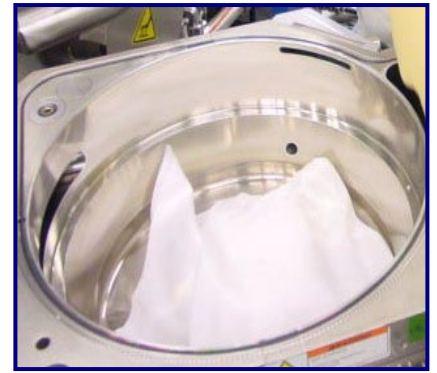


BEFORE

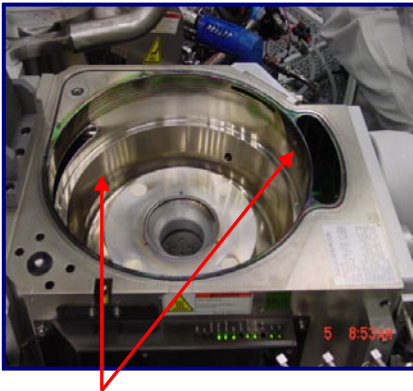


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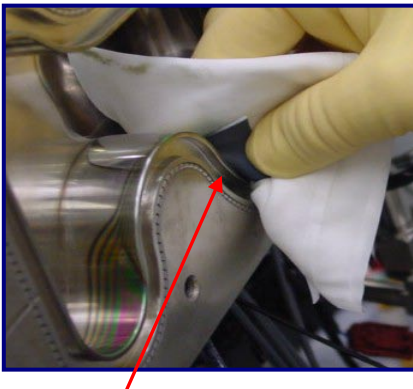
AMAT TxZ™ CHAMBER PM TRAINING GUIDE

THE PROBLEM:

TxZ™ CHAMBER



MONTHLY DEPOSITION BUILDUP



USING SiC ScrubPADS WITH STANDARD FAB WIPER FOR CLEAN

MONTHLY TxZ™ CHAMBER PM

CURRENT CLEANING METHOD:

- Scrub with SiC ScrubPAD using DI water
- Wipe deposition from scrubbed area using DI Water with Texwipe Alpha 10 Wipers
- Final wipe TxZ™ Chamber with IPA using Texwipe Alpha 10 Wiper

CURRENT CLEANING METHOD PROBLEMS:

- SiC ScrubPAD breaks-down during scrub portion of clean
- Must use (8) to (10) SiC ScrubPADS to complete chamber scrub
- SiC Particles are left behind to be removed by Texwipe Alpha 10 Wiper
- Texwipe Alpha 10 Wiper does not effectively remove deposition/particles from TxZ™ Chamber
- Texwipe Alpha 10 wipers more susceptible to leaving IPA residue behind in chamber
- Extensive outgassing caused when leaving deposition/particles within TxZ™ Chamber
- Extensive outgassing caused when leaving IPA residue within TxZ™ Chamber
- Not able to clean TxZ™ Chamber in a timely manner
- **Not able to remove particles from bead-blasted parts prior to returning them to chamber**

THE PREPARATION:

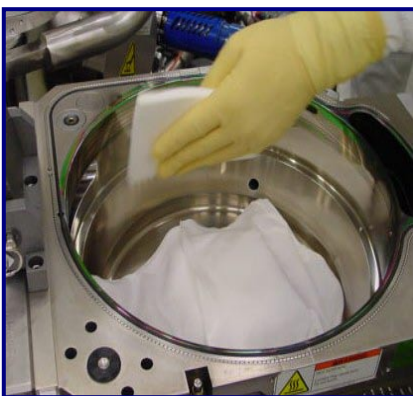


SET UP:

- Stage the necessary Foamtec International parts:
 - 800 Grit Diamond ScrubPAD
 - 800 Grit Diamond ScrubTIP®
 - UltraSOLV® Sponge
 - Bottle of DI water
- Stage plastic bag next to chamber for waste
- Dampen UltraSOLV® Sponge with DI water
- Dampen 800 Grit Diamond ScrubPAD with DI water

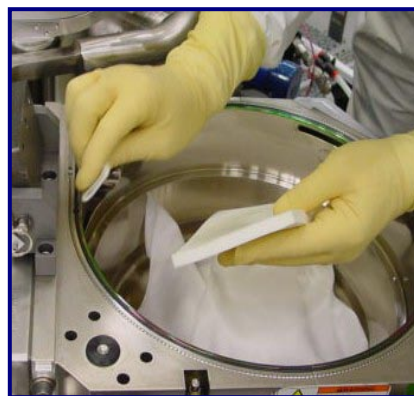


THE UltraSOLV® CHAMBER CLEANING TECHNIQUE:



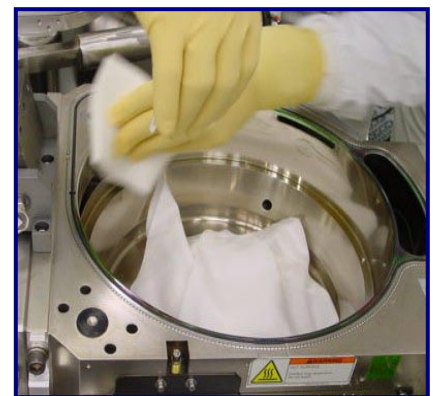
STEP 1:

