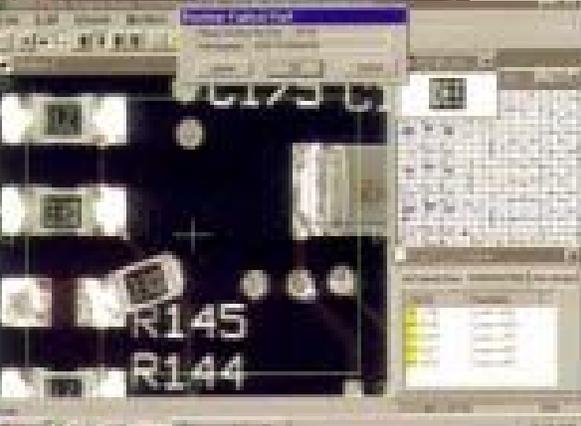


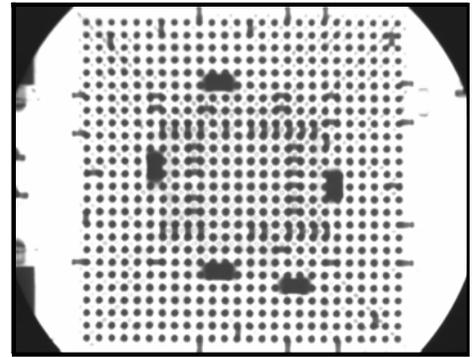
stage of the assembly process strict quality controls are applied.
paste height is measured prior to surface mount.
ovens profiled using populated boards.



Surface mount assembly checking with Fully Automatic Optical Inspection (AOI) (Diagnosis VisionPoint, ~100 components per minute)
Programmed using a "gold" board and ODB++ data.
Detects component misplacements, incorrect part nrs, poor solder joints, solder bridges.



AOI example is not from a FED)



Example of a good BGA (from a l

BGA assembly verified with 3D X-Ray.
Solder ball re-flow checked using Ersascope.



Ersascope picture (not from



Assembly
Access
X-ray

Tests at
Assembly Plant
VME crate

Tests at RAL &
IC
Full crate

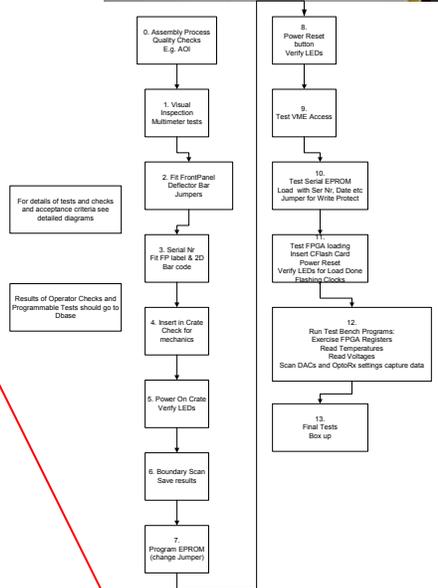
Tests at CERN
Preveessin
Crate Integration

Installation at CMS
USC55

Move from Assembly Plant to USC55

Plans to test over 10 months. Essential to catch any manufacturing faults early.

Plans



VME Crate Testing for Analogue

