	4,313,774	4,009,668	4,034,897	2,158,004	2,040,664
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	73.8	71.3	68.3	70.2	63.3	62.5	63.2
Canada	11.5	10.6	11.3	11.3	14.2	15.9	11.6
Mexico	1.6	2.0	2.0	2.6	2.6	2.7	2.5
All other sources	13.1	16.1	18.4	15.9	19.8	18.9	22.7
Total imports	26.2	28.7	31.7	29.8	36.7	37.5	36.8
U.S. market share based on value (*percent*)							
U.S. producers' shipments	75.0	73.0	70.4	73.4	66.3	65.6	64.8
Canada	11.5	10.5	11.1	10.8	14.2	16.1	11.0
Mexico	1.3	1.8	1.8	2.3	2.7	2.7	2.7
All other sources	12.3	14.7	16.7	13.4	16.8	15.6	21.5
Total imports	25.0	27.0	29.6	26.6	33.7	34.4	35.2

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table TUBULAR-44
Welded OCTG: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
U.S. consumption (*tons*)	867,348	1,232,700	784,596	600,476	1,269,762	577,140	869,533
U.S. consumption (*$1,000*)	555,306	822,692	511,555	330,007	763,784	342,445	501,305
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	92.9	89.4	83.4	88.4	81.6	85.8	69.0
Canada	0.6	0.5	0.2	0.1	0.2	0.0	0.8
Mexico	0.1	0.1	0.0	0.7	0.6	1.1	0.4
All other sources	6.4	10.0	16.4	10.8	17.6	13.0	29.8
Total imports	7.1	10.6	16.6	11.6	18.4	14.2	31.0
U.S. market share based on value (*percent*)							
U.S. producers' shipments	94.2	91.0	85.8	90.9	85.8	88.9	81.1
Canada	0.5	0.4	0.1	0.1	0.2	0.1	0.7
Mexico	0.0	0.1	0.0	0.7	0.6	1.0	0.4
All other sources	5.2	8.5	14.0	8.3	13.5	10.1	17.8
Total imports	5.8	9.0	14.2	9.1	14.2	11.1	18.9

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

Table TUBULAR-45
Fittings: U.S. consumption and market shares, 1996-2000, January-June 2000, and January-June 2001

Item	1996	1997	1998	1999	2000	January-June	
						2000	2001
U.S. consumption (*tons*)	295,929	319,785	329,472	311,352	324,712	157,872	174,334
U.S. consumption (*$1,000*)	598,176	652,352	690,398	640,929	675,986	346,943	371,742
U.S. market share based on quantity (*percent*)							
U.S. producers' shipments	65.0	67.1	64.5	62.3	58.3	61.0	53.3
Canada	3.5	3.7	3.5	3.7	4.9	4.7	4.7
Mexico	5.8	6.0	8.5	5.9	5.8	5.5	5.7
All other sources	25.7	23.3	23.6	28.1	31.0	28.8	36.3
Total imports	35.0	32.9	35.5	37.7	41.7	39.0	46.7
U.S. market share based on value (*percent*)							
U.S. producers' shipments	64.7	65.2	61.5	59.7	54.4	58.3	51.0
Canada	6.9	7.6	8.1	8.6	10.7	10.1	10.3
Mexico	4.9	5.3	6.8	4.9	5.3	4.8	7.2
All other sources	23.4	21.9	23.6	26.8	29.6	26.8	31.6
Total imports	35.3	34.8	38.5	40.3	45.6	41.7	49.0

Source: Compiled from data submitted in response to Commission questionnaires and official Commerce statistics.

PRICES AND RELATED INFORMATION

Supply

Welded and seamless tubular products are produced on different equipment, from different raw materials, and generally by different producers. In general, it is less expensive to purchase the capital equipment for production of welded tubular products than seamless tubular products. Some types of specialty tubular products, such as many types of OCTG, will require more extensive finishing operations after production. These operations, which make the finished tubular product more durable or easier to use, can include heat treatment, threading, coupling, coating, and upsetting. Production-wise, welded and welded OCTG are more alike than welded and seamless.[10] Likewise, seamless and seamless OCTG are more alike than welded and seamless. There are also product divisions based on diameter and thickness, with especially large or small diameter tubular products sometimes requiring more specialized production.[11]

Fittings and flanges are produced by both integrated and non-integrated producers. An integrated producer will produce fittings forgings or flange forgings, and then convert those into fittings or flanges, respectively. A non-integrated producer will purchase fittings forgings or flange forgings and perform the conversion steps. Fittings forgings, fittings, and flanges are all within the scope of this investigation, while flange forgings are not (although stainless steel flange forgings are within the scope). In general, producers of fittings and flanges are not the same as the producers of pipe and tube.[12] There are a small number of integrated fittings and flanges producers, but a larger number of (generally smaller) fittings and flanges converters.[13] Tool joints are also included in the Commission's fittings and flanges category and are used to attach lengths of drill pipe to each other.

Generally, tubular products are sold through a large distribution market. Some distributors are affiliated with producers or importers. However, specialty tubes that require more heat-treatment or testing are often sold directly to end users. Such specialty tubes exist in all five tubular product categories.

Supply-Related Information on U.S. Producers

Based on available information, U.S. tubular producers are likely to respond to changes in demand with moderate to large changes in the quantity of shipments of U.S.-produced tubular products

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[10] However, domestic representatives estimated that while there are 50-55 producers of welded tubulars with about 130 plants, only 5-8 producers in about 10 plants make welded OCTG. Hearing transcript, p. 2,527, and table TUBULAR-2.

[11] *See*, for example, hearing transcript, pp. 2,481, 2,484, 2,529-30, 2,554, 2,654-55, and 2,659, and *Certain Seamless Carbon and Alloy Steel Standard, Line, and Pressure Pipe From the Czech Republic, Japan, Mexico, Romania, and South Africa*, Invs. Nos. 731-TA-846-850 (Preliminary), publication No. 3221, August 1999, pp. I-8-15 and II-7-9.

[12] There are exceptions to this rule. For example, pipe nipples fall into the fittings category and are made by tubular producers. There is currently only one U.S. producer, Weldbend, that makes both fittings and flanges. Hearing transcript, p. 2,602.

[13] *See*, for example, prehearing briefs of Boltex Manufacturing et al, pp. 8-10; CAB and CAB Flange Manufacturing, pp. 2-3; Mill Works, Trinity Fitting, and Tube Forgings, pp. 7-9; and Joint Respondents Product 22, pp. 1, 15-17.

to the U.S. market. The main factors contributing to the moderate to large responsiveness of supply are low levels of capacity utilization tempered by limited export markets and moderate inventory levels.

Industry Capacity

U.S. producers reported generally falling levels of capacity utilization for 1997-99, with a mild rebound in 2000. Capacity utilization rates for the various tubular products were at relatively low levels throughout the period and were below 60 percent in 2000 and interim 2001. These data indicate that U.S. producers have some unused capacity with which they could increase production of tubular products in the event of price changes. Table TUBULAR-46 summarizes capacity utilization, export, and inventory information for U.S. producers across tubular product categories.

Table TUBULAR–46
Tubular products: U.S. producers' year 2000 capacity utilization, export shipments as a percentage of total shipments, and inventories as a percentage of total shipments, by product

Product	Capacity utilization *(percent)*	Exports/total shipments *(percent)*	Inventories/total shipments *(percent)*
Seamless	57.4	10.2	11.7
Seamless OCTG	70.5	10.8	14.1
Welded	56.2	3.8	16.7
Welded OCTG	59.6	3.8	13.1
Fittings	67.4	3.1	30.9

Source: Compiled from data submitted in response to Commission questionnaires.

