GRYF
Manufacturer of Electronic Measuring Instruments

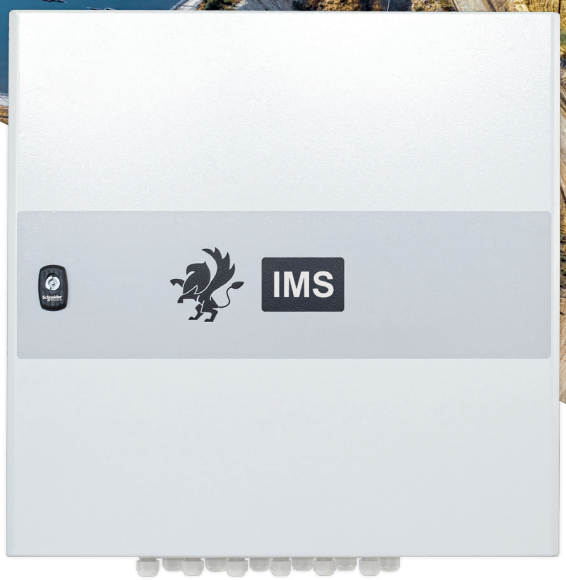
WATER QUALITY MONITORING IN THE MINING INDUSTRY

pH

Dissolved oxygen

Conductivity

ORP



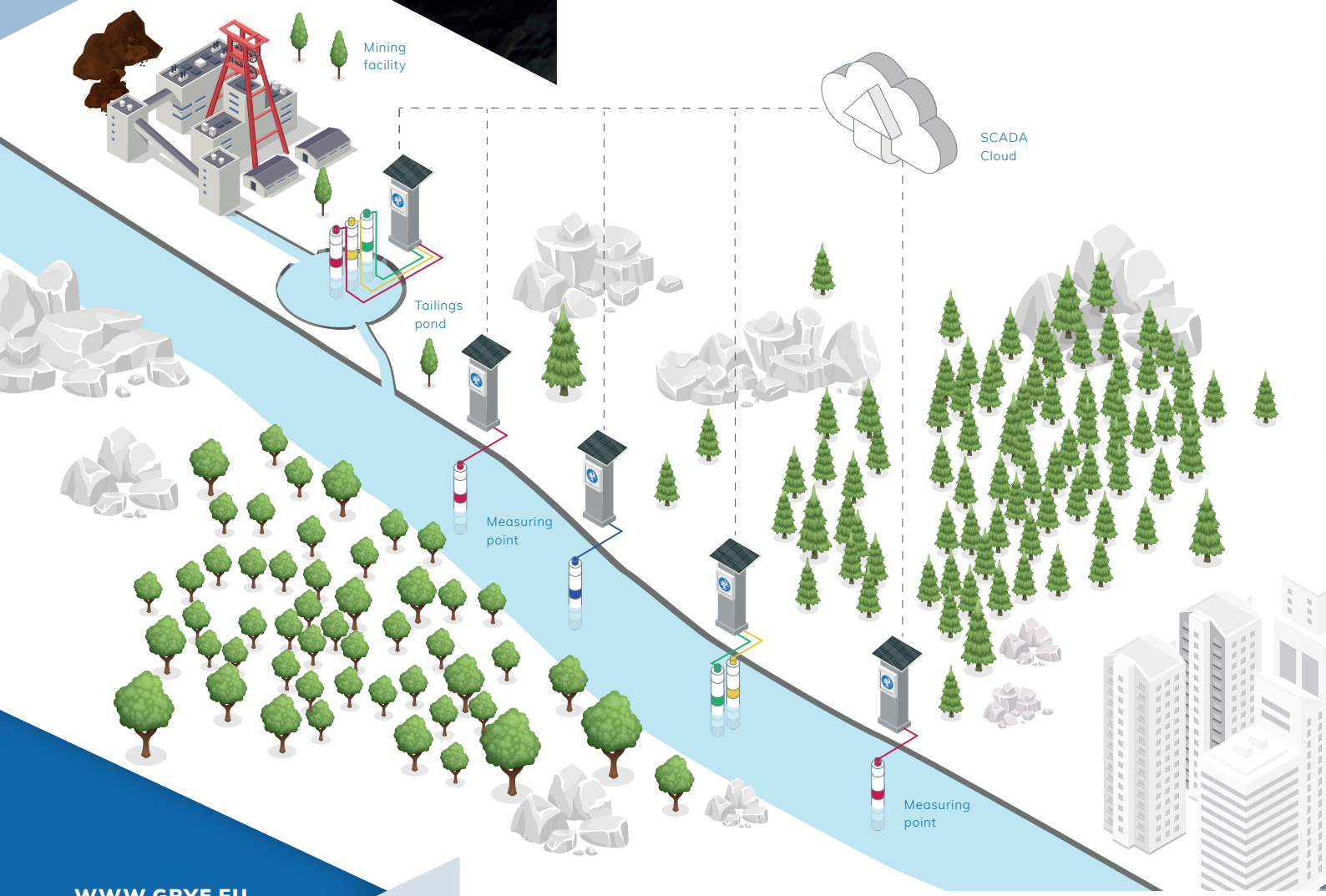
WWW.GRYF.EU

Development and production of professional electronic equipment since 1990.

