Siemens to modernize Çemtaş bar rolling mill in Turkey

- New roughing stand to roll larger billet sizes in accordance with automotive industry standards
- Improved mechanical properties and metallurgical structure
- Improved surface quality of round and flat bars
- End-to-end automation to increase flexibility and reduce downtimes

Çelik Makina Sanayi ve Ticaret A.Ş. (Çemtaş), a Turkish steel producer, has awarded Siemens Metals Technologies an order to modernize its bar rolling mill in Bursa. The rolling mill will be equipped with a new reversing sliding roughing stand and a new intermediate train. The existing finishing mill will also be brought up to the state-of-the-art. The new equipment will enable Çemtaş to further improve its product quality, especially in respect of mechanical properties, metallurgical structure and the surface quality of the rolled bars. The plant will have a new automation system, including process models and mechatronic packages. This will give the bar rolling mill an end-to-end automation solution, which will increase productivity and reduce downtimes for maintenance. The modernized rolling mill is scheduled to come into operation at the beginning of 2015.

Çemtaş is the second-largest producer of alloyed bar steels in Turkey, and supplies the European automotive industry. It exports around 70 percent of its products. The company has its own steel production and rolling capacities at the Bursa location. It produces structural, case-hardened, heat-treatable and spring steels, as well as micro-alloyed grades, stainless steel, free-cutting and boron steels. After completion of modernization, the rolling mill will produce bars with diameters ranging from 15 to 80 millimeters, and can be converted to handle diameters up to 120 millimeters if required. It will also be able to produce flat bars with thicknesses ranging from 5.5 to...
62 millimeters and widths from 46 to 140 millimeters.

For the bar rolling mill, Siemens will supply a reversing sliding roughing stand which will be able to roll billets up to a size of 200 millimeters. This will allow a higher reduction ratio, resulting in better mechanical properties and an optimized metallurgical structure. During the reversing roll pass sequence, between two subsequent passes, the stand will hydraulically slide along the cross direction with respect to the rolling axis, so to present the appropriate groove for each subsequent pass, while at the same time maintaining a fixed rolling axis. The sliding movement is fully controlled by the automation. The rolling stock will be rotated by bar guidance equipment and special manipulators at the entry and exit ends of the stand. The roll gap will be adjusted electrically.

Siemens will also supply the continuous intermediate mill, comprising six Red-Ring rolling stands in an HV arrangement. The rolled bars will be cropped by a crank shear whose blade will be guided parallel to the bar to ensure a clean cut. Provision for inline controlled cooling section is foreseen in order to give Çemtaş the future opportunity to roll with a precise and continuous control of the metallurgical grain size. As part of the project, Siemens will also modernize the existing finishing mill by installing new automation and process equipment.

The scope of delivery from Siemens will also include the basic automation (level 1), the process automation (level 2) based on the Siroll concept, special mechatronic packages, as well as the complete electrical equipment. Siemens will also supervise the installation and commissioning, and provide the staff training.

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This press release and a press picture are available at http://www.siemens.com/press/pi/IMT201402553e
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