



2010 Minerals Yearbook

IRON AND STEEL SCRAP [ADVANCE RELEASE]

IRON AND STEEL SCRAP

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Steel scrap recycling conserves energy, landfill space, and raw materials. In 2010, the domestic steel industry recycled or exported for recycling nearly 69 million metric tons (Mt) of appliances, automobiles, cans, construction materials, and other steel products (G.L. Crawford, Steel Recycling Institute, unpub. data, January 11, 2011). This resulted in an overall recycling rate of about 88%. The remelting of scrap requires much less energy than does 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 18 million houses). 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.

Iron and steel scrap is a vital raw material for 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 from the recovery of products that are no longer used or needed. The steel industry has been recycling steel scrap for more than 170 years, using electric arc furnaces (EAF), which accounted for about 61% of the total raw steel produced in 2010. Consistent with international usage and Federal Government policy, the U.S. Geological Survey (USGS) reports all data on iron and steel in metric units, unless otherwise noted.

In the United States, the primary source of obsolete steel is the automobile. By weight, the typical car consists of about 65% iron and steel. The steel used in the outside shell of car bodies is made of about 29% recycled steel (G.L. Crawford, Steel Recycling Institute, unpub. data, January 11, 2011). The steel industry recovered and recycled almost 14 Mt of iron and steel from about 10.8 million end-of-life vehicles in 2010, processed through more than 300 car shredders. The recycling rate for automotive scrap was 113% in 2010. A recycling rate greater than 100% is a result of the steel industry recycling more steel from automobiles than was used in the production of new vehicles. About 8,300 vehicle dismantlers in North America resold parts.

The annual average recycling rate of obsolete appliance scrap continued at a high of about 90% in 2010, the same as that of 2009 (G.L. Crawford, Steel Recycling Institute, unpub. data, November 1, 2011). During 2010, almost 2.7 Mt of steel was recovered from recycled appliances, an increase of about 5% compared with that of 2009. The typical appliance consists of about 68% steel, and the steel used in appliances is made with a minimum of 29% recycled steel. The recycling rate of steel containers increased to more than 67% in 2010 from 15% in 1983 (G.L. Crawford, Steel Recycling Institute, unpub. data, November 1, 2011). More than 1.4 Mt of steel containers was recycled. The estimated rate of recycling of structural beams and plates in 2004 through 2010 was about 98%, an increase from

85% in 1997. Recycling rates for reinforcement bar and other materials increased to 70% in 2010 from 40% in 1997.

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 often used a feed mix that has equal proportions of DRI, pig iron, and scrap. Raw steel production in the minimill industry increased by 34% during 2010 (American Iron and Steel Institute, 2011, p. 72) (table 3), while DRI production remained at zero, as in 2009 (Midrex Technologies, Inc., 2011).

Consumption

Domestic data for ferrous scrap were derived from voluntary monthly or annual surveys of U.S. scrap-consuming operations by the USGS. About 62% of the known manufacturers of pig iron and raw steel responded to the surveys. Their response represented about 64% of the 53 Mt of ferrous scrap consumed by this class of consumers (table 1). The remaining 36% of scrap consumption was estimated based on prior reports. Of the iron foundries, manufacturers of steel castings, and miscellaneous users, about 58% of the surveyed establishments responded to the annual survey, which represented about 59% 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. Actual survey data accounted for about 59% of total ferrous scrap consumption by all classes of scrap consumers.

In 2010, brokers, dealers, and other outside sources supplied domestic consumers with 50.3 Mt of all types of ferrous scrap at an estimated average delivered value of \$16.4 billion, and exported 20.5 Mt (excluding used rails for rerolling and other uses, and ships, boats, and other vessels for scrapping) valued at \$8.4 billion (tables 1, 8, 11). Raw steel production was 80.5 Mt in 2010 compared with 59.4 Mt in 2009 (American Iron and Steel Institute, 2011, p. 73).

The share of raw steel produced by EAF and basic oxygen furnaces was 61% and 39%, respectively. In 2010, continuous cast steel production represented 97% of total raw steel production; this was slightly less than that of 2009. Raw steel production capability increased to 114 Mt from 113 Mt in 2009 (American Iron and Steel Institute, 2011, p. 75). The capability utilization index increased to 70.4% in 2009 from 52.4% in 2010.

Steel mills accounted for 91% of all scrap received from brokers, dealers, and other outside sources; iron foundries and miscellaneous users received 7%; and steel foundries received 2% (table 1). Apparent total domestic consumption of ferrous scrap was 46.8 Mt, as measured by net receipts (total external receipts minus shipments) and 10 Mt of home scrap (table 2). Stocks of ferrous scrap at consumer plants increased by 16% to 3.9 Mt (table 1). Total domestic consumption was 60.1 Mt, 13% more

than that of 2009 (table 1). The total market for U.S.-produced scrap (net receipts plus exports minus imports) was 67.0 Mt, compared with 62.8 Mt in 2009 (table 1). Feedstock used in electric furnaces by all iron and steel product manufacturers comprised scrap, 89%; pig iron, 9%; and DRI, 2% (table 4). Total consumption of DRI was 10% more than that of 2009 (table 1). Net shipments of all grades of steel mill products were about 75.7 Mt, which was an increase of 34% from the 56.4 Mt shipped in 2009 (American Iron and Steel Institute, 2011, p. 25).

Prices

The average composite delivered price of No. 1 heavy-smelting steel scrap in 2010, calculated from prices per long ton published monthly by American Metal Market, was \$326.34 per metric ton. The price ranged from a low of \$290.69 per ton in January to a high of \$365.97 per ton in December (table 8). The average 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 \$318.71 per metric ton; the price ranged from a low of \$275.54 per ton in December to a high of \$367.68 per ton in April.

