

## Wet Oxidation Procedure:

Note: Please do not touch the valves, switches, buttons etc unless you are asked.

- I. Load Wafer  
Use “sideways” boat for loading wafer. Always use high temperature gloves to touch the inner parts of the furnace. Use the high performance glassware and rod for such procedure. Loading is done by sliding through the annular space using glass rod and the slot in the boat. Consult someone who “knows” if you don’t know!
- II. If dry oxidation was the previous procedure then it is likely that the dry oxygen and nitrogen valves are in ON position (“open”). Close these valves. And for the process of wet oxidation, open the oxygen and nitrogen valves meant for wet oxidation. Also turn ON the WET OXIDATION switch.
- III. Open the oxygen cylinder valve (e.g. at pressure of 20psi). This will allow the flow of oxygen in the furnace.
- IV. Check the water level in the reservoir. If it is inadequate then add some DI water to the reservoir. Close the reservoir inlet (which is also a steam release valve) and ensure that there is no steam leakage using a clamp.
- V. Turn heater ON to 90 to 100 degree Celsius.
- VI. Check for steam from the front side of the furnace after some time (say 10 to 15 minutes).
- VII. Wait for 200 minutes for 2-micron oxide layer (at 1000 degree Celsius).
- VIII. Reverse the steps V through I to stop the oxidation process.
- IX. Remove the wafer boat carefully.