IRON AND STEEL SCRAP

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Iron and steel scrap is a vital raw material for the production of new steel and cast-iron products. The steelmaking and foundry industries in the United States are highly dependent upon the ready availability of scrap from manufacturing operations and from the recovery of products that are no longer used or needed. The steel industry has been recycling steel scrap for more than 150 years. In 2000, domestic electric-arc-furnace (EAF) steel made primarily from recycled ferrous scrap in about 41 minimills was 47% of the total steel produced. Consistent with international usage and Federal Government policy, the U.S. Geological Survey (USGS) reports all data on iron and steel in metric units, unless otherwise noted.

Steel scrap recycling conserves raw materials, energy, and landfill space. The domestic steel industry recycles millions of metric tons per year of steel cans, automobiles, appliances, construction materials, and other steel products. In 2000, the industry's overall recycling rate was 64% (Steel Recycling Institute, [undated], A few facts about steel—North America's #1 recycled material, accessed May 11, 2001, at URL http://www.recycle-steel.org/fact/main.html). The remelting of scrap requires much less energy than the production of iron and steel products from iron ore. Each year, steel recycling saves the energy equivalent of the electrical power needed for 1 year by approximately one-fifth of the houses in the United States (about 18 million). Consumption of iron and steel scrap by remelting reduces the burden on landfill disposal facilities and prevents the accumulation of abandoned steel products in the environment. Every metric ton of steel recycled saves about 1.3 metric tons (t) of iron ore, 700 kilograms (kg) of coal, and 60 kg of limestone that would be needed to make a ton of steel from new raw materials.

In the United States, the primary source of obsolete steel is the automobile (Steel Recycling Institute, [undated], Recycling scrapped automobiles, accessed June 9, 1999, at URL http://www.recycle-steel.org/cars/autorec.html). Of the ferrous metals used to make a typical 2000 U.S. family vehicle, 45% was recycled metal. About 16,000 car dismantlers and 3,000 scrap processors produced about 12.7 million metric tons (Mt) of iron and steel scrap for recycling in 2000—enough steel to produce over 14 million new cars. The recycling rate of automobile scrap steel exceeded 95% in 2000 compared with 91% in 1999.

The recycling rate of obsolete appliance scrap had increased from 20% in 1988 to 81% in 1997, decreased to 72% in 1998, and rebounded to 84% in 2000. During 2000, more than 2.0 Mt of steel were recovered from recycled appliances (Steel Recycling Institute, [undated], A few facts about steel—North America's #1 recycled material, accessed May 6, 2000, at URL http://www.recycle-steel.org/fact/main.html). The typical appliance consists of about 75% steel, and from 25% to 100% of the steel used in appliances is recycled. The recycling rate of steel cans increased to 61% in 1997 from 15% in 1988, decreased to 56% in 1998, and rebounded to over 58% in 2000. The estimated rate of recycling of structural beams and plates in 2000 was 95% and that of reinforcement bar and other materials was 48%. By 2002, an estimated 25% of all new homes built in the United States will be framed in recycled steel.

Minimills in which EAFs are used consumed greater quantities of direct reduced iron (DRI) to improve steel quality, and integrated steelmakers continued to use small quantities of DRI in blast furnaces as a process coolant. Mills often used a feed mix that has equal proportions of DRI, pig iron, and scrap. Although production in the U.S. steel industry increased during 2000, DRI production decreased by 6.6%.

The U.S. steel industry was adversely affected by the 1997 Asian financial crisis as Asian demand for steel and ferrous scrap declined, Asian currency exchange rates declined, and inexpensive steel became available for export to U.S. markets from excess Asian steel-producing capacity. Domestic steel product manufacturers welcomed inexpensive imports, but domestic steel producers were forced to reduce production and scrap consumption, which led to an oversupply of scrap and a plunge of scrap prices to the lowest levels in decades. By early 1999, the steel-producing and scrap industries were on the rebound owing primarily to resurging Asian economies and increasing steel demand in Asia and the United States.

As 2000 began, steel producers and scrap suppliers were increasingly optimistic that they were on track for a slow but certain recovery to precrisis economic levels. However, to the detriment of these sectors, the U.S. economic expansion—the longest in U.S. history—was showing signs of weakening. Concurrently, prices of electricity and natural gas were increasing significantly, and steel imports, which declined in 1999 below the 1998 level, began to increase again in 2000. Prices for steel products and ferrous scrap again plunged to record levels. Although for relief the U.S. steel industry filed trade cases against allegedly dumped hot-rolled carbon steel from 11 countries, it was becoming clear that a more fundamental problem was that the world and the United States had excess steelmaking capacity (Iron and Steelmaker, 2001; Matthews, 2001). Steelmakers had the capacity to produce 15% more steel than the world market demand in 2000, but were adding capacity at the rate of 2% each year.

Environment

In 1997, the U.S. Department of Energy (DOE) contracted to decommission and decontaminate three uranium enrichment plants at DOE's Oak Ridge, TN, nuclear reservation, which contained an estimated 100,000 t of radioactive metals (Paper, Allied-Industrial, Chemical and Energy Workers Union, [undated], Court finds that energy department plan to recycle radioactive metals from nuclear weapons factories poses great potential for environmental harm, accessed July 7, 1999, at URL http://biz.yahoo.com/prnews/990630/dc_court_e_2.html). DOE arranged to sell 6,000 t of contaminated nickel from a former nuclear weapons plant (American Metal Market, 2000a).

The Metals Industry Recycling Coalition, which consists of steel, nickel, zinc, copper and brass interests, lobbied to prevent radioactive-contaminated scrap from reaching the commerce stream. Their concern was that consumers would reject recycled goods made from radioactive scrap even if the level of radiation was deemed to be safe by the Government. At yearend 2000, the DOE issued a memorandum recommending the preparation of a full environmental impact statement on the proposed rulemaking governing the release of radioactive metal. The effect was to delay the release of radioactive metal into the commerce stream.

In addition to the radioactive materials, other potentially hazardous materials used in vehicles and durable goods are entering the recycling system (Wiener, 2001). Mercury switches have been suspected as contributors to high mercury readings in recent electric furnace stack tests. Steel air-bag inflators are sealed units that may deploy and injure employees sorting scrap and working in steel mill melt shops. Also, the propellant in the inflators, sodium azide, can be potentially hazardous to the environment. Substitution of mercury switches with pressure switches by vehicle manufacturers and removal of mercury switches and air bag inflators by dismantlers prior to shredding would ensure that injury to employees and the environment do not occur.

In July 1997, the U.S. Environmental Protection Agency (EPA) revised the National Ambient Air Quality Standards for particulate matter (PM), which met resistance by the steel industry. The EPA reduced the standard for airborne PM from 10 microns to 2.5 microns (U.S. Environmental Protection Agency, 1998). The American Iron and Steel Institute and several other business groups initiated litigation against the EPA, and a three-judge panel of the U.S. Circuit Court of Appeals for the District of Columbia ruled that the agency overstepped its authority by interpreting the 1990 Clean Air Act so loosely that it unlawfully usurped Congress' legislative power. The full appeals court voted in October 1999 against reviewing the panel's decision (New Steel, 1999). Later, in May 2000, the Supreme Court entered the dispute by announcing that they will decide whether antipollution regulations must take the costs of compliance, not just health effects, into account. If the Court rules in favor of such cost-benefit analyses, allegedly unneeded and unfeasible air-quality standards might not be required of the steel industry, among others (Washington Times, 2000a).

