

Optimising Hot Etch Processing Efficiency

CLIENT: MULTINATIONAL AEROSPACE AND DEFENCE COMPANY



Zone 1 Control Station

Project Name:	Hot Etch Cleaning Work
Project Scope:	Specialist industrial services & disposal of hard to handle wastes

Project Highlights

- + Attention to detail and commitment to minimise disruptions allowed the plant to keep running smoothly throughout the entire process
- + The FIS team's expertise, combined with their thorough planning and execution, ensured that the works were carried out efficiently and effectively.
- + The plant maintained its productivity and avoided any costly downtime.

“Through this meticulous, multi-step process, the once-soiled floor was transformed into a hygienic, spotless expanse - a testament to the expertise, skill and thoroughness of our industrial cleaning team.”

Their ability to deliver a complete, turnkey solution, from the initial cleaning to the final waste disposal, demonstrated the depth of their capabilities and their dedication to meeting the unique needs of their industrial customers.

Lee Evans, General Manager
- Industrial Services North West & Midlands

PROJECT BACKGROUND

The Hot Etch blade processing line is a critical piece of equipment that requires meticulous maintenance and cleanliness to function properly. This line consists of a series of 10 large, 2-cubic meter tanks, each filled with chemical solutions; nitric acid, hydrochloric acid, and Ardrox, a specialised cleaning agent.

Over the course of 8 years, these tanks, their protective covers, and the surrounding floor areas have accumulated a substantial buildup of dirt, scale, and other contaminants, creating an unsafe and unsanitary work environment for the employees who must regularly access and maintain this equipment. The customer recognised the need to have this system thoroughly deep cleaned, restoring it to a well-functioning condition.

This deep cleaning project is essential to keep this critical blade processing system operating at peak efficiency, protecting both the workers and the quality of the final products.

SOLUTION

In order to minimise any potential downtime or disruptions, the team at Future Industrial Services (FIS) carefully planned and executed the necessary works over the course of two consecutive weekends, beginning on a Friday.

Recognising the critical importance of maintaining continuous operations, they strategically divided the project into two distinct phases, each meticulously designed to avoid any interference with the plant's normal functioning. By taking this phased approach, FIS was able to seamlessly integrate its services and provide a truly comprehensive solution, encompassing both specialist industrial cleaning and comprehensive waste management.

EXECUTION

Phase 1

In the initial phase of this critical project, the customer took proactive measures to ensure a safe and thorough cleaning process. They isolated the processing tank 24 hours prior to the start of the work, allowing ample time for the tanks to cool down to a safe temperature. The FIS industrial services team wore full chemical suits with Jupiter air hoods, providing complete protection as they tackled the task at hand.

Using high-powered jet washing equipment, the crew systematically flushed out any remaining acids from each tank, carefully pumping all residues into secure intermediate bulk containers (IBCs) for proper disposal. The team used scrapers and abrasive pads to meticulously clean the tank walls, tops, and covers, leaving no trace of the previous corrosive materials. Another round of jet washing ensured the tanks were thoroughly rinsed, with all wastewater again collected in the IBCs, and a wet-and-dry vacuum was mobilised to suck up any final traces of residue from the tank interiors.

Phase 2

The expansive floor area was carefully divided into four distinct sections, each one meticulously cleaned using a powerful jet washing technique. The jet wash used hot, high-pressure water to thoroughly scour the surface, lifting away any accumulated dirt, grime, or debris that had built up over time. This thorough cleaning process ensured that every inch of the flooring was restored to a pristine, spotless condition.

A specialised de-greasing and cleaning agent was then strategically applied across the entire floor space. This multi-purpose solution worked to break down and dissolve any stubborn oily or greasy residues that the jet wash may have missed, further enhancing the deep cleaning effect.

Finally, an advanced electric scrubber-dry vac unit was deployed to methodically scrub the floor and vacuum up any remaining particles or leftover cleaning agents. This innovative equipment lifted out the last traces of dirt and grime, leaving the floor area completely clean, dry, and ready for its next use.



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