

PRESS RELEASE

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greentec steel: landmark melting at voestalpine site Donawitz

voestalpine has produced the world's first high-quality "green" wire rod from hydrogen-reduced pure iron and scrap at its site in Donawitz. The hydrogen-reduced pure iron was produced in the Hyfor pilot plant, while the landmark melting was carried out in the Group's own Technikum Metallurgie research facility, a unique small but complete steel plant. The CO₂-reduced steel was further processed in the wire rod mill to produce roller-bearing steel, which is characterized by its particular hardness and wear resistance. The production of high-quality, CO₂-reduced steel grades is one of the biggest technological challenges in the transition to green steel production.

greentec steel is an ambitious and feasible phased plan with which voestalpine can make a valuable contribution to achieving the climate goals. "We have already made a successful start on our path to green steel production and are advancing quickly with construction of the two arc furnaces powered by green electricity in Linz and Donawitz. Parallel to this, we are researching various breakthrough technologies with partners from industry and science. The first-ever melting of hydrogen-reduced pure iron and its further processing into high-quality wire rod is a historic milestone," says Herbert Eibensteiner, CEO of voestalpine AG. Hyfor is a joint research project of Primetals Technologies, voestalpine, Montanuniversität Leoben and K1-MET, with the goal of researching the use of hydrogen to reduce fine iron ore. In the future, the resulting hot sponge iron could be melted down in an electric arc furnace or used to produce hot briquetted iron (HBI).

"The Technikum Metallurgie provides us with an ideal test environment to quickly adapt our steels to the needs of our customers and to changed market requirements. I am very pleased that we are now also doing pioneering work in green steel production and would like to thank all the researchers and employees for their commitment," says Franz Kainersdorfer, Head of the Metal Engineering Division and Member of the Management Board of voestalpine AG. At the Technikum Metallurgie, voestalpine is conducting research into the production of new high-performance steels, for subsequent processing into special rails, high-quality wire rod, and heavy-duty oil field pipes. The product development involves a CO₂-reduced route: the input material is melted using electricity from renewable energy sources.

greentec steel—Austria's largest climate protection program

In a first step from 2027, voestalpine will reduce its CO₂ emissions by up to 30% by partially replacing its current coal-based blast furnace technology with electric arc furnace technology powered by green electricity. This represents almost 5% of Austria's entire annual CO₂ emissions, making greentec steel the largest climate protection program in Austria.

The Group is aiming for carbon-neutral steel production by 2050 and is researching intensively on several new processes, as well as investing in pilot projects that explore new pathways in steel production.

Metal Engineering Division

With its Railway Systems business unit, the Metal Engineering Division of the voestalpine Group is the global market leader for railway infrastructure systems and signaling technology. With its Industrial Systems business unit, the division is also the European market leader for quality wire and global provider of full welding solutions. And it supplies seamless tubes all over the world from the Kindberg location in Austria. Customers come from the railway infrastructure industry, the oil and gas industry, the mechanical engineering, automotive, and construction industries, as well as the renewable energy sector. As part of the greentec steel program, the Metal Engineering Division is already intensively working on and researching various innovative, climate-friendly technologies and production processes. In the business year 2022/23 the division generated about EUR 4.3 billion in revenue with its Railway Systems and Industrial Systems business units; over 40% of this revenue was generated outside Europe. The division recorded an operating profit (EBITDA) of EUR 586 million and employed around 14,000 people 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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