



2011 Minerals Yearbook

IRON AND STEEL SCRAP

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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 60% of the total raw steel produced in 2011. 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.

Steel scrap recycling conserves energy, landfill space, and raw materials. In 2011, the domestic steel industry recycled or exported for recycling nearly 78 million metric tons (Mt) of appliances, automobiles, cans, construction materials, and other steel products (G.L. Crawford, Steel Recycling Institute, unpub. data, December 12, 2012). This resulted in an overall recycling rate of about 92%. 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.

In the United States, the primary source of obsolete steel is the automobile. By weight, the typical car consists of about 60% iron and steel. The steel used in the outside shell of car bodies is made of about 25% recycled steel (G.L. Crawford, Steel Recycling Institute, unpub. data, December 13, 2012). The steel industry recovered and recycled almost 15.5 Mt of iron and steel from about 11.9 million end-of-life vehicles in 2011, processed through more than 300 car shredders. The recycling rate for automotive scrap was 94.5% in 2011. About 12,500 vehicle dismantlers in North America resold parts.

The annual average recycling rate of obsolete appliance scrap continued at a high of about 90% in 2011, the same as that of 2010 (G.L. Crawford, Steel Recycling Institute, unpub. data, November 20, 2012). During 2011, almost 2.6 Mt of steel was recovered from recycled appliances, a decrease of about 4% compared with that of 2010. The typical appliance consists of about 60% steel, and the steel used in appliances is made with a minimum of 25% recycled steel. The recycling rate of steel containers increased to almost 71% in 2011 from 15% in 1983 (G.L. Crawford, Steel Recycling Institute, unpub. data, November 10, 2012). More than 18 Mt of steel containers was recycled. The estimated rate of recycling of structural beams and plates in 2004 through 2011 was about 98%, an increase from 85% in 1997. Recycling rates for reinforcement bar and other materials were 70% in 2011 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 commonly use a feed mix that has equal proportions of DRI, pig iron, and scrap. Raw steel production in the minimill industry increased by 5.6% during 2011 (American Iron and Steel Institute, 2012, p. 72), while DRI production remained at zero, as in 2009 and 2010 (Midrex Technologies, Inc., 2012).

Consumption

Domestic data for ferrous scrap were derived from voluntary monthly or annual surveys of U.S. scrap-consuming operations by the USGS. About 61% of the known manufacturers of pig iron and raw steel responded to the surveys. Their response represented about 35% of the 56 Mt of ferrous scrap consumed by this class of consumers (table 1). The remaining 65% of scrap consumption was estimated based on prior reports. Of the iron foundries, manufacturers of steel castings, and miscellaneous users, about 53% of the surveyed establishments responded to the annual survey, which represented about 97% 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 97% of total ferrous scrap consumption by all classes of scrap consumers.

In 2011, brokers, dealers, and other outside sources supplied domestic consumers with 53 Mt of all types of ferrous scrap at an estimated average delivered value of \$21.8 billion, and exported 24.3 Mt (excluding used rails for rerolling and other uses, and ships, boats, and other vessels for scrapping) valued at \$11.4 billion (tables 1, 8, 11). Raw steel production was 86.4 Mt in 2011 compared with 80.5 Mt in 2010 (American Iron and Steel Institute, 2012, p. 73). The share of raw steel produced by EAF and basic oxygen furnaces was 60% and 40%, respectively. In 2011, continuous cast steel production represented 98% of total raw steel production; this was slightly more than that of 2010. Raw steel production capability increased to 116 Mt from 114 Mt in 2010 (American Iron and Steel Institute, 2012, p. 75). The capability utilization index increased to 74.4% in 2011 from 70.4% in 2010.

Steel mills accounted for 91% of all scrap received from brokers, dealers, and other outside sources; iron foundries and miscellaneous users received 8%; and steel foundries received 1% (table 1). Apparent total domestic consumption of ferrous scrap was 98.6 Mt, as measured by net receipts (total external receipts minus shipments) and 9.9 Mt of home scrap production (table 2). Stocks of ferrous scrap at consumer plants increased by 22% to 4.1 Mt (table 1). Total domestic consumption was 63.1 Mt, 6% more than that of 2010 (table 1). The total market

for U.S.-produced scrap (net receipts plus exports minus imports) was 24.5 Mt, compared with 67.0 Mt in 2010 (table 1). Feedstock used in electric furnaces by all iron and steel product manufacturers comprised scrap, 88.3%; pig iron, 9.5%; and DRI, 2.2% (table 4). Total consumption of DRI was 4.4% more than that of 2010 (table 1). Net shipments of all grades of steel mill products were about 83.3 Mt, which was an increase of 10% from the 75.7 Mt shipped in 2010 (American Iron and Steel Institute, 2012, p. 25).

Prices

The average composite delivered price of No. 1 heavy-melting steel scrap in 2011, calculated from prices per long ton published monthly by American Metal Market, was \$410.99 per metric ton. The price ranged from a low of \$379.75 per ton in November to a high of \$429 per ton in January (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 \$391.91 per metric ton; the price ranged from a low of \$334.14 per ton in December to a high of \$411.89 per ton in July.

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 2011 was about \$2,178 per gross ton, a slight decrease compared with that of 2010.

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 14% to about \$467 per metric ton compared with that of 2010 (table 11). The unit value of total imports increased by 10% to about \$413 per metric ton, compared with that of 2010 (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 2011, 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 20.3 Mt valued at about \$9.7 billion (tables 11, 14). This represented an increase of 21% in quantity and an increase of 39% in value compared with the 2010 surplus of 16.8 Mt valued at \$7.0 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 2011 than any other country, followed by, in decreasing order of export tonnage, Germany, France, Japan, and Canada (World Steel Association, 2012a, p. 110–111). The leading importing nations were, in decreasing order of import tonnage, Turkey,

the Republic of Korea, China, Germany, and Italy (World Steel Association, 2012a, p. 111–112).

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, after 3.8% in 2010 (World Bank, The, 2011). The International Monetary Fund's projection of GDP growth for 2012 was 4.0%, which was down from an earlier projection of 4.5% (International Monetary Fund, 2012). The U.S. Federal Reserve's January 2012 projections for the U.S. 2012 GDP growth rate was between 2.1% and 3.0%, between 2.4% and 3.8% for 2013, and between 2.8% and 4.3% for 2014, which were reduced from earlier projections (Board of Governors of the Federal Reserve System, 2012). The 2011 GDP growth for China was 10.3% and was projected to be 8.7% in 2012 and 8.8% in 2013, and that of India was projected to be 7.7% and 7.9% for those years, respectively (World Bank, The, 2011).

