

2005 Minerals Yearbook

IRON AND STEEL SCRAP

IRON AND STEEL SCRAP

By Michael D. Fenton

Domestic survey data and tables were prepared by Steven H. Diamond, statistical assistant.

In 2005, the domestic steel industry recycled or exported for recycling almost 76 million metric tons (Mt) of appliances, automobiles, cans, construction materials, and other steel products. This resulted in an overall recycling rate of nearly 76% (Steel Recycling Institute, 2006c§1). Iron and steel scrap is a vital raw material for the production of new steel and castiron 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 150 years. The Association for Iron and Steel Technology reported that 90 steel-producing plants used electric arc furnaces (EAF), which consumed ferrous scrap, and accounted for about 56% of the total raw steel produced in 2005 (Association for Iron and Steel Technology, 2005).

Steel scrap recycling conserves energy, landfill space, and raw materials. 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). 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. Every metric ton of steel recycled saves 1.134 kilograms (kg) of iron ore, 635 kg of coal, and 54 kg of limestone that would otherwise be consumed to make the iron used in that steel.

In the United States, the primary source of obsolete steel is the automobile (Rich Tavoletti, marketing manager, American Iron and Steel Institute, unpub. data, July 2002). By weight, the typical car consists of about 65% iron and steel. The steel used in car bodies is made of about 25% recycled steel (Steel Recycling Institute, 2006a§). The steel industry recovered and recycled more than 14 Mt of iron and steel automobile scrap in 2005. The recycling rate of automobile scrap steel was 102% in 2005, about the same as that in 2004. 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.

The recycling rate of obsolete appliance scrap had increased to a high of 90% in 2005 from 20% in 1988 (Steel Recycling Institute, 2006c§). During 2005, about 2.75 Mt of steel was recovered from recycled appliances, an increase of nearly 6% compared with that of 2004 (Bill Heenan, president, Steel Recycling Institute, unpub. data, May 6, 2006). The typical appliance consists of about 75% steel, and the steel used in appliances is made with a minimum of 25% recycled steel (Steel Recycling Institute, 2006b§). The recycling rate of steel cans increased to 63% in 2005 from 16% in 1988 (Steel Recycling Institute, 2006c§). The estimated rate of recycling of structural beams and plates in 2004 and 2005 was almost 98%, and that of reinforcement bar and other materials increased to 65% from 63% in 2004. Currently, 2% of homes being built in the United States use 100% steel framing, whereas 10% use some steel framing.

Minimills, in which EAFs are used, consumed greater quantities of 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 U.S. steel industry decreased by 6.4% during 2005, and DRI production increased by 22% (American Iron and Steel Institute, 2005, p. 76; Midrex Technologies, 2005§).

Environment

Following programs established by Arkansas, Maine, and New Jersey, Virginia's Department of Environmental Quality joined the Virginia Vehicle Recyclers Association to distribute containers to vehicle salvagers for the collection of mercury switches removed from scrapped vehicles (American Metal Market, 2005). Collected switches will be sent to a processing facility in Allentown, PA, for recycling. Each switch contains about 1 gram of mercury, an environmental pollutant that can cause serious neurological health problems, especially in children.

Consumption

Domestic data for ferrous scrap were derived from voluntary monthly or annual surveys of U.S. scrap-consuming operations by the U.S. Geologiccal (USGS). About 38% of the known manufacturers of pig iron and raw steel responded to the surveys. Their responses represented about 48% of estimated total scrap consumption by this class of consumers. The remaining 52% of scrap consumption was estimated based on prior reports. Of the iron foundries, manufacturers of steel castings, and miscellaneous users, about 47% of the surveyed establishments responded to the annual survey, which represented about 57% of estimated scrap consumption. Total consumption for these two classes of consumers was estimated using statistical methods and prior reports. Actual survey data accounted for about 54% of total estimated scrap consumption by all classes of scrap consumers.

In 2005, brokers, dealers, and other outside sources supplied domestic consumers with 50.7 Mt of all types of ferrous scrap at an estimated delivered value of more than \$9.8 billion and exported 13.0 Mt (excluding used rails for rerolling and other uses and ships, boats, and other vessels for scrapping) valued at \$3.4 billion (tables 1, 8, 11). In 2004, domestic consumers received 53.0 Mt (revised) of scrap steel at an estimated

¹References that include a section mark (§) are found in the Internet References Cited section.

delivered value of more than \$11.1 billion (revised); exports totaled 11.8 Mt valued at \$2.9 billion. This represented a tonnage decrease during 2005 of 4% for received quantities and a tonnage increase of 10% for exported quantities. The value of received scrap grades decreased by 12% and that of exported scrap grades increased by 17% during 2005.

Raw steel production was 93.3 Mt in 2005 compared with 99.7 Mt in 2004 (American Iron and Steel Institute, 2005, p. 75). The share of raw steel produced by electric furnaces was 56% and by the basic oxygen furnaces was 44%. In 2005, continuous cast steel production represented 96% of total raw steel production; this was about the same as that of 2004. Raw steel production capability increased to 120 Mt from 116 Mt in 2004.

Steel mills accounted for 85% of all scrap received from brokers, dealers, and other outside sources; iron foundries and miscellaneous users received 13%; and steel foundries received 2% (table 1). Apparent total domestic consumption of ferrous scrap was 48 Mt of net receipts (total receipts minus shipments) and 15 Mt of home scrap (table 2). Stocks of ferrous scrap at consumer plants decreased by 5% to 5.1 Mt (table 1). Total domestic consumption was more than 65 Mt, which was a 2% decrease compared with that of 2004. The total market for U.S.produced scrap (net receipts plus exports minus imports) was 59.8 Mt compared with 60.1 (revised) in 2004. Feedstock used in electric furnaces by all iron and steel product manufacturers comprised scrap, 92%; pig iron, 6%; and DRI, 2% (table 4). Total consumption of DRI was 17% greater than that of 2004 (table 1). Net shipments of all grades of steel mill products were about 93.4 Mt, which was a decrease of more than 8% from the 101 Mt shipped in 2004 (American Iron and Steel Institute, 2005, p. 27).

Prices

The average composite delivered price of No. 1 heavy-melting steel scrap, calculated from prices per long ton published monthly by American Metal Market, was \$192.44 per metric ton. The price ranged from a low of \$122.95 per ton in June to a high of \$230.53 per ton in November (table 8). The average composite delivered price of No. 1 heavy-melting steel scrap, calculated from prices per long ton published weekly in Iron Age Scrap Price Bulletin, was \$188.51 per ton; the price ranged from a low of \$118.92 per ton in June to a high of \$228.46 per ton in September.

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 \$1,487 per ton, about the same as in 2004.

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 7% to about \$265 per ton compared with that of 2004 (table 11). The unit value of total imports, which was about \$243 per ton, was about 9% less than that of 2004 (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 2005, 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 9.0 Mt valued at \$2.49 billion (tables 11, 14). This represented an increase of 29% in quantity and an increase of 51% in value compared with the 2004 surplus of 7.0 Mt valued at \$1.65 billion.

Total U.S. exports of carbon steel and cast-iron scrap (excluding alloy steel; ships, boats, and other vessels for scrapping; stainless steel; and used rails for rerolling and other uses) went to 72 countries (2 less than in 2004) and totaled 10.8 Mt (a 13% increase) valued at \$2.31 billion (a 17% increase) for an average of \$213 per ton (a 3% increase) (U.S. Census Bureau, unpub. data, 2005). The largest tonnages went to China, 3.0 Mt; the Republic of Korea, 1.8 Mt; Mexico, 1.5 Mt; Turkey, 1.5 Mt; and Canada, 1.2 Mt. These five countries received 75% of the total quantity, valued at \$1.7 billion, which accounted for 74% of the total value.

Total U.S. exports of stainless steel scrap went to 55 countries (5 more than in 2004) and consisted of 602,466 metric tons (t) (20% more than in 2004) valued at \$697 million (a 20% increase) for an average of \$1,156 per ton (about the same as that in 2004) (U.S. Census Bureau, unpub. data, 2005). The largest tonnages went to China, 241,801 t; Finland, 70,466 t; Taiwan, 70,454 t, and the Republic of Korea, 55,885 t. These countries received 73% of the total quantity valued at \$536 million, which was 77% of the total value.

U.S. exports of alloy steel scrap (excluding stainless steel) were shipped to 43 countries (9 less than in 2004) and consisted of 1.6 Mt (a 13% decrease) valued at \$459 million (a 15% increase) for an average of \$291 per ton (a 32% increase) (U.S. Census Bureau, unpub. data, 2005). The largest tonnages went to Canada, 916,878 t, and China, 347,498 t. These countries received 80% of the total quantity, valued at \$343 million, which accounted for 75% of the total value.

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 the most iron and steel scrap in 2004, followed by Germany, the United Kingdom, Japan, France, and the Netherlands (International Iron and Steel Institute, 2005, p. 72). The six leading significant importing nations were, in decreasing order of importance, Turkey, China, Belgium and Luxembourg, the Republic of Korea, Spain, and Italy (International Iron and Steel Institute, 2005, p. 97).

Outlook

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

Growth of the world economy is expected to slow, owing primarily to increasing oil and energy prices. The U.S. gross domestic product (GDP) growth was estimated to be less than 3.5% in 2006, down from about 4% in 2005 (Institute for International Economics, 2005§). The International Monetary Fund (IMF) was more optimistic with its world GDP forecast of 4.2% in 2006, down slightly from 4.3% in 2005 (Scrap, 2006).