Consumption

Domestic data for ferrous scrap were derived from voluntary monthly or annual surveys of U.S. scrap consuming operations by the USGS. About 45% of the known manufacturers of pig iron and raw steel responded to the surveys. Their responses represented about 59% of estimated total scrap consumption by this class of consumers. The remaining 41% of scrap consumption was estimated on the basis of prior reports. For manufacturers of steel castings, iron foundries, and miscellaneous users, about 31% of the surveyed establishments, which represented about 46% of estimated scrap consumption by these consumers, responded to the annual survey. Total consumption for these two classes of consumers was estimated by using statistical methods and prior reports. Actual survey data accounted for about 44% of total estimated scrap consumption by all classes of scrap consumers.

In 2000, brokers, dealers, and other outside sources supplied domestic consumers with 54 Mt of all types of ferrous scrap at an estimated delivered value of more than $5.2 billion and exported 5.8 Mt (excluding used rails for rerolling and other uses and ships, boats, and other vessels for scrapping) valued at $1.0 billion (tables 1, 8, 11). In 1999, domestic consumers received 51 Mt of scrap at an estimated delivered value of about $4.8 billion; exports totaled 5.5 Mt valued at $758 million. This represented a tonnage increase during 2000 of nearly 6% for received quantities and over 4% for exported quantities. The total value of received and exported scrap grades increased 13% from that of 1999.

Raw steel production was 101.8 Mt in 2000 compared with 97.4 Mt in 1999 (American Iron and Steel Institute, 2000, p. 75). The shares of raw steel produced by electric and basic oxygen furnaces were 47% and 53%, respectively; EAF production increased slightly during 2000. In 2000, continuous cast steel production represented 96% of total raw steel production, as it had in 1999. Raw steel production capability was 118 Mt compared with 116 Mt in 1999.

Steel mills accounted for 84% of all scrap received from brokers, dealers, and other outside sources; iron foundries and miscellaneous users received 14%; and steel foundries received 2% (table 2). Apparent total domestic consumption of ferrous scrap was 54 Mt of net receipts (total receipts minus shipments) and 20 Mt of home scrap (table 1). Stocks of ferrous scrap at consumers' plants decreased by nearly 4% to 5.3 Mt (table 1). Total domestic consumption was about 74 Mt, a 4% increase since 1999 (table 1). The total market for U.S.-produced scrap (net receipts plus exports minus imports) was 56.5 Mt compared with 53.3 Mt in 1999. Feedstock used in electric furnaces by all iron and steel product manufacturers comprised scrap, 91%; pig iron, 5.3%; and DRI, 3.4% (table 4). Consumption of DRI was 11% greater than that of 1999.

Net shipments of all grades of steel mill products were 98.9 Mt, which was an increase of 2.7% from the 96.3 Mt shipped in 1999 (American Iron and Steel Institute, 2000, p. 27). Imports of steel mill products increased to 34.4 Mt from 32.4 Mt in 1999. Exports of steel mill products increased to 5.9 Mt from 4.9 Mt in 1999 (American Iron and Steel Institute, 2000, p. 45). The U.S. apparent supply of steel mill products increased to 120 Mt from 116 Mt in 1999. As a share of the U.S. market, imports of steel mill products increased to 29% from 28% in 1999. Pig iron production increased to 47.9 Mt from 46.3 Mt in 1999 (American Iron and Steel Institute, 2000, p. 80). As reported by the U.S. Census Bureau, iron castings shipments totaled an estimated 9.9 Mt for 1999 and 9.9 Mt (revised) for 1998. Steel castings shipments (including investment castings) totaled 1.2 Mt in 1999, the same as in 1998.

Transportation

In June 1999, the acquisition of Conrail, Inc by CSX Transportation, Inc. (42%) and Norfolk Southern Corp. (58%) reduced the number of large rail carriers from 3 to 2 in 23 States east of the Mississippi River, the District of Columbia, Quebec, and Ontario. The railroad system is the main form of transportation of ferrous scrap in the United States. A significant part of the industry experienced considerable deterioration of service, such as train backups, routing problems, lost cars and billing, erroneous information given to shippers, car unavailability, and mistakenly routed shipments.

These problems were based, for the most part, on the railroads' difficulty in integrating the computer systems of the merged railroads. All of this resulted in canceled contracts, smaller orders, and increased costs (American Metal Market, 1999, 2000b). One year later, the general opinion was that the railroads are performing much better (Robertson, 2000). The railroads invested in new track capacity in the Midwest, new terminal capacity in Buffalo, NY, and improvements at railyards throughout the Northeast and the Midwest. They also installed improved computer systems while working closely with shippers to solve delivery problems.

The Surface Transportation Board of the Federal Government ordered in March a moratorium on new consolidations in the railroad industry while it develops new rules for mergers. It was concerned about problems for shippers resulting from recent railroad mergers (Washington Times, 2000b). The steel industry, among others, expressed its opposition to more railroad consolidation because it no longer has an affordable option to choose truck transportation over rail transportation, given recent fuel price increases (American Metal Market, 2000c).

Prices

The average composite delivered price per metric ton of No. 1 heavy-melting steel scrap, calculated from prices per long ton published monthly by American Metal Market, was $95.88. The price ranged from a high of $120.06 in January to a low of $77.36 in December (table 8). The average composite delivered price per ton of No. 1 heavy-melting steel scrap, calculated from prices per long ton published weekly in Iron Age Scrap Price Bulletin, was $92.61; the price had ranged from a high of $112.07 in January to a low of $73.27 in November.

On the basis of weekly quotations by Iron Age Scrap Price Bulletin for 18-8 (18% chromium, 8% nickel) stainless steel scrap (bundles and solids) delivered to consumers in the Pittsburgh, PA, area, the average price increased by 32% to $823 per metric ton from $624 in 1999.

The unit value of total ferrous scrap exports (excluding used rails for rerolling and other uses and ships, boats, and other vessels for scrapping) increased by about 30% to about $174 per metric ton compared with that of 1999 (table 11). The unit value of total imports, about $85 per ton, was about 18% less than that of 1999 (table 14).

Foreign Trade

Foreign trade valuation continued to be reported on a free-alongside-ship (f.a.s.) basis for exports and on a Customs value basis for imports. In 2000, the U.S. trade surplus for all classes of ferrous scrap (including used rails for rerolling and other uses and ships, boats, and other vessels for scrapping) was 2.2 Mt valued at $597 million (U.S. Census Bureau, unpub. data, 2000). This represented an increase of 42% in quantity and 82% in value compared with the 1999 surpluses of 1.5 Mt and $328 million.

