UNDERGROUND WATER TANKS FOR SMART AND SUSTAINABLE MINING

Client Profile

Aerison Group, a multi-disciplined engineering design and construction company, was recently selected as the EPC contractor for a new water treatment facility for the Roy Hill mine in the Pilbara region of Western Australia

The Problem

The water treatment facility will utilise ultrafiltration reverse osmosis resulting in two types of treated water – permeate and concentrate. Permeate water is the impurity-free water sent to the clean product water storage tank and is ready for distribution. In contrast, concentrate is "ready-for-recycle" water with a high salinity level (over 40 parts per thousand) and sent to sanitary storage tanks for further treatment.

One of the expected results when storing a hypersaline solution is corrosion. Hence, Aerison required an underground water tank resistant to the degrading effects of salt.

The Solution

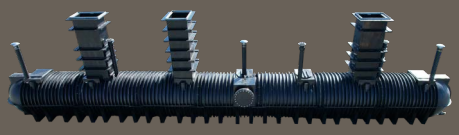
Aerison and Coerco's solution is a large 31,000-Litre underground sump tank made of high-density polyethylene (HDPE) and purposely built with super duplex metal components. High-density polyethylene (HDPE) and super duplex metal have high corrosion resistance, high malleability, and rigid strength. Properties that would ensure maximum design life while retaining hypersaline water.

Summary

Location
Newman, Western Australia

Client
Aerison

Products Used
Underground Storage Tanks



"The robust underground tank will improve Roy Hill's productivity by minimising downtime caused by product maintenance or failure.