Mining & Metals

SAMCO
Separation from the ordinary

PROJECT BRIEF

Rare Earth Mining Company Enhances Specialty Acid Recovery with Pilot-Scale Multi-Unit Filtration System

PROJECT OVERVIEW

A rare earth mining facility in the Far East was looking to prevent a valuable component used in its production process from being discarded with its waste stream. This particular specialty acid can be expensive to source and is known to be hazardous to the environment if discharged without treatment, so the client worked with SAMCO to scale up a proprietary technological procedure for removing this high-value acid from the facility's waste and treating it for reuse in their process.

OBJECTIVE

Help the customer develop a pilot-scale system from its concept and design to treat the facility's waste stream (40% specialty acid concentration) for reuse in its process.

SCOPE OF SERVICE

SAMCO worked with the client to engineer a pilot-scale production system from the client's proprietary technology design. SAMCO fabricated the system as a single integrated skid and oversaw the installation and commissioning.

CHALLENGES

- New process never operated at pilot scale
- Need to minimize energy consumption and product loss

SOLUTION

The final solution was a filtration unit followed by ion exchange for efficient contamination removal. This technology minimized product loss while allowing the facility to produce higher product quantities at a lower unit cost.

TECHNOLOGY

SAMCO's project deliverables and equipment included:

- Filtration and IX system
- PLC controls for autonomous operation
- Chemical feed

OVERVIEW

Industry
Mining & Metals

Location
Far East

Objective
Increase specialty acid recovery from process waste stream

Solution
50 GPM Filtration and IX System

Looking to increase the efficiency of your process? Is process separation an issue?
Contact us today at www.SamcoTech.com • askengineers@samcotech.com • (716) 743 9000