IRON AND STEEL[1]

(Data in million metric tons of metal, unless otherwise noted)

Domestic Production and Use: The iron and steel industry and ferrous foundries produced goods valued at about $73 billion. The steel industry consisted of 101 companies that produced raw steel at 143 locations, with combined raw steel production capability of about 126 million tons. Indiana accounted for about 21% of total raw steel production, followed by Ohio, 16%, and Pennsylvania, 8%. Pig iron was produced by 14 companies operating integrated steel mills, with about 39 blast furnaces in continuous operation. Integrated companies accounted for about 57% of total steel production, including output of their electric arc furnaces. The distribution of steel shipments was estimated as follows: warehouses and steel service centers, 21%; transportation (predominantly for automotive production), 13%; construction, 14%; cans and containers, 4%; and others, 48%. Ferrous foundries, numbering about 1,100, continued to be importers of pig iron into the United States, mainly from Brazil and Russia.

Salient Statistics—United States:[1]	**1994**	**1995**	**1996**	**1997**	**1998[e]**
Pig iron production[2]	49.4	50.9	49.4	49.6	50.1
Steel production:	91.2	95.2	95.5	98.5	102
Basic oxygen furnaces, percent	60.7	59.6	57.4	56.2	55.3
Electric arc furnaces, percent	39.3	40.4	42.6	43.8	44.9
Continuously cast steel, percent	89.5	91.0	93.2	94.7	95.3
Shipments:					
Steel mill products	86.3	88.4	91.5	96.0	97.8
Steel castings[3]	1.0	1.1	1.2	1.2	1.2
Iron castings[3]	13.2	9.8	9.8	9.8	9.8
Imports of steel mill products	27.3	22.1	26.5	28.3	34.6
Exports of steel mill products	3.5	6.4	4.6	5.5	4.7
Apparent steel consumption[4]	104	102	108	114	113
Producer price index for steel mill products (1982=100)[5]	113.4	120.1	115.6	116.4	114
Steel mill product stocks at service centers yearend[6]	6.6	5.9	6.3	6.6	7.3
Total employment, average,[7] number					
Blast furnaces and steel mills	172,000	171,000	168,000	169,000	168,000
Iron and steel foundries	125,000	130,000	129,000	128,000	127,000
Net import reliance[8] as a percent of apparent consumption	22	21	20	20	18

Recycling: See Iron and Steel Scrap and Iron and Steel Slag.

Import Sources (1994-97): European Union, 27%; Canada, 16%; Japan, 9%; Brazil, 9%; and other, 39%.

Tariff:[9] **Item**	**Number**	**Normal Trade Relations (NTR)[10] 12/31/98**	**Canada 12/31/98**	**Mexico 12/31/98**	**Non-NTR[11] 12/31/98**
Pig iron	7201.10.0000	Free	Free	Free	$1.11/t.
Carbon steel:					
Semifinished	7207.12.0050	2.5%	Free	2.1%	20%.
Structural shapes	7216.33.0090	0.5%	Free	0.4%	2%.
Bars, hot-rolled	7213.20.0000	1.1%	Free	0.9%	5.5%.
Sheets, hot-rolled	7208.39.0030	2.9%	Free	2.4%	20%.
Hot-rolled, pickled	7208.27.0060	3.1%	Free	2.5%	0.4¢/kg+20%.
Cold-rolled	7209.18.2550	1.9%	Free	1.6%	20%.
Galvanized	7210.49.0090	3.9%	Free	3.2%	21.5%.
Stainless steel:					
Semifinished	7218.91.0015	3.1%	Free	2.6%	29%.
	7218.99.0015	3.1%	Free	2.6%	29%.
Bars, cold-finished	7222.20.0075	6.4%	Free	5.3%	29%.
Pipe and tube	7304.41.3045	4.6%	Free	Free	36%.
Cold-rolled sheets	7219.33.0035	6.1%	Free	5.0%	29%.

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IRON AND STEEL

Depletion Allowance: Not applicable.

Government Stockpile: None.

Events, Trends, and Issues: Pig iron production and steel production and shipments continued to increase during 1998. The basic oxygen process used in integrated mills continued to decline in importance relative to the use of electric arc furnaces and continuous casting in minimills. Capital expenditures by integrated steelmakers was an estimated $2.2 billion in 1998, an increase of nearly 5% from that of 1997. Capital expenditures in minimills also increased to $1.4 billion, 16% more than that of 1997.

Although domestic demand for steel remained high during 1998 and domestic steelmaking capacity increased, pessimism in the industry grew as steel spot prices and exports declined while imports increased. July imports of relatively low-priced steel were 44% greater than imports during July 1997. Some minimalist and integrated mills responded by cutting production. Capacity utilization decreased below 80%. Some mills also reduced scrap inventories and laid off workers. Several big producers joined the United Steel Workers of America to file antidumping suits against Japanese, Russian, and Brazilian hot roll producers.

The United Steelworkers of America and the Made in the USA Foundation filed a lawsuit against the Federal Government charging that the North American Free Trade Agreement (NAFTA) is unconstitutional on the ground that it is a treaty that was not approved by two-thirds vote of the Senate. The Department of Labor determined that about 7,400 steelworker union members have been displaced as a result of NAFTA.

World Production:

	Pig iron		Raw steel	
	1997	1998[e]	1997	1998[e]
United States	49.6	50.1	98.5	102
Brazil	25.0	25.6	25.1	25.8
China	115	115	108	111
European Union	96.4	102	165	170
Japan	78.5	75.0	105	95.1
Korea, Republic of	22.7	23.5	42.6	41.1
Russia	37.3	35.4	48.4	42.8
Ukraine	20.0	21.6	25.6	24.8
Other countries	105	95.8	177	170
World total (may be rounded)	550	544	795	783

World Resources: Not applicable. See Iron Ore.

Substitutes: Iron is the least expensive and most widely used metal. In most applications, iron and steel compete either with less expensive nonmetallic materials or with more expensive materials having a property advantage. Iron and steel compete with lighter materials, such as aluminum and plastics, in the motor vehicle industry; aluminum, concrete, and wood in construction; and aluminum, glass, paper, and plastics in containers.

[e]Estimated.
[1]Production and shipments data source is the American Iron and Steel Institute (AISI); see also Iron Ore and Iron and Steel Scrap.
[2]More than 95% of iron made is transported molten to steelmaking furnaces located at the same site.
[3]U.S. Department of Commerce, Bureau of the Census.
[4]Defined as steel shipments + imports - exports + adjustments for industry stock changes + adjustment for imports of semifinished steel products.
[5]Bureau of Labor Statistics.
[6]Steel Service Center Institute.
[7]Bureau of Labor Statistics. Blast furnaces and steel mills: SIC 3312; Iron and steel foundries: SIC 3320.
[8]Defined as imports - exports + adjustments for Government and industry stock changes.
[9]All tariff percentages are ad valorem.
[10]No tariff for Israel and certain Caribbean and Andean nations.
[11]See Appendix B.