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 in 2011 that were estimated to be valued at $103 billion. Pig iron was produced by 5 companies operating integrated steel mills in 15 locations. About 48 companies produce raw steel at about 108 minimills. Combined production capability was about 115 million tons. Indiana accounted for 26% of total raw steel production, followed by Ohio, 12%, Pennsylvania, 7%, and Michigan, 6%. The distribution of steel shipments was estimated to be: warehouses and steel service centers, 25%; construction, 16%; transportation (predominantly automotive), 15%; cans and containers, 3%; and other, 41%.

Salient Statistics—United States:	2007	2008	2009	2010	2011[e]
Pig iron production[2]	36.3	33.7	19.0	26.8	29
Steel production:	98.1	91.9	59.4	80.5	86
Basic oxygen furnaces, percent	41.8	42.6	38.2	38.7	38
Electric arc furnaces, percent	58.2	57.4	61.8	61.3	62
Continuously cast steel, percent	96.7	96.4	97.5	97.4	98
Shipments:					
Steel mill products	96.5	89.3	56.4	75.7	89
Steel castings[e, 3]	0.7	0.7	0.4	0.4	0.4
Iron castings[e, 3]	7.4	7.4	4.0	4.0	4.0
Imports of steel mill products	30.2	29.0	14.7	21.7	30
Exports of steel mill products	10.1	12.2	8.4	11.0	13
Apparent steel consumption[4]	116	102	63	80	91
Producer price index for steel mill products (1982=100)[5]	182.9	220.6	165.2	191.7	220
Steel mill product stocks at service centers yearend[6]	9.3	7.8	5.6	7.0	7
Total employment, average, number					
Blast furnaces and steel mills	102,000	107,000	[e]109,000	110,000	140,000
Iron and steel foundries[e]	95,000	86,000	86,000	86,000	86,000
Net import reliance[7] as a percentage of apparent consumption	16	13	11	6	9

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

Import Sources (2007–10): Canada, 23%; European Union, 16%; China, 12%; Mexico, 10%; and other, 39%.

Tariff: Item	Number	Normal Trade Relations 12-31-11
Pig iron	7201.10.0000	Free.
Carbon steel:		
Semifinished	7207.12.0050	Free.
Hot-rolled, pickled	7208.27.0060	Free.
Sheets, hot-rolled	7208.39.0030	Free.
Cold-rolled	7209.18.2550	Free.
Galvanized	7210.49.0090	Free.
Bars, hot-rolled	7213.20.0000	Free.
Structural shapes	7216.33.0090	Free.
Stainless steel:		
Semifinished	7218.91.0015	Free.
Do.	7218.99.0015	Free.
Cold-rolled sheets	7219.33.0035	Free.
Bars, cold-finished	7222.20.0075	Free.
Pipe and tube	7304.41.3045	Free.

Depletion Allowance: Not applicable.

Government Stockpile: None.

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IRON AND STEEL

Events, Trends, and Issues: The expansion or contraction of gross domestic product (GDP) may be considered a predictor of the health of the steelmaking and steel manufacturing industries, worldwide and domestically. The World Bank's (WB) global GDP growth forecast for 2012 and 2013 was 3.6% each, after 3.2% in 2011. The WB forecast that the U.S. economy would expand in 2012 and 2013 at rates of 2.9% and 2.7%, respectively, after a rate of 2.6% in 2011.

According to the Institute of Supply Management (ISM), economic activity in the manufacturing sector expanded in September 2011 for the 26th consecutive month and the overall economy grew for the 28th consecutive month. The ISM manufacturing index fluctuated during the 12 months ending September 2011 between 50.6 and 61.4, while averaging 56.6, which corresponds to a 4.8% increase in real GDP. An index in excess of 42.5 for a period of time generally indicates an expansion of the overall economy.

MEPS (International) Inc. forecast total world steel production in 2011 to be up 7% from that in 2010. MEPS also forecast changes in steel production in 2011 in the European Union, South America, Asia (excluding China), the Commonwealth of Independent States (CIS), and Africa of 4%, 17%, 10%, 5%, and -13%, respectively. China accounted for about 45% of the world steel production.

According to the World Steel Association, world apparent steel consumption (ASC) was expected to increase by 5.4% in 2012, after increasing by 6.5% during 2011 to 1,398 million tons. In the developed world, ASC was expected to be 15% below the 2007 level, whereas in the emerging and developing countries, it was expected to be 44% above. China's ASC was expected to increase by 6% in 2012. ASC in India was expected to increase by 8% in 2012. ASC in the United States was expected to increase by 5% in 2012, while in the European Union, ASC was expected to increase by almost 3%.

World Production:

	Pig iron		Raw steel	
	2010	2011[e]	2010	2011[e]
United States	27	29	81	86
Brazil	25	34	33	36
China	590	650	627	700
France	10	9	15	16
Germany	29	29	44	46
India	39	38	67	72
Japan	82	81	110	110
Korea, Republic of	31	42	49	68
Russia	49	48	67	69
Ukraine	28	29	34	35
United Kingdom	7	7	10	10
Other countries	109	67	273	260
World total (rounded)	1,030	1,100	1,410	1,500

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 that have 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. Do. Ditto.

[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 in molten form to steelmaking furnaces located at the same site.

[3]U.S. Census Bureau.

[4]Defined as steel shipments + imports - exports + adjustments for industry stock changes - semifinished steel product imports.

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

[6]Metals Service Center Institute.

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