World apparent steel consumption (ASC) was expected to increase by 3.6% to 1.422 billion metric tons (Gt) during 2012, after increasing by 5.6% in 2011, and then increase by 4.5% in 2013, to reach a historic high of 1.49 Gt (World Steel Association, 2012b). China's ASC was expected to increase by about 4% to 649 Mt in 2012, and then by 4% in 2013 to 675 Mt. ASC in India was expected to increase by about 7% in 2012 to about 73 Mt and by 9.4% in 2013. The U.S. ASC was expected to increase by 5.7% to 94 Mt in 2012 and by 5.6% in 2013. The European Union's ASC was expected to decrease by 1.2% to 151 Mt in 2012 and increase by 3.3% to 156 Mt in 2013. In Japan, the 2012 ASC was expected to decrease by 0.6% to 64 Mt, and decrease an additional 2.2% to 62 Mt in 2013. The ASC of the Commonwealth of Independent States was expected to increase by 4% to 56 Mt in 2012 and then by 5% to 59 Mt in 2013.

World capacity for DRI production in 2011 was estimated to be about 87 Mt (Midrex Technologies, Inc., 2012). DRI production worldwide reached a record of 76.3 Mt in 2011, 7.5% more than that in 2010 (Fenton, 2012, table 9). The leading producer of DRI was India, followed by, in descending order of tonnage, Iran, Venezuela, and Mexico. In 2011, additional DRI capacity of almost 22 Mt/yr was under construction in China, Bahrain, Egypt, India, Iran, Pakistan, the United States, and Venezuela. The leading technology was, according to declining order of production, the Midrex process, followed by Coal-based, HYL/Energiron, and Finmet processes.

MEPS International Ltd. forecast total world steel production in 2012 to be 1.625 Gt, up 11% from that in 2010 and up 5% from that forecast in 2011. MEPS also forecast increasing steel production in 2012 in South America, Africa and the Middle East, China, other Europe and the CIS, and the EU of 5%, 3%, 8%, 4%, and 2%, respectively (Commodities Now, 2012).

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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)

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|--------------------------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|------------|
| Manufacturers of pig iron and raw steel and castings:² | | | | | |
| Ferrous scrap consumption | 55,000 | 58,000 | 47,700 | 53,500 ^r | 56,400 |
| Pig iron consumption | 36,500 | 33,600 | 28,300 | 34,100 | 34,900 |
| Direct-reduced iron consumption | 2,040 | 1,950 | 1,340 | 1,550 ^r | 1,620 |
| Net receipts of ferrous scrap ³ | 46,800 | 49,800 | 39,800 | 46,100 ^r | 48,400 |
| Home scrap production ⁴ | 8,760 | 8,720 | 7,610 | 7,710 ^r | 8,010 |
| Ending stocks of ferrous scrap, December 31 | 3,650 | 3,730 | 2,820 | 3,030 ^r | 3,650 |
| Manufacturers of steel castings:⁵ | | | | | |
| Ferrous scrap consumption | 1,070 ^r | 1,850 ^r | 603 ^r | 536 ^r | 756 |
| Pig iron consumption | 11 | 12 | 17 | 10 | 10 |
| Direct-reduced iron consumption | -- | 4 | 14 | -- | -- |
| Net receipts of ferrous scrap ³ | 749 ^r | 1,480 ^r | 460 ^r | 413 ^r | 583 |
| Home scrap production ⁴ | 319 ^r | 416 ^r | 138 ^r | 148 ^r | 232 |
| Ending stocks of ferrous scrap, December 31 | 83 ^r | 200 ^r | 70 ^r | 83 ^r | 167 |
| Iron foundries and miscellaneous users:⁵ | | | | | |
| Ferrous scrap consumption | 7,940 | 7,760 | 5,250 ^r | 5,660 ^r | 5,960 |
| Pig iron consumption | 870 | 842 | 1,860 ^r | 1,930 ^r | 1,970 |
| Direct-reduced iron consumption | 4 | 3 | 3 | 3 | 3 |
| Net receipts of ferrous scrap ³ | 5,120 | 5,200 | 3,520 ^r | 3,880 ^r | 4,180 |
| Home scrap production ⁴ | 2,550 | 2,560 | 1,730 ^r | 1,820 ^r | 1,830 |
| Ending stocks of ferrous scrap, December 31 | 413 | 416 | 175 ^r | 213 ^r | 246 |
| Total, all manufacturing types: | | | | | |
| Ferrous scrap consumption | 64,000 ^r | 67,600 ^r | 53,500 ^r | 59,700 ^r | 63,100 |
| Pig iron consumption | 37,400 | 34,400 | 30,200 | 36,100 ^r | 36,900 |
| Direct-reduced iron consumption | 2,050 | 1,960 | 1,360 | 1,550 ^r | 1,620 |
| Net receipts of ferrous scrap ³ | 52,600 ^r | 56,400 ^r | 43,800 ^r | 50,400 ^r | 53,200 |
| Home scrap production ⁴ | 11,600 ^r | 11,700 ^r | 9,480 ^r | 9,680 ^r | 10,100 |
| Ending stocks, December 31: | | | | | |
| Ferrous scrap at consumer plants | 4,140 ^r | 4,340 ^r | 3,070 ^r | 3,330 ^r | 4,060 |
| Pig iron at consumer and supplier plants | 771 | 885 | 506 ^r | 418 ^r | 423 |
| Direct-reduced iron at consumer plants | 364 | 435 | 234 | 161 | 126 |
| Exports:⁶ | | | | | |
| Ferrous scrap (includes tinplate and terneplate):⁷ | | | | | |
| Quantity | 16,500 | 21,500 | 22,400 | 20,500 | 24,300 |
| Value | 6,890,000 | 10,400,000 | 7,120,000 | 8,380,000 | 11,400,000 |
| Pig iron, all grades: | | | | | |
| Quantity | 71 | 51 | 11 | 2,220 | 51 |
| Value | 4,610 | 11,400 | 4,200 | 13,400 | 27,000 |
| Direct-reduced iron, steelmaking grade: | | | | | |
| Quantity | (8) | 1 | (8) | 1 | 4 |
| Value | 23 | 97 | 38 | 115 | 448 |
| Imports for consumption:⁶ | | | | | |
| Ferrous scrap (includes tinplate and terneplate):⁷ | | | | | |
| Quantity | 3,700 | 3,600 | 2,990 | 3,780 | 4,010 |
| Value | 1,040,000 | 1,450,000 | 814,000 | 1,420,000 | 1,650,000 |
| Pig iron, all grades: | | | | | |
| Quantity | 5,220 | 4,980 | 2,420 | 3,780 | 4,190 |
| Value | 1,660,000 | 2,800,000 | 877,000 | 1,540,000 | 2,120,000 |
| Direct-reduced iron, steelmaking grade: | | | | | |
| Quantity | 2,330 | 2,340 | 1,020 | 1,640 | 1,800 |
| Value | 519,000 | 971,000 | 304,000 | 607,000 | 775,000 |

^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.

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.

