Water Treatment Solutions

Water Treatment in Mining Industry
Contaminated mine water is generated when rock containing sulphidic minerals is exposed to water and oxygen, resulting in the production of acidity and high concentrations of metals and sulphate in the water.

Mine drainage, process water and storm water associated with industrial activities are the main types of water produced in mining operation. The two primary aims of the treatment of contaminated mine water are to neutralize acidity and removal metals.

Lenntech provides sustainable complete water treatment solutions for mining industry considering a wide range of technologies and strategies.

APPLICATIONS
- Waste water reuse/recycle
- Waste water minimization
- Brine minimization

OUR SOLUTIONS
- Sulfate removal
- Heavy metals removal
- Desalination / Demineralization
- Zero liquid discharge (ZLD)

OUR ADVANTAGES
- Engineered and custom designed solutions for unique water and equipment needs
- Turn-key solutions including design, engineering, manufacturing, automation, installation, maintenance and training
- State-of-art technologies for effective water and wastewater reuse
- Full team of engineers for best on-line assistance and on-site service and support
- Worldwide operation and assistance with all language capabilities to support local projects
Lenntech Reverse Osmosis technologies will allow a recovery of up to 65-85% of the waste water producing a clean water stream with high quality standards that can be re-used in other processes or safely discharged in the environment.

Depending on the desired final water quality, there might be required technologies to remove dissolved minerals, like reverse osmosis and other membrane filtration, ion exchange, electro-deionization, adsorption media.

The reverse osmosis brine can be ultimately treated with evaporation/crystallization, allowing total usage of the waste water and providing a zero liquid discharge solution for the operators.

Our Technologies

Mine waste waters are often acidic and require the addition of lime, limestone or caustic soda to raise the pH (chemical precipitation). Since the pH is increased, dissolved metals precipitate and settle into the bottom of settling or sedimentation ponds. Coagulants and flocculants can be added in order to combine smaller particles into larger clumps which will settle quickly.

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The complete system provided by Lenntech incorporates multimedia filtration for manganese and iron removal and reverse osmosis technology, which removes sulphates and other dissolved impurities from the contaminated water. The high quality produced water, which used to be discharged in the environment, is now re-used in the operational processes.

Lake contamination through the discharge of process water containing high concentrations of sulphates and manganese led to the adoption of technologies for water recycling. These have included improved precipitation of manganese from process waters and removal of sulphates through membrane separation.

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OUR SERVICES

Design

Engineering

Automation

Manufacturing

Transport

Commissioning

Maintenance

Training
Lenntech is currently active in more than 130 countries worldwide, providing ultimate water treatment solutions for all sorts of applications, from domestic equipment to industrial turnkey plants.

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