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 was about \$2,187 per gross ton in 2010, an increase of 41% compared with that of 2009.

The unit value of total ferrous scrap exports (excluding used rails for rerolling and other uses, and ships, boats, and other vessels for scrapping) increased by 29% to about \$408 per metric ton compared with that of 2009 (table 11). The unit value of total imports increased by 38% to about \$377 per metric ton, compared with that of 2009 (table 14).

Foreign Trade

Foreign trade valuation continued to be reported on a free-alongside-ship basis for exports and on a customs-value basis for imports. In 2010, 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 16.8 Mt valued at about \$7.0 billion (tables 11, 14). This represented a decrease of 14% in quantity and an increase of 10% in value compared with the 2009 surplus of 19.4 Mt valued at \$6.3 billion.

World Review

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

The United States exported more iron and steel scrap in 2010 than any other country, followed by, in decreasing order of export tonnage, Germany, France, Japan, and Canada (World Steel Association, 2011a, p. 115–116). The leading importing nations were, in decreasing order of import tonnage, Turkey, the United States, the Republic of Korea, China, and Germany (World Steel Association, 2011a, p. 117–118).

Outlook

Because of the close interdependence of the steelmaking and ferrous scrap industries, forecast of the global steel industry in the context of the global economy serves as the bellwether of the scrap industry.

The World Bank's forecast of global gross domestic product (GDP) growth for 2011, 2012, and 2013 was 3.2%, 3.6%, and 3.6%, respectively (World Bank, The, 2011). The International Monetary Fund's forecast of world GDP growth for 2011 and 2012 was 4.3% and 4.5%, respectively (International Monetary Fund, 2011). The U.S. Federal Reserve Bank's forecast for the U.S. 2011 GDP growth rate was between 3.4% and 3.9%, and between 3.5% and 4.4% for 2012 (Board of Governors of the Federal Reserve System, 2011). The GDP growth for China was projected to be 9.3% and 8.7% in 2011 and 2012, respectively, and that of India was projected to be 8.0% and 8.4% for those years, respectively (World Bank, The, 2011).

World apparent steel consumption (ASC) was expected to increase by 6% to 1,359 Mt during 2011, after increasing by 13% in 2010, and then increase by 6% in 2012, to reach a historic high of 1,440 Mt (World Steel Association, 2011b). China's ASC was expected to increase by 5% to 605 Mt in 2011, and then by 5% in 2012 to 635 Mt. ASC in India was expected to increase by 13% in 2011 to about 69 Mt and 14% in 2012. The U.S. ASC was expected to increase by 13% to 90 Mt in 2011. The European Union's (EU) ASC was expected to increase by 5% to 152 Mt in 2011 and increase by 4% in 2012. In Japan, the 2011 ASC was expected to decrease by 1.2% to 63 Mt, and remain at this level during 2012. The ASC of the Commonwealth of Independent States (CIS) was expected to increase by nearly 8% to 52 Mt in 2011 and then by 9% in 2012.

World capacity for DRI production in 2010 was estimated to be about 83 million metric tons per year (Mt/yr) (Midrex Technologies, Inc., 2011). DRI production worldwide reached a record of 68.7 Mt in 2010, 4.6% more than that in 2009 (Fenton, 2012) (table 9). The leading producer of DRI was India, accounting for 30% of the total, followed by, in descending order of tonnage, Iran, Venezuela, Mexico, and Saudi Arabia. At yearend 2010, additional DRI capacity of almost 20 Mt/yr was under construction in Bahrain, China, Egypt, India, Iran, Oman, Pakistan, the United Arab Emirates, and Venezuela. The leading technology was the Midrex process, followed by the HYL I and the HYL III processes.

MEPS (International) Ltd. forecast total world steel production in 2011 to be 1,568 Mt, up 11% from that in 2010, and 1,625 Mt for 2014 [MEPS (International) Ltd., 2011]. MEPS also forecast increasing steel production in 2011 in South America, the Middle East, China, the CIS, and the EU of 17%, 11%, 8%, 5%, and 4%, respectively. For China, MEPS forecast a 19% increase in steel production by 2014 compared with that in 2010.

Because the primary source of obsolete steel is the automobile, an increasing world population and increased demand for vehicles in developing countries, especially China and India, are expected to contribute to a dramatic rise in the amount of vehicle scrap created during the next 25 years, according to the Oxford Brookes University in the United Kingdom (Blanco, 2007). More vehicles are expected to be produced in the next 25 years than in the history of the motor vehicle industry through 2008.

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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)

