

Food & Beverage



SAMCO

Separation from the ordinary

PROJECT BRIEF

Food-Ingredient Manufacturer Enhances Acid-Separation Process with Highly Efficient Packed-Bed Ion Exchange

PROJECT OVERVIEW

A leading food-ingredient manufacturer, whose process involved the separation of acids, sought to expand its production capabilities despite limited space in an existing facility. Because the process was energy intensive and wasn't generating the desired product quality, the customer worked with SAMCO to create an ion exchange process for replacing the existing thermal acid-separation component. SAMCO was selected to work with the customer to design a full-scale production system based on the pilot testing results.

OBJECTIVE

Use data from the customer's pilot testing to design and deliver a full-scale system for separating acids with ion exchange while meeting stringent product quality requirements.

SCOPE OF SERVICE

SAMCO worked with the client to engineer a full-scale production system from a piloted process. SAMCO fabricated the system as modular units and oversaw the installation and commissioning.

CHALLENGES

- New process never operated at production scale
- Need to minimize chemical use, energy consumption, and product loss
- Limited footprint for fitting new system into existing building

SOLUTION

The final solution was a packed-bed ion exchange system with fractal distribution plate technology. This technology minimized the use of regenerant chemicals and product loss during regeneration cycles while allowing the new line to produce higher product quantities at a lower unit cost.

TECHNOLOGY

SAMCO's project deliverables and equipment included:

- Packed-bed ion exchange system
- Fractal distribution plates
- PLC controls for autonomous operation
- Integration with existing factory distributed control system (DCS)

OVERVIEW

Industry

Food & Beverage

Location

North America

Objective

Increase acid separation efficiency in place of thermal process

Solution

52 GPM Packed-bed ion exchange 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