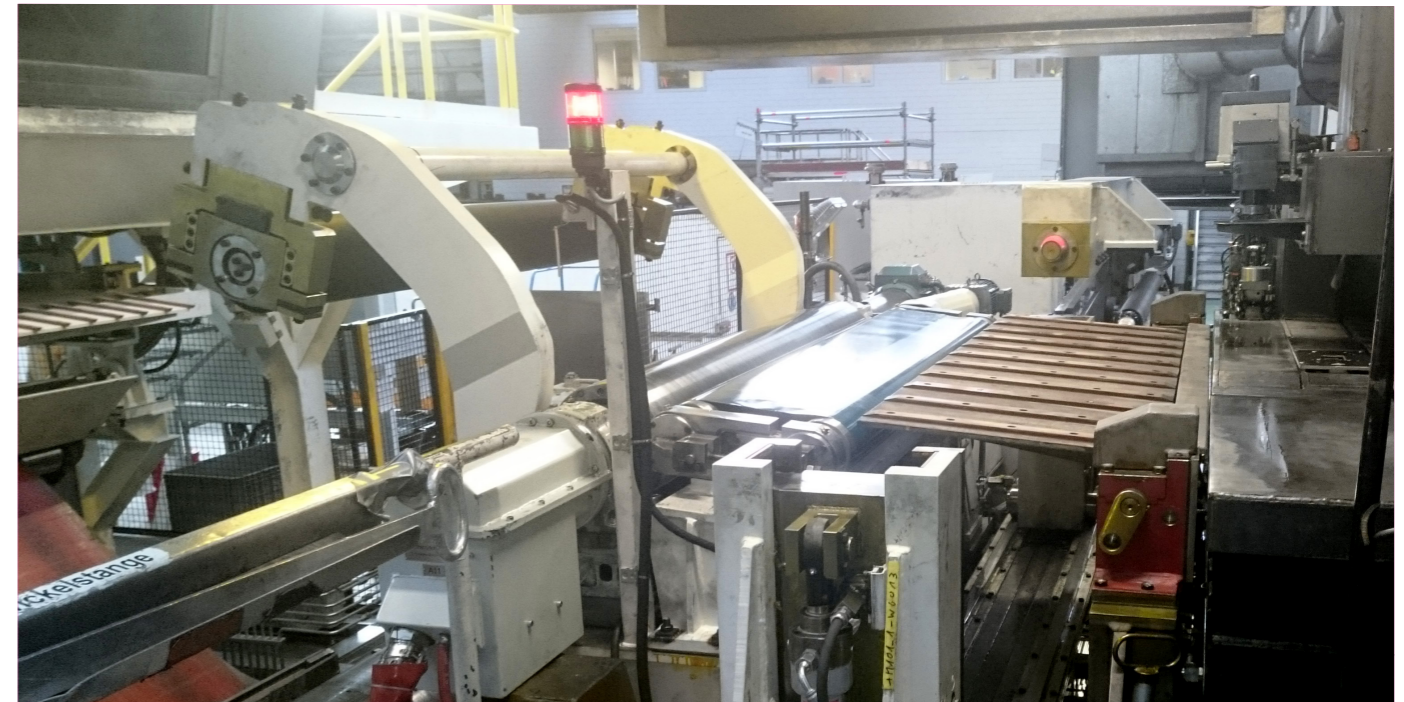


**MODERNIZATION OF A 2-STAND
ALUMINUM COLD TANDEM MILL**
CONSTELLIUM ROLLED PRODUCTS
SINGEN GMBH-QT QUARTO TANDEM

IMPROVING PRODUCTIVITY AND STRIP QUALITY

HIGHLIGHTS

- Inter stand strip cooling installed to facilitate increased pass speeds and back-to-back rolling.
- Roll coolant system modifications including new ISV spray bar for improved flatness control
- Primetals Technologies Edgewipe system installed to remove edge beading and improve surface quality
- Mill exit structure replaced including new equipment to improve the process and inspection of rolled products
- Fully integrated electrical and automation system including AFC/AGC/L2 control has greatly improved mill availability
- A reduction in off gauge material length has improved coil yield



New exit equipment

THE CHALLENGE

In February 2017, Constellium Rolled Products Singen GmbH selected Primetals Technologies to revamp the 4 high - 2 stand Aluminum Tandem Cold Rolling Mill at Singen, Germany.

As a major global supplier of aluminum flat rolled products the main aims of this investment for Constellium were to;

- Increase production volumes
- Improve product quality
- Penetrate new markets (automotive)
- Ultimately exceed the demands of the expanding aluminum market.

OUR SOLUTION

Primetals Technologies were successful in securing this project after demonstrating that;

- Only a 10 day outage period was required which greatly minimized any disruption to production
- Primetals Technologies could deliver the engineering design, manufacture, supply and installation of the equipment on a turnkey basis.
- The mill enhancements would deliver increased production volumes, improved quality and greater yield.
- The newly installed Level 2 automation system would reduce off gauge length
- In addition to our technical competence and world-class automation system we have significant experience in the successful delivery of modernization projects

FINISH PRODUCT DATA

Aluminum alloys	1xxx, 3xxx, 5xxx & 6xxx
Maximum strip thickness	3.5 mm
Minimum strip thickness	0.16 mm
Max/Min width	1850/750 mm
Coil I/D (without sleeve)	500mm
Coil max O/D	1800mm
Coil weight (max)	11,000 Kgs

EQUIPMENT DATA

Maximum mill speed	1000 m/min
Work roll sizes	360 mm (max)
Back up roll size	1020 mm (max)

SCOPE OF SUPPLY

Project management, design, and supply of key equipment for:

- Entry temperature measurement system
- Automatic coil centering system
- Primetals Technologies ISV Spraybar solution
- Primetals Technologies Edgewipe solution
- Interstand strip cooling system
- Exit temperature measurement system
- Mill hydraulic system pipework
- Mill coolant pipework
- Mill exit equipment support structure Inc:
 - New shear
 - New carryover tables
 - New ironing roll
 - New outboard bearing support arm
- New offline inspection system
- New Level 1 automation system including:
 - Mass flow thickness control
 - New ET200 process interfaces
 - New HMI
 - New roll coolant controls
 - New stand controls
- New Level 2 automation incorporating math models for automated mill setup calculation



Edgewipe



New ironing roll

Primetals Technologies Limited

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