

# A Specialist End-to-End Decontamination Service You Can Rely On

Whether you need to decontaminate just one ion implanter or a whole fleet, our trusted team of specialists can support every part of your project, from disassembly and cleaning to reassembly and testing.

Decontaminating an ion implanter tool safely and effectively demands decades of specialist knowledge, hands-on experience and rigorous training.

Our trusted team of decontamination specialists has been decontaminating complex semiconductor tools for manufacturers and end users across the globe since 1991. With comprehensive support at every stage of the project, we ensure your equipment is restored and ready for optimal performance.

**“IES’s decontamination service has been outstanding and the professionalism of the team has been exceptional.”**

– Intel

## How IES can help

### Get total peace of mind

De-risk your decontamination project, with teams that are fully trained on the process, methodology and PPE involved.

### Benefit from our expertise

Work with cleanroom specialists who understand equipment complexities and the strict protocols required in clean environments.

### Have expert support

Work with a team that has decades of experience solving complex engineering challenges and working with world-renowned OEMs, including Axcelis, Applied Materials and Varian.

# What's Included in Our Decontamination Service...

## Comprehensive risk assessment

At the beginning of each decontamination project, we carry out a full risk assessment to ascertain which contaminants the implanter has been processing (including process gasses, typically arsenic, boron and phosphorus) and how to best remove the contaminants.

## Process module assemblies removal

We start by removing the process module assemblies, immediate beamline path. We then send all contaminated PM assemblies to our specialist lab cleaning facility.

## Process chamber scrubbing

We scrub the chamber back to bare metal using a range of specialist materials. We'll often use Deionised water (DI) and cleanroom cloths to bond to some of the materials. Then, we'll use diamond-encrusted pads to scrub the chamber back to bare metal and polish it with fine-scoring pads.

## Full tool wipe-down

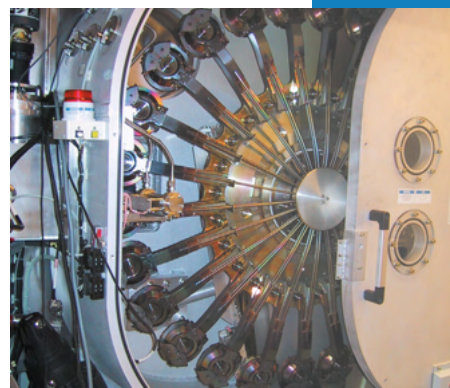
We finish cleaning the process chamber with a final wipe-down with DI and Isopropyl Alcohol (IPA). This step is essential to achieving a spotless finish that meets industry standards.

