

Profiting from Better Wastewater Treatment

The Challenge

A leading producer of oxygen-free copper anodes faced significant challenges with its wastewater treatment system. Their existing process relied on ferric coagulant, which proved inefficient and made it labor-intensive to keep copper levels below the 2.5 ppm discharge limit. Additionally, high iron levels in the resulting sludge diminished its value to recyclers, turning a potential revenue stream into a disposal cost. With a new treatment system planned but not yet implemented, the company sought Hubbard-Hall's expertise to address its copper wastewater challenges.

The Approach

Hubbard-Hall began by conducting a thorough evaluation of the company's existing wastewater treatment system and processes. This included analyzing water samples, reviewing the equipment in use, and identifying inefficiencies in their current methods. The central issue stemmed from the use of ferric coagulant, which, while low-cost, was ineffective at consistently removing copper to meet the discharge limit of 2.5 ppm. Additionally, the ferric-based process introduced high levels of iron into the sludge, reducing its recyclability and turning a potential revenue stream into an ongoing expense.

Recognizing these challenges, Hubbard-Hall proposed a tailored solution centered around switching to **AquaPure Cal40**, a calcium-based coagulant. **AquaPure Cal40** offered superior performance in binding copper and forming precipitates, making it far more effective at removing contaminants. To enhance the process further, a new

Executive Summary

A leading anode manufacturer partnered with Hubbard-Hall to improve its wastewater treatment process, achieving regulatory compliance, operational efficiency, and increased profitability.

- The manufacturer struggled to reduce copper in wastewater below the 2.5 ppm discharge limit using outdated treatment methods.
- Hubbard-Hall identified inefficiencies with the existing ferric coagulant and proposed **AquaPure Cal40** as a superior solution.
- The updated treatment system improved copper removal, reduced operational effort, and enabled sludge recycling.

polymer flocculant was introduced to aid in the rapid formation and settling of floc, streamlining the separation process.

Hubbard-Hall didn't stop at simply recommending new chemicals. The team worked closely with the facility's operators to provide hands-on training and education about the new treatment protocol. This ensured that staff understood not only how to use the new products but also why the changes were necessary and how they improved the system's efficiency. By empowering the operators with knowledge, Hubbard-Hall ensured the solution would be sustainable in the long term.

Additionally, Hubbard-Hall advised on optimizing the dosing process for the new coagulant and flocculant, ensuring precise application to avoid unnecessary chemical use while maximizing effectiveness. The collaborative and educational approach helped the facility seamlessly transition to the improved treatment system without significant disruptions to their operations.

This proactive strategy ensured the company could achieve its goals of regulatory compliance, operational efficiency, and sludge recyclability, all while maintaining minimal capital investment in new equipment.

The Outcome

The results of the new approach were transformative. The updated wastewater treatment system, paired with **AquaPure Cal40** and the new flocculant, consistently reduced copper discharge levels well below the regulatory limit of 2.5 ppm. The improved process also eliminated excess iron in the sludge, making copper recycling a viable and profitable option. By reducing labor requirements and turning waste into value, the company significantly enhanced operational efficiency and profitability. With Hubbard-Hall's support, the environmentally friendly facility continues to set a global standard for excellence in the electroplating industry.

CS-0225

 Surface Cleaners

 Metal Finishing

 Wastewater Treatment

Chemistry and Expertise for
Manufacturing's Toughest Problems



563 South Leonard Street, Waterbury, CT 06708
Phone: (800) 648-3412 • HubbardHall.com

“IMC’s relationship with Hubbard-Hall is based on their technical competence, responsiveness, and integrity... it’s an absolute pleasure to know there are still chemical suppliers who value their customers enough to workday in and day out to earn their customer’s complete trust.”

Steve Leonetti
IMC EVP

Our people. Your problem solvers.

Expertise you can trust.
32% of Hubbard-Hall associates are in tech support, customer service, or sales. This means that you get answers fast while the rest of our team gets your order delivered on time and in spec.

HubbardHall.com