Case Study: Aquaease 2289

New chemistry provides cleaning and brightening in one step.

The Challenge

As a leader in industrial and oil heating nozzles, this company provides significant reductions in combustion pollutants for cleaner air and contributes to the reduction of carbon and soot. This helps to retain set up efficiencies and extend maintenance cycles.

This facility runs machined brass and assembles various brass parts into nozzles for gas furnaces. The brass they run is low lead, and approximately 20% zinc. They also run some bismuth brass and a very small part of the nozzles are stainless steel.

The Approach

The technical team at Hubbard-Hall recommended the following:

1. Replace the concentrated acid bright dip with a safer alternative, in this case we suggested Aquaease 2289.
2. Replace chromate sealer with alternative chemistry to prevent tarnish. We suggested Laserguard HFP.

These process changes could potentially offer cleaning and brightening (remove staining) in one step.

We processed three different parts in a 10% solution with Aquaease 2289 for a 3 minute cycle at 145° F. All the parts looked better (higher shine) than any of the finished parts through the current system.

Cleaning
the Hard to Clean

Aquaease 2289
Key Benefits

- Superior oil splitting abilities- extended bath life, reclaim oil with BTU value
- Forms highly soluble metal salts - reduced scale and sludge in washer
- Low odor - no toxic fumes
- Non-chelated - simplifies waste treatment
- Low corrosion rates - minimizes over etching

Continued other side

The Outcome

With Hubbard-Hall chemistry, the company no longer needs to bright dip in nitric acid and follow with a chromate sealer to protect the nozzles from oxidizing after bright dip. Parts are now processed in Aquaease 2289 and sealed with Laser HFP, resulting in brighter nozzles that are pit-free. The company has switched over to a better, safer, and faster process.

Left: Brass nozzle, before

Right: Rejected nozzle due to pitting from the Nitric brite dip process.

Left: Brass nozzle, before.

Right: Nozzle processed with Aquaease 2289 and sealed with Laserguard HFP

Key benefits continued

- Removes oxides and scales - eliminates multi-stage cleaning operations
- Phosphate free - reduces wastewater charges
- One step cleaner, deoxidizer & brightener - Reduces stages, time, equipment and space needed for desired finish

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Cleaning the Hard to Clean

Finishing the Hard to Finish

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