U.S. GDP growth reported by the U.S. Department of Commerce, Bureau of Economic Analysis (2006§), for 2003, 2004, and 2005 was 2.7%, 4.2%, and 3.5%, respectively. The Council of Economic Advisers, Office of Management and Budget, and the Department of the Treasury forecast faster-than-expected U.S. economic growth in the beginning of 2006, with growth projected to moderate somewhat in the future), owing in part to the rising costs of gasoline and natural gas, and rising interest rates (Lazear, 2006§). GDP growth for 2006 is projected to be 3.6%, and economic strength is broadening, with stronger growth in business investment and exports. The Congressional Budget Office (2006§) projected healthy growth of the U.S. economy during 2006 and 2007. Real GDP was expected to grow by 3.6% in 2006, 3.4% in 2007, an average of 3.1% from 2008 through 2011, and 2.6% from 2012 through 2016. ThyssenKrupp AG (2004§) forecast U.S. GDP growth for 2006 to be 4%. The Organisation for Economic Co-operation and Development (OECD) and the European Confederation of Iron and Steel Industries (Eurofer) forecast the U.S. GDP growth rate to be 3.5% for 2006 (Newratings, 2005§; Metal Center News Online, 2006§). The OECD forecast 3.3% GDP growth in the United States for 2007 (Newratings, 2005§). GDP growth in the United States was expected by the Institute for International Economics (2005§) to decrease to about 2.5% in 2006, down from 3.5% in 2005.

World raw steel production exceeded 1 billion metric tons (Gt) for the first time ever in 2004 and reached 1.13 Gt in 2005 (International Iron and Steel Institute, 2006b§). Global steel production may reach 1.18 Gt in 2007 (MEPS Steel News, 2006§). According to the OECD, global raw steelmaking capacity would increase to more than 1.31 billion metric tons per year (Gt/yr) in 2006 from 1.18 Gt/yr in 2004 (Organisation for Economic Cooperation and Development, 2005§).

The steel market continued strong in 2005, and global apparent steel consumption was forecast to grow to between 1,040 and 1,053 Mt in 2006 from 972 Mt in 2004 (International Iron and Steel Institute, 2005§). Later, the International Iron and Steel Institute (IISI) revised the 2006 figure to 1,087 Mt, and forecast consumption to be 1,150 Mt for 2007 (International Iron and Steel Institute, 2006a§). The IISI forecast steel demand in the United States to grow by 5% in 2006 and by an additional 1.7% in 2007 (International Iron and Steel Institute, 2006a§).

Economic activity in China continued to be an important influence on the world economy and steel markets. With a projected GDP growth in China far greater than that of all other world economies, China is by far the fastest growing economy. However, the explosive growth of China may decrease somewhat after 2005. The IMF forecast growth of 7.5% to 8% in 2005 after 9% to 10% growth in 2004 (Scrap, 2006). The Eurofer projected China's GDP to grow by about 8% in 2006 (Metal Center News Online, 2006§). However, the Chinese Academy of Social Sciences expected the gross national product for 2006 to be 8.9%, down from 9.4% in 2005 (Scrap, 2006); ThyssenKrupp (2004§) forecast growth of 8.5%. China crude steel production was estimated to be about 349 Mt in 2005 and was expected to be about 386 Mt in 2006 (MEPS Steel News, 2006§). The IISI forecast steel demand in China to grow by 13% to 356 Mt in 2006, accounting for 32% of total world steel demand, and 12.1% in 2007 (International Iron and Steel Institute, 2006a§).

The Eurofer forecast 1.9% growth in the European Union's (EU) GDP for 2006, up from 1.4% in 2005 (Metal Center News Online, 2006§). The IISI forecast increases of 3.9% in 2006 and 1.5% in 2007 for the EU; increases of 8.0% during 2006 and 2007 for India; and increases of 3.2% in 2006 and 1.6% in 2007 for in Russia and Ukraine (International Iron and Steel Institute, 2006a§).

World Steel Dynamics (WSD) reported a global shortage of steelmaking metallics, with 2004 requirements up by more than 200 Mt to 1.3 Gt from those of 2000 (American Metal Market, 2004). These metallics comprised pig iron, 713 Mt; obsolete scrap, 315 Mt; new and recirculated scrap, 263 Mt; and scrap substitutes, 58 Mt. WSD predicted that the global metallics requirement could grow to as much as 1.8 Gt/yr by 2015 based on an annual increase of 5.7% in China and 2.3% in the rest of the world. WSD also reported that recovery rates for obsolete scrap outside China were a record 95% in 2004. Thus, the obsolete scrap reservoir is likely to grow by only 1.6% per year through 2015. Yayan (2005§) reported that the IISI had determined that global ferrous scrap production was only 367 Mt, slightly less than consumption of 370 Mt, suggesting that scrap availability would barely meet the steelmaking industry's demand. Nevertheless, as crude steel demand and iron ore prices and shipping costs increase, ferrous scrap prices should remain high, which will be an inducement to collect scrap from new sources in Africa, Asia, Eastern Europe, and the Eastern Mediterranean region.

References Cited

American Iron and Steel Institute, 2005, Annual statistical report 2005: Washington, DC, American Iron and Steel Institute, 130 p.

- American Metal Market, 2004, Steelmakers face ongoing shortfall in metallics— WSD: American Metal Market, v. 112, no. 49-1, December 6, p. 1.
- American Metal Market, 2005, Va. unveils mercury switch recovery program: American Metal Market, v. 113, no. 4-6, February 10, p. 7.
- Association for Iron & Steel Technology, 2005, Steel production facilities— 2005, *in* The steel industry of Canada, Mexico & the United States: Warrendale, PA, Association for Iron & Steel Technology, Map.
- Association for Iron and Steel Technology, International Iron and Steel Institute, 2005, Steel statistical yearbook 2005: International Iron and Steel Institute, December, 104 p.
- Scrap, 2006, A good run: Scrap, January/February, p. 43.

Internet References Cited

Congressional Budget Office, 2006, The budget and economic outlook—Fiscal years 2007 to 2016, accessed June 21, 2006, at URL http://www.cbo.gov/ftpdocs/70xx/doc7027/01-26-budget outlook.pdf.

Institute for International Economics, 2005, Global economic growth to slow in 2006, accessed July 22, 2006, at URL http://www.iie.com/publications/ newsreleases/gep0905.pdf.

International Iron and Steel Institute, 2005, IISI short range outlook—Good prospects for steel, accessed July 19, 2006, at URL http://www.allbusiness. com/periodicals/article/844287-1.html.

International Iron and Steel Institute, 2006a, Short range outlook for finished steel products confirms continued strong growth, accessed July 18, 2006, at URL http://www.steelonthenet.com/pdf/IISI_Media_Release_25-Apr-06.pdf.

International Iron and Steel Institute, 2006b, World steel in figures 2006, accessed June 29, 2006, at URL http://www.worldsteel.org/?action=publicationdetail&id=54.

Lazear, Edward, 2006, Press briefing on the administration's updated economic forecast by CEA chairman, Dr. Edward Lazear, accessed July 22, 2006, at URL http://www.whitehouse.gov/news/releases/2006/06/20060608-8.html.

MEPS Steel News, 2006, Global crude steel production to rise 4.1 percent in 2006, accessed July 16, 2006, at URL http://www.meps.co.uk/article-key-outq1-06.htm.

Metal Center News Online, 2006, Eurofer forecasts modest growth for EU, World in 2006, accessed July 22, 2006, at URL http://www.metalcenternews. com/2006/January/mcn0601min.htm.

Midrex Technologies, 2005, 2005 world direct reduction statistics, accessed June 19, 2006, at URL http://www.midrex.com.

Newratings, 2005, OECD projects strong GDP growth in US, euro zone and Japan, accessed July 21, 2006, at URL http://www.newratings.com/analyst_ news/article_1142725.html.

Organisation for Economic Co-operation and Development, 2005, Bright outlook for steel industry in 2005-2006 forecast at OECD/IISI conference, accessed July 21, 2006 at URL http://www.oecd.org/document/22/0,2340,en_ 2649_201185_34282331_1_1_1_1_1_00.html.

Steel Recycling Institute, 2006a, Recycling scrapped automobiles, accessed June 16, 2006, via URL http://www.recycle-steel.org.

Steel Recycling Institute, 2006b, Recycling steel appliances, accessed June 21, 2006, via URL http://www.recycle-steel.org.

Steel Recycling Institute, 2006c, Steel recycling in the U.S. continues its record pace in 2005, accessed June 16, 2006, via URL http://www.recycle-steel.org.

ThyssenKrup AG, 2004, Annual report 2004-2005, accessed July 18, 2006, at URL http://www.thyssenkrupp.com/fr/o4_05/en/outlook.html#gross_domestic_product_2006.

U.S. Department of Commerce, Bureau of Economic Analysis, 2006, Gross domestic product and corporate profits, News Release, accessed July 6, 2006, at URL http://www.bea.gov/bea/newsrel/gdpnewsrelease.htm.

Yayan, Veysel, 2005, Global scrap outlook, accessed July 22, 2006, at URL http://www.worldsteel.org/index.php?action=storypages&id=98.

GENERAL SOURCES OF INFORMATION

U.S. Geological Survey Publications

Iron. Ch. in United States Mineral Resources, Professional Paper 820, 1973.

- Iron and Steel. Ch. in Metal Prices in the United States Through 1998, 1999.
- Iron and Steel. Ch. in Mineral Commodity Summaries, annual.

Iron and Steel Scrap. Ch. in Metal Prices in the United States Through 1998, 1999.

