

PRESS RELEASE

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Hasçelik selects Tenova and ABB technologies for Steelmaking Line at new plant in North – West Türkiye

Tenova's Consteel® electric arc furnace (EAF) with a new ladle furnace and twin vacuum degasser will enhance production and quality.

Castellanza, October 19, 2023 - Tenova, a leading developer and provider of sustainable solutions for the green transition of the metals industry, has received an order from **Hasçelik Sanayi ve Ticaret A.S.**, to install and commission state-of-the-art equipment in a new plant in Osmaneli (Bilecik, Türkiye). Hasçelik is one of Türkiye's leading manufacturers of special steel with a total of five manufacturing plants and other locations worldwide.

The new line will comprise a **Consteel® Electric Arc Furnace (EAF)** equipped with **Consteerr®**, electro-magnetic liquid steel stirring system, a **Ladle Furnace (LF)** and a **Twin Vacuum Degasser (VD)**. All units are linked and governed by an extensive, state-of-the-art automation system to optimize the whole process and guarantee high quality steel grades.

The unit selected by Hasçelik will be the first continuously charged EAF in Türkiye and will allow the steelmaker to leverage the inherent flexibility of the Consteel® EAF to tackle declining scrap availability and quality. The continuous charge makes the process robust to the variation of the scrap density, quality, and content of volatile compounds. At the heart of the system is the new **Consteel® Evolution** based on a full-platform EAF with single-point roof lifting system, a combination that brings the benefits of energy efficiency, reduced workforce, increased reliability, improved productivity and reduced environmental impact.

Since its first industrial installation in the USA in 1989, Tenova has always improved the Consteel® system to meet clients' needs, and it is currently by far the most applied EAF solution for continuous scrap charge and waste heat recovery. Within Consteel® the fumes from the EAF are used to pre-heat raw materials inside the pre-heating section while the scrap is delivered to the crucible with a steady, controlled flow. Thanks to the continuity of the charge, the organic compounds developing from the non-metallic portion of the scrap get thoroughly pyrolyzed and combusted within the system, guaranteeing the minimum possible generation of noxious substances such as dioxins and furans. The system also dramatically reduces the noise and provides a safer and healthier working environment whilst eliminating the need for personnel operating in hazardous areas.

The new Consteel® furnace will be equipped with **Consteerr®**, a technology jointly developed by **ABB** and Tenova as part of an exclusive global partnership agreement. **Consteerr®** is an application of ABB's unique **ArcSave®** non-contact electromagnetic stirring technology designed specifically for continuous charging EAFs. It reduces thermal losses, increases melt rate, rapidly homogenizes the liquid steel and reduces oxygen content in the bath. The technology can be customized to match the needs of different EAFs and retrofitted on existing units.

"Together with Tenova experts, we designed a tailor-made solution that allows us also for a future expansion of the current facility. In addition to this, the specific technologies of Consteel® and Consteerr® perfectly fit with our needs", said **Naci Faydasıçok**, Hasçelik chairman of the board.

“With this project, Hasçelik is investing to increase its competitiveness within the market of high steel grades. Scrap characteristics in terms of purity and density are, in fact, worsening and the Consteel® technology is fundamental to maintaining high-quality production”, said **Daide Masoero**, Tenova Area Manager Europe Electric Arc & Ladle Furnaces.

“In light of rising commodity and energy costs, as well as a greater focus on sustainability, process efficiency is more important than ever”, said **Zaeim Mehraban**, Global Sales Manager, Metallurgy Products at ABB. *“Using the unique and proven ABB ArcSave®-based electromagnetic stirring technology found at the core of Consteerr®, Hasçelik will be able to increase productivity and energy efficiency in their electric arc furnace process, and to contribute to both financial and sustainability goals”.*

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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