

Phone: +49 211 881-4449
Fax: +49 211 881-774449
Mobile: +49 151 40226502
E-Mail: thilo.sagermann@sms-group.com
Thilo Sagermann

PRESS RELEASE

Düsseldorf, June 6, 2016

Increase in production capacity for premium-grade automotive sheet, tinplate and plate

Tailor-made rebuild of continuous slab caster at ArcelorMittal Avilés by SMS group

ArcelorMittal Avilés, Spain, has awarded SMS group (www.sms-group.com) the order to rebuild the two-strand bow-type slab caster No. 1 into a vertical bending machine. Caster No. 2 will be revamped as well, in a second phase.

SMS group had proposed a project package that convinced ArcelorMittal Avilés not only for the proposed rebuilding concept and equipment but also for the breakdown of the TCO (Total Cost of Ownership) and the TPM (Total Productive Maintenance Costs).

The expertise in plant modernization and the technologies developed by SMS group have made this economic solution possible. In order to keep the construction time as short as possible, the existing foundations and fixing bolts of the plant will be retained.

The two-strand slab casters supplied by SMS group in 1987 can each produce about 1.9 tons of steel slabs per year. In order to meet the growing requirements of the market, the primary goal of this project is to improve the quality of the produced slabs. At the same time, the production capacity of the two casters will be increased in order to be

prepared for future requirements. The new No. 1 caster will be designed to produce slabs 235 millimeters thick and between 800 and 1,600 millimeters wide.

The complete plant, from the mold down to the exit, will be rebuilt into a vertical bending machine. Its radius will measure about eight meters and the vertical length 2.4 meters. The metallurgical length will be increased from 34 to 38 meters, the casting speed to 1.95 meters per minute.

The plant will be equipped with SMS group's remote-adjustable mold (Delta Speed Adjustment). With this technology, any width adjustment and automatic setting of the mold taper can be performed during running production without having to reduce the casting speed. In doing so, the system takes into account the steel grade and the current casting speed. The mechanical oscillation system will be replaced by a hydraulic one, allowing the stroke and frequency to be varied during casting.

SMS group will also implement a new secondary cooling concept based on a width-dependent spray cooling unit (single-component system) installed in the machine head. All cooling circuits for the mold, machine and spray cooling system will be completely renewed. The associated hydraulics will be adapted and extended.

ArcelorMittal Avilés will receive new workshops which will be equipped with the HD LASr alignment assistant developed by SMS group. This system no longer uses rulers to measure the mold and the segments but a laser tracker and the dedicated SMS-developed measuring software. The high quality of the measurements, the precise and reliable logging function and the highly informative evaluation of the measurements provided by HD LASr make this technology clearly superior to any previously available system.

The slab caster will be prepared for hydraulic soft reduction.

SMS group will also implement various level-2 process models as part of the X-Pact[®] electrical and automation system. HD mold^{TC} will monitor the temperature distribution, allowing any stickers or break-outs to be identified at an early stage and prevented. The metallurgical process model DSC (Dynamic Solidification Control) calculates the solidification process of the strand and controls the various zones of the secondary cooling system.

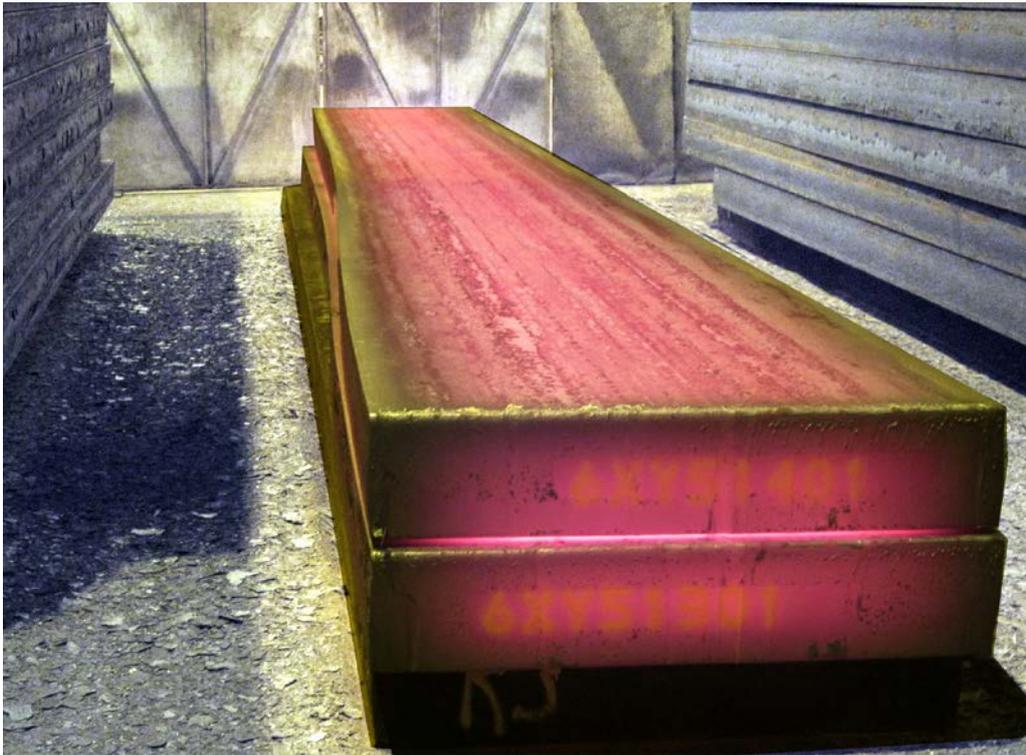
The two-strand continuous caster No. 2 will be revamped in the same way as caster No. 1.

The integrated iron and steelworks of ArcelorMittal in Avilés produces premium steels for the automotive and tinplate industries as well as for plate production.

(64 lines of max. 65 characters per line)



The HD LASr alignment assistant developed by SMS group provides precise measurements of the mold and the segments of continuous casting plants.



Optimized and efficient width adjustment with Delta Speed Adjustment.

The SMS group is a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry. Its 14,000 employees generate sales of over EUR 3,3 bn.