



2016 Minerals Yearbook

IRON AND STEEL SCRAP [ADVANCE RELEASE]

IRON AND STEEL SCRAP

By Michael D. Fenton

Domestic survey data and tables were prepared by Hoa P. Phamdang, statistical assistant.

In 2016, brokers, dealers, and other outside sources supplied domestic consumers with 45.7 million metric tons (Mt) of all types of ferrous scrap at an estimated delivered value of \$9.0 billion and exported 12.7 Mt valued at \$3.57 billion (tables 1, 8, 11). The steel industry has been recycling steel scrap for more than 150 years using electric arc furnaces (EAFs), which accounted for 67% of the total raw steel produced in 2016. U.S. raw steel production declined to 78.5 Mt in 2016 compared with 78.8 Mt in 2015 (American Iron and Steel Institute, 2017, p. 71).

Iron and steel scrap is a vital raw material in the production of new steel and cast-iron products. The steelmaking and foundry industries in the United States are highly dependent upon the ready availability of scrap from manufacturing operations and the recovery of obsolete products. Steel scrap recycling conserves energy, landfill space, and raw materials. The remelting of scrap requires much less energy than the production of iron and steel products from iron ore. Each year, steel recycling saves the energy equivalent of the electrical power needed for 1 year by approximately one-fifth of the houses in the United States (about 20 million homes). Consumption of iron and steel scrap by remelting reduces the burden on landfill disposal facilities and prevents the accumulation of abandoned steel products in the environment (James Woods, Senior Director, Steel Recycling Institute, unpub. data, January 8, 2016).

In the United States, the primary source of obsolete steel is recycled automobiles. By weight, the typical car consists of about 60% iron and steel. The steel used in the outer shell of car bodies is made of about 25% recycled steel. Each year, the steel industry recycles more than 18 Mt of steel from cars that are no longer fit for the road. This amount is equivalent to nearly 18 million new vehicles. About 7,000 vehicle dismantlers in North America resold parts processed through an estimated 300 car shredders (James Woods, Senior Director, Steel Recycling Institute, unpub. data, January 8, 2016).

Minimills, in which EAFs are used, consumed direct-reduced iron (DRI) to improve steel quality, and integrated steelmakers continued to use small quantities of DRI in blast furnaces as a process coolant. Minimills commonly use a feed mix that has various proportions of DRI, pig iron, and scrap. Raw steel production by U.S. minimills increased to 67.0 Mt in 2016, a 7% increase from that in 2015 (American Iron and Steel Institute, 2017, p. 71). U.S. DRI production was 1.81 Mt, a 65% increase from 1.10 Mt in 2015 (Midrex Technologies, Inc., 2017, p. 8).

Consumption

The U.S. Geological Survey derived the domestic data for ferrous scrap from voluntary monthly or annual surveys of U.S. scrap-consuming operations. About 61% of the known

manufacturers of pig iron and raw steel responded to the inquiries. Their responses represented approximately 31% of the 44.9 Mt of ferrous scrap consumed by this class of consumers (table 1). The remaining 69% of scrap consumption was estimated based on previously published reports. Of the iron foundries, manufacturers of steel castings, and miscellaneous users, about 44% of the surveyed establishments responded to the annual survey, which represented about 44% of scrap consumed by this class of consumers. Total consumption for these two classes of consumers included estimates based on statistical methods and prior reports plus actual survey responses. Survey data accounted for about 40% of total ferrous scrap consumption by all classes of scrap consumers.

In 2016, brokers, dealers, and other outside sources supplied domestic consumers with 45.7 Mt of all types of ferrous scrap at an estimated delivered value of \$9.0 billion and exported 12.6 Mt (excluding used rails for rerolling and other uses and ships, boats, and other vessels for scrapping) valued at \$3.5 billion (tables 1, 8, 11). The shares of raw steel produced by EAFs and basic oxygen furnaces were 67% and 33%, respectively. In 2016, continuous cast steel production represented 99% of total raw steel production, the same as that of 2015. Raw steel production capability decreased slightly to 111 Mt in 2016 from 112 Mt in 2015 (American Iron and Steel Institute, 2017, p. 73). The capacity utilization index increased to 70.5% in 2016 from 70.1% in 2015.

Steel mills received 88.4% of all scrap provided by brokers, dealers, and other outside sources; iron foundries received 9.2%, and steel foundries received 2.4% (table 1). Apparent total domestic consumption of ferrous scrap was 43.2 Mt as measured by net receipts (total external receipts minus shipments) and 7.6 Mt of home scrap production (table 2). Stocks of ferrous scrap at consumer plants increased by 8% to 4.7 Mt in 2016. Total domestic consumption of ferrous scrap, based on reported and estimated data, was 53.0 Mt, essentially unchanged from that of 2015. The total market for U.S.-produced scrap (net receipts plus exports minus imports) was 54.5 Mt in 2016, down slightly from 55.7 Mt in 2015. Total consumption of DRI was 4.8 Mt, 16% more than that of 2015 (table 1). Feedstock used in electric furnaces by all iron and steel product manufacturers consisted of scrap, 89%; pig iron, 7%; and DRI, 4% (table 4). Net shipments of all grades of steel mill products were about 78.5 Mt, essentially the same as those in 2015 (American Iron and Steel Institute, 2017, p. 23).

Prices

The average composite delivered price of No. 1 heavy-melting steel scrap in 2016, calculated from prices per long ton published monthly by American Metal Market, was \$195.84 per metric ton. The average monthly price ranged from a low of \$152.43 per metric ton in January to a high of

\$237.46 per metric ton in May after declining from an annual average high of \$410.99 in 2011 to \$212.97 in 2015 (table 8).

The average annual composite delivered price of No. 1 heavy-melting steel scrap, calculated from prices per long ton published weekly in the Iron Age Scrap Price Bulletin, was \$198.80 per metric ton; the average unit value ranged from a low of \$157.64 per metric ton in January to a high of \$241.95 per metric ton in May (Metal Bulletin Holdings LLC, 2016). Based on weekly quotations by Iron Age Scrap Price Bulletin for 18–8 (18% chromium, 8% nickel) stainless steel scrap (bundles and solids) delivered to consumers in the Pittsburgh, PA, area, the average price in 2016 was about \$1,085 per gross ton, a 16% decrease compared with that of 2015 (Metal Bulletin Holdings LLC, 2016).