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

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 2011 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 | 667 | 7 | 83 | -- | 699 | W | 137 |
| Cut structural and plate | 3,850 | 148 | 724 | -- | 4,690 | 4 | 276 |
| No. 1 heavy-melting steel | 4,700 | 196 | 944 | 2 | 5,840 | 36 | 341 |
| No. 2 heavy-melting steel | 6,120 | 68 | 264 | -- | 6,410 | 3 | 351 |
| No. 1 and electric furnace bundles | 2,330 | 213 | 836 | -- | 3,260 | 120 | 245 |
| No. 2 and all other bundles | 943 | 13 | W | -- | 979 | W | 34 |
| Electric furnace, 1 foot and under (not bundles) | 11 | W | W | -- | 88 | W | -- |
| Railroad rails | 245 | W | W | -- | 303 | -- | 21 |
| Turnings and borings | 2,200 | 197 | 45 | -- | 2,440 | 1 | 127 |
| Slag scrap | 923 | W | 1,050 | -- | 1,510 | 569 | 163 |
| Shredded or fragmentized | 13,700 | 1,610 | 492 | -- | 15,800 | 41 | 957 |
| No. 1 busheling | 4,430 | 109 | 173 | -- | 4,660 | W | 310 |
| Steel cans, post consumer | 109 | -- | W | -- | 112 | -- | 3 |
| All other carbon steel scrap | 2,960 | 183 | 1,910 | 9 | 4,540 | 510 | 186 |
| Stainless steel scrap | 866 | 66 | 350 | W | 1,300 | 4 | 50 |
| Alloy steel (except stainless) | 343 | 193 | 249 | -- | 774 | 10 | 150 |
| Ingot mold and stool scrap | 25 | -- | 106 | 65 | 105 | 89 | 17 |
| Machinery and cupola cast iron | 58 | -- | W | -- | 56 | W | 4 |
| Cast-iron borings | 286 | -- | W | -- | 295 | W | 16 |
| Other iron scrap | 955 | 74 | 242 | -- | 1,200 | 65 | 154 |
| Other mixed scrap | 753 | 286 | 302 | W | 1,300 | 31 | 104 |
| Total | 46,500 | 3,480 | 7,910 | 97 | 56,400 | 1,560 | 3,650 |
| Manufacturers of steel castings: | | | | | | | |
| Carbon steel: | | | | | | | |
| Low-phosphorus plate and punchings | 272 | W | 106 | -- | 331 | -- | 125 |
| Cut structural and plate | 59 | -- | 5 | -- | 64 | -- | 1 |
| No. 1 heavy-melting steel | 8 | -- | -- | -- | 9 | 1 | 2 |
| 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 | 1 | -- | W | -- | W | -- | W |
| Turnings and borings | 34 | W | 11 | -- | 46 | W | 1 |
| Slag scrap | W | -- | W | -- | W | -- | W |
| Shredded or fragmentized | 23 | -- | -- | -- | 23 | -- | -- |
| No. 1 busheling | 38 | -- | -- | -- | 38 | -- | 1 |
| Steel cans, post consumer | -- | -- | -- | -- | -- | -- | -- |
| All other carbon steel scrap | 6 | -- | 47 | -- | 53 | -- | -- |
| Stainless steel scrap | 26 | -- | 21 | W | 44 | 1 | 25 |
| Alloy steel (except stainless) | 45 | W | 27 | W | 72 | -- | 6 |
| Ingot mold and stool scrap | W | -- | W | -- | W | -- | W |
| Machinery and cupola cast iron | -- | -- | -- | -- | -- | -- | -- |
| Cast-iron borings | -- | -- | -- | -- | -- | -- | -- |
| Other iron scrap | 1 | -- | -- | -- | 2 | -- | -- |
| Other mixed scrap | 38 | -- | -- | W | 46 | -- | 2 |
| Total | 576 | 10 | 223 | 9 | 756 | 4 | 167 |

See footnotes at end of table.

TABLE 2—Continued

U.S. CONSUMER RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS OF IRON AND STEEL SCRAP IN 2011 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 | 623 | 1 | 149 | -- | 770 | -- | 6 |
| Cut structural and plate | 673 | W | 47 | 12 | 728 | 5 | 28 |
| No. 1 heavy-melting steel | 11 | W | W | -- | 69 | -- | 1 |
| No. 2 heavy-melting steel | 110 | -- | W | -- | 142 | -- | 5 |
| No. 1 and electric furnace bundles | 74 | -- | -- | -- | 74 | -- | 2 |
| No. 2 and all other bundles | 80 | -- | W | -- | 77 | W | 5 |
| Electric furnace, 1 foot and under (not bundles) | 80 | -- | -- | -- | 81 | -- | 1 |
| Railroad rails | 40 | W | W | -- | 39 | -- | 3 |
| Turnings and borings | W | -- | 1 | -- | 47 | 1 | 18 |
| Slag scrap | W | -- | 12 | -- | 19 | W | W |
| Shredded or fragmented | 852 | -- | 21 | -- | 875 | W | 51 |
| No. 1 busheling | 299 | -- | 4 | -- | 302 | -- | 8 |
| Steel cans, post consumer | 7 | -- | -- | -- | 7 | -- | -- |
| All other carbon steel scrap | 89 | -- | 56 | W | 144 | 1 | 5 |
| Stainless steel scrap | 40 | -- | 1 | W | 39 | -- | 1 |
| Alloy steel (except stainless) | 4 | -- | 2 | -- | 6 | W | 1 |
| Ingot mold and stool scrap | W | W | W | -- | W | W | W |
| Machinery and cupola cast iron | 407 | W | 111 | W | 545 | W | 32 |
| Cast-iron borings | 54 | 10 | 8 | -- | 72 | -- | 1 |
| Motor blocks | 189 | W | 431 | -- | 621 | -- | 2 |
| Other iron scrap | 269 | 23 | 737 | 1 | 963 | 29 | 67 |
| Other mixed scrap | 209 | W | 111 | -- | 316 | 5 | 4 |
| Total | 4,190 | 45 | 1,780 | 41 | 5,960 | 51 | 246 |
| Grand total, all manufacturing types: | | | | | | | |
| Carbon steel: | | | | | | | |
| Low-phosphorus plate and punchings | 1,560 | 14 | 338 | -- | 1,800 | 60 | 267 |
| Cut structural and plate | 4,580 | 151 | 777 | 13 | 5,480 | 9 | 305 |
| No. 1 heavy-melting steel | 4,720 | 198 | 1,000 | 2 | 5,920 | 36 | 344 |
| No. 2 heavy-melting steel | 6,240 | 68 | 298 | W | 6,570 | 3 | 356 |
| No. 1 and electric furnace bundles | 2,410 | 213 | 836 | -- | 3,340 | 120 | 247 |
| No. 2 and all other bundles | 1,020 | 13 | 13 | -- | 1,060 | W | 38 |
| Electric furnace, 1 foot and under (not bundles) | 97 | W | 84 | -- | 177 | W | 1 |
| Railroad rails | 287 | W | W | -- | 342 | -- | 26 |
| Turnings and borings | 2,280 | 198 | 57 | -- | 2,530 | 2 | 147 |
| Slag scrap | 934 | W | 1,060 | -- | 1,530 | 572 | 164 |
| Shredded or fragmented | 14,600 | 1,610 | 513 | -- | 16,700 | 42 | 1,010 |
| No. 1 busheling | 4,760 | 109 | 177 | -- | 5,000 | 2 | 319 |
| Steel cans, post consumer | 116 | W | W | -- | 119 | -- | 3 |
| All other carbon steel scrap | 3,050 | 183 | 2,020 | 9 | 4,730 | 511 | 191 |
| Stainless steel scrap | 931 | 66 | 372 | 19 | 1,380 | 5 | 76 |
| Alloy steel (except stainless) | 392 | 195 | 277 | W | 851 | 10 | 157 |
| Ingot mold and stool scrap | 47 | W | 106 | 65 | 133 | 89 | 22 |
| Machinery and cupola cast iron | 465 | W | 113 | W | 601 | W | 35 |
| Cast-iron borings | 340 | 15 | 8 | -- | 367 | -- | 16 |
| Motor blocks | 189 | W | 431 | -- | 621 | -- | 2 |
| Other iron scrap | 1,230 | 97 | 979 | 1 | 2,170 | 94 | 221 |
| Other mixed scrap | 1,000 | 287 | 414 | 10 | 1,660 | 36 | 110 |
| Total | 51,300 | 3,530 | 9,920 | 147 | 63,100 | 1,620 | 4,060 |