Iron and Steel Scrap. Mineral Industry Surveys, monthly.

- Iron Ore. Ch. in Mineral Commodity Summaries, annual.
- Iron Ore. Ch. in Minerals Yearbook, annual.
- Iron Ore. Mineral Industry Surveys, monthly.
- Slag-Iron and Steel. Ch. in Minerals Yearbook, annual.

Other

American Metal Market, daily.

- Annual Statistical Report. American Iron and Steel Institute.
- Direct from Midrex. Midrex Direct Reduction Corporation, quarterly.
- Directory of Iron and Steel Plants. Association of Iron and Steel Engineers, annual.

HYL Report. HYL, the Iron & Steel Technology Division of HYLSA, S.A. de C.V., annual.

- Iron and Steel. Ch. in Mineral Facts and Problems, U.S. Bureau of Mines Bulletin 675, 1985.
- Iron and Steelmaker. American Institute of Mining,

Metallurgical, and Engineers—Iron and Steel Society, annual.

Making, Shaping, and Treating of Steel. Association of Iron and Steel Engineers, annual.

Metal Bulletin, biweekly.

- Steel Manufacturers Association.
- Steel Statistical Yearbook. International Iron and Steel Institute. Steel Times International, monthly.

Iron and Steel Slag. Ch. in Mineral Commodity Summaries, annual.

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

(Thousand metric tons and thousand dollars)

| | 2001 | 2002 | 2003 | 2004 | 2005 |
|--|-----------------------|---------------------|---------------------|---------------------|-----------|
| Manufacturers of pig iron and raw steel and castings: ² | _ | | | | |
| Ferrous scrap consumption | 56,700 ^r | 56,400 ^r | 55,200 ^r | 57,100 ^r | 54,600 |
| Pig iron consumption | 46,900 | 42,500 | 39,700 | 38,000 | 36,900 |
| Direct-reduced iron consumption | 1,780 | 2,230 | 1,790 | 1,490 | 1,740 |
| Net receipts of ferrous scrap ³ | 42,900 ^r | 43,600 | 42,700 r | 45,700 ^r | 43,300 |
| Home scrap production ⁴ | 13,400 r | 12,700 ^r | 12,600 r | 11,600 ^r | 11,200 |
| Ending stocks of ferrous scrap, December 31 | – 4,330 ^r | 4,360 ^r | 4,070 ^r | 4,880 ^r | 4,440 |
| Manufacturers of steel castings: ⁵ | _ | | | | |
| Ferrous scrap consumption | 1,560 ^r | 1,900 ^r | 1,130 ^r | 1,310 ^r | 1,810 |
| Pig iron consumption | 32 | 34 | 31 | 94 | 89 |
| Net receipts of ferrous scrap ³ | | 1,160 ^r | 761 ^r | 972 ^r | 1,060 |
| Home scrap production ⁴ | 519 ^r | 717 ^r | 361 ^r | 326 ^r | 743 |
| Ending stocks of ferrous scrap, December 31 | 110 ^r | 173 ^r | 88 ^r | 80 ^r | 85 |
| Iron foundries and miscellaneous users: ⁵ | - | | | | |
| Ferrous scrap consumption | - 11,900 | 11,200 | 8,720 | 8,490 | 9,020 |
| Pig iron consumption | 1,120 | 1,280 | 1,030 | 1,020 | 1,090 |
| Direct-reduced iron consumption | 13 | 13 | 4 | 4 | 3 |
| Net receipts of ferrous scrap ³ | - 7,640 | 7,270 | 6,300 | 6,320 ^r | 6,390 |
| Home scrap production ⁴ | 4,250 | 3,760 | 2,430 | 2,370 | 2,960 |
| Ending stocks of ferrous scrap, December 31 | 440 | 401 | 251 | 459 | 605 |
| Total, all manufacturing types: | | - | | | |
| Ferrous scrap consumption | – 70,100 ^r | 69,500 ^r | 65,000 ^r | 66,900 ^r | 65,400 |
| Pig iron consumption | 48,000 | 43,800 | 40,800 | 39,100 | 38,000 |
| Direct-reduced iron consumption | - 1,800 | 2,250 | 1,790 | 1,500 | 1,750 |
| Net receipts of ferrous scrap ³ | 51,500 ^r | 52,100 ^r | 49.800 ^r | 53,000 ^r | 50,700 |
| Home scrap production ⁴ | 18,200 ^r | 17,200 ^r | 15,400 ^r | 14,300 | 14,900 |
| Ending stocks, December 31: | | 17,200 | 15,100 | 11,500 | 11,000 |
| Ferrous scrap at consumer plants | – 4,880 ^r | 4,930 ^r | 4,410 ^r | 5,420 ^r | 5,130 |
| Pig iron at consumer and supplier plants | | 754 | 381 | 722 | 665 |
| Direct-reduced iron at consumer plants | - 318 | 269 | 345 | 136 | 263 |
| Exports: ⁶ | | 20) | 515 | 150 | 203 |
| Ferrous scrap (includes tinplate and terneplate): ⁷ | - | | | | |
| Quantity | - 7,440 | 8,950 | 10,800 | 11,800 | 13,000 |
| Value | 1,130,000 | 1,290,000 | 1,940,000 | 2,910,000 | 3,430,000 |
| Pig iron, all grades: | | 1,290,000 | 1,940,000 | 2,910,000 | 5,450,000 |
| Quantity | - 44 | 34 | 86 | 48 | 51 |
| Value | - 5,580 | 4,910 | 8,850 | 6,690 | 8,110 |
| Direct-reduced iron, steelmaking grade: | | 4,910 | 8,850 | 0,090 | 8,110 |
| | - 1 | 1 | 5 | 13 | (8) |
| Quantity Value | - 83 | 100 | 525 | 1,360 | |
| | | 100 | 525 | 1,500 | 16 |
| Imports for consumption: ⁶ | _ | | | | |
| Ferrous scrap (includes tinplate and terneplate): ⁷ | - 2 (20 | 2 120 | 2 490 | 4.660 | 2.940 |
| Quantity | _ 2,630 | 3,130 | 3,480 | 4,660 | 3,840 |
| Value | 274,000 | 376,000 | 511,000 | 1,230,000 | 909,000 |
| Pig iron, all grades: | - 4.270 | 1 (20) | 2 000 | 6 100 | 6.020 |
| Quantity | 4,370 | 4,620 | 3,890 | 6,400 | 6,030 |
| Value | 479,000 | 527,000 | 571,000 | 1,360,000 | 1,580,000 |
| Direct-reduced iron, steelmaking grade: | - | | | <i>~</i> · - ^ | - |
| Quantity | 1,650 | 2,010 | 1,940 | 2,450 | 2,170 |
| Value | 145,000 | 195,000 | 242,000 | 463,000 | 361,000 |

^rRevised.

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.

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

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

⁸Less than ¹/₂ unit.

U.S. CONSUMER RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS OF IRON AND STEEL SCRAP IN 2005, BY GRADE¹

(Thousand metric tons)

| | Receipts | | Production of hor | ne scrap | | | |
|---|--------------------|---------------|--------------------|--------------------|----------------|-----------|-------------|
| | From brokers, | From other | Recirculating | | Consumption | | Ending |
| | dealers, and other | company-owned | scrap from current | Obsolete | of purchased | Shipments | stocks, |
| Grade | outside sources | plants | operations | scrap ² | and home scrap | of scrap | December 31 |
| Manufacturers of pig iron and raw steel | | | | | | | |
| and castings: | | | | | | | |
| Carbon steel: | | | | | | | |
| Low-phosphorus plate and punchings | 305 | | 520 | | 653 | 71 | 134 |
| Cut structural and plate | 4,150 | 132 | 650 | 57 | 4,810 | 124 | 266 |
| No. 1 heavy-melting steel | 4,160 | 147 | 2,080 | 11 | 6,320 | 234 | 442 |
| No. 2 heavy-melting steel | 5,570 | 66 | 373 | 1 | 6,020 | 5 | 420 |
| No. 1 and electric furnace bundles | 4,260 | 63 | 1,670 | 30 | 5,750 | 112 | 283 |
| No. 2 and all other bundles | 787 | 13 | 2 | | 828 | (3) | 42 |
| Electric furnace, 1 foot and under | | | | | | | |
| (not bundles) | 80 | | 83 | | 135 | 47 | 3 |
| Railroad rails | 262 | 22 | 42 | | 320 | | 16 |
| Turnings and borings | 2,020 | 50 | 44 | | 2,200 | (3) | 100 |
| Slag scrap | 853 | 82 | 1,460 | 6 | 1,990 | 577 | 174 |
| Shredded or fragmentized | 9,530 | 1,130 | 332 | 112 | 11,100 | 70 | 681 |
| No. 1 busheling | 5,150 | 92 | 208 | 72 | 5,300 | (3) | 366 |
| Steel cans, post consumer | 260 | | 44 | | 313 | | 85 |
| All other carbon steel scrap | 1,490 | 193 | 1,650 | 49 | 3,190 | 106 | 305 |
| Stainless steel scrap | 731 | 59 | 216 | | 1,060 | 1 | 31 |
| Alloy steel (except stainless) | 137 | 1 | 498 | 18 | 617 | 7 | 32 |
| Ingot mold and stool scrap | 1 | | 80 | 81 | 58 | 82 | 15 |
| Machinery and cupola cast iron | 3 | | 2 | | 5 | | (3) |
| Cast-iron borings | 298 | | (3) | (3) | 302 | (3) | 18 |
| Motor blocks | 8 | | | | 8 | | 1 |
| Other iron scrap | 620 | 81 | 398 | | 1,140 | 68 | 380 |
| Other mixed scrap | 1,970 | 72 | 466 | | 2,430 | 40 | 643 |
| Total | 42,600 | 2,200 | 10,800 | 436 | 54,600 | 1,540 | 4,440 |
| Manufacturers of steel castings: | | | | | | | |
| Carbon steel: | | | | | | | |
| Low-phosphorus plate and punchings | 283 | 3 | 74 | (3) | 373 | (3) | 32 |
| Cut structural and plate | 154 | 2 | 42 | (3) | 196 | (3) | 3 |
| No. 1 heavy-melting steel | 36 | | 4 | | 43 | | 3 |
| No. 2 heavy-melting steel | 17 | | | | 17 | | (3) |
| No. 1 and electric furnace bundles | 1 | | | | 1 | | (3) |
| No. 2 and all other bundles | | | | | | | |
| Electric furnace, 1 foot and under | | | | | | | |
| (not bundles) | 38 | | 37 | | 75 | | (3) |
| Railroad rails | 19 | | 57 | | 76 | (3) | 2 |
| Turnings and borings | 34 | | 14 | (3) | 48 | (3) | 1 |
| Slag scrap | 1 | | 4 | | 5 | | (3) |
| Shredded or fragmentized | 97 | | 24 | | 121 | | 1 |
| No. 1 busheling | 75 | | 34 | | 109 | | 2 |
| Steel cans, post consumer | | | | | | | |
| All other carbon steel scrap | 51 | | 97 | (3) | 146 | (3) | 4 |
| Stainless steel scrap | 20 | (3) | 30 | (3) | 52 | 2 | 25 |
| Alloy steel (except stainless) | 30 | 2 | 32 | | 62 | (3) | 7 |
| Ingot mold and stool scrap | (3) | | (3) | | (3) | (3) | (3) |
| Machinery and cupola cast iron | | | | | | | |
| Cast-iron borings | | | (3) | | (3) | | (3) |
| Motor blocks | | | | | | | |
| Other iron scrap | 27 | | 178 | | 206 | | (3) |
| Other mixed scrap | 168 | | 101 | 14 | 282 | 1 | 3 |
| Total | 1,050 | 7 | 729 | 14 | 1,810 | 3 | 85 |