The unit value of total ferrous scrap exports decreased by 11% to about \$281 per metric ton compared with that of 2015 (table 11). The unit value of total imports reduced by 10% to about \$245 per metric ton compared with that of 2015 (table 14).

Foreign Trade

In 2016, the U.S. trade surplus for all classes of ferrous scrap (including used rails for rerolling and other uses and ships, boats, and other vessels for scrapping) was 8.7 Mt valued at about \$2.6 billion (tables 11, 14). This represented a decrease of 5% in quantity and a decrease of 15% in value compared with the 2015 surplus of 9.2 Mt valued at \$3.1 billion.

World Review

Iron and steel scrap is an essential raw material for the steel and foundry industries. Because scrap comes from such sources as discarded cars, consumer durables, industrial machinery, manufacturing operations, and old buildings, the relatively mature industrialized economies were generally the leading exporters of scrap to lesser developed steelmaking countries.

The United States exported more iron and steel scrap in 2016 than any other country (12.6 Mt), followed by, in decreasing order of export tonnage, Japan (8.7 Mt), Germany (8.2 Mt), the United Kingdom (8.1 Mt), France (5.43 Mt), and Russia (5.41 Mt). The leading importing nations were, in decreasing order of import tonnage, Turkey (17.7 Mt), India (6.4 Mt), the Republic of Korea (5.8 Mt), Italy (4.4 Mt), and Belgium and Germany (4.1 Mt each) (World Steel Association, 2016, p. 108–109).

World capacity (operating, under construction, and under contract) for DRI production in 2016 was estimated to be about 126 million metric tons per year (Mt/yr) including about 14 Mt/yr of idled capacity. DRI production worldwide was estimated to have decreased by 11% to 59.7 Mt in 2016 from 67.4 Mt in 2015. The leading producer of DRI was India (18.5 Mt), followed by, in descending order of tonnage, Iran (16.0 Mt), Saudi Arabia (5.89 Mt), Russia (5.57 Mt), and Mexico (5.31 Mt). In 2016, additional DRI capacity of almost 21 Mt/yr was under construction in Algeria, India, Iran, Russia, the United States, and Venezuela. The leading technology was, according to declining order of production, the Midrex process, followed by coal-based and HYL/Energiron (Midrex Technologies, Inc., 2017, p. 11–14).

Outlook

The World Bank forecast of global gross domestic product (GDP) growth for 2017, 2018, 2019, and 2020 is 3.0%, 3.1%, 3.0%, and 2.9%, respectively, after 2.4% in 2016 (World Bank, The, 2018, p. 4). The U.S. Federal Reserve System's September 2017 projections for the U.S. GDP rate of growth are 2.4% for 2017, 2.1% for 2018, 2.0% for 2019, and 1.8% for 2020 (Board of Governors of the Federal Reserve System, 2018, p. 2). The 2016 rate of GDP growth in China was 6.7% and is projected to be 6.8% in 2017 and 6.4% in 2018. The rate of GDP growth for India was 7.1% in 2016 and is projected to be 6.7% in 2017 and 7.3% in 2018 (World Bank, The, 2018, p. 4).

World apparent steel consumption (ASC) is forecast to be 1,535 Mt in 2017 and 1,549 Mt in 2018, after consumption in 2016 was 1,515 Mt (World Steel Association, 2017). China's ASC is expected to decrease to 667 Mt in 2018 from 681 Mt in 2016. The ASC in India is expected to increase to 94.9 Mt in 2018 from 83.5 Mt in 2016. Increases in ASC are also anticipated in the Commonwealth of Independent States (to 51.9 Mt from 48.7 Mt), the European Union (to 160 Mt from 157 Mt), Japan (to 63.4 Mt from 62.2 Mt), and the United States (to 97.1 Mt from 96.6 Mt).

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TABLE 1
SALIENT U.S. IRON AND STEEL SCRAP, PIG IRON, AND DIRECT-REDUCED IRON STATISTICS¹

(Thousand metric tons and thousand dollars)

	2012	2013	2014	2015	2016
Manufacturers of pig iron and raw steel and castings:²					
Ferrous scrap consumption	55,800	52,100	51,800	46,100	44,900
Pig iron consumption	35,400	31,800	25,900	22,200	20,700
Direct-reduced iron consumption	3,580	4,490	4,790	4,130	4,780
Net receipts of ferrous scrap ³	48,200	45,200	46,600	41,400	40,400
Home scrap production ⁴	7,790	6,780	5,360	4,990	4,820
Ending stocks of ferrous scrap, December 31	3,770	3,620	3,760	3,890 ^r	4,040
Manufacturers of steel castings:⁵					
Ferrous scrap consumption	639	1,180	1,110	1,970	3,100
Pig iron consumption	9	63	80	72	67
Direct-reduced iron consumption	--	1	--	--	1
Net receipts of ferrous scrap ³	472	1,100	1,020	1,780	1,100
Home scrap production ⁴	189	142	138	125 ^r	1,950
Ending stocks of ferrous scrap, December 31	89	277	321	261 ^r	284
Iron foundries and miscellaneous users:⁵					
Ferrous scrap consumption	6,710	5,660	5,560 ^r	4,430 ^r	5,020
Pig iron consumption	1,980	2,260	2,100	633 ^r	1,620
Direct-reduced iron consumption	3	3	3	3	3
Net receipts of ferrous scrap ³	4,570 ^r	4,090 ^r	3,960 ^r	3,270 ^r	4,190
Home scrap production ⁴	2,180	1,540	1,620	1,160	1,010
Ending stocks of ferrous scrap, December 31	302	282	256	240	411
Total, all manufacturing types:					
Ferrous scrap consumption	63,100	58,900	58,500 ^r	52,500	53,000
Pig iron consumption	37,400	34,100	28,100	22,900	22,400
Direct-reduced iron consumption	3,580	4,490	4,800	4,130	4,780
Net receipts of ferrous scrap ³	53,300 ^r	50,400	51,600	46,400	45,700
Home scrap production ⁴	10,100	8,460	7,120	6,270	7,780
Ending stocks, December 31:					
Ferrous scrap at consumer plants	4,170 ^r	4,180	4,330	4,390	4,730
Pig iron at consumer and supplier plants	405 ^r	444	469	690	453
Direct-reduced iron at consumer plants	147	107	217	216	237
Exports:⁶					
Ferrous scrap (includes tinplate and terneplate):⁷					
Quantity	21,400	18,500	15,300	12,800	12,600
Value	9,430,000	7,570,000	6,150,000	4,010,000	3,550,000
Pig iron, all grades:					
Quantity	21	18	7	17	17
Value	8,110	4,440	2,290	5,450	4,200
Direct-reduced iron, steelmaking grade:					
Quantity	(8)	(8)	1	20	(8)
Value	56	29	132	548 ^r	21,600
Imports for consumption:⁶					
Ferrous scrap (includes tinplate and terneplate):⁷					
Quantity	3,720	3,930	4,220	3,510	3,860
Value	1,590,000	1,470,000	1,710,000	955,000	949,000
Pig iron, all grades:					
Quantity	4,270	4,120	4,600	4,530	3,870
Value	1,900,000	1,640,000	1,850,000	1,290,000	948,000
Direct-reduced iron, steelmaking grade:					
Quantity	2,470	2,240	2,390	1,860	1,600
Value	921,000	775,000	854,000	483,000	334,000