	2006	2007	2008	2009	2010
Manufacturers of pig iron and raw steel and castings:²					
Ferrous scrap consumption	55,200 ^r	55,000 ^r	58,000 ^r	47,700 ^r	53,100
Pig iron consumption	36,800 ^r	36,500	33,600	28,300	34,100
Direct-reduced iron consumption	1,570 ^r	2,040	1,950	1,340	1,490
Net receipts of ferrous scrap ³	45,700 ^r	46,800 ^r	49,800 ^r	39,800	45,700
Home scrap production ⁴	9,140 ^r	8,760 ^r	8,720 ^r	7,610 ^r	7,720
Ending stocks of ferrous scrap, December 31	3,710 ^r	3,650 ^r	3,730 ^r	2,820	3,010
Manufacturers of steel castings:⁵					
Ferrous scrap consumption	1,080	1,710 ^r	2,080	841 ^r	1,810
Pig iron consumption	11	11	12	17	10
Direct-reduced iron consumption	--	--	4	14	--
Net receipts of ferrous scrap ³	754	965	1,630	588 ^r	1,230
Home scrap production ⁴	319	693 ^r	549	272 ^r	566
Ending stocks of ferrous scrap, December 31	79	383	503	397	629
Iron foundries and miscellaneous users:⁵					
Ferrous scrap consumption	8,300	7,940	7,760 ^r	4,650 ^r	5,180
Pig iron consumption	934 ^r	870 ^r	842 ^r	1,840 ^r	1,910
Direct-reduced iron consumption	4	4	3	3 ^r	3
Net receipts of ferrous scrap ³	5,600 ^r	5,120 ^r	5,200	2,950 ^r	3,370
Home scrap production ⁴	2,700	2,550	2,560	1,700 ^r	1,940
Ending stocks of ferrous scrap, December 31	420 ^r	413 ^r	416 ^r	127 ^r	256
Total, all manufacturing types:					
Ferrous scrap consumption	64,600 ^r	64,700 ^r	67,900 ^r	53,200 ^r	60,100
Pig iron consumption	37,700 ^r	37,400	34,400	30,200	36,000
Direct-reduced iron consumption	1,580 ^r	2,050	1,960	1,360	1,490
Net receipts of ferrous scrap ³	52,100 ^r	52,900 ^r	56,600 ^r	43,400	50,300
Home scrap production ⁴	12,200 ^r	12,000 ^r	11,800	9,580 ^r	10,200
Ending stocks, December 31:					
Ferrous scrap at consumer plants	4,210 ^r	4,440 ^r	4,650 ^r	3,350 ^r	3,900
Pig iron at consumer and supplier plants	787 ^r	771	885	505 ^r	415
Direct-reduced iron at consumer plants	312 ^r	364	435	234	161
Exports:⁶					
Ferrous scrap (includes tinplate and terneplate):⁷					
Quantity	14,900	16,500	21,500	22,400	20,500
Value	4,230,000	6,890,000	10,400,000	7,120,000	8,380,000
Pig iron, all grades:					
Quantity	813	71	51	11	2,220
Value	8,750	4,610	11,400	4,200	13,400
Direct-reduced iron, steelmaking grade:					
Quantity	(8)	(8)	1	(8)	1
Value	11	23	97	38	115
Imports for consumption:⁶					
Ferrous scrap (includes tinplate and terneplate):⁷					
Quantity	4,820	3,700	3,600	2,990	3,780
Value	1,250,000	1,040,000	1,450,000	814,000	1,420,000
Pig iron, all grades:					
Quantity	6,730	5,220	4,980	2,420	3,780
Value	1,760,000	1,660,000	2,800,000	877,000	1,540,000
Direct-reduced iron, steelmaking grade:					
Quantity	2,610	2,330	2,340	1,020	1,640
Value	417,000	519,000	971,000	304,000	607,000

^rRevised. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

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.

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

⁴Home scrap production includes 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 and U.S. International Trade Commission. 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 2010 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	685	7	21	--	714	--	123
Cut structural and plate	3,340	157	650	--	4,090	2	218
No. 1 heavy-melting steel	4,650	196	1,010	1	5,760	48	347
No. 2 heavy-melting steel	5,480	157	258	W	5,840	15	331
No. 1 and electric furnace bundles	2,510	186	894	--	3,440	178	206
No. 2 and all other bundles	918	15	W	--	930	W	47
Electric furnace, 1 foot and under (not bundles)	10	--	W	--	63	W	W
Railroad rails	239	W	51	--	309	W	13
Turnings and borings	1,840	198	48	W	2,080	1	88
Slag scrap	896	86	1,080	W	1,460	583	170
Shredded or fragmentized	11,300	1,450	W	--	12,800	71	630
No. 1 busheling	4,160	116	204	--	4,490	W	203
Steel cans, post consumer	97	--	--	--	97	--	5
All other carbon steel scrap	3,970	233	1,750	W	5,670	264	257
Stainless steel scrap	846	77	362	W	1,280	4	52
Alloy steel (except stainless)	151	164	348	--	657	10	44
Ingot mold and stool scrap	--	--	82	65	58	89	12
Machinery and cupola cast iron	35	W	W	--	38	W	2
Cast-iron borings	246	4	7	--	244	W	22
Motor blocks	--	--	--	--	--	--	--
Other iron scrap	941	76	193	--	1,120	83	137
Other mixed scrap	1,390	307	250	W	1,900	57	103
Total	43,700	3,450	7,620	96	53,100	1,430	3,010
Manufacturers of steel castings:							
Carbon steel:							
Low-phosphorus plate and punchings	607	1	222	--	811	--	300
Cut structural and plate	50	--	5	--	55	--	--
No. 1 heavy-melting steel	16	--	--	--	17	--	3
No. 2 heavy-melting steel	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	--	3	--	8	--	--
Railroad rails	W	--	W	--	W	--	W
Turnings and borings	25	--	10	--	34	W	1
Slag scrap	4	--	W	--	W	--	W
Shredded or fragmentized	24	--	--	--	24	--	--
No. 1 busheling	36	--	--	--	36	--	2
Steel cans, post consumer	--	--	--	--	--	--	--
All other carbon steel scrap	3	--	45	--	49	--	--
Stainless steel scrap	237	--	19	W	296	1	94
Alloy steel (except stainless)	53	2	28	W	84	--	66
Ingot mold and stool scrap	W	--	W	--	W	W	W
Machinery and cupola cast iron	--	--	--	--	--	--	--
Cast-iron borings	--	--	--	--	--	--	--
Motor blocks	--	--	--	--	--	--	--
Other iron scrap	1	--	--	--	2	--	--
Other mixed scrap	31	--	W	W	45	--	3
Total	1,230	3	552	14	1,810	2	629

See footnotes at end of table.

