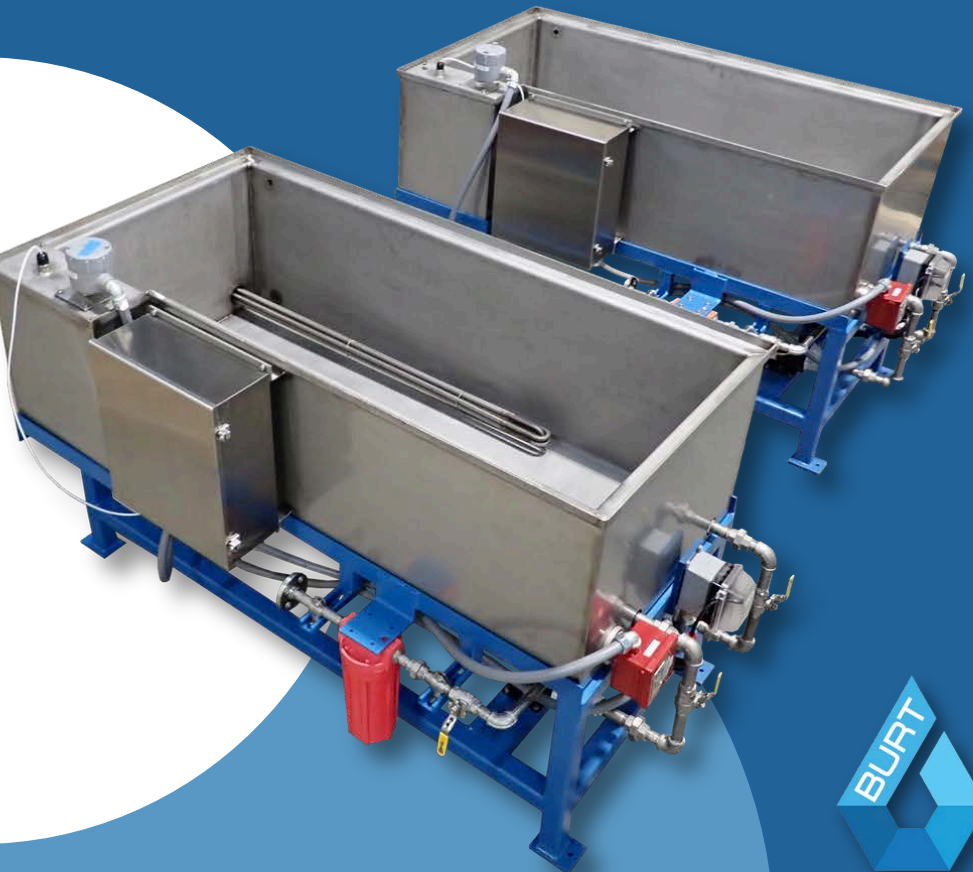


# CASE STUDY

Burt Process Equipment's Custom  
Rinse Tank Assemblies for a Leading  
Metal Component Manufacturer



## Overview

A leading manufacturer known for its precision metal components and advanced material science technologies required enhanced cleaning and finishing line capabilities. Burt Process Equipment was tasked to design and fabricate a highly efficient, robust system that would integrate seamlessly into their existing production line in Waterbury, Connecticut, improving both process quality and throughput.

## Project Requirements

The client, specializing in the production of high-performance metal products and located in a hub for the brass industry, required two customized rinse tank assemblies capable of handling the rigors of their proprietary cleaning solution, integral to their production processes. The tanks needed to be durable, resistant to chemical wear, and capable of precise temperature and flow control to ensure optimal cleaning results.



## Challenges

- Customization: Tailoring tank dimensions and features to specific production requirements.
- Chemical Compatibility: Selecting materials that would withstand aggressive cleaning agents.
- Integration: Fitting the new system within the existing workflows with minimal disruption.



## Solution

Burt Process Equipment engineered a solution that included:

- Tank Specifications: Two 304 stainless steel holding tanks, each with a 94-gallon capacity, custom-engineered to the client's specifications. These were mounted on 2-inch HRS box tube frames with a protective blue epoxy coating for enhanced chemical resistance.
- Heating and Circulation: Equipped with dual Glo-Quartz screwplug heaters and horizontal magnetic drive recirculation pumps, ensuring precise temperature control and consistent cleaning solution flow.
- Monitoring and Safety Features: The system incorporated custom-fabricated wells for vertical insertion of level control and RTD instrumentation, along with a NEMA 4X rated PLC based control panel for safe and efficient operation.
- Insulation and Durability: Tanks were insulated with 1-inch-thick rock wool and encased in 14-gauge 304 stainless steel to maintain optimal temperature and prevent heat loss.



## Implementation

Pre-assembled and tested at Burt Process Equipment's facility, the system was designed for easy integration into the client's production line, ensuring minimal downtime during installation.

## Results

The new custom rinse tank assemblies markedly improved the efficiency and quality of the client's metal finishing processes by:

- **Enhanced Process Control:** The improved temperature and chemical delivery controls yielded more consistent and effective cleaning outcomes.
- **Reduced Downtime:** The robust construction and automation reduced maintenance needs and system downtime.
- **Increased Throughput:** The system's efficiency enabled the client to handle higher production volumes without sacrificing quality.



### **Client Feedback**

The client commended the custom solution for its robustness, efficiency, and seamless integration with their existing operations. They reported significant improvements in product quality and operational uptime following the installation.

### **Conclusion**

This case study exemplifies Burt Process Equipment's capability to meet specialized industrial needs with bespoke solutions, bolstering their reputation as a leader in process equipment manufacturing. The successful project not only enhanced the client's operational efficiency but also supported their commitment to maintaining exact standards in metal component manufacturing.