Outotec EWT combines our unique understanding of water treatment, process design, electrolysis, and hydrometallurgy in an easy-to-use solution that delivers efficient performance with minimal manual intervention and maintenance. The system can process wastewater containing a diverse range of impurities using only electricity and a combination of electrode materials. Furthermore, the modular design makes it both easy to transport and easily scalable.

**BENEFITS**
- Fast, efficient water treatment and lower residual impurities compared to conventional processes
- Modular design supports easy relocation and expansion
- Highly automated process minimizes personnel requirements and enables remote operation and monitoring
- No need to procure or handle chemicals
COST-EFFICIENT, SUSTAINABLE WASTEWATER TREATMENT

Preventing water contamination is an important issue for companies in the mining and minerals processing industry as they increasingly focus on finding ways to minimize the environmental impact of their operations. Drainage from surface and underground mines, wastewaters from beneficiation, surface run-off, and acid mine drainage (AMD) are all potential sources of contamination.

These different types of wastewaters can contain a diverse range of impurities, including oxyanions like arsenic, selenium, and antimony; trace metals like copper, cadmium, nickel, and zinc; as well as sulfates, nitrates, and cyanides.

Easy to install, operate, and relocate
The modular design of Outotec electrochemical water treatment (EWT) makes it easy to install, dismantle, and relocate. The system has been developed based on our understanding of typical customer challenges with conventional precipitation treatment. While it features standardized, prefabricated components that support ‘plug-and-play’ operation, each solution is customized according to the individual water treatment requirements of your site.

The system is designed to be easy to operate, with a high level of automation. This makes it possible for personnel who are not experts in water treatment to run the process. Remote operation is also possible – a significant advantage at sites that are difficult to access.

The modular EWT concept can be scaled to suit various kinds of operations, from a single unit that can be added to as requirements increase, to complete plant solutions for larger volumes. Outotec EWT has the flexibility to adapt to changes in the size, scope, and even the location of your water treatment requirements for the lifetime of your operations.
KEY BENEFITS OVER CONVENTIONAL PRECIPITATION TREATMENT

Lower initial investment
Less equipment required means a lower initial investment

Lower installation cost
Compact footprint makes installation straightforward and cost-efficient

Lower life-cycle cost
Cost-efficient process reduces operating costs

Lower energy consumption
Energy-efficient process is more environmentally sustainable

Applications
The Outotec EWT process is suitable for the following applications:

- Removal of arsenic, selenium, antimony, and other oxyanions
- Removal of metals such as copper, nickel, and zinc
- Oxidation and removal of inorganic and organic compounds

Complementary products
- Outotec OKTOP® reactors for pretreatment, additional chemical precipitation, or post-treatment
- Complete dosing systems for coagulation and flocculation
- Clarifiers and thickeners
- Dissolved air flotation
- Pressure and vacuum-belt filters
- Liquid and polishing filters
- Screens, filters, microfiltration, membranes
- Sand filters

Complementary services
- Laboratory-scale test work, on-site piloting
- Conceptual and feasibility studies
- Basic and detailed engineering
- Development of water treatment solutions for entire processes
- Replacement of electrode packs and other spare and wear parts
A HOLISTIC APPROACH TO IMPROVING PERFORMANCE AND PRODUCTIVITY

We combine the right services into a customized solution that meets your precise requirements and asset needs. By assessing, designing, delivering, and verifying, we ensure the solution has maximum impact on your performance and productivity.

Assess
The process begins with collaborative work and benchmarking to provide a clear picture of your business and operational challenges, using our comprehensive range of Advisory Services. Our services range from plant and equipment inspections and assessments to process audits and research and test services. These provide valuable information to help identify areas in which improvements would generate substantial increases in safety, reliability, availability, or productivity.

Design
Based on the assessment results, we design precisely the right service solution to suit your operational and plant needs. Whether you are aiming to improve efficiency through modernization, minimize production losses during shutdown projects, or optimize the availability and productivity of operations and maintenance, our service solution will help you achieve a step change in performance.

Deliver
Our experienced teams follow established processes that enable a holistic delivery approach to your service solution, ensuring safe, efficient, and reliable implementation with minimum disruption to your operations. Through close collaboration with you, we integrate all the necessary elements required for a successful solution delivery that will generate high-quality results in the shortest time possible.

Verify
Results are closely monitored and analyzed by our experts to verify that the desired new performance level has been achieved. We focus on continuous improvement and on maximizing the positive impact on your bottom line.