

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 \$5.1 billion in 2001, down about 7% from that of 2000. 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 2001 was an estimated 92 million tons, down nearly 10% from that of 2000, as capacity utilization declined to its lowest level since December 2000 during the fourth quarter of 2001. Net shipments of steelmill products were estimated at about 91.8 million tons compared with 98.9 million tons for 2000. The domestic ferrous castings industry shipped an estimated 11 million tons of all types of iron castings in 2001 and an estimated 1.4 million tons of steel castings, including investment castings.

Salient Statistics—United States:	1997	1998	1999	2000	2001^e
Production:					
Home scrap	20	20	19	20	21
Purchased scrap ²	59	56	53	56	55
Imports for consumption ³	3	3	4	3	3
Exports ³	9	6	6	6	7
Consumption, reported	73	73	71	74	73
Price, average, dollars per metric ton delivered, No. 1 Heavy Melting composite price, Iron Age					
Average, Pittsburgh, Philadelphia, Chicago	125.80	104.07	90.98	92.61	75.17
Stocks, consumer, yearend	5.5	5.2	4.8	5.3	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 apparent consumption	E	E	E	E	E

Recycling: All 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 nearly 14 million vehicles in 2000 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 73 million tons of steel was recycled in steel mills and foundries in 2001. 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), 24% prompt scrap (produced in steel-product manufacturing plants), and 47% post-consumer (old) scrap.

Import Sources (1997-2000): Canada, 61%; United Kingdom, 18%; Netherlands, 5%; Mexico, 3%; and other, 13%.

Tariff: Item	Number	Normal Trade Relations 12/31/01
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: To the detriment of steel producers and their raw material suppliers, including the scrap iron and steel industry, the longest economic expansion in U.S. history was showing signs of weakening through the third quarter in 2001. Industrial activity declined in September 2001—the 12th straight month of decline and the first of this duration since November 1944 through October 1945. Decreasing demand for vehicles and consumer goods and the steel to make them caused manufacturing operating capacity to decline in September 2001. Prices for steel products and scrap plunged to record low levels during the first three quarters of 2001, but additional price declines were not expected. The steel-producing and scrap industries were convinced that they, if not the national economy as a whole, were in a recession. Few, if any, analysts and executives in these industries were predicting a significant upturn in scrap demand during 2001, especially after the market downturn resulting from the terrorist attacks in the United States on September 11.

Ferrous scrap prices were lower, on average, during 2001 than in 2000. 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 \$75 per metric ton in 2001. As reported by Iron Age Scrap Price Bulletin, the average price for nickel-bearing stainless steel scrap delivered to purchasers in Pittsburgh was about \$652 per ton in 2001, which was significantly lower than the 2000 average price of \$761 per ton. Exports of ferrous scrap increased from 5.8 million tons during 2000 to about 7.0 million tons in 2001. Export scrap value increased from \$1.0 billion in 2000 to an estimated \$1.15 billion in 2001.

In the United States, the primary source of obsolete steel scrap is the automobile. The recycling rate for automobiles for the 5-year period 1996-2000 was about 95%. The recycling rates for appliances and steel cans for the past 5 years overall were about 78% and 58%, respectively. Recycling rates for construction materials in 2000 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: 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.

⁶Estimated. 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.