PRIMETALS TECHNOLOGIES

THREE STAND TANDEM HOT ALUMINUM MILL

CHALCO RUIMIN CO, CHINA

NEW TANDEM FINISHING MILL

The new mill has been supplied to Chalco Ruimin Co Ltd, Fujian Province, China

MAIN BENEFITS

- Flexible, cost-efficient rolling of a wide range of products
- Most advanced and innovative automation
- Tightest strip thickness and profile tolerances
- High surface quality
- Reliable, consistent performance
- Realising tight tolerances right from the strip head
- Maximum operating efficiency
- Integrated occupational safety concepts

Hot Finishing Mill Entry Side

Primetals Technologies were awarded this contract on the basis of technological competence and the significant number of successful project references for aluminum hot mills.

The tandem hot aluminum mill was supplied to Chalco Ruimin Co Ltd, located in Fuzhou City, Fujian province in south east China and was started up on 1st April 2011. The Primetals Technologies mill has been designed to meet Chalco's need to expand capacity to over 370,000 metric tones per annum at widths in excess of 2.2 metres, servicing the high quality strip and sheet markets, including printing, packaging and electronics.

SOLUTIONS

The new 3-stand tandem hot finishing mill is an integral part of an aluminum 1+3 hot line, the key process component of the major plant expansion planned by Ruimin.

In addition to the mechanical equipment, Primetals Technologies supplied all automation technology; the drive systems and the sensors. The automation system comprises basic automation, including the technological controllers, as well as operation and visualization equipment. Primetals Technologies also supplied the model based process automation for the complete hot line to ensure the highest standards in product quality. All mechanical and electrical components used are part of our integrated solution for aluminum hot mills. Beside the above, commissioning and customer training is also part of the contract.

SCOPE OF DELIVERY

Three 4-high stands including

- Hydraulic automatic gauge control
- Positive and negative bending
- Work roll chock mounted brushes
- ISV Sprays

Mill exit equipment including

- Edge trimmer with separate chopper
- Coiling equipment

Automation system including

- Basic automation system incl. technological control
- Sensors and measuring devices
- Process automation system
- Analytical online process models
- Profile, thickness and temperature control
- Flexible production scheduling
- Data logging and reporting system
- Comprehensive diagnostics

Drive systems

- Utilizing Sinamics SM150 and S120 converters

PRODUCT DATA

Product	Hot rolled aluminum and aluminum alloys 1XXX, 3XXX, 5XXX and 8XXX series
Max. entry thickness	40 mm
Min. exit thickness	2.5 mm
Min./Max. strip width	1,050 - 2,250 mm
Min./Max. strip width (trimmed)	950 - 2,150 mm
Max. coil weight	23 tons
Coil max. outside diameter	2,600 mm
Coil max. inside diameter	610 mm
Specific coil density	13.1 kg/mm

ROLLING MILL DATA

Mill size	Ø750/1,500 mm x 2,500 mm
Max. exit strip	460 mpm
Stand power (each stand)	5,000 kW
Max. rolling load per stand	4,000 tons

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