

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 in 2004 valued at an estimated \$62 billion. The steel industry consisted of about 79 companies that produced raw steel at about 122 locations, with combined raw steel production capability of about 106 million tons. Indiana accounted for about 24% of total raw steel production, followed by Ohio, 14%, Michigan, 6%, and Pennsylvania, 6%. Pig iron was produced by 9 companies operating integrated steel mills, with about 31 blast furnaces in continuous operation. The distribution of steel shipments was estimated as follows: warehouses and steel service centers, 23%; construction, 14%; transportation (predominantly for automotive production), 12%; cans and containers, 3%; and other, 48%. 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:	2000	2001	2002	2003	2004^e
Pig iron production ²	47.9	42.1	40.2	40.6	40.8
Steel production:	102	90.1	91.6	93.7	96.2
Basic oxygen furnaces, percent	53.0	52.6	49.6	49.0	47.0
Electric arc furnaces, percent	47.0	47.4	50.4	51.0	53.0
Continuously cast steel, percent	96.4	97.2	97.2	97.3	97.0
Shipments:					
Steel mill products	99	89.7	90.7	96.1	104
Steel castings ³	1.0	0.8	0.7	0.7	1.1
Iron castings ³	9.4	8.3	7.8	7.5	8.3
Imports of steel mill products	34.4	27.3	29.6	21.0	29.1
Exports of steel mill products	5.9	5.6	5.4	2.5	7.3
Apparent steel consumption ⁴	120	107	107	107	125
Producer price index for steel mill products (1982=100) ⁵	108.4	101.3	104.8	109.5	150.0
Steel mill product stocks at service centers yearend ⁶	7.8	7.1	13.7	12.3	10.0
Total employment, average, number ⁷					
Blast furnaces and steel mills	151,000	141,000	140,000	140,000	140,000
Iron and steel foundries ^e	125,000	117,000	116,000	116,000	116,000
Net import reliance ⁸ as a percentage of apparent consumption	18	16	15	10	18

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

Import Sources (2000-03): European Union⁹, 18%; Canada, 17%; Mexico, 11%; Republic of Korea, 6%; and other, 48%.

Tariff:	Item	Number	Normal Trade Relations	Mexico
			12-31-04	12-31-04
	Pig iron	7201.10.0000	Free	Free.
	Carbon steel:			
	Semifinished	7207.12.0050	Free.	Free.
	Structural shapes	7216.33.0090	Free.	Free.
	Bars, hot-rolled	7213.20.0000	Free.	Free.
	Sheets, hot-rolled	7208.39.0030	Free.	Free.
	Hot-rolled, pickled	7208.27.0060	Free.	Free.
	Cold-rolled	7209.18.2550	Free.	Free.
	Galvanized	7210.49.0090	Free.	Free.
	Stainless steel:			
	Semifinished	7218.91.0015	Free.	Free.
		7218.99.0015	Free.	Free.
	Bars, cold-finished	7222.20.0075	Free.	Free.
	Pipe and tube	7304.41.3045	Free.	Free.
	Cold-rolled sheets	7219.33.0035	Free.	Free.

Depletion Allowance: Not applicable.

Government Stockpile: None.

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Events, Trends, and Issues: During the first 8 months of 2004, monthly pig iron production fluctuated near 3.3 million tons and monthly raw steel production fluctuated near 8.2 million tons. Production totals during these periods increased about 3.5% for pig iron and 7.1% for steel from those of 2003. Steel production was trending upward during the first 8 months of 2004. Shipments of steel mill products for 2004 were up 8.2% compared with those of 2003. Imports of steel mill products increased an estimated 39% compared with those of 2003, and U.S. net import reliance as a percentage of apparent consumption surged to an estimated 18%, the highest level since 2000.

The U.S. International Trade Commission's section 201 investigation under the Trade Act of 1974 led to the imposition in 2002 of 8% to 30% duties on a wide range of steel products. The subsequent World Trade Organization ruling that Section 201 violated global trading rules was followed by the European Union's threat of retaliatory trade sanctions against the United States. Total relief from imports was partially nullified when the U.S. Department of Commerce exempted 727 imported steel products from the tariff. The United States ended tariffs ahead of schedule in late 2003 on the grounds that the steel industry had enough time to restructure to become competitive.

The intense bankruptcy activity in the U.S. steel industry since late-2000 appeared to be at an end with the declaration of bankruptcy by a South Carolina steel company in October 2003, subsequently being purchased by a major international steel company in June 2004, and reopening in August 2004. During this 4-year period, the steel industry experienced restructuring and consolidation that included acquisitions totaling more than \$3.6 billion. Consolidations were facilitated by labor agreements that increased worker participation and streamlined the management structure.

The recovery of the global economy that began in late 2003 has been steady and gradual. The International Iron and Steel Institute estimated a gross domestic product growth rate of 3.1% in 2004 and 3.4% in 2005. Growth in the United States was estimated to be 4.7% in 2004 and 3.6% in 2005. World consumption of finished steel products was estimated to increase by 6.2% in 2004 and by 4.5% in 2005. Finished steel product consumption in the United States was expected to rise by 4.6% in the period 2003 to 2005.

World Production:

	Pig iron		Raw steel	
	<u>2003</u>	<u>2004^e</u>	<u>2003</u>	<u>2004^e</u>
United States	40.6	40.8	93.7	96.2
Brazil	29.6	34.3	29.6	32.8
China	202	242	220	263
European Union ⁹	89.6	111	153	196
India	25.0	25.1	31.8	33.2
Japan	82.1	82.8	111	112
Korea, Republic of	29.5	27.5	46.3	47.2
Russia	48.4	50.2	62.7	64.2
Ukraine	29.6	30.8	36.9	38.6
Other countries	<u>70.6</u>	<u>58.5</u>	<u>177</u>	<u>142</u>
World total (rounded)	647	703	962	1,030

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.

^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. Census Bureau.

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

⁵U.S. Department of Labor, Bureau of Labor Statistics.

⁶Metals Service Center Institute.

⁷U.S. Department of Labor, Bureau of Labor Statistics. Blast furnaces and steel mills: SIC 3312; Iron and steel foundries: NAICS 331511.

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

⁹European Union membership increased from 15 to 25 as of May 1, 2004.