Contribution ID: **106** Type: **Oral Presentation**

FESCON SYSTEM: TRANSFORMING STEEL TO GREEN

Monday 11 May 2026 12:50 (20 minutes)

In the steel production process, the Scrap Preheating Technique, which heats scrap to approximately 700℃ through Electric Arc Furnace melting, enables a significant reduction in electrical energy consumption and, consequently, an increase in furnace efficiency. ”Furnace Energy Saving & Continuous Charging (FESCON) System”developed by GEMKOM, is a patented technology that brings significant transformation to steel production processes through its “environmentally friendly”and “high-efficiency production”, making it superior to existing systems. Adopted by pioneering company like KARDEMIR HADDECILIK, this innovative system integrates advanced methods for scrap preheating, resulting in substantial improvements in emission reduction, productivity enhancement, and energy efficiency. The successes achieved by KARDEMIR HADDECILIK with the FESCON system highlight the importance of leading initiatives towards environmentally friendly steel production. Key design features of the FESCON system include efficient scrap preheating, reduced dust emissions, increased process stability, and optimized energy consumption. The achievements of Kar-Demir with the FESCON system also inspire other companies in the sector to take further steps towards environmentally friendly steel production, emphasizing the significant transformation brought about by innovative, sustainability-focused solutions in the industry. Among all the advantages, one feature is giving the operational flexibility that FESCON is the only system on the market where you can continue operation by taking FESCON system to parking position where all other pre-heating technologies on the market is not giving such flexibility since they are strictly combined with EAF.

Speaker Country

Turkey

Speaker Company/University

GEMKOM MAKINA

Primary author: Mr ERTAS, Dogan (gemkom makina)

Presenter: Mr ERTAS, Dogan (gemkom makina)

Session Classification: Innovations in EAF Technology I

Track Classification: EEC 1 - Technological Advancements: EEC 1.A Innovations in electric arc furnace (EAF) technology