IRON AND STEEL SCRAP[1]

(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 $5.7 billion in 2002, up about 30% from that of 2001. Manufacturers of pig iron, raw steel, and steel castings accounted for nearly 80% 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 20% 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 2002 was an estimated 92 million tons, about the same as that of 2001; capacity utilization exceeded that of 2001. Net shipments of steelmill products were estimated at about 90.7 million tons compared with 89.7 million tons for 2001. The domestic ferrous castings industry shipped an estimated 9 million tons of all types of iron castings in 2002 and an estimated 1.0 million tons of steel castings, including investment castings.

Salient Statistics—United States:	**1998**	**1999**	**2000**	**2001**	**2002[e]**
Production:					
Home scrap	20	19	20	18	14
Purchased scrap[2]	56	53	56	55	58
Imports for consumption[3]	3	4	4	3	3
Exports[3]	6	6	6	7	9
Consumption, reported	73	71	74	71	72
Price, average, dollars per metric ton delivered, No. 1 Heavy Melting composite price, Iron Age Average, Pittsburgh, Philadelphia, Chicago	104.07	90.98	92.61	73.84	85.00
Stocks, consumer, yearend	5.2	4.8	5.3	4.9	4.3
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 72 million tons of steel was recycled in steel mills and foundries in 2002. 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 29% home scrap (recirculating scrap from current operations), 23% prompt scrap (produced in steel-product manufacturing plants), and 48% post-consumer (old) scrap.

Import Sources (1998-2001): Canada, 59%; United Kingdom, 19%; Netherlands, 5%; Sweden, 5%; and other, 12%.

Tariff: Item	**Number**	**Normal Trade Relations 12/31/02**
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: Although the official end of the longest economic expansion in U.S. history was in March 2001, according to the National Bureau of Economic Research, industrial production had been declining since June 2000, and by the end of 2000, the U.S. scrap metal industry was seriously concerned. Decreasing demand for vehicles and consumer goods and the steel to make them caused U.S. manufacturing operating capacity to decline during 2001—a year of recession for the U.S. and the global economies, which adversely affected the steelmaking and ferrous scrap industries. Optimism about the timing and strength of any recovery during 2002 was not strong throughout the U.S. scrap industry, although scrap prices and steel mill capacity utilization were increasing relative to those of 2001.

Ferrous scrap prices were higher, on average, during 2002 than in 2001. 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 $85 per metric ton in 2002. As reported by Iron Age Scrap Price Bulletin, the average price for nickel-bearing stainless steel scrap delivered to purchasers in Pittsburgh was about $695 per ton in 2002, which was significantly higher than the 2001 average price of $652 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 2001, the latest year for which statistics are available, was 102%. The recycling rates for appliances and steel cans in 2001 were 85% and 58%, respectively. Recycling rates for construction materials in 2001 were about 95% for plates and beams and 48% 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: Iron and steel scrap is not a mined material, and world production data for iron and steel scrap are not available. However, it is estimated that annual output is about 404 million tons, based on world steel production.

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.

[e]Estimated. E Net exporter.

[1]See also Iron Ore and Iron and Steel.

[2]Receipts - shipments by consumers + exports - imports.

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

[4]Estimated, based on 1992 Census of Wholesale Trade.

[5]Defined as imports - exports + adjustments for Government and industry stock changes.