



Contribution ID: 76

Type: Oral Presentation

High Speed Billet Casting: Introduction of a new Billet CCM at Tosyalı Demir Çelik

Wednesday 8 October 2025 15:40 (20 minutes)

In June 2024 the new high speed billet caster at Tosyalı Demir Çelik, Sariseki, Turkey was successfully put into operation.

Supplied by SMS Concast, this new continuous casting machine represents a significant advancement in casting technology, offering exceptional speed capabilities while maintaining product quality and versatility. This state-of-the-art system can achieve casting speeds of up to 6.0 meters per minute, resulting in a total production capacity of more than 3Mio. tons/year. The machine is designed with a 10.25-meter radius, comprises of 7 strands and produces square billets with 150-millimeter side lengths.

This machine demonstrates impressive versatility in its product range: it can cast a wide range of steel grades, from rebar to cold heading grades and spring steels. This diverse portfolio allows Tosyalı Demir Çelik to meet a wide array of market demands without compromising on productivity or quality.

To support this casting process, SMS Concast has implemented several cutting-edge technologies: the state-of-the-art CONFLOW electromechanical stopper mechanism ensures precise mold level control even at high speeds, while INVEX mold tubes have been specifically developed for both rebar and SBQ billet casting. Mold and Final CONSTIR electromagnetic stirrers ensure the internal quality of cast products. The CONDRIVE direct oscillation drive allows for precise oscillation control, which is critical for maintaining quality and casting stability at high casting speeds.

To ensure quality is maintained also at high casting speeds, the Level 2 system continuously tracks all relevant parameters and provides detailed casting reports for each billet or bloom, ensuring that the elevated productivity of this machine matches the required market demands.

This paper shall outline the main technological features in detail and reflect the quality results that could already be achieved in standard production after an intensive hot commissioning and testing period.

Primary author: CASCINO, Carlo (SMS group)

Co-authors: ABRAM, Marco (SMS group); Dr KORKMAZ, Suhat (Tosyalı Holding); Dr BUKEN, Heinrich (SMS group)

Presenter: CASCINO, Carlo (SMS group)

Session Classification: Caster Design & Process Optimization

Track Classification: Steelmaking - Continuous casting, near-net shape casting and ingot casting