TABLE 2—Continued

U.S. CONSUMER RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS OF IRON AND STEEL SCRAP IN 2010 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	643	W	147	--	791	1	4
Cut structural and plate	510	2	46	14	569	--	18
No. 1 heavy-melting steel	90	W	W	--	147	--	5
No. 2 heavy-melting steel	85	--	W	23	110	--	1
No. 1 and electric furnace bundles	68	--	--	--	68	--	1
No. 2 and all other bundles	5	--	W	--	2	W	--
Electric furnace, 1 foot and under (not bundles)	92	--	71	84	170	--	78
Railroad rails	28	W	W	--	28	W	1
Turnings and borings	W	--	1	--	28	1	18
Slag scrap	W	--	2	--	W	2	--
Shredded or fragmented	633	--	19	--	603	W	68
No. 1 busheling	305	--	8	--	314	--	7
Steel cans, post consumer	W	--	--	--	W	--	--
All other carbon steel scrap	52	--	56	W	108	1	4
Stainless steel scrap	2	--	--	W	3	--	--
Alloy steel (except stainless)	13	--	1	--	14	W	1
Ingot mold and stool scrap	W	W	W	--	W	W	W
Machinery and cupola cast iron	401	W	114	W	540	5	36
Cast-iron borings	47	10	9	--	65	--	1
Motor blocks	121	W	470	--	593	W	2
Other iron scrap	172	23	750	--	924	9	23
Other mixed scrap	24	W	30	--	72	5	--
Total	3,360	47	1,790	151	5,180	37	256
Grand total, all manufacturing types:							
Carbon steel:							
Low-phosphorus plate and punchings	1,940	8	390	--	2,320	W	427
Cut structural and plate	3,900	159	702	14	4,720	2	237
No. 1 heavy-melting steel	4,760	198	1,060	1	5,930	48	355
No. 2 heavy-melting steel	5,580	157	258	W	5,960	15	333
No. 1 and electric furnace bundles	2,580	186	894	--	3,510	178	208
No. 2 and all other bundles	922	15	8	--	932	4	47
Electric furnace, 1 foot and under (not bundles)	107	--	153	84	240	W	78
Railroad rails	267	23	53	--	337	5	15
Turnings and borings	1,910	198	59	--	2,150	2	106
Slag scrap	905	86	1,080	W	1,470	585	173
Shredded or fragmented	11,900	1,450	351	--	13,500	73	699
No. 1 busheling	4,500	116	213	--	4,840	--	212
Steel cans, post consumer	99	--	--	--	99	--	5
All other carbon steel scrap	4,020	233	1,850	10	5,830	265	261
Stainless steel scrap	1,090	77	381	6	1,580	5	147
Alloy steel (except stainless)	217	165	377	W	755	10	111
Ingot mold and stool scrap	142	W	301	65	416	91	174
Machinery and cupola cast iron	436	W	116	W	579	6	38
Cast-iron borings	293	14	16	--	308	--	23
Motor blocks	121	W	470	--	593	W	2
Other iron scrap	1,110	99	943	--	2,050	92	161
Other mixed scrap	1,440	308	280	23	2,020	63	86
Total	48,300	3,500	9,960	261	60,100	1,470	3,900

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

¹Data are rounded to no more than three significant digits; may not add to totals shown.²Obsolete home scrap includes 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 2010¹

(Thousand metric tons)

	Receipts	Production	Consumption	Shipments	Stocks, December 31
Manufacturers of pig iron, raw steel, and castings:					
Pig iron	9,630 ²	24,500	34,100	88	390
Direct-reduced iron (DRI)	1,500 ³	--	1,490	W	160
Manufacturers of steel castings:					
Pig iron	11	(4)	10	(4)	(4)
DRI	(4)	--	--	--	(4)
Iron foundries and miscellaneous users:					
Pig iron	1,910	3	1,910	3	25
DRI	3	--	3	--	(4)
Total, all manufacturing types:					
Pig iron	11,600	24,500	36,000	92	415
DRI	1,500	--	1,490	W	161

W Withheld to avoid disclosing company proprietary data. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes 1.69 million metric tons (Mt) purchased by electric furnace steel producers.

³Includes 49,750 metric tons purchased by integrated steel producers.

⁴Less than ½ unit.

TABLE 4
U.S. CONSUMPTION OF IRON AND STEEL SCRAP, PIG IRON, AND DIRECT-REDUCED IRON IN 2010,
BY TYPE OF FURNACE OR OTHER USE¹

(Thousand metric tons)

	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	1,200	--	50	--	--	--	--	--	--	1,200	--	50
Basic oxygen process	9,860	31,200	341	--	--	--	--	--	--	9,860	31,200	341
Electric furnace	41,900	2,880	1,100	1,810	10	--	3,800	1,840	3	47,500	4,740	1,100
Cupola furnace	157	--	--	--	--	--	1,290	55	--	1,450	55	--
Other ³	4	--	--	2	--	--	79	16	--	85	16	--
Direct castings ⁴	--	36	--	--	--	--	--	--	--	--	36	--
Total	53,100	34,100	1,490	1,810	10	--	5,180	1,910	3	60,100	36,000	1,490

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Direct-reduced iron.

³Includes air furnaces.

⁴Includes ingot molds and stools.

