SUCCESS STORY

Today's state-of-the-art equipment

METALS

H20-HIGH REVERSING MILL

HUGO VOGELSANG, GERMANY

ANDRITZ

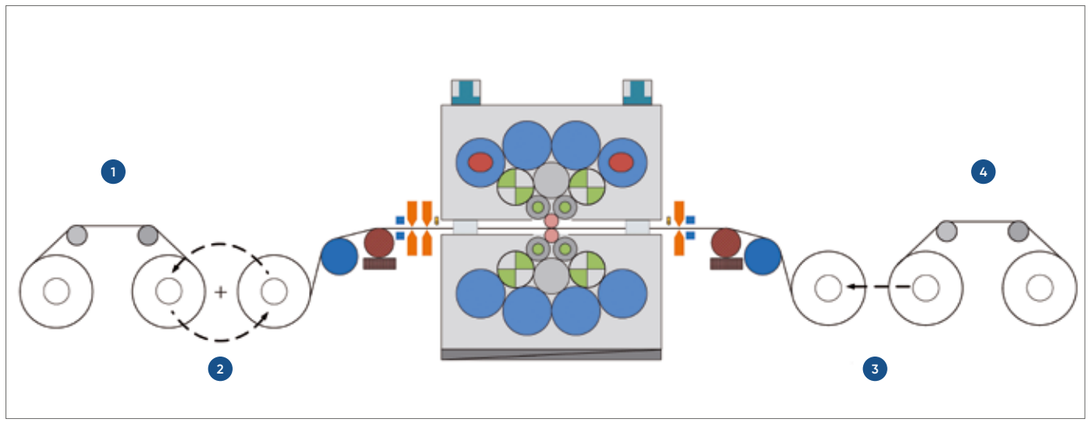
ENGINEERED SUCCESS

Modernization of 20-high reversing mill

The 20-high reversing mill at Hugo Vogelsang GmvH & Co. KG, Germany has undergone extensive modernization by ANDRITZ Metals. The complete control electronics now correspond to today's state-of-the-art equipment. Moreover, the drive and control systems have been replaced, and all drive motors completely overhauled.

A modular and digital control system consisting of automatic thickness, strip shape and strip tension controls, as well as a strip guiding system are now being used as a replacement for the previous line control system. The automation system deals with coordination of the classic sequence and media control, as well as including a technological process computer to ensure optimum production.

Operation of the line is controlled from a centralized, air-conditioned, main control stand. For this purpose, the rolling mill operator is assisted by a comprehensive process visualization system as well as a video system. Extension of the fault indication and evaluation tools permits a prompt analysis of any deviations occurring, as well as contributing to line process optimization and improved maintenance.



1 Rewinding group, left 2 Double coiler, revolver type 3 Roller-type coiler 4 Rewinding group, right

In designing the main control stand, particular attention was directed to the ergonomic design of the working environment. The hydraulic screw down of the mill and the control device for intermediate roll shifting were also renewed at the same time. The horizontally adjustable steering rolls added in the entry and exit sections enable simple rolling of wedge-shaped strip. In order to optimize the strip guiding system, the entry and exit tables were re-machined. In the mill stand itself, the cooling and spray plates were optimized and the rolling oil cooling system provided with a new filtration system.

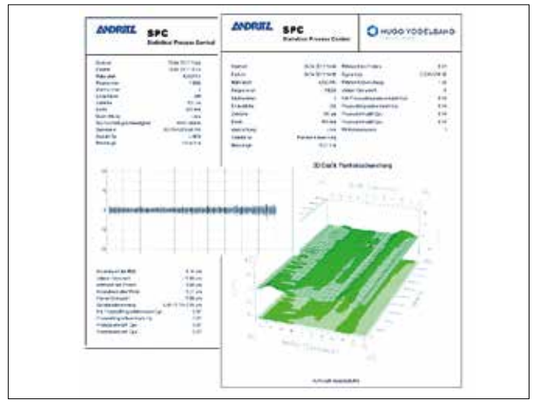
After modernization work, strip thickness deviations of 1-2 microns and strip shape deviations of 4-6 I-units were achieved. The quality reports below show the strip thickness and strip shape results during acceptance tests for a selected wedge-type strip.

MILL DATA

Customer	HUGO VOGELSANG GmbH & Co. KG, Hagen, Germany
Strip thickness	0.04–3.5 mm
Strip tensions	6–180 kN
Strip speed	500 m/min
Material	C-steels and alloyed steels
Rolling force	2,400 kN
Drive power	2 x 450 kW

OUR SCOPE OF SUPPLY FOR ROLLING MILLS

- Mechanical modernization projects
- Hydraulic screw down
- Axial shifting of the intermediate rolls
- Guide and spray plates
- Steering roll unit with shielded shapemeter roll
- Modernization of the shape measurement and control systems
- Electrical modernization of the mill stand and the rewinding groups
- Automation systems
- Technological control systems for strip thickness, roll force, strip tension, strip guiding, and strip flatness
- Drive technology
- Main control desk with process visualization and video system
- Technological process computer



Statistical process control

ENGINEERED SUCCESS FOR FLAT PRODUCT PROCESSING

ANDRITZ Metals is – via the Schuler Group – one of the world's leading suppliers of technologies, plants and digital solutions in sheet metal forming. The product portfolio also includes automation and software solutions, dies, process know-how and service. In the metals processing segment, the business area provides innovative and market-leading solutions for production and processing of flat products, for welding systems, as well as furnaces and services for the metals industry.

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