

IRON AND STEEL¹

(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 about 105 companies that produced raw steel at about 144 locations, with combined raw steel production capability of about 128 million tons. Indiana accounted for about 23% of total raw steel production, followed by Ohio, 16%, and Pennsylvania, 7%. Pig iron was produced by 13 companies operating integrated steel mills, with about 35 blast furnaces in continuous operation. The distribution of steel shipments was estimated as follows: warehouses and steel service centers, 21%; transportation (predominantly for automotive production), 14%; construction, 13%; cans and containers, 3%; and others, 49%. Ferrous foundries, numbering about 1,100, continued to be importers of pig iron into the United States, mainly from Brazil, Russia, and South Africa.

Salient Statistics—United States:¹	1996	1997	1998	1999	2000^e
Pig iron production ²	49.4	49.6	48.2	46.3	50.6
Steel production:	95.5	98.5	98.6	97.4	106
Basic oxygen furnaces, percent	57.4	56.2	54.9	53.7	53.8
Electric arc furnaces, percent	42.6	43.8	45.1	46.3	46.2
Continuously cast steel, percent	93.2	94.7	95.5	95.9	96.1
Shipments:					
Steel mill products	91.5	96.0	92.9	96.3	105
Steel castings ³	1.2	1.2	1.3	^e 1.3	1.3
Iron castings ³	9.8	9.6	9.8	^e 9.8	9.8
Imports of steel mill products	26.5	28.3	37.7	32.4	36.8
Exports of steel mill products	4.6	5.5	5.0	4.9	6.0
Apparent steel consumption ⁴	108	114	118	116	126
Producer price index for steel mill products (1982=100) ⁵	115.6	116.4	113.8	105.3	111.0
Steel mill product stocks at service centers yearend ⁶	6.3	6.6	7.7	7.7	8.2
Total employment, average, number ⁷					
Blast furnaces and steel mills	168,000	163,000	160,000	^e 160,000	160,000
Iron and steel foundries	129,000	130,000	132,000	^e 132,000	132,000
Net import reliance ⁸ as a percent of apparent consumption	15	15	22	17	17

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

Import Sources (1996-99): European Union, 21%; Canada, 14%; Japan, 10%; Mexico, 9%; and other, 46%.

Tariff:⁹	Item	Number	Normal Trade Relations¹⁰	Mexico
			12/31/00	12/31/00
	Pig iron	7201.10.0000	Free	Free.
	Carbon steel:			
	Semifinished	7207.12.0050	1.7%	1.2%.
	Structural shapes	7216.33.0090	0.4%	0.2%.
	Bars, hot-rolled	7213.20.0000	0.8%	0.5%.
	Sheets, hot-rolled	7208.39.0030	2%	1.4%.
	Hot-rolled, pickled	7208.27.0060	2%	1.5%.
	Cold-rolled	7209.18.2550	1.3%	0.9%.
	Galvanized	7210.49.0090	2.6%	1.9%.
	Stainless steel:			
	Semifinished	7218.91.0015	2.1%	1.5%.
		7218.99.0015	2.1%	1.5%.
	Bars, cold-finished	7222.20.0075	4.2%	3.1%.
	Pipe and tube	7304.41.3045	3.0%	Free.
	Cold-rolled sheets	7219.33.0035	4%	3%.

Depletion Allowance: Not applicable.

Government Stockpile: None.

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Events, Trends, and Issues: During the first 8 months of 2000, monthly pig iron and raw steel production fluctuated near 4.7 million tons and 9.6 million tons, respectively. Production totals during this period increased 23% for pig iron and 15% for steel from those of 1999. Shipments of steel mill products during the first 6 months of 2000 were up 15% compared with those of 1999. However, raw steel production was trending downward during the second half of 2000.

Domestic steel prices declined significantly during 1998 and 1999, allegedly because of dumping of subsidized, low-priced steel products onto the U.S. market by foreign producers, and then reversed during the first half of 2000. As of the end of the third quarter 2000, industry market prices were up from those of 1999 for hot-rolled sheet, 16%; cold-rolled sheet, 32%; and structural beams, 8%. The industry appealed to the Government for vigorous enforcement of trade laws in response to the alleged dumping, and received support from the U.S. Department of Commerce in the form of antidumping duty margins against several countries. Later, the International Trade Commission ruled against the industry claiming that the industry did not suffer irreparable damage from the extra imports in 1998. An American Institute for International Steel study, which claimed that U.S. consumers incurred as much as \$151 billion in costs over the past 40 years from governmental trade protection and subsidy aid to the industry, also opposed the position of the U.S. steel industry.

Members of the Auto Steel Partnership have been meeting with auto manufacturers to discuss future materials requirements. The Ultra-Light Steel Auto Body (ULSAB) program successfully developed the steel-intensive body-in-white that is as much as 36% lighter than existing comparable vehicles. Currently, 33 steel companies and Porsche Engineering are conducting research to establish a new standard for steel auto body design in the ULSAB-Advanced Vehicle Concepts program.

World Production:

	Pig iron		Raw steel	
	1999	2000 ^e	1999	2000 ^e
United States	46.3	50.6	97.4	106
Brazil	25.1	27.2	25.0	27.3
China	125	129	124	123
European Union	93.1	97.2	^e 157	167
Japan	74.5	80.1	94.2	104.8
Korea, Republic of	23.3	24.5	41.0	43.4
Russia	40.0	44.8	49.8	57.3
Ukraine	21.9	24.1	26.8	30.1
Other countries	<u>91.9</u>	<u>93.8</u>	<u>171</u>	<u>174</u>
World total (may be rounded)	541	571	786	833

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.

^eEstimated.

¹Production and shipments data source is the American Iron and Steel Institute; see also Iron Ore and Iron and Steel Scrap.

²More than 95% of iron made is transported molten to steelmaking furnaces located at the same site.

³U.S. Department of Commerce, Census Bureau.

⁴Defined as steel shipments + imports - exports + adjustments for industry stock changes + adjustment for imports of semifinished steel products.

⁵Bureau of Labor Statistics.

⁶Steel Service Center Institute.

⁷Bureau of Labor Statistics. Blast furnaces and steel mills: SIC 3312; Iron and steel foundries: SIC 3320.

⁸Defined as imports - exports + adjustments for Government and industry stock changes.

⁹All tariff percentages are ad valorem.

¹⁰No tariff for Canada, Israel, and certain Caribbean and Andean nations for items shown.