

PRESS RELEASE

Contacts:

Sara Secomandi, +39 0331 444 111, communications@tenova.com

Vulcan Green Steel orders DRI plant from Tenova and Danieli

A new 2.5-Mtpy ENERGIRON® zero-reformer plant will be installed in Oman.

Castellanza, December 07, 2023 - Vulcan Green Steel, a new established company of Jindal Steel Group, relied on ENERGIRON® for its new hydrogen-ready direct reduction plant in Duqm, in the Al Wusta Governorate in the Sultanate of Oman. ENERGIRON® is the DRI technology jointly developed by Tenova and Danieli that will feed a new electric steelmaking complex conceived as a hub for green steel production in the country.

ENERGIRON® is H2-ready and allows to use **natural gas as reducing agent** with the possibility to **mix it with up to 100% hydrogen**, according to hydrogen availability. The new ENERGIRON® zero-reformer DR plant will produce 2.5-Mtpy of direct reduction ores and will start operation with natural gas feed, increasing the percentage of hydrogen in blend as hydrogen becomes available on site.

The single-module will hot charge an Electric Arc Furnace (EAF) with a temperature over 600°C, allowing significant energy savings for the steelmaking process. The plant will also be able to produce **Hot Briquetted Iron (HBI)** for storage or export purposes.

The ENERGIRON® technology has the capability to **capture CO**₂ from the process and utilize it for other applications, which will further reduce the overall plant emissions and, together with the EAF, bring the green steel hub closer to achieving carbon-neutrality. Additionally, it will also provide an additional revenue stream for the plant operations.

The completion of the DRI Plant in Dugm site is scheduled for 2026.

Mr. D.K. Saraogi, Projects Director, Vulcan Green Steel, stated: "Vulcan Green Steel led by Jindal Steel Group represents our flagship initiative to lead the green transition for the global steel industry. Each of us in the steel industry has to do our part to decarbonize: our investment in Duqm is a visionary project set to become the largest green hydrogen ready steel plant globally."

"As a sustainable technology supplier for the steel sector, Tenova is privileged to be part of this green hydrogen-ready steel plant by suppling our flexible and innovative ENERGIRON® DRI technology which nowadays has become a key pillar for the decarbonization targets of our industry as we aim for a cleaner world', said **Jorge Martínez**, Tenova HYL Commercial Director. "Our collaboration with Vulcan Green Steel embodies the strong commitment of ENERGIRON® for greener steel production."

About Tenova

Tenova, a Techint Group company, is a worldwide partner for sustainable, innovative and reliable solutions in the metals and – also through the well-known TAKRAF and DELKOR brands – in the mining industries. Tenova leverages a workforce of over 2,300 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.

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