CASE STUDY

BHP | BARS Project

NOVAFAST HOLDINGS

INCORPORATING

Dennis Southam & Associates | NOVAFAST | Basetec Services

Client BHP

Location Olympic Dam

Project Overview

The Bismuth and Antimony Removal System (BARS) plant was located at the BHP Olympic Dam facility near Roxby Downs in South Australia.

It's purpose is to treat a side stream of electro refinery electrolyte, using ion exchange (IX) technology, to remove Bismuth (Bi) and Antimony (Sb).

The Bi and Sb will load onto the IX resin, with the treated electrolyte being returned to the refinery. Once loading is complete the resin undergoes elution using concentrated hydrochloric (HCl) acid to strip the Bi and Sb. The resin is then regenerated using dilute sulphuric (H2SO4) acid and water before the loading recommences.

The eluate, containing the Bi and Sb, is passed through an HCl acid recovery step, with the waste product of Bi and Sb comingled with tailings, and deposited into the tailings storage facility.

Basetec Services were engaged to design, manufacture and install the composite piping and tanks for this processing plant.

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DESIGN

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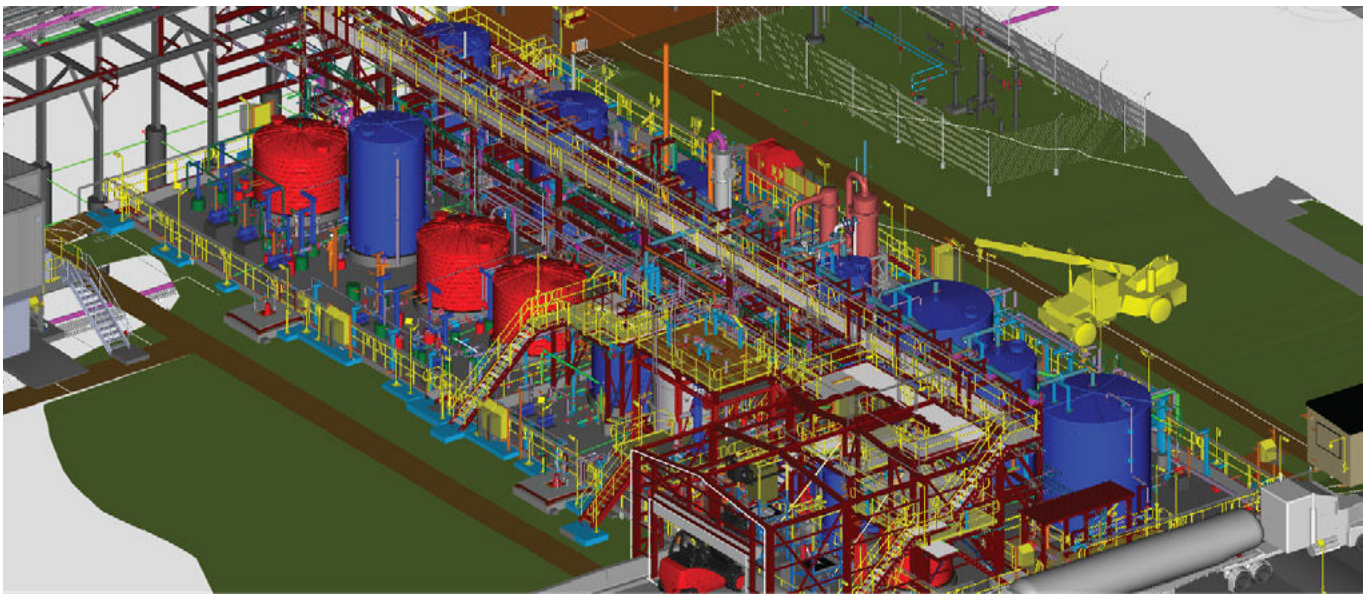

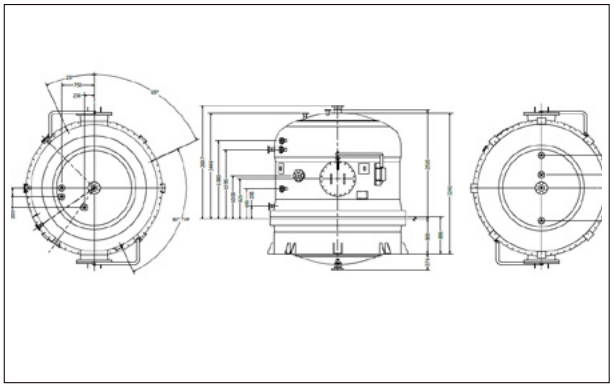

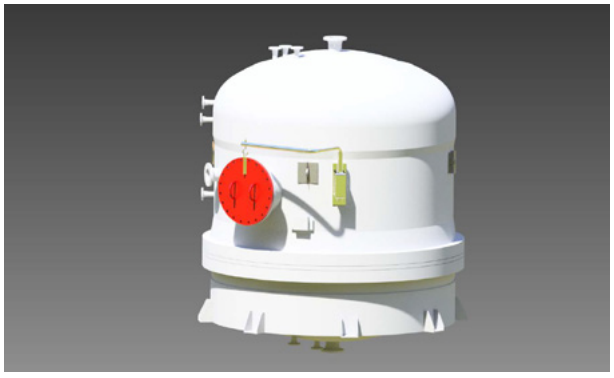

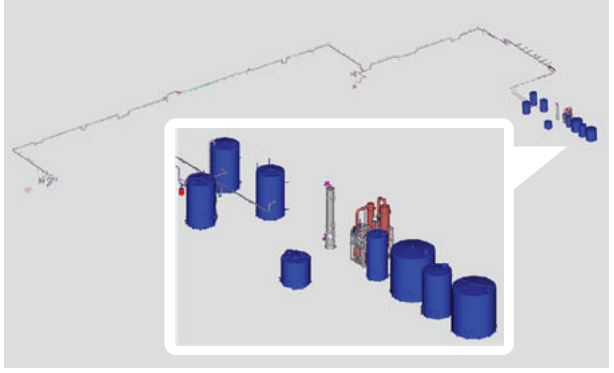

Dennis Southam & Associates (DSA), was entrusted with designing and developing the composite pipes and tanks, HCL and Airscrubber for this project. Leveraging their extensive knowledge of advanced materials and structural analysis, DSA tailored the design to the requirements of BHP.

Through meticulous research and development, DSA engineered the composite components that surpassed the capabilities of conventional materials. These innovative solutions offered superior corrosion resistance, enhanced strength-to-weight ratio, and exceptional performance under extreme conditions.

By employing cutting-edge composite technology, DSA's designs ensured longevity, reliability, and sustainability for the infrastructure critical to the success of the BHP BARS project.