

Advanced water drainage control for efficient ore extraction

LLP Bakyrchik Mining Venture trusts Endress+Hauser measuring technologies



Polymetal is a major manufacturer of silver and one of the largest gold mining companies. LLP Bakyrchik Mining Venture is a subsidiary of Polymetal and the operator of the gold mining project Kyzyl located the North-West Kazakhstan and reckoned as a world-class asset: its reserves are estimated at 280 tons of gold with the average grade of 7.7 g/t. The capacity of the quarry is 2 million tons of ore per year; the mine capacity is 1.2 million tons.

«We are impressed with the reliability and easy maintenance of Endress+Hauser instrumentation. The combination of extensive product portfolio and expertise in customized solutions ensured us that we've chosen the right partner.»

Yuri Ovchinnikov, Managing Director
LLP Bakyrchik Mining Venture,
Ust-Kamenogorsk, Kazakhstan



Yuri Ovchinnikov



Mining project Kyzyl in the North-West Kazakhstan

In a challenging mining environment, one of the main tasks of the companies is maximizing operational availability. The use of reliable Endress+Hauser instrumentation helped Bakyrchik Mining Venture to optimize the mine drainage process and reduced ore extraction downtime.

Customer challenge LLP Bakyrchik Mining Venture had to drain an unused mine, as water leaked into the quarry and hindered ore extraction.

One of the major requirements towards measuring devices was high accuracy of measurement to regulate water draining process parameters. The implemented system had to be very reliable and require minimal maintenance, so that the personnel could configure it quickly and easily in the stand-by mode.

The customer needed a reliable partner able to provide support at every stage of the project.

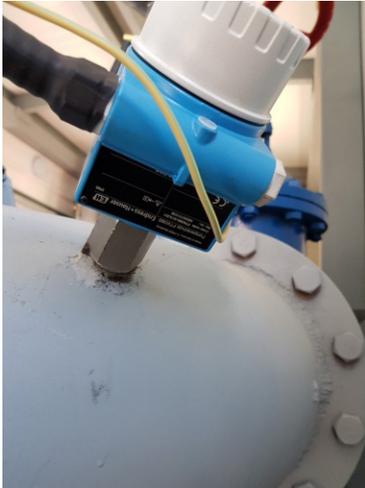
Our solution A representative of Endress+Hauser, LLP DIM Sroy, designed a mobile pumping station for transportation in field conditions.

The use of reliable Endress+Hauser instrumentation helped to build pumping station to support the following process tasks:

- Pressure control at head
- Outlet flow control
- Inlet and outlet level control

The robust design and the reliable functionality of devices guaranteed smooth operation of the pumping station and optimally accelerated the mine draining process, resulting in increased ore production in the dry quarry.

The result



Conductive point level detection and dry run protection of the pumps with compact flush-mounted probe FTW360.



Energy-saving flow measurement without pressure loss due to cross-section constriction. Promag L 400 reduces installation costs thanks to flexible mounting by lap-joint flange concept.



Digital pressure transmitter Cerabar PMC51 guarantees high degree of system safety thanks to vacuum-proof ceramic membrane with integrated breakage detection.



Compact, fast and precise thermometer Easytemp TMR31 ensures reliable bearing temperatures control.

Customer benefits

- Accurate measurement for smooth control of the mine draining process.
- Downtime reduction.
- High system reliability and availability to operate the pumping station under the control of a single person.
- Maintenance by Endress+Hauser technicians is required no more than once a year.

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