Total U.S. exports of carbon steel and cast-iron scrap (including reexports and excluding used rails for rerolling and other uses; ships, boats, and other vessels for scrapping; stainless steel; and alloy steel) went to 55 countries (1 less than during 1999) and totaled 4.5 Mt (a 4% decrease) valued at $526 million (an 11% increase) for an average of $116 per ton (U.S. Census Bureau, unpub. data, 2000). The largest tonnages went to the Republic of Korea, 1.24 million; Canada, 1.04 million; Mexico, 792,000; China, 773,000; and Taiwan, 205,000. These countries received 90% of the total quantity valued at $451 million, which was 86% of the total value.

Total U.S. exports of stainless steel scrap, including reexports, went to 43 countries (12 more than in 1999) and consisted of 470,000 t (an 80% increase) valued at $311 million (a 105% increase) for an average of $661 per metric ton (a 14% increase) (U.S. Census Bureau, unpub. data, 2000). The largest tonnages went to the Republic of Korea, 181,000; Taiwan, 80,000; Canada, 47,000; Japan, 46,000; and China, 24,000. These countries received 80% of the total quantity valued at $248 million, which also was 80% of the total value.

U.S. exports of alloy steel scrap (including reexports and excluding stainless steel) were shipped to 46 countries (1 more than in 1999) and consisted of 815,000 t (a 46% increase) valued at $169 million (a 47% increase) for an average of $207 per metric ton (a 1% increase) (U.S. Census Bureau, unpub. data, 2000). The largest tonnages went to China, 295,000; Mexico, 214,000; and Canada, 202,000. These countries received 87% of the total quantity valued at $138 million, which was 82% of the total value.

World Review

Iron and steel scrap is an important raw material for the steel and foundry industries. Because scrap comes from such sources as old buildings, industrial machinery, discarded cars and consumer durables, and manufacturing operations, the relatively mature industrialized economies are generally the main exporters of scrap to lesser developed steelmaking countries.

Germany was the leading exporting country of iron and steel scrap in 1999 (International Iron and Steel Institute, 2000, p. 102), followed by Russia, the United States, Ukraine, Japan, France, the United Kingdom, and Canada. The five most significant importing nations were, in decreasing order of importance, Turkey, the Republic of Korea, Spain, Italy, and the United States (International Iron and Steel Institute, 2000, p. 104).

Outlook

As 2000 opened, the longest economic expansion in U.S. history began its 105th month, and the economies of Asia, Europe, and Latin America were improving. The expectation was for continued strong domestic economic growth and strong demand for steel products and ferrous scrap. In October 2000, the International Iron and Steel Institute forecast an increase in world steel consumption of 5.8% during 2000 and 2.3% during 2001 for a total of 769 Mt in 2001 (International Iron and Steel Institute, [undated], Short and medium term outlook for steel demand, accessed June 5, 2000, at URL http://www.worldsteel.org/ trends_indicators/demand.html). About 15% of the 1999-2000 increase is accounted for by estimates for China. It is predicted that China will soon be consuming more steel than either the European Union (EU) or the countries of the North American Free Trade Agreement. Even without the Chinese contribution to the total, world steel demand is forecast to grow by 35 Mt in 2000 and 7 Mt in 2001, and 43 Mt through 2005. Consumption will increase during 2001 in China, 7.3%; the Commonwealth of Independent States,

1.2%; the EU, 0.4%; and the Republic of Korea, 4.7%; while the United States and Japan may experience slight declines of less than 1% each. However, by the fourth quarter 2000, the U.S. economy began to soften, as did demand for steel and scrap. Prices for these commodities declined as inventories grew, putting the steel sector back into a depressed state similar to that experienced during the Asian financial crisis 3 years earlier. Imports of low-price steel and scrap again brought calls for relief from unfair dumping. Although the industry was hoping for relief on the imports issue, by yearend 2000 the realization was growing that the problem of excess U.S. uneconomic steelmaking capacity would need a solution.

The United States is the top consumer of ferrous scrap while holding the world's largest stockpile of ferrous scrap resources. The United States has had sufficient scrap resources to satisfy domestic steelmaking needs while being able to export significant scrap quantities to newly emerging economies with developing steelmaking capacities. Steelmaking by the EAF in the minimill will continue to grow in the United States because of its capital and operating cost advantages relative to those of the blast furnace and basic oxygen furance, and it is environmentally cleaner (Darrell Hassler, November 11, 1998, Scrap trade pins hopes on minimills, accessed June 11, 1999, at URL http://www.amm.com/ref/hot/fersc98a.htm#3). In fact, the ratio of EAF steelmaking to BOF steel production has been forecast to increase to 60% from the current 47% (TexReport, 2001).

Continuing expansion of EAF mills in the eastern United States has been absorbing available local scrap resources, thereby causing east coast exports to Europe and Turkey to decline. Demand for scrap in the western United States has not been increasing at a similar pace to that in the eastern United States, and west coast scrap export is expected to increase to satisfy the emerging demand of China, which may displace the Republic of Korea as the largest overseas scrap market.

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TABLE 1
SALIENT U.S. IRON AND STEEL SCRAP, PIG IRON, AND DIRECT-REDUCED IRON STATISTICS 1/

(Thousand metric tons, unless otherwise specified)

		1996	1997	1998	1999	2000
Manufacturers of pig iron and raw steel and castings: 2/						
Ferrous scrap consumption		56,000	58,000	58,000	56,000	59,000
Pig iron consumption		50,000	51,000	49,000	48,000	49,000
Direct-reduced iron consumption		1,300	1,300	1,300	2,200	2,300
Net receipts of ferrous scrap 3/		41,000	43,000	44,000	42,000	45,000
Home scrap production 4/		15,000	14,000	14,000	13,000	14,000
Ending stocks of ferrous scrap, December 31		4,800	4,900	4,700	4,800	4,700
Manufacturers of steel castings: 5/						
Ferrous scrap consumption		2,000	1,800	2,000	1,900	2,200
Pig iron consumption		11	13	14	11	11
Net receipts of ferrous scrap 3/		1,300	1,200	1,300	1,200	1,200
Home scrap production 4/		640	660	710	690	980
Ending stocks of ferrous scrap, December 31		84	77	83	230	150
Iron foundries and miscellaneous users: 5/						
Ferrous scrap consumption		13,000	13,000	13,000	13,000	13,000
Pig iron consumption		1,100	1,200	1,200	1,100	1,200
Direct-reduced iron consumption		13	13	12	13	16
Net receipts of ferrous scrap 3/		8,300	8,200	7,900	7,700	7,800
Home scrap production 4/		4,900	5,200	5,100	5,000	4,800
Ending stocks of ferrous scrap, December 31		360	470	440	430	430
Totals, all manufacturing types:						
Ferrous scrap consumption		71,000	73,000	73,000	71,000	74,000
Pig iron consumption		52,000	52,000	50,000	49,000	50,000
Direct-reduced iron consumption		1,300	1,300	1,300	2,200	2,300
Net receipts of ferrous scrap 3/		50,000	52,000	53,000	51,000	54,000
Home scrap production 4/		20,000	20,000	20,000	19,000	20,000
Ending stocks, December 31:						
Ferrous scrap at consumer plants		5,200	5,500	5,200	5,500	5,300
Pig iron at consumer and supplier plants		600	510	560	720	800
Direct-reduced iron at consumer plants		270	160	280	310	290
Exports: 6/						
Ferrous scrap (includes tinplate and terneplate) 7/		8,440	8,930	5,570	5,520	5,760
Value	thousands	$1,340,000	$1,350,000	$805,000	$738,000	$1,000,000
Pig iron (all grades)		58	86	87	83	72
Value	thousands	$8,320	$12,300	$11,700	$11,100	$9,620
Direct-reduced iron (steelmaking grade)		3	8	5	3	2
Value	thousands	$304	$852	$487	$302	$241
Imports for consumption: 6/						
Ferrous scrap (includes tinplate and terneplate) 7/		2,600	2,870	3,060	3,670	3,350
Value	thousands	$342,000	$384,000	$402,000	$383,000	$385,000
Pig iron (all grades)		2,660	3,150	5,150	4,990	4,970
Value	thousands	$411,000	$465,000	$722,000	$527,000	$601,000
Direct-reduced iron (steelmaking grade)		1,050	987	939	950	1,090
Value	thousands	$136,000	$127,000	$118,000	$86,500	$119,000