- Wipe out TxZ™ Chamber with UltraSOLV® Sponge



STEP 2:

- Scrub small section of TxZ™ Chamber with 800 Grit Diamond ScrubPAD

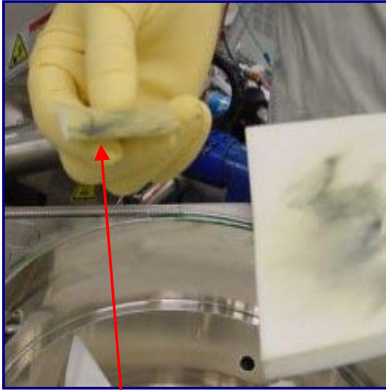


STEP 3:

- Wipe scrubbed area with UltraSOLV® Sponge

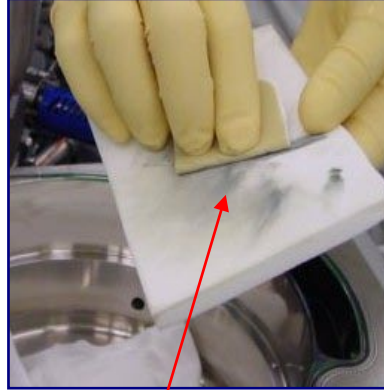
THE UltraSOLV[®] CHAMBER CLEANING TECHNIQUE (cont):

ScrubPAD UNLOADING PROCEDURE



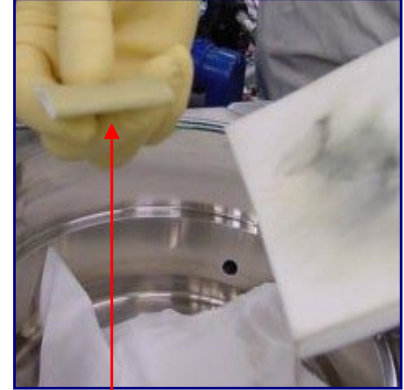
STEP 1:

- ScrubPAD loaded with deposition



STEP 2:

- Pull ScrubPAD across UltraSOLV[®] Sponge



STEP 3:

- Unloaded ScrubPAD

UltraSOLV[®] SPONGE UNLOADING PROCEDURE



STEP 1:

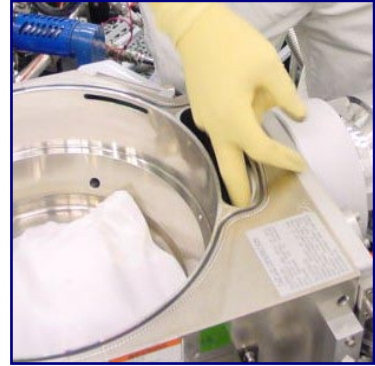
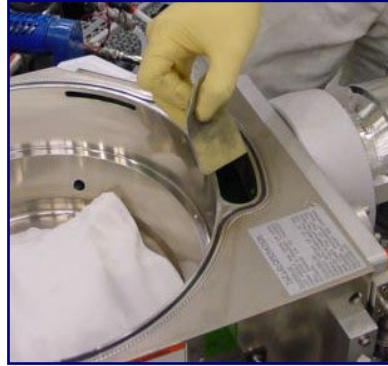
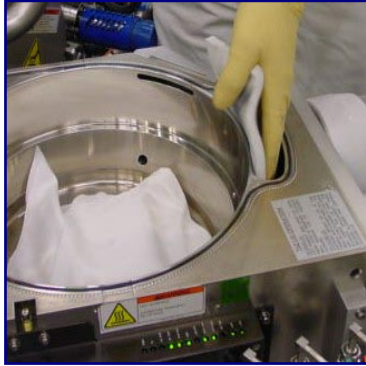
- Dampen UltraSOLV[®] Sponge with DI water



STEP 2:

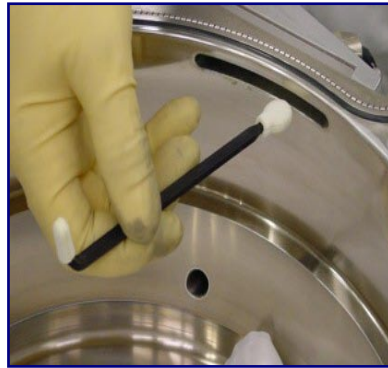
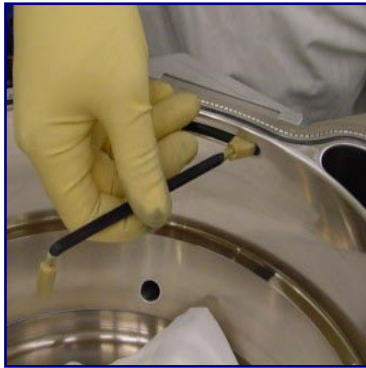
- Ring-out excess DI water from UltraSOLV[®] Sponge

THE UltraSOLV® CHAMBER CLEANING TECHNIQUE (cont):



