

## IRON AND STEEL<sup>1</sup>

(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 \$72 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 119 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, 25%; transportation (predominantly for automotive production), 13%; construction, 16%; cans and containers, 3%; and others, 43%. Ferrous foundries, numbering about 1,100, continued to be importers of pig iron into the United States, mainly from Brazil, Russia, and Ukraine.

<b>Salient Statistics—United States:<sup>1</sup></b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001<sup>e</sup></b>
Pig iron production <sup>2</sup>	49.6	48.2	46.3	47.9	44.2
Steel production:	98.5	98.6	97.4	102	92.9
Basic oxygen furnaces, percent	56.2	54.9	53.7	53.0	53.2
Electric arc furnaces, percent	43.8	45.1	46.3	47.0	46.8
Continuously cast steel, percent	94.7	95.5	95.9	96.3	96.8
Shipments:					
Steel mill products	96.0	92.9	96.3	99	92.6
Steel castings <sup>3</sup>	1.2	1.3	1.2	1.0	1.0
Iron castings <sup>3</sup>	9.6	9.8	9.8	9.5	9.5
Imports of steel mill products	28.3	37.7	32.4	34.4	26.2
Exports of steel mill products	5.5	5.0	4.9	5.9	5.6
Apparent steel consumption <sup>4</sup>	114	118	116	119	118
Producer price index for steel mill products (1982=100) <sup>5</sup>	116.4	113.8	105.3	108.4	100.7
Steel mill product stocks at service centers yearend <sup>6</sup>	6.6	7.7	7.7	7.8	7.1
Total employment, average, number <sup>7</sup>					
Blast furnaces and steel mills	163,000	160,000	<sup>e</sup> 160,000	<sup>e</sup> 160,000	160,000
Iron and steel foundries	130,000	132,000	<sup>e</sup> 132,000	<sup>e</sup> 132,000	132,000
Net import reliance <sup>8</sup> as a percentage of apparent consumption	15	22	17	18	15

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

**Import Sources (1997-2000):** European Union, 19%; Canada, 14%; Japan, 10%; Mexico, 9%; and other, 48%.

<b>Tariff:<sup>9</sup></b>	<b>Item</b>	<b>Number</b>	<b>Normal Trade Relations<sup>9</sup></b>	<b>Mexico</b>
			<b>12/31/01</b>	<b>12/31/01</b>
	Pig iron	7201.10.0000	Free	Free.
	Carbon steel:			
	Semifinished	7207.12.0050	1.3% ad val.	0.8% ad val.
	Structural shapes	7216.33.0090	0.3% ad val.	0.1% ad val.
	Bars, hot-rolled	7213.20.0000	0.6% ad val.	0.3% ad val.
	Sheets, hot-rolled	7208.39.0030	1.5% ad val.	0.9% ad val.
	Hot-rolled, pickled	7208.27.0060	1.5% ad val.	1.0% ad val.
	Cold-rolled	7209.18.2550	1.0% ad val.	0.6% ad val.
	Galvanized	7210.49.0090	2.0% ad val.	1.3% ad val.
	Stainless steel:			
	Semifinished	7218.91.0015	1.6% ad val.	1.0% ad val.
		7218.99.0015	1.6% ad val.	1.0% ad val.
	Bars, cold-finished	7222.20.0075	3.2% ad val.	2.1% ad val.
	Pipe and tube	7304.41.3045	2.3% ad val.	Free.
	Cold-rolled sheets	7219.33.0035	3.0% ad val.	2.0% ad val.

**Depletion Allowance:** Not applicable.

**Government Stockpile:** None.

## IRON AND STEEL

**Events, Trends, and Issues:** During the first 8 months of 2001, monthly pig iron production fluctuated near 4.1 million tons, and monthly raw steel production fluctuated near 8.5 million tons. Production totals during these periods decreased about 12% for pig iron and 10% for steel from those of 2000. Shipments of steel mill products estimated for 2001 were down 7% compared with those of 2000. Raw steel production was beginning a downward trend during the second half of 2001.

To the detriment of steel producers, the longest economic expansion in U.S. history was showing signs of weakening through the third quarter in 2001. Industrial activity declined in September 2001—the 12th straight month of decline and the first of this duration since November 1944 through October 1945. Decreasing demand for vehicles and consumer goods and the steel to make them caused manufacturing operating capacity to decline in September 2001. Concurrently, steel imports began to increase in 2000 and continued to grow in the first half of 2001 as prices for steel products plunged to record low levels. By mid-2001, the United States had 119 antidumping and countervailing duty orders in place on steel imports, and 36 others were being considered.

The International Trade Commission began a Section 201 investigation under the Trade Act of 1974 to determine whether the U.S. steel industry had been significantly harmed by excessive steel importation. Although the focus by all involved was on alleged dumping by foreign steelmakers, it was becoming clear that a more fundamental problem existed—the United States and the world had excess steelmaking capacity that needed to be reduced.

A unique aspect of this latest round of economic difficulty for the domestic steel industry, allegedly caused by steel import dumping, was the high number of bankruptcies declared by steelmakers. In bankruptcy, as of mid-October 2001, were Acme Steel Co., Bethlehem Steel Corp., Erie Forge & Steel Inc., GS Industries Inc., LTV Steel Corp., Republic Technologies International LLC, and Wheeling-Pittsburgh Steel Corp.

### **World Production:**

	Pig iron		Raw steel	
	2000	2001 <sup>e</sup>	2000	2001 <sup>e</sup>
United States	47.9	44.2	102	92.9
Brazil	27.7	27.1	27.8	26.3
China	131	140	127	135
European Union	91.6	91.3	158	157
Japan	81.1	79.2	106	104
Korea, Republic of	24.9	25.9	43.1	43.8
Russia	44.6	44.8	59.1	57.8
Ukraine	25.7	26.5	31.8	33.5
Other countries	96.5	92.7	190	178
World total (may be rounded)	571	573	845	828

**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.

<sup>e</sup>Estimated.

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

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

<sup>3</sup>U.S. Department of Commerce, Census Bureau.

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

<sup>5</sup>Bureau of Labor Statistics.

<sup>6</sup>Steel Service Center Institute.

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

<sup>8</sup>Defined as imports - exports + adjustments for Government and industry stock changes.

<sup>9</sup>No tariff for Canada, Israel, and certain Caribbean and Andean nations.