See footnotes at end of table.

TABLE 1—Continued
SALIENT U.S. IRON AND STEEL SCRAP, PIG IRON, AND DIRECT-REDUCED IRON STATISTICS¹

(Thousand metric tons and thousand dollars)

¹Revised. -- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to

²Includes manufacturers of raw steel that also produce steel castings.

³Net receipts of scrap is defined as receipts from brokers, dealers, and other outside sources plus receipts from other company-owned plants minus shipments.

⁴Includes recirculating scrap that results from current operations and obsolete home scrap.

⁵Some consumers in the “Manufacturers of steel castings” category also produce iron castings; some consumers in the “Iron foundries and miscellaneous users” category also produce steel castings.

⁶Data from U.S. Census Bureau. Export valuation is free alongside ship, and import valuation is customs value.

⁷Excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping.

⁸Less than ½ unit.

TABLE 2

U.S. CONSUMER RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS OF IRON AND STEEL SCRAP IN 2016, BY GRADE¹

(Thousand metric tons)

Grade	Receipts of scrap		Production of home scrap		Consumption of purchased and home scrap	Shipments of scrap	Ending stocks, December 31
	From brokers, dealers, and other outside sources	From other company-owned plants	Recirculating scrap from current operations	Obsolete scrap ²			
Manufacturers of pig iron and raw steel and castings:							
Carbon steel:							
Low-phosphorus plate and punchings	502	--	25	--	525	--	132
Cut structural and plate	3,430	77	319	--	3,790	W	301
No. 1 heavy-melting steel	3,330	159	528	W	3,980	49	255
No. 2 heavy-melting steel	4,000	43	328	W	4,360	W	208
No. 1 and electric furnace bundles	2,150	W	W	--	2,140	7	198
No. 2 and all other bundles	751	W	8	W	768	W	37
Electric furnace, 1 foot and under (not bundles)	1	--	W	--	61	W	--
Railroad rails	225	W	--	--	209	--	15
Turnings and borings	2,040	8	52	--	2,060	--	147
Slag scrap	564	W	812	--	908	W	142
Shredded or fragmentized	11,500	992	W	--	12,400	W	1,460
No. 1 busheling	4,810	60	221	W	5,150	W	319
Steel cans, postconsumer	84	--	W	--	116	--	2
All other carbon steel scrap	2,360	217	963	W	3,440	61	368
Stainless steel scrap	891	73	320	W	1,340	4	61
Alloy steel (except stainless)	323	W	194	--	518	W	177
Ingot mold and stool scrap	10	--	72	W	105	W	3
Machinery and cupola cast iron	30	W	--	--	31	W	W
Cast-iron borings	149	W	W	--	148	W	5
Motor blocks	5	--	--	--	5	--	--
Other iron scrap	1,060	47	291	--	1,380	61	84
Other mixed scrap	602	578	342	--	1,460	55	120
Total	38,900	2,290	4,710	104	44,900	709	4,040
Manufacturers of steel castings:							
Carbon steel:							
Low-phosphorus plate and punchings	1,020	W	41	W	1,070	1	222
Cut structural and plate	16	--	W	W	20	--	--
No. 1 heavy-melting steel	7	--	--	--	7	--	1
No. 2 heavy-melting steel	9	--	W	W	W	--	W
No. 1 and electric furnace bundles	W	--	--	--	W	--	W
No. 2 and all other bundles	--	--	--	--	--	--	--
Electric furnace, 1 foot and under (not bundles)	5	--	2	--	8	--	--
Railroad rails	W	--	W	--	W	--	W
Turnings and borings	27	W	3	--	32	--	2
Slag scrap	W	--	W	--	W	W	W
Shredded or fragmentized	20	--	--	--	20	--	--
No. 1 busheling	30	--	--	--	30	--	1
Steel cans, postconsumer	--	--	--	--	--	--	--
All other carbon steel scrap	6	W	11	--	17	--	--
Stainless steel scrap	23	1	842	4	870	1	28
Alloy steel (except stainless)	250	W	1,030	--	1,010	325	28
Ingot mold and stool scrap	W	--	W	--	W	--	W
Machinery and cupola cast iron	--	--	--	--	--	--	--
Cast-iron borings	--	--	W	W	W	--	W
Motor blocks	--	--	--	--	--	--	--
Other iron scrap	--	--	--	W	1	W	--
Other mixed scrap	W	--	--	--	W	--	W
Total	1,420	11	1,950	5	3,100	328	284

See footnotes at end of table.

