

PRESS RELEASE

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Yongfeng places follow-up order with SMS Concast for the supply of two eight-strand billet casters

High-speed casters for China



High-speed casting in eight strands on an SMS Concast casting machine.

Following the recent order for two five-strand billet casters to be installed at its Dezhou location, Yongfeng Group has again chosen SMS Concast, a company of SMS group, as supplier of high-speed billet casting technology. The now ordered casters will be installed in the new Yongfeng Lingang Co., Ltd facility in Linyi City, China.

SMS Concast will supply the two eight-strand billet casters for the newly built basic oxygen furnace (BOF) steelmaking plant in Linyi City in the Shandong Province. The two casters will have a combined production capacity of approximately 2.6 million tons per year of steel bars.

Both casters will have a radius of 10.25 meters. While the first one will produce on eight strands right from the beginning, the second one will initially be equipped with seven strands, but prepared for the addition of an eighth strand in the future. Both machines will cast billets of 165 millimeters square.

Starting with a range of low-carbon and cold-heading steels, it is planned to expand the production range to also include SBQ grades (Special Bar Quality), such as spring and bearing steels, in the future. For this extension of steel grades cast, the casting machines will be prepared for the retrofitting of electromagnetic mold stirrers (CONSTIR-MEMS), powder feeding systems and submerged casting technology.

The casters for this innovative project will include high-speed casting molds featuring INVEX technology and compact oscillation mechanisms with CONDRIVE direct drives, which enable the oscillation stroke and frequency to be adjusted electrically even at very high casting speeds. Secondary water cooling and the five-roller withdrawal and straightening units (WSU) will be designed to handle these high casting speeds. The equipment will be controlled via SMS Automation Level 1 and Level 2 systems.

Yongfeng Lingang Co., Ltd. selected INVEX mold tubes in order to reach very high casting speeds and billet temperatures of above 950 degrees Celsius at the discharge. These high temperatures will enable direct rolling without the need for any billet temperature conditioning and equalizing before rolling.

With the latest generation of SMS Concast's INVEX technology – in combination with the classical cartridge mold design – very high casting speeds can be achieved. The specific design of the copper tubes enables a higher heat transfer. The installation of this

latest high-speed technology will provide an increase in productivity without the risk of breakouts and an extraordinarily high productivity with low CAPEX compared to traditional casters.

This caster project will also include Industry 4.0 digitalization features and new safety- and productivity-enhancing functionalities. In particular, the temperature measuring and tracking system will optimize the billet temperature, enabling direct automatic hot-charging of the billets into the rolling mill.

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 more than EUR 2.9 billion. The sole owner of the holding company SMS GmbH is the Familie Weiss Foundation.