1/ Data are rounded to no more than two significant digits, except trade data, which are rounded to no more than three significant digits; may not add to totals shown.
2/ Includes manufacturers of raw steel that also produce steel castings.
3/ Net receipts of scrap is defined as receipts from brokers, dealers, and other outside sources, plus receipts from other own-company plants minus shipments.
4/ Home scrap production includes recirculating scrap that results from current operations and obsolete home scrap.
5/ Some consumers in the "Manufacturers of steel castings" category also produce iron castings; some consumers in the "Iron foundries and miscellaneous users" category also produce steel castings.
6/ Data from U.S. Census Bureau. Export valuation is free-alongside-ship (f.a.s.) value, and import valuation is Customs value.
7/ Excludes used rails for rerolling and other uses and ships, boats and other vessels for scrapping.

TABLE 2
U.S. CONSUMER RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS
OF IRON AND STEEL SCRAP IN 2000, BY GRADE 1/

(Thousand metric tons)

Grade	Receipts of scrap		Production of home scrap		Consumption of purchased and home scrap	Shipments of scrap	Ending stocks, December 31
	From brokers, dealers and other outside sources	From other own-company plants	Recirculating scrap from current operations	Obsolete scrap 2/			
Manufacturers of pig iron and raw steel and castings:							
Carbon steel:							
Low-phosphorus plate and punchings	330	--	(3/)	--	340	13	25
Cut structural and plate	3,800	54	700	51	4,400	66	270
No. 1 heavy melting steel	5,400	330	3,900	24	9,800	79	670
No. 2 heavy melting steel	5,700	76	530	1	6,200	86	490
No. 1 and electric furnace bundles	5,700	310	1,700	(3/)	7,200	490	320
No. 2 and all other bundles	1,000	15	2	(3/)	1,000	--	58
Electric furnace, 1 foot and under (not bundles)	--	9	180	--	86	110	2
Railroad rails	200	2	42	--	230	10	10
Turnings and borings	2,100	72	70	(3/)	2,200	(3/)	130
Slag scrap	790	130	1,300	17	2,100	210	180
Shredded or fragmentized	9,200	970	370	--	11,000	30	570
No. 1 busheling	5,400	130	120	--	5,400	140	350
Steel cans (post consumer)	190	7	40	--	250	--	74
All other carbon steel scrap	2,300	67	2,500	4	4,400	380	390
Stainless steel scrap	820	1	400	--	1,200	1	46
Alloy steel (except stainless)	280	8	560	--	780	25	75
Ingot mold and stool scrap	10	--	120	100	100	130	21
Machinery and cupola cast iron	75	--	5	--	73	1	10
Cast-iron borings	260	--	(3/)	--	250	13	12
Motor blocks	11	--	--	--	11	--	1
Other iron scrap	300	55	460	--	770	150	370
Other mixed scrap	1,000	22	530	(3/)	1,400	89	650
Total	45,000	2,300	14,000	200	59,000	2,000	4,700
Manufacturers of steel castings:							
Carbon steel:							
Low-phosphorus plate and punchings	370	3	83	(3/)	470	(3/)	31
Cut structural and plate	180	--	10	10	190	10	23
No. 1 heavy melting steel	70	--	37	--	110	--	8
No. 2 heavy melting steel	15	--	--	--	12	--	2
No. 1 and electric furnace bundles	11	--	--	--	13	--	(3/)
No. 2 and all other bundles	--	--	--	--	--	--	--
Electric furnace, 1 foot and under (not bundles)	10	5	4	--	18	--	3
Railroad rails	28	--	58	--	86	(3/)	2
Turnings and borings	46	1	6	18	53	18	1
Slag scrap	1	--	3	--	4	--	(3/)
Shredded or fragmentized	120	--	--	--	120	--	2
No. 1 busheling	90	--	6	--	99	--	6
Steel cans (post consumer)	--	--	--	--	--	--	--
All other carbon steel scrap	83	2	230	9	310	15	11
Stainless steel scrap	140	(3/)	300	28	450	29	36
Alloy steel (except stainless)	72	1	50	(3/)	120	(3/)	8
Ingot mold and stool scrap	10	--	43	--	33	19	6
Machinery and cupola cast iron	--	--	--	--	--	--	(3/)
Cast-iron borings	--	--	1	--	1	--	(3/)
Motor blocks	1	--	--	--	1	--	(3/)
Other iron scrap	9	--	60	--	69	1	2
Other mixed scrap	52	--	1	14	65	1	5
Total	1,300	11	900	79	2,200	92	150

See footnotes at end of table.

TABLE 2--Continued
U.S. CONSUMER RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS
OF IRON AND STEEL SCRAP IN 2000, BY GRADE 1/

(Thousand metric tons)