TABLE 2—Continued

U.S. CONSUMER RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS OF IRON AND STEEL SCRAP IN 2016, BY GRADE¹

(Thousand metric tons)

Grade	Receipts of scrap		Production of home scrap		Consumption of purchased and home scrap	Shipments of scrap	Ending stocks, December 31
	From brokers, dealers, and other outside sources	From other company-owned plants	Recirculating scrap from current operations	Obsolete scrap ²			
Iron foundries and miscellaneous users:							
Carbon steel:							
Low-phosphorus plate and punchings	179	1	6	W	186	1	5
Cut structural and plate	554	221	67	24	865	1	23
No. 1 heavy-melting steel	77	W	W	--	119	--	1
No. 2 heavy-melting steel	82	--	W	--	83	--	4
No. 1 and electric furnace bundles	56	--	W	--	56	--	1
No. 2 and all other bundles	115	--	W	--	112	W	6
Electric furnace, 1 foot and under (not bundles)	80	--	--	--	80	--	1
Railroad rails	680	--	W	--	680	1	2
Turnings and borings	40	--	11	W	46	6	16
Slag scrap	--	--	W	W	W	W	W
Shredded or fragmented	666	--	21	W	696	--	37
No. 1 busheling	318	--	6	--	324	1	10
Steel cans, postconsumer	W	--	--	W	W	W	W
All other carbon steel scrap	79	--	57	--	134	1	4
Stainless steel scrap	2	W	1	W	2	--	1
Alloy steel (except stainless)	4	W	1	--	6	W	1
Ingot mold and stool scrap	W	W	W	--	W	W	W
Machinery and cupola cast iron	347	W	114	51	502	8	30
Cast-iron borings	117	13	8	--	97	W	41
Motor blocks	129	--	W	--	338	W	2
Other iron scrap	365	29	352	--	601	10	204
Other mixed scrap	32	7	26	W	63	W	7
Total	3,940	276	934	76	5,020	35	411
Grand total, all manufacturing types:							
Carbon steel:							
Low-phosphorus plate and punchings	1,700	8	72	--	1,780	1	359
Cut structural and plate	4,000	298	390	24	4,670	--	324
No. 1 heavy-melting steel	3,420	161	569	2	4,110	49	257
No. 2 heavy-melting steel	4,090	43	340	W	4,470	W	213
No. 1 and electric furnace bundles	2,210	W	W	--	2,200	7	199
No. 2 and all other bundles	865	W	W	W	880	3	43
Electric furnace, 1 foot and under (not bundles)	86	--	67	--	148	W	1
Railroad rails	906	W	1	--	890	1	17
Turnings and borings	2,110	10	67	W	2,140	6	165
Slag scrap	567	W	823	W	920	451	143
Shredded or fragmented	12,200	992	155	W	13,100	W	1,500
No. 1 busheling	5,150	60	227	W	5,500	--	330
Steel cans, postconsumer	89	W	W	W	121	--	2
All other carbon steel scrap	2,440	217	1,030	13	3,590	62	373
Stainless steel scrap	916	73	1,160	49	2,210	5	91
Alloy steel (except stainless)	578	3	1,230	--	1,530	330	206
Ingot mold and stool scrap	27	W	73	W	123	5	14
Machinery and cupola cast iron	377	W	114	51	534	8	31
Cast-iron borings	265	13	10	W	245	--	47
Motor blocks	134	--	W	--	342	--	2
Other iron scrap	1,420	76	644	W	1,980	71	289
Other mixed scrap	634	585	368	W	1,530	56	127
Total	44,200	2,570	7,600	185	53,000	1,070	4,730

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.²Includes ingot molds, stools, and scrap from old equipment and buildings.

TABLE 3
U.S. CONSUMER RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS OF PIG IRON
AND DIRECT-REDUCED IRON IN 2016¹

(Thousand metric tons)

	Receipts	Production	Consumption	Shipments	Stocks, December 31
Manufacturers of pig iron, raw steel, and castings:					
Pig iron	3,390 ²	17,100	20,700	4	395
Direct-reduced iron (DRI)	1,890	W	4,780	W	236
Manufacturers of steel castings:					
Pig iron	63	W	67	W	16
DRI	1	--	1	--	(3)
Iron foundries and miscellaneous users:					
Pig iron	1,640	(3)	1,620	17	42
DRI	W	--	3	--	(3)

W Withheld to avoid disclosing company proprietary data; included in "Total, all manufacturing types." -- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes 1.28 million metric tons purchased by electric furnace steel producers.

³Less than ½ unit.

TABLE 4
U.S. CONSUMPTION OF IRON AND STEEL SCRAP, PIG IRON, AND DIRECT-REDUCED IRON IN 2016,
BY TYPE OF FURNACE OR OTHER USE¹

(Thousand metric tons)

Type of furnace	Manufacturers of pig iron and raw steel and castings			Manufacturers of steel castings			Iron foundries and miscellaneous users			Total, all manufacturing types		
	Scrap	Pig iron	DRI ²	Scrap	Pig iron	DRI ²	Scrap	Pig iron	DRI ²	Scrap	Pig iron	DRI ²
Blast furnace	2,070	--	--	--	--	--	--	--	--	2,070	--	--
Basic oxygen process	4,570	18,600	3,070	--	--	--	--	--	--	4,570	18,600	3,070
Electric furnace	38,200	2,090	1,710	1,500	67	1	3,500	1,470	3	43,200	3,620	1,710
Cupola furnace	49	--	--	--	--	--	1,530	155	--	1,580	155	--
Other ³	--	--	--	1,610	--	--	--	--	--	1,610	--	--
Total	44,900	20,700	4,780	3,100	67	1	5,020	1,620	3	53,000	22,400	4,780

-- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Direct-reduced iron.

³Includes air furnaces.

TABLE 5
IRON AND STEEL SCRAP SUPPLY AVAILABLE FOR CONSUMPTION IN 2016, BY REGION AND STATE^{1,2}

(Thousand metric tons)

Region and State	Receipts of scrap		Production of home scrap			New supply available for consumption
	From brokers, dealers, and other outside sources	From other company-owned plants	Recirculating scrap resulting from current operations	Obsolete scrap ³	Shipments of scrap ⁴	
New England and Middle Atlantic:						
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	17	--	6	W	W	23
New Jersey and New York	832	(5)	28	(5)	W	W
Pennsylvania	3,100	61	701	W	12	W
Total	3,940	61	734	81	16	4,800
North Central:						
Illinois	1,280	(5)	97	35	13	1,400
Indiana	3,850	199	466	--	(5)	4,520
Iowa, Nebraska, South Dakota	2,130	41	106	(5)	W	W
Kansas and Missouri	16	5	19	--	W	W
Michigan	2,140	134	1,130	(5)	502	2,900
Minnesota	260	12	121	--	W	W
Ohio	5,490	253	1,130	29	139	6,770
Wisconsin	1,070	2	2,220	4	330	2,960
Total	16,200	649	5,290	68	986	21,300
South Atlantic:						
Florida and Georgia	W	--	W	--	W	599
Maryland	W	--	W	--	--	1
North Carolina and South Carolina	2,730	W	221	(5)	W	2,950
Virginia and West Virginia	908	W	W	(5)	1	1,320
Total	4,210	378	276	1	1	4,870
South Central:						
Alabama and Mississippi	5,430	W	304	W	W	5,750
Arkansas, Louisiana, Oklahoma	3,820	W	382	W	--	4,380
Kentucky and Tennessee	4,060	443	280	--	W	W
Texas	3,060	402	109	W	18	W
Total	16,400	1,010	1,080	34	26	18,500
Mountain and Pacific:						
Arizona, Colorado, Idaho, Montana, Utah	1,570	W	W	W	W	1,720
California, Oregon, Washington	1,890	W	W	W	W	2,390
Total	3,470	478	215	1	42	4,120
Grand total	44,200	2,570	7,600	185	1,070	53,500

