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## **ELECTRICAL AND AUTOMATION SERVICE**

YOUR PARTNER FOR THE ENTIRE  
LIFECYCLE OF YOUR PLANT

# TAILOR MADE ELECTRICAL AND AUTOMATION SERVICE - FOR BETTER PLANT PERFORMANCE

## YOUR CHALLENGE

Increasing competitive pressures along with fluctuating demand create a serious impact on the price of all types of steel products. Continuously rising costs for energy, raw materials, and transport make it essential to cut both operating and maintenance costs.

Your customers' fast-changing requirements in areas like product variety demand high flexibility from your production and a powerful and well-trained maintenance team. Your electrical and automation crew play a major role in achieving these goals.

The challenge is to maintain high plant performance, which can only be achieved if an expert team is on hand with excellent skills in using the latest technologies.

A central factor in ensuring the required plant availability is to implement small changes migrations as well as upgrades in a timely manner and with minimized risks.

State-of-the-art automation technology and access to comprehensive experts' skills and support in electrical and automation systems is mandatory for flexibly adapting the cost structure, avoiding cost-intensive downtimes, and improving the quality and performance of the plant.

## OUR SOLUTION

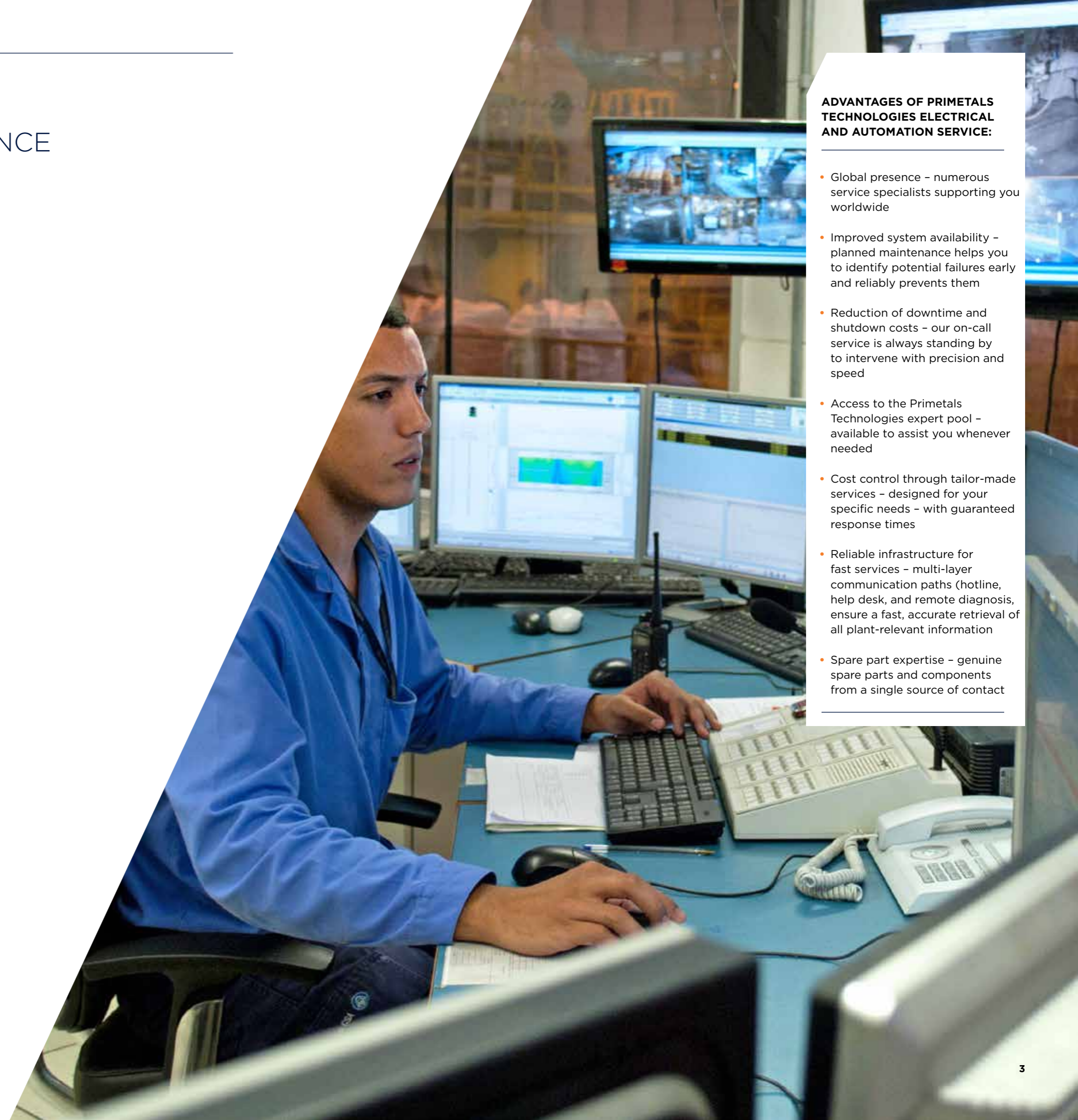
When it comes to outstanding services in automation and electrical systems, leading steel companies around the world trust in Primetals Technologies's expertise.