WATER MONITORING IN THE MINING INDUSTRY

Continuous monitoring of water quality in mines, during reclamation and reprocessing of rocks, and after water is returned to the environment is the key to a responsible, efficient and sustainable way of mining.

- Monitoring water quality in the mine environment
- Control of water generated during reclamation and rock retreatment
- Monitoring the degradation of mining traces in surface water



WWW.GRYF.EU

Development and production of professional electronic equipment since 1990.

SCADA AND EARLY WARNING SYSTEM

The measuring system supplied by us is used for real-time water quality monitoring purposes. In mines, tailings ponds and watercourses where wastewater is subsequently discharged, the customer has a continuous overview of key water parameters. The mine site management thus has a continuous overview of key water parameters.

- **Compliance with laws and regulations** – Monitoring water quality in mines and tailings ponds is essential to comply with strict laws and regulations that set allowable pollution levels for discharged water.

- **Environmental protection** – Controlling the quality of water in mines and tailings ponds and the water that is discharged back into the environment helps minimize the negative impact of mining and industry on surrounding ecosystems.

- **Accident prevention** – Monitoring water quality can help prevent accidents and incidents such as industrial accidents, watercourse contamination or groundwater contamination.

- **Improved reputation** – Monitoring water quality can help a company meet its environmental commitments and show that it is committed to sustainable development and reducing its environmental impact. This can improve its reputation and increase its credibility with clients, investment funds and other stakeholders.

- **Operational optimization** – The measurement system helps determine exactly how the operation is affecting water quality in mines and tailings ponds and allows the operation to optimize its operations to minimize its impact on the environment.
- **Cost reduction** – Water quality monitoring helps identify areas where water treatment costs can be reduced or water and energy consumption in industrial processes can be optimised.
- **Improving safety** – Measuring water quality allows potential problems to be identified and addressed before something serious happens, increasing operational safety.

FLAWLESS CONTROL

The system allows precise measurement and various degrees of automation – from pump control to oxygenated water saturation to chemical dosing.

ISM extends mine management to include wide-area water quality monitoring, joint supervision of multiple mines simultaneously, and a high level of integration with third-party systems such as public early warning platforms in the event of a hazardous spill.

MONITORING UNIT IMS ROVER

IMS Rover includes PLC, an industrial computer and a GSM/LTE router. Optional accessories include an additional antenna system, solar collector and battery.

Enclosed in a metal enclosure, it resists freezing, tropical heat, water and dust in accordance with the IP66 standard. Up to 12 multi-parameter probes can be connected to the system, and an equal number of relays can be connected to control valves or other active elements.

Energy consumption of only 10 Ah/day allows the use of compact solar collectors.

WWW.GRYF.EU

Development and production of professional electronic equipment since 1990.

CONDUCTIVITY

- Water quality for industrial use
- Water pollution by salts
- Safety (high concentrations of dissolved salts in mine water can lead to electrolytic reactions and the formation of dangerous gases such as hydrogen cyanide)

PH

- Solubility of metals
- Protection of mining equipment
- Rock quality indicator
- Water management

A submersible probe for measuring water salinity

Electrodes manufactured from highly-durable carbon composite

Also suitable for use in polluted solutions

A submersible probe for measuring water pH

External gel electrolyte supply tank

Multi-level reference system

Minimum operating costs

Highly durable housing

Enhanced biofouling resistivity

ORP

- Indication of potentially harmful substances
- Prevention of corrosion
- Disinfection control
- Worker safety

DISSOLVED OXYGEN

- Corrosive aggressiveness of the environment
- Stress on the biosphere
- Optimisation of process control
- Meeting legislative requirements

A submersible probe for measuring water ORP

Enhanced biofouling resistivity

Long service life

A submersible probe for measuring the amount of dissolved oxygen in water

Measurements taken independently of water currents around the sensor

Robust and easily replaceable optical sensor – CAP

Not sensitive to the presence of H_2S or CO_2 gas

Minimum operating costs

Highly durable housing

WWW.GRYF.EU

Development and production of professional electronic equipment since 1990.

GRYF

Manufacturer of Electronic Measuring Instruments

ABOUT US

We are a modern Czech company with 30 years of in-house experience and manufacturing professional measuring equipment. Our equipment enhances the efficiency, user-friendliness and reliability of industrial operations in a variety of applications.

CONTACT

+420 569 425 024
info@gryf.cz
www.gryf.eu

ADDRESS

GRYF HB, spol. s.r.o.
Čechova 314
580 01 Havlíčkův Brod