See footnotes at end of table.

TABLE 2-Continued

U.S. CONSUMER RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS OF IRON AND STEEL SCRAP IN 2005, BY GRADE¹

(Thousand metric tons)

| | Receipts | | Production of hor | ne scrap | | | |
|---|--------------------|---------------|--------------------|--------------------|----------------|-----------|-------------|
| | From brokers, | From other | Recirculating | | Consumption | | Ending |
| | dealers, and other | company-owned | scrap from current | Obsolete | of purchased | Shipments | stocks, |
| Grade | outside sources | plants | operations | scrap ² | and home scrap | of scrap | December 31 |
| Iron foundries and miscellaneous users: | | | | | | | |
| Carbon steel: | | | | | | | |
| Low-phosphorus plate and punchings | 919 | 2 | 163 | 3 | 969 | 23 | 116 |
| Cut structural and plate | 1,160 | 37 | 38 | (3) | 1,240 | 9 | 40 |
| No. 1 heavy-melting steel | 198 | 2 | 16 | | 164 | (3) | 55 |
| No. 2 heavy-melting steel | 222 | 1 | | | 224 | (3) | 2 |
| No. 1 and electric furnace bundles | 90 | | | | 88 | | 4 |
| No. 2 and all other bundles | 91 | | 24 | | 115 | 3 | 5 |
| Electric furnace, 1 foot and under | | | | | | | |
| (not bundles) | 24 | | (3) | | 24 | | 1 |
| Railroad rails | 65 | | 32 | | 100 | | 3 |
| Turnings and borings | 135 | | (3) | | 135 | 1 | 2 |
| Slag scrap | | | 14 | | 10 | 3 | 1 |
| Shredded or fragmentized | 1,310 | | 7 | | 1,310 | 8 | 48 |
| No. 1 busheling | 511 | (3) | 31 | (3) | 541 | 1 | 11 |
| Steel cans, post consumer | 12 | | (3) | | 12 | | (3) |
| All other carbon steel scrap | 61 | | 2 | (3) | 63 | (3) | 3 |
| Stainless steel scrap | 2 | | (3) | | 2 | (3) | (3) |
| Alloy steel (except stainless) | . 1 | | (3) | | 1 | (3) | (3) |
| Ingot mold and stool scrap | 56 | | 15 | | 71 | | 10 |
| Machinery and cupola cast iron | 617 | (3) | 251 | 2 | 674 | 32 | 221 |
| Cast-iron borings | 73 | 37 | 11 | | 118 | 2 | 2 |
| Motor blocks | 283 | 3 | 575 | | 855 | 1 | 13 |
| Other iron scrap | 417 | 4 | 1,710 | 1 | 2,090 | 11 | 64 |
| Other mixed scrap | 125 | 21 | 59 | (3) | 204 | 1 | 5 |
| Total | 6,380 | 108 | 2,950 | 6 | 9,020 | 96 | 605 |
| Grand total, all manufacturing types: | | | _,, - • • | | ,, | | |
| Carbon steel: | | | | | | | |
| Low-phosphorus plate and punchings | 1,510 | 5 | 756 | 3 | 2,000 | 95 | 282 |
| Cut structural and plate | 5,470 | 171 | 730 | 57 | 6,250 | 133 | 310 |
| No. 1 heavy-melting steel | 4,390 | 149 | 2,100 | 11 | 6,520 | 234 | 501 |
| No. 2 heavy-melting steel | 5,810 | 68 | 373 | 1 | 6,260 | 5 | 422 |
| No. 1 and electric furnace bundles | 4,350 | 63 | 1,670 | 30 | 5,840 | 112 | 287 |
| No. 2 and all other bundles | 878 | 13 | 26 | | 944 | 3 | 47 |
| Electric furnace, 1 foot and under | 0/0 | 15 | 20 | | 211 | 5 | ., |
| (not bundles) | 142 | | 120 | | 234 | 47 | 4 |
| Railroad rails | 345 | 22 | 132 | | 496 | (3) | 20 |
| Turnings and borings | 2,190 | 50 | 59 | (3) | 2,380 | 1 | 102 |
| Slag scrap | 854 | 82 | 1,470 | 6 | 2,010 | 580 | 102 |
| Shredded or fragmentized | 10,900 | 1,130 | 363 | 112 | 12,600 | 78 | 729 |
| No. 1 busheling | 5,730 | 92 | 273 | 72 | 5,950 | 1 | 380 |
| Steel cans, post consumer | 272 | | 44 | | 325 | | 85 |
| All other carbon steel scrap | 1,600 | 193 | 1,740 | 49 | 3,400 | 106 | 312 |
| Stainless steel scrap | 753 | 59 | 246 | | | | 56 |
| Alloy steel (except stainless) | 167 | 59 2 | 246 531 | (3) 18 | 1,110 680 | 2 7 | 30 |
| Ingot mold and stool scrap | 57 | | 96 | 81 | 129 | 82 | 25 |
| Machinery and cupola cast iron | 620 | (3) | 253 | 2 | 679 | | 25 221 |
| Cast-iron borings | 371 | (3) | 255 11 | (3) | 421 | 32 2 | 221 |
| Motor blocks | 291 | | 575 | | | 2 | |
| | | 3 | | | 863 | | 13 |
| Other iron scrap | 1,060 | 85 | 2,290 | 1 | 3,440 | 79 42 | 444 |
| Other mixed scrap | 2,270 | 93 | 626 | 14 | 2,920 | 42 | <u>651</u> |
| Total | 50,100 | 2,310 | 14,500 | 457 | 65,400 | 1,640 | 5,130 |

⁻⁻ 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.

³Less than ¹/₂ unit.

TABLE 3 U.S. CONSUMER RECEIPTS, PRODUCTION, CONSUMPTION, SHIPMENTS, AND STOCKS OF PIG IRON AND DIRECT-REDUCED IRON IN 2005¹

| (Thousand metric tons) | | | | | | | |
|------------------------|----------|------------|-------------|--|--|--|--|
| | Receipts | Production | Consumption | | | | |
| | | | | | | | |

| | | | | | Stocks, |
|---|--------------------|------------|-------------|-----------|-------------|
| | Receipts | Production | Consumption | Shipments | December 31 |
| Manufacturers of pig iron, raw steel, and castings: | | | | | |
| Pig iron | 6,910 ² | 1,070 | 36,900 | 493 | 614 |
| Direct-reduced iron (DRI) | 1,590 ³ | W | 1,740 | | 262 |
| Manufacturers of steel castings: | | | | | |
| Pig iron | 88 | (4) | 89 | (5) | 2 |
| DRI | . (5) | | (5) | | (5) |
| Iron foundries and miscellaneous users: | | | | | |
| Pig iron | 1,080 | (4) | 1,090 | 65 | 49 |
| DRI | 3 | 1 | 3 | | 1 |
| Total, all manufacturing types: | | | | | |
| Pig iron | 8,080 | 31,100 | 38,000 | 558 | 665 |
| DRI | 1,590 | W | 1,750 | | 263 |

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 1.81 million metric tons (Mt) purchased by electric furnace steel producers.

³Includes 1.16 Mt purchased by integrated steel producers.

⁴Withheld to avoid disclosing company proprietary data; included in "Total, all manufacturing types." ⁵Less than ¹/₂ unit.