With experience from numerous successfully completed projects worldwide, we provide our customers with software updates, operational support from tailor-made training up to maintenance contracting, hardware migrations and modernization packages as well as spare parts acting as a single source supplier. Innovative service concepts enable smooth production and maintenance of electrical and automation systems at high performance levels while securing the optimal availability of both plant and equipment.

Our electrical and automation services provide our customers with the security they need to operate under continuously stable conditions - and make us one of the world's leading partners to the metals industry.

## ADVANTAGES OF PRIMETALS TECHNOLOGIES ELECTRICAL AND AUTOMATION SERVICE:

- Global presence - numerous service specialists supporting you worldwide
- Improved system availability - planned maintenance helps you to identify potential failures early and reliably prevents them
- Reduction of downtime and shutdown costs - our on-call service is always standing by to intervene with precision and speed
- Access to the Primetals Technologies expert pool - available to assist you whenever needed
- Cost control through tailor-made services - designed for your specific needs - with guaranteed response times
- Reliable infrastructure for fast services - multi-layer communication paths (hotline, help desk, and remote diagnosis, ensure a fast, accurate retrieval of all plant-relevant information
- Spare part expertise - genuine spare parts and components from a single source of contact



## SERVICE CONTRACTS MATCHED TO YOUR NEEDS



Primetals Technologies offers a wide spectrum of contract options – adapted precisely to your needs. Our goal is to work in close cooperation with our customers to jointly achieve a competitive edge.

The global Primetals Technologies network is a unique advantage. It ensures in many countries that a first contact can be established with local Primetals Technologies personnel. In addition, experts are available around the clock at different locations, where customer requests are registered, correctly distributed, and resolved.

### TROUBLESHOOTING

In the case of an unexpected shutdown, Primetals Technologies customers can rely on prompt and experienced support from experts. For plant operators, it is important that troubleshooting and debugging is closely coordinated with operations and that repair services are executed quickly and reliably. This is exactly what electrical and automation service from Primetals Technologies offers: smooth execution, involvement of local personnel, and reliable solutions using the latest technology.

### REMOTE DATA ANALYSIS

To supplement operator inspections, at regular intervals Primetals Technologies experts together with discrete software and hardware components analyze dedicated data sources like values, KPIs, measurement logs and application logs using an encrypted connection. If the data show irregularities that require countermeasures or indicate potential operational disturbances, Primetals Technologies experts inform you immediately and make recommendations for solving the problem.

