

HBI and greentec steel

Investor Relations
April 2022

voestalpine GROUP

SUCCESSFUL BUSINESS MODEL

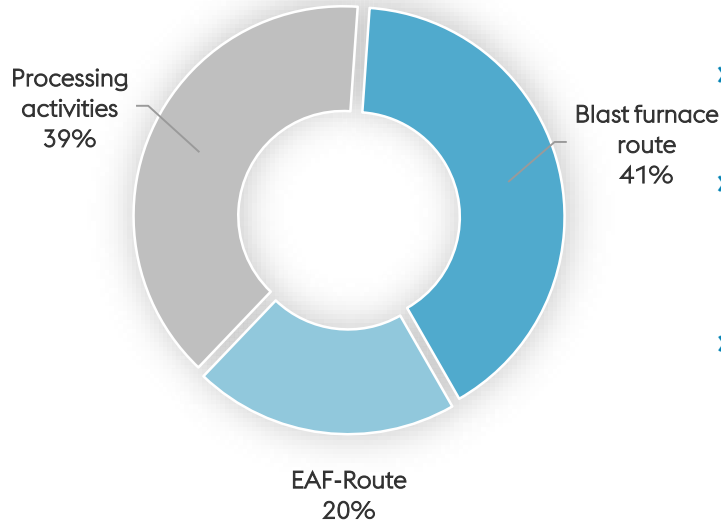


- » Globally leading steel and technology group with combined material and processing expertise
- » Premium product and system solutions
- » Leading partner to the automotive, consumer goods, aerospace, oil & gas industries
- » World market leader in railway systems, tool steel and special sections
- » Climate neutrality by 2050

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DECARBONISATION STRATEGY

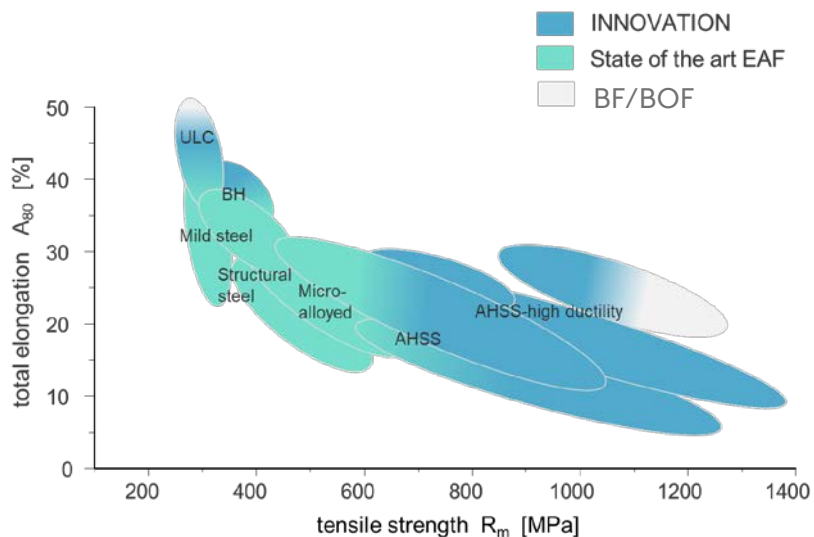
Revenues BY 2020/21



- » Carbon-neutrality is an essential part of our sustainability strategy, which in turn is an integrated part of our overall group strategy
- » Focus is on blast furnace-based steel production in Linz and Donawitz
- » Products made via the blast furnace route accounted for around 41% of revenues of the voestalpine Group in BY 2020/21
- » For these particularly CO₂-intensive production processes, voestalpine has developed the near term plan greentec steel and a long term strategy for CO₂-free steel production

