



SITAU-TRITON. ROBOT INSPECTION



PARTS OF THE SYSTEM

- ✓ Immersion tank
- ✓ Articulated industrial robot with programmable manipulator in its 6 controlled axes. Robot guidance system with linear guides.
- ✓ Quick change tools equipped that allows 3 areas of movement simultaneously. PE techniques with PA, double transmission with plate reflective, and TT for sandwich structures.
- ✓ “Visualscan” Software. A, B and C Scan result presentation available.
- ✓ Ultrasound system DASEL SITAU designed to operate in automatic.
- ✓ 7 phased array probes with 128 elements → up to 896 for complex configuration.



OPERATION MODE 1 The immersion tank and the robot are used together and the displacement is done following a linear guide.

The use of positioners and a gimbal allows the inspection of surfaces with certain curvature and a trajectory tracking according to a not necessarily horizontal plane.

The available inspection techniques are: PE and DT, with PA technology, for inspection of solid laminates with a flat or slightly curved shape.

In this mode of operation, the pieces are placed in immersion in the bottom of the tank and the scan is performed according to a plane that can be vertical or horizontal.

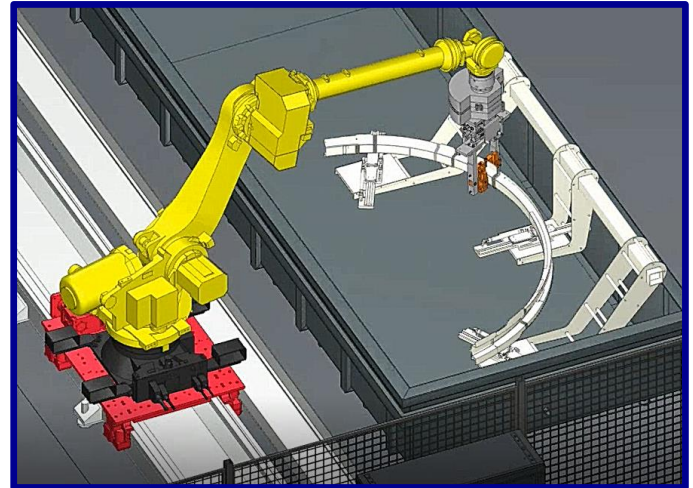
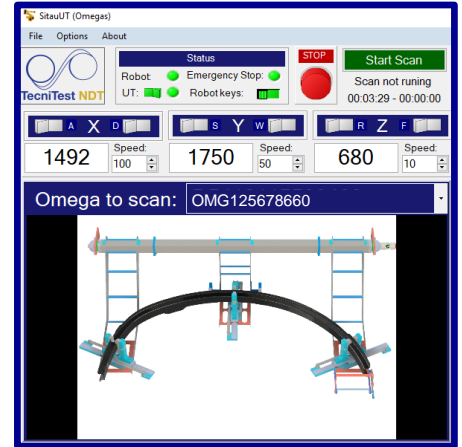


OPERATION MODE 2

The pieces with complex geometry are placed on an ad-hoc tool immersed in the tank.

The robot, is responsible for carrying out the inspection completely automatically using a custom made probe head that allows to absorb deviations in the geometry.

Inspection trajectories are programmed, based on the information of the coordinates of the piece.



OPERATION MODE 3

Based on the use of TT inspection mode.

It allows to inspect sandwich components, both flat and with complex geometry using a transmission tool.

