

IRON AND STEEL SCRAP¹

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

Domestic Production and Use: Total value of 1999 domestic purchases (receipts of ferrous scrap by all domestic consumers from brokers, dealers, and other outside sources) and exports was estimated at \$4.9 billion, down about 26% from that of 1998. Manufacturers of pig iron, raw steel, and steel castings accounted for about 82% 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 18% to produce cast iron and steel products, such as motor blocks, pipe, and machinery parts. Relatively small quantities 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 1999 was an estimated 98.6 million tons, nearly the same as that produced in 1998. Net shipments of steel mill products were estimated at about 93 million tons compared with 92.9 million tons for 1998. The domestic ferrous castings industry shipped an estimated 11 million tons of all types of iron castings in 1999 and an estimated 1.2 million tons of steel castings, including investment castings.

Salient Statistics—United States:	1995	1996	1997	1998	1999^e
Production: Home scrap	20	20	20	20	21
Purchased scrap ²	59	57	59	56	49
Imports for consumption ³	2.3	2.9	3	3	6
Exports ³	10.5	9.1	9	6	5
Consumption, reported	72	71	73	73	68
Price, average, dollars per metric ton delivered:					
No. 1 Heavy Melting composite price, Iron Age					
Average: Pittsburgh, Philadelphia, Chicago	131.29	126.0	126.02	104.07	87
Stocks, consumer, yearend	4.2	5.2	5.5	5.2	4.4
Employment, dealers, brokers, processors, number ⁴	37,000	37,000	37,000	37,000	37,000
Net import reliance ⁵ as a percent of apparent consumption	E	E	E	E	3

Recycling: All iron and steel scrap is recycled material that 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 recycles nearly 12 million vehicles annually through more than 200 car shredders, to supply more than 13 million tons of shredded steel scrap to the steel industry for recycling. In the United States alone, an estimated 51 million tons of steel apparently was recycled in steel mills and foundries in 1999. 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 32% home scrap (new recirculating scrap from current operations), 24% prompt scrap (produced in steel-product manufacturing plants), and 44% obsolete (old) scrap.

Import Sources (1995-98): Canada, 76%; United Kingdom, 8%; Venezuela, 5%; Mexico, 5%; and other, 6%.

Tariff: Item	Number	Normal Trade Relations 12/31/99
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: During 1999, domestic steel producers and ferrous scrap suppliers appeared to be recovering slowly from the effects of the Asian financial crisis of 1997. Prolonged scrap price depression in 1998 caused a sharp reduction in the generation, collection, and processing of scrap and eventually supply could not satisfy increasing demand. Prices in the ailing ferrous scrap market finally began to creep upwards at yearend 1998 and early 1999. The scrap supply improved in early 1999 causing scrap prices to decline significantly until midyear, when prices finally increased in response to the slowly rising trend in steel prices and the addition of scrap to mill inventory. Domestic steel production during the summer was stronger than expected, and demand for scrap was improving, especially from minimills. By the fourth quarter of 1999, the recovery in global steel markets continued to gain momentum, and scrap price rises could be seen in most steel product markets. Domestic steel consumption increased, which strengthened scrap demand and helped support scrap prices.

Ferrous scrap prices were lower, on average, during 1999 than in 1998. 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 \$87 per metric ton in 1999. As reported by Iron Age Scrap Price Bulletin, the average price for nickel-bearing stainless steel scrap delivered to purchasers in Pittsburgh was about \$609 per metric ton in 1999, which was only slightly higher than the 1998 average price of \$592 per metric ton. Exports of ferrous scrap declined from about 5.5 million tons in 1998 to about 5.3 million tons in 1999, having an estimated value of about \$802 million.

In the United States, the primary source of obsolete steel scrap is the automobile. The recycling rate for automobiles for the 5-year period 1994-98 was about 96%. The recycling rates for appliances and steel cans for the past 5 years overall were about 75% and 57%, respectively. Recycling rates for construction materials for 1998 were about 88% for plates and beams and 43% 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 increase.

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

World Resources: Not applicable.

Substitutes: About 1.3 million tons of direct-reduced iron was used in the United States in 1999 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.