Press release

Steel Europe

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thyssenkrupp Steel is intensively pushing ahead with developing the hydrogen economy: Call for tenders for supplying hydrogen to the first direct reduction plant at the Duisburg location

- thyssenkrupp Steel has issued a call for tenders to supply hydrogen to the first direct reduction plant in the tkH_2Steel decarbonization project
- Hydrogen use is planned to start in 2028, with 100% hydrogen operation to follow in 2029
- Tender process consists of three phases
- Requirement for 143,000 metric tons of hydrogen is to be covered

Duisburg, February 2024. thyssenkrupp Steel has reached another milestone on the path to sustainable steel production. The company has officially launched its call for tenders to supply hydrogen to its first direct reduction plant. In conjunction with two innovative melters, this is the centerpiece of the first transformation step in thyssenkrupp's decarbonization process as part of the tkH_2Steel project. The hydrogen requirement is being put out to tender in a transparent and broad-based procedure, with the aim of operating the direct reduction plant fully on hydrogen by as early as 2029. The call for tenders is being organized in close coordination with the German Federal Ministry for Economic Affairs and Climate Protection (BMWK), which, together with the state of North Rhine-Westphalia, is funding the innovative plant project and the associated hydrogen ramp-up to the tune of around two billion euros. This will make it possible to cease using natural gas at an early stage, while at the same time firing the starting pistol for the hydrogen ramp-up in Germany.

tkH_2Steel decarbonization project: Key function for the build-up of a hydrogen economy

The direct reduction plant, in conjunction with the two downstream melters, will be integrated into Europe's biggest iron and steel plant as a technologically new plant combination. It will be possible to retain all subsequent process steps from the steel mill onward. The 100% hydrogen-capable direct reduction plant has an annual production capacity of 2.5 million metric tons of directly reduced iron. The first use of hydrogen in the plant combination is planned for 2028, with the ramp-up to full hydrogen operation to be completed in 2029. The use of around 143,000 metric tons of hydrogen (equivalent to 5.6 terawatt hours) will enable up to 3.5 million metric tons of CO_2 to be saved per year. As the largest German hydrogen

consumer, thyssenkrupp Steel will thus function as the initiator of and driving force behind a hydrogen economy, paving the way for the decarbonization of the entire steel value chain.

Clear signal to customers, the market and policymakers

The call for tenders for the hydrogen volumes was already published in various German federal government and EU portals in mid-December. The tendering process will be divided into three phases, and is aimed at all potential hydrogen suppliers which have production projects for renewable green or CO_2-reduced blue hydrogen with the ability to deliver to Duisburg. All interested suppliers will receive an information pack on the contract award process at the start of the first tendering phase, which begins in February 2024 and will culminate in a timely conclusion of binding supply contracts.

"We are delighted to be taking another significant step forward on our transformation path with this call for tenders," explains Dr Arnd Köfler, Chief Technology Officer at thyssenkrupp Steel. "With the call for tenders, we are sending a clear signal for scaling up the European hydrogen economy and the necessary infrastructure. This step will give our customers greater planning security when purchasing climate-friendly steel produced with hydrogen, and consequently enable them to significantly reduce the carbon footprint of their own production. In doing this, we are making an important contribution toward achieving the climate targets in Germany and Europe."

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