

## Press Release

May 24, 2023

### **SALCOS® milestone reached - Salzgitter AG awards contract for direct reduction plant**

- Salzgitter AG orders "Energiron ZR® Direct Reduction" technology for low-CO<sub>2</sub> steel production
- In 2026, this plant will enable the use of hydrogen to replace coal in steel production
- Contractor is a consortium of Tenova, Danieli and DSD Steel Group

**Salzgitter.** Salzgitter AG has contracted a consortium comprising Tenova, Danieli and DSD Steel Group to build a direct reduction plant (DRP) on the site of Salzgitter Flachstahl GmbH. The unit is the largest sub-plant in the first stage of the SALCOS® - Salzgitter Low CO<sub>2</sub> Steelmaking transformation program and has a production capacity of more than 2 million tons of direct reduced iron (DRI) per year. The award of the contract marks a further, decisive milestone on the way to low CO<sub>2</sub> steelmaking at the Salzgitter location and for the Salzgitter group.

The aim of SALCOS® is to achieve near to CO<sub>2</sub>-free steel production, which will be implemented in three stages. The first stage will go into operation as early as the end of 2025 and consists of a direct reduction plant, an electric arc furnace and a 100 MW electrolysis plant for hydrogen production. By the end of 2033, the transformation of the steel production at the Salzgitter site shall be completed, far ahead of regulatory requirements.

The SALCOS® program is already in the midst of implementation: The financing of stage 1 of SALCOS® has been secured through subsidies from the Federal Republic of Germany and the State of Lower Saxony totalling around € 1 billion, as well as through substantial own funds of Salzgitter AG amounting to over € 1 billion. Prior to this, an electric arc furnace had already been ordered as another important production plant for low-CO<sub>2</sub> steel production. The DRP, the largest sub-plant in the SALCOS® program, has now been ordered.

The direct reduction plant is based on innovative "Energiron ZR® Direct Reduction" technology, jointly developed by Tenova and Danieli, which can be operated flexibly with hydrogen and natural gas in any mixing ratio. Salzgitter AG is the first European steel producer to have taken the investment decision, secured the financing and placed major contracts for its transformation, thus living up to its claim of being a pioneer of sustainable industry.

The plant will already provide half of the total DRI capacity planned until 2033. It will be connected to the neighbouring electric arc furnace via the well-proven Hytemp® pneumatic transport system, so that the reduced iron pellets can be fed into the furnace in a hot state even if they come from a long distance. This ensures excellent energy efficiency of the overall process.

Gunnar Groebler, Salzgitter AG CEO: "We are underpinning our motto 'A new thinking for a new industry' today with a clear signal to the market. As early as 2026, we will be in a position to produce significant quantities of green steel and make it available to our customers. I am pleased and also a little proud that we, as a pioneer with fully up-front financing for the first stage of our transformation program, have today awarded this contract to our strong partners. We have thus taken a decisive step forward on the way to a scheduled start of production of the SALCOS® route in 2026."

Roberto Pancaldi, Tenova CEO, stated: "The award of this contract today is the result of a years-long collaboration with Salzgitter on the development of the SALCOS® project, and we could not be more honored to be the consortium leader. From the beginning, Salzgitter identified Energiron ZR® as the only technology developed and extensively tested to use any proportion of reducing gas mixture without plant modifications, thus enabling a seamless transition from natural gas to hydrogen. Furthermore, the use of the Hytemp® system will strongly reduce the energy consumption at the EAF, so greatly contributing to a further reduction of CO<sub>2</sub> emissions".

Giacomo Mareschi, Danieli Group CEO, also commented: "Danieli is proud to be beside Salzgitter Flachstahl in this outstanding project that will be a lighthouse for the steel industry decarbonation. The use of the Energiron® technology, that we jointly developed with Tenova, is a definitive step towards a Green Steel era, with the possibility to use different amounts of hydrogen, up to 100%, as an alternative reducing agent in order to lower more and more the carbon footprint without changing the standard and mature plant configuration. We are fully committed as a technological partner of Salzgitter to make this a great success."

#### **Salzgitter AG contacts:**

Thorsten Möllmann  
Head of Communication & Brand  
Tel.: + 49 (0)5341 21 2300  
email: [moellmann.t@salzgitter-ag.de](mailto:moellmann.t@salzgitter-ag.de)  
[www.salzgitter-ag.com](http://www.salzgitter-ag.com)

Olaf Reinecke  
Press Spokesperson  
Tel.: + 49 (0)5341 21 5350  
email: [reinecke.o@salzgitter-ag.de](mailto:reinecke.o@salzgitter-ag.de)  
[www.salzgitter-ag.com](http://www.salzgitter-ag.com)

Salzgitter AG ranks as one of Germany's leading steel and technology groups.

As a pioneer in the circular economy, we focus on sustainable innovation and on transforming products and processes in the business units of Steel Production, Steel Processing, Trading and Technology.

With our "Salzgitter AG 2030" strategy and anchored in the principle of "Pioneering for Circular Solutions", we are setting new benchmarks in the industry. Our aspirations are realized through strong initiatives and programs such as SALCOS® - Salzgitter Low CO2 Steelmaking. Through partnerships and in networks, we are actively driving the process of development towards a circular economy.

With around 25,000 employees worldwide at 150 national and international subsidiaries and associate companies, we live up to our global aims for growth, profitability and our pioneering position. In the financial year 2022, we generated external sales of around € 12 billion, with a crude steel capacity of 7 million.

More information is available at: [People, Steel and Technology | Salzgitter AG \(salzgitter-ag.com\)](https://www.salzgitter-ag.com)