



PROJECT BRIEF

Post-Transitional/Semi-Precious Metals Producer Recovers Valuable Metals from Scrap Electronics Leachate

PROJECT OVERVIEW

When a global materials manufacturer sought to expand its post-transitional and semi-precious metals production at its facility in Asia, the firm needed an efficient solution for salvaging valuable metals from scrap electronics waste. Leveraging its ion exchange (IX) technology, SAMCO delivered a recovery and purification system to maximize resources.

OBJECTIVE

Recover post-transitional/semi-precious metals from pregnant leach solution (PLS). Project specifications:

- Process 1000–2000 liters per day

SCOPE OF SERVICE

SAMCO delivered an IX-based recovery and purification system, with services encompassing detailed process, mechanical, and electrical design and engineering, controls integration, and system fabrication.

CHALLENGES

- Complex contaminant streams
- High-purity solutions critical for production

SOLUTION

SAMCO designed and constructed an IX system capable of a two-stage process to effectively isolate high-purity streams of the valuable metals. The system was contained within a prepackaged, skid-mounted design in order to facilitate rapid installation, and to compensate for limited operator availability, SAMCO installed programmable logic controllers (PLC) to automate flow, temperature, pressure, and resistivity monitoring.

TECHNOLOGY

SAMCO delivered a single packaged skid unit, including:

- IX pressure vessels and internals
- Effluent and influent pumps
- Multimedia filters
- Instruments and valves
- PLC controls

OVERVIEW

Industry
Chemical

Location
Asia

Objective
Recover post-transitional and semi-precious metals from scrap electronics PLS

Solution
1000–2000 L/Day Ion Exchange System for Purification & Recovery