CLEANING PUMP-PORT

Using same technique described above, continue cleaning all areas throughout TxZ™ Chamber



Using 800 Grit Diamond ScrubTIP® & UltraSOLV® Swab

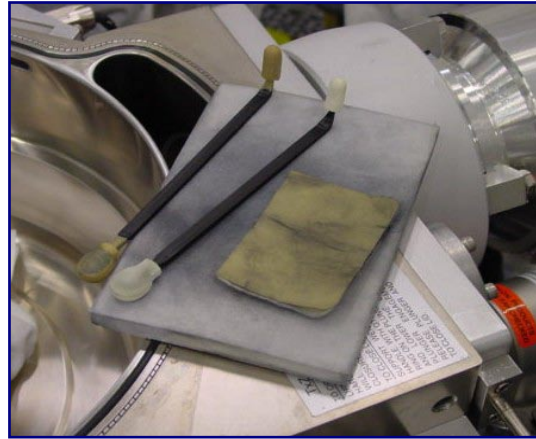
- Clean TxZ™ view port
 - Unload ScrubTIP® on UltraSOLV® Sponge using same technique as unloading Diamond Grit ScrubPAD
- Use UltraSOLV® Swab to effectively wipe-out TxZ™ view port

800 Grit ScrubTIP® and UltraSOLV® swab can be used to clean the bottom areas of the pump port that cannot be reached by hand

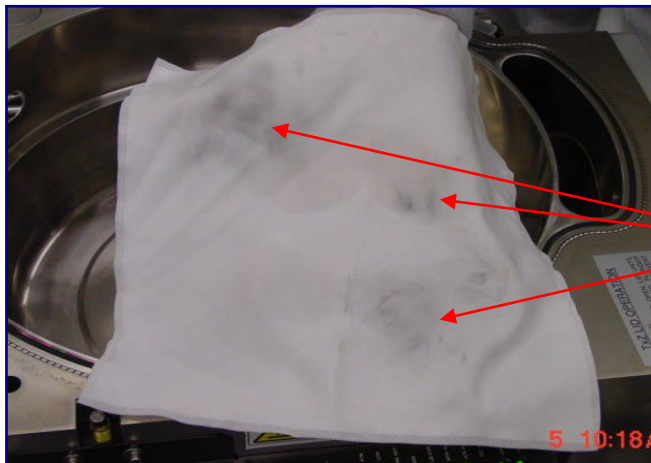
PERFORM FINAL WIPE OF ENTIRE CHAMBER USING IPA

- See note below regards using Foamtec International MiraWIPE® as Final Wiper

THE UltraSOLV® CHAMBER CLEANING SOLUTION:



PM COMPLETED IN 1 HOUR

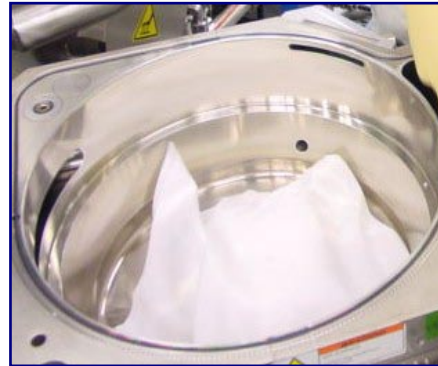
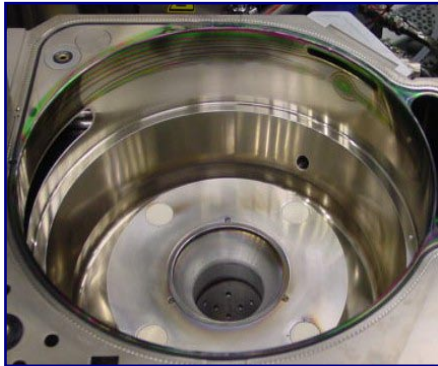


What the MiraWIPE® was able to remove after wiping TxZ™ Chamber with Texwipe Alpha 10



What the UltraSOLV® Foam Wiper was able to remove from bead blasted part just prior to its being replaced in the TxZ™ Chamber

CONCLUSION:



THE UltraSOLV® CHAMBER CLEANING PM SOLUTIONS:

- Diamond Grit ScrubPAD does not break-down during scrub portion of clean
- Able to clean entire TxZ™ Chamber using (1) to (2) Diamond Grit ScrubPADS
- No Diamond Grit Particles left behind to be removed from TxZ™ Chamber
- MiraWIPES® remove more deposition/particles within TxZ™ Chamber
- MiraWIPES® remove more IPA residue within TxZ™ Chamber
- Less outgassing due to MiraWIPE® removing more deposition/particles within TxZ™ Chamber
- Less outgassing due to MiraWIPE® removing more IPA residue within TxZ™ Chamber
- Able to clean TxZ™ Chamber in a timely manner, shorter green – to – green times based on:
 - More efficient scrub
 - Less outgassing
 - Reduction of defects

ABLE TO REMOVE PARTICLES FROM BEAD-BLASTED PARTS USING UltraSOLV® WIPER PRIOR TO REPLACING PARTS REMOVED FROM CHAMBER.