Alternate Markets

Available data indicate that because exports have accounted for a relatively small portion of total shipments of tubular products, there is little potential for increased sales to alternative markets. Exports of all tubular products as a percentage of total shipments fell slightly during the period and remained below 10 percent, indicating that exporting remains a small part of U.S. producers' shipments. The consistency of the numbers indicates that U.S. producers cannot easily divert shipments to or from alternate markets in response to changes in the price of tubular products.

Inventory Levels

U.S. producers' inventories of tubular products accounted for a relatively stable percentage of total shipments during the period for which data were collected. As a ratio to total shipments, inventories were between 13.4 and 15.4 percent during 1996-2001. These data indicate that U.S. producers have a somewhat limited ability to use inventories as a means of increasing shipments of tubular products to the U.S. market.

Subject Import Supply

All Sources

Non-U.S. producers' capacity utilization in 2000 ranged from 40.6 percent to 85.9 percent for the different tubular products. Non-U.S. producers' inventories relative to total shipments increased slightly

from 1996 to 2000 and were generally above 6.5 percent during that time. In 2000, non-U.S. producers of tubular products shipped almost half of their production beyond their borders, with about one quarter of these exports going to the United States. These data indicate that non-U.S. producers will be able to respond at least moderately with increased supply to the U.S. market in the event of price changes.[14] Table TUBULAR-47 summarizes capacity utilization, export, and inventory information for all non-U.S. producers across tubular product categories.

Table TUBULAR-47
Tubular products: Non-U.S. producers' year 2000 capacity utilization, export shipments to the United States as a percentage of total shipments, and inventories as a percentage of total shipments, by product

Product	Capacity utilization *(percent)*	U.S. exports/total shipments *(percent)*	Inventories/total shipments *(percent)*
Seamless	85.9	6.4	5.7
Seamless OCTG	82.5	10.1	5.5
Welded	70.0	12.6	7.5
Welded OCTG	40.6	30.5	8.6
Fittings	58.4	19.0	16.4
Source: Compiled from data submitted in response to Commission questionnaires.			

Canada

Canadian producers' capacity utilization in 2000 ranged from *** percent for the different tubular products. Canadian inventories relative to total shipments increased slightly from 1996 to 2000 and were generally around 10 percent during that time. In 2000, Canada shipped a significant amount of its production beyond its borders, with almost all of these exports going to the United States. These data indicate that Canadian producers will be able to respond at least moderately with increased supply to the U.S. market in the event of price changes. Table TUBULAR-48 summarizes capacity utilization, export, and inventory information for Canadian producers across tubular product categories.

Table TUBULAR-48
Tubular products: Canadian producers' year 2000 capacity utilization, export shipments to the United States as a percentage of total shipments, and inventories as a percentage of total shipments, by product

Product	Capacity utilization *(percent)*	U.S. exports/total shipments *(percent)*	Inventories/total shipments *(percent)*
Seamless	***	***	***
Seamless OCTG	***	***	***
Welded	62.0	47.4	8.9
Welded OCTG	***	***	***
Fittings	***	***	***
Source: Compiled from data submitted in response to Commission questionnaires.			

[14] Producers of welded, welded OCTG, and fittings products are likely to have a greater response as they have a relatively large amount of unused capacity.

Mexico

Mexican producers' capacity utilization in 2000 ranged from *** percent for the different tubular products. Mexican inventories relative to total shipments increased slightly from 1996 to 2000 and were generally around 10 percent during that time. In 2000, Mexico shipped a significant amount of its production beyond its borders, with about one-quarter of these exports going to the United States. These data indicate that Mexican producers will be able to respond at least moderately with increased supply to the U.S. market in the event of price changes. Table TUBULAR-49 summarizes capacity utilization, export, and inventory information for all Mexican producers across tubular product categories.

Table TUBULAR-49
Tubular products: Mexican producers' year 2000 capacity utilization, export shipments to the United States as a percentage of total shipments, and inventories as a percentage of total shipments, by product

Product	Capacity utilization *(percent)*	U.S. exports/total shipments *(percent)*	Inventories/total shipments *(percent)*
Seamless	***	***	***
Seamless OCTG	***	***	***
Welded	66.8	16.7	10.2
Welded OCTG	***	***	***
Fittings	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. Demand

Based on available information, the overall demand for tubular products will change little in response to changes in the price of tubular products. The main factors contributing to this low degree of price sensitivity are the lack of commercially viable substitute products and the wide range of cost share of tubular products in the finished end product they contribute to. The responsiveness of demand to price changes varies somewhat by product category, with welded more responsive due to the higher number of substitutes while OCTG drill pipe is less responsive because it is an integral component of a drill rig.

Demand Characteristics

Tubular products cover a wide variety of end uses. OCTG casing and tubing, both welded and seamless, are used in oil and gas extraction from wells that are drilled with OCTG drill pipe. Seamless and welded tubular products are used both for conveyance of liquids and gasses and as structural support. Thus, purchasers noted end uses in cars and light trucks (including steering columns, frames, and axle tubes), industrial production, fencing, ball bearing assemblies, construction equipment, building structurals, hydraulic cylinders, bridges, scaffolding, boiler parts, steam generators, highway signs, and fuel lines. While there is overlap in the potential and actual uses of welded and seamless tubular products, welded tubular products carry the risk of failure along the weld, and thus are generally sold at a discount to seamless tubular products.[15]

[15] The following discussion is drawn from *Certain Pipe and Tube From Argentina, Brazil, Canada, India, Korea,* (continued...)

Demand for tubular products will depend on both general economic conditions, as increased production and construction spurs demand for seamless and welded, and conditions in the somewhat counter-cyclical oil and gas industry, as increased energy prices spur increased drilling, extraction, and refining (and thus demand for both OCTG and line pipe).

Seamless tubular products include standard, line, or pressure pipe as well as boiler and mechanical tubing (depending on specification). Due to the general strength advantage that seamless products have over welded, they are often used in higher stress applications than welded.

Welded tubular products are also used in a wide variety of end uses. Their uses as standard pipe mean that they can be used for conveyance in industrial applications, as well as having uses in construction, automobiles, electric power generation, and in the oil market. Some respondent welded importers divide the welded market into large diameter welded for line pipe (which they estimate as 20-30 percent of the U.S. welded market) and other welded, generally standard pipe.[16] Overall economic growth from 1996 to 2001 has led to a general increase in demand for welded pipe across a myriad of end uses.

OCTG are divided among casing (which lines a well), tubing (which carries hydrocarbons up the well), and drill pipe (which is used to drill the well). Casing and tubing can be welded or seamless, though for certain high-pressure applications only seamless is acceptable. Seamless and welded OCTG, in the U.S. market at least, are often interchangeable. Drill pipe is always made of seamless OCTG. OCTG demand is driven by the level of drilling activity. The type of drilling activity can also have an effect, as deeper drilling in harsher environments will require more durable and specialized types of OCTG.

