

LIGHT METAL AGE

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...ing
... which has
... ways to replace fossil
... using solar thermal technology. Despite being significantly less energy intensive than primary aluminum, the aluminum recycling process still produces emissions, releasing 0.5 t CO₂e/t Al into the environment. According to the research organization, it has designed a compact, simple, and innovative system that will allow solar radiation to be reflected at a focal point, producing enough heat to melt common aluminum waste without the need for a heat transfer fluid. Using only solar energy to recycle aluminum would significantly reduce emissions from the process. The project, which will be funded by Corfo's Crea y Valida Fund, proposes to develop and validate the solar thermal concentration system.

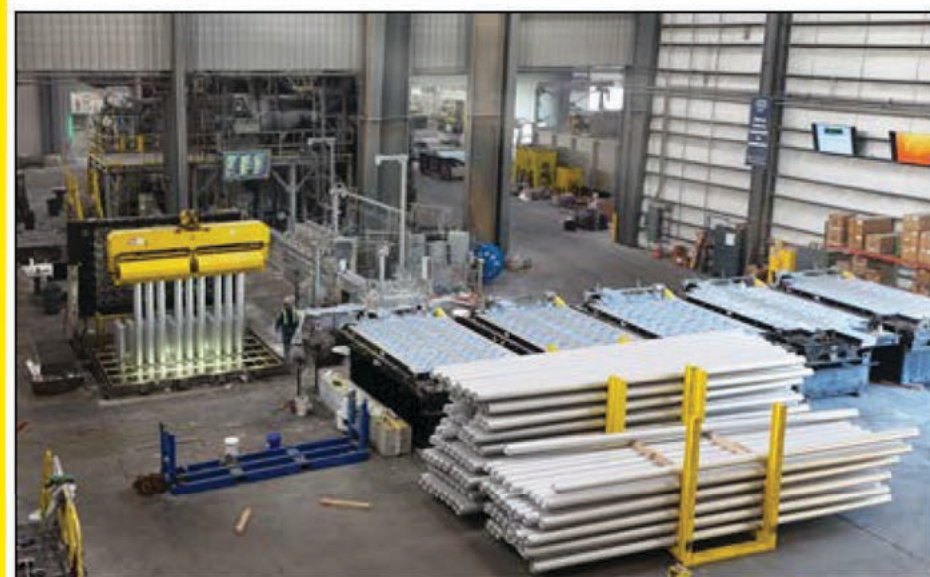
U.S.

In July 2023, Rio Tinto entered into an agreement with Giampaolo Group, one of North America's largest fully-integrated metal management businesses, to form a joint venture to manufacture and market recycled aluminum products. Under the agreement, Rio Tinto acquired a 50% equity stake in Giampaolo's wholly-owned Matalco business for US\$700 million, subject to usual closing adjustments. Matalco is a leading producer of high-quality recycled aluminum billet and slab products, operating six facilities in the U.S. and one in Canada. The company has the capacity to produce approximately 900,000 tons (2 billion lbs) of recycled aluminum per year. Triple M Metal (another Giampaolo subsidiary) will be responsible for supplying recyclable feed to the joint venture, with Matalco's leadership team continuing to lead its operations. Rio Tinto will be responsible for sales and marketing of the Matalco products. The transaction between Rio Tinto and Giampaolo was completed on December 1, 2023, officially combining the strengths of North America's largest primary and secondary aluminum producers, so as to meet the growing demand from manufacturers for low carbon materials. (Learn more about Rio Tinto's investments in recycling on page 18.)

In August 2023, Novelis, headquartered in Atlanta, GA, announced that recycled aluminum accounted for 61% of its total inputs for the fiscal year that ended March 31, 2023, during which time the company recycled approximately 2.3 million tons of aluminum, including 82 billion used beverage cans. The company's recycled aluminum

... milestones.
... as the technol-
... ing. The proprietary process advantages include the removal of impurities and the increased availability and quality of recycled aluminum. These innovations allow aluminum to be used for a wider variety of manufacturing applications. The IP has been licensed by Phinix to a domestic secondary aluminum producer.

In September 2023, Service Center Metals (SCM) cut the ribbon on a US\$127 million expansion, which added 320,000 sq ft (29,730 sq m) to its 100-acre campus in Prince George, VA. The expansion added 125 jobs and includes two new manufacturing areas—an aluminum recycling and billet casting plant and a new aluminum extrusion line. The new scrap recycling billet plant (named "Cash," after Johnny Cash) uses state-of-art recycling technology and positions SCM as one of the largest independent consumers of aluminum scrap and producer of secondary billet in North America. The company sources aluminum scrap, which could otherwise be discarded and wind up in landfills, from around the country to produce the billet. The billet is comprised of 95% recycled aluminum (the highest recycling rate in the industry, according to SCM) and is sold under the brand name Emerald Eco-Billet® to extruders serving the transportation, electrical, and machinery industries.



Service Center Metals opened a new aluminum recycling and billet casting plant, nicknamed "Cash." (Source: SCM.)

In October 2023, Spectro Alloys, one of the U.S.'s largest aluminum recyclers, announced plans to invest US\$71 million to install new aluminum recycling equipment at its facility in Rosemount, MN. This expansion will be crucial for the company as demand is rising