TABLE 5
IRON AND STEEL SCRAP SUPPLY AVAILABLE FOR CONSUMPTION IN 2010, 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	20	(5)	15	W	W	36
New Jersey and New York	1,780	--	84	W	W	1,830
Pennsylvania	3,320	723	1,830	W	59	5,890
Total	5,120	723	1,920	80	92	7,750
North Central:						
Illinois	1,720	(5)	147	57	W	1,860
Indiana	3,950	298	1,810	(5)	362	5,690
Iowa, Nebraska, South Dakota	2,060	29	133	(5)	W	2,230
Kansas and Missouri	13	5	19	--	(5)	36
Michigan	2,090	(5)	956	(5)	562	2,480
Minnesota	406	142	22	--	22	548
Ohio	5,990	398	1,050	24	92	7,370
Wisconsin	1,700	2	989	--	5	2,690
Total	17,900	876	5,120	82	1,110	22,900
South Atlantic:						
Delaware and Maryland	962	W	W	--	W	1,300
Florida and Georgia	697	--	W	--	W	702
North Carolina and South Carolina	3,070	W	564	W	(5)	3,850
Virginia and West Virginia	1,770	290	268	W	W	2,300
Total	6,500	521	1,220	W	92	8,150
South Central:						
Alabama and Mississippi	4,270	W	243	--	W	4,550
Arkansas, Louisiana, Oklahoma	4,320	W	399	W	W	4,880
Kentucky and Tennessee	3,310	W	265	--	W	3,780
Texas	2,730	664	178	W	95	3,480
Total	14,600	1,080	1,090	6	102	16,700
Mountain and Pacific:						
Arizona, Colorado, Idaho, Utah	1,540	W	57	W	W	1,690
California, Oregon, Washington	2,550	W	550	W	W	3,320
Total	4,090	306	607	94	77	5,020
Grand total	48,300	3,500	9,960	261	1,470	60,500

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

¹Supply 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.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Obsolete scrap includes ingot molds, stools, and scrap from old equipment, buildings, etc.

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 2010, 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	1,720	21	8	--	134	6	1,860	28
Pennsylvania	5,540	3,230	154	1	187	17	5,880	3,250
Total	7,250	3,250	162	1	321	23	7,730	3,280
North Central:								
Illinois	1,500	W	24	(4)	330	71	1,860	2,260
Indiana	5,360	11,800	62	(4)	262	46	5,690	11,800
Iowa, Kansas, Minnesota, Missouri, Nebraska, South Dakota, Wisconsin	3,270	W	53	(4)	2,100	1,650	5,420	1,770
Michigan	1,900	W	29	--	546	24	2,470	4,070
Ohio	6,410	6,470	67	(4)	749	52	7,220	6,530
Total	18,400	24,600	235	1	3,980	1,840	22,700	26,400
South Atlantic:								
Delaware, Maryland, Virginia, West Virginia	W	W	W	(4)	W	W	3,640	1,580
Florida, Georgia, North Carolina, South Carolina	W	W	W	--	W	W	4,550	94
Total	7,250	1,670	612	(4)	320	3	8,190	1,670
South Central:								
Alabama, Kentucky, Mississippi, Tennessee	7,570	4,060	W	(4)	W	W	8,400	W
Arkansas, Louisiana, Oklahoma	4,800	467	W	--	W	W	4,810	W
Texas	3,270	--	31	7	110	16	3,410	23
Total	15,600	4,530	731	7	258	38	16,600	4,570
Mountain and Pacific:								
Arizona, Colorado, Idaho, Utah	1,590	W	2	(4)	73	(4)	1,670	37
California, Oregon, Washington	2,920	80	68	(4)	220	4	3,200	47
Total	4,510	80	70	(4)	293	4	4,870	84
Grand total	53,100	34,100	1,810	10	5,180	1,910	60,100	36,000

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

¹Includes recirculating scrap resulting from current operations and home-generated obsolete scrap.

²Includes molten pig iron used for ingot molds and direct castings.

³Data are rounded to no more than three significant digits; may not add to totals shown.

⁴Less than ½ unit.

TABLE 7

U.S. CONSUMER STOCKS OF IRON AND STEEL SCRAP AND PIG IRON, DECEMBER 31, 2010, BY REGION AND STATE¹

(Thousand metric tons)

Region and State	Carbon steel ²	Stainless steel	Alloy steel ³	Cast iron ⁴	Other grades of scrap	Total scrap	Pig iron
New England and Middle Atlantic:							
Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	1	(5)	--	(5)	W	(5)	(5)
New Jersey and New York	64	(5)	--	2	W	66	2
Pennsylvania	233	13	12	16	3	277	3
Total	297	13	12	18	4	344	5
North Central:							
Illinois	71	(5)	(6)	3	W	77	10
Indiana	390	3	5	15	W	419	153
Iowa, Kansas, Missouri, Nebraska, South Dakota	110	W	W	2	--	117	8
Michigan	98	(6)	W	7	1	106	3
Minnesota and Wisconsin	104	W	(6)	5	W	111	7
Ohio	466	34	19	70	W	589	55
Total	1,240	40	27	102	12	1,420	236
South Atlantic:							
Delaware, Maryland, Virginia, West Virginia	223	W	W	W	--	W	W
Florida, Georgia, North Carolina, South Carolina	309	W	W	W	--	W	W
Total	532	70	60	246	--	901	66
South Central:							
Alabama, Kentucky, Mississippi, Tennessee	313	W	W	14	W	350	59
Arkansas, Louisiana, Oklahoma	277	W	W	2	--	287	37
Texas	213	1	W	6	W	221	(5)
Total	803	23	9	22	W	858	96
Mountain and Pacific:							
Arizona, Colorado, Idaho, Utah	55	(5)	(5)	(5)	W	97	3
California, Oregon, Washington	227	(5)	2	9	W	276	9
Total	282	1	2	9	52	373	12
Grand total	3,150	147	111	397	86	3,900	415

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

¹Data are rounded to no more than three significant digits; may not add to totals shown.²Excludes rerolling rails.³Excludes stainless steel.⁴Includes borings.⁵Less than ½ unit.⁶Withheld to avoid disclosing company proprietary data; included in "North Central Total" of "Total Scrap."

