

thyssenkrupp is accelerating the green transformation: Decision taken on the construction of Germany's largest direct reduction plant for low-CO₂ steel

- Construction of the first direct reduction plant will involve investments of more than two billion euros.
- The Supervisory Board supports the decision of the Executive Board to release the corresponding capital resources to start the transformation.
- thyssenkrupp reaffirms its leading role in decarbonization of the steel industry.
- The plant with a capacity of 2.5 million metric tons will avoid the emission of 3.5 million metric tons of CO₂.
- Low-CO₂ premium steel: Leading competitive position in emerging green steel markets targeted.
- Contract award is planned for fall 2022 – start of production in 2026.

Essen/Duisburg, 8 September 2022. thyssenkrupp has laid the foundation for investments of more than two billion euros to enter the green transformation. The Executive Board of thyssenkrupp AG today established the prerequisite for this by releasing the corresponding capital resources for the construction of the first direct reduction plant at the Duisburg site. The Supervisory Board of thyssenkrupp AG supports this decision. The major project remains subject to public funding.

Martina Merz, CEO of thyssenkrupp AG: "The release of this enormous investment comes in the midst of the company's transformation, in what is also for all concerned an extremely challenging environment. We are thus underlining our claim to make a significant and, above all, rapid contribution to the green transformation – also where steel is concerned. This is a further step for our team at Steel Europe, for our partners and for the Ruhr region. In this region, we have everything that is needed for a successful green transformation. That is why the Ruhr region is playing a leading role in the energy turnaround. We are firmly convinced of this, and this is also borne out by this investment, which heralds a new era for steel production in the Ruhr region."

Bernhard Osburg, Chairman of the Executive Board of thyssenkrupp Steel Europe AG: "With today's decisions, we are continuing to set the pace on our path to climate-friendly steel production. The first direct reduction plant with downstream melters will supply our customers with over two million metric tons of low-CO₂ premium steel per year in the foreseeable future, significantly more than previously planned. We are thus reaffirming our goal of playing a leading role in the competition for the green steel markets of the future and supporting our customers in achieving their decarbonization targets. In addition, we are fulfilling our social responsibility and will already be reducing the CO₂ emissions of our production by just under 20 percent in the first step. That is already five percent of the Ruhr region's greenhouse gas emissions. Our tkH2Steel® transformation project is the key to this."

tkH2Steel: efficient transformation at the Duisburg site

With a capacity of 2.5 million metric tons of direct reduced iron, the first plant will be larger than initially planned. In this way, thyssenkrupp is accelerating the start of low-CO₂ steel production and making an important contribution to achieving national and European climate targets. At the same time, the increasing demand for climate-friendly steel is being taken into account and the ramp-up of the hydrogen economy is being accelerated.

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As part of its tkH2Steel® transformation project, thyssenkrupp Steel has developed an innovative and technologically leading concept for decarbonizing steel production. The coal-based blast furnaces will be replaced by hydrogen-powered direct reduction plants. The iron produced there, which will have been directly reduced with hydrogen, will be liquefied for the first time in downstream, specially developed melting units to produce high-quality hot iron. All subsequent production steps can take place in the existing plant structure, including the steel mills, thus enabling an efficient transformation. In the new plant concept, the entire premium product portfolio can thus be produced with low CO₂ emissions without compromising on quality. tkH2Steel® thus represents an efficient and exemplary path towards climate-friendly steel production.

Tekin Nasikkol, Chairman of the General Works Council at thyssenkrupp Steel adds:

"Tomorrow's steel must be climate-neutral. The Supervisory Board and Executive Board of thyssenkrupp AG are sending a clear signal here with their support for our transformation path. Above all, this is also a clear commitment to safeguarding jobs and the future of our site. And not only that: The transformation also stands for a qualification campaign, because new, innovative production concepts require new skills. We therefore want to prepare our employees specifically for the climate-neutral steel production of the future."

Next steps in planning

With the increase in plant capacity, thyssenkrupp Steel has also significantly raised its climate targets. Chief Technology Officer Arnd Köfler: "By as soon as 2030, we are planning for around five million metric tons of low-CO₂ steel, which will deliver CO₂ savings of well over 30 percent. The now imminent construction of one of the largest hydrogen-powered direct reduction plants planned to date will also generate innovation and employment in the Ruhr region and beyond. The intelligent combination with newly developed melting units can serve as a model for many other decarbonization projects in the steel industry worldwide. In order to continue our transformation without delay, we are planning to award the contract in the fall and we are already making appropriate preparations."

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