

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 at \$7.6 billion in 2003, up about 41% from that of 2002. Manufacturers of pig iron, raw steel, and steel castings accounted for 81% 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 19% 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 less than 1 million tons.

Raw steel production in 2003 was an estimated 91.4 million tons, slightly less than that of 2002; capacity utilization was about the same as that of 2002. Net shipments of steelmill products were estimated at about 89.2 million tons compared with 90.7 million tons for 2002. The domestic ferrous castings industry shipped an estimated 8.6 million tons of all types of iron castings in 2003 and an estimated 0.7 million tons of steel castings, including investment castings.

Salient Statistics—United States:	1999	2000	2001	2002	2003^e
Production:					
Home scrap	19	20	18	17	19
Purchased scrap ²	53	56	55	56	57
Imports for consumption ³	4	4	3	3	3
Exports ³	6	6	7	9	11
Consumption, reported	71	74	71	69	69
Price, average, dollars per metric ton delivered,					
No. 1 Heavy Melting composite price, Iron Age					
Average, Pittsburgh, Philadelphia, Chicago	90.98	92.61	73.84	88.21	108.00
Stocks, consumer, yearend	4.8	5.3	4.9	5.1	4.2
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 over 200 years. The automotive recycling industry alone recycled about 14 million vehicles in 2001 through more than 200 car shredders to supply more than 14 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 69 million tons of steel was recycled in steel mills and foundries in 2003. 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 28% home scrap (recirculating scrap from current operations), 23% prompt scrap (produced in steel-product manufacturing plants), and 49% post-consumer (old) scrap.

Import Sources (1999-2002): Canada, 58%; United Kingdom, 23%; Sweden, 7%; Netherlands, 3%; and other, 9%.

Tariff: Item	Number	Normal Trade Relations 12/31/03
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 recession that began in March 2001, following a 10-year economic expansion, ended in November 2001, according to the National Bureau of Economic Research. Growth in the U.S. gross domestic product during 2002 was only 2.4%. U.S. apparent steel consumption, an indicator of economic growth, remained at 107 million tons in 2001 and 2002, the lowest amount since 1995, from a peak of 120 million tons in 2000, and was expected to decline in 2003. Scrap prices increased steadily through 2002 and the first half of 2003. Hot-rolled steel prices and the producer price index for steelmill products rose during 2002 and declined during 2003. Steel mill capacity utilization also increased until late 2002 and then declined during 2003. This record of performance indicated economic recovery during 2003 would not be strong.

Ferrous scrap prices were higher, on average, during 2003 than in 2002. 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 \$111 per metric ton in 2003. As reported by Iron Age Scrap Price Bulletin, the average price for nickel-bearing stainless steel scrap delivered to purchasers in Pittsburgh was about \$881 per ton in 2003, which was significantly higher than the 2002 average price of \$695 per ton. Exports of ferrous scrap increased from 7.4 million tons during 2001 to about 9.2 million tons in 2002. Export scrap value increased from \$0.5 billion in 2001 to an estimated \$1.3 billion in 2002.

In the United States, the primary source of obsolete steel scrap is the automobile. The recycling rate for automobiles in 2002, the latest year for which statistics were available, was 101%. 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 rates for appliances and steel cans in 2002 were 87% and 59%, respectively. Recycling rates for construction materials in 2002 were about 95% for plates and beams and 58% 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 2.2 million tons of direct-reduced iron was used in the United States in 2000 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.