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
2009. ¹ average	230.07	208.36	201.48	213.30
2010:				
January	292.93	276.88	302.26	290.69
February	300.18	274.80	310.03	295.00
March	347.26	323.51	350.67	340.48
April	354.31	360.13	380.71	365.05
May	333.40	340.54	332.42	335.45
June	329.71	301.08	329.71	320.17
July	300.18	274.17	308.16	294.17
August	320.76	314.50	323.89	319.72
September	341.66	345.69	338.85	342.07
October	319.17	307.92	316.12	314.40
November	332.66	327.99	338.07	332.91
December	374.00	349.14	374.78	365.97
Average	328.85	316.36	333.81	326.34

¹Revised.

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^{1,2}

(Thousand metric tons and thousand dollars)

Country	2009		2010	
	Quantity	Value	Quantity	Value
Argentina	1	369	4	1,450
Australia	(3)	1,520	(3)	262
Austria	(3)	1,480	1	2,860
Bahamas, The	(3)	119	(3)	103
Bangladesh	91	25,100	37	13,800
Belgium	6	5,690	10	20,100
Brazil	64	19,000	61	20,600
Canada	971	235,000	1,360	417,000
Chile	1	393	1	453
China	6,210	2,500,000	3,210	1,800,000
Colombia	(3)	233	(3)	560
Costa Rica	(3)	161	1	164
Dominican Republic	2	642	4	960
Ecuador	(3)	47	31	11,300
Egypt	361	90,500	650	228,000
El Salvador	(3)	41	1	499
Finland	30	41,600	43	91,700
France	1	1,490	8	3,010
Germany	12	2,530	9	3,540
Greece	224	53,900	72	21,800
Guyana	(3)	72	1	271
Hong Kong	100	65,800	96	83,500
India	1,580	419,000	976	347,000
Indonesia	369	101,000	388	145,000
Israel	(3)	325	3	959
Italy	48	17,300	179	71,200
Jamaica	(3)	108	1	290
Japan	69	104,000	172	170,000
Kenya	(3)	82	1	284
Korea, Republic of	3,110	939,000	2,820	1,030,000
Malaysia	689	189,000	803	311,000
Mexico	668	159,000	666	213,000
Netherlands	5	5,610	23	19,500
Netherlands Antilles	1	127	(3)	47
New Caledonia	(3)	2,980	1	3,740
Pakistan	333	83,900	174	70,100
Peru	155	42,400	280	98,200
Portugal	25	4,460	(3)	3
Saudi Arabia	1	538	(3)	227
Singapore	38	9,970	8	2,880
Spain	41	29,100	20	32,100
Sweden	13	6,160	3	9,060
Switzerland	55	15,700	(3)	79
Taiwan	2,230	722,000	2,820	1,160,000
Thailand	459	120,000	562	204,000
Trinidad and Tobago	12	4,640	1	496
Turkey	3,680	894,000	4,350	1,530,000
United Arab Emirates	1	493	4	1,690
United Kingdom	4	6,260	6	7,750
Uruguay	(3)	74	1	118
Venezuela	1	435	16	7,270
Vietnam	750	193,000	645	221,000
Other	8 ^r	3,030 ^r	6	4,460
Total	22,400	7,120,000	20,500	8,380,000

See footnotes at end of table.

TABLE 9—Continued
U.S. EXPORTS OF IRON AND STEEL SCRAP, BY COUNTRY^{1,2}

¹Revised.

¹Data 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. Export valuation is free alongside ship. The United States exported scrap to 92 countries in 2009 and 93 countries in 2010.

³Less than ½ unit.

Source: U.S. Census Bureau.

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

(Thousand metric tons and thousand dollars)

Customs district	2009		2010	
	Quantity	Value	Quantity	Value
Baltimore, MD	494	158,000	264	102,000
Boston, MA	1,270	324,000	1,040	360,000
Buffalo, NY	168	45,200	316	120,000
Charleston, SC	167	79,800	160	94,300
Charlotte, NC	51	26,200	21	21,500
Chicago, IL	22	6,230	14	5,400
Cleveland, OH	2	702	5	1,810
Columbia-Snake, OR	1,220	346,000	1,270	466,000
Detroit, MI	210	71,800	295	86,700
Duluth, MN	55	14,500	75	22,700
El Paso, TX	14	3,110	25	7,070
Great Falls, MT	9	1,990	8	2,110
Honolulu, HI	140	38,800	171	58,300
Houston-Galveston, TX	914	278,000	889	340,000
Laredo, TX	418	99,200	347	113,000
Los Angeles, CA	4,330	1,730,000	4,000	2,030,000
Miami, FL	404	129,000	482	166,000
Mobile, AL	112	49,000	97	47,100
New Orleans, LA	2,230	549,000	1,290	477,000
New York, NY	3,110	1,040,000	2,580	1,170,000
Nogales, AZ	15	4,340	(3)	6
Norfolk, VA	439	176,000	360	166,000
Ogdensburg, NY	100	19,900	47	15,000
Pembina, ND	295	83,100	430	148,000
Philadelphia, PA	1,400	356,000	919	321,000
Portland, ME	129	35,600	173	65,000
Providence, RI	374	90,900	449	155,000
San Diego, CA	17	3,360	29	7,620
San Francisco, CA	1,760	542,000	2,120	798,000
San Juan, PR	294	69,500	339	92,300
Savannah, GA	507	237,000	443	247,000
Seattle, WA	1,020	317,000	1,190	450,000
St. Albans, VT	35	8,750	71	22,300
Tampa, FL	583	168,000	505	184,000
Other	116	15,900	111	16,500
Total	22,400	7,120,000	20,500	8,380,000

¹Excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping. Export valuation is free alongside ship.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Less than ½ unit.

