

ALUMINIUM COLD ROLLING MILL HENAN ZHONGFU, CHINA

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ALUMINIUM COLD ROLLING MILL



THE CHALLENGE

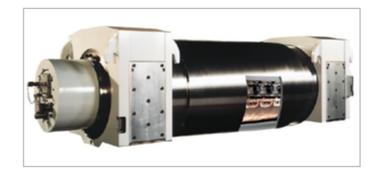
The mill supplied by Primetals Technologies is currently one of the most technically advanced and fastest heavy breakdown cold mills to be supplied anywhere in the world today.

Our solution for cold mills specifically addresses the high speed element of the mill, to process large coils at high rolling loads and the robust demands imposed by the heavy gauge cold rolling process. Furthermore, the mill has the ability to roll light gauges as part of a multi-alloy product mix that comprises soft, medium and hard strength alloys. The alloys include high added value products such as Lithographic and Canstock sheet.

THE SOLUTION

The mill features the latest cold mill technologies in all aspects of mechanical, fluid and electrical design and includes the unique Dynamic Shaperoll (DSR®) that works in conjunction with the Primetals Technologies world leading Process Control and Automation System.

The DSR* replaces the top solid back-up roll usually employed at four-high stands and provides improved flatness control, especially in the critical areas at the head and tail ends of the strip. Thus, significant improvements in overall coil yield can be achieved. At the moment, the DSR* is a unique technology being the only truly on-line dynamic actuator that is able to undertake symmetric and asymmetric changes to the roll-gap profile during ongoing production.





TECHNICAL FEATURES

- Twin Strand Pallet Conveyor Coil Handling System
- Automated Spool and Scrap Coil Handling
- Dynamic Shaperoll DSR[®]
- AGC by feedforward, feedback and mass flow
- ISV spray bars and Hot Edge Sprays
- Edge wipe system
- Constant force twin ironing roll

ACHIEVED RESULTS

- High speed rolling, speeds achieved of up to 1800 m/min
- Saleable product with a finished gauge of 0.1mm
- Excellent cold start
- Minimal length to achieve flatness & thickness targets
- Unrivalled ability to handle product changes

The Customer:

Originally sold to Chinalco/Vimetco (Joint ownership), Henan Zhongfu Recently sold and relocated to Chinalco, Ruimin

Location:

Original Location: China, Henan ProvinceNew Location: China, Fuzhou City, Fujian Province

Production:

120,000 tonnes per annum

Final Acceptance:

January 2013 As part of the Chinalco/Vimetco group, Henan Zhongfu's new aluminium cold rolling mill installed by Primetals Technologies has strengthened the position of the company in flat rolled products globally. They now have the capability of supplying a wide range of products to world class quality.

PRODUCT DATA

| Material | Aluminium AA 1000, 3000, 5000 and 8000 series alloys |
|----------------------|---|
| Entry thickness | 5.5 mm (maximum) |
| Exit thickness | 0.10 mm (minimum) |
| Width range | 900 - 2100 mm |
| Coil data | |
| | 0500 |
| Diameter | 2500 mm |
| Max weight | 24,000 Kg |
| Density | 11.4 Kg/mm width |
| | |
| Mill data | |
| Mill type | 4-high breakdown mill |
| Work roll dimensions | 470 & 1400 Diam. x 2350/2300 mm wide |
| Nominal production | 120,000 tpy |
| Max. rolling load | 2000 tonnes |
| Maximum mill speed | 1800 m/min |
| Main drive power | 5500 KW synchronous motor with SM150 voltage |

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