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Flexible direct reduction of iron ore with Natural Gas and Hydrogen - Potential and perspectives of the new SALCOS demonstration plant µDRAL in Salzgitter

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Salzgitter AG is consistently pushing ahead with the SALCOS (Salzgitter Low CO2 Steelmaking) project on its way to climate friendly primary steel production. In this regard Salzgitter Flachstahl GmbH is gradually converting its crude steel capacity from the conventional blast furnace-converter route to a nearly CO2-free direct reduction-electric arc furnace route.

With the new SALCOS demonstration plant μ DRAL, supplied by plant and technology partner Tenova, the flexible direct reduction of iron ore with natural gas and hydrogen is now being tested in order to gain important preliminary experiences for the industrial SALCOS green steel production. The focus is on energy-efficient and CO2-reducing process development, the testing of suitable iron carriers and sponge iron products as well as other aspects of operational management and circularity.

The paper reports on the potential, first operation experiences and further perspectives of the new μ DRAL direct reduction pilot plant.

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