The fittings category includes butt-weld pipe fittings, flanges, and tool joints. Fittings and flanges are often distributed with other tubular products, and purchasers stated that demand for them is driven by utilities, automotive products, and import competition in downstream markets. One fittings importer characterized oil and gas end uses as "high-end" demand while construction end uses would be "low-end" demand.[17] Demand for tool joints is connected with OCTG demand, since tool joints are used in manufacturing finished drill pipe.

There are three main drivers for tubular products demand. First is the general economic situation, as increased production will mean more demand from the construction, industrial (automotive, chemical, etc.), and transportation sectors. Second is drilling for hydrocarbons, which will mean more demand for OCTG and the line pipe (both seamless and welded) to carry it. Third is energy generation, which will mean more demand for boiler tubing and other tubular products used in utility plants, as well as the line pipe (both seamless and welded) to bring the oil and natural gas to the plant. These three demand factors do not play equal roles, especially across the five sub-categories, and can work to complement but also undercut each other.

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[15] (...continued)
Mexico, Singapore, Taiwan, Thailand, Turkey, and Venezuela, Invs. Nos. 701-TA-253 (Review) and 731-TA-132, 252, 271, 273, 276, 277, 296, 409, 410, 532-534, 536, and 537 (Review), publication No. 3316, July 2000, pp. LWR-I-9-10, LWR-II-3, OCTG-I-11-12, and CIRC-I-17-18; *Oil Country Tubular Goods From Argentina, Italy, Japan, Korea, and Mexico*, Invs. Nos. 701-TA-364 (Review) and 731-TA-711, 713-716 (Review), publication No. 3434, June 2001, pp. I-16-19, II-10-14, II-2-3; *Certain Seamless Carbon and Alloy Steel Standard, Line, and Pressure Pipe From the Czech Republic, Japan, Mexico, Romania, and South Africa*, Invs. Nos. 731-TA-846-850 (Preliminary), publication No. 3221, August 1999, pp. I-8-15 and II-7-9; hearing transcript, pp. 2,487, 2,528, 2,531, 2,540, 2,578-79, 2,659, and 2,675-76; and responses to Commission questionnaires.

[16] Hearing transcript, pp. 2,579 and 2,660.

[17] One fittings producer, however, stated that oil and gas demand for fittings was often "overstated." Hearing transcript, pp. 2,617, 2,683, and 2,687.

Demand Trends

Several national data series act as proxies for various categories of tubular demand. As industrial production and construction spending increase, demand for welded, fittings, and some seamless will also increase. The rig count is a proxy for OCTG demand (though OCTG used per rig is also important). Additionally, oil and gas prices not only lead OCTG demand, they also affect seamless and welded demand due to increased petroleum refining and increased costs of other production, and thus perhaps lower demand for tubular products in those areas.

As can be seen in table TUBULAR-50, industrial production and construction spending increased during 1996-2000, before leveling off or even showing slight declines in the first half of 2001. Rig counts showed a rise in 1996-97, before dropping precipitously in 1997 and 1998, and then making a strong recovery in 2000. Oil and gas prices have remained mostly low since 1996, dipping even lower in 1998 and 1999, and then making a strong move upward in 2000 and 2001.

Table TUBULAR-50
Tubular products: Industrial production, construction spending, rig count, crude oil prices, and natural gas prices

Year	Industrial production (manufacturing) *(1992=100)*	Construction spending *(billions of dollars)*	Rig count *(number of rigs)*	Crude oil prices *(dollars per barrel)*	Natural gas prices *(dollars per 1,000 cubic feet)*
1996	121.4	615.9	779	2.17	18.46
1997	130.6	653.4	944	2.32	17.23
1998	137.7	704.7	829	1.94	10.87
1999	144.2	763.8	622	2.17	15.56
2000	152.9	815.4	916	3.60	26.73
2001 y.t.d.	149.0	([1])	1,252	5.76	24.13

[1] Not available.

Source: Federal Reserve Board, U.S. Census Bureau, Baker-Hughes Rig Count, and Energy Information Administration.

All these demand trends have led to increased demand for overall tubular products during 1996-2000. When OCTG demand was falling with rig counts and energy prices in 1998 and 1999, increased demand for seamless and welded compensated as industrial production and construction went higher. As general economic conditions leveled off in 2000, increased energy costs drove OCTG demand higher.

When asked if demand for their end-use products had changed since 1996, 77 purchasers said that it had not. Sixty-nine purchasers said that demand had changed, with import competition cited as a reason for decreased demand and market growth cited as a reason for increased demand. The following tabulation shows how the purchaser responses break down by tubular product category:

Category	Number of purchasers reporting demand for their end use products had changed	Number of purchasers reporting demand for their end use products had not changed
Seamless	31	39
Seamless OCTG	11	11
Welded	44	48
Welded OCTG	7	5
Fittings	19	17

When asked if their relative purchases of tubular products had changed from one country to another, 69 purchasers said that their shares of tubular products from different countries had remained the same. Fourteen purchasers reported that they had increased their share of purchases of U.S. tubular products, citing reasons such as increased demand, antidumping orders, and increased availability. However, 18 purchasers said that their share of tubular purchases from U.S. tubular producers had decreased due to issues such as quality, reliability, lack of availability, the shutdown of U.S. mills, and lower-priced imports. Purchasers cited 71 examples of increasing their share of purchases of imported tubular products, citing new sources of supply, higher demand, competitive prices, building inventory, or availability. Furthermore, 48 purchasers noted a drop in their share of purchases of imported products, explaining that antidumping orders, quality problems, competition with other lower priced imports, and a recent demand slowdown contributed to this drop in share.

Substitute Products

There are few substitutes for tubular products of carbon and alloy steel; however, there can be limited competition between various tubular products. With regard to non-tubular substitutes for tubular products, purchasers cited concrete and wood in structural end uses, and plastic, copper, stainless steel, or aluminum tubulars in other end uses. A few purchasers could even buy plate or forgings and manufacture the tubular products themselves. However, these substitutes are only available in limited applications (and in the case of aluminum and stainless steel, are more expensive). Within tubular products, there is some possibility of substitution between seamless and welded pipe, and between alloy and high strength. However, 170 purchasers said that there were no substitutes for the tubular products they purchased.

Cost Share

Because there are a large number of end uses for tubular products, the percentage of the cost of the end product accounted for by the tubular products varies significantly. Purchasers were asked to report the end uses for which they purchased tubular products as a component part and to report the percentage of the total cost accounted for by the tubular products. For bridges, scaffolding, and fabricated steel, tubular products may be a small (1-3 percent) part of the total cost, whereas for high pressure fuel lines and boilers it may account for 40-50 percent of the total cost. A high cost component tends to support a higher degree of price sensitivity of demand, and so the wide range of cost shares indicates that while some end uses may be affected more significantly by price changes, others would be less affected, moderating the overall effect of price rises on the demand for tubular products.

Substitutability of Domestic and Imported Tubular Products

U.S. Purchasers

The Commission sent questionnaires to purchasers of all tubular products, and received responses from 241 purchasers, whose purchases of domestic and imported tubular products are summarized in tables TUBULAR-51 and TUBULAR-52 below. As can be seen in TUBULAR-51, purchasers of domestic product within a category were usually also purchasers of imported products as well.[18]

Table TUBULAR-51
Tubular products: Number of firms reporting purchases of domestic and imported products, by products

Product	Number of firms reporting--		
	Purchases of domestic product	Purchases of imported product	Purchases of both imported and domestic product
Seamless	101	64	56
Seamless OCTG	37	37	31
Welded	138	88	73
Welded OCTG	25	22	16
Fittings	52	39	31
Source: Compiled from data submitted in response to Commission questionnaires.			