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	2009		2010	
	Quantity	Value	Quantity	Value
No. 1 heavy-melting scrap	5,840	1,520,000	5,650	1,940,000
No. 2 heavy-melting scrap	903	230,000	1,020	331,000
No. 1 bundles	311	79,300	326	80,900
No. 2 bundles	55	14,600	53	21,900
Shredded steel scrap	8,500	2,190,000	7,440	2,640,000
Borings, shovelings, and turnings	106	19,800	62	10,500
Cut plate and structural	1,320	359,000	825	302,000
Tinned iron or steel	112	54,000	82	52,400
Remelting scrap ingots	27	35,000	27	34,200
Stainless steel scrap	1,130	777,000	937	936,000
Other alloy steel scrap	1,280	900,000	916	840,000
Other steel scrap ³	2,170	718,000	2,680	1,000,000
Iron scrap	668	223,000	517	197,000
Total	22,400	7,120,000	20,500	8,380,000
<u>Ships, boats, and other vessels for scrapping</u>	4	773	4	743
<u>Used rails for rerolling and other uses⁴</u>	59	38,700	49	41,000
Grand total	22,500	7,160,000	20,600	8,420,000

¹Data 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^{1,2}

(Thousand metric tons and thousand dollars)

Country	2009		2010	
	Quantity	Value	Quantity	Value
Argentina	4	737	3	2,310
Bahamas, The	3	599	9	2,560
Belgium	--	--	(3)	248
Brazil	3	2,670	1	1,790
Canada	2,400	611,000	2,700	964,000
Cayman Islands	(3)	32	2	647
China	(3)	281	(3)	171
Colombia	1 ^r	1,120	(3)	167
Denmark	26	6,290	--	--
Dominican Republic	(3)	222	(3)	471
Egypt	1	637	1	1,230
France	(3)	203	1	479
Germany	54	14,400	76	28,900
Guadeloupe	3	182	--	--
Guatemala	(3)	255	(3)	1,060
Israel	(3)	49	1	976
Japan	2	695	2	1,110
Korea, Republic of	2	628	1	1,450
Malaysia	(3)	103	1	881
Mexico	207	83,900	439	197,000
Netherlands	76	21,100	136	49,700
Netherlands Antilles	1	89	(3)	12
Peru	(3)	30	1	522
Singapore	(3)	861	3	776
Spain	(3)	281	--	--
Sweden	100	27,300	117	38,800
Taiwan	1	2,690	4	8,900
Trinidad and Tobago	(3)	164	(3)	1,080
United Kingdom	101	33,500	274	106,000
Other	6 ^r	3,350 ^r	6	6,520
Total	2,990	814,000	3,780	1,420,000

^rRevised. -- Zero.

¹Data 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. Import valuation is customs values.

The United States imported scrap from 47 countries (revised) in 2009 and 57 countries in 2010.

³Less than ½ unit.

Source: U.S. Census Bureau.

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

(Thousand metric tons and thousand dollars)

Customs district	2009		2010	
	Quantity	Value	Quantity	Value
Baltimore, MD	2	1,240	(3)	609
Buffalo, NY	596	185,000	518	282,000
Charleston, SC	178	44,300	224	83,800
Chicago, IL	15	1,290	2	1,270
Cleveland, OH	(3)	427	1	2,760
Columbia-Snake, OR	36	6,570	34	9,890
Detroit, MI	644	157,000	974	363,000
Duluth, MN	52	13,700	29	14,500
El Paso, TX	35	10,200	77	28,600
Great Falls, MT	93	19,700	183	58,600
Houston-Galveston, TX	3	7,680	3	9,770
Laredo, TX	84	46,700	156	109,000
Los Angeles, CA	2	3,430	7	11,500
Miami, FL	5	1,210	8	1,660
Mobile, AL	65	21,200	61	23,700
New Orleans, LA	138	41,300	299	107,000
New York, NY	(3)	641	4	1,900
Nogales, AZ	11	3,730	11	3,940
Norfolk, VA	(3)	109	1	1,470
Ogdensburg, NY	38	15,600	29	37,100
Pembina, ND	25	11,400	35	21,400
Philadelphia, PA	(3)	174	17	7,190
Portland, ME	7	2,570	8	5,710
San Diego, CA	79	21,900	195	54,400
Seattle, WA	878	195,000	889	173,000
Tampa, FL	3	552	8	2,220
Other	3	858 ^r	3	1,410
Total	2,990	814,000	3,780	1,420,000

^rRevised.

¹Data 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. Import valuation is customs values.

