

Case Study: Eastern Basin AMD Treatment Plant



Customer's Query

The Eastern Basin Acid Mine Drainage (AMD) treatment plant is a monumental project aimed at addressing the AMD issue in South Africa. The plant needed a capable partner to design, install, commission, and operate the facility efficiently. The project's goal was to eradicate the immediate decant threat across the three Witwatersrand basins, making the Eastern Basin Plant the largest AMD treatment plant in Africa and the largest of its type globally.

Our Approach

Design and Construction Phases

The project began with detailed planning and design, leveraging Tecroveer's expertise in water treatment engineering. The successful execution included:

- Full mechanical supply and installation.
- Piping, mechanical design, and installation.
- Comprehensive commissioning and ongoing operations.



Innovative Engineering The project featured innovative engineering solutions, such as the high-rate minerals thickeners. These were specifically designed to address the unique challenges of AMD treatment, showcasing Tecroveer's ability to develop proprietary technology and execute complex projects.

Challenges and Solutions

- **Scale and Complexity:** Managing the largest AMD treatment plant in Africa required advanced engineering and project management skills. Tecroveer's successful execution and ongoing operation of the plant demonstrate its capability in handling large-scale, complex projects.
- **Sustainability:** The project ensures long-term sustainability by effectively treating AMD and mitigating environmental impacts, aligning with broader environmental goals.



Our Solution

Tecroveer was selected for its engineering expertise and experience in water treatment solutions. The journey began with a subcontracted work package on the Central Basin, where Tecroveer designed, installed, and commissioned the pump stations.

This prepared the company for the full mechanical supply and installation for the Eastern Basin Project, including all piping, mechanical supply, design, installation, full commissioning, and ongoing operations.

Technological Innovation

A significant highlight of Tecroveer's contribution was the in-house design, fabrication, construction, and commissioning of five high-rate minerals thickeners, specifically designed for the AMD Project. These thickeners were the first of their kind and underscored Tecroveer's capability in proprietary design and manufacturing of large processing equipment. The project's success broadened Tecroveer's exposure and solidified its reputation in large-scale water treatment solutions.



// The Eastern Basin AMD treatment plant is a significant achievement in managing South Africa's AMD problem. Tecrover's innovative solutions and operational excellence have set a new standard for water treatment in the region.

The Results

The Eastern Basin AMD treatment plant is now a benchmark for efficiency, maintainability, and cleanliness in water treatment. Tecrover continues to operate the plant to the highest standards, ensuring consistent performance and reliability. The experience gained from this large project has been instrumental in targeting other areas of the industrial water treatment market.