

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 2013 with an estimated valued of about \$116 billion. Pig iron was produced by 5 companies operating integrated steel mills in 13 locations. About 61 companies produce raw steel at about 110 minimills. Combined production capability was about 125 million tons. Indiana accounted for 26% of total raw steel production, followed by Ohio, 12%; Michigan, 6%; and Pennsylvania, 6%. The distribution of steel shipments was estimated to be warehouses and steel service centers, 25%; construction, 18%; transportation (predominantly automotive), 16%; cans and containers, 3%; and other, 38%.

Salient Statistics—United States:	2009	2010	2011	2012	2013^e
Pig iron production ²	19.0	26.8	30.2	32	31
Steel production	59.4	80.5	86.4	89	87
Basic oxygen furnaces, percent	38.2	38.7	39.7	41	40
Electric arc furnaces, percent	61.8	61.3	60.3	59	60
Continuously cast steel, percent	97.5	97.4	98.0	99	99
Shipments:					
Steel mill products	56.4	75.7	83.3	87	87
Steel castings ^{e,3}	0.4	0.4	0.4	0.4	0.4
Iron castings ^{e,3}	4.0	4.0	4.0	4.0	4.0
Imports of steel mill products	14.7	21.7	25.9	30.4	29
Exports of steel mill products	8.4	11.0	12.2	12.5	12
Apparent steel consumption ⁴	63	80	90	98	100
Producer price index for steel mill products (1982=100) ⁵	165.2	191.7	216.2	208.0	195
Steel mill product stocks at service centers yearend ⁶	5.6	7.0	7.6	7.3	7
Total employment, average, number					
Blast furnaces and steel mills	135,000	137,000	148,000	154,000	154,000
Iron and steel foundries ^e	86,000	86,000	86,000	86,000	86,000
Net import reliance ⁷ as a percentage of apparent consumption	11	6	7	11	13

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

Import Sources (2009–12): Canada, 22%; Mexico, 10%; the Republic of Korea, 10%; Brazil, 9%, and other, 49%.

Tariff:	Item	Number	Normal Trade Relations 12–31–13
	Pig iron	7201.00.0000	Free.
	Carbon steel:		
	Semifinished	7207.00.0000	Free.
	Sheets, hot-rolled	7208.10.0000	Free.
	Hot-rolled, pickled	7208.10.1500	Free.
	Cold-rolled	7209.00.0000	Free.
	Galvanized	7210.00.0000	Free.
	Bars, hot-rolled	7213.00.0000	Free.
	Structural shapes	7216.00.0000	Free.
	Stainless steel:		
	Semifinished	7218.00.0000	Free.
	Cold-rolled sheets	7219.31.0000	Free.
	Bars, cold-finished	7222.20.0000	Free.

Depletion Allowance: Not applicable.

Government Stockpile: None.

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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) forecast of global GDP growth for 2013, 2014, and 2015 was 2.2%, 3.0%, and 3.3%, respectively, after 2.5% in 2012. The U.S. Federal Reserve's projections for the U.S. 2014 GDP growth rate was between 3.0% and 3.5% and between 2.9% and 3.6% for 2015.

According to the Institute of Supply Management (ISM), economic activity in the domestic manufacturing sector expanded in October 2013 for the fifth consecutive month, and the overall U.S. economy grew for the 53rd consecutive month. The ISM manufacturing Purchasing Managers Index January through October 2013 corresponded to a 3.5% increase in real GDP.

MEPS International Inc. forecast total world steel production in 2014 to be 3.1% more than that in 2013. MEPS also forecast changes in steel production in 2014 in South America, Europe and the Commonwealth of Independent States, Africa and the Middle East, North America, and Asia of 19%, 13%, 7%, 4%, and -3%, respectively, relative to those of 2013.

A concern among the World's steelmakers is worldwide overcapacity. Steel demand decreased during the financial crisis of 2008, but capacity growth did not slow to match decreasing consumption growth rates. Since 2008, steelmaking capacity has exceeded apparent steel use, primarily as a result of China's rapid economic expansion and increasing steelmaking capacity. China's excess capacity and production has resulted in an inflow of steel products into the United States and other steelmaking countries that also have excess capacity. Also, demand by China's steelmakers has caused unprecedented increases of prices of iron ore and metallurgical coal that have hurt other steelmaking companies and their customers worldwide. The short-term outlook is that steelmaking capacity, globally and especially in China, will continue to exceed steel demand growth, steel prices will remain stable, and production costs will not decrease significantly.

World Production:

	Pig iron		Raw steel	
	<u>2012</u>	<u>2013^e</u>	<u>2012</u>	<u>2013^e</u>
United States	32	31	89	87
Brazil	27	26	35	35
China	658	720	717	783
Germany	27	27	43	42
India	48	50	78	80
Japan	81	84	107	110
Korea, Republic of	40	39	70	65
Russia	49	50	69	69
Taiwan	12	14	21	23
Turkey	*9	9	36	34
Ukraine	29	29	33	33
Other countries	*98	91	252	219
World total (rounded)	1,110	1,170	1,550	1,580

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.

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

³U.S. Census Bureau.

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

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

⁶Metals Service Center Institute.

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

*Corrections posted on January 17, 2015