Table TUBULAR-52
Tubular products: Types of purchasers reporting information

Type of firm	Number of firms reporting
Distributor	104
End user	118
End user and distributor	2
Source: Compiled from data submitted in response to Commission questionnaires.	

A few purchasers were also producers, and cited low capacity (including a shortage of skilled workers), inability to produce specific products, cost competitiveness, and competition with imports as reasons they had purchased rather than produced some tubular products.

Seventy-two purchasers reported that their supplier sets the sales terms for purchase, while 157 reported that terms are negotiable. However, among distributors, 40 purchasers reported that their supplier sets the sales terms at a purchase, while 56 reported that terms are negotiable. Among end users, 71 purchasers reported that terms were negotiable while only 18 said that their supplier sets terms. This dichotomy suggests that end users who purchase from suppliers generally have more market power, while the distributor market serves purchasers who generally buy less product per purchaser and have fewer specifications.

Frequency of purchases varied widely across purchasers, with 60 purchasing daily, 55 purchasing weekly, 47 purchasing monthly, and 24 purchasing quarterly. The rest purchased as required,

[18] It should also be noted that purchasers usually purchased more than one category of tubular product.

or irregularly, and few reported any changes in their purchasing patterns since 1996, other than some increased purchasing frequency due to increased demand.

Purchasers reported that both they themselves and their customers were generally aware of the country of origin of the tubular products they bought. Of the responding firms, 152 purchasers reported that they were "always" aware of whether the tubular products were U.S.-produced or imported, 50 said they were "usually" aware, 17 said they were "sometimes" aware, and five said they were "never" aware. Fifty-six purchasers said that their buyers were "always" aware of whether the tubular products were U.S. produced or imported, 47 said their buyers were "usually" aware, 58 said their buyers were "sometimes" aware, and 12 said their buyers were "never" aware.

In summary, the Commission's purchaser database is split relatively evenly between end users and distributors. Most purchasers had purchased both domestic and imported products, and felt that their own buyers were at least sometimes aware of the origin of the tubular products they bought.

Lead Times

Purchasers reported lead times of one day to six months, with most purchasers reporting lead times of a few days to four months for domestic tubular products (depending on whether the product was in stock) and three to five months for imported tubular products.

The Commission asked purchasers to report if average lead times for domestic and imported tubular products had changed since January 1, 1996. In general, most purchasers reported that both domestic and imported lead times had remained about the same, or had increased or decreased together. Those that did report increased lead times for domestic purchases cited increased demand and reduced staff at domestic mills, while those who reported decreased lead time for domestic purchases cited new mill equipment and stocking programs. Those purchasers who said imported lead times had increased cited global demand, while those who noted a decrease in imported lead times cited increased amounts of imported material available.

Factors Affecting Purchasing Decisions

Purchases of tubular products are often (though not always) for high performance end uses (such as automotive parts, oil and gas drilling, and industrial uses) where adherence to specifications is critical for safety and successful operation. Thus, purchasers usually stressed that quality and adherence to industry recognized standards are of the utmost importance when purchasing tubular products. However, once these standards are met, price and cost competitiveness often become the most important factors. With the exception of a few products where domestic availability was lacking, price plays an important role in the competition between imported and domestic tubular products that met specifications. Table TUBULAR-53 shows how purchasers ranked the most important factors in their purchasing decisions.

Table TUBULAR-53
Tubular products: Ranking of factors used in purchasing decisions as reported by purchasers

Factor	Number of firms reporting		
	Number 1 factor	Number 2 factor	Number 3 factor
Quality	103	45	33
Price/ cost	59	73	70
Availability	28	56	35
Certification/ specification	10	2	4
Traditional supplier	7	7	11
Pre-existing contract	8	2	0
Customer specifications	3	2	5
Lead time	2	22	29
Reliability/ dependability	2	4	6
Service	1	2	6
Product range	1	6	11
Supplier reputation	0	0	3
Other[1]	4	5	6

[1] Other includes country of origin, location, capacity, consistency, credit extension, ability to manufacture specific products, terms, and alternate supplier.

Source: Compiled from data submitted in response to Commission questionnaires.

Purchasers defined quality as being based on physical properties of the tubular product (such as chemistry, dimensional tolerances, mechanical properties, surface finish, consistent shape, cleanliness, and hardness), market acceptance (reputation and certification), and delivery.

When asked how often they purchase the lowest priced tubular products offered, 8 purchasers said "always," 126 said "usually," 85 said "sometimes," and 12 said "never." The 12 "never"s were distributed relatively evenly across the tubular product categories.

One hundred sixty-six purchasers reported requiring supplier certification for their purchases. Certification usually involved ASTM, API, or ISO specifications, and was usually required for 95-100 percent of purchases. A minority of purchasers had additional specifications of their own, which they usually described as more stringent than ASTM or API. Of the 63 purchasers who did not require certification, some did say they still required ASTM or API certification.[19] Purchasers described certification as a process that looked at issues such as quality, reliability, competitive pricing, acceptable delivery, financial strength, liability insurance, product range, reputation, end-user acceptability, traceability, and capacity. Depending on the certification, it could take between a few days (for purchasers who only checked ASTM specifications) to 18 months.

Sixteen purchasers reported that a domestic producer had failed to qualify. Reasons cited included quality, availability, and inability to meet required specifications. Twenty purchasers reported

[19] Most purchasers require some certification, usually industry minimums but sometimes more. There were also some differences by product category, with seamless and OCTG purchasers more likely to report requiring certification than welded and fittings purchasers. However, even for welded and fittings purchasers, a majority still required certification.

an instance of a foreign producer failing to qualify. Reasons cited included quality, inability to meet required specifications, and late delivery. China, India, and Russia were mentioned more than once.

Comparisons of Domestic Products and Subject Imports

In general, purchasers reported that U.S. tubular products are broadly competitive with foreign tubular products of high reputation (*e.g.*, European, Argentine, Japanese, and Korean tubular products). However, in cases of specific products, some purchasers did report a lack of U.S. production capability or sufficient availability. Purchasers who compared the prices of U.S. and imported tubular products were much more likely to report that U.S. tubular products were more expensive than imports, especially imports from less industrialized nations.

Purchasers tended to indicate familiarity with a fairly wide variety of countries' tubular products. They were asked to compare U.S., Canadian, Mexican, and non-NAFTA tubular products. The results are summarized in table TUBULAR-54 below.

Table TUBULAR-54
Tubular products: Average purchase factor ratings and reported comparisons between U.S., Canadian, Mexican, and non-NAFTA products

Factor	Average importance score[1]	U.S. vs. Canada[2]			U.S. vs. Mexico[2]			U.S. vs non-NAFTA imports[2]		
		S	C	I	S	C	I	S	C	I
Availability	2.9	9	26	1	13	15	3	50	54	32
Delivery terms	2.4	4	31	0	9	21	1	38	85	11
Delivery time	2.8	8	22	5	13	15	3	66	51	17
Discounts offered	2.3	7	26	1	5	20	5	19	90	21
Lowest price	2.6	8	22	5	6	10	14	13	59	63
Minimum quantity requirements	2.1	1	31	3	1	25	5	33	79	19
Packaging	2.0	0	35	0	3	27	1	16	102	14
Product consistency	2.9	2	33	0	8	21	2	22	87	28
Product quality	3.0	3	32	0	9	21	1	22	85	30
Product range	2.4	10	23	2	12	16	3	29	67	39
Reliability of supply	2.9	8	25	2	12	14	5	41	67	27
Technical support	2.4	8	25	2	13	14	4	40	72	22
Transportation network	2.1	4	31	0	9	19	3	38	87	8
U.S. transportation costs	2.2	5	25	4	8	22	1	33	89	7

[1] 3 = very important, 2 = somewhat important, 1 = not important.
[2] S = U.S. superior, C = products comparable, I = U.S. inferior.

