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Primetals Technologies to supply bar rolling mill to Capitol Steel in the Philippines

- **Production capacity is 500,000 metric tons of rebars per year**
- **Smaller diameters are rolled in multi-slit mode**

Primetals Technologies, in cooperation with Automazioni Industriali Capitanio S.r.l. (AIC), has received an order from Capitol Steel Corporation (Capitol Steel) to supply a new bar rolling mill for its plant in Quezon City, Philippines. The rolling mill will produce around 500,000 metric tons of reinforcing steel (rebars) per annum with diameters ranging from 8 to 50 millimeters. Diameters up to 12 millimeters will be rolled in multi-slit mode. Commissioning is scheduled to start in the second half of 2017.

Founded in 1974, Capitol Steel Corporation already runs a bar rolling mill in Quezon City near Manila, which has a capacity of around 200,000 metric tons per annum. The new bar rolling mill will enable Capitol Steel to considerably increase its capacity for supplying the presently booming construction industry in the Philippines.

The starting material for the bar rolling mill will comprise 6 and 12 meter long billets of carbon steel with square cross-sections ranging from 120 x 120 to 160 x 160 millimeters, which will be processed into rebars with diameters ranging from 8 to 50 millimeters. In order to increase the productivity of the plant, bars with diameters between 10 and 12 millimeters will be rolled in two-slit mode, and those with diameter 8 millimeters in three-slit mode.

The rolling line will consist of a roughing mill, with seven stands, and an intermediate mill, with six stands, in an HV arrangement. The finishing mill will be made up of six stands in H arrangement. The type of all the rolling stands will be Red Ring Series 5. An inline PQS quenching system gives the bars a tempered martensitic case and a ferritic-pearlitic core, enabling Capitol Steel to produce ASTM A615 and A706 Grades starting from low carbon steel made raw material. The downstream hot dividing shear is equipped with an optimization system to maximize the utilization of the cooling bed and guarantee the

pre-set number of commercial-length bar layers per bundle. The cooling bed is 84 meters long and 8 meters wide. A re-located cold static dividing shear, whose drive system will be upgraded from original clutch and brake type to start stop type, handles the final cutting of the rolled bars. This is followed by automatic bundling, binding, weighing and dispatching of bundles. The scope of supply also includes fluid systems and operational parts, such as stand-by Red Ring stands, rolling rolls and guides.

The bar rolling mill is already designed to be able to produce in the future plain rounds and merchant bars, with the additional provision of specific operation parts only. It is laid out so that it can be retro-fitted at a later date with a billet welding system, to allow endless rolling, and a wire rod outlet for the production of coils.

Primetals Technologies is responsible for the design of the mechanical equipment supplied, the entire process planning of the bar rolling mill, and specific engineering support for auxiliary systems, such as water treatment plant, workshop and laboratory, fire protection, cranes and civil works. AIC is responsible for the design and supply of the electrical equipment and the Level 2 automation system to run the bar rolling mill. Both Primetals Technologies and AIC will also assist Capitol Steel with specific technological training of its personnel, and with the construction, startup and commissioning of the plant.



The inline PQS quenching system from Primetals Technologies gives bars a tempered martensitic case and a ferritic-pearlitic core.

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Primetals Technologies, Limited headquartered in London, United Kingdom is a worldwide leading engineering, plant-building and lifecycle services partner for the metals industry. The company offers a complete technology, product and service portfolio that includes integrated electrics, automation and environmental solutions. This covers every step of the iron and steel production chain, extending from the raw materials to the finished product – in addition to the latest rolling solutions for the nonferrous metals sector. Primetals Technologies is a joint venture of Mitsubishi Heavy Industries (MHI) and Siemens. Mitsubishi-Hitachi Metals Machinery (MHMM) - an MHI consolidated group company with equity participation by Hitachi, Ltd. and the IHI Corporation - holds a 51% stake and Siemens a 49% stake in the joint venture. The company employs around 9,000 employees worldwide. Further information is available on the Internet at www.primetals.com.