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The new MSR bloom caster at Saarloha Advance Materials, Pune

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Saarloha Advance Materials Pvt. Ltd. (SAMPL), a Kalyani Group Company, headquartered in Pune, India, is a leading steel manufacturer renowned for its high-quality alloy and special steel products. With state-of-the-art facilities and a focus on innovation, the group serves diverse sectors, including automotive and engineering. With the installation of the new 2 strands bloom caster, supplied by SMS Concast, SAMPL strengthens its position as leading supplier for high quality steel.

The caster –first of its kind in India –is equipped with six different section sizes, ranging from 160x160mm square billets to 340x400mm blooms and including a Ø500mm round section, and able to cast a wide range of steel grades, this 12m radius caster allows KSG to flexibly respond to any market request.

The machine is equipped with CONFLOW electromechanical stopper system, CONGAUGE steel level and Mold powder thickness measuring system, CONDRIVE Electromechanical Direct Oscillation Drives, CONSTIR Mold- and Final-EMS, air-mist secondary cooling, Level 2 with COOL Solidification model, Dynamic Mechanical Soft Reduction (DMSR) and rigid dummy bar to ensure quick re-stranding and high machine availability.

The 7 DMSR modules represent the main technological feature of this caster: each module can apply a force in excess of 2000kN, while the online solidification model COOL ensures that the optimal steel grade specific reduction pattern is dynamically applied and adapted to any change in casting conditions, ensuring always optimal efficiency and performance of the DMSR process.

The very limited installation space in the existing building represented another challenging aspect of this project requiring dedicated design solutions.

This paper will outline the main technological features in detail and present the quality results that have already been achieved in standard production after an intensive hot commissioning and testing period.

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