### REMOTE SERVICE CAPABILITY

Remote access is a prerequisite for services like remote diagnosis and remote data analysis. It allows the Primetals Technologies service specialists to provide expert support from anywhere in the world. A reliable and secure encrypted connection through the internet provides the basis for remote services.

### SECURITY HAS PRIORITY

Remote sessions can only be initiated from the customer's end. This provides a reliable means of preventing unauthorized access to the customer's plant. Comprehensive logging of all activities ensures additional security.



Automation support via remote connection

### CHANGES, ADD-ONS, MODIFICATIONS

The need to improve existing functions or even add new ones normally arises in the course of operating any automation system. This ongoing process ensures that the system continues to fulfill your requirements, and usually extends its lifespan.

#### Typical examples of these kinds of changes are

- Modification of existing reports or creation of new ones
- Modified or additional HMI (Human Machine Interface) screens
- Modified communications with external systems
- Modifications to functionality

Depending on their complexity, the changes are executed either via the remote connection or on-site. Highly qualified specialists in the relevant application areas perform the changes in close cooperation with the customer.

### ON-CALL SERVICE/CORRECTIVE MAINTENANCE

Our on-call service guarantees preferred access to Primetals Technologies specialists through dedicated points of contact, where problems can be tracked through help-desk support and remote diagnosis. We can also send a specialist delegation to your site in line with the contractually agreed service, response, and ready-to-travel times.

#### On-call service is carried out utilizing

- Help-desk support/hotline
- Remote diagnosis
- On-site fault elimination

#### For the following possible areas

- Drive systems
- Basic automation solutions
- Process optimization solutions
- Technological packages

### PLANNED MAINTENANCE AND SERVICE CONTRACTS

A crucial element in cost- and quality-efficient plant operation is the best possible utilization of planned maintenance shutdowns. Well-organized plant shutdowns ensure that high performance levels will be maintained. Primetals Technologies electrical and automation engineers are always ready to assist you in planned maintenance shutdowns.

### MAIN BENEFITS

- Increased plant availability
- Secure expert's knowledge regarding complex functions and components
- Access to global Primetals Technologies service network with the integration of local expertise
- Contractually agreed response times

# OPERATIONAL SUPPORT EXPERTISE AT YOUR SERVICE



Training session at Primetals Technologies Linz

**Primetals Technologies provides a full range of operational Consulting support to ensure that your electrical and automation systems operate at a constantly high performance level over the entire lifespan of your plant.**

**We offer our experience, our technical expertise, and our global network of workshops in the fields of**

- Training, consulting, and technical assistance
- Maintenance contracting
- System upgrade, modernization, and migration packages

## TRAINING

The capacity of your human resources to maintain and extend their expertise determines the successful operation of your plant. Continuously maintaining and improving this capacity is a major management issue that requires ongoing attention.

Our services may include the design of concepts for initial, basic, and continued training, effective programs for classroom training, on-the-job training, and the provision of the training itself. Training in automation systems lays the foundation for your personnel to enhance their expert use of these systems.

## MAIN BENEFITS

- Tailor-made training packages
- Improved overall performance due to skilled personnel

## PLANT EVALUATION

Changing market requirements and competition force all steel producers to continuously evaluate, maintain, and improve their sales position. Funds for investments are not unlimited, and priorities must be defined. Managers need to know the plant areas where investments are most urgently needed, will yield the shortest return on investment, and contribute most to a sustainable and competitive operation. The bottlenecks in production lines must be identified and decisions made on whether upgrading or replacement of electrical equipment or automation systems will be most effective.

To help resolve these issues, Primetals Technologies offers a full range of consulting services for the entire industry that includes audits of the technological and economic performance of operations and maintenance and recommendations for improvements.

## MAIN BENEFITS

- Provision of facts and figures for efficient management decisions
- Identification of equipment deficiencies, bottlenecks, and investment priorities
- Definition of performance improvement potentials
- Special focus on energy-efficient solutions



Component check in a PLC

## TECHNICAL ASSISTANCE

Our experienced specialists can provide technical assistance and comprehensive support in the efficient and sustainable introduction of metallurgical production processes for both improved product quality yields and new steel grades. As your partner, we help you implement more effective operation and maintenance procedures to achieve an optimized use of installed capacities in addition to start-up support for new facilities.