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 2011¹

(Thousand metric tons)

| | Receipts | Production | Consumption | Shipments | Stocks, December 31 |
|-----------------------------------------------------|--------------------|------------|-------------|-----------|------------------------|
| Manufacturers of pig iron, raw steel, and castings: | | | | | |
| Pig iron | 8,110 ² | 26,900 | 34,900 | 73 | 396 |
| Direct-reduced iron (DRI) | 1,630 ³ | -- | 1,620 | -- | 126 |
| Manufacturers of steel castings: | | | | | |
| Pig iron | 11 | (4) | 10 | (4) | (4) |
| DRI | (4) | -- | -- | -- | (4) |
| Iron foundries and miscellaneous users: | | | | | |
| Pig iron | 2,000 | (4) | 1,970 | 27 | 50 |
| DRI | 3 | -- | 3 | -- | (4) |
| Total, all manufacturing types: | | | | | |
| Pig iron | 10,100 | 26,900 | 36,900 | 101 | 423 |
| DRI | 1,630 | -- | 1,620 | -- | 126 |

-- Zero.

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

²Includes 2.47 million metric tons (Mt) purchased by electric furnace steel producers.

³Includes 43,646 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 2011,
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 | | |
|------------------------------|---------------------------------------------------------|--------|------------------|------------------------------------|------|------------------|-------------------------------------------|-------|------------------|-----------------------------------|--------|------------------|
| | Pig iron | | | Pig iron | | | Pig iron | | | Pig iron | | |
| | Scrap | iron | DRI ² | Scrap | iron | DRI ² | Scrap | iron | DRI ² | Scrap | iron | DRI ² |
| Blast furnace | 2,370 | -- | 44 | -- | -- | -- | -- | -- | -- | 2,370 | -- | 44 |
| Basic oxygen process | 8,800 | 31,300 | 312 | -- | -- | -- | -- | -- | -- | 8,800 | 31,300 | 312 |
| Electric furnace | 45,100 | 3,510 | 1,260 | 754 | 10 | -- | 4,600 | 1,890 | 3 | 50,500 | 5,410 | 1,270 |
| Cupola furnace | 64 | -- | -- | -- | -- | -- | 1,340 | 76 | -- | 1,400 | 76 | -- |
| Other ³ | 1 | -- | -- | 2 | -- | -- | 30 | 12 | -- | 33 | 12 | -- |
| Direct castings ⁴ | -- | 36 | -- | -- | -- | -- | -- | -- | -- | -- | 36 | -- |
| Total | 56,400 | 34,900 | 1,620 | 756 | 10 | -- | 5,960 | 1,970 | 3 | 63,100 | 36,900 | 1,620 |

-- 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 2011, 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 | 19 | (5) | 15 | W | W | 33 |
| New Jersey and New York | 1,780 | -- | 93 | W | W | 1,840 |
| Pennsylvania | 3,660 | 659 | 1,790 | W | 66 | 6,130 |
| Total | 5,460 | 659 | 1,900 | 84 | 103 | 8,000 |
| North Central: | | | | | | |
| Illinois | 1,710 | (5) | 122 | 36 | 8 | 1,860 |
| Indiana | 4,230 | 337 | 1,780 | -- | 358 | 5,980 |
| Iowa, Nebraska, South Dakota | 2,160 | 30 | 108 | (5) | (5) | 2,300 |
| Kansas and Missouri | 132 | 5 | 85 | -- | (5) | 222 |
| Michigan | 2,100 | 9 | 1,050 | (5) | 504 | 2,650 |
| Minnesota | 369 | 142 | 20 | -- | 21 | 511 |
| Ohio | 6,080 | 337 | 1,490 | 18 | 415 | 7,510 |
| Wisconsin | 1,680 | 2 | 1,000 | (5) | 5 | 2,670 |
| Total | 18,500 | 862 | 5,640 | 54 | 1,310 | 23,700 |
| South Atlantic: | | | | | | |
| Delaware and Maryland | W | W | W | -- | W | 1,300 |
| Florida and Georgia | W | -- | W | -- | W | 825 |
| North Carolina and South Carolina | 3,190 | W | W | (5) | (5) | 3,680 |
| Virginia and West Virginia | 2,130 | 271 | 271 | (5) | W | 2,660 |
| Total | 7,100 | 545 | 899 | (5) | 77 | 8,460 |
| South Central: | | | | | | |
| Alabama and Mississippi | 5,920 | W | 228 | -- | 7 | 6,140 |
| Arkansas, Louisiana, Oklahoma | 4,230 | W | 388 | W | -- | 4,790 |
| Kentucky and Tennessee | 3,490 | 285 | 308 | -- | (5) | 4,090 |
| Texas | 3,090 | 690 | 197 | W | 56 | 3,920 |
| Total | 16,700 | 1,140 | 1,120 | 9 | 60 | 18,900 |
| Mountain and Pacific: | | | | | | |
| Arizona, Colorado, Idaho, Utah | 1,760 | W | 143 | W | W | 1,940 |
| California, Oregon, Washington | 1,770 | W | 214 | W | W | 2,200 |
| Total | 3,520 | 330 | 357 | (5) | 65 | 4,150 |
| Grand total | 51,300 | 3,530 | 9,920 | 147 | 1,620 | 63,200 |