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GREENTEC STEEL

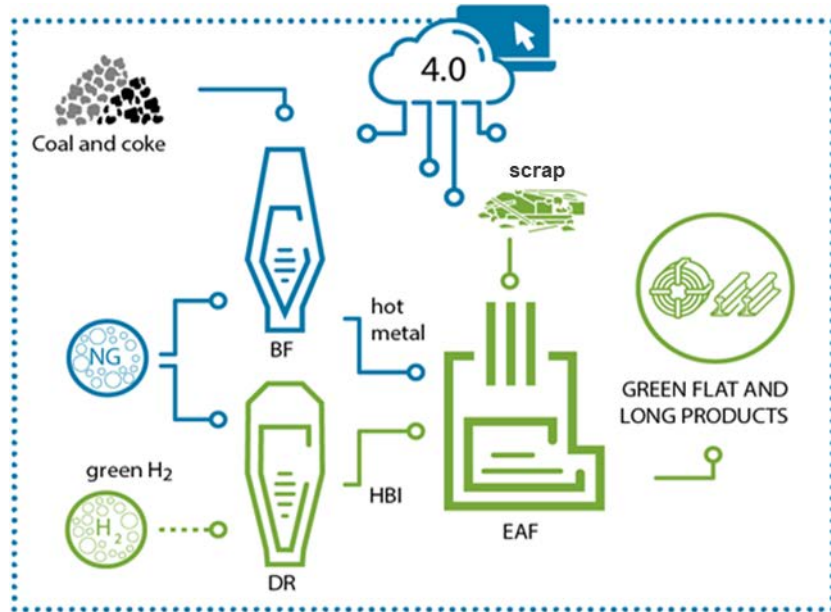


BF... Blast Furnace; BOF... Basic Oxygen Furnace

- » voestalpine's portfolio of steel-qualities (such as high strengths steel grades) cannot be produced via today's conventional EAF-production route
- » greentec steel is an innovative concept, that enables the production of the most demanding steel grades via Electric Arc Furnaces (EAF)
- » Core innovation is a flexible mix of input materials
 - » High quality scrap (circular economy + upcycling)
 - » HBI (Texas)
 - » Hot metal (blast furnace)

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GREENTEC STEEL

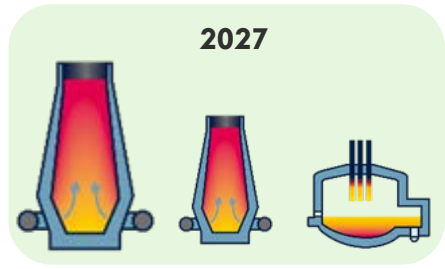
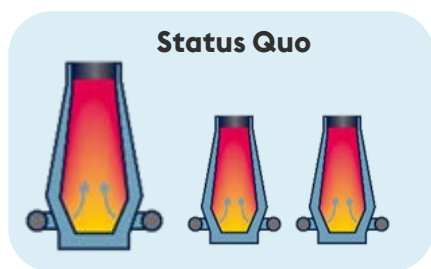


- » greentec steel stands for an integrated steel plant, combining blast furnace and electric arc furnace operations (Hybrid steel plant)
- » The EAF-production route uses mainly scrap as input material as well as HBI and hot metal for defined steel grades
- » Scrap is an important raw material in a circular economy
- » voestalpine has access to premium return scrap from long term customers in the automotive and railway business
- » Upcycling concepts in our existing scrap-business offers access to additional scrap volumes

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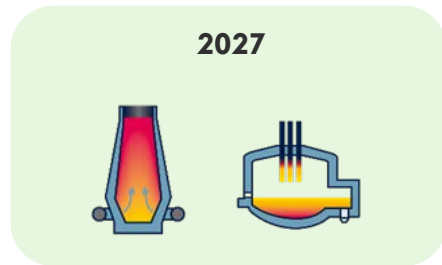
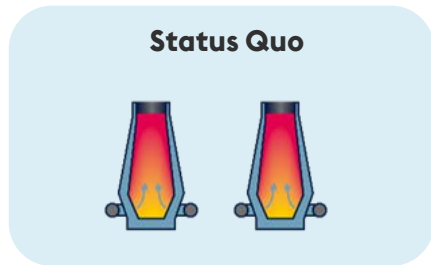
GREENTEC STEEL – FIRST STEP

