### **NAVITAS SOLAR PV MODULES**

# **Quality Control Systems**

Revision Date: March 18, 2015 | Applicable for IEC Certified Products



The quality system is followed in 4 sections in Navitas solar:

- 1. Incoming Quality Inspection
- 2. In process Quality Inspection
- 3. Final Quality Inspection
- 4. Machine Validation

#### INCOMING QUALITY INSPECTION

All raw materials are inspected as per Quality Plan of Navitas Solar. The materials are checked for dimensions, Specifications, Quantity, weight, visual as per criteria laid out in Quality Plan of material. The following material are inspected whenever they arrive in the plant as per criteria laid out in Quality Plan:

EVA, Glass, Cell, Backsheet, Ribbon, Busbar, Frame, Junction box, Sealant, Labels, Packing Boxes, wooden pallets

# IN PROCESS QUALITY INSPECTION

The product during manufacturing is inspected at various stages on line for various parameters as per criteria laid out in Quality Plan. These are the stringent inspections performed at various stages so that product produces if of Premium Quality. The following inspections are performed on Product during manufacturing as per Quality Plan:

- 1. Visual Glass Inspection for Spots etc .
- 2. Cell Testina
- 3. Visual inspection of cells
- 4. EVA and backsheet for dimensions
- 5. Ribbon Pull Test
- 6. Gap between Cells
- 7. Gap between strings
- 8. Gap between cells and Glass side edge
- 9. Gap between cells and Glass top edge
- 10. String Polarity
- 11. Bus Bar Location w.r.t. Junction box terminal
- 12. IV testing at Lay up
- 13. EL test before Lamination
- 14. Visual Inspection before Laminator
- 15. Gap between Bus bars
- 16. Gap between Busbar and cells
- 17. Visual Inspection after Lamination
- 18. Frame Inspection after fitment
- 19. Junction Box Assembly Inspection
- 20. Electrical Parameters of Modules
- 21. Leakage current at high voltage
- 22. IR at high voltage
- 23. Wet leakage test
- 24. Module visual Inspection
- 25. Packing Inspection
- 26. Gel Test
- 27. Back sheet Pull test

## FINAL QUALITY INSPECTION

The Product is inspected before dispatch to customers for visual inspection, packing and electrical parameters. After stringent Quality inspection solar modules are dispatched to customers.

#### MACHINE VALIDATION

The sun simulator and High Voltage equipment are calibrated in every shift so that machine performs all the testing in accurate manner and product is of specified parameters.

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