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Acroni produces X120 Mn12 grade on continuous caster from Primetals Technologies

- **Technology packages ensure required interior and surface quality of slabs**

Since early 2015, the continuous caster of Slovenian steelmaker Acroni, d.o.o. (member of SIJ – Slovenian Steel Group) that was modernized by Primetals Technologies also produces X120Mn12 wear resistant grade. This is due to the optimized interplay of the technology packages, machine head and strand guide system supplied by Primetals Technologies, which ensure the required high internal and surface quality of slabs.

Acroni's plant is situated in Jesenice, some 60 kilometers northwest of the capital Ljubljana. Acroni is the leading European producer of quarto stainless plates, also specialized in electric and special steels, sold in the form of hot and cold rolled coils, steel plates and cold formed profiles, mainly for special niche products. The single-strand continuous caster was radically modernized by Primetals Technologies. The machine head and strand guide system were replaced and new technology packages, systems and components installed. The plant features a curved mold and has a machine radius of 10.36 meters. It is designed for casting around 515,000 metric tons of steel annually, including medium to highly carbon and peritectic steels, structural steels, microalloyed and stainless steels belonging to grades 300 and 400 as well as silicon steels. The slabs have thicknesses of 200 or 250 millimeters and widths of 800 to 2,120 millimeters.

Wear resistant steels such as X120 Mn 12 grades can now also be reliably produced on the bow –type continuous caster. Previously this grade was produced as ingot or on vertical continuous casting machines. This is made possible by the optimized interplay of machine head, strand guide and technology packages. The strand's temperature profile and the required volumes of water for secondary cooling in any position along the strand can be calculated using the fully automatic and dynamic Dynacs level-2 cooling model. This provides the basis for determining the optimum target values for secondary cooling and final solidification point of the strand. The DynaGap Soft Reduction technological solution

improves the homogeneity of the inner structure for production of the highest slab quality. This is achieved by exact setting of the conicity of the rolls in the area of final solidification of the strand in conformity with target values calculated by Dynacs, helping to avoid center segregations. This is a crucial aspect in the production of X120 Mn12 grades because these kind of steels have to pass an ultrasound test and center segregations are an exclusion criterion. In addition, the Dynacs dynamic level-2 cooling model permits homogeneous and optimum cooling of slabs over their entire width, thus minimizing the occurrence of surface defects such as edge or transversal cracks. A tight roller pitch in the strand guidance system, together with LevCon meniscus control, ensures a stable meniscus, which is another essential requirement for high surface quality. Furthermore, stresses in the cast slab can be minimized by continuously unbending the strand. This also has a positive impact on interior and surface quality.



Continuous caster of at Acroni, d.o.o. in Jesenice, Slovenia. The caster was modernized by Primetals Technologies and now also produces X120 Mn12 grades.

This press release and a press photo are available at

www.primetals.com/press/

Contact for journalists:

Dr. Rainer Schulze: rainer.schulze@primetals.com

Tel: +49 9131 7-44544

Primetals Technologies, Limited
A joint venture of Siemens, Mitsubishi Heavy Industries and Partners
Communications and Marketing
Head: Heiko Huensch

Chiswick Park, Building 11, 566 Chiswick High Road
W4 5YS London
United Kingdom

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