

Press

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Primetals Technologies Awarded FAC for Yantai Walsin's Stainless Steel Combination Mill

- Meets greater local market demand for high-quality stainless steel products
- Yantai Walsin achieves tighter tolerances and improved surface quality
- Lower production costs with in-line processing

Primetals Technologies has received the final acceptance certificate (FAC) from Yantai Walsin Stainless Steel for a new stainless steel combination mill, enabling Yantai Walsin to produce 420,000 tons per year of stainless steel and nickel alloy products. This new mill meets the increase in market demand for high-quality stainless steel products in China. For Yantai Walsin, this trend suggests that it converts billets from its existing plant into finished products that achieve tighter tolerances and improved surface quality, which reduces the amount of peeling after pickling and therefore saves costs.

A further benefit for Yantai Walsin was the fact that the bar-in-coil outlet realizes in-line quenching for austenitic and ferritic stainless products, leading to a reduction of subsequent post-processing annealing. Moreover, Primetals Technologies has designed the equipment to accommodate a future addition of an in-line solution for the direct treatment of wire rod products, which also reduces subsequent post-processing annealing. For bar products, the producer now uses a rapid transfer system to slow cooling bins for martensitic grades.

A Complete Solution

Located in Yantai, Shandong Province, China, the new mill project was completed via a consortium consisting of Primetals Technologies and CERI Long Products. The scope comprised all electrics and automation to approach Industry 4.0. The combination bar and rod mill includes three outlets: a straight bar outlet for the production of bar from 40 millimeters to 130 millimeters, a bar-in-coil outlet to produce bar from 18 millimeters to 40 millimeters in coils and a wire rod outlet to produce rods from 5.5 millimeters to 18 millimeters in coils.

The mill train features a next-generation breakdown mill, induction heating system, roughing and intermediate mill with no-housing stands which feed a cooling bed equipped with abrasive saws, slow bin cooling, bundle-forming stations and in-line bar straightening. The bar-in-coil outlet will utilize the latest high-speed pouring reels with direct quenching. The rod outlet includes a Morgan No-Twist Mill, Morgan Rod Reducing/Sizing Mill, Morgan Stelmor Conveyor, vertical pallet coil handling, as well as a high-speed shear system and a future in-line direct solution treatment line.

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State-of-the-Art Quality Control

Primetals Technologies' electrical and automation supply includes electrical equipment, a Level 1 and Level 2 process automation system (the Long Rolling Process Expert) and mechatronics packages. Developed by Primetals Technologies, The Long Rolling Process Expert is a production management platform that includes Quality Expert, which provides Through-Process Quality Control functions.

In a letter highlighting Primetals Technologies as the consortium leader of this project, Yantai Walsin Vice President of Engineering, Wen-Nan Hung, said, "Throughout the duration of the project, Primetals Technologies took full responsibility for several critical aspects, including process design, process layout, and overall project execution."

"We have recognized Primetals Technologies to be a reliable and highly competent partner. Their contributions were instrumental in the successful completion of the project."

Walsin Lihwa Corporation, established in 1966, is an industrial conglomerate with operations spanning wire and cable, stainless steel, and renewable energy.

No-Twist and Stelmor are registered trademarks of Primetals Technologies in certain countries.



Curved section of Primetals Technologies' Stelmor Conveyor for future in-line direct solution treatment (DST) processing.

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