SSAB contracts SMS group to modernize hot-dip galvanizing line No. 3 in Finland

New furnace equipment and air knife system for higher capacity and enhanced material range

In the future, a DUMA-BANDZINK Jet-Pro air knife system will produce high-quality surfaces in the hot-dip galvanizing line No. 3 of SSAB, Finland. (The picture shows a plant of similar design).

SSAB has awarded SMS group a contract covering the modernization of its continuous hot-dip galvanizing line No. 3 in Hämeenlinna, Finland. The upgrade essentially involves the integration of an inductive booster into the furnace and of a new air knife system.
with strip stabilization. The measures will be implemented within a short period of time at the end of 2017. The main objective of the project is to increase the line’s efficiency and capacity and enable production of high-quality high-strength automotive grades. The modernization concept is based on a comprehensive study SMS group prepared for the optimization of SSAB’s hot-dip galvanizing lines.

The conversion measures will be implemented in cooperation with DREVER International, DUMA-BANDZINK and EMG Automation, all companies of SMS group. This is the second major modernization contract SSAB placed with SMS group within a short period of time. At the end of last year, SMS group had already been awarded an order covering the large-scale modernization of the continuous pickling line’s entry section.

Inductive strip pre-heating to about 350 degrees Celsius will increase the capacity of the furnace. Thanks to this temperature rise inside the furnace it will be possible to expand the product range by several high-strength steel grades, among others. Another advantage comes with the stabilized strip flow in the furnace which is due to said higher temperature and hence better strip formability on the first deflector roll. To permit the six-megawatts induction furnace to be integrated into the line, the furnace entry section will be reconstructed and some of the rolls relocated. Also, a vertical compensation roll will be installed.

The installation of a new DUMA-BANDZINK Jet-Pro air knife system with EMG eMASS® strip stabilization as part of the integrated solution will save zinc and improve the quality of the coating. Improved quality and zinc savings will be achieved by stabilizing the strip travel and installing state-of-the-art equipment in the Jet-Pro air knife system like a patented radial controller, automatic nozzle-lip cleaning system and touchless edge mask of the newest generation.

The line will be designed for strips between 0.4 and 3.0 millimeters thick and from 650 to 1,550 millimeters wide. In the process section, the strips will be zinc-
coated at speeds of up to 160 meters per minute. It will be equipped with two zinc pots and produce galvanized and galvannealed strips as well as zinc-aluminum coated Strip.

*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.*