



ALUMINIUM 4.1M PLATE MILL ALERIS ZHENJIANG

NEW ALUMINIUM HOT ROLLING MILL

Producing high value plate for the aerospace industry



THE CUSTOMER

Name: Aleris Zhenjiang
Location: Zhenjiang, Jiangsu Province, China

Services:
The mill is able to process aluminium ingots weighing up to 22 tonnes and produce rolled product with final thickness of between 6 to 250 millimetres.

Aleris-Zhenjiang, a company owned by the US aluminium producer Aleris International Inc. contracted Primetals Technologies to supply a new Aluminium Plate Mill to be installed in the town of Zhenjiang in the Jiangsu Province in China. The order formed part of a major investment by Aleris and came into operation at the end of 2012.

THE CHALLENGE

The single stand plate mill was designed for future potential to produce 250,000 tonnes per annum of heat-treated and non-heat-treated sheets and plates in widths up to 3.8 meters.

The mill is able to process aluminium ingots weighing up to 22 tonnes and produce rolled product with final thickness of between 6 to 250 millimetres. The finished product is used by the aerospace industry, mechanical engineering, tool and mold making, as well as in the petrochemical and transport industries.

OUR SOLUTION

Primetals Technologies supplied the complete mechanical and electrical equipment for the four-high rolling stand as well as a hydraulic shear and roller tables for the new rolling mill. The equipment has a number of special design features specifically focused on meeting the demanding requirements for high quality aluminium plate production.

The order also included the supply of a state of the art electrical and technological process control system. Primetals Technologies has maximised the supply of equipment from the Chinese market in order to meet challenging cost and timescales for the project.

TECHNICAL PARAMETERS

Plate Mill

Work Roll:	1,175/1,100 mm x 4,100 mm
Back-up Roll:	1,750/1,600 mm x 4,100 mm
Load:	60,000 kN
Bending:	+3,500 kN / chock
Speed:	0/108/270 m/min
Power:	2 x 7,000 kW

Down Cut Hydraulic Shear

Blade Load:	12,000 kN
Blade Rake:	1 in 22
Maximum Width:	3,900 mm

Product Data

Material:	1xxx, 2xxx, 3xxx, 4xxx, 5xxx, 6xxx, 7xxx, 8xxx
Plate Thickness:	6-250mm
Plate Width:	1,070 to 3,800 mm
Plate Length:	2,000 to 24,000 mm

ACHIEVED RESULTS

Order Placement:	April 2011
Building construction Started:	July 2012
First Plate:	12 th April 2013
FAC:	September 2016

MATERIAL ACCREDITATION

Just over 12 months from when the first plate rolled the Zhenjiang plant achieved Nadcap accreditation. This was critical in moving to the final stages of qualification with major aircraft manufacturers.

The plant is now fully qualified to supply Boeing, Airbus, Bombardier and COMAC, making it one of the first facilities in Asia Pacific qualified to produce aluminum plate for the major global aircraft manufacturers.

Primetals Technologies Limited

A joint venture of Mitsubishi Heavy Industries and partners

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Brochure No.: T07-O-N224-L4-R-V3-EN

Printed in Austria

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