TABLE 4

U.S. CONSUMPTION OF IRON AND STEEL SCRAP, PIG IRON, AND DIRECT-REDUCED IRON IN 2005, BY TYPE OF FURNACE OR OTHER USE¹

| (Thousand | metric | tons) |
|-----------|--------|-------|
|-----------|--------|-------|

| | Manufactu | urers of pig | iron and | Ma | nufacturer | s | Iron f | oundries a | and | | Total, all | |
|------------------------------|-----------|--------------|------------------|-------|--------------|------------------|--------|------------|---------|---------------------|------------|------------------|
| | raw ste | eel and cast | ings | of s | teel casting | gs | miscel | laneous u | sers | manufacturing types | | |
| | | Pig | | | Pig | | Pig | | | | Pig | |
| | Scrap | iron | DRI ² | Scrap | iron | DRI ² | Scrap | iron | DRI^2 | Scrap | iron | DRI ² |
| Blast furnace | 1,380 | | 445 | | | | 3 | | | 1,390 | | 445 |
| Basic oxygen process | 11,400 | 34,400 | 341 | | | | | 2 | | 11,400 | 34,400 | 341 |
| Electric furnace | 41,700 | 2,400 | 958 | 1,460 | 60 | (3) | 3,390 | 588 | 3 | 46,600 | 3,040 | 962 |
| Cupola furnace | 40 | | | 353 | 29 | | 5,610 | 498 | | 6,000 | 528 | |
| Other ⁴ | W | | | 1 | (3) | | W | W | | W | W | |
| Direct castings ⁵ | | 36 | | | | | | | | | 36 | |
| Total | 54,600 | 36,900 | 1,740 | 1,810 | 89 | (3) | 9,010 | 1,090 | 3 | 65,400 | 38,000 | 1,750 |

W Withheld to avoid disclosing company proprietary data; included with "Electric furnace." -- Zero.

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

²Direct-reduced iron.

 3 Less than $\frac{1}{2}$ unit.

⁴Includes air furnaces.

⁵Includes ingot molds and stools.

IRON AND STEEL SCRAP SUPPLY AVAILABLE FOR CONSUMPTION IN 2005, BY REGION AND STATE $^{\rm l,\,2}$

(Thousand metric tons)

| | Receipt | s of scrap | Production of h | ome scrap | | |
|--------------------------------------|---------------|---------------|-----------------|--------------------|-----------------------|---------------|
| | From brokers, | | Recirculating | | | |
| | dealers, and | From other | scrap resulting | | | New supply |
| | other outside | company-owned | from current | Obsolete | Shipments | available for |
| Region and State | sources | plants | operations | scrap ³ | of scrap ⁴ | consumption |
| New England and Middle Atlantic: | | | | | | |
| Connecticut, Maine, Massachusetts, | | | | | | |
| New Hampshire, Rhode Island, Vermont | 28 | | 10 | (5) | (5) | 39 |
| New Jersey and New York | 2,180 | | 118 | 1 | | 2,300 |
| Pennsylvania | 3,570 | 116 | 2,050 | 74 | 24 | 5,790 |
| Total | 5,780 | 116 | 2,170 | 75 | 24 | 8,120 |
| North Central: | | | | | | |
| Illinois | 1,590 | 53 | 198 | (5) | (5) | 1,840 |
| Indiana | 3,550 | 162 | 3,690 | 33 | 497 | 6,940 |
| Iowa, Nebraska, South Dakota | 2,390 | 13 | 170 | (5) | (6) | 2,570 |
| Kansas and Missouri | 78 | 7 | 61 | (5) | (5) | 146 |
| Michigan | 2,730 | 13 | 1,260 | 295 | 519 | 3,780 |
| Minnesota | 448 | 142 | 41 | | 1 | 630 |
| Ohio | 6,370 | 333 | 1,870 | 23 | 243 | 8,350 |
| Wisconsin | 1,780 | 2 | 1,450 | 1 | 7 | 3,230 |
| Total | 18,900 | 725 | 8,740 | 352 | 1,270 | 27,500 |
| South Atlantic: | | | | | | |
| Delaware and Maryland | 602 | 14 | 385 | | 9 | 992 |
| Florida and Georgia | 1,030 | | 38 | (5) | (5) | 1,070 |
| North Carolina and South Carolina | 2,470 | (6) | 220 | | (6) | 2,950 |
| Virginia and West Virginia | 2,130 | (6) | 364 | (6) | (6) | 2,460 |
| Total | 6,230 | 389 | 1,010 | (5) | 157 | 7,470 |
| South Central: | | | | | | |
| Alabama and Mississippi | 4,560 | (6) | 752 | (6) | 19 | 5,300 |
| Arkansas, Louisiana, Oklahoma | 4,530 | (6) | 334 | (6) | (6) | 5,010 |
| Kentucky and Tennessee | 2,580 | 95 | 215 | | (6) | 2,870 |
| Texas | 3,160 | 795 | 508 | 4 | 9 | 4,460 |
| Total | 14,800 | 1,020 | 1,810 | 20 | 45 | 17,600 |
| Mountain and Pacific: | | | | | | |
| Arizona, Colorado, Idaho, Utah | 2,320 | 55 | 9 | (6) | (6) | 2,840 |
| California, Oregon, Washington | 1,980 | W | (5) | (5) | (6) | 2,120 |
| Total | 4,300 | W | 9 | 9 | 150 | 4,960 |
| Grand total | 50,100 | 2,260 | 13,700 | 451 | 1,640 | 65,700 |

W Withheld to avoid disclosing company proprietary data. -- 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 ¹/₂ unit.

⁶Withheld to avoid disclosing company proprietary data; included in "Total" or "Grand total."

U.S. CONSUMPTION OF IRON AND STEEL SCRAP AND PIG IRON IN 2005, BY REGION AND STATE^{1, 2, 3}

(Thousand metric tons)

| | Manufa | cturers of | | | | | Total, | all |
|--|-----------|--|-------|------------------------------------|-------|------------|---------|----------|
| | pig iron | pig iron and raw steel and castings | | Manufacturers of steel castings | | ndries and | manufac | turing |
| | steel and | | | | | eous users | types | |
| Region and State | 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 | 1,780 | 22 | 11 | | 652 | 155 | 2,440 | 177 |
| Pennsylvania | 5,510 | 2,860 | 170 | 1 | 340 | 31 | 6,020 | 2,900 |
| Total | 7,290 | 2,890 | 181 | 1 | 992 | 186 | 8,460 | 3,070 |
| North Central: | | | | | | | | |
| Illinois | 1,360 | 2,020 | 68 | 1 | 308 | 14 | 1,740 | 2,040 |
| Indiana | 5,900 | 12,100 | 64 | 1 | 861 | 86 | 6,830 | 12,200 |
| Iowa, Kansas, Minnesota, Missouri, Nebraska, South | | | | | | | | |
| Dakota, Wisconsin | 2,850 | 1 | 1,080 | 62 | 2,370 | 419 | 6,310 | 481 |
| Michigan | 1,660 | 4,670 | 27 | | 1,360 | 95 | 3,040 | 4,770 |
| Ohio | 7,250 | 6,860 | 184 | (4) | 626 | 144 | 8,060 | 7,010 |
| Total | 19,000 | 25,700 | 1,430 | 64 | 5,520 | 758 | 26,000 | 26,500 |
| South Atlantic: | | | | | | | | |
| Delaware, Maryland, Virginia, West Virginia | 3,490 | W | W | W | 304 | 16 | 3,790 | 1,600 |
| Florida, Georgia, North Carolina, South Carolina | 4,020 | W | W | W | 155 | 2 | 4,170 | 182 |
| Total | 7,500 | 1,760 | 2 | (4) | 459 | 18 | 7,960 | 1,780 |
| South Central: | | | | | | | | |
| Alabama, Kentucky, Mississippi, Tennessee | 6,650 | W | 85 | W | 1,610 | W | 8,350 | 4,260 |
| Arkansas, Louisiana, Oklahoma | 5,070 | W | 12 | W | 18 | W | 5,100 | 804 |
| Texas | 4,320 | 52 | 10 | W | 185 | 24 | 4,520 | 101 |
| Total | 16,000 | 5,010 | 107 | 24 | 1,820 | 129 | 18,000 | 5,170 |
| Mountain and Pacific: | | | | | | | | |
| Arizona, Colorado, Idaho, Utah | 2,760 | W | 6 | (4) | 106 | W | 2,880 | 1,500 |
| California, Oregon, Washington | 1,970 | W | 89 | (4) | 120 | W | 2,180 | 3 |
| Total | 4,740 | 1,500 | 94 | (4) | 226 | 4 | 5,060 | 1,510 |
| Grand total | 54,600 | 36,900 | 1,810 | 89 | 9,020 | 1,090 | 65,400 | 38,000 |

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 ¹/₂ unit.

TABLE 7

U.S. CONSUMER STOCKS OF IRON AND STEEL SCRAP AND PIG IRON, DECEMBER 31, 2005, BY REGION AND STATE¹

(Thousand metric tons)

| | | | | | Other | | |
|---|--------------------|-----------|--------------------|-------------------|-----------|-------|------|
| | Carbon | Stainless | Alloy | Cast | grades of | Total | Pig |
| Region and State | steel ² | steel | steel ³ | iron ⁴ | scrap | scrap | iron |
| New England and Middle Atlantic: | | | | | | | |
| Connecticut, Maine, Massachusetts, New Hampshire, Rhode | | | | | | | |
| Island, Vermont | (5) | (5) | | (5) | W | 1 | (5) |
| New Jersey and New York | 56 | 1 | 1 | 2 | W | 59 | (5) |
| Pennsylvania | 241 | 15 | 16 | 16 | 5 | 293 | 10 |
| Total | 297 | 16 | 17 | 18 | 5 | 353 | 10 |

See footnotes at end of table.