Dedicated engineers are available to assist company personnel in detecting, analyzing, and solving all electrical and automation-related problems.

## MAIN BENEFITS

- Assistance of highly skilled engineers
- Fast support by utilizing local Primetals Technologies resources with the backup of Primetals Technologies headquarters
- Secure, expert knowledge of complex functions and components

## CONDITION MONITORING

The key to successfully improving the efficiency of a manufacturing facility or its individual equipment is the collection, analysis, and interpretation of all relevant data. A fully integrative condition monitoring system - in conjunction with a competent lifecycle service - helps to visualize the plant's condition and serves as the basis for predictive and focused maintenance activities. The resulting avoidance of unplanned downtimes and equipment damage leads to an increase in the overall productivity of the facility, while also keeping product quality and operation at a high level.

Primetals Technologies offers an innovative condition monitoring system that integrates information from several automation levels in order to provide the best description of the condition of functions, equipment, and even complete plants. This system is designed for the metals industry and combines the specific expertise of a process turnkey supplier and the technological skills of a leading automation solutions provider in this industry.

## MAIN BENEFITS

- Increased plant efficiency - by reducing the number of unplanned downtimes
- Flexible monitoring system - based on a modular, scalable, and integrative design
- Additional analyzing functions - designed for the metals industry
- More focused maintenance and operation - thanks to qualified messages
- High quality data collection - condition monitoring as a source for data streaming tools
- Virtualization - the condition monitoring system runs on industrial PCs and even on virtual machines

# LIFECYCLE SUPPORT

## EXTENDING THE LIFE-TIME OF YOUR ELECTRICAL AND AUTOMATION SYSTEMS



On-site services in the continuous casting control room, voestalpine Stahl GmbH, Linz, Austria

**Primetals Technologies – where the most modern production technology meets the increased demand for product quality. Our worldwide experience in the area of electrical and automation systems provides our clients with innovative technological upgrades for their manufacturing equipment.**

### SYSTEM UPGRADES

Primetals Technologies offers economic upgrading and optimization packages reflecting state-of-the-art solutions. Small upgrades are the right way to extend the lifespan of your automation system. By making small, cost-effective upgrades or replacements, you can bring your components in line with the latest technology. These types of improvements typically require minimal plant downtime, or none at all – and your plant will remain competitive in the marketplace.

### MIGRATION AND AUTOMATION UPGRADE

The overall process of migrating existing automation platforms is a complex procedure that requires in-depth system expertise as well as extensive technological knowledge of the processes involved. Primetals Technologies offers a full scope of services, from a simple assessment of the existing system through the development of upgrade concepts to the full implementation of upgrade projects.

### MAIN BENEFITS

- Enhanced life-time of the automation system and the overall installation thanks to ongoing improvements
- Seamless integration of new technologies and standards
- Ensured and extended maintainability (spare parts, resources)

### MODERNIZATION

Primetals Technologies offers you modernization solutions tailored to your needs. Updates and migrations of your existing plant automation system not only increase availability and productivity but also lower operating and maintenance expenditures, safeguarding your investment and making your plant ready for future production requirements.

Primetals Technologies has a long tradition of providing the metallurgical industry with both integrated systems as well as individual technological and automation packages. Based on the modular design of our automation solutions, it is possible to install these packages as stand-alone versions or embedded into existing environments. Their easy integration into existing software configurations eliminates the need to replace the entire automation system and enables major performance improvements with small investments. In-house experience in software and hardware engineering is the key to achieving the fastest project implementation and start-ups.

Having Primetals Technologies upgrade your automation system gives you access to a number of new functions and technological features that can boost the performance of your process. Our comprehensive capability as a single-source provider minimizes downtime and risks during the upgrade process.