W Withheld to avoid disclosing company proprietary data; included in "Total" or "New supply available for consumption." -- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Supply available for consumption is a net figure computed by adding production to receipts and deducting scrap shipped during the year. The difference in stock levels at the beginning and end of the year is not taken into consideration.

³Includes ingot molds, stools, and scrap from old equipment, buildings, and so forth.

⁴Includes scrap shipped, transferred, or otherwise disposed of during the year.

⁵Less than ½ unit.

TABLE 6
U.S. CONSUMPTION OF IRON AND STEEL SCRAP AND PIG IRON IN 2016, BY REGION AND STATE^{1,2,3}

(Thousand metric tons)

Region and State	Manufacturers of pig iron and raw steel and castings		Manufacturers of steel castings		Iron foundries and miscellaneous users		Total, all manufacturing types	
	Scrap	Pig iron	Scrap	Pig iron	Scrap	Pig iron	Scrap	Pig iron
New England and Middle Atlantic:								
Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont	788	--	1	--	88	7	877	8
Pennsylvania	3,600	2,000	142	(4)	168	16	3,910	2,020
Total	4,390	2,000	143	(4)	256	23	4,790	2,030
North Central:								
Illinois	1,170	71	3	1	224	29	1,400	100
Indiana	4,220	8,100	15	(4)	255	56	4,490	8,150
Iowa, Kansas, Minnesota, Missouri, Nebraska, South Dakota, Wisconsin	2,950	37	1,840	(4)	921	211	5,710	248
Michigan	2,270	4,240	27	--	570	33	2,870	4,280
Ohio	6,290	3,220	66	(4)	430	47	6,780	3,260
Total	16,900	15,700	1,960	1	2,400	374	21,300	16,000
South Atlantic:								
Maryland, Virginia, West Virginia	W	W	(4)	(4)	W	W	1,300	1
Florida, Georgia, North Carolina, South Carolina	W	W	(4)	--	W	W	3,500	307
Total	4,370	158	1	(4)	433	149	4,800	308
South Central:								
Alabama, Kentucky, Mississippi, Tennessee	8,280	W	W	W	1,610	1,060	W	3,540
Arkansas, Louisiana, Oklahoma	4,390	W	W	--	6	2	W	W
Texas	3,100	W	37	W	116	14	3,250	52
Total	15,800	2,880	576	65	1,730	1,070	18,100	4,010
Mountain and Pacific:								
Arizona, Colorado, Idaho, Montana, Utah	W	10	2	(4)	56	(4)	W	10
California, Oregon, Washington	W	--	425	(4)	145	3	W	3
Total	3,490	10	427	(4)	202	3	4,120	13
Grand total	44,900	20,700	3,100	67	5,020	1,620	53,000	22,400

W Withheld to avoid disclosing company proprietary data; included in "Total" or "Total, all manufacturing types." -- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes recirculating scrap resulting from current operations and home-generated obsolete scrap.

³Includes molten pig iron used for ingot molds and direct castings.

⁴Less than ½ unit.

TABLE 7
U.S. CONSUMER STOCKS OF IRON AND STEEL SCRAP AND PIG IRON, DECEMBER 31, 2016, BY REGION AND STATE¹

(Thousand metric tons)

Region and State	Scrap					Total scrap	Pig iron
	Carbon steel ²	Stainless steel	Alloy steel ³	Cast iron ⁴	Other grades		
New England and Middle Atlantic:							
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	(5)	W	--	(5)	W	(5)	(5)
New Jersey and New York	54	W	--	(5)	W	55	1
Pennsylvania	147	15	17	8	1	187	1
Total	200	15	17	8	1	242	2
North Central:							
Illinois	88	W	W	2	W	93	20
Indiana	374	3	8	11	W	399	148
Iowa, Kansas, Missouri, Nebraska, South Dakota	67	W	W	2	W	72	4
Michigan	78	(5)	1	52	57	188	4
Minnesota and Wisconsin	31	3	27	3	7	71	4
Ohio	424	33	29	56	W	W	67
Total	1,060	39	65	127	W	W	247
South Atlantic:							
Maryland, Virginia, West Virginia	46	--	(5)	W	W	60	W
Florida, Georgia, North Carolina, South Carolina	335	(5)	(5)	W	W	366	W
Total	381	(5)	(5)	23	23	427	23
South Central:							
Alabama, Kentucky, Mississippi, Tennessee	572	W	--	149	W	749	109
Arkansas, Louisiana, Oklahoma	729	W	121	W	--	W	60
Texas	825	14	(5)	11	W	850	10
Total	2,130	36	122	W	6	W	179
Mountain and Pacific:							
Arizona, Colorado, Idaho, Montana, Utah	76	(5)	(5)	54	W	W	W
California, Oregon, Washington	79	(5)	1	9	W	W	W
Total	155	1	2	63	W	W	3
Grand total	3,930	91	206	381	127	4,730	453

W Withheld to avoid disclosing company proprietary data; included in "Total" or "Total scrap." -- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Does not include rerolling rails.

³Does not include stainless steel.

⁴Includes borings.

⁵Less than ½ unit.

