Foamtec International
Wilshire Contamination Control Division
cleaning critical surfaces

FOAMTEC INTERNATIONAL WCC VALUE ANALYSIS

LAM 2300 METAL ETCH CHAMBER PM

LAM 2300 METAL ETCH CHAMBER PM **REQUIREMENTS**	**FOAMTEC INTL WCC METHOD**	**STANDARD METHOD**
REQUIRED PARTS	(3) Grit Diamond ScrubPAD @ $25.40/pc = **$76.20** (1) HT4754 UltraSOLV® Sponge @ $4.87/pc = **$4.87** (25) HT5790S MiraWIPE® @ $0.70/pc = **$17.50** **TOTAL COST = $98.57/PM**	(20) Aluminum Oxide Scrubpads @ $2.51/pc = **$50.20** (10) Silicon Carbide Scrubpads @ $4.12/pc = **$41.20** (250+) Alpha Wipes @ $0.16/pc = **$40.00** **TOTAL COST = $131.40**
HAZARDOUS WASTE	(3) ScrubPADS (1) UltraSOLV® Sponge (25) MiraWIPES® **(29) TOTAL ITEMS**	(30) ScrubPads ScotchBrite (250) LTK Wipers **(280) TOTAL ITEMS**
PM CLEAN TIME	Total Scrub Time – **2.5 Hr**	Total Scrub Time – **6 Hrs**
TECH HOURS	(1) TECHNICIAN	(3) TECHNICIANS
ANALYSIS: **(30) LAM 2300 METAL ETCH CHAMBERS** **METAL ETCH PM** EVERY 6WKS **(180) LAM METAL ETCH CHAMBER PM/YR**	WASTE: **(5,220) ITEMS** TOOL SCRUBTIME: **450 Hrs** TECH HOURS: **450 Hrs**	WASTE: **(50,400) ITEMS** TOOL SCRUBTIME: **1,080 Hrs** TECH HOURS: **3,240 Hrs**

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FOAMTEC INTERNATIONAL WCC VALUE ANALYSIS
LAM 2300 METAL ETCH PROCESS CHAMBER PM

Vacuum Chamber: LAM 2300 Metal Etch
Vacuum Chamber Components: Process Chamber
Vacuum Chamber Process Residue: Process Induced Residue

OBJECTIVE:

To demonstrate to how the Foamtec International PM Technique will properly clean the LAM 2300 METAL ETCH chambers more effectively, and in less time - providing a significant reduction in operating cost

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OLD PROCEDURE

Products Used:

- **(20) Aluminium Oxide 800Grit ScrubPADS**
- **(10) Silicon Carbide 800Grit ScrubPADS**
- **(250+) LTK Wipers (1 to 2 bags of 150 LTK Wipes)**
  - **(150) Soaked with DI Water for initial wipe**
  - **(50+) Soaked with DI Water used while scrubbing**
  - **(55+) Soaked with IPA for final wipe**

Clean Time: **6 Hrs**
Technicians: **3 Techs scrubbing (Two at a time, third rotating in)**
Recovery Time: **4 Hrs**

FOAMTEC INTERNATIONAL WCC ULTRASOLV® CHAMBER CLEANING TECHNIQUE

Vacuum Chamber Products Used:

- **(2) HT4536D ScrubPAD, 360 Diamond Grit**
- **(1) HT4580D ScrubPAD, 800 Diamond Grit**
- **(1) HT4754 UltraSOLV® Sponge**
- **(25) HT5790S MiraWIPES®**
  - **(25) Dampened with IPA used for Final Wipe**

Clean Time: **2.5 Hrs**
Technicians: **One technician completes entire clean**
Recovery Time: **TBD**

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FOAMTEC INTERNATIONAL WCC ULTRASOLV® CHAMBER CLEANING TECHNIQUE

SEQUENCE OF EVENTS:

Step 1: Prep LAM 2300 METAL ETCH Chamber for PM.

Step 2: Dampened UltraSOLV® Sponge in small container of DI water and wipe out entire chamber. Allow the water to react with deposition and remove the top layer of dep with the UltraSOLV® Sponge.

Step 3: Rinse out UltraSOLV® Sponge as necessary in small container of DI water and continue to wipe chamber until as much deposition as possible has been removed with the UltraSOLV® Sponge – approximately 20min.

Step 4: Using a light amount of pressure, scrub the chamber and necessary parts associated with the tool with the 360D Grit Diamond ScrubPAD and DI water.

Step 5: Unload Diamond ScrubPAD onto UltraSOLV® Sponge as ScrubPAD begins to load up with deposition. Repeat as necessary.

Step 6: Replace 360 Grit Diamond ScrubPAD as initial ScrubPAD begins to wear.

Step 7: Unload UltraSOLV® Sponge by placing back in container of DI water to rinse out. Repeat as necessary.

Step 8: Repeat steps 4 - 7 until all deposition is removed from entire chamber and associated parts.

Step 9: Replace 360 Grit Diamond ScrubPAD with an 800 Grit Diamond ScrubPAD and perform a final scrub of the entire chamber using the same technique as described above with the diamond ScrubPAD and UltraSOLV® Sponge.

Step 10: Apply a small amount of IPA to the MiraWIPES® and wipe out the entire LAM 2300 METAL ETCH Process Chamber and associated parts.

NOTE: STEP 10 IS A VERY CRITICAL STEP TO ENSURE LAM 2300 METAL ETCH CHAMBER RECOVERS FROM PM IN THE MOST EFFICIENT MANNER, MINIMIZING PUMPDOWN TIME AND REDUCING PARTICLES.

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