

PRESS RELEASE

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ENERGIRON® Largest Hydrogen-Based DRI Facility in China

A hydrogen-based 1,000,000 ton/year ENERGIRON® direct reduction (DR) plant will reduce carbon dioxide emission for a sustainable steel industry.

Castellanza, March 03, 2022 - Sinosteel Engineering & Technology Co., Ltd., located in Beijing, China, has recently contracted Tenova, a leading developer and provider of sustainable solutions for the green transition of the metals industry, for the design and supply of a **hydrogen-based 1,000,000 tonnes/year ENERGIRON® direct reduction (DR) plant**.

The plant will be installed at **Baosteel Zhanjiang Iron & Steel Co., Ltd**, located in the Zhanjiang Economic and Technological Zone, Guangdong Province, China. The plant capacity of 1,000,000 ton/year will make it the **largest hydrogen-based DRI facility in China**.

As the effort to **lower carbon emissions** worldwide continues, the replacement of traditional blast furnace steelmaking technologies - often characterized by the intensive use of coal – is currently the new trend for a sustainable steel industry, and the use of gas-based ironmaking technologies is a valuable alternative. The ENERGIRON® technology, jointly developed by Tenova and Danieli, is the **most flexible DR technology for virgin metallic unit production** in terms of makeup gases utilization and is already designed to maximize the reduction of CO₂ emissions.

The new ENERGIRON® plant will use mainly **hydrogen as reducing gas** with the possibility to mix it with Natural Gas (NG) and Coke Oven Gas (COG) .The plant has in fact the **flexibility** to use different reducing gases in any combination or proportion, using the same ENERGIRON® ZR scheme.

The plant will also be designed to have the capability to **capture and sell CO₂** on the commercial market; this will further reduce the overall plant CO₂ emissions and provide an additional revenue stream for the plant operations.

The plant will produce cold DRI pellets through an external cooler for potential future hot DRI production and transport (using the proven HYTEMP system) to a new EAF mill to be located next to the ENERGIRON® plant.

“This is the first direct reduction iron production line integrating hydrogen, natural gas and coke oven gas for industrial production. Thanks to our technology, Baowu group can proceed towards the path of reducing carbon emission and reaching carbon neutrality in 2050 and Tenova is very proud to be part of this journey.” said **Stefano Maggiolino**, President and CEO at Tenova HYL, the company’s competence center in direct reduction.

About Tenova

Tenova, a Techint Group company, is a worldwide partner for sustainable, innovative and reliable solutions in the metals and – through the well-known TAKRAF and DELKOR brands – in the mining industries. Tenova leverages a workforce of over 2,000 forward-thinking professionals located in 19 countries across 5 continents, who design technologies and develop services that help companies reduce costs, save energy, limit environmental impact and improve working conditions.

For more information, visit www.tenova.com