Source: Compiled from data submitted in response to Commission questionnaires.

One hundred forty-eight purchasers stated that imported and domestically produced tubular products that were produced to the same grade and specification were generally used in the same applications, while 13 said that they were not. For Canada, 144 purchasers agreed that imported and domestically produced tubular products that were produced to the same grade and specification were generally used in the same applications, while 10 said that they were not. For Mexico, 135 purchasers

agreed that imported and domestically produced tubular products that were produced to the same grade and specification were generally used in the same applications, while 11 said that they were not.

The following tabulation shows how many purchasers in each category reported that imported and domestically produced tubular products that were produced to the same grade and specification were generally used in the same applications:

Are U.S. and Canadian tubular products produced to the same grade and specification generally used in the same applications?

Product	Number of purchasers who reported purchases of domestic in 2000	Percent who answered "yes"	Number of purchasers who reported purchases of imported in 2000	Percent who answered "yes"
Seamless	69	87.0	53	86.8
Seamless OCTG	34	91.2	33	93.9
Welded	89	93.3	74	93.2
Welded OCTG	23	95.7	19	89.5
Fittings	44	95.5	35	94.3

Are U.S. and Mexican tubular products produced to the same grade and specification generally used in the same applications?

Product	Number of purchasers who reported purchases of domestic in 2000	Percent who answered "yes"	Number of purchasers who reported purchases of imported in 2000	Percent who answered "yes"
Seamless	65	89.2	48	89.6
Seamless OCTG	32	90.6	31	93.5
Welded	90	94.4	69	94.2
Welded OCTG	21	100.0	17	94.1
Fittings	40	97.5	29	93.1

Are U.S. and all other tubular products produced to the same grade and specification generally used in the same applications?

Product	Number of purchasers who reported purchases of domestic in 2000	Percent who answered "yes"	Number of purchasers who reported purchases of imported in 2000	Percent who answered "yes"
Seamless	69	94.2	47	93.6
Seamless OCTG	32	93.8	32	90.6
Welded	96	94.8	72	95.8
Welded OCTG	23	95.7	18	94.4
Fittings	42	95.2	29	96.6

For purchasers who stated that imported and domestically produced tubular products were not generally used in the same applications, reasons cited included limited size range and heat-treating capability in the United States and lower quality tubular products from other countries.

Seventy purchasers stated that they ordered tubular products specifically from the United States, citing quality, domestic content requirements, lead times, reliability, and widespread customer acceptance. Fifty-two purchasers stated they ordered tubular products specifically from a foreign country, citing availability, price, and quality. Thirty-three purchasers fell into both groups, i.e. reporting that they ordered tubular products from both U.S. and some imported sources specifically, and usually citing quality and customer acceptance as the reason. One hundred twenty-two purchasers stated that they did not ever order tubular products from one country in particular over other sources of supply.

One hundred forty-one purchasers stated that to their knowledge, no specific tubular products were in short supply from the United States. Seventy-three purchasers stated that there were products unavailable or in short supply from domestic producers. In general, among those purchasers citing short supply of U.S. product, heavy-walled, longer, high-grade, larger diameter, or heat-treated tubular products were most frequently cited. These products tend to require specialized production facilities that purchasers stated were rare or non-existent in the United States. The products in short supply from domestic producers were spread across all five categories, including seamless mechanical and boiler tubing, seamless OCTG drill pipe, welded large diameter pipe, fittings forgings, and tool joints.

Many purchasers stated that they had purchased tubular products from one source even though a comparable product was available at a lower price. Reasons cited include availability, delivery, quality, and lead times. Among purchasers who specified which source had been purchased over another, answers were further split between 16 purchasers who had purchased imported product rather than U.S. product (due to quality or availability of particular products) and 47 purchasers who had purchased U.S. product rather than imported product (due to better lead times or quality).

Elasticity Estimates

This section discusses the elasticity estimates that will be used in the economic analysis concerning any remedy options.

U.S. Supply Elasticity

The domestic supply elasticity for tubular products measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of tubular products. The elasticity of domestic supply depends on several factors, including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift production to other products, the existence of inventories, and the availability of alternate markets for U.S.-produced tubular products. Although most U.S. producers do not use their tubular production equipment to produce non-tubular products, there is some significant excess capacity that could be used to scale up production. Analysis of these factors earlier indicates that the U.S. industry is likely to be able to increase or decrease shipments to the U.S. market; an estimate in the range of 3 to 5 is suggested.

U.S. Demand Elasticity

The U.S. demand elasticity for tubular products measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of tubular products. This estimate depends on factors discussed earlier such as the existence of substitute products and the component share of tubular products in the production of downstream products. There are few, if any, viable substitutes for tubular products in general, but component share varies widely. Based on available information, the aggregate demand for tubular products is likely to be inelastic; a range of -0.5 to -1.0 is suggested. Due to the presence of more specialized products in seamless and seamless OCTG (i.e. fewer potential substitute products),

demand elasticity estimates for these products may be closer to the -0.5 end of the range while welded demand is perhaps more elastic.

Substitution Elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[20] Product differentiation, in turn, depends upon such factors as quality and conditions of sale. A majority of purchasers indicated that for most applications, U.S. and imported products are broadly substitutable. Based on available information, the elasticity of substitution between U.S. produced and imported tubular products is likely to be in the range of 4 to 6. Due to the greater likelihood that some seamless and seamless OCTG products are more specialized products and are sometimes in short supply in the United States, substitution elasticity estimates for these products may tend toward the lower end of the range.

Factors Affecting Prices

Raw Material Costs

The main raw material used in the production of welded line pipe is hot-rolled carbon steel. Seamless pipe is manufactured from round billets, which can in turn be manufactured from square billets. In turn, the raw materials used in the production of hot-rolled carbon steel and billets are scrap, pig iron, and hot briqueted iron. Prices of these raw materials generally fell during 1996-2001.

Transportation Costs to the U.S. Market

Transportation costs for tubular products from all import sources (based on 1996-June 2001 import data) to the United States (excluding U.S. inland costs) are estimated to be 8 percent of the customs value of the tubular products. This estimate is derived from the official U.S. import data by subtracting the c.i.f. value and duties from the landed, duty-paid value, and represents the transportation and other charges on imports. For Canada, the estimate is 2.3 percent and for Mexico, 4.2 percent. European countries' estimates ranged from 5.6 to 12.4 percent, with four of the five largest importing European nations in the 6.8 to 7.8 percent range. Asian transportation costs are slightly higher, in the 10.0 to 18.9 range, Russian transportation costs are estimated at 12.4 percent, and South American transportation costs are estimated to be in the 6.7 to 8.4 percent range.

