



**METALS**

# **ELECTRIC & AUTOMATION**

**FOR ALL METAL PRODUCTS**

**ANDRITZ**

**ENGINEERED SUCCESS**



# Complete electrical equipment and process automation

## ABOUT US

ANDRITZ METALS Automation supplies complete electrical equipment and process automation for the metal industry. This industrial sector is facing continuously rising demands which can only be met by implementing sophisticated and cost-effective technical solutions. This objective has been achieved by introducing flex-

ible and application-oriented automation technology together with standardized modern hardware and software systems. Precise and comprehensive knowledge of the line and process technology combined with many years of practical experience have resulted in ingenious solutions enabling our customers to produce top level products in terms of quality and productivity.

## WE KNOW HOW TO RELEASE FULL POTENTIAL OF YOU PLANT

### CONSULTING

FEASIBILITY STUDIES  
INQUIRIES  
PROJECT MANAGEMENT

### MANUFACTURING

PROCUREMENT  
ELECTRICAL CABINET MANUFACTURING  
FUNCTIONAL TESTING

### ENGINEERING

FUNCTIONAL SPECIFICATION  
BASIC AND DETAIL DESIGN  
SOFTWARE DEVELOPMENT

### SERVICE

INSTALLATION  
COMMISSIONING  
TRAINING  
LIFE CYCLE SERVICE

# ANDRITZ Metals is an all-in-one supplier

Customers are accompanied from the idea to the commissioning of their processing line

ANDRITZ Metals stands for state-of-the-art solutions in the metal industry and provides experts for electrical equipment and automation in every section of the processing line. Our strengths are optimum project handling based on well-engineered and process-optimized models from L1: PLC/HMI to L2: MES, and dealing with specified and application-oriented electrical and automation solutions.

Our expertise in combination with decades of experience allows ANDRITZ to create sustainable and consistently repeatable quality. Our optimization models (in L1 and L2) enable us to incorporate the products of all renowned manufacturers of automation systems.

## ROLLING MILLS

POS	Process optimization system
PSM	Pass schedule memory
SPC	Statistical process control
MMS	Mill management system
ASC	Automatic shape control
RSMS	Roll shop management system

## PROCESSING LINES

Primary data handling
Material handling
Setup calculation
Material-/segment tracking
Report management
Archiving

## MATHEMATICAL MODELS FOR CARBON AND STAINLESS PROCESSES (ANDRITZ LINE MASTER)

ALM-CP: Carbon steel pickling	ALM-SP: Stainless steel pickling
ALM-FS: Carbon steel annealing	ALM-FT: Stainless steel annealing
ALM-OMS: Line optimization stainless steel	ALM-EGL: Advanced coating control
ALM-CurrentD: Advanced control electrolytic process	ALM-PP: Production planning

## AUTOMATION ENGINEERING

- Installation hardware engineering (CAE systems, data-base-oriented systems)
- Process instrumentation – key equipment in critical, technological processes
- Control systems – PLC, DCS, CNC – application programming
- Drives systems (single/sectional)
- HMI-systems – Siemens, Wonderware, Rockwell, ABB, Yokogawa, etc.
- Process computer systems – MES – mathematical modelling
- Advanced process control
- Simulation applications – process simulation
- Special systems – flatness, mill control, etc.

## EQUIPMENT (SUPPLY)

- High/medium/low voltage equipment and distribution
- Drives systems
- PCC/MCC
- Instrumentation and sensors for process and terminal equipment
- Automation systems – PLC, DCS, CNC, HMI
- Modelling of process computer systems
- ITV, intercom, lighting, etc.

## PRODUCTS

- Technological control systems (TCS) for ANDRITZ products
- Level 2 system – process optimization



# Industrial IoT solutions

As companies expect greater plant efficiency and increased profitability, digitalization is omnipresent now-a-days and rapidly changing the industrial world. Metris is the ANDRITZ answer to keep up with the demanding environment. Providing the opportunity to become a smart factory, Metris networks machines and applies the most advanced technologies, such as big data, augmented reality, artificial intelligence and smart sensors, to create attractive overall solutions for existing and new plants.

**Metris OPP:** Boosting performance of plants or an entire factory.

Within the Metris family, Metris OPP (Optimization of Process Performance) is a service/solution to improve the performance of metal production lines. The IIoT platform uses big data and provides digitally supported tools that ensure increased efficiency and profitability of customers' plants with guaranteed ROI and no capital investment.

## What does Metris OPP do?

The intelligent Metris platform analyzes available plant data, compares it with data already gathered, assesses the data, and then provides valuable output for business intelligence, big data analytics, quality management, augmented reality applications, and process information. These results play a vital role in increasing the efficiency and performance of

systems already installed and thus secure competitive advantages on the international market. But Metris OPP is not just a platform – it offers ANDRITZ service contracts for both on-site and remote assistance services by specialists. These support services are performed by a network of various experts according to the customer's requirements.

## METRIS OPP BUILDING ON EXPERTISE

During the past 11 years, ANDRITZ has been developing this software consistently to always ensure that the technology reflects the very latest state of the art. Since 2007, OPP has been implemented in over 40 mills and plants in Brazil, Europe, and the USA, achieving exceptional results such as a 15% performance increase. Using this solution, ANDRITZ is able to create a significant competitive advantage for our customers.

The brand name is a combination of the words metis – which in Greek mythology stands for practical, complex implicit knowledge – and matrix, i.e. arranging numerical data cybernetically to control and adjust machines. The Metris brand covers individually adapted products that generate the IIoT optimum for the customer in precisely defined steps. The technologies used are adapted to the requirements and needs of each individual customer.

ANDRITZ METALS Automation offers its products and services for carbon steel, stainless steel, and non ferrous metals.

## STRIP PROCESSING

- Push pull pickling lines
- Continuous pickling lines
- Cold annealing and pickling lines
- Hot annealing and pickling lines
- Bright annealing lines
- Hot dip galvanizing lines
- Electrolytic galvanizing lines
- Continuous annealing lines
- Continuous colour coating lines

## ROLLING MILLS

- Cold reversing mills
- Temper, skin pass, and tandem mills
- Roll grinder
- Shape tronic systems (shape meter)

## ACID REGENERATION

- Regeneration plants (HCl, mixed acid)
- Denox / Waste water treatment plants

## AUTOMOTIVE

- Punching, metals forming presses
- Welding machines

## FINISHING

- Tension leveling lines
- Coil preparation lines
- Slitting / Cut-to-length lines
- Polishing / Grinding lines
- Chemical treatment, passivation lines
- Heat treatment lines
- Leveling lines
- (Electrolytic) Cleaning / Degreasing lines

## THERMO PROCESSING

- Heating / Annealing furnaces
- Stationary and tilting bath melting furnaces
- Stationary and tilting shaft-bath melting furnaces
- Rotary drum-type furnaces
- Horizontal furnaces
- Vertical muffle type furnaces

## MODERNIZATION

- Revamps, upgrades, optimizations
- Life cycle service

## METRIS OPP BENEFITS





## **ENGINEERED SUCCESS FOR FLAT PRODUCT PROCESSING**

### **AUSTRIA**

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# **ANDRITZ**

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