Ebara (Left)

Chris Guarino Living Notes

Operations Procedure

Pre-Flight Check List

* Do you have proper slurry?
* Do you have enough slurry?
  + \*Remember flow rate is 200ml/min.
* Do you have enough cleaning solution (JDX)?
* How does the pad look?
  + \*How do the grooves look and what is the pad life?

Steps:

On-Screen Operations

1. Regular Operations
2. Auto Operations Start
3. Be sure you have the correct Cassette selected before you enter any information.
4. Enter you Warm Ups (WU)
   1. Two WU are needed the first time a slurry is being used that day or when you change slurry.
      1. Time for running WU is variable. It depends on the slurry being used and how long since the line (A, B, C) was last used.
      2. Typically for any of the Line A or C slurries you should run your WU for 60 seconds. This is due to there being in-line filters for those lines. This means that the filters need to purge (old slurry) and flood (new slurry) their chamber before you can assume that the correct slurry is being distributed.
      3. For Line B slurries 30 seconds is sufficient run time for a WU.
   2. One WU is needed if there has been over 15 minutes since your last Lot run.
5. Now enter your run information for the product wafers.
   1. Enter Name of the Lot followed by the wafers being run.
      1. Ex: MRHFC137 W3-17 ODD
   2. Enter the number of wafers to be run.
   3. Select the proper recipe.
   4. Ensure that the correct run time is set for the correct Step #.
6. START
7. Start Command
   1. It is a good habit to refence the Start Command after initiating a run. This is give you one last chance to catch any mistakes you may have entered.
8. Unlock the screen so that all three Ebara panels can now be used.

Faulting

The Ebara tool can fault in two different ways.

Light Fault: occurs when the tool see that it is approaching a replacement or maintenance threshold for one of it’s components. These thresholds are determined by the manufacturer and can be edited by the user. DO NOT change these thresholds.

Heavy Fault: occurs when something crucial took place. These events can range from inter-mechanical communication confusion to a wafer breaking on the platen.

\*The Ebara logs where an issue has taken place. When a fault occurs you can look through the Fault History to help diagnose the causality of the event.

\*To clear a fault, first press the “Busser Reset” button. This is end the alarm. Then press the “Fault Reset” button. A Fault History screen should appear.

Qualifying

The Ebara is qualified for processing at the beginning of every week. Run a Pre-Measured HOX Monitor with CuC for 60 seconds. A post measurement will give us a rate. That rate needs to be within spec to qualify the tool for processing. Post Measurement will be on the UV tool.

\*We also need to qualify the tool after every pad, dresser, head change.\*

Run:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Wafer Type | # | Recipe | Step | Time(sec) | Slurry |
| Break-In | 2 | 402 | 5 | 60 | CSL |
| Seasoning | 10 | 403 | 5 | 30 | CSL |
| M2 | 1 | 370 | 5 | 120 | CSL |
| CUB | 1 | 370 | 5 | 60 | CSL |
| Warm Up (Slurry Change) | 2 | 371 | 6 | 60 | CuC |
| HOX | 1 | 371 | 6 | 60 | CuC |

Slurries

There are 10 common slurries used on the Left side of the Ebara.

GET RATES & USES!!!

1. CSL 9044C : This is only used for Copper polishing.
2. CuC (Ta33) : Liner Polish (Full Concentration)
3. v2 Ta33 : Liner Polish
4. Low Rate Ta33 : Liner Polish
5. v4 Ta33 : Liner Polish (Least aggressive formulation.)
6. RDB 1001 :
7. RDB 1002 :
8. 6:1 Ceria :
9. D112 :
10. Nalco :

Notes:

1/8/19

* After changing pad follow pad changing procedures.
* You CAN touch wafers to be polished. After final polish you must use the vacuum wand.
* Inspect FRONT, MIDDLE, and BACK in Scope.
* Drain Flushes are done every Friday on both the Left and Right side of the Ebara.