III. DEFECTS IN EPI FILMS

- THE CRYSTAL QUALITY OF THE EPI LAYER CANNOT SURPASS THAT OF THE SUBSTRATE.

- ALREADY TALKED ABOUT WAFER CLEANING. "RCA" CLEAN.
  
  - CAN ALSO USE IN-SITU NCL CLEAN AT 1000°C-1100°C.

- THE SUSCEPTOR IS A SOURCE OF METALLIC IMPURITIES. CAN CLEAN WITH HIGH TEMP NCL.

- DISLOCATIONS AND STACKING FAULTS ARE COMMON.

- DISLOCATIONS
  
  - PROPAGATION OF SUBSTRATE DISLOCATIONS INTO THE EPI.

- MISFIT DISLOCATIONS DUE TO DOPING DIFFERENCES.

- THERMALLY GENERATED STRESS → SLIP.
  
  A FEW DEGREES DIFFERENCE IN TEMP BETWEEN THE FRONT AND BACK OF A WAFER CAN CAUSE THE WAFER TO BOW.