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 2011, 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 | 1,750 | 22 | 8 | -- | 130 | 7 | 1,890 | 29 |
| Pennsylvania | 5,700 | 2,920 | 206 | 1 | 205 | 19 | 6,110 | 2,930 |
| Total | 7,450 | 2,940 | 214 | 1 | 335 | 26 | 7,990 | 2,960 |
| North Central: | | | | | | | | |
| Illinois | 1,450 | W | 25 | 2 | 374 | 56 | 1,850 | 2,150 |
| Indiana | 5,680 | 12,600 | 65 | (4) | 252 | 51 | 6,000 | 12,700 |
| Iowa, Kansas, Minnesota, Missouri, Nebraska, South Dakota, Wisconsin | 3,340 | W | 206 | -- | 2,100 | 1,660 | 5,650 | 1,780 |
| Michigan | 2,100 | W | 28 | -- | 535 | 24 | 2,670 | 4,040 |
| Ohio | 6,830 | 6,840 | 68 | (4) | 623 | 56 | 7,530 | 6,900 |
| Total | 19,400 | 25,700 | 392 | 2 | 3,880 | 1,840 | 23,700 | 27,600 |
| South Atlantic: | | | | | | | | |
| Delaware, Maryland, Virginia, West Virginia | W | W | (4) | (4) | W | W | 3,960 | 1,580 |
| Florida, Georgia, North Carolina, South Carolina | W | W | (4) | -- | W | W | 4,440 | 200 |
| Total | 7,750 | 1,730 | 1 | (4) | 639 | 49 | 8,390 | 1,780 |
| South Central: | | | | | | | | |
| Alabama, Kentucky, Mississippi, Tennessee | 9,390 | 3,970 | W | (4) | W | W | 10,200 | W |
| Arkansas, Louisiana, Oklahoma | 4,800 | W | W | -- | W | W | 4,820 | W |
| Texas | 3,740 | W | 31 | 7 | 132 | 15 | 3,900 | 55 |
| Total | 17,900 | 4,480 | 69 | 7 | 892 | 54 | 18,900 | 4,540 |
| Mountain and Pacific: | | | | | | | | |
| Arizona, Colorado, Idaho, Utah | 1,890 | W | 3 | (4) | 76 | (4) | 1,970 | 15 |
| California, Oregon, Washington | 1,960 | 15 | 77 | (4) | 137 | 4 | 2,170 | 4 |
| Total | 3,840 | 15 | 80 | (4) | 213 | 4 | 4,130 | 19 |
| Grand total | 56,400 | 34,900 | 756 | 10 | 5,960 | 1,970 | 63,100 | 36,900 |

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, 2011, 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 | (5) | (5) | -- | (5) | (5) | (5) | (5) |
| New Jersey and New York | 59 | (5) | -- | (5) | (5) | 60 | (5) |
| Pennsylvania | 242 | 15 | 14 | 16 | 2 | 288 | 3 |
| Total | 301 | 15 | 14 | 16 | 2 | 347 | 3 |
| North Central: | | | | | | | |
| Illinois | 78 | (5) | (6) | 5 | W | 85 | 11 |
| Indiana | 379 | 3 | 2 | 17 | W | 408 | 151 |
| Iowa, Kansas, Missouri, Nebraska, South Dakota | 186 | W | W | 2 | -- | 192 | 4 |
| Michigan | 110 | (6) | W | 18 | 22 | 153 | 4 |
| Minnesota and Wisconsin | 68 | W | (6) | 5 | W | 77 | 7 |
| Ohio | 414 | 30 | 12 | 106 | W | 562 | 35 |
| Total | 1,240 | 36 | 21 | 153 | 31 | 1,480 | 212 |
| South Atlantic: | | | | | | | |
| Delaware, Maryland, Virginia, West Virginia | 134 | (5) | (5) | W | W | W | W |
| Florida, Georgia, North Carolina, South Carolina | 276 | (5) | (5) | W | W | W | W |
| Total | 410 | (5) | (5) | 91 | 27 | 529 | 60 |
| South Central: | | | | | | | |
| Alabama, Kentucky, Mississippi, Tennessee | 404 | W | W | W | W | 451 | 110 |
| Arkansas, Louisiana, Oklahoma | 685 | W | W | W | -- | 804 | 30 |
| Texas | 191 | 3 | (5) | 8 | W | 202 | 2 |
| Total | 1,280 | 24 | 120 | 28 | 5 | 1,460 | 142 |
| Mountain and Pacific: | | | | | | | |
| Arizona, Colorado, Idaho, Utah | 103 | (5) | (5) | (5) | W | 103 | W |
| California, Oregon, Washington | 89 | (5) | 2 | 7 | W | 143 | W |
| Total | 192 | 1 | 2 | 7 | 45 | 246 | 6 |
| Grand total | 3,420 | 77 | 157 | 296 | 110 | 4,060 | 423 |

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 |
|----------------------------|-------------|------------------|----------------|--------------------|
| 2010, ^r average | 334.48 | 321.85 | 339.54 | 331.96 |
| 2011: | | | | |
| January | 429.00 | 423.75 | 434.25 | 429.00 |
| February | 427.37 | 406.58 | 417.63 | 417.19 |
| March | 425.00 | 409.13 | 415.00 | 416.38 |
| April | 425.00 | 400.71 | 410.72 | 412.14 |
| May | 407.86 | 408.57 | 396.90 | 404.44 |
| June | 419.32 | 414.55 | 413.18 | 415.68 |
| July | 420.00 | 423.50 | 415.00 | 419.50 |
| August | 420.00 | 420.65 | 415.00 | 418.55 |
| September | 420.00 | 420.00 | 410.48 | 416.83 |
| October | 411.43 | 408.57 | 397.86 | 405.95 |
| November | 388.75 | 373.00 | 377.50 | 379.75 |
| December | 408.68 | 381.84 | 398.68 | 396.40 |
| Average | 416.87 | 407.57 | 408.52 | 410.99 |

