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 $63 billion. The steel industry consisted of about 83 companies that produced raw steel at about 214 locations, with combined raw steel production capability of about 103 million tons. Indiana accounted for about 20% of total raw steel production, followed by Ohio, 15%, Michigan, 7%, and Pennsylvania, 6%. Pig iron was produced by 11 companies operating integrated steel mills, with about 33 blast furnaces in continuous operation. The distribution of steel shipments was estimated as follows: warehouses and steel service centers, 23%; construction, 16%; transportation (predominantly for automotive production), 13%; cans and containers, 3%; and others, 45%. Ferrous foundries, numbering about 1,100, continued to be importers of pig iron into the United States, mainly from Brazil, Russia, and Ukraine.

Salient Statistics—United States:	1999	2000	2001	2002	2003[e]
Pig iron production[2]	46.3	47.9	42.1	40.2	39.4
Steel production:	97.4	102	90.1	91.6	91.5
Basic oxygen furnaces, percent	53.7	53.0	52.6	49.6	48.0
Electric arc furnaces, percent	46.3	47.0	47.4	50.4	52.0
Continuously cast steel, percent	95.9	96.4	97.2	97.2	97.1
Shipments:					
Steel mill products	96.3	99	89.7	90.7	94.7
Steel castings[3]	1.2	1.0	0.8	1.0	1.0
Iron castings[3]	9.8	9.4	8.3	83.3	7.8
Imports of steel mill products	32.4	34.4	27.3	29.6	21.7
Exports of steel mill products	4.9	5.9	5.6	5.4	8.2
Apparent steel consumption[4]	116	120	107	107	104
Producer price index for steel mill products (1982=100)[5]	105.3	108.4	101.3	102.3	108.9
Steel mill product stocks at service centers yearend[6]	7.7	7.8	7.1	7.3	7.5
Total employment, average, number[7]					
Blast furnaces and steel mills	153,000	151,000	141,000	140,000	140,000
Iron and steel foundries[e]	127,000	125,000	117,000	116,000	116,000
Net import reliance[8] as a percentage of apparent consumption	17	18	16	15	9

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

Import Sources (1999-2002): European Union, 18%; Canada, 15%; Mexico, 10%; Japan, 7%; and other, 50%.

Tariff: Item	Number	Normal Trade Relations[9] 12/31/03	Mexico 12/31/03
Pig iron	7201.10.0000	Free	Free.
Carbon steel:			
Semifinished	7207.12.0050	0.4% ad val.	Free.
Structural shapes	7216.33.0090	0.1% ad val.	Free.
Bars, hot-rolled	7213.20.0000	0.2% ad val.	Free.
Sheets, hot-rolled	7208.39.0030	0.5% ad val.	Free.
Hot-rolled, pickled	7208.27.0060	0.5% ad val.	Free.
Cold-rolled	7209.18.2550	0.3% ad val.	Free.
Galvanized	7210.49.0090	0.6% ad val.	Free.
Stainless steel:			
Semifinished	7218.91.0015	0.5% ad val.	Free.
	7218.99.0015	0.5% ad val.	Free.
Bars, cold-finished	7222.20.0075	1.1% ad val.	Free.
Pipe and tube	7304.41.3045	0.8% ad val.	Free.
Cold-rolled sheets	7219.33.0035	1.0% ad val.	Free.

Depletion Allowance: Not applicable.

Prepared by **Michael D. Fenton [(703) 648-4972, mfenton@usgs.gov, fax: (703) 648-7757]**

IRON AND STEEL

Government Stockpile: None.

Events, Trends, and Issues: During the first 8 months of 2003, monthly pig iron production fluctuated near 3.3 million tons, and monthly raw steel production fluctuated near 7.6 million tons. Production totals during these periods were not significantly different for pig iron and steel from those of 2002. Shipments of steel mill products during the first 8 months of 2003 were unchanged compared with those of 2002. Pig iron and raw steel production were trending downward during the first half of 2003.

A lull in bankruptcy activity during the second half of 2002 followed the bankruptcies of three major steelmakers in early 2002. The first half of 2003 saw an additional four bankruptcies—Bayou Steel Corp; Kentucky Electric Steel, Inc; Slater Steel, Inc; and Weirton Steel Corp. U.S. integrated steelmakers and labor, represented by the United Steelworkers of America, finalized labor agreements that, in part, protect the current benefits held by retirees. Some domestic mills have not been cost competitive with foreign mills partly because the latter have lower healthcare costs as a result of nationalized or subsidized healthcare programs.

The International Trade Commission's section 201 investigation under the Trade Act of 1974 and subsequent recommendations in December 2001 led to a March 2002 imposition of 8% to 30% duties on a wide range of steel products. In mid-2003, the World Trade Organization (WTO) concluded that Section 201 violated global trading rules, and the European Union (EU), Brazil, China, among others, challenged the legality of Section 201. The EU threatened retaliatory trade sanctions against the United States. The United States was scheduled to review its policy in September 2003 prior to its appeal of the WTO decision.

Projections of U.S. economic growth by Boston Federal Research Bank and International Monetary Fund were no greater than 3.5% and 2.2%, respectively, for 2003. But by the end of October 2003, the U.S. Bureau of Economic Analysis reported an estimated increase in the annual rate of the real gross domestic product of 7.2% in the third quarter of 2003.

World Production:

	Pig iron		Raw steel	
	2002	2003[e]	2002	2003[e]
United States	40.2	39.4	91.6	91.5
Brazil	27.8	31.0	29.6	27.5
China	171	190	182	200
European Union	89.4	90.4	157	159
Japan	81.0	81.7	108	110
Korea, Republic of	26.5	26.6	45.4	46.0
Russia	46.1	48.0	59.8	61.2
Ukraine	27.6	29.0	34.5	38.0
Other countries	94.4	97.9	196	191
World total (rounded)	604	634	904	924

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 performance 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; 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, Census Bureau.

[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]Metals Service Center Institute.

[7]Bureau of Labor Statistics. Blast furnaces and steel mills: SIC 3312; Iron and steel foundries: NAICS 331511.

[8]Defined as imports – exports + adjustments for Government and industry stock changes.

[9]No tariff for Canada, Israel, and certain Caribbean and Andean nations.