TABLE 7-Continued

U.S. CONSUMER STOCKS OF IRON AND STEEL SCRAP AND PIG IRON, DECEMBER 31, 2005, BY REGION AND STATE¹

(Thousand metric tons)

| | | | | | Other | | |
|--|---------------------------|--------------------|-----------------------------|---------------------------|--------------------|----------------|-------------|
| Region and State | Carbon steel ² | Stainless steel | Alloy steel ³ | Cast iron ⁴ | grades of scrap | Total scrap | Pig iron |
| North Central: | steel | steel | steel | Iron | scrap | scrap | |
| Illinois | 122 | (5) | W | 81 | 2 | 205 | 18 |
| Indiana | 421 | 5 | W | 16 | 22 | 465 | 153 |
| Iowa, Kansas, Missouri, Nebraska, South Dakota | 101 | (5) | (5) | 8 | | 109 | 5 |
| Michigan | 122 | (5) | 1 | 12 | 17 | 152 | 9 |
| Minnesota and Wisconsin | 54 | 2 | 3 | 4 | (5) | 64 | 3 |
| Ohio | 564 | 31 | 8 | 182 | | 784 | 30 |
| Total | 1,380 | 39 | 13 | 303 | 41 | 1,780 | 219 |
| South Atlantic: | | | | | | | |
| Delaware, Maryland, Virginia, West Virginia | 174 | (5) | W | 92 | 14 | 280 | 54 |
| Florida, Georgia, North Carolina, South Carolina | 263 | (5) | W | 14 | 1 | 278 | 41 |
| Total | 437 | (5) | (5) | 106 | 15 | 558 | 94 |
| South Central: | | | | | | | |
| Alabama, Kentucky, Mississippi, Tennessee | 635 | W | W | 277 | W | 1,410 | 170 |
| Arkansas, Louisiana, Oklahoma | 437 | W | W | 1 | W | 439 | 129 |
| Texas | 246 | W | W | 6 | W | 254 | 32 |
| Total | 1,320 | (5) | 6 | 284 | 494 | 2,100 | 331 |
| Mountain and Pacific: | | | | | | | |
| Arizona, Colorado, Idaho, Utah | 149 | (5) | W | 5 | 64 | 218 | W |
| California, Oregon, Washington | 72 | 2 | W | 7 | 31 | 114 | W |
| Total | 220 | 2 | 3 | 12 | 95 | 332 | 10 |
| Grand total | 3,660 | 56 | 39 | 724 | 651 | 5,130 | 665 |

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 ¹/₂ unit.

TABLE 8 U.S. AVERAGE MONTHLY PRICE AND COMPOSITE PRICE FOR NO. 1 HEAVY-MELTING STEEL, WITH ANNUAL AVERAGES $^{\rm l}$

| (Dollars per metric t | ton) |
|-----------------------|------|
|-----------------------|------|

| Period | Chicago, IL | Philadelphia, PA | Pittsburgh, PA | Composite price |
|---------------|-------------|------------------|----------------|--------------------|
| 2004, average | 216.80 | 197.02 | 217.51 | 210.45 |
| 2005: | | | | |
| January | 199.79 | 197.38 | 208.16 | 201.78 |
| February | 187.00 | 197.41 | 204.09 | 196.17 |
| March | 187.00 | 200.01 | 197.06 | 194.69 |
| April | 213.71 | 214.23 | 214.66 | 214.20 |
| May | 178.09 | 176.78 | 177.16 | 177.34 |
| June | 122.36 | 127.95 | 118.55 | 122.95 |
| July | 133.36 | 138.03 | 134.84 | 135.41 |
| August | 186.78 | 183.02 | 185.54 | 185.12 |
| September | 237.38 | 212.45 | 228.90 | 226.24 |
| October | 201.06 | 195.86 | 200.49 | 199.14 |
| November | 242.36 | 203.44 | 245.81 | 230.53 |
| December | 238.60 | 196.84 | 241.60 | 225.68 |
| Average | 193.96 | 186.95 | 196.40 | 192.44 |

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

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

(Thousand metric tons and thousand dollars)

| | 2 | 2004 | 2005 | | |
|--------------------------|------------------|--------------------|----------|-----------|--|
| Country | Quantity | Value | Quantity | Value | |
| Bahamas, The | 2 | 387 | 2 | 462 | |
| Bangladesh | 6 | 1,150 | 28 | 7,320 | |
| Belgium | 23 | 3,020 | 13 | 3,710 | |
| Brazil | 2 | 757 | 10 | 2,410 | |
| Canada | 2,170 | 236,000 | 2,160 | 264,000 | |
| Chile | 2 | 245 | 1 | 177 | |
| China | 2,970 | 923,000 | 3,530 | 1,260,000 | |
| Colombia | 4 | 463 | 51 | 11,900 | |
| Dominican Republic | 2 | 1,370 | 1 | 192 | |
| Egypt | 55 | 12,100 | 208 | 52,500 | |
| Finland | 72 | 99,800 | 65 | 97,900 | |
| France | 1 | 1,050 | 4 | 4,610 | |
| Germany | 17 | 7,620 | 7 | 3,260 | |
| Greece | 1 | 115 | 23 | 4,310 | |
| Guatemala | 30 | 5,660 | (3) | 202 | |
| Hong Kong | 72 | 41,400 | 49 | 31,200 | |
| India | 295 | 90,800 | 806 | 221,000 | |
| Indonesia | 41 | 11,700 | 188 | 46,200 | |
| Ireland | 1 | 565 | 1 | 549 | |
| Italy | 150 | 40,400 | 137 | 36,900 | |
| Japan | 93 | 41,100 | 41 | 28,700 | |
| Kenya | 59 | 24,700 | 71 | 12,800 | |
| Korea, Republic of | 1,880 | 490,000 | 1,130 | 316,000 | |
| Malaysia | 399 | 80,700 | 457 | 109,000 | |
| Mexico | 1,510 | 305,000 | 1,500 | 287,000 | |
| Netherlands | 15 | 16,100 | 21 | 18,300 | |
| Pakistan | 4 | 770 | 39 | 10,300 | |
| Panama | 3 | 789 | (3) | 43 | |
| Peru | 186 | 39,500 | 44 | 10,000 | |
| Portugal | 25 | 4,750 | 21 | 4,120 | |
| Qatar | (3) | 22 | 31 | 6,560 | |
| Saudi Arabia | (3) | 116 | 32 | 7,220 | |
| Singapore | 15 | 4,610 | 75 | 2,130 | |
| Slovenia | 21 | 5,160 | | | |
| Spain | 10 | 13,200 | 18 | 15,100 | |
| Sweden | 1 | 2,280 | 7 | 5,640 | |
| Switzerland | 3 | 1,120 | (3) | 283 | |
| Taiwan | 191 ^r | 93,700 | 283 | 153,000 | |
| Thailand | 751 | 150,000 | 337 | 77,500 | |
| Turkey | 631 | 136,000 | 1,500 | 299,000 | |
| Turks and Caicos Islands | 7 | 780 | 2 | 176 | |
| United Arab Emirates | 5 | 1,440 | 3 | 688 | |
| United Kingdom | 24 | 8,240 | 9 | 6,080 | |
| Venezuela | 4 | 694 | 6 | 1,540 | |
| Vietnam | 13 | 3,830 | 26 | 7,570 | |
| Other | 10 ^r | 3,040 ^r | 17 | 5,670 | |
| Total | 11,800 | 2,910,000 | 13,000 | 3,430,000 | |

^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. Export valuation is free alongside ship. The United States exported scrap to 87 countries in 2004 and 101 countries in 2005.

³Less than ¹/₂ unit.

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

(Thousand metric tons and thousand dollars)

| | 2 | 004 | 20 |)05 |
|-----------------------------|----------|-----------|----------|-----------|
| Customs district | Quantity | Value | Quantity | Value |
| Baltimore, MD | 18 | 9,430 | 37 | 18,900 |
| Boston, MA | 794 | 176,000 | 682 | 154,000 |
| Buffalo, NY | 111 | 29,700 | 114 | 33,200 |
| Charleston, SC | 83 | 22,200 | 53 | 32,500 |
| Charlotte, NC | 24 | 6,380 | 28 | 8,970 |
| Chicago, IL | 9 | 4,510 | 3 | 1,800 |
| Cleveland, OH | 1 | 713 | 1 | 366 |
| Columbia-Snake River, OR/WA | 403 | 98,200 | 325 | 78,700 |
| Detroit, MI | 329 | 61,000 | 411 | 78,000 |
| Duluth, MN | 44 | 8,650 | 52 | 6,530 |
| El Paso, TX | 3 | 691 | 6 | 1,390 |
| Great Falls, MT | 23 | 3,280 | 28 | 4,650 |
| Honolulu, HI | 125 | 29,300 | 147 | 35,900 |
| Houston-Galveston, TX | 127 | 83,600 | 101 | 48,500 |
| Laredo, TX | 417 | 88,700 | 898 | 162,000 |
| Los Angeles, CA | 2,100 | 653,000 | 2,820 | 934,000 |
| Miami, FL | 46 | 18,900 | 50 | 41,100 |
| Mobile, AL | 4 | 4,320 | 24 | 9,730 |
| New Orleans, LA | 69 | 97,800 | 304 | 125,000 |
| New York, NY | 1,730 | 480,000 | 1,920 | 545,000 |
| Nogales, AZ | 20 | 2,970 | 1 | 217 |
| Norfolk, VA | 137 | 41,500 | 116 | 61,200 |
| Ogdensburg, NY | 63 | 12,600 | 69 | 14,900 |
| Pembina, ND | 510 | 78,800 | 596 | 93,600 |
| Philadelphia, PA | 418 | 91,600 | 592 | 124,000 |
| Portland, ME | 288 | 61,000 | 185 | 42,300 |
| Providence, RI | 252 | 48,800 | 215 | 44,500 |
| San Diego, CA | 200 | 27,200 | 114 | 16,400 |
| San Francisco, CA | 1,220 | 306,000 | 1,110 | 326,000 |
| San Juan, PR | 80 | 15,300 | 55 | 11,700 |
| Savannah, GA | 66 | 36,400 | 83 | 47,100 |
| Seattle, WA | 632 | 192,000 | 712 | 237,000 |
| St. Albans, VT | 51 | 9,840 | 59 | 12,300 |
| Tampa, FL | 321 | 65,400 | 222 | 46,600 |
| Other | 1,050 | 39,900 | 817 | 33,600 |
| Total | 11,800 | 2,910,000 | 13,000 | 3,430,000 |

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.

