Finishing mill to be equipped with modern actuators for setting strip geometry

ArcelorMittal trusts in SMS group to modernize the hot strip mill at Dunkirk

SMS group has received from ArcelorMittal Atlantique et Lorraine an order for the modernization of the hot strip mill at Dunkirk, France. The modernization covers the installation of the CVC® plus bending and shifting system, of new drive spindles in all finishing stands,
and the installation of a new PCFC® system (Profile Contour and Flatness Control). This modernization provides the hot strip mill with a powerful actuator for influencing the strip geometry and prepares the mill for future challenges.

The CVC®plus system with integrated work-roll bending system of SMS group is the worldwide leading technology for the setting of hot strip profile, contour and flatness and is used in more than 400 hot strip mill stands all over the world. On the basis of the process parameters, PCFC® calculates for every strip the correct shifting position of the work rolls, which are provided with a special barrel grind, and the setting values of the work-roll bending system. This way the roll gap is ideally adapted to the changing conditions and the mill can produce strip with close geometrical tolerances. The drive spindles for ArcelorMittal’s Dunkirk mill will be SIEFLEX® toothed universal joint shafts.

Modernization will be implemented in three steps. PCFC® will be installed as early as at the end of 2017 and operate in parallel with the existing control system. This so-called shadow mode makes it possible to check all functions of the PCFC®, the interplay with the automation environment, and allows adaptation to the products of ArcelorMittal Dunkirk. In the end, this way of proceeding guarantees a smooth start-up of the new system. This start-up of the PCFC® will take place after the installation of the new bending and shifting systems in the first four stands during the annual shutdown scheduled for August 2018. The modernization of stands F5 to F7 will follow one year later.
With this order, ArcelorMittal and SMS group continue their good cooperation in the modernization of the hot strip mill at Dunkirk. In the period between 2010 and 2014 SMS group replaced a total of nine main gear units of the roughing mill (R2 to R5) and the finishing mill (F1 to F5). Only some months back, at the end of 2016, SMS group had successfully completed the modernization of ArcelorMittal’s hot strip mill at Ghent, Belgium.

*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 13,500 employees who generate worldwide sales of more than EUR 3 billion. The sole owner of the holding company SMS GmbH is the Familie Weiss Foundation.*