



**ALUMINIUM 3 STAND
HOT FINISHING MILL**
NOVELIS KOREA LTD

New 3 stand hot finishing mill expansion to Primetals Technologies existing single stand twin coiler hot mill to increase throughput.



Novelis Korea Ltd contracted Primetals Technologies to add a 3 Stand Hot Finishing Mill to a former Primetals Technologies project, their existing Hot Reversing Twin Coiling Mill at their Ulsan plant, South Korea. The Plant was originally built by Davy McKee in 1993 then purchased by Novelis (formerly Alcan) in 2000 with the single stand hot mill rolling 198,000 tonnes of coil and plate products in 2011.

The existing hot mill now operates with the new tandem mill and is used for roughing passes on thin coil products (<6mm) and for all thick coil products.

The order from Novelis followed their decision to expand in to automotive sheet production in Asia.

First Coil was rolled on 20th June 2013 on first attempt, less than two years from order placement. By October 2013 production increased with the full range of alloys rolled including 5182/5083 and over 800 coils rolled in that month.

SOLUTION

The Primetals Technologies mill was designed to ensure minimal disruption to existing line production capability during the installation phase. The new tandem mill was started up after only 10 days of shutdown on the existing hot mill.

In addition to the mechanical equipment, Primetals Technologies supplied all automation technology. The majority of the equipment was manufactured and assembled in Korea locally before installation, in order to optimise the overall project programme

BENEFITS

- Fully integrated Primetals Technologies Supply with single point responsibility
- Improved product quality (thickness, temperature, profile tolerance)
- Improved Mill throughput
- Improved flexibility of mill operations

SCOPE OF SUPPLY

- New Light Gauge Shear
- Additional Roller Tables
- New 3 Stand Hot Finishing Mill
- Hydraulic AGC Cylinders and Heavy Work Roll Bending
- Edge Trimmer and Scrap Chopper
- Coiler, Beltwrapper and Coil Handling Equipment
- Roll Coolant System including Integral Solenoid Valve Spray Bars
- Profile, Temperature and Automatic Gauge Control
- SM150 Drive Controls on Main Mill Motors

ACHIEVED RESULTS

Order Received	1st July 2011
Building Construction started	May 2012
Supervision of Installation started	1st October 2012
First Coil	20th June 2013
Final Acceptance	14th February 2014

PRODUCTION DATA

Material	Aluminium & Aluminium Alloys 1xxx, 2xxx, 3xxx, 4xxx, 5xxx, 6xxx, 7xxx, 8xxx series
Entry Thickness	60mm - 25mm
Exit Thickness	6mm - 1.8mm
Width Range	max 2250mm (untrimmed)
Slab width range	950 - 2150 mm

COIL DATA

Diameter	2500mm (max)
Max Weight	25 t
Density	12.8 kg/mm

MILL DATA

Mill Type	3 Stand Hot Finishing
Work Roll dimensions	750/700mm x 2500mm
Backup Roll dimensions	1500/1400 x 2400mm
Max. rolling load	40,000 KN
Maximum mill speed	0/180/450m/min (std3)
Main drive power	3 x 5000KW AC

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