Grade	Receipts of scrap		Production of home scrap		Consumption of purchased and home scrap	Shipments of scrap	Ending stocks, December 31
	From brokers, dealers and other outside sources	From other own-company plants	Recirculating scrap from current operations	Obsolete scrap 2/			
Iron foundries and miscellaneous users:							
Carbon steel:							
Low-phosphorus plate and punchings	950	5	160	(3/)	1,100	(3/)	18
Cut structural and plate	1,300	32	110	(3/)	1,500	(3/)	120
No. 1 heavy melting steel	220	3	16	(3/)	230	2	9
No. 2 heavy melting steel	150	1	--	--	160	--	3
No. 1 and electric furnace bundles	93	140	32	--	260	--	12
No. 2 and all other bundles	88	--	1	--	88	1	2
Electric furnace, 1 foot and under (not bundles)	140	--	1	--	140	1	3
Railroad rails	140	--	9	--	150	--	6
Turnings and borings	87	65	3	--	160	4	3
Slag scrap	42	--	3	--	40	3	4
Shredded or fragmentized	1,500	110	(3/)	--	1,700	--	55
No. 1 busheling	670	62	56	--	780	39	17
Steel cans (post consumer)	14	--	--	--	14	--	(3/)
All other carbon steel scrap	120	(3/)	42	--	170	(3/)	12
Stainless steel scrap	6	--	4	--	9	(3/)	6
Alloy steel (except stainless)	13	--	1	--	14	--	2
Ingot mold and stool scrap	61	--	2	(3/)	63	--	10
Machinery and cupola cast iron	740	--	310	(3/)	1,100	1	56
Cast-iron borings	190	89	47	1	320	8	5
Motor blocks	240	10	740	--	1,000	2	9
Other iron scrap	240	3	3,100	--	3,300	9	67
Other mixed scrap	210	23	150	(3/)	380	(3/)	14
Total	7,300	540	4,800	2	13,000	71	430
Totals for all manufacturing types:							
Carbon steel:							
Low-phosphorus plate and punchings	1,600	8	240	(3/)	1,900	14	75
Cut structural and plate	5,400	86	810	61	6,100	76	420
No. 1 heavy melting steel	5,700	340	4,000	24	10,000	81	680
No. 2 heavy melting steel	5,800	77	530	1	6,400	86	490
No. 1 and electric furnace bundles	5,800	440	1,700	(3/)	7,500	490	330
No. 2 and all other bundles	1,100	15	3	(3/)	1,100	1	60
Electric furnace, 1 foot and under (not bundles)	150	14	180	--	250	110	7
Railroad rails	370	2	110	--	470	10	19
Turnings and borings	2,200	140	79	18	2,400	22	130
Slag scrap	830	130	1,300	17	2,200	210	180
Shredded or fragmentized	11,000	1,100	370	--	12,000	30	630
No. 1 busheling	6,200	200	190	--	6,300	180	370
Steel cans (post consumer)	200	7	40	--	260	--	74
All other carbon steel scrap	2,500	69	2,800	13	4,900	390	410
Stainless steel scrap	960	1	700	28	1,700	30	88
Alloy steel (except stainless)	360	8	610	(3/)	920	25	85
Ingot mold and stool scrap	81	--	170	100	200	150	37
Machinery and cupola cast iron	810	--	320	(3/)	1,100	3	66
Cast-iron borings	450	89	47	1	570	22	17
Motor blocks	260	10	740	--	1,000	2	10
Other iron scrap	550	58	3,600	--	4,200	160	440
Other mixed scrap	1,300	45	680	14	1,900	90	670
Total	53,000	2,800	19,000	280	74,000	2,200	5,300

-- Zero.

1/ Data are rounded to no more than two significant digits; may not add to totals shown.

2/ Obsolete home scrap includes ingot molds, stools, and scrap from old equipment, buildings, etc.

3/ Less than 1/2 unit.

TABLE 3
U.S. CONSUMER RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS
OF PIG IRON AND DIRECT-REDUCED IRON (DRI) IN 2000 1/

(Thousand metric tons)

	Receipts	Production	Consumption	Shipments	Stocks, December 31
Manufacturers of pig iron, raw steel, castings:					
Pig iron	10,000 2/	42,000	49,000	1,900	660
DRI	2,200 3/	W	2,300	17	290
Manufacturers of steel castings:					
Pig iron	11	(4/)	11	(5/)	1
DRI	--	--	--	--	--
Iron foundries and miscellaneous users:					
Pig iron	1,200	(4/)	1,200	41	130
DRI	16	1	16	--	(5/)
Totals for all manufacturing types:					
Pig iron	11,000	42,000	50,000	1,900	800
DRI	2,200	W	2,300	17	290

W Withheld to avoid disclosing company proprietary data. -- Zero.
1/ Data are rounded to no more than two significant digits; may not add to totals shown.
2/ Includes 1,600 tons purchased by electric furnace steel producers.
3/ Includes 1,300 tons purchased by integrated steel producers.
4/ Withheld to avoid disclosing company proprietary data; included in "Total."
5/ Less than 1/2 unit.

TABLE 4
U.S. CONSUMPTION OF IRON AND STEEL SCRAP, PIG IRON, AND DIRECT-REDUCED IRON (DRI) IN 2000,
BY TYPE OF FURNACE OR OTHER USE 1/

(Thousand metric tons)

	Manufacturers of pig iron, raw steel, castings			Manufacturers of steel castings			Iron foundries and miscellaneous users			Totals for all manufacturing types		
	Scrap	Pig iron	DRI	Scrap	Pig iron	DRI	Scrap	Pig iron	DRI	Scrap	Pig iron	DRI
Blast furnace	1,500	--	330	--	--	--	--	--	--	1,500	--	330
Basic oxygen process	15,000	47,000	100	--	--	--	--	--	--	15,000	47,000	100
Electric furnace	43,000	2,200	1,800	2,100	11	--	5,300	700	5	50,000	2,900	1,800
Cupola furnace	--	--	--	100	1	--	7,300	520	11	7,400	530	11
Other (including air furnaces)	W	--	--	2	--	--	W	W	--	2	W	--
Direct castings 2/	--	35	--	--	--	--	--	--	--	--	35	--
Total	59,000	49,000	2,300	2,200	11	--	13,000	1,200	16	74,000	50,000	2,300

W Withheld to avoid disclosing company proprietary data; included with "Electric furnace." -- Zero.
1/ Data are rounded to no more than two significant digits; may not add to totals shown.
2/ Includes ingot molds and stools.

TABLE 5
IRON AND STEEL SCRAP SUPPLY AVAILABLE FOR CONSUMPTION IN 2000, BY REGION AND STATE 1/ 2/

(Thousand metric tons)

Region and State	Receipts of scrap		Production of home scrap		Shipments of scrap 4/	New supply available for consumption
	From brokers, dealers, other outside sources	From other own company plants	Recirculating scrap resulting from current operations	Obsolete scrap 3/		
New England and Middle Atlantic:						
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	47	--	30	1	(5/)	76
New Jersey and New York	1,800	--	110	7	1	1,900
Pennsylvania	4,200	98	2,400	77	18	6,800
Total	6,100	98	2,600	85	20	8,800
North Central:						
Illinois	3,400	86	1,000	2	170	4,300
Indiana	4,200	190	5,100	39	620	8,900
Iowa, Nebraska, South Dakota	1,900	3	210	--	(5/)	2,200
Kansas and Missouri	830	3	250	65	83	1,100
Michigan	3,200	440	1,900	(5/)	200	5,300
Minnesota	450	170	110	--	(6/)	730
Ohio	7,400	800	2,300	43	780	9,800
Wisconsin	1,200	3	1,000	(5/)	6	2,200
Total	23,000	1,700	12,000	150	1,900	34,000
South Atlantic:						
Delaware and Maryland	680	1	430	--	(6/)	1,100
Florida and Georgia	950	--	160	--	(5/)	1,100
North Carolina and South Carolina	2,100	(6/)	230	--	(6/)	2,300
Virginia and West Virginia	1,800	(6/)	600	(6/)	(6/)	2,500
Total	5,500	160	1,400	(6/)	160	7,000
South Central:						
Alabama and Mississippi	3,700	(6/)	1,000	(6/)	83	4,700
Arkansas, Louisiana, Oklahoma	4,300	(6/)	380	(6/)	(6/)	4,700
Kentucky and Tennessee	3,200	2	510	--	(6/)	3,600
Texas	3,300	760	610	10	4	4,700
Total	14,000	860	2,500	24	140	18,000
Mountain and Pacific:						
Arizona, Colorado, Idaho, Montana, Utah	2,200	(5/)	550	(6/)	(6/)	2,800
California, Oregon, Washington	2,600	W	310	(5/)	(6/)	2,900
Total	4,800	W	850	(6/)	5	5,700
Grand total	53,000	2,800	19,000	280	2,200	74,000

W Withheld to avoid disclosing company proprietary data. -- Zero.