## Area sampling and swipe testing

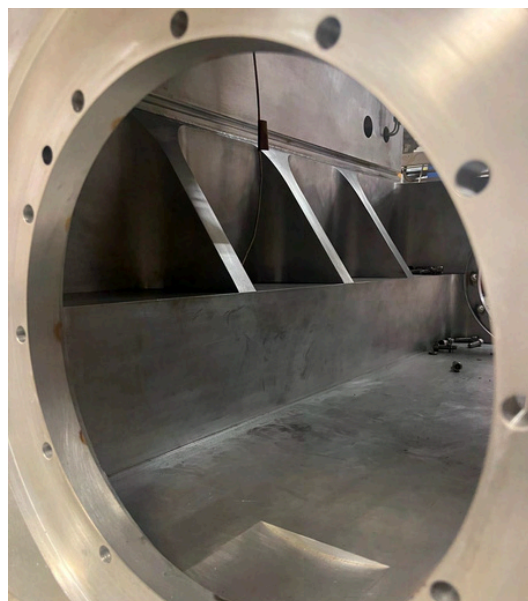
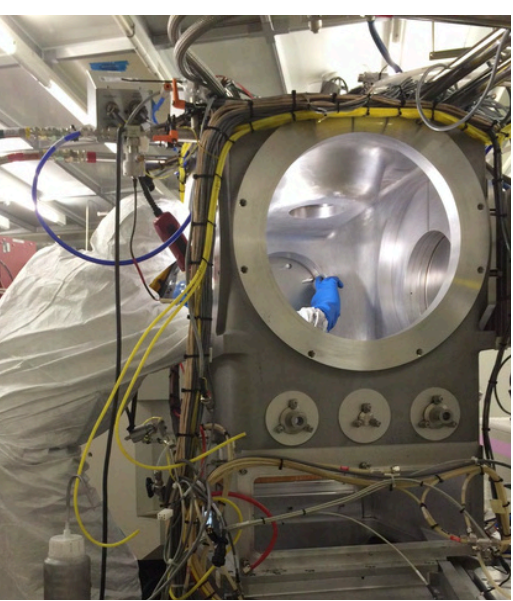
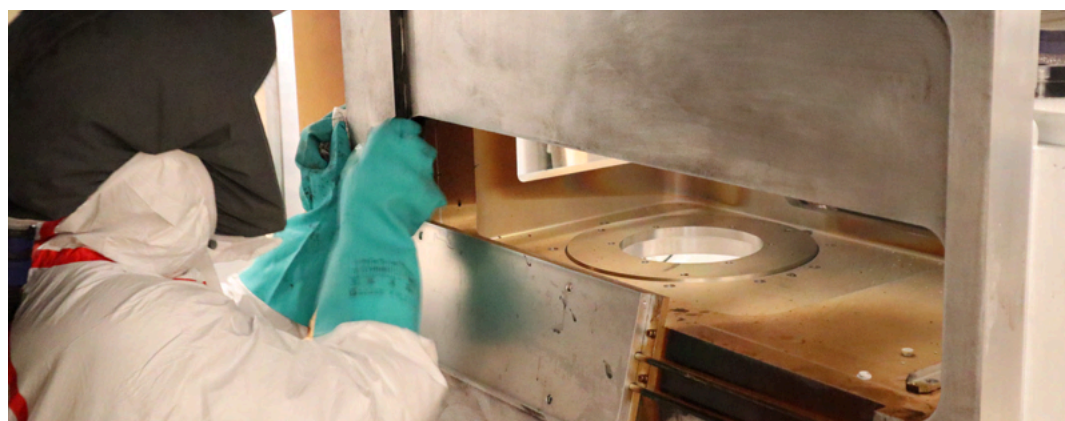
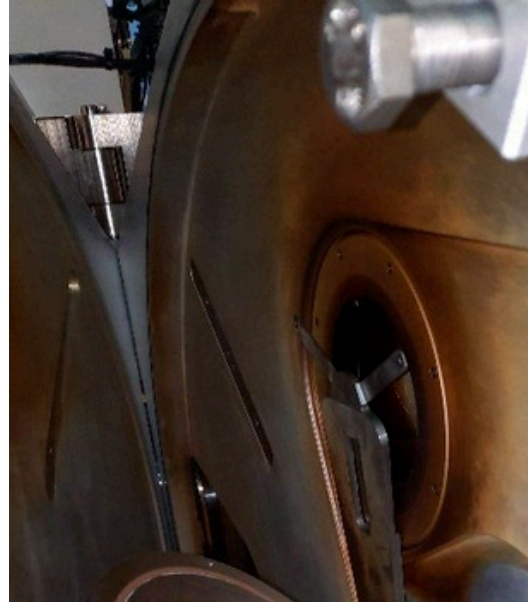
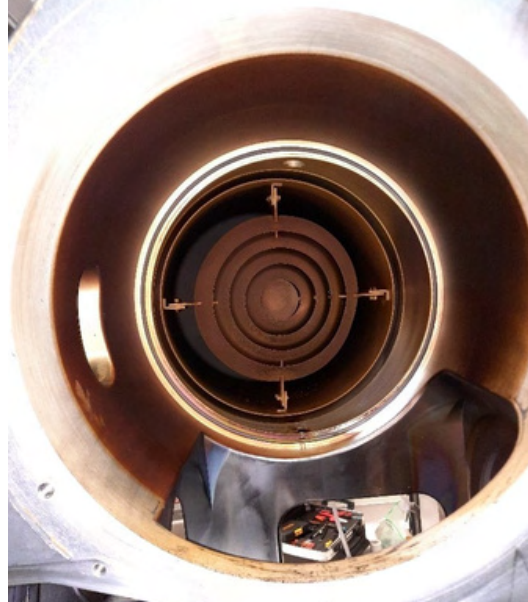
Once the cleaning process is complete, we conduct area sampling by saturating several 100x100mm areas with DI and performing swipe tests. This enables us to confirm that decontamination residue levels are within specified and industry-safe limits.

## Full rebuild


We follow the original equipment manufacturer's guidelines to carefully reinstall cleaned assemblies and complete a full beamline rebuild, ensuring the tool is fully operational and ready for production.











# Additional Support Services, if Required

## Consumables replacements

We can replace consumables as required, including shielding, graphite components and o-rings, as specified in the original equipment manufacturer's guidelines.

## Equipment moves

Whether you're looking to move an ion implanter to the other side of your fab or to another continent, our teams can help, with our teams of expert machine movers/riggers.

## Crate manufacture and export packing

Our service covers all aspects of crating and packing - from custom crate manufacture and export packing to freighting (if required) - and is supported by our experienced packing specialists. We adhere to SEMI and OEM packing standards throughout.

## Equipment power-up and final testing

Once reassembly and rebuild are complete, Once the customer has facilitated the implanter, we are able to power up the tool equipment following a step-by-step protocol to verify proper functionality. We then run a series of tests to ensure the equipment we meet operational specifications, making adjustments and calibrations where required.



## Why IES?

### 30+ years of semiconductor expertise

From implanters to lithography, we've specialised in working with complex semiconductor tools in fabs across the globe since 1991. So you can feel confident that you're in the safest and most knowledgeable hands.

### End-to-end supplier

We're the only supplier globally that can support every single part of your project in-house, from decontamination to transportation and installation. That means you can work with just one expert supplier instead of multiple.

### Watertight methodology

Our highly successful decontamination methodology ensures every job is completed safely, correctly and to legislated standards. So you never have to worry about damage to your equipment, facility or finances.

### Strong partnerships

Over the years our teams have built strong partnerships with world-leading OEMs, including Axcelis, Applied Materials and Varian.



**"IES did a great job and kept the project within schedule"**  
- HP

## Case study

In December 2022, we undertook a large-scale decontamination project that involved cleaning several ion implanter tools back to bare metal to ensure safe transportation overseas over US and European borders.

Having been in service for over 30 years, the tools were thoroughly saturated with hazardous materials such as phosphorus, arsenic, and boron. So it was essential that decontamination residue levels were brought within specified, industry-safe limits.

We not only seamlessly handled decontamination, but also supported disassembly at the original site and assembly at their new home in Europe.

[Read the full case study to find out more](#)



## About IES

At IES, we've been helping end-users and OEMs in high-technology industries such as semiconductor and pharma to decontaminate business-critical equipment since 1991.

Request a callback from one of our experts to learn more about how we can help. Alternatively, book a site survey to scope your move.

[Get in touch](#)

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