

Mining & Metals



SAMCO

Separation from the ordinary

PROJECT BRIEF

Rare Earth Mine Optimizes Process Brine Recycling Circuit with SAMCO Adsorption Technology for Trace Organic Compound Removal

PROJECT OVERVIEW

When a rare earth mine in North America sought to recycle brine from its hydrometallurgical operations, SAMCO delivered trace organic removal technology, which the facility used to protect its downstream purification equipment.

OBJECTIVE

Remove organic compounds from complex hydrometallurgical brine stream to protect the integrity of downstream purification equipment. Specifications:

- Reduce kerosene fraction organics to non-detectable levels.

SCOPE OF SERVICE

SAMCO delivered comprehensive design, engineering, system fabrication, controls integration, commissioning, startup training, and support services for a steam regenerated synthetic adsorption unit.

CHALLENGES

- Stringent purity requirements for downstream purification
- Limited operator availability

SOLUTION

In line with the client's needs, SAMCO designed and commissioned a steam regenerated synthetic adsorption vessel to achieve the removal of trace hydrocarbon compounds from process brine. In order to meet the client's goal for protecting downstream purification equipment from damage, SAMCO designed the unit to produce treated brine with undetectable kerosene fraction levels. Designed to provide turnkey convenience and rapid delivery, SAMCO fabricated the modular solution, and provided full startup support. To minimize operational demands, the system included programmable logic controllers (PLC) with remote telemetry capabilities, enabling automated monitoring of unit function.

TECHNOLOGY

Project deliverables and equipment included:

- Steam regenerated synthetic adsorption vessel
- Pipe rack assemblies
- PLC controls

OVERVIEW

Industry

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Location

Mountain Pass, CA

Objective

Remove organic compounds to prepare recycled process brine for purification

Solution

Steam Regenerated Synthetic Adsorption System

Looking to recycle your process brine? Is brine stream purity an issue?
Contact us today at www.SamcoTech.com • askengineers@samcotech.com • (716) 743 9000