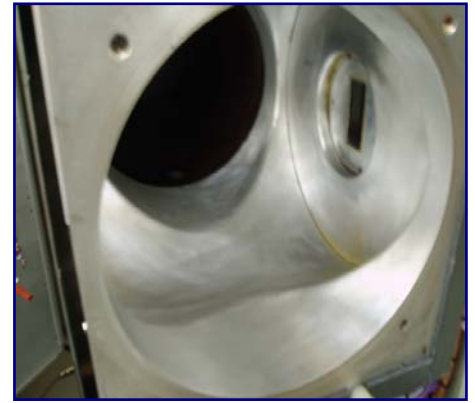


BEFORE



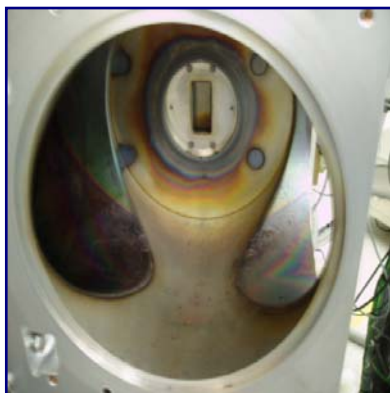
AFTER

AXCELIS™ HIGH ENERGY HE3 SOURCE PM BOX AND CHAMBER TRAINING GUIDE

THE PROBLEM:



(+) 1 YR DEPOSITION BUILDUP



OLD PROCEDURE:

WET CLEAN METHOD:

- Wipe with hydrogen peroxide (H_2O_2)
- Scrub with 3M ScotchBrite®
- Wipe with DI water
- Wipe with IPA

SAFETY HAZARDS:

- Must wear breathing apparatus due to toxic fumes released when using H_2O_2
- Dangerous risk of fire when using H_2O_2 around flammable solvents
- Dangerous risk of fire when scrubbing phosphorus with H_2O_2
- Constant smoke and fire risk when scrubbing phosdep with ScotchBrite® and H_2O_2

EQUIPMENT PROBLEMS:

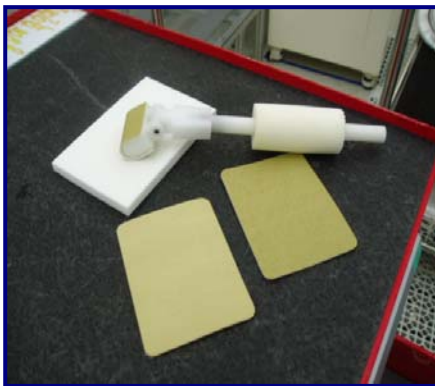
- Not able to clean source region in a cost effective manner
- Extensive outgassing caused by the use of H_2O_2 , ScotchBrite® And the inability to thoroughly remove processed induced residue from source region
- Risk of ScotchBrite® related arcing, sodium and metal contamination.

FOAMTEC INTERNATIONAL NEW PROCEDURE:



SET UP:

- Stage the necessary Foamtec International products
 - 280 Grit Diamond ScrubDISK®
 - 280 Grit Diamond ScrubPAD
 - UltraSOLV® Sponge
 - ErgoWRENCH®
 - ErgoSCRUB®
 - Small container of DI water
- Place container of DI water inside of plastic bag to prevent spills
- Dampen UltraSOLV® Sponge And Diamond ScrubPAD in container of DI water
 - Squeeze as much moisture out of the sponge and ScrubPAD when ready to use



THE UltraSOLV® CHAMBER CLEANING TECHNIQUE:



STEP 1:

- Wipe out the source area with UltraSOLV® Sponge



STEP 2:

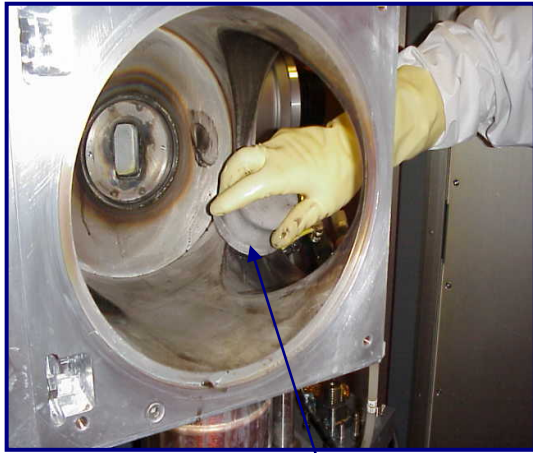
- Scrub small section of source with Diamond ScrubPAD



STEP 3:

- Wipe the scrubbed area with UltraSOLV® Sponge

THE ULTRASOLV[®] CHAMBER CLEANING TECHNIQUE (CONT'D):