U.S. Inland Transportation Costs

Purchasers estimated that U.S. inland transportation costs accounted for between 0 and 10 percent of the total delivered cost of tubular products, with 179 estimating deliver costs at 1-7 percent, and 46 more estimating 10-20 percent. One hundred forty purchasers reported that their supplier generally arranges the transportation to their location, while 64 stated that the purchaser itself usually arranges transportation.

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[20] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and U.S. like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

Pricing Methods and Sales Terms

One hundred twenty-four purchasers reported that 90-100 percent of their purchases were on a spot basis, while 51 reported that 90-100 percent of their purchases were on a contract basis. Sixty-five purchasers reported some mix of contract and spot pricing. Contracts ranged from 3 months to 5 years, with 24 purchasers reporting contracts of over one year, 33 reporting contracts of one year, 13 reporting quarterly contracts, and 25 reporting 3-6 month contracts. Generally, renegotiation comes only at the end of a contract. Forty-nine purchasers reported contracts that fixed both price and quantity, while 44 reported contracts that fixed price only. Few purchasers reported price premiums for sub-minimum shipments or meet or release provisions.

Price Data

The Commission asked for quarterly sales value and quantity data for U.S. producers' and importers' sales of the following seven products during January 1996 to June 2001:

Product 18A.--Seamless pipe tripled stenciled (or more) to meet ASTM-106 Grade B, ASTM A-53 Grade B, and API 5L Grade B specifications; 4 inches nominal size (4.5 inches outside diameter (O.D.) x 0.337 inch wall thickness); plain ends; schedule 80.

Product 18B.--Seamless pipe triple stenciled (or more) to meet ASTM-106 Grade B, ASTM A-53 Grade B, and API 5L Grade B specifications; 12 inches nominal size (12.75 inches O.D. x 0.375 inch wall thickness); plain ends.

Product 19.--Casing, grade P-110, 9-5/8 inches O.D., 53.50 pounds/ft., long threaded and coupled, range 3, seamless.

Product 20A.--Circular welded non-alloy steel pipe meeting ASTM A-53 or equivalent, schedule 40, black, plain-end, 2 inches inside diameter.

Product 20B.–ASTM A-513 (mechanical) or A-500 grade A or B (ornamental) tubing, carbon-welded, pickled and oiled, 1 inch square, 0.065 inch nominal wall thickness (+ or - 10 percent), 20 foot to 24 foot mill lengths.

Product 21.--Tubing, grade J-55, 2-3/8 inches O.D., 4.7 pounds, 0.190 inch wall, external upset ends, threaded and coupled, range 2, welded, other than full body normalized.

Product 22.--Carbon steel butt-weld pipe fitting, 6 inch nominal diameter, 90 degree elbow, long radius, standard weight, meeting ASTM A-234, grade WPB or equivalent specification.

Pricing data are presented in tables TUBULAR-55 to TUBULAR-67 and figures TUBULAR-2-15.[21] Due to the large number of potential pricing products in each Commission category, it is difficult to find high-volume pricing products in a heterogenous market such as the steel tubular market.

[21] Pricing data coverage tended to be very low (usually less than 5 percent), due to the wide heterogeneity among tubular products in all five categories.

However, low volumes do not mean that the products in question are not representative of the larger category as a whole.

Pricing product 18A is a small diameter seamless pipe, triple stenciled to standard, line, and pressure pipe applications. U.S. prices were mostly stable, showing a slight dip in 1999 before rebounding to earlier levels by June 2001. Canadian imports were low volume, and there were no Mexican imports. Non-NAFTA import prices were generally stable, but consistently lower-priced than U.S. imports, and showed a slight rise in 2001. Volumes of U.S. and non-NAFTA imports showed strength in 1996-97, with volatility and dips in 1998-99, and recovery to near previous levels in 2000-01.

Pricing product 18B is a large diameter seamless pipe, triple stenciled to meet standard, line, and pressure pipe applications. U.S. prices were generally around *** a ton, but there was some marked variance (on low volumes). Non-NAFTA prices showed relatively stable prices and generally increasing volumes until the third quarter of 2000. Neither Canadian nor Mexican data had significant volumes.

Pricing product 19 is OCTG casing, a large diameter tubular product. U.S. prices were stable or rising from 1996 through 1997, before falling steadily in 1998 and 1999. They began to move up to previous highs in 2000 and 2001. Volumes dropped sharply in the fourth quarter of 1999, but reached a high in the third quarter of 2000. Non-NAFTA prices were generally much lower than U.S. prices through 1998, but showed a similar (though lower) rise in 2000 and 2001. Neither Canadian nor Mexican data had significant volumes.

Pricing product 20A is a relatively high volume circular welded tubular product. U.S. prices showed a steady, nearly 20 percent, decline between 1996 and June 2001, interrupted by a brief rise in late 1999 and early 2000. Canadian prices were generally higher than U.S. prices, but showed the same overall downward trend, on lower but relatively steady volumes. Mexican prices were generally lower, on very small volumes. Non-NAFTA prices showed a pattern similar to the U.S. and Canadian prices, generally falling *** between 1996 and June 2001. While U.S. volumes were relatively stable through 2000, they showed a dip in 2001. Non-NAFTA imports saw a large rise in 1998, with steady continuing gains through 2000.

Pricing product 20B is a square tubular product. The United States had large volumes, with prices steadily declining by around 10 percent during 1996-June 2001. Importers did not report large volumes of this product.

Pricing product 21 is a seamless OCTG tubing. U.S. prices rose on rising volumes after a small dip in 1998 and 1999. Canadian and Mexican imports entered the United States in 1998 and again in 2000 and 2001, generally in small volumes but underselling U.S. product by margins of 10.5 to 34.9 percent. Non-NAFTA prices showed a decline until 2000, when they rose mildly, but not as much as U.S. prices.

Pricing product 22 is a high volume butt-weld pipe fitting. U.S. prices were generally stable during 1996-June 2001, but non-NAFTA prices showed a pattern of steady decline with a rise in volumes. Mexican prices also showed a decline, but on lower volumes.

Table TUBULAR-55
Seamless: Weighted-average price and quantity data for U.S.-produced and imported product 18A[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

	United States		Canada			Mexico			Non-NAFTA imports		
Period	Price (*per ton*)	Quantity (*tons*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)
1996:											
Jan.-Mar.	$***	***	(2)	(2)	(2)	(2)	(2)	(2)	$***	***	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	599.03	1,005	***
July-Sept.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	608.58	972	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	621.33	930	***
1997:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	606.13	896	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	569.24	2,219	***
July-Sept.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	582.58	1,955	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	608.16	2,806	***
1998:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	569.53	2,429	***
Apr.-June	***	***	$***	***	***	(2)	(2)	(2)	586.92	3,068	***
July-Sept.	***	***	***	***	***	(2)	(2)	(2)	571.27	2,227	***
Oct.-Dec.	***	***	***	***	***	(2)	(2)	(2)	573.72	1,672	***
1999:											
Jan.-Mar.	***	***	***	***	***	(2)	(2)	(2)	522.81	505	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	524.42	899	***
July-Sept.	***	***	***	***	***	(2)	(2)	(2)	508.42	347	***
Oct.-Dec.	***	***	***	***	***	(2)	(2)	(2)	503.40	758	***
2000:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	549.09	1,513	***
Apr.-June	***	***	***	***	***	(2)	(2)	(2)	587.98	1,894	***
July-Sept.	***	***	***	***	***	(2)	(2)	(2)	573.07	859	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	653.08	1,157	***
2001:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	579.39	1,342	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	633.47	1,671	***

[1] Product 18A.--Seamless pipe tripled stenciled (or more) to meet ASTM-106 Grade B, ASTM A-53 Grade B, and API 5L Grade B specifications; 4 inches nominal size (4.5 inches O.D. x 0.337 inch wall thickness); plain ends; schedule 80.

