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PRESS RELEASE

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Systems competence from a single source

Tosyali Toyo orders high-efficiency tinning line with soluble anodes from SMS Siemag

Tosyali Toyo Çelik A.Ş. (Tosyali Toyo Steel Co. Inc.), the Turkish-Japanese joint venture between Tosyali Holding and Toyo Kohan, has awarded SMS Siemag (www.sms-siemag.com) the contract for the supply of an electrolytic tinning line. This line will be a key element of the new steel mill for the production of packing materials to be constructed in Osmaniye, southern Turkey. From late 2016, 255,000 tons per year of very thin steel sheet will be coated with a fine layer of tin as corrosion protection. The high-quality tinplate will then be used as packing materials for foodstuffs or aerosols.

Tosyali Toyo has selected SMS Siemag as supplier because the line, consisting of a great number of high-performance plant components, will be supplied from a single source inclusive of the mechanical equipment, process technology and electrical and automation systems. Ancillary units such as the evaporation unit and anode casting equipment will also be provided by SMS Siemag. Besides design and manufacturing, the scope of supply will include erection and commissioning assistance.

Tosyali Toyo has chosen the soluble tin anode technology. SMS Siemag is a leading supplier of this technology and has proven the economic, ecological and process technology-related advantages in several previously built tinning lines.

This, for example, ensures low tin consumption, stable tinning conditions for optimum product quality and precise process control.

At a process speed of up to 450 meters per minute the T1 to T5 and DR6 to DR10 materials will be coated with tin layers ranging from 1.0 to 11.2 g/m². The strip widths will range from 700 to 1,270 millimeters and the strip thicknesses from 0.12 to 0.6 millimeters.

The line will feature a great number of high-performance equipment units, which impress with their environmental compatibility and economic efficiency as well as their reliability in operation, flexibility and product quality. In the entry section, a side trimming shear with scrap baller will be integrated. Prior to tinning, the strip will be prepared in a cleaning, tension levelling and pickling section. The tin coating section itself will contain one preconditioning cell and six electroplating cells. The applied tin layer will be subsequently treated in a fully inductive heating system, in order to enhance the surface quality. Finally the strip is passivized and dried.

Along the tinning line, various measuring units will be installed to ensure constant process supervision and control. In combination with the tin layer thickness measurement, this achieves the best possible product quality and production efficiency.

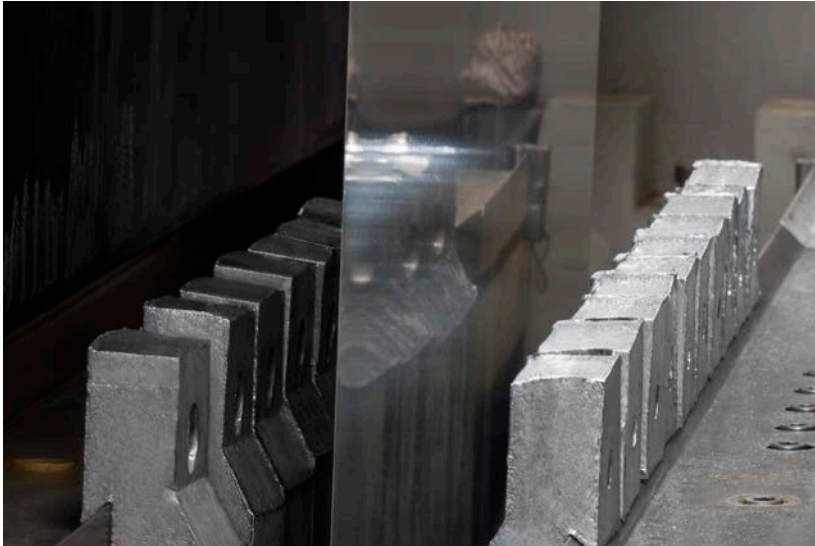
Rinsing water from the tinplating and the passivation processes will be reconditioned in an advanced evaporation system. In this way, further operational expenses are saved.

A separate anode caster will be used to cast the anodes without tin losses and at a steady temperature. The fully automated casting process produces perfectly shaped, high-purity tin anodes from the anode remnants and tin ingots.

In the Plug & Work integration test, the complete control and automation equipment will be installed in a test field and subjected to a plant simulation prior to commissioning. In this procedure, the control and automation systems are tested and optimized under true-to-life conditions. The operating personnel are also trained at the

same time, so that they are already familiar with the control system and achieve a steep run-up curve upon actual commissioning.

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Tosyali Toyo has decided in favor of a line with soluble anodes due to its economic, ecological and process technology-related benefits.



The contaminated rinsing water generated by the tinsplating and passivation processes will be reconditioned in an advanced evaporation system.

SMS Siemag AG is a company of the SMS group which, under the roof of the SMS Holding GmbH, consists of a group of global players in machinery and plant construction in steel and nonferrous metals processing. Its workforce of more than 13,800 employees generates sales worldwide totaling EUR 3.5 billion.