



STEEL MANUFACTURERS
ASSOCIATION

News Release

Media Contact:

Gregg Walker
202-296-1515
walker@steelnet.org

FOR IMMEDIATE RELEASE

May 4, 2023

New Report Indicates Significant Scrap Is Available to Support Global Steel Decarbonization

WASHINGTON — The global steel industry has an opportunity to make greater use of ferrous scrap in steel production to lower greenhouse gas emissions and decarbonize the industry, according to a new report made public today by the Steel Manufacturers Association.

Compared to traditional ore-based steel manufacturing processes, steel production using recycled scrap emits an estimated 78 percent less carbon emissions per ton of steel. But some analysts argue that the limited global availability of ferrous (i.e., iron and steel) scrap hinders the ability of this production method to decarbonize steel manufacturing. That view is based on assessing the lifespan of steel products at approximately 40 years. However, the report provides new calculations in key scrap-producing countries that steel lifespans may be lower, in the range of 25 and 35 years, making more scrap available sooner than with longer lifespans to satisfy the demand for global steel production.

The report, entitled [Ferrous Scrap's Role in Decarbonizing Steel: Assessing Steel Product Lifespans](#), is co-authored by Dr. Thomas Brady, executive director of the J.P. Morgan Center for Commodities & Energy Management at the University of Colorado Denver, and Dr. Roderick Eggert, professor of economics and business at the Colorado School of Mines.

“By calculating lower steel product lifespans, the report supports the argument there will be enough scrap to enable a widescale industry transition to electric arc furnaces,” said Philip K. Bell, president of the Steel Manufacturers Association.

The study reinforces the important role that ferrous scrap will play in decarbonizing the global steel industry. “The difference between a 40-year lifespan and a 25-year lifespan is significant and illustrates the importance of policies to promote scrap recycling. By increasing recycling rates, we can accelerate steel decarbonization efforts,” said Bell.

The report estimates average steel product lifespans in nine key steel producing and consumer countries. In five of the nine countries surveyed, the implied product lifetime is approximately 35 years (Brazil, Canada, Germany, Japan and the United States). China and the United Kingdom have the lowest implied lifespans, at approximately 25 years. Mexico and South Korea have lifespans between

25 and 36 years. A weighted average of the product lifespan for these nine countries (based on 2022 raw steel production volumes) is approximately 30 years.

In mature steel markets, robust scrap collection and recycling systems are in place and a significant amount of manufacturing or process scrap is already recycled soon after it is created. In the United States, for example, scrap-based electric arc furnace production accounts for 70 percent of domestic steel production. In developing countries, the infrastructure and economic incentives to collect and process scrap efficiently will grow, which will likely increase the amount of available scrap. Decarbonization will strongly incentivize the transition to scrap-based production, the report concludes.

[Read the full report.](#)

###

About the SMA

SMA is the largest steel industry trade association in the United States and is the primary trade association representing North American EAF steel producers. EAF steelmakers account for almost 70 percent of domestic steelmaking capacity using an innovative, 21st century production process that is less energy-intensive and has lower carbon emissions than traditional steelmaking. For more information check out our website at www.steelnet.org or our [LinkedIn page](#).