^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^{1,2}

(Thousand metric tons and thousand dollars)

| Country | 2010 | | 2011 | |
|----------------------|----------------|--------------------|----------|------------|
| | Quantity | Value | Quantity | Value |
| Argentina | 4 | 1,450 | 2 | 1,180 |
| Austria | 1 | 2,860 | 1 | 2,970 |
| Bangladesh | 37 | 13,800 | 50 | 24,600 |
| Belgium | 10 | 20,100 | 9 | 12,500 |
| Brazil | 61 | 20,600 | 36 | 15,200 |
| Canada | 1,360 | 417,000 | 1,460 | 503,000 |
| Chile | 1 | 453 | (3) | 183 |
| China | 3,210 | 1,800,000 | 4,230 | 2,310,000 |
| Colombia | (3) | 560 | 2 | 798 |
| Dominican Republic | 4 | 960 | 2 | 635 |
| Ecuador | 31 | 11,300 | 76 | 33,600 |
| Egypt | 650 | 228,000 | 890 | 383,000 |
| Finland | 43 | 91,700 | 41 | 93,200 |
| France | 8 | 3,010 | 12 | 5,090 |
| Germany | 9 | 3,540 | 4 | 2,850 |
| Greece | 72 | 21,800 | 35 | 12,600 |
| Guatemala | (3) | 100 | 32 | 14,000 |
| Hong Kong | 96 | 83,500 | 104 | 65,100 |
| India | 976 | 347,000 | 1,210 | 532,000 |
| Indonesia | 388 | 145,000 | 246 | 104,000 |
| Israel | 3 | 959 | (3) | 321 |
| Italy | 179 | 71,200 | 195 | 92,300 |
| Jamaica | 1 | 290 | 1 | 219 |
| Japan | 172 | 170,000 | 243 | 196,000 |
| Korea, Republic of | 2,820 | 1,030,000 | 2,960 | 1,320,000 |
| Malaysia | 803 | 311,000 | 984 | 432,000 |
| Mexico | 666 | 213,000 | 549 | 233,000 |
| Netherlands | 23 | 19,500 | 31 | 43,600 |
| New Caledonia | 1 | 3,740 | 1 | 3,110 |
| Pakistan | 174 | 70,100 | 202 | 111,000 |
| Peru | 280 | 98,200 | 187 | 79,300 |
| Saudi Arabia | (3) | 227 | 19 | 8,360 |
| Singapore | 8 | 2,880 | 8 | 3,080 |
| Spain | 20 | 32,100 | 29 | 26,000 |
| Sri Lanka | 1 | 281 | 1 | 1,070 |
| Sweden | 3 | 9,060 | 5 | 9,120 |
| Switzerland | (3) | 79 | 1 | 313 |
| Taiwan | 2,820 | 1,160,000 | 3,540 | 1,690,000 |
| Thailand | 562 | 204,000 | 814 | 357,000 |
| Trinidad and Tobago | 1 | 496 | 2 | 737 |
| Turkey | 4,350 | 1,530,000 | 5,620 | 2,420,000 |
| United Arab Emirates | 4 | 1,690 | 34 | 14,300 |
| United Kingdom | 6 | 7,750 | 4 | 3,620 |
| Uruguay | 1 | 118 | 1 | 198 |
| Venezuela | 16 | 7,270 | 2 | 1,090 |
| Vietnam | 645 | 221,000 | 396 | 161,000 |
| Other | 9 ^r | 5,710 ^r | 73 | 32,900 |
| Total | 20,500 | 8,380,000 | 24,300 | 11,400,000 |

^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. Export valuation is free alongside ship.

The United States exported scrap to 93 countries in 2010 and 93 countries in 2011.

³Less than ½ unit.

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

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

(Thousand metric tons and thousand dollars)

| Customs district | 2010 | | 2011 | |
|-----------------------|----------|-----------|----------|------------|
| | Quantity | Value | Quantity | Value |
| Baltimore, MD | 264 | 102,000 | 400 | 189,000 |
| Boston, MA | 1,040 | 360,000 | 1,430 | 619,000 |
| Buffalo, NY | 316 | 120,000 | 306 | 125,000 |
| Charleston, SC | 160 | 94,300 | 148 | 93,200 |
| Charlotte, NC | 21 | 21,500 | 29 | 23,100 |
| Chicago, IL | 14 | 5,400 | 7 | 4,570 |
| Cleveland, OH | 5 | 1,810 | 2 | 1,160 |
| Columbia-Snake, OR | 1,270 | 466,000 | 1,440 | 644,000 |
| Detroit, MI | 295 | 86,700 | 337 | 103,000 |
| Duluth, MN | 75 | 22,700 | 73 | 28,000 |
| El Paso, TX | 25 | 7,070 | 15 | 6,620 |
| Great Falls, MT | 8 | 2,110 | 7 | 2,060 |
| Honolulu, HI | 171 | 58,300 | 184 | 78,500 |
| Houston-Galveston, TX | 889 | 340,000 | 1,190 | 540,000 |
| Laredo, TX | 347 | 113,000 | 311 | 128,000 |
| Los Angeles, CA | 4,000 | 2,030,000 | 5,080 | 2,700,000 |
| Miami, FL | 482 | 166,000 | 601 | 237,000 |
| Mobile, AL | 97 | 47,100 | 144 | 79,700 |
| New Orleans, LA | 1,290 | 477,000 | 1,330 | 588,000 |
| New York, NY | 2,580 | 1,170,000 | 3,230 | 1,580,000 |
| Nogales, AZ | (3) | 6 | 1 | 168 |
| Norfolk, VA | 360 | 166,000 | 433 | 214,000 |
| Ogdensburg, NY | 47 | 15,000 | 35 | 14,100 |
| Pembina, ND | 430 | 148,000 | 545 | 214,000 |
| Philadelphia, PA | 919 | 321,000 | 1,140 | 499,000 |
| Portland, ME | 173 | 65,000 | 193 | 87,700 |
| Providence, RI | 449 | 155,000 | 567 | 245,000 |
| San Diego, CA | 29 | 7,620 | 9 | 2,880 |
| San Francisco, CA | 2,120 | 798,000 | 2,330 | 1,040,000 |
| San Juan, PR | 339 | 92,300 | 364 | 126,000 |
| Savannah, GA | 443 | 247,000 | 478 | 287,000 |
| Seattle, WA | 1,190 | 450,000 | 1,220 | 559,000 |
| St. Albans, VT | 71 | 22,300 | 83 | 32,200 |
| Tampa, FL | 505 | 184,000 | 597 | 264,000 |
| Other | 111 | 16,500 | 73 | 9,150 |
| Total | 20,500 | 8,380,000 | 24,300 | 11,400,000 |

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.

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

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

(Thousand metric tons and thousand dollars)

| Grade | 2010 | | 2011 | |
|------------------------------------------------------|----------|-----------|----------|------------|
| | Quantity | Value | Quantity | Value |
| No. 1 heavy-melting scrap | 5,650 | 1,940,000 | 8,060 | 3,430,000 |
| No. 2 heavy-melting scrap | 1,020 | 331,000 | 1,160 | 482,000 |
| No. 1 bundles | 326 | 80,900 | 525 | 173,000 |
| No. 2 bundles | 53 | 21,900 | 10 | 2,450 |
| Shredded steel scrap | 7,440 | 2,640,000 | 8,390 | 3,680,000 |
| Borings, shovelings, and turnings | 62 | 10,500 | 106 | 31,400 |
| Cut plate and structural | 825 | 302,000 | 955 | 420,000 |
| Tinned iron or steel | 82 | 52,400 | 127 | 69,700 |
| Remelting scrap ingots | 27 | 34,200 | 39 | 38,300 |
| Stainless steel scrap | 937 | 936,000 | 656 | 958,000 |
| Other alloy steel scrap | 916 | 840,000 | 947 | 585,000 |
| Other steel scrap ³ | 2,680 | 1,000,000 | 2,850 | 1,270,000 |
| Iron scrap | 517 | 197,000 | 515 | 228,000 |
| Total | 20,500 | 8,380,000 | 24,300 | 11,400,000 |
| Ships, boats, and other vessels for scrapping | 4 | 743 | 4 | 835 |
| Used rails for rerolling and other uses ⁴ | 49 | 41,000 | 49 | 50,400 |
| Grand total | 20,600 | 8,420,000 | 24,400 | 11,400,000 |

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.