1/ Supply available for consumption is a net figure computed by adding production to receipts and deducting scrap shipped during the year. The difference in stock levels at the beginning and end of the year is not taken into consideration.

2/ Data are rounded to no more than two significant digits; may not add to totals shown.

3/ Obsolete scrap includes ingot molds, stools and scrap from old equipment, buildings, etc.

4/ Includes scrap shipped, transferred, or otherwise disposed of during the year.

5/ Less than 1/2 unit.

6/ Withheld to avoid disclosing company proprietary data; included in "Total" or "Grand total."

TABLE 6
U.S. CONSUMPTION OF IRON AND STEEL SCRAP AND PIG IRON IN 2000, BY REGION AND STATE 1/ 2/ 3/

(Thousand metric tons)

Region and State	Manufacturers of pig iron, raw steel, castings		Manufacturers of steel castings		Iron foundries and miscellaneous users		Totals for all manufacturing types	
	Scrap	Pig iron	Scrap	Pig iron	Scrap	Pig iron	Scrap	Pig iron
New England and Middle Atlantic:								
Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont	1,600	24	20	(4/)	390	17	2,000	41
Pennsylvania	6,300	3,000	180	2	580	79	7,100	3,100
Total	7,900	3,000	200	2	980	96	9,100	3,100
North Central:								
Illinois	3,800	2,700	140	2	570	36	4,500	2,800
Indiana	8,000	17,000	69	1	1,100	150	9,200	17,000
Iowa, Kansas, Minnesota, Missouri, Nebraska, South Dakota, Wisconsin	3,000	110	480	3	2,400	320	5,900	430
Michigan	2,700	5,000	31	(4/)	2,500	170	5,200	5,200
Ohio	7,800	9,800	430	2	1,300	130	9,500	9,900
Total	25,000	34,000	1,200	8	7,800	810	34,000	35,000
South Atlantic:								
Delaware, Maryland, Virginia, West Virginia	2,900	W	W	W	470	21	3,400	4,400
Florida, Georgia, North Carolina, South Carolina	2,900	W	W	W	480	37	3,400	75
Total	5,900	4,400	4	W	960	58	6,800	4,500
South Central:								
Alabama, Kentucky, Mississippi, Tennessee	5,800	W	620	W	1,900	W	8,300	5,000
Arkansas, Louisiana, Oklahoma	4,700	W	25	W	120	W	4,800	600
Texas	4,200	62	89	W	420	38	4,700	100
Total	15,000	5,500	730	W	2,400	200	18,000	5,700
Mountain and Pacific:								
Arizona, Colorado, Idaho, Montana, Utah	2,700	W	22	(4/)	130	W	2,900	1,900
California, Oregon, Washington	2,400	W	120	(4/)	320	W	2,900	110
Total	5,200	1,900	140	(4/)	460	58	5,800	2,000
Grand total	59,000	49,000	2,200	11	13,000	1,200	74,000	50,000

W Withheld to avoid disclosing company proprietary data; included in "Total" or "Grand total."

1/ Includes recirculating scrap resulting from current operations and home-generated obsolete scrap.

2/ Includes molten pig iron used for ingot molds and direct castings.

3/ Data are rounded to no more than two significant digits; may not add to totals shown.

4/ Less than 1/2 unit.

TABLE 7
U.S. CONSUMER STOCKS OF IRON AND STEEL SCRAP AND PIG IRON, DECEMBER 31, 2000, BY REGION AND STATE 1/

(Thousand metric tons)

Region and State	Carbon steel 2/	Stainless steel	Alloy steel 3/	Cast iron 4/	Other grades of scrap	Total scrap	Pig iron
New England and Middle Atlantic:							
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	(5/)	1	(5/)	1	W	1	1
New Jersey and New York	71	1	1	1	W	76	1
Pennsylvania	340	33	20	28	5	420	29
Total	410	35	21	30	5	500	31
North Central:							
Illinois	320	(5/)	W	18	3	340	35
Indiana	500	5	W	120	13	640	210
Iowa, Kansas, Missouri, Nebraska, South Dakota	170	(5/)	1	14	W	180	99
Michigan	130	6	1	18	45	200	70
Minnesota and Wisconsin	41	2	1	9	2	54	9
Ohio	440	27	45	33	4	550	33
Total	1,600	40	49	210	68	2,000	460
South Atlantic:							
Delaware, Maryland, Virginia, West Virginia	270	(5/)	W	17	46	330	57
Florida, Georgia, North Carolina, South Carolina	120	(5/)	W	23	3	150	7
Total	390	(5/)	3	40	49	480	64
South Central:							
Alabama, Kentucky, Mississippi, Tennessee	650	W	W	260	W	1,400	140
Arkansas, Louisiana, Oklahoma	360	W	W	4	W	370	68
Texas	250	W	W	4	W	260	21
Total	1,300	12	6	270	500	2,000	220
Mountain and Pacific:							
Arizona, Colorado, Idaho, Montana, Utah	140	(5/)	W	6	--	150	W
California, Oregon, Washington	93	(5/)	W	16	53	170	W
Total	230	1	5	22	53	310	17
Grand total	3,900	88	84	570	670	5,300	800

W Withheld to avoid disclosing company proprietary data; included in "Total" or "Grand total." -- Zero.
1/ Data are rounded to no more than two significant digits; may not add to totals shown.
2/ Excludes rerolling rails.
3/ Excludes stainless steel.
4/ Includes borings.
5/ Less than 1/2 unit.

TABLE 8
U.S. AVERAGE MONTHLY PRICE AND COMPOSITE PRICE FOR NO. 1 HEAVY MELTING STEEL, WITH ANNUAL AVERAGES 1/

(Dollars per metric ton)

Period	Chicago	Philadelphia	Pittsburgh	Composite price
2000:				
January	118.60	115.10	126.47	120.06
February	109.35	101.52	117.12	109.33
March	108.75	101.37	116.63	108.92
April	106.44	103.83	116.23	108.84
May	99.90	97.44	108.75	102.03
June	93.10	92.52	102.85	96.15
July	91.04	87.59	97.93	92.19
August	91.04	82.80	97.93	90.59
September	91.04	82.67	97.93	90.55
October	81.29	74.31	88.18	81.26
November	71.65	71.85	76.57	73.36
December	73.03	80.26	78.79	77.36
Annual average:				
2000	94.60	90.94	102.11	95.88
1999	100.91	85.16	96.37	94.15

1/ Calculated by the U.S. Geological Survey from prices published in American Metal Market.