TABLE 8
U.S. AVERAGE MONTHLY PRICE AND COMPOSITE PRICE FOR
NO. 1 HEAVY-MELTING STEEL, WITH ANNUAL AVERAGES¹

(Dollars per metric ton)

Period	Chicago, IL	Philadelphia, PA	Pittsburgh, PA	Composite price
2015, average	214.34 ^r	209.68	214.88 ^r	212.97 ^r
2016:				
January	144.52	156.44	156.33	152.43
February	147.63	157.47	159.44	154.85
March	177.58	161.97	159.44	166.33
April	217.93	202.23	199.93	206.70
May	242.30	247.46	222.62	237.46
June	229.95	214.82	214.29	219.69
July	218.49	190.74	206.09	205.11
August	216.53	187.00	213.28	205.60
September	201.53	175.75	203.31	193.53
October	180.91	161.09	187.14	176.38
November	195.61	182.08	214.16	197.28
December	231.76	224.72	247.70	234.73
Average	200.40	188.48	198.64	195.84

^rRevised.

¹Calculated by the U.S. Geological Survey from prices published in American Metal Market.

TABLE 9
U.S. EXPORTS OF IRON AND STEEL SCRAP, BY COUNTRY OR LOCALITY^{1,2,3}

(Thousand metric tons and thousand dollars)

Country or locality	2015		2016	
	Quantity	Value	Quantity	Value
Argentina	2	906	1	604
Australia	(4)	264	1	209
Austria	3	4,590	1	1,120
Bahamas, The	(4)	5	1	533
Bahrain	8	107	(4)	53
Bangladesh	126	33,700	296	63,900
Belgium	8	14,000	9	10,800
Brazil	(4)	341	22	5,910
Canada	674	168,000	717	131,000
Chile	1	1,990	(4)	130
China	699	656,000 ^r	889	661,000
Colombia	22	5,910	--	--
Dominican Republic	7	1,350	2	554
Ecuador	104	19,000	40	9,210
Egypt	190	49,800	120	29,300
Finland	8	7,720	(4)	24
France	(4)	811	1	929
Germany	4	2,580	3	2,900
Greece	82	18,500	203	42,100
Hong Kong	64	56,900	42	30,100
India	1,110	360,000 ^r	1,100	316,000
Indonesia	25	8,660	60	17,300
Italy	36	10,700	2	1,720
Japan	45	48,600	54	35,200
Korea, Republic of	1,090	311,000 ^r	853	212,000
Kuwait	192	43,800	442	104,000
Malaysia	35	11,200	35	12,000
Mexico	1,150	283,000	1,480	340,000
Morocco	72	14,700	--	--
Netherlands	5	5,140	8	6,470
Pakistan	357	147,000	452	167,000
Peru	335	84,700	394	85,800
Philippines	1	428	1	427
Saudi Arabia	177	49,500	50	10,600
Singapore	31	8,170	1	647
Spain	18	24,600	1	1,050
Sweden	4	5,460	3	3,780
Taiwan	1,410	445,000	1,350	370,000
Thailand	378	96,800	430	96,500
Tunisia	12	2,500	--	--
Turkey	3,960	923,000	3,180	687,000
Uganda	7	1,190	--	--
United Arab Emirates	13	5,040	15	5,250
United Kingdom	3	2,750	2	1,280
Vietnam	290	68,900	370	82,400
Other	6 ^r	3,350 ^r	3	1,240
Total ⁵	12,800	4,010,000	12,600	3,550,000

^rRevised. -- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping.

³Export valuation is free alongside ship.

⁴Less than ½ unit.

⁵The United States exported scrap to 84 countries and (or) localities in 2015 and to 75 countries and (or) localities in 2016.

Source: U.S. Census Bureau.

TABLE 10
U.S. EXPORTS OF IRON AND STEEL SCRAP,
BY CUSTOMS DISTRICT^{1,2,3}

(Thousand metric tons and thousand dollars)

Customs district	2015		2016	
	Quantity	Value	Quantity	Value
Baltimore, MD	230 ^r	81,400	341	106,000
Boston, MA	695 ^r	164,000	876	198,000
Buffalo, NY	108	36,300	191	35,600
Charleston, SC	65	56,600	68	40,500
Chicago, IL	1	1,020	1	517
Cleveland, OH	1	472 ^r	1	597
Columbia-Snake, OR	519	121,000	568	126,000
Detroit, MI	209	55,000	188	40,100
Duluth, MN	13	3,980	7	3,330
El Paso, TX	41	9,660	92	21,100
Great Falls, MT	7	1,450	11	2,620
Honolulu, HI	109	24,300	103	20,500
Houston-Galveston, TX	606 ^r	215,000	342	130,000
Laredo, TX	425 ^r	118,000	448	109,000
Los Angeles, CA	2,270	915,000	2,150	752,000
Miami, FL	285	101,000	316	97,300
Mobile, AL	141	45,900	54	13,900
New Orleans, LA	32	25,800	35	14,600
New York, NY	2,210	665,000	2,090	597,000
Norfolk, VA	216	113,000	211	121,000
Ogdensburg, NY	11	3,570	14	1,860
Pembina, ND	173	41,600	94	20,800
Philadelphia, PA	714	174,000	913	201,000
Portland, ME	76	15,000	135	28,000
Providence, RI	584	138,000	536	118,000
San Diego, CA	136 ^r	29,800	284	58,300
San Francisco, CA	1,620	452,000	1,360	328,000
San Juan, PR	152	35,200	106	25,100
Savannah, GA	113	66,300	136	76,600
Seattle, WA	614 ^r	187,000	540	161,000
St. Albans, VT	20	4,820 ^r	64	6,990
Tampa, FL	291 ^r	88,300	282	77,200
Wilmington, NC	6 ^r	9,060	4	3,660
Other	65 ^r	9,440 ^r	76	10,700
Total	12,800	4,010,000	12,600	3,550,000

^rRevised.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping.

³Export valuation is free alongside ship.

Source: U.S. Census Bureau.