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

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

(Thousand metric tons and thousand dollars)

| Country | 2010 | | 2011 | |
|---------------------|----------------|--------------------|----------|-----------|
| | Quantity | Value | Quantity | Value |
| Argentina | 3 | 2,310 | (3) | 37 |
| Bahamas, The | 9 | 2,560 | 9 | 2,370 |
| Brazil | 1 | 1,790 | 4 | 983 |
| Canada | 2,700 | 964,000 | 3,260 | 1,290,000 |
| Cayman Islands | 2 | 647 | 6 | 1,900 |
| China | (3) | 171 | 1 | 1,330 |
| Egypt | 1 | 1,230 | 1 | 1,080 |
| France | 1 | 479 | (3) | 772 |
| Germany | 76 | 28,900 | 27 | 11,100 |
| Guatemala | (3) | 1,060 | (3) | 528 |
| Israel | 1 | 976 | (3) | 873 |
| Japan | 2 | 1,110 | 3 | 1,460 |
| Jordan | 1 | 147 | 2 | 355 |
| Korea, Republic of | 1 | 1,450 | (3) | 277 |
| Malaysia | 1 | 881 | (3) | 33 |
| Mexico | 439 | 197,000 | 467 | 212,000 |
| Netherlands | 136 | 49,700 | 55 | 25,000 |
| Peru | 1 | 522 | 5 | 806 |
| Singapore | 3 | 776 | 4 | 7,800 |
| Sweden | 117 | 38,800 | 86 | 42,900 |
| Taiwan | 4 | 8,900 | 2 | 4,220 |
| Trinidad and Tobago | (3) | 1,080 | (3) | 121 |
| United Kingdom | 274 | 106,000 | 69 | 33,800 |
| Other | 5 ^r | 7,270 ^r | 8 | 5,090 |
| Total | 3,780 | 1,420,000 | 4,010 | 1,650,000 |

^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. The United States imported scrap from 57 countries in 2010 and 59 countries in 2011.

³Less than ½ unit.

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

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 | 2010 | | 2011 | |
|-----------------------|----------|--------------------|----------|-----------|
| | Quantity | Value | Quantity | Value |
| Buffalo, NY | 518 | 282,000 | 674 | 376,000 |
| Charleston, SC | 224 | 83,800 | 147 | 67,600 |
| Chicago, IL | 2 | 1,270 | 9 | 2,910 |
| Cleveland, OH | 1 | 2,760 | 63 | 14,900 |
| Columbia-Snake, OR | 34 | 9,890 | 43 | 14,400 |
| Detroit, MI | 974 | 363,000 | 1,220 | 491,000 |
| Duluth, MN | 29 | 14,500 | 44 | 20,900 |
| El Paso, TX | 77 | 28,600 | 48 | 20,200 |
| Great Falls, MT | 183 | 58,600 | 172 | 66,300 |
| Houston-Galveston, TX | 3 | 9,770 | 2 | 4,670 |
| Laredo, TX | 156 | 109,000 | 163 | 113,000 |
| Los Angeles, CA | 7 | 11,500 | 2 | 2,670 |
| Miami, FL | 8 | 1,660 | 7 | 2,340 |
| Mobile, AL | 61 | 23,700 | 29 | 14,600 |
| New Orleans, LA | 299 | 107,000 | 60 | 28,100 |
| New York, NY | 4 | 1,900 | 5 | 3,270 |
| Nogales, AZ | 11 | 3,940 | 32 | 12,700 |
| Norfolk, VA | 1 | 1,470 | (3) | 125 |
| Ogdensburg, NY | 29 | 37,100 | 23 | 29,800 |
| Pembina, ND | 35 | 21,400 | 73 | 33,200 |
| Philadelphia, PA | 17 | 7,190 | 2 | 1,160 |
| Portland, ME | 8 | 5,710 | 12 | 4,930 |
| San Diego, CA | 195 | 54,400 | 225 | 65,300 |
| Savannah, GA | (3) | 938 | 8 | 1,360 |
| Seattle, WA | 889 | 173,000 | 933 | 252,000 |
| Tampa, FL | 8 | 2,220 | 12 | 3,790 |
| Other | 3 | 1,080 ^r | 2 | 919 |
| Total | 3,780 | 1,420,000 | 4,010 | 1,650,000 |

^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.

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

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

(Thousand metric tons and thousand dollars)

| Class | 2010 | | 2011 | |
|------------------------------------------------------|----------|-----------|----------|-----------|
| | Quantity | Value | Quantity | Value |
| No. 1 heavy-melting scrap | 163 | 48,700 | 199 | 72,400 |
| No. 2 heavy-melting scrap | 70 | 18,400 | 70 | 23,900 |
| No. 1 bundles | 1,190 | 457,000 | 1,080 | 493,000 |
| No. 2 bundles | 34 | 6,360 | 21 | 5,320 |
| Shredded steel scrap | 441 | 98,200 | 387 | 93,100 |
| Borings, shovelings, and turnings | 94 | 21,400 | 109 | 25,000 |
| Cut plate and structural | 174 | 43,700 | 263 | 79,600 |
| Tinned iron or steel | 68 | 14,300 | 97 | 28,500 |
| Remelting scrap ingots | (3) | 190 | (3) | 507 |
| Stainless steel scrap | 195 | 305,000 | 169 | 295,000 |
| Other alloy steel scrap | 740 | 240,000 | 797 | 310,000 |
| Other steel scrap ⁴ | 469 | 123,000 | 621 | 156,000 |
| Iron scrap | 142 | 42,300 | 193 | 65,100 |
| Total | 3,780 | 1,420,000 | 4,010 | 1,650,000 |
| Ships, boats, and other vessels for scrapping | (3) | 226 | (3) | 50 |
| Used rails for rerolling and other uses ⁵ | 53 | 23,700 | 71 | 35,000 |
| Grand total | 3,830 | 1,440,000 | 4,080 | 1,680,000 |

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.

