

PRESS RELEASE

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Jiangsu Yonggang Group grants FAC to SMS Concast for four-strand billet caster

Efficient execution of continuous caster modernization
project in China



Modernized four-strand SBQ billet caster running at Jiangsu Yonggang Group by SMS Concast.

Jiangsu Yonggang Group Co., Ltd. in Jiangsu Province, China, granted SMS Concast, a company of SMS group, the FAC (Final Acceptance Certificate) for the modernization of a new four-strand SBQ billet caster

replacing an old caster at Yonggang in Zhangjiagang, P.R. China. One major aspect of the project was the expansion of Jiangsu Yonggang's SBQ steel grades portfolio which now includes high-quality bearing and other engineering steel grades.

Only five months from installation start, the new billet caster with a capacity of 540,000 tons per year was commissioned and recently accepted by issuing the FAC. The section sizes include square billets from 150 to 220 millimeters.

The continuous casting machine contains many technological and digital solutions provided by SMS Concast in order to achieve a flawless process, high quality products and increased productivity.

The continuous caster was redesigned for the flying tundish production concept, a method to increase operation time and yield of the caster. Furthermore, the tundishes were equipped with the CONFLOW stopper control assuring a precise and stable steel flow for reliable casting and requiring almost no maintenance. Apart from the standard mold electromagnetic stirrer CONSTIR-MEMS, a final stirrer CONSTIR-FEMS helps achieve the required product quality in terms of center segregation and center porosity. The spray cooling system is equipped with SMS Concast's AIRMIST spray nozzles enabling a uniform and softer cooling at lower water consumption. Additionally, provision has been made for the future application of DMSR (Dynamic Mechanical Soft Reduction) for bigger sections. This will be possible thanks to SMS Concast's COOL simulation software which models the temperature profile of the hot steel strand in real time and thus allows the casting process, including spray cooling and DMSR, to be optimized online. Online adjustment of the spray cooling system prevents cracks due to internal reheating. And the dynamic adaption of the withdrawal straightening unit's application forces (DMSR) improves product quality in terms of center segregation and center porosity.

A further digital solution is heat tracking as part of the level-2 system. This module allows the quality of each heat to be meticulously traced down to single billet

slices and thus enables the operator to predict quality events and improve the production yield by cut optimization.

“The great co-operation with SMS Concast AG with a fast and smooth execution of the contract enabled us to commission our new SBQ billet caster within five months from installation start,” says Liu Jinbu, Plant Director of Jiangsu Yonggang Group, Steelmaking Plant.

The Chinese market is continuously moving towards more challenging steel grades and more efficient production. SMS Concast provides the right solutions to meet these challenges. Jiangsu Yonggang Group is looking forward to cooperate with SMS Concast in further potential upgrade projects.

SMS group is a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry. It has some 14,000 employees who generate worldwide sales of about EUR 3 billion. The sole owner of the holding company SMS GmbH is the Familie Weiss Foundation.