

PRESS RELEASE

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Tenova successfully modernizes Walking Beam Furnace for high-quality electrical steel strip production at thyssenkrupp Steel in Duisburg, Germany

The upgrade has led to an increase in the production of high-quality materials while simultaneously reducing specific consumption.

Castellanza, March 26, 2025 – Tenova, a leading developer and provider of sustainable solutions for the green transition of the metals industry, has recently received the Final Acceptance Certificate for the modernization of a **Walking Beam Furnace (WBF)** at **thyssenkrupp Steel**, a global market leader for high-grade flat steel, at their Bruckhausen Plant, Duisburg, **Germany**.

The overhauled WBF has been installed to the highest technical standard at the hot strip mill (WBW) 1 by **Tenova Italimpianti**, a well-known Tenova brand and leader in technologies for reheating, heat treatment, strip processing, acid regeneration plants, and cold rolling mills. It brings three key benefits: **maximum production capability, increased quality of the electrical steel strip**, a crucial material for the energy transition, and **reduced specific consumption**.

The modernized furnace sets new **energy utilization and efficiency** benchmarks thanks to an improved refractory lining design and an optimized fixed and walking beam system. These lead to a more uniform temperature distribution along the entire slab length, reducing temperature loss in the slab's center and minimizing contact points (rails) between the slabs and the fixed and walking beam system. This also prevents surface defects and improves the **quality** of the product.

The upgrade of the unit included new state-of-the-art **UltraLowNOx burners** for coke oven gas fuel application. Their customized design, enhanced with a modern control system, ensures optimal heating distribution in the furnace with significantly reduced **Nitrogen Oxide (NOx) emissions**.

Additionally, a new automatic descaling concept was incorporated, significantly reducing the cleaning intervals and optimizing heat treatment processes. The safety systems were upgraded to meet the latest standards for industrial furnaces.

"The modernization of this walking beam furnace supports our goals for efficiency and sustainability. Tenova has played a key role in this process," said **Viktor Schlecht**, Head of Hot Strip Mill 1, at thyssenkrupp Steel in Duisburg Bruckhausen. *"We had already successfully collaborated on a new walking beam furnace at our Beeckerwerth Hot Strip Mill 2 in Duisburg, where Tenova's contribution was crucial in helping us potentially reduce CO2 emissions by more than 20% through the use of hydrogen."*

"We are proud to have partnered with thyssenkrupp Steel for this project, which supports their forward-looking strategy," said **Alessandro Sicher**, Project Engineer Coordinator for Reheating Technologies at Tenova. *"Our equipment ensures the maximum production of high-quality electrical steel strips while enhancing the sustainability of the heat treatment process."*

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 2,500 forward-thinking professionals located in 18 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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