

The Scrap Recycling Industry: **Ferrous Scrap Metal**

Ferrous scrap is a **vital raw material** for the production of new steel and cast iron products. Currently, more than two out of three pounds of steel made in the U.S. are manufactured using ferrous scrap. Electric arc furnace (EAF) manufacturers **utilize nearly 100% ferrous scrap** as their feedstock material.

Ferrous scrap is iron and steel recovered from automobiles, farm equipment, household appliances, steel beams, bridges, railroad tracks, ships, and food. Nearly half of the ferrous scrap supply is **generated from industrial and manufacturing sources**. For example, when a piece of metal is cut or a hole is drilled, the metal that is left over is industrial scrap. Ferrous scrap recyclers purchase the scrap and process it into one of more than **100 globally recognized commercial grade specifications**. It is then sold to a steel mill, foundry, or other industrial consumer for manufacture into new products.

THE FERROUS SCRAP INDUSTRY

In 2009, the U.S. ferrous scrap industry, including stainless and alloy steels, was valued at \$16.9 billion.

If the ferrous scrap that is processed in the U.S., in 2009, were put into rail cars, the train would stretch 9,800 miles—the distance from Alaska to France and back.

On average, the U.S. processes enough ferrous scrap daily, by weight, to build 25 Eiffel Towers every day of the year.

In 2009, the U.S. scrap industry recycled more than 48 million metric tons of ferrous metal.

Steel produced by predominantly scrap-fed electric arc furnaces account for nearly 60% of the total raw steel produced in the United States.

The U.S. is the largest exporter of ferrous scrap in the world. In 2009, 18.2 million metric tons of ferrous scrap—including stainless-alloy scrap—valued at more than \$7 billion—were exported to 84 countries, including China, Turkey, South Korea, Taiwan, India, Canada, Malaysia, Vietnam, Mexico, Thailand, and Indonesia.

Top exports include:

- 8,500,000 metric tons of shredded steel scrap
- 5,800,000 metric tons of #1 heavy melting steel
- 1,300,000 metric tons of alloyed non-stainless steel
- 667,000 metric tons of cast iron
- 1,300,000 metric tons of cut plate and structural

Steel is the world's most recycled material

"Recycling one car saves more than 2,500 pounds of iron ore, 1,400 pounds of coal, and 120 pounds of limestone

Recycled more than 17 million cars in 2006 through more than 200 shredders to supply an estimated 14 million tons of shredded scrap.

Recycling rate

- for cars: 106%
- for appliances: 90%
- for steel containers: 65%
- for plates and beams: 97%
- for rebar and other construction materials: 70%



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Institute of
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