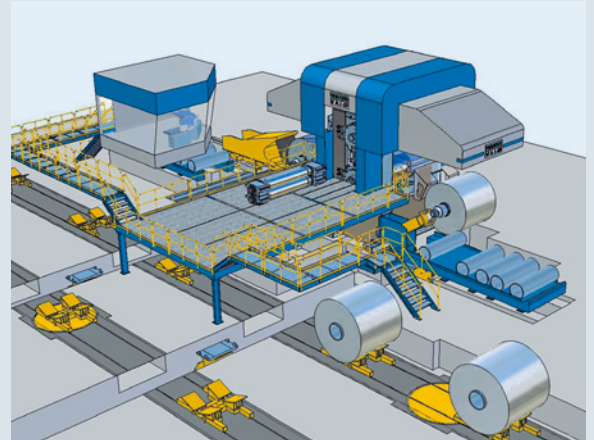


SIROLL ALU TCS

Technology package for high availability and quality control in aluminum rolling

SIROLL ALU TCS is a technology control system tailored to the demands of today's market in the aluminum processing industry. It is currently available for – but not limited to – use in aluminum cold rolling mills and foil mills.



Typical aluminum cold mill layout

Your challenge:

Even in economically challenging times, there is a large demand in the market for control systems. In particular, Chinese aluminum producers are constantly looking for this kind of investment in order to acquire improved technology for their existing or new rolling mills.

Whether it's about revamping a plant to improve quality and productivity or constructing an entirely new mill, plant operators always face similar challenges: short lead times, a smooth start-up in the shortest possible time frame, and of course achieving the requested product characteristics and quality.

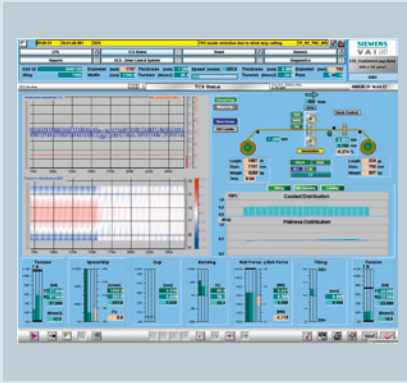
Our solution:

In order to meet these demands, Siemens Metals Technologies is offering SIROLL ALU TCS, which is based on the well-known SIROLL suite of software and system solutions.

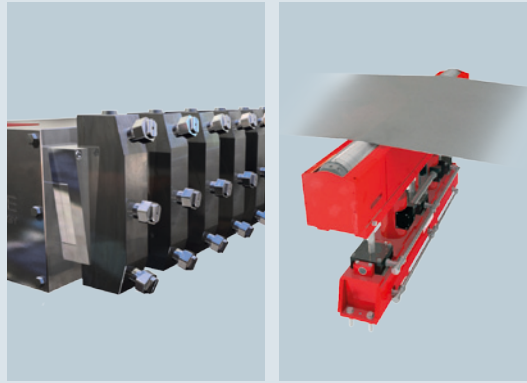
The hardware backbone is the high-performance SIMATIC TDC system, and all necessary functions are included in the compactly designed hardware and software solution.

The amount of reengineering within the basic system for a single application is reduced to a minimum by the design of the I/O environment. Thanks to the standardized, highly available hardware, projects can be accomplished in a very short time compared to self-developed solutions.

SIROLL ALU TCS has already proven its practical suitability for achieving excellent results. And more than 30 SIROLL ALU TCS for cold and foil mills are currently in progress at various stages of order execution. By choosing to use SIROLL ALU TCS, customers have chosen high product quality and a stronger competitive edge.



HMI – mill operator overview screen



Typical system components



ALU TCS control cubicle

Rolling optimization

The system includes all the features typically needed for a cold or foil mill technological application, such as:

- AGC automatic gauge control features for narrowest strip thickness tolerances
- AFC automatic flatness control features for closest strip flatness tolerances
- Stand controls for closed-loop control of the mill actuators, such as:
 - Hydraulic gap control
 - Work/intermediate bending control
 - Intermediate roll axial shifting controls
 - Selective roll coolant, including hot-edge sprays
- Intelligent pass schedule memory and organization system
- Roll eccentricity control
- Mill calibration and hysteresis test sequences

The system is able to control mills of various mechanical designs, such as 4-high mills and 6-high mills. The use of special actuators like VC rolls is also possible.

Economizing your operation

An integrated package of support functions includes everything required for an economical system that is easy to operate and maintain. These system features include:

- Engineering station with all necessary tools (SIMATIC manager)
- User-friendly HMI
- Message and alarm system
- Data recording and analysis system – PDA
- Diagnostic system
- Logging functions for the generation of various reports
- Remote-access functionality to allow support from abroad directly to the target system
- Built-in UPS (uninterruptible power supply)
- ET 200 remote I/O technology to reduce cabling

Outlook

In order to keep SIROLL ALU TCS at the leading edge, we are constantly refining the technological features, functions and available applications. SIROLL ALU TCS is a highly cost-efficient solution not only for aluminum, but also for all other types of mills.

Advantages of SIROLL ALU TCS:

- **Short realization time**
thanks to the use of standardized components with high availability.
- **Fast start-up**
due to a field-proven system with references from around the world.
- **High product quality**
SIROLL ALU TCS offers an integrated suite of quality control functions.
- **Compact design**
Highly integrated components result in a compact cabinet and allow installation even in confined areas.
- **Simple implementation**
for new mill plants as well as for upgrades, extensions and revamps.

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