

Operational technology and control systems to **transform** the mining value chain



mipac

beyond the solution

27+ yrs

servicing the
mining industry

720+

projects
delivered

110+

site/plant
operations

55+

countries around
the world



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We are very pleased with the performance of the smelter. The achievement of over 100% of nameplate capacity in just three months from startup is unprecedented. It is a credit to the design and project teams, and illustrates the strong capabilities of the whole Mipac team.

Chairman and CEO
Leading North American
Mining Company

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From Expertise to Innovation: Mipac's Proven Mining Solutions

At Mipac, we bring decades of hands-on experience and best practice technology to every mining, metals, and minerals project. With a strategic presence around the globe, we support our clients in addressing industry challenges like rising energy costs, declining ore grades, and the need for sustainable operations.



By leveraging global expertise in process automation, operational technology, and mineral processing, we're not just solving problems – we're driving performance.

Whether it's optimising legacy systems, improving data quality, or implementing next-generation digital technologies, our approach is tailored to deliver cost-effective, high-impact solutions.

With established relationships with industry leaders such as Anglo American, Glencore and First Quantum Minerals, we understand the evolving needs of mining operations and are well-positioned to help you increase productivity, reduce operational costs, and optimise performance.

Our team is committed to transforming operations through automation, digitalisation, and workforce development, ensuring that your operations are prepared for the future of mining.

Count on Mipac as your trusted advisor, delivering proven solutions that make a difference – locally and globally.



Advanced Process Control

Advanced Process Control (APC) uses software logic to capitalise on the full value of modern process control. These techniques increase plant efficiency and make it easier to meet your variability reduction goals, helping you avoid the constant firefighting that wastes operations and maintenance hours.

- APC readiness
- APC design and implementation
- Advanced Regulatory Control (ARC)
- Artificial Intelligence (AI)/ Machine Learning (ML)
- Multi-variable Model Predictive Control (MPC)

Industrial Automation

We design, commission, configure and optimise process control environments so that downtime and risk are minimised.

Our team of specialist control engineers are adept at implementing and commissioning robust, reliable systems and can support both large-scale continuous process operations and smaller individual challenges.

PLC, DCS, SCADA, Control Systems Virtualisation Industrial Networking and Cybersecurity

- Automation feasibility studies
- Communication and network design
- Configuration of field devices and network components
 - Control system modernisation
 - Training and e-learning
 - Distributed control systems
 - Edge control
 - Factory and site acceptance testing
 - Fieldbus design and configuration
 - Human machine interfaces
 - Industrial networking
 - Integration and commissioning services
 - Main Automation Contractor



Asset Performance Management

Predictive maintenance tools have become indispensable in modern asset management. Leveraging advanced asset health management software, these tools continuously monitor equipment and infrastructure. By analysing data patterns and anomalies, they predict potential failures before they occur.

If you are looking to unlock the full potential of your assets, our solutions engineers work with the latest software to provide a comprehensive solution for monitoring, diagnosis, and reliability management in mining process operations.

- Real-time asset health monitoring
- Asset reliability and performance
- Predictive maintenance
- Prescriptive maintenance
- Maintenance planning support tool

Data Visualisation & Analytics

We provide solutions that transform data into actionable information, enabling you to unlock your operation's total value.

From complete digital platforms to business intelligence, monitoring systems and beyond; our solutions deliver practical, continuous operational improvements that demonstrate a clear, long-term return on investment.

- Process historians
- Enterprise historians
- Predictive analytics
- Cloud solutions
- Business Intelligence (BI)



Process Optimisation

Our experienced and dedicated team has global experience in metallurgy and the mining value chain and can leverage the collective knowledge of Mipac's instrumentation, control system and production system engineers to help you achieve sustained, increased productivity, efficiency and reliability.

- Advanced reclaiming control
- Alarm audits
- Bottleneck optimisation
- Downtime monitors
- In-loading and out-loading optimisation
- Integrated asset modeling
- Metallurgical accounting
- Performance monitoring
- PID loop tuning
- Plant constraint control
- Process and infrastructure audits
- Process modeling
- Production optimisation
- Sequencing and process start ups

Cybersecurity

Since the start of the COVID-19 pandemic, cyberattacks have surged on operational technology systems, with more potential for huge impact on mining operations. Our OT cybersecurity experts support clients in securing and protecting their critical infrastructure.