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

| | 20 | 004 | 20 | 005 |
|--|----------|-----------|----------|-----------|
| Grade | Quantity | Value | Quantity | Value |
| No. 1 heavy-melting scrap | 1,970 | 406,000 | 3,180 | 617,000 |
| No. 2 heavy-melting scrap | 406 | 79,900 | 325 | 65,900 |
| No. 1 bundles | 301 | 38,100 | 330 | 35,500 |
| No. 2 bundles | 45 | 7,790 | 91 | 21,300 |
| Shredded steel scrap | 3,710 | 778,000 | 3,800 | 834,000 |
| Borings, shovelings, and turnings | 207 | 20,000 | 241 | 27,200 |
| Cut plate and structural | 547 | 115,000 | 387 | 87,700 |
| Tinned iron or steel | 82 | 19,200 | 77 | 24,900 |
| Remelting scrap ingots | 7 | 6,270 | 10 | 8,900 |
| Stainless steel scrap | 478 | 548,000 | 585 | 670,000 |
| Other alloy steel scrap | 1,740 | 387,000 | 1,570 | 455,000 |
| Other steel scrap ³ | 1,260 | 300,000 | 1,240 | 328,000 |
| Iron scrap | 1,030 | 201,000 | 1,120 | 255,000 |
| Total | 11,800 | 2,910,000 | 13,000 | 3,430,000 |
| Ships, boats, and other vessels for scrapping | 16 | 2,680 | 3 | 476 |
| Used rails for rerolling and other uses ⁴ | 42 | 18,100 | 55 | 25,600 |
| Grand total | 11,800 | 2,930,000 | 13,000 | 3,460,000 |

(Thousand metric tons and thousand dollars)

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)

| | 20 | 04 | 2005 | | |
|----------------------|----------|---------|----------|---------|--|
| Country | Quantity | Value | Quantity | Value | |
| Argentina | (3) | 681 | (3) | 201 | |
| Aruba | 7 | 1,610 | | | |
| Bahamas, The | 5 | 275 | 3 | 351 | |
| Belgium | 3 | 14,700 | 36 | 9,780 | |
| Brazil | 5 | 1,540 | 1 | 774 | |
| Canada | 2,550 | 591,000 | 2,750 | 570,000 | |
| China | 2 | 1,100 | 2 | 978 | |
| Colombia | 1 | 1,160 | 1 | 118 | |
| Denmark | 138 | 31,600 | | | |
| Dominican Republic | 76 | 16,400 | 31 | 6,900 | |
| Ecuador | 1 | 712 | (3) | 102 | |
| Egypt | 1 | 1,070 | 1 | 732 | |
| Finland | 2 | 5,250 | 1 | 93 | |
| France | (3) | 60 | (3) | 358 | |
| Germany | 7 | 1,130 | 2 | 148 | |
| Italy | (3) | 29 | (3) | 72 | |
| Japan | 2 | 807 | 1 | 1,540 | |
| Malaysia | | | 2 | 264 | |
| Mexico | 126 | 57,700 | 145 | 61,000 | |
| Netherlands | 247 | 79,100 | 222 | 72,300 | |
| Netherlands Antilles | 17 | 1,630 | | | |
| Russia | 86 | 30,700 | 35 | 10,500 | |
| South Africa | 3 | 2,070 | 4 | 35 | |
| Suriname | 3 | 445 | | | |
| Sweden | 313 | 76,300 | 261 | 71,500 | |
| Taiwan | 30 | 419 | 1 | 396 | |

See footnotes at end of table.

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

(Thousand metric tons and thousand dollars)

| | 20 | 004 | 20 | 2005 | |
|----------------------|----------|-----------|----------|---------|--|
| Country | Quantity | Value | Quantity | Value | |
| Trinidad and Tobago | 10 | 2,630 | 1 | 647 | |
| United Arab Emirates | (3) | 16 | (3) | 170 | |
| United Kingdom | 1,020 | 300,000 | 338 | 97,200 | |
| Venezuela | 9 | 8,360 | 1 | 1,560 | |
| Other | 3 | 1,970 | 2 | 1,700 | |
| Total | 4,660 | 1,230,000 | 3,840 | 909,000 | |

-- 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 value. The United States imported scrap from 50 countries in 2004 and 43 countries in 2005.

 3 Less than $\frac{1}{2}$ 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)

| | 20 | 04 | 2005 | | |
|-----------------------|----------|-----------|----------|---------|--|
| Customs district | Quantity | Value | Quantity | Value | |
| Baltimore, MD | 1 | 365 | (3) | 213 | |
| Buffalo, NY | 454 | 179,000 | 423 | 152,000 | |
| Charleston, SC | 1,110 | 309,000 | 869 | 253,000 | |
| Charlotte, NC | 21 | 5,500 | | | |
| Chicago, IL | 45 | 2,720 | 20 | 1,880 | |
| Cleveland, OH | 23 | 350 | 11 | 665 | |
| Detroit, MI | 1,220 | 272,000 | 1,450 | 280,000 | |
| Duluth, MN | 26 | 6,920 | 39 | 8,640 | |
| El Paso, TX | 31 | 8,410 | 32 | 6,970 | |
| Great Falls, MT | 18 | 3,350 | 12 | 2,120 | |
| Houston-Galveston, TX | 27 | 18,500 | 18 | 17,900 | |
| Laredo, TX | 34 | 27,400 | 34 | 23,600 | |
| Los Angeles, CA | 2 | 1,770 | 2 | 1,580 | |
| Miami, FL | 2 | 236 | (3) | 112 | |
| Mobile, AL | 195 | 49,100 | 56 | 12,000 | |
| New Orleans, LA | 741 | 229,000 | 95 | 23,300 | |
| New York, NY | 3 | 1,500 | 3 | 552 | |
| Nogales, AZ | 9 | 2,860 | 11 | 3,640 | |
| Ogdensburg, NY | 28 | 15,100 | 16 | 9,520 | |
| Pembina, ND | 78 | 23,300 | 72 | 20,700 | |
| Philadelphia, PA | (3) | 86 | 1 | 348 | |
| Portland, ME | 1 | 105 | (3) | 11 | |
| San Diego, CA | 46 | 10,200 | 55 | 13,200 | |
| Savannah, GA | 30 | 414 | 1 | 322 | |
| Seattle, WA | 514 | 62,200 | 618 | 75,700 | |
| Tampa, FL | 4 | 261 | 3 | 324 | |
| Other | 1 | 1,020 | 2 | 1,280 | |
| Total | 4,660 | 1,230,000 | 3,840 | 909,000 | |

-- 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 value.

³Less than ¹/₂ unit.

U.S. IMPORTS FOR CONSUMPTION OF IRON AND STEEL SCRAP, BY ${\rm CLASS}^{1,\,2}$

| | 20 | 004 | 20 | 05 |
|--|----------|-----------|----------|---------|
| Class | Quantity | Value | Quantity | Value |
| No. 1 heavy-melting scrap | 118 | 20,300 | 55 | 7,010 |
| No. 2 heavy-melting scrap | 27 | 3,880 | 46 | 7,160 |
| No. 1 bundles | 910 | 251,000 | 879 | 228,000 |
| No. 2 bundles | 1 | 105 | 10 | 3,340 |
| Shredded steel scrap | 1,340 | 299,000 | 841 | 187,000 |
| Borings, shovelings, and turnings | 58 | 5,680 | 95 | 8,340 |
| Cut plate and structural | 125 | 19,600 | 193 | 35,300 |
| Tinned iron or steel | 10 | 2,020 | 17 | 3,160 |
| Remelting scrap ingots | 31 | 1,230 | 2 | 1,080 |
| Stainless steel scrap | 146 | 160,000 | 111 | 124,000 |
| Other alloy steel scrap | 291 | 77,500 | 425 | 81,200 |
| Other steel scrap ³ | 1,270 | 327,000 | 780 | 161,000 |
| Iron scrap | 338 | 63,300 | 385 | 62,700 |
| Total | 4,660 | 1,230,000 | 3,840 | 909,000 |
| Ships, boats, and other vessels for scrapping | (4) | 128 | (4) | 208 |
| Used rails for rerolling and other uses ⁵ | 131 | 44,100 | 164 | 62,800 |
| Grand total | 4,790 | 1,280,000 | 4,000 | 972,000 |

(Thousand metric tons and thousand dollars)

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

²Import valuation is customs value.

