

IRON AND STEEL SCRAP¹

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

Domestic Production and Use: Total value of domestic purchases (receipts of ferrous scrap by all domestic consumers from brokers, dealers, and other outside sources) and exports was estimated to be \$12.9 billion in 2004, up about 35% from that of 2003. Manufacturers of pig iron, raw steel, and steel castings accounted for 89% of scrap consumption by the domestic steel industry, using scrap together with pig iron and direct-reduced iron to produce steel products for the construction, transportation, oil and gas, machinery, container, appliance, and various other consumer industries. The ferrous castings industry consumed most of the remaining 11% to produce cast iron and steel products, such as motor blocks, pipe, and machinery parts. Relatively small quantities of scrap were used for producing ferroalloys, for the precipitation of copper, and by the chemical industry; these uses totaled collectively less than 1 million tons.

Raw steel production in 2004 was an estimated 99.2 million tons, almost 6% more than that of 2003; capacity utilization was up by 10% from that of 2003. Net shipments of steelmill products were estimated to be about 104 million tons compared with 96.1 million tons for 2003. The domestic ferrous castings industry shipped 8.3 million tons of all types of iron castings in 2003 and an estimated 1.1 million tons of steel castings, including investment castings, according to the latest available information.

Salient Statistics—United States:	2000	2001	2002	2003	2004^e
Production:					
Home scrap	20	18	17	17	17
Purchased scrap ²	56	55	56	53	56
Imports for consumption ³	4	3	3	4	5
Exports ³	6	7	9	11	12
Consumption, reported	74	71	69	61	64
Price, average, dollars per metric ton delivered,					
No. 1 Heavy Melting composite price, Iron Age					
Average, Pittsburgh, Philadelphia, Chicago	92.61	73.84	88.21	108.00	190
Stocks, consumer, yearend	5.3	4.9	5.1	4.3	4.1
Employment, dealers, brokers, processors, number ⁴	37,000	37,000	37,000	37,000	37,000
Net import reliance ⁵ as a percentage of reported consumption	E	E	E	E	E

Recycling: Recycled iron and steel scrap is a vital raw material for the production of new steel and cast iron products. The steel and foundry industries in the United States have been structured to recycle scrap, and, as a result, are highly dependent upon scrap. The steel industry in North America has been recycling steel scrap for more than 200 years. The automotive recycling industry alone recycled about 14 million vehicles in 2004 through more than 200 car shredders to supply more than 14.2 million tons of shredded steel scrap to the steel industry for recycling. More than 12,000 vehicle dismantlers throughout North America resell parts. In the United States alone, an estimated 64 million tons of steel was recycled in steelmills and foundries in 2004. Recycling of scrap plays an important role in the conservation of energy because the remelting of scrap requires much less energy than the production of iron or steel products from iron ore. Also, 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. Recycled scrap consists of approximately 49% post-consumer (old, obsolete) scrap, 26% prompt scrap (produced in steel-product manufacturing plants), and 25% home scrap (recirculating scrap from current operations).

Import Sources (2000-03): Canada, 62%; United Kingdom, 20%; Sweden, 7%; Russia, 3%; and other, 8%.

Tariff: Item	Number	Normal Trade Relations 12-31-04
Iron and steel waste and scrap:		
No. 1 Bundles	7204.41.0020	Free.
No. 1 Heavy Melting	7204.49.0020	Free.
No. 2 Heavy Melting	7204.49.0040	Free.
Shredded	7204.49.0070	Free.

Depletion Allowance: Not applicable.

Government Stockpile: None.

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Events, Trends, and Issues: The third quarter of 2003 displayed near-record levels of real economic growth, about 8% annualized. Growth continued with strength through 2004. U.S. apparent steel consumption, an indicator of economic growth, remained at about 107 million tons from 2001 through 2003, the lowest amount since 1995, from a peak of 120 million tons in 2000. However, it rose to an estimated 125 million tons in 2004. Scrap prices increased steadily through 2003 and the first quarter of 2004, but moderated in the second and third quarters. Hot-rolled steel prices and the producer price index for steelmill products rose during 2003 and the first three quarters of 2004. Steelmill capacity utilization also increased steadily during 2003 and through 2004 to a peak of 97.3% in September 2004. This record performance supported forecasts of a steadily improving domestic economic recovery.

Ferrous scrap prices were significantly higher, on average, during 2004 than in 2003. Composite prices published by Iron Age Scrap Price Bulletin for No. 1 Heavy Melting steel scrap delivered to purchasers in Chicago, Philadelphia, and Pittsburgh averaged about \$219 per metric ton in 2004. As reported by Iron Age Scrap Price Bulletin, the average price for nickel-bearing stainless steel scrap delivered to purchasers in Pittsburgh was about \$1,450 per ton in 2004, which was significantly higher than the 2003 average price of \$881 per ton. Exports of ferrous scrap increased from 11 million tons during 2003 to about 12 million tons in 2004. Export scrap value increased from \$2.0 billion in 2003 to an estimated \$2.8 billion in 2004.

In the United States, the primary source of old steel scrap is the automobile. The recycling rate for automobiles in 2003, the latest year for which statistics were available, was 103%. A recycling rate greater than 100% is a result of the steel industry recycling more steel from automobiles than was used in the domestic production of new vehicles. The recycling rates for appliances and steel cans in 2003 were 90% and 60%, respectively. Recycling rates for construction materials in 2003 were about 96% for plates and beams and 60% for rebar and other materials. The recycling rates for appliance, can, and construction steel are expected to increase not only in the United States but also in emerging industrial countries. As environmental regulations increase, recycling becomes more profitable and convenient, and public interest in recycling continues to grow.

World Mine Production, Reserves, and Reserve Base: Not applicable.

World Resources: Not applicable.

Substitutes: About 2.1 million tons of direct-reduced iron was used in the United States in 2004 as a substitute for iron and steel scrap.

⁰Estimated. E Net exporter.

¹See also Iron Ore and Iron and Steel.

²Receipts – shipments by consumers + exports – imports.

³Includes used rails for rerolling and other uses, and ships, boats, and other vessels for scrapping.

⁴Estimated, based on 1992 Census of Wholesale Trade.

⁵Defined as imports – exports + adjustments for Government and industry stock changes.