In the recent years Primetals Technologies sets a high value to develop maintenance and service packages which have to be cost-efficient, increases productivity as well as quality and reduces energy consumption. On this page you can find a selection of recently released solutions. Feel free to ask us about the full range of our maintenance packages.

### FLUID GUARD

Within steel plants cooling by water is the most commonly used method to protect system components from overheating. Water in contact with liquid steel is one of the most dangerous combinations during the liquid metal phase, Fluid Guard prevents such cases for safe steelmaking operation by providing fully automatic monitoring and controlling of the water cooling circuits. Early detected leakages prevent heavy injuries or plant damages and therefore can also prevent of excessive maintenance and repair works.

The system detects water leakages, pipe/hose break detection and excess accumulation and debris in pipes. Any variations in process conditions are detected and immediate measures are performed through continuous monitoring of temperature, pressure, flow, stability and supply and heat transfer. Furthermore Fluid Guard includes an automatic self-diagnostic system.

### BENEFITS

- Reliable production by safety oriented detection of water leakages in cooling circuits
- Easy system integration into existing cooling circuit
- Continuous, automatic diagnostic of system function
- Continuous monitoring of cooling supply lines



### ACOUSTIC EXPERT

The Acoustic Expert System represents a simple to use and configurable acoustic diagnostic tool for any kind of observable noise which can appear in an industrial plant.

In industrial plants a lot of different equipment is used which has to be monitored and checked with high effort and different sensor strategies to guarantee its proper function ability. The new Acoustic Expert system is based on measuring noise, an important property emitted by almost every device or process. With this acoustic diagnostic system, monitoring a plant becomes a new dimension. Independently from all other sensor strategies now automation solutions “get ears”.

### BENEFITS

- Support for maintenance staff
- Minimal hardware costs
- Easy integration in existing automation, thus no plant-shutdown for setup is needed
- Immediate feedback to control system

### OTHER RELATED PRODUCTS

- Advanced Tracking System for ladles, slag pots, scrap chutes and baskets or any other vessel to be tracked
- Precon for energy saving at electrostatic precipitators in steel plants
- Wiplant for wireless process data capturing and logistics optimization using a combination of sensors with safe data transmission system
- Bagfilter Control for smart bag filter cleaning

## SPARE PARTS AND COMPONENTS

### EFFICIENT SUPPLY OF ELECTRICAL AND AUTOMATION SPARE PARTS



The Primetals Technologies spare part service ranges from supplying individual parts to acting as a single source for your entire spare parts management system and all spare parts are of the highest quality.

Being able to count on having spare and wear parts available is extremely important to plant operators. Thanks to the Primetals Technologies network, we can ensure that the right spare parts are delivered at the right time. This means that we can significantly reduce your plant's start-up times as well as downtimes.

Especially in cases of emergency, we are able to realize the shortest possible delivery times. For selected critical spare parts, Primetals Technologies will provide advice and support to our customers on a 24-7 basis, and our worldwide support centers ensure that the right experts are on hand to deal with every concern. Primetals Technologies delivers either original manufacturer components or, if these are no longer available, appropriate replacement parts. Spare part monitoring can be offered in combination with a cost-efficient migration strategy developed together with the plant operators. Specific spares & component lists are available for each process unit.

#### MAIN BENEFITS

- Comprehensive knowledge of installed equipment from the original supplier
- Reduced purchasing administration by using a single point of contact
- Proven replacement strategies
- Reliable spare part quality and logistics



Lomas gas sample probe with cooling jacket



Mold level sensor



Thermocouple type K



**PRIMETALS  
TECHNOLOGIES**  
YOUR  
PARTNER FOR  
ELECTRICAL &  
AUTOMATION  
SERVICES

**Primetals Technologies Austria GmbH**

A joint venture of Mitsubishi Heavy Industries and partners

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