[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-56
Seamless: Weighted-average price and quantity data for U.S.-produced and imported product 18B from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

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Table TUBULAR-57
Seamless OCTG: Weighted-average price and quantity data for U.S.-produced and imported product 19 from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

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Table TUBULAR-58
Welded: Weighted-average price and quantity data for U.S.-produced and imported product 20A[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price (*per ton*)	Quantity (*tons*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)	Price (*per ton*)	Qty (*tons*)	Margin (*percent*)
1996:											
Jan.-Mar.	$***	***	$***	***	***	$***	***	***	$***	***	***
Apr.-June	***	***	***	***	***	(2)	(2)	(2)	***	***	***
July-Sept.	***	***	***	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	(2)	(2)	(2)	***	***	***
1997:											
Jan.-Mar.	***	***	***	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***	***	***	***
1998:											
Jan.-Mar.	***	***	***	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***	441.81	31,949	***
July-Sept.	***	***	***	***	***	***	***	***	432.34	26,821	***
Oct.-Dec.	***	***	***	***	***	***	***	***	426.73	30,600	***
1999:											
Jan.-Mar.	***	***	***	***	***	***	***	***	403.25	24,501	***
Apr.-June	***	***	***	***	***	(2)	(2)	(2)	409.36	28,012	***
July-Sept.	***	***	***	***	***	***	***	***	414.15	28,579	***
Oct.-Dec.	***	***	***	***	***	***	***	***	429.51	28,075	***
2000:											
Jan.-Mar.	***	***	***	***	***	(2)	(2)	(2)	428.93	38,015	***
Apr.-June	***	***	***	***	***	(2)	(2)	(2)	433.44	48,461	***
July-Sept.	***	***	***	***	***	(2)	(2)	(2)	422.26	39,194	***
Oct.-Dec.	***	***	***	***	***	(2)	(2)	(2)	421.87	27,352	***
2001:											
Jan.-Mar.	***	***	***	***	***	(2)	(2)	(2)	401.49	35,313	***
Apr.-June	***	***	***	***	***	(2)	(2)	(2)	389.60	26,021	***

[1] Product 20A.–Circular welded non-alloy steel pipe meeting ASTM A-53 or equivalent, schedule 40, black, plain-end, two inches inside diameter.

[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-59
Welded: Weighted-average price and quantity data for U.S.-produced and imported product 20B from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

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Table TUBULAR-60
Welded OCTG: Weighted-average price and quantity data for U.S.-produced and imported product 21 from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

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Table TUBULAR-61
Fittings: Weighted-average price and quantity data for U.S.-produced and imported product 22[1] from Canada, Mexico, and non-NAFTA countries and margins of under/(overselling), by quarters, January 1996-June 2001

Period	United States		Canada			Mexico			Non-NAFTA imports		
	Price (*per item*)	Qty (*items*)	Price (*per item*)	Qty (*items*)	Margin (*percent*)	Price (*per item*)	Qty (*items*)	Margin (*percent*)	Price (*per item*)	Qty (*items*)	Margin (*percent*)
1996:											
Jan.-Mar.	$***	***	(2)	(2)	(2)	$***	***	***	$14.05	11,820	***
Apr.-June	***	***	(2)	(2)	(2)	***	***	***	14.53	23,767	***
July-Sept.	***	***	(2)	(2)	(2)	***	***	***	14.18	13,044	***
Oct.-Dec.	***	***	(2)	(2)	(2)	***	***	***	13.63	8,981	***
1997:											
Jan.-Mar.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	13.15	14,703	***
Apr.-June	***	***	(2)	(2)	(2)	(2)	(2)	(2)	12.99	13,539	***
July-Sept.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	12.95	12,265	***
Oct.-Dec.	***	***	(2)	(2)	(2)	(2)	(2)	(2)	13.03	14,710	***
1998:											
Jan.-Mar.	***	***	(2)	(2)	(2)	***	***	***	13.91	24,850	***
Apr.-June	***	***	(2)	(2)	(2)	***	***	***	13.52	17,725	***
July-Sept.	15.69	71,584	(2)	(2)	(2)	***	***	***	13.44	19,544	15.4
Oct.-Dec.	15.77	73,483	(2)	(2)	(2)	***	***	***	13.28	20,776	15.8
1999:											
Jan.-Mar.	15.72	64,583	(2)	(2)	(2)	***	***	***	13.32	25,617	15.2
Apr.-June	15.91	70,302	(2)	(2)	(2)	***	***	***	13.23	27,271	16.8
July-Sept.	15.73	74,479	(2)	(2)	(2)	***	***	***	13.18	23,879	16.2
Oct.-Dec.	15.88	68,342	(2)	(2)	(2)	***	***	***	12.37	22,147	22.1
2000:											
Jan.-Mar.	15.83	64,483	(2)	(2)	(2)	***	***	***	12.10	26,471	23.6
Apr.-June	15.68	78,186	(2)	(2)	(2)	***	***	***	12.17	38,414	22.4
July-Sept.	15.83	64,544	(2)	(2)	(2)	***	***	***	12.12	39,596	23.4
Oct.-Dec.	15.84	75,333	(2)	(2)	(2)	***	***	***	12.07	38,157	23.8
2001:											
Jan.-Mar.	15.93	74,808	(2)	(2)	(2)	***	***	***	12.66	55,742	20.5
Apr.-June	16.86	56,768	(2)	(2)	(2)	***	***	***	12.50	56,132	25.8

[1] Product 22.–Carbon steel butt-weld pipe fitting, 6 inch nominal diameter, 90 degree elbow, long radius, standard weight, meeting ASTM A-234, grade WPB or equivalent specification.
[2] Price and quantity were not reported. Margins are not applicable.

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-62
Tubular products: Overall trends in weighted-average prices for carbon and alloy tubular products, by sources and by products, January 1996-June 2001

Product	United States	Imports from Canada	Imports from Mexico	Non-NAFTA imports
		Percent change		
18A-Seamless	3.2	(1)	(1)	***
18B-Seamless	15.8	(1)	(1)	(12.2)
19-Seamless OCTG	13.1	(1)	(1)	2.9
20A-Welded	(20.4)	(14.6)	(1)	***
20B-Welded	(10.1)	(11.5)	(1)	(1)
21-Welded OCTG	7.5	(1)	(1)	(1)
22-Fittings	***	(1)	(21.3)	(11.0)

[1] Comparison not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-63
Seamless: Summary of instances of underselling/overselling for imports from Canada, Mexico, and non-NAFTA countries, January 1996-June 2001

Country	Underselling		Overselling	
	Instances (*number*)	Range (*percent*)	Instances (*number*)	Range (*percent*)
Canada	0	(1)	8	17.8 to 44.5
Mexico	1	1.2	4	0.9 to 10.1
Non-NAFTA countries	30	0.9 to 21.7	11	0.1 to 50.9
All countries	35	0.9 to 21.7	23	0.9 to 50.9

[1] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-64
Seamless OCTG: Summary of instances of underselling/overselling for imports from Canada, Mexico, and non-NAFTA countries, January 1996-June 2001