TABLE 9
U.S. EXPORTS OF IRON AND STEEL SCRAP, BY COUNTRY 1/ 2/

(Thousand metric tons and thousand dollars)

Country	1999		2000	
	Quantity	Value	Quantity	Value
Australia	(3/)	355	1	469
Belgium	3	1,770	16	11,200
Brazil	3	505	2	1,680
Canada	1,700	182,000	1,280	159,000
China	419	96,200	1,080	216,000
Colombia	30	3,380	5	690
France	15	2,450	1	322
Germany	9	2,610	5	2,090
Hong Kong	48	13,600	45	13,800
India	17	5,770	61	18,100
Indonesia	6	1,590	10	2,590
Israel	1	1,130	3	1,230
Italy	5	2,080	7	3,350
Japan	72	15,400	73	47,100
Korea, Republic of	1,870	215,000	1,440	142,000
Malaysia	46	4,360	95	9,450
Mexico	849	88,100	1,010	109,000
Netherlands	3	1,730	16	11,100
Philippines	17	8,290	18	10,500
Saudi Arabia	(3/)	27	33	2,960
Singapore	2	803	3	2,300
South Africa	16	10,100	13	9,110
Spain	32	16,700	81	118,000
Sweden	1	672	5	148
Taiwan	220	44,100	297	82,600
Thailand	58	6,930	134	16,000
United Kingdom	13	4,760	8	3,220
Other	64 r/	8,760 r/	23	8,090
Total	5,520	738,000	5,760	1,000,000

r/ Revised.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping. Export valuation is free-alongside-ship (f.a.s.) value. The United States exported scrap to 70 countries in 1999 and 88 countries in 2000.

3/ Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 10
U.S. EXPORTS OF IRON AND STEEL SCRAP, BY CUSTOMS DISTRICT 1/ 2/

(Thousand metric tons and thousand dollars)

Customs district	1999		2000	
	Quantity	Value	Quantity	Value
Boston, MA	328	30,500	336	32,500
Buffalo, NY	148	27,300	129	30,800
Columbia-Snake	52	10,300	105	22,700
Detroit, MI	411	46,900	220	35,000
Honolulu, HI	45	5,250	96	12,800
Houston-Galveston, TX	66	28,500	73	49,200
Laredo, TX	193	21,800	361	41,100
Los Angeles, CA	1,120	155,000	1,230	231,000
Mobile, AL	40	22,300	39	26,400
New Orleans, LA	50	13,900	47	34,700
New York, NY	379	64,200	357	109,000
Nogales, AZ	9	948	47	5,580
Norfolk, VA	118	15,700	84	20,700
Pembina, ND	361	32,600	272	26,900
Portland, ME	79	8,010	69	7,640
Providence, RI	140	10,700	240	24,500
San Francisco, CA	706	90,600	847	125,000
San Juan, PR	11	5,430	69	4,830
Seattle, WA	277	40,300	303	53,100
St Albans, VT	38	7,860	66	12,200
Tampa, FL	2	415	64	6,990
Other	947 r/	100,000 r/	711	88,000
Total	5,520	738,000	5,760	1,000,000

r/ Revised.
1/ Excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping. Export valuation is free-alongside-ship (f.a.s.) value.
2/ Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 11
U.S. EXPORTS OF IRON AND STEEL SCRAP, BY GRADE 1/ 2/

(Thousand metric tons and thousand dollars)

Grade	1999		2000	
	Quantity	Value	Quantity	Value
No. 1 heavy melting scrap	931	77,200	778	77,200
No. 2 heavy melting scrap	245	19,300	181	17,400
No. 1 bundles	42	3,800	52	5,120
No. 2 bundles	32	2,180	31	2,800
Shredded steel scrap	1,190	112,000	1,350	140,000
Borings, shovelings and turnings	230	15,600	214	15,700
Cut plate and structural	284	29,000	156	17,200
Tinned iron or steel	90	21,500	123	28,600
Remelting scrap ingots	2	664	3	1,600
Stainless steel scrap	260	151,000	468	310,000
Other alloy steel scrap	558	115,000	809	168,000
Other steel scrap 3/	940	101,000	939	132,000
Iron scrap	715	89,300	658	85,000
Total	5,520	738,000	5,760	1,000,000
Ships, boats, other vessels for scrapping	7	2,610	11	153
Used rails for rerolling and other uses 4/	34	14,300	40	15,600
Grand total	5,560	755,000	5,810	1,020,000

1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Export valuation is on a free-alongside-ship (f.a.s.) value.
3/ Includes tinplate and terneplate.
4/ Includes mixed (used plus new) rails. See table 15 for details.

Source: U.S. Census Bureau.

TABLE 12
U.S. IMPORTS FOR CONSUMPTION OF IRON AND STEEL SCRAP, BY COUNTRY 1/ 2/

(Thousand metric tons and thousand dollars)

Country	1999		2000	
	Quantity	Value	Quantity	Value
Australia	19	1,900	(3/)	216
Belgium	30	3,270	53	10,200
Brazil	12	609	3	2,850
Canada	1,830	181,000	1,870	196,000
China	3	1,870	(3/)	54
Dominican Republic	32	3,090	32	3,630
Egypt	2	1,970	2	1,480
Finland	106	9,170	32	3,500
France	(3/)	73	1	173
Germany	(3/)	360	31	4,010
Jamaica	7	638	6	686
Japan	26	3,740	140	8,920
Mexico	62	26,600	63	29,200
Netherlands	218	21,000	129	13,800
Netherlands Antilles	4	355	4	440
Norway	--	--	15	1,420
Panama	2	107	1	168
Russia	98	6,840	91	8,920
Singapore	2	24	8	2,800
South Africa	6	2,000	(3/)	2
Sweden	175	16,100	200	21,000
Trinidad and Tobago	(3/)	45	(3/)	210
Ukraine	(3/)	14	(3/)	13
United Kingdom	976	95,600	652	71,300
Venezuela	4	523	8	1,920
Other	58 r/	5,780 r/	12	2,260
Total	3,670	383,000	3,350	385,000

r/ Revised. -- Zero.

1/ Data are rounded to no more than three significant digits; may not add to totals shown.

2/ Excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping. Import valuation is Customs value. The United States imported scrap from 52 countries in 2000 and 53 countries in 1999.

3/ Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 13
U.S. IMPORTS FOR CONSUMPTION OF IRON AND STEEL SCRAP,
BY CUSTOMS DISTRICT 1/ 2/

(Thousand metric tons and thousand dollars)

Customs district	1999		2000	
	Quantity	Value	Quantity	Value
Buffalo, NY	187	28,800	151	23,900
Charleston, SC	75	6,990	245	25,600
Chicago, IL	145	11,200	79	5,170
Cleveland, OH	28	1,790	38	3,580
Detroit, MI	1,110	107,000	1,110	113,000
El Paso, TX	6	2,020	7	2,090
Laredo, TX	44	17,500	59	24,300
Los Angeles, CA	6	327	59	798
Mobile, AL	52	5,210	21	2,670
New Orleans, LA	1,670	159,000	1,150	128,000
Ogdensburg, NY	19	3,710	31	5,110
Pembina, ND	25	7,610	21	5,970
Philadelphia, PA	(3/)	59	27	3,610
San Diego, CA	12	5,530	8	5,220
Seattle, WA	264	20,400	338	26,700
Other	32	6,800	18	8,420
Total	3,670	383,000	3,350	385,000