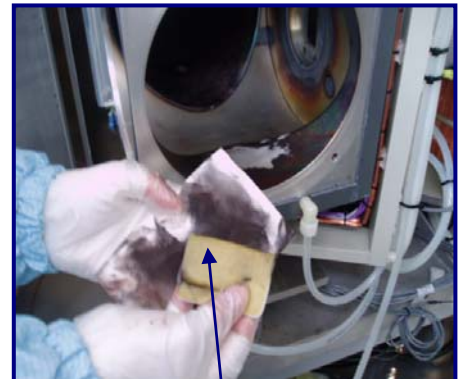
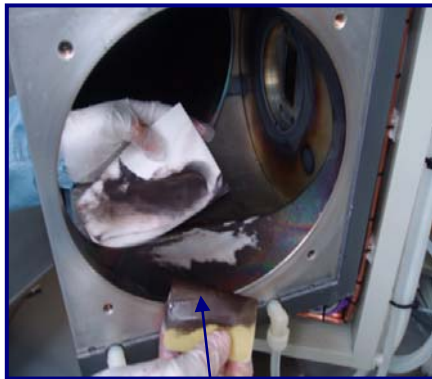
ErgoSCRUB[®]



ErgoWRENCH[™]

STEP 4:

- Use ergonomic handles (especially ErgoWRENCH[™]) in order to remove deposition that has built up over numerous PM cycles (legacy of deposition)



ScrubPAD/ScrubDISK[®] Unloading Procedure

STEP 1:

- ScrubPAD loaded with deposition

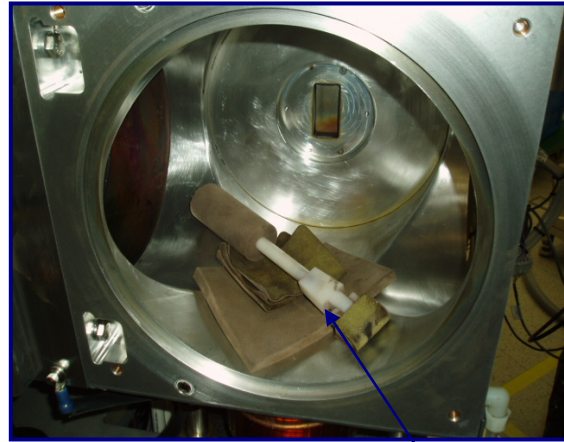
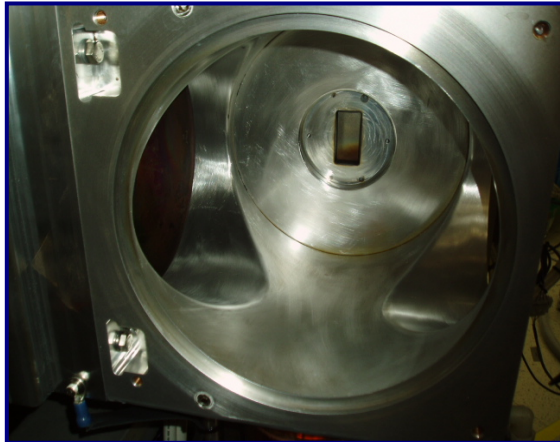
STEP 2:

- Pull ScrubPAD across UltraSOLV[®] Sponge

STEP 3:

- Unloaded ScrubPAD

THE SOLUTION:



PM COMPLETED IN 1 HOUR

Reduced
consumables
count reduces
cost & hazmat

Contamination on
final polyester
wiper



Contamination left in
the source region
removed by
MiraWIPE®. Particles
equal arcing!

- NO H₂O₂
- SOURCE CHAMBER CLEANED BACK TO BARE METAL
- MORE DEPOSITS/PARTICLES WIPED AWAY FROM CHAMBER
- REDUCTION OF SODIUM & METAL CONTAMINANTS

CONCLUSION

UltraSOLV® CHAMBER CLEANING TECHNIQUE IS ABLE TO IMPROVE PM PROCEDURES AS FOLLOWS:

- SOURCE REGION CAN BE CLEANED TO BARE METAL WITH REDUCED LABOR AND EQUIPMENT DOWNTIME.
- H₂O₂ AND SCOTCHBRITE ARE ELIMINATED REDUCING HEALTH, SAFETY, SODIUM, METALS, & PARTICLE RISKS.
- OUTGASSING IS REDUCED BY MORE COMPLETELY REMOVING DEPOSITS FROM THE CHAMBER AND COMPONENTS.

UltraSOLV® CHAMBER CLEANING TECHNIQUE IS ABLE TO ELIMINATE SAFETY HAZARDS

- ABLE TO ELIMINATE THE BREATHING HAZARDS CAUSED BY USING H₂O₂
- ABLE TO ELIMINATE THE RISK OF FIRE BY USING H₂O₂