Steel Division / Linz, Austria



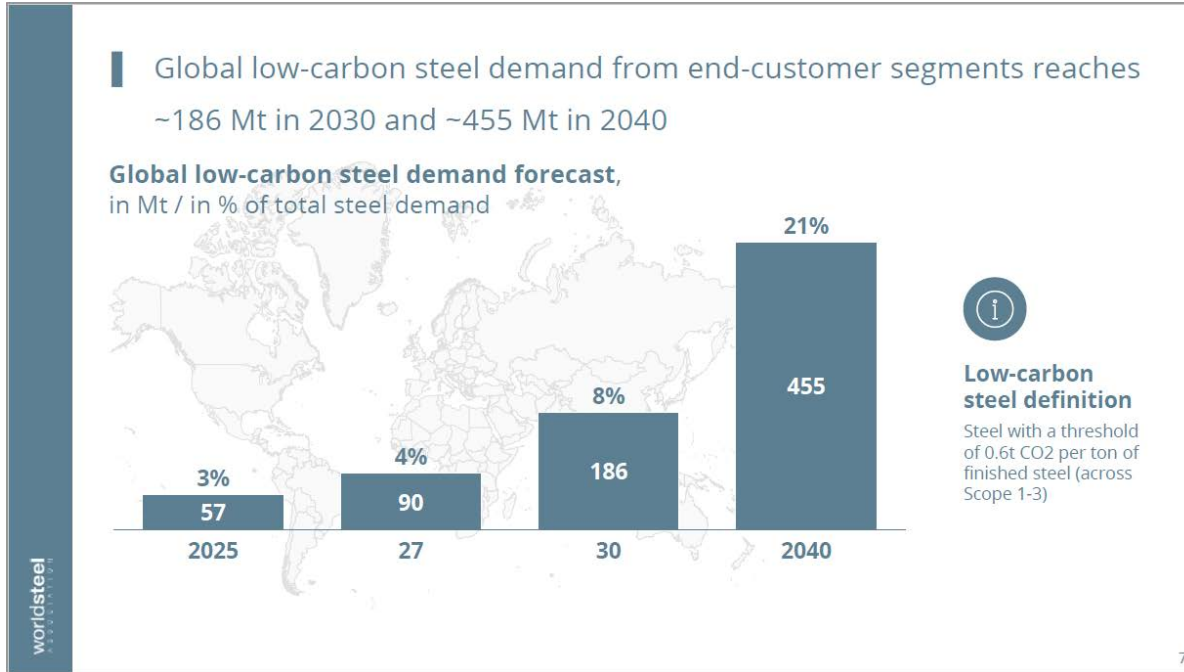
- » Production volume of greentec steel in 2027
 - » 2 to 2.5 million tons per annum
- » CAPEX (total gross number)
 - » 1 billion EUR, spent from BY 2022/23 until BY 2027/28
- » Timeline
 - » 2022 until 24 : Clearing construction site and adaptation of intralogistics
 - » 2024 until 27: Detail engineering, construction and installation of EAFs
 - » 2027: Start of production EAFs

Metal Engineering Division / Donawitz, Austria



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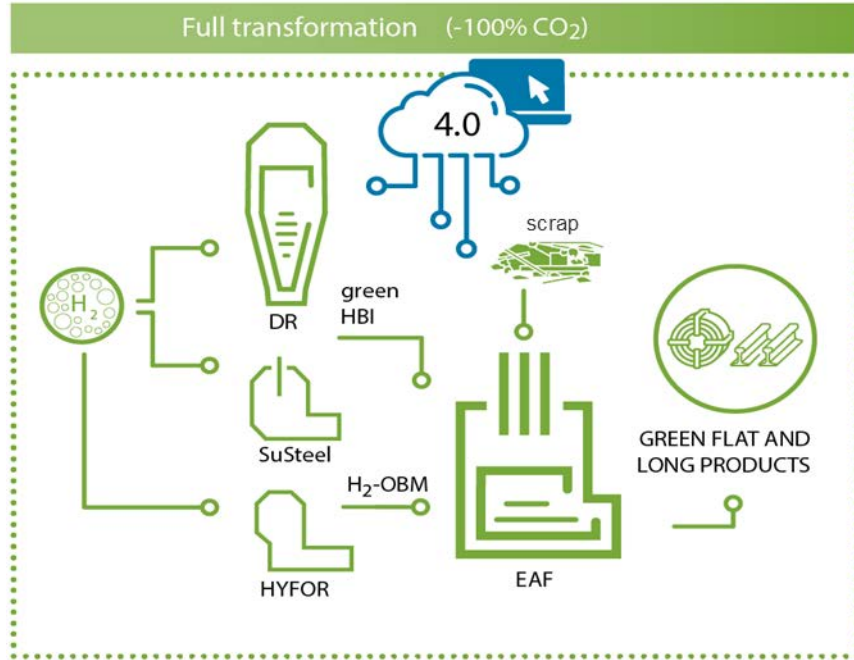
MARKET DEVELOPMENT FOR LOW CARBON STEEL



