

BUILDING THE FUTURE OF

GREEN STEEL

Case Update: Salzgitter Flachstahl

The steel industry is entering a new era. As manufacturers work toward ambitious decarbonization targets, the SALCOS® transformation program is demonstrating how green steel can become an industrial reality. Developed by Salzgitter Flachstahl in Germany, the program aims to reduce CO_2 emissions from steel production by up to 95 % by replacing the conventional blast furnace route with hydrogen-based direct reduction and electric arc furnace technology powered by renewable electricity.

ONE OF EUROPE'S LARGEST GREEN HYDROGEN PLANTS

For the SALCOS (Salzgitter Low CO_2 Steelmaking) program, ANDRITZ is delivering a 100 MW green hydrogen plant – one of the largest of its kind in Europe – on an EPC basis. The scope includes the complete hydrogen production facility based on pressurized alkaline electrolysis, together with hydrogen purification and compression systems, utilities, offsites and the balance of plant. Rounding out the scope, ANDRITZ is also supplying 34 pumps, including 23 magnet-coupled pumps, 6 cooling water and 5 process pumps – engineered for high efficiency and a compact footprint. A key project milestone is approaching: core equipment manufactured at the ANDRITZ Electrolyzer Gigafactory in Erfurt, including the electrolyzers and phase separation units, is currently being installed on site, bringing the project another step closer to commissioning. Once operational in 2027, the plant will produce approximately 9,000 tonnes of green hydrogen annually to support the new low-carbon steelmaking route.

FROM VISION TO INDUSTRIAL REALITY

Projects like SALCOS® demonstrate that industrial decarbonization is no longer a future vision. The technologies are available today – the challenge is bringing them together into reliable, integrated plants that enable customers to transition confidently toward low-carbon production.

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Hydrogen Milestone
The core equipment of the SALCOS® hydrogen plant is currently being installed. Once operational, it will support one of Europe's most ambitious green steel initiatives.