³Includes tinplate and terneplate.

⁴Less than ¹/₂ unit.

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

U.S. EXPORTS OF USED RAILS FOR REROLLING AND OTHER USES, BY COUNTRY $^{\rm l,\,2}$

| | 20 | 004 | 20 | 05 |
|--------------------------|----------------|-------------|---------------|-------------|
| | Quantity | Value | Quantity | Value |
| Country | (metric tons) | (thousands) | (metric tons) | (thousands) |
| Argentina | 1 | \$13 | 1 | \$3 |
| Aruba | | | 3 | 47 |
| Australia | 559 | 859 | 470 | 1,040 |
| Austria | 12 | 61 | 8 | 35 |
| Bahamas, The | 24 | 98 | 268 | 202 |
| Brazil | | 29 | 679 | 531 |
| Canada | 17,600 | 5,890 | 20,200 | 9,100 |
| Cayman Islands | 49 | 36 | 102 | 120 |
| Chile | 88 | 104 | 21 | 43 |
| China | 1,020 | 300 | 612 | 205 |
| Colombia | 192 | 74 | 264 | 76 |
| Dominican Republic | 472 | 256 | 519 | 573 |
| Egypt | | | 2,120 | 1,020 |
| El Salvador | 5 | 8 | 1 | 11 |
| France | 28 | 114 | 42 | 19 |
| Georgia | 6 | 19 | | |
| Germany | | 252 | 50 | 10 |
| Grenada | 41 | 59 | | |
| Guatemala | | | 93 | 34 |
| Hong Kong | | 149 | 16 | 297 |
| Ireland | | | 1 | 119 |
| Italy | | 13 | 1 | 24 |
| Japan | 3 | 44 | 11 | 167 |
| Korea, Republic of | | 69 | 65 | 148 |
| Malaysia | 23 | 41 | | |
| Mexico | 19,500 | 8,320 | 26,900 | 10,100 |
| New Caledonia | | 15 | · | · |
| New Zealand | (3) | 5 | 44 | 120 |
| Peru | 10 | 3 | 228 | 170 |
| Philippines | 1 | 4 | 2 | 3 |
| Portugal | | 29 | | |
| Saudi Arabia | 36 | 99 | 1 | 24 |
| Singapore | 1 | 7 | 5 | 27 |
| Slovakia | | | 17 | 5 |
| Spain | | | 54 | 11 |
| Suriname | | | 14 | 8 |
| Sweden | 2 | 14 | | |
| Taiwan | 1,750 | 552 | 2,420 | 978 |
| Thailand | 5 | 56 | 2,120 | 17 |
| Turks and Caicos Islands | | 163 | 21 | 157 |
| United Arab Emirates | | 154 | | |
| United Kingdom | 59 | 118 | 33 | 30 |
| Venezuela | 7 | 30 | 22 | 87 |
| Other | 4 ^r | | 13 | 69 |
| Total | 41,900 | 18,100 | 55,300 | 25,600 |
| | 11,700 | 10,100 | 55,500 | 25,500 |

^rRevised. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown. ²Exports contain mixed (used plus new) rails totaling 13,500 metric tons (t) valued at \$10,100,000 in 2004 and 21,500 t valued at \$15,600,000 in 2005. Export valuation is free alongside ship value.

 3 Less than $\frac{1}{2}$ unit.

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

| | 200 |)4 | 20 | 05 |
|--------------------|----------------------|-------------|---------------|-------------|
| | Quantity | Value | Quantity | Value |
| Country | (metric tons) | (thousands) | (metric tons) | (thousands) |
| Austria | 3 | \$3 | 447 | \$500 |
| Brazil | 1 ^r | 6 | | |
| Canada | 29,000 | 7,210 | 29,000 | 8,700 |
| Czech Republic | | | 6 | 12 |
| Germany | 341 | 455 | 531 | 837 |
| Italy | | | 2 | 6 |
| Japan | 2 | 4 | 72 | 15 |
| Korea, Republic of | 9 | 8 | 110 | 74 |
| Mexico | 2 | 5 | 619 | 410 |
| Netherlands | 17 | 22 | | |
| Philippines | 2 | 6 | | |
| Russia | 85,700 | 33,400 | 109,000 | 46,100 |
| Spain | 99 | 46 | | |
| Switzerland | | | (3) | 3 |
| Taiwan | 18 | 27 | 2 | 5 |
| Ukraine | 15,500 | 2,950 | 23,700 | 6,190 |
| United Kingdom | 2 | 4 | 21 | 34 |
| Total | 131,000 ^r | 44,100 | 164,000 | 62,800 |

^rRevised. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown. ²Import valuation is customs value.

 3 Less than $\frac{1}{2}$ unit.

Source: U.S. Census Bureau.

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

| | 200 | 04 | 200 |)5 |
|----------|---------------|-------------|---------------|-------------|
| | Quantity | Value | Quantity | Value |
| Country | (metric tons) | (thousands) | (metric tons) | (thousands) |
| Brazil | 47 | \$5 | | |
| Canada | 116 | 13 | | |
| China | 12,000 | 1,280 | | |
| Colombia | 43 | 4 | | |
| Mexico | 503 | 53 | 87 | \$9 |
| Spain | 33 | 3 | 68 | 7 |
| Turkey | 36 | 4 | | |
| Total | 12,800 | 1,360 | 155 | 16 |

-- 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.

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

| | 2004 | | 2005 | |
|---------------------|---------------|-------------|---------------|-------------|
| | Quantity | Value | Quantity | Value |
| Country | (metric tons) | (thousands) | (metric tons) | (thousands) |
| Brazil | | | 238,000 | \$17,900 |
| Canada | 435,000 | \$45,300 | 532,000 | 50,300 |
| China | | | 425 | 53 |
| Italy | 709 | 75 | | |
| Russia | 64,000 | 16,100 | | |
| Trinidad and Tobago | 220,000 | 58,100 | 92,100 | 20,300 |
| United Kingdom | 62,500 | 15,600 | | |
| Venezuela | 1,670,000 | 328,000 | 1,310,000 | 272,000 |
| Total | 2,450,000 | 463,000 | 2,170,000 | 361,000 |

-- 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} | | | | | |

| | 2004 | | 2005 | |
|----------------------|---------------|-------------|---------------|-------------|
| | Quantity | Value | Quantity | Value |
| Country | (metric tons) | (thousands) | (metric tons) | (thousands) |
| Brazil | | | 13 | \$6 |
| Canada | 5,910 | \$1,240 | 9,010 | 1,430 |
| Cayman Islands | | | 907 | 80 |
| China | 479 | 48 | 5 | 9 |
| Colombia | 18,400 | 1,620 | 21,000 | 1,850 |
| Costa Rica | | | 472 | 42 |
| Czech Republic | 47 | 4 | | |
| Dominican Republic | | | 154 | 65 |
| France | | | 1,660 | 151 |
| Germany | 36 | 17 | 31 | 14 |
| Italy | - 77 | 19 | | |
| Jamaica | 270 | 24 | | |
| Korea, Republic of | 631 | 109 | 895 | 94 |
| Malaysia | | | 322 | 28 |
| Mexico | 15,200 | 1,800 | 13,900 | 4,100 |
| Netherlands | 30 | 3 | 14 | 7 |
| Singapore | 42 | 8 | | |
| Switzerland | . 15 | 7 | | |
| Taiwan | 101 | 12 | 956 | 84 |
| Trinidad and Tobago | | | 271 | 24 |
| Turkey | 6,690 | 1,780 | | |
| United Arab Emirates | | | 948 | 83 |
| United Kingdom | 20 | 9 | 59 | 31 |
| Venezuela | | | 19 | 9 |
| Total | 48,000 | 6,690 | 50,700 | 8,110 |

-- Zero.

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

 2 Includes 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.

U.S. IMPORTS FOR CONSUMPTION OF PIG IRON, BY COUNTRY $^{\rm l,\,2}$

| | 2004 | | 2005 | |
|---------------------|---------------|-------------|---------------|-------------|
| | Quantity | Value | Quantity | Value |
| Country | (metric tons) | (thousands) | (metric tons) | (thousands) |
| Argentina | | | 27,200 | \$7,210 |
| Australia | | | 204 | 214 |
| Brazil | 4,770,000 | \$914,000 | 4,460,000 | 1,180,000 |
| Canada | 95,200 | 25,000 | 105,000 | 34,000 |
| China | 132,000 | 31,200 | 57,200 | 13,900 |
| Colombia | | | 238 | 147 |
| Germany | | | 10 | 3 |
| Hong Kong | | | 3 | 5 |
| Italy | | | 498 | 236 |
| Japan | 1 | 3 | | |
| Mexico | | | 27 | 15 |
| Russia | 1,110,000 | 314,000 | 918,000 | 218,000 |
| South Africa | 118,000 | 23,900 | 141,000 | 44,000 |
| Trinidad and Tobago | 48,400 | 14,300 | 26,200 | 816 |
| Ukraine | 80,200 | 18,700 | 274,000 | 76,700 |
| United Kingdom | 15,300 | 4,520 | | |
| Venezuela | 28,300 | 10,100 | 22,400 | 988 |
| Total | 6,400,000 | 1,360,000 | 6,030,000 | 1,580,000 |
| 7.000 | | | | |

-- 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.