1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping. Import valuation is Customs value.
3/ Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 14
U.S. IMPORTS FOR CONSUMPTION OF IRON AND STEEL SCRAP, BY CLASS 1/ 2/

(Thousand metric tons and thousand dollars)

Class	1999		2000	
	Quantity	Value	Quantity	Value
No. 1 heavy melting scrap	46	3,660	23	2,020
No. 2 heavy melting scrap	16	1,480	5	417
No. 1 bundles	246	23,100	248	25,000
No. 2 bundles	1	74	35	4,140
Shredded steel scrap	1,080	103,000	885	92,100
Borings, shovelings and turnings	138	10,800	76	5,640
Cut plate and structural	134	13,200	113	13,300
Tinned iron or steel	58	5,270	15	1,660
Remelting scrap ingots	5	1,860	34	5,590
Stainless steel scrap	66	27,700	56	35,500
Other alloy steel scrap	210	29,700	377	44,900
Other steel scrap 3/	1,320	135,000	1,020	119,000
Iron scrap	354	28,300	466	35,300
Total	3,670	383,000	3,350	385,000
Ships, boats, other vessels for scrapping	(4/)	189	--	--
Used rails for rerolling and other uses 5/	348	43,900	271	34,100
Grand total	4,020	427,000	3,630	419,000

-- Zero.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Import valuation is Customs value.
3/ Includes tinplate and terneplate.
4/ Less than 1/2 unit.
5/ Includes mixed (used plus new) rails. See table 16 for details.

Source: U.S. Census Bureau.

TABLE 15
U.S. EXPORTS OF USED RAILS FOR REROLLING AND OTHER USES, BY COUNTRY 1/ 2/

Country	1999 Quantity (metric tons)	1999 Value (thousands)	2000 Quantity (metric tons)	2000 Value (thousands)
Bahamas, The	21	$90	405	$360
Canada	9,290	2,090	12,800	2,740
Chile	63	64	2,310	1,140
Dominican Republic	566	232	207	191
Mexico	21,800	8,850	23,000	9,540
Netherlands	--	--	289	142
United Kingdom	516	296	204	137
Venezuela	70	87	412	319
Other	1,430 r/	2,590 r/	745	1,080
Total	33,700 r/	14,300 r/	40,400	15,600

r/ Revised. -- Zero.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Exports contain mixed (used plus new) rails totaling 7,590 metric tons valued at $8,580,000 in 2000 and 7,700 metric tons valued at $7,390,000 in 1999. Export valuation is free-alongside-ship (f.a.s.) value.

Source: U.S. Census Bureau.

TABLE 16
U.S. IMPORTS FOR CONSUMPTION OF USED RAILS FOR REROLLING AND OTHER USES, BY COUNTRY 1/ 2/

Country	1999 Quantity (metric tons)	1999 Value (thousands)	2000 Quantity (metric tons)	2000 Value (thousands)
Canada	28,700	5,490	21,100	4,120
France	1	2	49	26
New Zealand	--	--	5	5
Poland	41,400	8,370	10,300	1,500
Romania	--	--	9,570	951
Russia	255,000 r/	27,600	217,000	25,600
Ukraine	13,600	1,410	13,200	1,660
Other	9,360 r/	964 r/	327	300
Total	348,000 r/	43,900	271,000	34,100

r/ Revised. -- Zero.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Import valuation is Customs value.

Source: U.S. Census Bureau.

TABLE 17
U.S. EXPORTS OF DIRECT-REDUCED IRON (DRI), BY COUNTRY 1/ 2/

Country	1999 r/ Quantity (metric tons)	1999 r/ Value (thousands)	2000 Quantity (metric tons)	2000 Value (thousands)
Australia	--	--	53	$6
Canada	--	--	86	9
Italy	--	--	28	3
Japan	--	--	26	3
Mexico	653	$69	1,440	181
Taiwan	40	4	137	14
United Kingdom	26	3	62	11
Other	2,560	226	139	15
Total	3,270	302	1,970	241

-- Zero.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Data are for steelmaking-grade DRI only.

Source: U.S. Census Bureau.

TABLE 18
U.S. IMPORTS FOR CONSUMPTION OF DIRECT-REDUCED IRON (DRI), BY COUNTRY 1/ 2/

Country	1999 Quantity (metric tons)	1999 Value (thousands)	2000 Quantity (metric tons)	2000 Value (thousands)
Argentina	35,300	$3,510	--	--
Canada	23	3	12,400	$2,180
Japan	19,000	2,010	--	--
Mexico	--	--	--	--
Norway	--	--	450	48
Trinidad and Tobago	26,300	2,110	64,000	6,560
Venezuela	870,000	78800	1,010,000	110000
Total	950,000	86,500	1,090,000	119,000

-- Zero.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Data are for steelmaking-grade DRI only.

Source: U.S. Census Bureau.

TABLE 19
U.S. EXPORTS OF PIG IRON, BY COUNTRY 1/ 2/

Country	1999 Quantity metric tons)	1999 Value (thousands)	2000 Quantity metric tons)	2000 Value (thousands)
Australia	2,430	$214	1,400	$123
Canada	10,100	1,680	4,270	761
China	--	--	186	39
Korea, Republic of	--	--	839	74
Malaysia	--	--	1,140	100
Mexico	64,300	8,500	58,700	8,020
Saudi Arabia	--	--	540	47
Singapore	224	20	355	31
South Africa	--	--	1,730	152
Spain	--	--	1,260	111
Taiwan	397	35	338	30
United Kingdom	--	--	432	38
Other	5,550 r/	610 r/	932	99
Total	83,000	11,100	72,100	9,620

r/ Revised. -- Zero.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Includes the following grades of pig iron: less than or equal to 0.5% phosphorus content, greater than 0.5% phosphorus content, and alloy grade. Export valuation is free-alongside-ship (f.a.s.) value.

Source: U.S. Census Bureau.

TABLE 20
U.S. IMPORTS FOR CONSUMPTION OF PIG IRON, BY COUNTRY 1/ 2/

Country	1999 Quantity metric tons)	1999 Value (thousands)	2000 Quantity metric tons)	2000 Value (thousands)
Brazil	2,540,000	$271,000	3,080,000	$374,000
Canada	117,000	20,700	109,000	18,300
China	20,700	2,340	41,100	4,740
Japan	112,000	11,000	5	10
Norway	5,190	552	5,000	617
Poland	--	--	12,400	1,640
Russia	688,000	63,100	423,000	45,200
South Africa	221,000	29,100	145,000	18,100
Switzerland	354,000	33,400	16,000	2,210
Turkey	--	--	44,000	5,520
Ukraine	921,000	94,600	1,070,000	129,000
Venezuela	--	--	23,000	2,370
Other	15,000 r/	1,410 r/	27	7
Total	4,990,000	527,000	4,970,000	601,000

r/ Revised. -- Zero.
1/ Data are rounded to no more than three significant digits; may not add to totals shown.
2/ Includes the following grades of pig iron: less than or equal to 0.5% phosphorus content, greater than 0.5% phosphorus content, and alloy grade. Import valuation is Customs value.

Source: U.S. Census Bureau.