Country	Underselling		Overselling	
	Instances (*number*)	Range (*percent*)	Instances (*number*)	Range (*percent*)
Canada	0	(1)	0	(1)
Mexico	2	0.2 to 26.9	0	(1)
Non-NAFTA countries	12	1.2 to 34.4	1	4.2
All countries	14	0.2 to 34.4	1	4.2

[1] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-65
Welded: Summary of instances of underselling/overselling for imports from Canada, Mexico, and non-NAFTA countries, January 1996-June 2001

Country	Underselling		Overselling	
	Instances (*number*)	Range (*percent*)	Instances (*number*)	Range (*percent*)
Canada	21	0.7 to 15.1	23	0.2 to 18.6
Mexico	34	0.6 to 35.8	0	([1])
Non-NAFTA countries	32	*** to ***	1	***
All countries	87	0.6 to 35.8	24	0.2 to 18.6

[1] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-66
Welded OCTG: Summary of instances of underselling/overselling for imports from Canada, Mexico, and non-NAFTA countries, January 1996-June 2001

Country	Underselling		Overselling	
	Instances (*number*)	Range (*percent*)	Instances (*number*)	Range (*percent*)
Canada	7	10.5 to 29.6	0	([1])
Mexico	11	14.6 to 37.3	0	([1])
Non-NAFTA countries	18	5.4 to 28.4	0	([1])
All countries	36	5.4 to 34.9	0	([1])

[1] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Table TUBULAR-67
Fittings: Summary of instances of underselling/overselling for imports from Canada, Mexico, and non-NAFTA countries, January 1996-June 2001

Country	Underselling		Overselling	
	Instances (*number*)	Range (*percent*)	Instances (*number*)	Range (*percent*)
Canada	0	([1])	0	([1])
Mexico	18	7.3 to 36.5	0	([1])
Non-NAFTA countries	22	*** to ***	0	([1])
All countries	40	7.3 to 36.5	0	([1])

[1] Not available.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure TUBULAR-2
Seamless: Weighted-average price data for U.S.-produced and imported product 18A from Canada and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-3
Seamless: Percent margin of underselling/(overselling) of imported product 18A from Canada and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-4
Seamless: Weighted-average price data for U.S.-produced and imported product 18B from Mexico and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-5
Seamless: Percent margin of underselling/(overselling) of imported product 18B from Mexico and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-6
Seamless OCTG: Weighted-average price data for U.S.-produced and imported product 19 from Mexico and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-7
Seamless OCTG: Percent margin of underselling/(overselling) of imported product 19 from Mexico and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-8
Welded: Weighted-average price data for U.S.-produced and imported product 20A from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-9
Welded: Percent margin of underselling/(overselling) of imported product 20A from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-10
Welded: Weighted-average price data for U.S.-produced and imported product 20B from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-11
Welded: Percent margin of underselling/(overselling) of imported product 20B from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-12
Welded OCTG: Weighted-average price data for U.S.-produced and imported product 21 from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-13
Welded OCTG: Percent margin of underselling/(overselling) of imported product 21 from Canada, Mexico, and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-14
Fittings: Weighted-average price data for U.S.-produced and imported product 22 from Mexico and non-NAFTA countries, by quarters, January 1996-June 2001

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Figure TUBULAR-15
Fittings: Percent margin of underselling/(overselling) of imported product 22 from Mexico and non-NAFTA countries, by quarters, January 1996-June 2001

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FACTORS AFFECTING THE DOMESTIC INDUSTRY

The Commission requested information from U.S. producers regarding factors that are having an adverse impact on the operation of the domestic industry. The reported factors and number of U.S. producers indicating each are presented in table TUBULAR-68.

Table TUBULAR-68
U.S. producers' assessment of factors other than imports affecting the domestic industry

Seamless	Seamless OCTG	Welded	Welded OCTG	Fittings
Imports				
8	4	26	6	16
General economic turndown in the United States				
1	0	4	1	1
Strong U.S. dollar relative to other foreign currencies				
2	1	3	2	0
Asian financial crisis				
3	2	8	3	0
Russian economic crisis				
1	1	1	1	0
Large expense of bringing unfair trade cases				
1	0	1	1	0
Inefficiencies of some U.S. producers				
0	0	1	0	0
Global steel overcapacity				
2	2	2	1	0
Increased Federal and State regulations and/or taxes				
0	0	1	0	0
Increased energy costs				
1	1	1	0	0
Increased labor costs				
1	1	0	0	0
Unavailability of product in the U.S. market				
0	0	1	0	0
Alternative materials other than steel available				
0	0	1	0	0
Number of reported U.S. producers				
10	6	32	8	19

Source: Compiled from data submitted in response to Commission questionnaires.

COMPETITIVE EFFORTS AND PROPOSED ADJUSTMENTS

COMPETITIVE EFFORTS

In the Commission's questionnaire, U.S. producers were asked to report any efforts made by their firm to compete more effectively in the U.S. market for steel products. The reported efforts and number of U.S. producers reporting each are presented in table TUBULAR-69.

Table TUBULAR-69
U.S. producers' reported competitive efforts

Seamless	Seamless OCTG	Welded	Welded OCTG	Fittings
No reported efforts				
2	1	5	2	3
Additional capital investment				
9	5	23	4	17
Cost reductions				
2	1	4	1	1
Reduction in work force				
1	0	6	1	3
Increase in work force				
0	0	1	0	0
R&D				
1	1	3	0	5
Utilization of e-commerce to reduce transaction costs or increase sales				
1	0	1	0	2
Attained ISO certification				
1	0	1	0	3
Developed new or innovative product lines				
0	0	3	1	2
Increased employee training				
0	0	1	0	3
Increased productivity/speed in manufacturing process				
0	0	2	0	4
Chapter 11 bankruptcy protection				
1	0	1	0	0
Production shift from commodity to niche products				
0	0	2	0	1
Shutdown of manufacturing facilities				
0	0	2	1	1
Merger or industry consolidation				
1	1	1	2	2
Number of reported U.S. producers				
10	6	32	8	19

Source: Compiled from data submitted in response to Commission questionnaires.

PROPOSED ADJUSTMENTS

The Commission requested U.S. producers to indicate whether they would make any adjustments in their steel operations if they were to receive import relief that would permit them to compete more effectively with imports of steel products after such relief expires. The reported adjustments and number of U.S. producers indicating each are presented in table TUBULAR-70.

Table TUBULAR-70
U.S. producers' proposed adjustments

Seamless	Seamless OCTG	Welded	Welded OCTG	Fittings
No planned adjustments				
3	2	7	2	4
Additional capital investment				
5	3	20	3	14
Further cost reductions				
1	1	4	2	3
R&D				
0	0	2	1	2
Improved customer service				
1	1	1	1	1
Utilization of e-commerce to reduce transaction costs or increase sales				
1	0	1	1	0
Develop new or innovative product lines				
1	1	1	0	0
Increase employee training				
0	0	4	0	2
Increase productivity/speed in manufacturing process				
0	0	1	0	2
Increase employment				
1	0	3	1	0
Relocation or closing of facility				
1	0	1	1	2
Expand geographic reach of current customer base				
0	0	1	1	1
Production shift from commodity to niche products				
0	0	1	0	0
Number of reported U.S. producers				
10	6	32	8	19

Source: Compiled from data submitted in response to Commission questionnaires.