



## VACUUM CHAMBER PM TECHNIQUE NOVELLUS CONCEPT SHOWER HEAD WIPE

### OBJECTIVE:

TO EFFECTIVELY PM NOVELLUS CONCEPT SHOWER HEAD IN A TIMELY MANNER, WHILE IMPROVING TOOL RECOVERY, PARTICLE PERFORMANCE AND REDUCING HAZARDOUS WASTE

Vacuum Chamber:

Vacuum Chamber Process Residue:

Vacuum Chamber Components:

NOVELLUS CONCEPT 1 & 2

PROCESS INDUCED RESIDUE

SHOWER HEADS

Old Procedure:

DI water, 50+ wipers

New Procedure:

DI water, Foamtec Foam Wipers

Vacuum Chamber Products:

- (6) [FS4291](#) PilloWIPE<sup>®</sup>
- or -
- (6) [HT4790](#) UltraSOLV<sup>®</sup> Foam Wipe
  
- (1) [HT5790S](#)-5 MiraWIPES<sup>®</sup>



The Foamtec International PilloWIPES<sup>®</sup> and UltraSOLV<sup>®</sup> Foam Wipers are sponge-like 9x9 wipers that can effectively wipe the Novellus hot shower heads, while protecting the technicians

**NOVELLUS CONCEPT SHOWER HEAD WIPE PM PROCEDURE:**

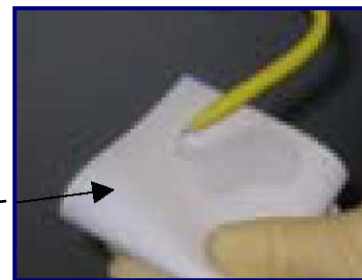
View "How to" instructional videos on <http://www.foamtecintlwcc.com/flash/>

**Step 1:** Using proper procedures and **safety guidelines** properly shutdown, vent and prepare to perform Novellus Shower Head Wipe

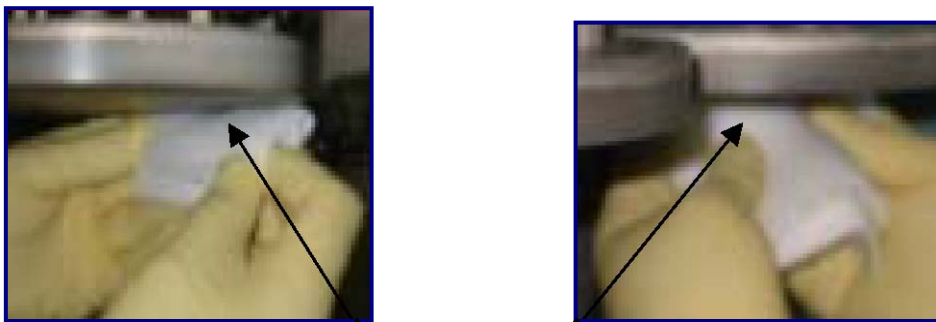
**Step 2:** Fold the [FS4291](#) PilloWIPE® into ¼'s and soak with DI water (See Fig 1)

**NOTE:** **DUE TO THE PilloWIPE®'s SPONGE-LIKE CHARACTERISTICS, SUFFICIENT DI WATER WILL BE NEEDED TO PROPERLY SOAK PilloWIPE® THROUGH. ENSURE TO SQUEEZE TO WORK IN THE DI WATER**

**Fig 1:** [FS4291](#) PilloWIPE® Folded into ¼'s and soaked with DI water



**Step 3:** In a pulling motion, proceed to wipe shower head from back to front (See Fig 2 & 3)



**Fig 2 & 3:** Pull [FS4291](#) from back to front across shower head

**NOTE:** **REFOLD PilloWIPE® AND CONTINUE TO WIPE SHOWER HEAD USING A FRESH AREA OF PilloWIPE®**

**Step 4:** Repeat process for remaining Novellus shower heads

**NOVELLUS CONCEPT SHOWER HEAD WIPE PM PROCEDURE (CONT'D):**

**Step 5:** Inspect Novellus Shower Heads and re-wipe any questionable areas, ensuring to use a fresh side of the PilloWIPE®

**FINAL IPA WIPE PROCEDURE:**

**VERY IMPORTANT NOTE**

**THE USE OF HT5790S MiraWIPES® DURING THE FINAL WIPE PROCEDURE IS A CRITICAL STEP TO EFFECTIVELY REMOVE PARTICLE DEFECTS**

**NOTE:** Figure below shows how much more deposition the Foamtec International MiraWIPE® can remove from a critical surface compared to the standard fab wiper, making the MiraWIPE® Final IPA Wipe the most **CRITICAL STEP** of the PM procedure (See Fig 4a & 4b)



**Fig 4a:** Current fab wiper after completely wiping chamber

**Fig 4b:** Particles picked up using HT5790S MiraWIPES® after completely wiping with current fab wiper

**MiraWIPES® are the KEY STEP for DEFECT REDUCTION and IMPROVED TOOL RECOVERY**

**Step 6:** Dampen the HT5790S MiraWIPES® with IPA and perform a **THOROUGH AND EFFECTIVE WIPE-DOWN** of all vacuum sealing surfaces on the Novellus chamber

**Step 7:** Ensure to wipe down all spare parts placed back into the Novellus Concept Chamber using additional IPA dampened HT5790S MiraWIPES®