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

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

| Country | 2010 | | 2011 | |
|----------------------|---------------------------|----------------------|---------------------------|----------------------|
| | Quantity (metric tons) | Value (thousands) | Quantity (metric tons) | Value (thousands) |
| Argentina | 10 | \$22 | 166 | \$139 |
| Australia | 1,760 | 2,460 | 1,500 | 2,470 |
| Bahamas, The | 106 | 143 | 120 | 142 |
| Brazil | 28 | 62 | 229 | 442 |
| Canada | 13,200 | 12,600 | 27,500 | 27,000 |
| Cayman Islands | 15 | 36 | 4 | 6 |
| Chile | 161 | 270 | 910 | 1,310 |
| China | 169 | 154 | 20 | 121 |
| Colombia | 18 | 41 | 156 | 149 |
| Denmark | 24 | 99 | -- | -- |
| Dominican Republic | 981 | 1,010 | 1,140 | 1,200 |
| Germany | -- | -- | 102 | 158 |
| Guatemala | 23 | 39 | 103 | 91 |
| Guinea | -- | -- | 433 | 536 |
| Guyana | 8 | 22 | 8 | 22 |
| Hungary | 12 | 10 | 5 | 150 |
| India | 79 | 142 | 86 | 413 |
| Ireland | 130 | 178 | 13 | 11 |
| Italy | 18 | 116 | -- | -- |
| Jamaica | 37 | 60 | 73 | 114 |
| Japan | 201 | 168 | 846 | 714 |
| Korea, Republic of | 3 | 20 | 19 | 16 |
| Mexico | 27,800 | 19,900 | 12,100 | 9,980 |
| Netherlands | 52 | 135 | 47 | 54 |
| Nigeria | 204 | 172 | 1 | 7 |
| Panama | 80 | 158 | 1,880 | 3,060 |
| Peru | 135 | 140 | 28 | 30 |
| Saudi Arabia | 95 | 262 | -- | -- |
| Taiwan | 3,290 | 1,870 | 892 | 804 |
| United Arab Emirates | -- | -- | 102 | 221 |
| United Kingdom | 10 | 13 | 31 | 26 |
| Venezuela | 79 | 176 | 310 | 616 |
| Other | 265 [†] | 504 [†] | 249 | 406 |
| Total | 49,100 | 41,000 | 49,100 | 50,400 |

[†]Revised. -- Zero.

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

²Export valuation is free alongside ship.

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 | 2010 | | 2011 | |
|----------------|---------------------------|----------------------|---------------------------|----------------------|
| | Quantity (metric tons) | Value (thousands) | Quantity (metric tons) | Value (thousands) |
| Canada | 46,800 | \$18,500 | 59,300 | \$27,100 |
| France | -- | -- | 142 | 77 |
| Germany | 15 | 40 | 5 | 11 |
| Japan | 4 | 10 | 5 | 13 |
| Mexico | 107 | 38 | 241 | 150 |
| Russia | 6,250 | 4,910 | 11,000 | 7,540 |
| Spain | 13 | 119 | -- | -- |
| United Kingdom | 2 | 6 | 1 | 3 |
| Other | 37 | 69 | 29 | 56 |
| Total | 53,200 | 23,700 | 70,700 | 35,000 |

-- 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 | 2010 | | 2011 | |
|--------------------|---------------------------|----------------------|---------------------------|----------------------|
| | Quantity (metric tons) | Value (thousands) | Quantity (metric tons) | Value (thousands) |
| Canada | -- | -- | 1,970 | \$242 |
| China | 213 | \$31 | -- | -- |
| Costa Rica | 557 | 59 | -- | -- |
| Korea, Republic of | -- | -- | 414 | 44 |
| Malaysia | -- | -- | 54 | 6 |
| Mexico | 204 | 25 | -- | -- |
| Switzerland | -- | -- | 85 | 9 |
| United Kingdom | -- | -- | 1,390 | 147 |
| Total | 974 | 115 | 3,910 | 448 |

-- 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.

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

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

| Country | 2010 | | 2011 | |
|---------------------|---------------------------|----------------------|---------------------------|----------------------|
| | Quantity (metric tons) | Value (thousands) | Quantity (metric tons) | Value (thousands) |
| Russia | -- | -- | 252 | \$117 |
| South Africa | 39,100 | \$11,700 | 7,600 | 2,280 |
| Trinidad and Tobago | 1,270,000 | 490,000 | 1,450,000 | 645,000 |
| Venezuela | 331,000 | 106,000 | 342,000 | 127,000 |
| Other | 63 | 22 | 43 | 11 |
| Total | 1,640,000 | 607,000 | 1,800,000 | 775,000 |

-- 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.

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

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

| Country | 2010 | | 2011 | |
|---------------------|---------------------------|----------------------|---------------------------|----------------------|
| | Quantity (metric tons) | Value (thousands) | Quantity (metric tons) | Value (thousands) |
| Austria | -- | -- | 289 | \$96 |
| Brazil | 9 | \$9 | 107 | 27 |
| Canada | 14,900 | 7,190 | 8,320 | 4,170 |
| China | 62 | 19 | 33 | 35 |
| Colombia | 3,300 | 25 | -- | -- |
| Dominican Republic | 149 | 137 | -- | -- |
| French Polynesia | -- | -- | 175 | 58 |
| Germany | 25 | 26 | 11 | 4 |
| Hong Kong | 37 | 40 | 15 | 5 |
| India | -- | -- | 86 | 32 |
| Israel | 29 | 10 | 19 | 6 |
| Italy | -- | -- | 146 | 78 |
| Japan | 2 | 5 | 757 | 495 |
| Korea, Republic of | 272 | 237 | 1,100 | 933 |
| Mexico ³ | 2,200,000 | 5,530 | 40,100 | 20,900 |
| Singapore | 113 | 123 | 20 | 22 |
| Uruguay | 76 | 25 | 162 | 54 |
| Other | 13 | 6 | 84 | 35 |
| Total | 2,220,000 | 13,400 | 51,400 | 27,000 |

-- 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. Export valuation is free alongside ship value.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

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

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

| Country | 2010 | | 2011 | |
|----------------|---------------------------|----------------------|---------------------------|----------------------|
| | Quantity (metric tons) | Value (thousands) | Quantity (metric tons) | Value (thousands) |
| Australia | 175 | \$185 | 619 | \$834 |
| Belgium | 7,000 | 2,340 | -- | -- |
| Brazil | 1,600,000 | 650,000 | 2,250,000 | 1,130,000 |
| Canada | 141,000 | 63,300 | 106,000 | 67,200 |
| China | 56,900 | 23,000 | -- | -- |
| Germany | 37 | 35 | 7,460 | 4,240 |
| Russia | 1,060,000 | 447,000 | 1,190,000 | 596,000 |
| South Africa | 127,000 | 51,000 | 157,000 | 83,300 |
| Sweden | -- | -- | 8,330 | 3,860 |
| Switzerland | -- | -- | 49,200 | 25,400 |
| Ukraine | 729,000 | 280,000 | 293,000 | 149,000 |
| United Kingdom | -- | -- | 9 | 5 |
| Venezuela | 61,300 | 20,400 | 128,000 | 55,100 |
| Total | 3,780,000 | 1,540,000 | 4,190,000 | 2,120,000 |

-- 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.

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