- » Worldsteel Association forecast about the market development of low carbon steel (October 2021)
- » greentec steel supplies the medium-term expected market volume, which is strategically interesting for voestalpine

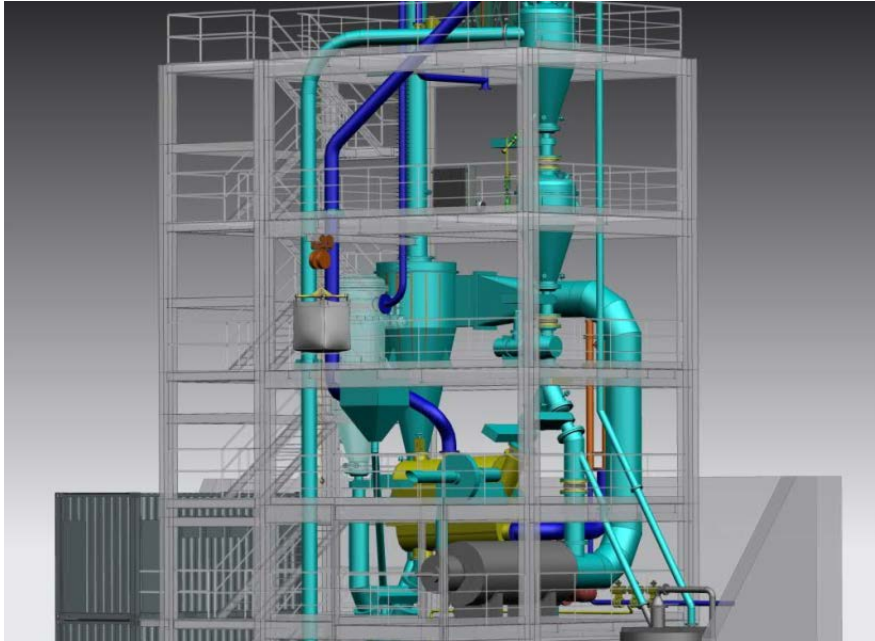
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CO₂-FREE STEEL PRODUCTION IN THE LONG RUN



- » CO₂-reduction is a major focus of R&D-activities globally
- » It is not yet decided, which technology for carbon free steel production is the best solution in ecologic, economic and technical terms
- » From today's point of view, various technical options are available, such as H₂-DRI, Hyfor-EAF, Susteel, Integrated energy concepts,...
- » voestalpine's step by step approach secures the implementation of the best available technology in the future

HYFOR: HYDROGEN-BASED DIRECT REDUCTION OF ULTRAFINE IRON ORE



- » Using **hydrogen** to reduce iron ore
- » FFG & COMET-funded research project
- » pilot facility at the Donawitz site
- » Objective: Base data for later conversion to an **industrial plant**
- » **Project partners:** Primetals Technologies, voestalpine Stahl Donawitz GmbH, Montanuniversität Leoben, K1-MET

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ONE STEP AHEAD.

SUSTEEL (“SUSTAINABLE STEELMAKING”): HYDROGEN PLASMA SMELTING REDUCTION



- » Reduction of ores using novel hydrogen plasma technology
- » CO₂ emissions could be completely avoided
- » Testing facility at the site in Donawitz
- » Basic research project
- » Project partners: voestalpine Stahl GmbH, voestalpine Stahl Donawitz GmbH, Montanuniversität Leoben, K1-MET

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ONE STEP AHEAD.

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RÉSUMÉ

- » voestalpine's strategy unchanged focuses on the expansion of its downstream-business
- » In-house steel production is a vital part of the group and in many cases the basement for USPs in the downstream activities
- » voestalpine has a clear defined step-by-step plan for decarbonizing its blast furnace based steel production
- » HBI plays a role in this plan, but only a limited volume of around 20-25% of the Texas plant's installed production capacity is required for the next decade
- » The necessary volumes of HBI for the first step of greenec steel is secured via a long term supply agreement
- » Future options of the CO₂-free steel production are not affected by this transaction
- » Bringing the HBI-plant in Texas into a cooperation with a partner, using the material in its own steel production, takes the merchant HBI business out of voestalpine's business