

voestalpine, Mercedes-Benz, and TSR launch showcase project in circular economy

With a unique flagship project, voestalpine, together with Mercedes-Benz and TSR Recycling, aims to demonstrate the technical feasibility of circular economy projects in the premium segment—from the recycling of post-consumer scrap (“old scrap”) into high-quality scrap to further processing in the steel-producing industry into high-quality steel grades and use in the automotive industry. In this way, the steel and technology Group is making an important contribution to sustainability and at the same time evaluating new opportunities for its increasing demand for scrap in connection with the transformation to green steel production.

In accordance with its greentec steel plan, voestalpine is replacing two blast furnaces, one in Linz and one in Donawitz, with an electric arc furnace (EAF) starting in 2027. Depending on the quality requirements, a mix of liquid pig iron, briquetted sponge iron (hot briquetted iron, HBI), and scrap will be used in the two electric arc furnaces. Scrap is therefore a valuable raw material and plays a key role in transitioning to green steel production. “voestalpine has been working successfully for decades on closing loops in production in order to conserve resources and secure the supply of raw materials. This unique cooperation with Mercedes-Benz and TSR Recycling shows us further opportunities and potential in the circular economy and is another important puzzle piece on the road to green steel production,” says Herbert Eibensteiner, CEO of voestalpine AG.

“Being able to produce high-quality steel grades using low-emission production processes is one of the major technological challenges in the transition to green steel production. We are conducting intensive research on various processes and are developing solutions together with our customers and suppliers so that we can continue to expand our leading position in the production of high-quality steel grades despite the change in technology,” says Hubert Zajicek, Member of the Management Board of voestalpine AG and Head of the Steel Division.

Turning old into new: using old scrap in the premium segment

Steel is a material that can be recycled again and again with almost no loss of quality. For this reason, the so-called high-quality pre-consumer scrap (“new scrap”) already plays an important role in steel production today. However, the increasing demand for recycled materials due to the European steel industry’s switch to green steel production cannot be fully covered by new scrap. It will therefore be necessary in future to increasingly utilize old scrap which, in comparison to new scrap (which is usually very pure), requires a great amount of processing and sorting before it can be reused to produce high-quality steel grades. In this specific joint flagship project of voestalpine, Mercedes-Benz, and TSR, the less pure post-consumer scrap is being reprocessed so that it can be used as high-quality steel of the highest grade as a side panel in the Mercedes A-Class sedan.

Steel Division

As a global manufacturer of high-quality steel products, the voestalpine Group's Steel Division assumes a driving role in shaping a clean and livable future. The Steel Division has set benchmarks in the current steel production route and is pursuing an ambitious step-by-step plan to achieve climate-neutral steel production with its greentec steel. As a first step, the Steel Division offers a CO₂-reduced greentec steel version of each flat steel product. It is also working on the implementation of climate-friendly production technologies based on green electricity and hydrogen. The Steel Division is the first point of contact for major automotive manufacturers and suppliers worldwide when it comes to high-quality steel strip. It is also a prominent partner to the European housing and machinery industries. The Division manufactures heavy plates and cast products for applications subject to the most difficult conditions in the energy industry and provides customized solutions for the expansion of renewable energy. In the business year 2022/23, the Steel Division generated revenue of EUR 6.7 billion, reported an operating result (EBITDA) of EUR 1.1 billion, and had around 10,600 employees worldwide.

The voestalpine Group

voestalpine is a globally leading steel and technology group with a unique combination of materials and processing expertise. voestalpine, which operates globally, has around 500 Group companies and locations in more than 50 countries on all five continents. It has been listed on the Vienna Stock Exchange since 1995. With its premium products and system solutions, voestalpine is a leading partner to the automotive and consumer goods industries, as well as to the aerospace and oil & natural gas industries. The company is also the global market leader in railway systems, tool steel, and special sections. voestalpine is committed to the global climate goals and has a clear plan for decarbonizing steel production with its greentec steel program. In the business year 2022/23, the Group generated revenue of EUR 18.2 billion, with an operating result (EBITDA) of EUR 2.5 billion; it has around 51,200 employees worldwide.

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