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PRESS RELEASE

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Furnace technology from SMS Siemag

Acroni orders two furnaces and the world's first MultiFlex-Quench® for the heat treatment of heavy plate

The Slovenian steelmaker Acroni has placed an order with SMS Siemag (www.sms-siemag.com), Germany, to deliver a heat treatment line and revamp a stainless-steel annealing and picking line. As part of the heat treatment line, SMS Siemag will for the first install the newly developed MultiFlex-Quench®, which offers an outstandingly high degree of flexibility and high cooling efficiencies in the heat treatment of heavy plate.

Acroni, a company of the Slovenian Steel Group (SIJ), is a highly specialized niche supplier focusing on plates and strips made of stainless grades, tool steels, abrasion-resistant steels and HSLA grades. This new heat treatment line will enable Acroni to further expand its product portfolio.

The line will be designed for plates with thicknesses ranging from three to 100 millimeters; the range of materials includes high-strength carbon steels, stainless and tool steels as well as a range of special grades. For the new line, SMS Siemag will supply a roller-hearth furnace for hardening and normalizing, a quench of the MultiFlex design and a roller-hearth furnace for tempering, as well as all auxiliary facilities. These will include the complete plate conveying

equipment, all systems for the water supply and water treatment as well as the automation of the systems.

The hardening furnace will be equipped with two chambers, in which the plates will be annealed in a nitrogen-based inert gas atmosphere. Heating to up to 1,100° Celsius will be carried out indirectly using radiant heating tubes.

The innovative MultiFlex-Quench® is characterized by its exceptionally high degree of flexibility. It sets itself apart from other quenches by the extremely wide range of cooling rates, from abrupt water quenching right down to gentle cooling, achieved by a multiple nozzle systems. As a result, flexible cooling patterns are possible for a wide range of different steel grades. Squeezer rolls fix the plate in place and hence ensure good plate flatness, even at high cooling rates. Following the MultiFlex-Quench®, the plates can be tempered in an open-heated roller-hearth furnace at temperatures between 400° and 800° Celsius.

The aim of the modernization of the annealing and pickling line is to reduce the burden on the environment during the manufacture of strips made of non-grain oriented silicon grades (NGO, up to 2.4 % Si content), carbon steels and ferritic special steels. To achieve this, the chemical pickling line will be replaced by a purely mechanical descaling system in combination with a brushing section. Dispensing with chemical descaling and the associated acid regeneration by the spray roaster process will make the Acroni works much more environment-friendly. The revamping of the annealing and pickling line will also comprise a new automation system, new drives and the installation of strip centering control equipment, deflector rolls and supporting rollers. All activities are planned in such a way that only a minimum of construction work will be necessary, thus ensuring short downtimes and rapid commissioning. The order is being carried out

by SMS Siemag in Germany together with SMS Innse (Italy).
Commissioning in the Jesenice (Slovenia) plant is planned for 2016.
In 2013, SMS already delivered a new 2.6-m heavy-plate stand and a
roller quenching station to Acroni.

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Handshakes after signing the contract.

Front row, from left to right: Alberto Bregante (SMS Innse), Blaž Jasnič (Acroni),
Fritz Brühl (SMS Siemag).

Back row, from left to right: Christian Sprung (SMS Siemag), Alberto Vaccani
(SMS Innse), Burkhard Dahmen (SMS group), Andrey Zubitskiy (KOKS Group),
Anton Chernykh (Slovenian Steel Group), Jens Barth (SMS group), Roman Robič
(Acroni), Vasilij Prešern (Slovenian Steel Group).

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
13,500 employees generates sales worldwide totaling EUR 3.3 billion.