- Application and cloud security
- Critical infrastructure security
- Internet of Things (IoT) security
- Industrial network design
- Cybersecurity audits and implementation
- Intrusion detection
- OT system administration
- System virtualisation



Mipac Software Products

TCard

TCard is task management software tailored for 24x7 mining operations, simple as a whiteboard and robust as the most advanced task management software.

TCard adapts the proven principles of Kanban for shift work to the specific needs of 24x7 industrial operations with continuous shifts and multiple processing areas across the plant.

Unlike traditional methods like whiteboards and messaging apps, TCard's shift-focused, real-time digital task boards are designed for the continuous nature of mining operations, ensuring no critical tasks are missed and minimising avoidable downtime.

- Comprehensive task tracking
- Consistent operational procedures
- Real-time coordination and escalation
- Operational performance insights

MPA

MPA transforms mineral processing operations with a software suite for live visualisation of plant processes and timely detection and accurate frontline response to production deviations.

This approach empowers the frontline team to make informed decisions on time and ensure minimum production losses, avoiding the need to wait for directions in the next production meeting.

Apps now available

- Logsheets
- Golden State
- Digital TARP
- Alarm Manager
- Loop Performance
- Production Reporting
- Production Monitor



Mipac Hardware Products

Copper Monitor™

Copper Monitor™ provides continuous, online monitoring of copper concentration in electrolytic solutions, reducing the need for manual chemical analysis.

When integrated with operation-wide control systems, the monitor helps reduce operational costs, increase productivity and ultimately improve the quality of production.

ShortMeter™

Our ergonomically designed, lightweight, easy-to-use device enables quick detection of short circuits and dead plates in electrolytic tankhouse operations.

This low-cost and low-maintenance device will help you increase productivity and improve production quality.

CellView®

Mipac's transformational wireless cell voltage monitoring system, CellView®, optimises mineral processing operations and detects short circuits early, assisting in the production of high-quality outputs while continuously and accurately monitoring the health of a cell.



Electrical and Instrumentation

With an expert team of electrical and instrumentation engineers, our services range from initial design of solutions and infrastructure to the selection, design, implementation and support of E&I systems.

- Arc flash calculations
- Brownfield cut-overs
- CAD design drafting
- CCTV design
- Classroom and site-based training
- Customised control panels and MCC design and drafting
- Earthing design
- Electrical equipment integration into supervisory control systems (SCADA)
- Electrical systems design and investigations
- Ethernet radio-telemetry systems
- Fieldbus systems including Probus PA
- Functional safety design
- Hazard and operability study
- HAZOP/HAZOP
- Industrial network design
- Instrument design and calibration
- Lighting and small power design and drafting
- LV drive control design
- Motor protection design
- Performance testing/optimisation
- Power systems design for control and computer equipment
- Procurement, expediting and inspection
- Project documentation
- Safety and obsolescence audits
- Site acceptance testing and commissioning
- Switchboard design
- Troubleshooting and fault diagnosis

Operations Support

From entire process control systems to single components of a plant, Mipac's team are experts in commissioning, plant start-up and providing ongoing support.

Commissioning Plant | Ongoing 24/7 Operational Support | Remote Support | On-site Support

- Alarm analysis, management and rationalisation
- Commissioning and return to service scheduling and coordination
- Development of operational procedures and practices
- Electrical safety audits for surface and underground plant and equipment
- Maintenance support for the lifetime of the plant
- Operational event analysis and problem resolution
- Operator training
- Optimisation of control systems on critical plant items
- Plant performance review, analysis and optimisation
- Project engineering, construction, supervision and commissioning of plant modifications
- Remote support
- Technical support and site visits

Mining 4.0 Consulting

At Mipac, we combine extensive mining experience with the latest digital technologies to create intelligent solutions that maximise productivity across every step in the mining value chain. Our global team of experts diagnose and design high-quality automation systems to help reduce variability and drive operational excellence.

- Control philosophy development
- Digital architecture consulting
- Digital maturity assessments
- Digital transformation roadmaps
- ESG monitoring and reporting
- Industrial Internet of Things (IIOT)
- Change leadership
- Multi-variable Model Predictive Control (MPC)
- Advanced Process Control (APC)
- Advanced Regulatory Control (ARC)

With a world-leading reputation in process control and automation for the mining, minerals and metals industry, Mipac has a long history of solving operational problems, minimising risk and driving productivity.





mipac

At Mipac we go
beyond the solution



We believe in working together with our clients and partners to achieve their goals.

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