TABLE 11
U.S. EXPORTS OF IRON AND STEEL SCRAP, BY GRADE^{1,2}

(Thousand metric tons and thousand dollars)

Grade	2015		2016	
	Quantity	Value	Quantity	Value
No. 1 heavy-melting scrap	3,630	868,000	3,670	833,000
No. 2 heavy-melting scrap	656	157,000	529	120,000
No. 1 bundles	242	68,800	90	20,800
No. 2 bundles	7	1,160	5	982
Shredded steel scrap	4,240	1,030,000	4,350	976,000
Borings, shovelings, and turnings	8	2,080	6	1,330
Cut plate and structural	818	222,000	563	145,000
Tinned iron or steel	81 ^r	23,200	61	16,400
Remelting scrap ingots	10	8,070	8	5,830
Stainless steel scrap	514	639,000 ^r	654	442,000
Other alloy steel scrap	548	271,000	765	354,000
Other steel scrap ³	1,840	659,000 ^r	1,780	573,000
Iron scrap	165	62,700	159	58,700
Total	12,800	4,010,000	12,600	3,550,000
Ships, boats, and other vessels for scrapping	4	641	3	435
Used rails for rerolling and other uses ⁴	35	45,300	16	18,600
Grand total	12,800	4,060,000 ^r	12,700	3,570,000

^rRevised.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Export valuation is free alongside ship.

³Includes tinplate and terneplate.

⁴Includes mixed (used plus new) rails. More information can be found in table 15.

Source: U.S. Census Bureau.

TABLE 12
U.S. IMPORTS FOR CONSUMPTION OF IRON AND STEEL SCRAP,
BY COUNTRY OR LOCALITY^{1,2,3}

(Thousand metric tons and thousand dollars)

Country or locality	2015		2016	
	Quantity	Value	Quantity	Value
Bahamas, The	1 ^r	215 ^r	2	273
Belgium	(4)	11	(4)	189
Brazil	4	3,340	1	591
Canada	2,790	703,000	2,800	656,000
Cayman Islands	(4) ^r	110	(4)	6
Chile	4	1,980	(4)	91
China	2	1,130	2	746
Colombia	1	835	(4)	121
Dominican Republic	(4)	78	(4)	97
Ecuador	(4)	146	(4)	50
Egypt	1	651	(4)	389
Germany	2	311	26	5,780
Honduras	(4)	162	(4)	97
Israel	(4)	43	(4)	11
Italy	(4)	27	(4)	239
Japan	1	661	1	652
Korea, Republic of	4	1,090	(4)	19
Malaysia	(4)	234	(4)	88
Mexico	234	101,000	229	95,900
Netherlands	109	29,700	180	39,700
Panama	1	216	(4)	180
Russia	2	458	(4)	29
Singapore	(4)	46	(4)	11
Sweden	173	48,300	259	60,500
Taiwan	(4)	377	(4)	264
Turkey	(4)	396	(4)	65
United Kingdom	184	57,700	355	83,200
Other	2 ^r	2,810 ^r	9	3,210
Total ⁵	3,510	955,000	3,860	949,000

^rRevised.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping.

³Import valuation is customs values.

⁴Less than ½ unit.

⁵The United States imported scrap from 61 countries and (or) localities in 2015 and 54 countries and (or) localities in 2016.

Source: U.S. Census Bureau.

TABLE 13
U.S. IMPORTS FOR CONSUMPTION OF IRON AND STEEL SCRAP,
BY CUSTOMS DISTRICT^{1,2,3}

(Thousand metric tons and thousand dollars)

Customs district	2015		2016	
	Quantity	Value	Quantity	Value
Baltimore, MD	(4)	110	1	234
Buffalo, NY	475	174,000	453	147,000
Charleston, SC	200	56,200	276	62,100
Chicago, IL	21	1,730	(4)	28
Cleveland, OH	(4)	258	19	1,120
Detroit, MI	1,330	335,000	1,370	334,000
Duluth, MN	76	16,400	96	20,800
El Paso, TX	27	13,900	29	9,860
Great Falls, MT	32	7,670	29	5,920
Houston-Galveston, TX	5	5,100	2	2,470
Laredo, TX	139	60,900	136	60,000
Los Angeles, CA	5	2,410	1	847
Miami, FL	2	641	4	816
Mobile, AL	122	39,600	162	44,000
New Orleans, LA	177	55,700	416	98,900
New York, NY	3	2,030	1	1,010
Nogales, AZ	10	3,290	8	2,500
Norfolk, VA	1	146	(4)	101
Ogdensburg, NY	37	12,900	18	5,310
Pembina, ND	110	28,200	160	33,100
Philadelphia, PA	1	293	1	375
Portland, ME	2	1,170	5	1,710
San Diego, CA	29	9,180	21	7,460
San Juan, PR	(4) ^r	14 ^r	2	275
Savannah, GA	3	1,340	(4)	499
Seattle, WA	676	120,000	610	100,000
St. Albans, VT	27	6,360	39	7,450
Tampa, FL	(4)	128	(4)	125
Other	1 ^r	175 ^r	3	279
Total	3,510	955,000	3,860	949,000

^rRevised.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping.

³Import valuation is customs values.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 14
U.S. IMPORTS FOR CONSUMPTION OF IRON AND STEEL SCRAP, BY CLASS^{1,2}

(Thousand metric tons and thousand dollars)

Class	2015		2016	
	Quantity	Value	Quantity	Value
No. 1 heavy-melting scrap	187	40,600	147	28,200
No. 2 heavy-melting scrap	137	29,600	95	19,300
No. 1 bundles	868 ^r	228,000	1,030	243,000
No. 2 bundles	67	16,000	69	15,200
Shredded steel scrap	476	102,000	716	146,000
Borings, shovelings, and turnings	56	10,100	46	7,550
Cut plate and structural	177	40,400	186	37,600
Tinned iron or steel	69	15,100	89	16,700
Remelting scrap ingots	(3)	154	(3)	80
Stainless steel scrap	192	164,000	263	182,000
Other alloy steel scrap	613	156,000	608	137,000
Other steel scrap ⁴	535	123,000	468	89,100
Iron scrap	135	29,200 ^r	144	27,000
Total	3,510	955,000	3,860	949,000
Ships, boats, and other vessels for scrapping	(3)	256	(3)	509
Used rails for rerolling and other uses ⁵	103	29,900	95	22,800
Grand total	3,620	985,000	3,960	972,000

^rRevised.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Import valuation is customs value.

³Less than ½ unit.

⁴Includes tinplate and terneplate.

⁵Includes mixed (used plus new) rails. More information can be found in table 16.

Source: U.S. Census Bureau.

