Contribution ID: **232** Type: **Oral Presentation**

Breaking boundaries: Tata Steel's H Blast Furnace sets new standards

Tuesday 7 October 2025 18:00 (20 minutes)

This paper examines the unprecedented achievements of Tata Steel's H-Blast Furnace at Jamshedpur, which has surpassed 50 million tons of hot metal production in the present campaign (as of January 8, 2025), without requiring major mid-campaign repairs. Commissioned in 2008, the furnace has consistently exceeded its designed by more than 20% annually, establishing new benchmarks in operational efficiency and sustainability within the Indian steel industry. This Blast furnace has consistently set records for PCI injection and fuel efficiency, even when working with high slag rates.

The project commenced in August 2005, with the construction awarded to a consortium led by SMS group and Larsen & Toubro. Featuring a substantial inner volume of 3814 m^3 and an annual production capacity of 2.5 million tons, the furnace was the largest in India at its inception. Completed in a record 25 months from groundbreaking.

This paper highlights the integration of advanced technological solutions, which contribute to enhanced energy efficiency and environmental sustainability, as well as aiming to provide a comprehensive analysis of the technological advancements strategies that have contributed to this landmark achievement.

Primary author: Mr DIPAK, Sangameswaran (SMS group)

Co-authors: Mr CASTAGNOLA, Cristiano (SMS group); Mr PAL, Padma (Tata steel limited); Mr NATH, Shambhu (Tata steel limited)

Presenter: Mr CASTAGNOLA, Cristiano (SMS group)

Session Classification: Blast Furnace Process Optimization & Control

Track Classification: Ironmaking - Blast furnace ironmaking