IRON AND STEEL[1]

(Data in million metric tons of metal unless otherwise noted)

Domestic Production and Use: The U.S. iron and steel industry produced raw steel in 2020 with an estimated value of about $91 billion, an 12% decrease from $104 billion in 2019 and $103 billion in 2018. Pig iron and raw steel was produced by three companies operating integrated steel mills in 11 locations. Raw steel was produced by 51 companies at 98 minimills. Combined production capacity was about 110 million tons. Indiana accounted for an estimated 26% of total raw steel production, followed by Ohio, 12%; Michigan, 5%; and Pennsylvania, 5%, with no other State having more than 5% of total domestic raw steel production. Construction accounted for an estimated 46% of total domestic shipments by market classification, followed by transportation (predominantly automotive), 26%; machinery and equipment, 8%; energy, 6%; appliances, 5%; and other applications, 9%.

Salient Statistics—United States:	2016	2017	2018	2019	2020[e]
Pig iron production[2]	22.3	22.4	24.1	22.3	18.0
Raw steel production	78.5	81.6	86.6	87.8	72.0
Distribution of raw steel production, percent:					
Basic oxygen furnaces	33	32	32	30	30
Electric arc furnaces	67	68	68	70	70
Continuously cast steel	99.4	99.6	98.2	99.8	99.7
Shipments, steel mill products	78.5	82.5	86.4	87.3	71.0
Imports, steel mill products:					
Finished	23.9	26.8	23.3	19.1	14.0
Semifinished	6.1	7.8	7.3	6.2	6.1
Total	30.0	34.6	30.6	25.3	20.1
Exports, steel mill products:					
Finished	8.3	9.4	7.9	6.6	5.6
Semifinished	(3)	(3)	(3)	(3)	(3)
Total	8.4	9.6	8.0	6.7	5.7
Stocks, service centers, yearend[4]	6.6	7.0	7.3	7.4	6.0
Consumption, apparent (steel)[5]	93.0	98.4	102	100	82.0
Producer price index for steel mill products (1982=100)[6]	167.8	187.4	211.1	204.0	180.2
Employment, average, number:					
Iron and steel mills[6]	83,900	80,600	82,100	85,700	80,000
Steel product manufacturing[7]	56,300	54,300	56,700	57,800	54,000
Net import reliance[8] as a percentage of apparent consumption	16	17	15	12	12

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

Import Sources (2016–19): Canada, 18%; Brazil, 14%; Mexico, 11%; the Republic of Korea, 10%; and other, 47%.

Tariff: Item	Number	Normal Trade Relations 12–31–20
Carbon steel:		
Semifinished	7207.00.0000	Free.
Flat, hot-rolled	7208.00.0000	Free.
Flat, cold-rolled	7209.00.0000	Free.
Galvanized	7210.00.0000	Free.
Bars and rods, hot-rolled	7213.00.0000	Free.
Structural shapes	7216.00.0000	Free.
Stainless steel:		
Semifinished	7218.00.0000	Free.
Flat-rolled sheets	7219.00.0000	Free.
Bars and rods	7222.00.0000	Free.

Depletion Allowance: Not applicable.

Government Stockpile: None.

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IRON AND STEEL

Events, Trends, and Issues: The World Steel Association[9] forecast global finished steel consumption to decrease by 2.4% in 2020 as a result of the impacts related to reduced consumption and demand of manufactured products, new construction, and other consumable goods owing to the global COVID-19 pandemic. On a monthly basis, global steel demand reached its lowest point in April; however, the rate of economic recovery in various countries has been variable owing to differences in containment strategies, the domestic industry structure, and economic measures to combat slowing economic growth. A rebound in steel demand later in the year following easing of restrictions was not enough to offset early losses in consumption.

In April, multiple U.S.-based blast furnaces were idled owing to the reduced steel demand resulting from the COVID-19 pandemic; however, they all reopened in the second half of 2020. In August, one iron ore and iron metallics company announced it had entered into a definitive agreement to purchase two iron ore mines, six steelmaking facilities, eight finishing facilities, and three coal and cokemaking operations from another domestic iron and steel production company, making it the largest manufacturer of flat-rolled steel in North America.

World Production:

	Pig iron		Raw steel	
	2019	2020[e]	2019	2020[e]
United States	22	18	88	72
Brazil	26	23	32	28
China	809	830	996	1,000
Germany	25	21	40	33
India	74	56	111	84
Iran	3	3	32	35
Italy	5	4	23	19
Japan	75	61	99	81
Korea, Republic of	48	43	71	65
Mexico	4	3	19	15
Russia	50	49	72	69
Taiwan	15	14	22	21
Turkey	10	10	34	33
Ukraine	20	19	21	19
Vietnam	8	9	14	15
Other countries	86	85	190	210
World total (rounded)	1,280	1,200	1,860	1,800

World Resources: Not applicable. See Iron Ore and Iron and Steel Scrap for steelmaking raw-material resources.

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.
[1]Production and shipments data source is the American Iron and Steel Institute; see also Iron and Steel Scrap and Iron Ore.
[2]More than 95% of iron made is transported in molten form to steelmaking furnaces located at the same site.
[3]Less than ½ unit.
[4]Steel mill products. Source: Metals Service Center Institute.
[5]Defined as steel shipments + imports of finished steel mill products – exports of steel mill products + adjustments for industry stock changes.
[6]Source: U.S. Department of Labor, Bureau of Labor Statistics, North American Industry Classification System Code 331100.
[7]Source: U.S. Department of Labor, Bureau of Labor Statistics, North American Industry Classification System Code 331200.
[8]Defined as imports of finished steel mill products – total exports + adjustments for industry stock changes.
[9]World Steel Association, 2020, Short range outlook October 2020: Brussels, Belgium, World Steel Association press release, October 15, 7 p.