TABLE 15
U.S. EXPORTS OF USED RAILS FOR REROLLING AND OTHER USES,
BY COUNTRY OR LOCALITY^{1,2}

Country or locality	2015		2016	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Argentina	--	--	18	\$57
Aruba	--	--	1	3
Australia	1,300	\$1,960	1,240	1,700
Bahamas, The	64	362	1	5
Barbados	7	81	1	10
Belgium	6	22	21	66
Bermuda	2	27	1	15
Brazil	6,960	5,710	714	489
Cayman Islands	5	18	1	10
Chile	31	123	255	230
China	255	1,250	116	242
Colombia	24	41	42	108
Costa Rica	3	25	18	32
Dominican Republic	33	340	225	234
Finland	--	--	1	10
France	1	11	15	21
Germany	3	3	10	35
Guatemala	22	57	--	--
Guyana	--	--	22	61
India	4	26	(3)	5
Indonesia	--	--	(3)	22
Jamaica	16 ^r	197	--	--
Japan	--	--	9	191
Korea, Republic of	2	25	--	--
Kuwait	--	--	63	265
Macau	--	--	2	91
Malaysia	171	66	--	--
Mauritania	10	18	--	--
Mexico	26,400	32,700	12,900	14,300
Netherlands	1	47	(3)	12
New Zealand	--	--	2	23
Oman	--	--	18	27
Panama	13	91	111	92
Peru	--	--	7	5
Russia	13	18	--	--
Singapore	2	62	1	14
Saint Kitts and Nevis	32	52	21	40
Saint Vincent and the Grenadines	2	15	(3)	3
Saudi Arabia	1	5	--	--
South Africa	--	--	2	53
Taiwan	39	13	146	82
Thailand	(3)	3	1	24
Trinidad and Tobago	110	136	(3)	6
United Arab Emirates	--	--	5	32
United Kingdom	6	1,220	3	20
Venezuela	7	598	10	5
Other	1 ^r	28 ^r	1	11
Total	35,500	45,300	16,000	18,600

^rRevised. -- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Export valuation is free alongside ship.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 16
U.S. IMPORTS FOR CONSUMPTION OF USED RAILS FOR REROLLING
AND OTHER USES, BY COUNTRY OR LOCALITY^{1,2}

Country or locality	2015		2016	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Austria	37	\$87	8	\$20
Belgium	245	350	23	39
Canada	92,000	22,400	91,900	20,200
China	6,270	4,780	3,360	2,240
Czechia	--	--	8	9
Germany	142	360	11	28
India	--	--	1	7
Japan	69	97	45	81
Korea, Republic of	3	11	--	--
Luxembourg	17	57	--	--
Mexico	2	6	15	27
New Zealand	2	8	1	4
Russia	4,400	1,750	--	--
Spain	--	--	52	107
Taiwan	--	--	3	8
United Kingdom	2	5	1	4
Other	3	12	(3)	11
Total	103,000	29,900	95,400	22,800

-- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Import valuation is customs value.

³Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 17
U.S. EXPORTS OF DIRECT-REDUCED IRON, BY COUNTRY OR LOCALITY^{1,2}

Country or locality	2015		2016	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Canada	5,190	\$471	1,420	\$58
China	--	--	45,300	78
El Salvador	2,000	5	--	--
Germany	--	--	22,700	136
Malaysia	--	--	426	4
Russia	--	--	10,600	27
Saudi Arabia	13,000	73	--	--
Singapore	--	--	1,000	4
Slovenia	--	--	89,600	21,300
Taiwan	--	--	6,700	19
Total	20,200	548 ^r	178,000	21,600

^rRevised. -- Zero.

¹Table includes data available July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Data are for steelmaking-grade direct-reduced iron only.

Source: U.S. Census Bureau.

TABLE 18
U.S. IMPORTS FOR CONSUMPTION OF DIRECT-REDUCED IRON,
BY COUNTRY OR LOCALITY^{1,2}

Country or locality	2015		2016	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Brazil	18,000	\$4,400	19,700	\$5,860
Canada	170	53	324	81
China	907	53	--	--
Russia	20,000	5,000	96,500	19,200
South Africa	51,600	6,540	--	--
Trinidad and Tobago	1,690,000	445,000	1,470,000	305,000
Ukraine	42,300	10,600	14,000	3,850
Venezuela	39,100	12,000	--	--
Total	1,860,000	483,000	1,600,000	334,000

-- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Data are for steelmaking-grade direct-reduced iron only.

Source: U.S. Census Bureau.

TABLE 19
U.S. EXPORTS OF PIG IRON, BY COUNTRY OR LOCALITY^{1,2}

Country or locality	2015		2016	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Canada	2,390	\$720	9,610	\$2,690
China	100	33	19	6
Dominican Republic	25	13	--	--
France	373	241	17	10
Germany	313	171	46	22
India	340	112	--	--
Indonesia	6	19	--	--
Italy	2,550	224	140	12
Mexico	7,780	2,960	5,090 ³	1,140 ³
Netherlands	3	4	23	8
Singapore	41	14	175	51
United Arab Emirates	895 ^r	79	1,220	107
United Kingdom	2,160	716	64	25
Uruguay	93	31	144	51
Other	203 ^r	114 ^r	143	76
Total	17,300	5,450	16,700	4,200

^rRevised. -- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes the following grades of pig iron: less than or equal to 0.5% phosphorus content, greater than 0.5% phosphorus content, and alloy grade. Export valuation is free alongside ship value.

³Data adjusted by the U.S. Geological Survey.

Source: U.S. Census Bureau.

TABLE 20
U.S. IMPORTS FOR CONSUMPTION OF PIG IRON, BY COUNTRY OR LOCALITY^{1,2}

Country or locality	2015		2016	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Brazil	1,550,000	\$449,000	705,000	\$166,000
Canada	15,900	7,130	45,500	14,100
Chile	18	8	--	--
China	71	37	83	44
Denmark	39	43	339	409
Germany	2,040	882	5,020	1,550
India	--	--	3	4
Indonesia	2,990	2,810	--	--
Japan	--	--	1	2
Latvia	--	--	52,500	15,800
Russia	2,280,000	615,000	2,220,000	538,000
South Africa	200,000	74,200	95,500	28,300
Switzerland	1,960	743	54,400	10,500
Ukraine	476,000	142,000	685,000	173,000
Total	4,530,000	1,290,000	3,870,000	948,000

-- Zero.

¹Table includes data available through July 11, 2018. Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes the following grades of pig iron: less than or equal to 0.5% phosphorus content, greater than 0.5% phosphorus content, and alloy grade. Import valuation is customs value.

Source: U.S. Census Bureau.