

## Opening of the HBI plant in Texas marks start of a new era at voestalpine

With the completion of the direct reduction plant in Corpus Christi, Texas, the voestalpine Group has set a further milestone in implementing its international growth strategy: today, after around two-and-a-half years of construction, the world's largest and most state-of-the-art plant of its type was officially opened. At EUR 550 million (USD 740 million<sup>1</sup>), the plant is the largest investment ever made in the US by an Austrian company. Each year it will produce two million tonnes of high-quality HBI (Hot Briquetted Iron, or sponge iron), a sophisticated pre-material used in steel production. The plant is already regarded as an environmental benchmark and is an important first step on voestalpine's path of reducing CO<sub>2</sub> emissions in steel production.

voestalpine is continuing to systematically drive forward its expansion in the NAFTA region. In accordance with Group Strategy 2020, it is intended to increase revenue generated in this region from its current level of EUR 1.2 billion (~USD 1.4 billion) to EUR 3 billion (~USD 3.4 billion) by the business year 2020/21. "Today's opening of the direct reduction plant in Corpus Christi is an important step for—and into—the future of our company. The new plant will not only secure the Austrian voestalpine sites by supplying premium pre-materials for steel production, it will also contribute significantly to further strengthening our position in the NAFTA region. Furthermore, over the long term it offers us new technological options for decarbonizing steel production," says Wolfgang Eder, Chairman of the Management Board of voestalpine AG. From the business year 2017/18 onwards, voestalpine Texas LLC, a company in the Steel Division of the voestalpine Group, will use natural gas to produce two million tonnes of premium HBI (Hot Briquetted Iron—sponge iron) each year, 40 percent of which (800,000 tonnes) will cover internal requirements. The remaining 60 percent of the production volume goes to external partners, with the corresponding offtake agreements already having ensured full capacity utilization for the next four years.

### Environmental benchmark and bridge to future technologies

In addition to exceeding all current American and European standards regarding environment and technology, the direct reduction plant in Texas opens up new environmental and technological options for voestalpine. In contrast to the pure coke- and coal-based blast furnace route, the plant in Corpus Christi uses only comparatively environmentally friendly natural gas as the reducing agent. Across the Group, using the HBI produced in Texas in voestalpine blast furnaces and steel plants will lead to a reduction in CO<sub>2</sub> emissions of around 5 percent. At the same time, the new plant opens up further technological possibilities for the future. "We are systematically working to gradually decarbonize steel production, first by the partial substitution of coal and coke with gas-based bridging technologies, and then by the long-term, gradual use of CO<sub>2</sub>-neutral hydrogen. With adequate availability, in future 'green' hydrogen could also replace natural gas as a reducing gas in Texas, making possible the emission-free production of HBI," says Eder. In order to gain the necessary experience, a pilot facility worth about EUR 20 million (~USD 23 million) will soon be installed at the voestalpine site in Linz, Austria; it will use electrolysis to produce hydrogen. End-to-

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<sup>1</sup> Exchange rate at the beginning of the project in 2014

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end hydrogen-based steel production is still a thing of the future. From today's viewpoint it could become a reality in around 20 years at the earliest and is dependent on energy being available at reasonable costs.

### **Largest and most state-of-the-art plant of its kind**

The new plant, the largest and most modern plant of its type in the world, covers an area of two square kilometers. The plant's own deep-sea port can currently handle five million tonnes of material each year (3 million tonnes of iron ore pellets and 2 million tonnes of HBI). The 137-meter-high reduction tower forms the heart of the plant and is the highest building in southern Texas. voestalpine Texas LLC is creating 190 new jobs at the plant, and will generate value in the region to the sum of around USD 600 million over the coming decade.

### **Locational advantages in the USA**

A politically stable and predictable environment, professional cooperation with the authorities, cost-efficient energy supply and logistical advantages were the key reasons behind the decision to locate the plant in Corpus Christi. "As an investor, during each phase of the project we were able to notice the intense efforts being made to reindustrialize in the USA. The USA has recognized that a sustainable industrial manufacturing base is essential to a country's stable economic development over the long term," says Wolfgang Eder. Compared to the USA, Austria and Europe will doubtless remain an expensive location in the long run, particularly in terms of energy supply: average industrial gas prices in Austria over the longer-term are around three times as high, and electricity prices around twice as high as those in the USA. The annual costs of operating an identical direct reduction plant in Austria would be around EUR 200 million (~USD 225 million) higher than in Texas, purely due to the price differences for gas, electricity, and logistics. "In Europe, however, increasing political and social detachment from anything to do with industry is at least equally problematic," Eder concludes.

### **The voestalpine Group**

In its business segments, voestalpine is a globally leading technology and capital goods group with a unique combination of material 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 top-quality products and system solutions using steel and other metals, it is one of the leading partners to the automotive and consumer goods industries in Europe and to the oil and gas industries worldwide. The voestalpine Group is also the world market leader in turnout technology, special rails, tool steel, and special sections. In the business year 2015/16, the Group generated revenue of EUR 11.1 billion (~USD 12.6 billion), with an operating result (EBITDA) of EUR 1.6 billion (~USD 1.8 billion); it has around 48,500 employees worldwide, who are collectively a major shareholder in the company with a stake of 14.5 percent.

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ONE STEP AHEAD.

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