³Less 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	2009		2010	
	Quantity	Value	Quantity	Value
No. 1 heavy-melting scrap	185	37,900	163	48,700
No. 2 heavy-melting scrap	28	5,510	70	18,400
No. 1 bundles	715	186,000	1,190	457,000
No. 2 bundles	37	5,430	34	6,360
Shredded steel scrap	452	78,500	441	98,200
Borings, shovelings, and turnings	53	10,100	94	21,400
Cut plate and structural	149	29,600	174	43,700
Tinned iron or steel	27	5,190	68	14,300
Remelting scrap ingots	(3)	327	(3)	190
Stainless steel scrap	124	138,000	195	305,000
Other alloy steel scrap	558	193,000	740	240,000
Other steel scrap ⁴	479	90,300	469	123,000
Iron scrap	184	34,400	142	42,300
Total	2,990	814,000	3,780	1,420,000
Ships, boats, and other vessels for scrapping	(3)	79	(3)	226
Used rails for rerolling and other uses ⁵	57	17,700	53	23,700
Grand total	3,050	831,000	3,830	1,440,000

¹Data 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^{1,2}

Country	2009		2010	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Anguilla	121	\$127	--	--
Antigua and Barbuda	23	51	(3)	\$4
Argentina	5	13	10	22
Aruba	34	33	--	--
Australia	534	759	1,760	2,460
Bahamas, The	57	89	106	143
Barbados	88	74	30	73
Bermuda	6	7	28	26
Brazil	26	34	28	62
British Virgin Islands	70	109	--	--
Canada	17,000	15,100	13,200	12,600
Cayman Islands	53	58	15	36
Chile	781	956	161	270
China	4,970	1,570	169	154
Colombia	342	588	18	41
Costa Rica	4	4	--	--
Denmark	--	--	24	99
Dominican Republic	561	633	981	1,010
Guatemala	--	--	23	39
Honduras	27	46	--	--
Hungary	--	--	12	10
India	10	9	79	142
Ireland	128	114	130	178
Italy	3	11	18	116
Jamaica	--	--	37	60
Japan	37	36	201	168
Korea, Republic of	4	3	3	20
Malaysia	13	11	(3)	5
Mexico	29,300	15,700	27,800	19,900
Netherlands	--	--	52	135
Netherlands Antilles	36	36	11	24
New Zealand	11	20	--	--
Nicaragua	15	27	--	--
Nigeria	--	--	204	172
Pakistan	45	9	--	--
Panama	33	48	80	158
Peru	65	147	135	140
Philippines	--	--	35	29
Russia	20	37	13	89
Saudi Arabia	194	162	95	262
South Africa	87	80	23	19
Spain	3	3	--	--
Taiwan	2,920	1,210	3,290	1,870
Thailand	124	83	27	22
Trinidad and Tobago	25	35	--	--
Turkey	7	10	7	15
Turks and Caicos Islands	10	17	--	--
United Arab Emirates	446	373	--	--
United Kingdom	25	32	10	13
Venezuela	88	184	79	176
Other	154 [†]	150 [†]	99	220
Total	58,600	38,700	49,100	41,000

[†]Revised. -- Zero.

¹Data 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.

Sources: U.S. Census Bureau and U.S. International Trade Commission.

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

Country	2009		2010	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Austria	--	--	6	\$6
Canada	31,300	\$7,950	46,800	18,500
China	--	--	16	29
Czech Republic	7	9	--	--
Germany	2	7	15	40
Japan	17	40	4	10
Korea, Republic of	--	--	15	34
Mexico	830	238	107	38
Russia	25,200	9,310	6,250	4,910
Spain	13	116	13	119
United Kingdom	--	--	2	6
Total	57,400	17,700	53,200	23,700

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Import valuation is customs value.

Sources: U.S. Census Bureau and U.S. International Trade Commission.

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

Country	2009		2010	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
China	--	--	213	\$31
Costa Rica	--	--	557	59
Indonesia	100	\$18	--	--
Mexico	36	6	204	25
Switzerland	58	6	--	--
Uruguay	77	8	--	--
Total	271	38	974	115

-- Zero.

¹Data 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^{1,2}

Country	2009		2010	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
South Africa	--	--	39,100	\$11,700
Sweden	--	--	63	22
Trinidad and Tobago	807,000	\$244,000	1,270,000	490,000
Venezuela	209,000	59,600	331,000	106,000
Total	1,020,000	304,000	1,640,000	607,000

-- Zero.

¹Data 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^{1,2}

Country	2009		2010	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Bolivia	1	\$4	--	--
Brazil	11	12	9	\$9
Canada	5,220	1,890	14,900	7,190
China	361	119	62	19
Colombia	--	--	3,300	25
Dominican Republic	--	--	149	137
France	62	18	--	--
French Polynesia	82	27	--	--
Germany	--	--	25	26
Hong Kong	--	--	37	40
Israel	--	--	29	10
Italy	11	4	--	--
Japan	59	19	2	5
Korea, Republic of	248	244	272	237
Mexico	4,400	1,640	2,200,000	5,530
Netherlands	2	3	--	--
New Zealand	11	4	--	--
Norway	--	--	13	6
Peru	103	34	--	--
Romania	14	15	--	--
Singapore	--	--	113	123
Tunisia	147	157	--	--
United Kingdom	2	6	--	--
Uruguay	--	--	76	25
Total	10,700	4,200	2,220,000	13,400

-- Zero.

¹Data 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.

Source: U.S. Census Bureau.

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

Country	2009		2010	
	Quantity (metric tons)	Value (thousands)	Quantity (metric tons)	Value (thousands)
Australia	--	--	175	\$185
Belgium	--	--	7,000	2,340
Brazil	1,260,000	\$478,000	1,600,000	650,000
Canada	90,700	27,300	141,000	63,300
China	--	--	56,900	23,000
Denmark	9	9	--	--
Germany	--	--	37	35
India	6	13	--	--
Italy	4	2	--	--
Russia	751,000	275,000	1,060,000	447,000
South Africa	120,000	37,400	127,000	51,000
Sweden	43,000	12,000	--	--
Ukraine	156,000	47,000	729,000	280,000
Venezuela	--	--	61,300	20,400
Total	2,420,000	877,000	3,780,000	1,540,000

-- Zero.

¹Data 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.