Introduction

The through transmission inspection technique is a widely accepted method for assessment of composite honeycomb or foam core structures. This technique requires both surfaces to be accessible and the use of an instrument with C-scan capabilities. The Sonatest rolling tip probe has a special design with a circular emitting crystal. The pulsing (TX) and receiving (RX) probes need to be precisely positioned in front of each other and across the part to properly carry out the inspection. A fixture to hold the part may also help to facilitate probe alignment although the rolling tips make it easier to scan. The very low probe frequency enables dry inspections, which eliminate the need for water coupling. In addition, the probe is highly sensitive, which, combined with the high-quality signal provided by Sonatest instruments, enables complete and accurate inspections, even on foam core composite air-like structures.

The main advantages of this technique:

This technique ensures lower sound attenuation, mitigates dead zones, reduces recovery time and lowers sensitivity with respect to flaw orientation.

Figure 1 – Prisma

Industries

- Aerospace Aeronautical Inspection
- Aerospace Astronautical Inspection
- Automotive Industry
- NDT Service Providers

Application

- Casting / Forging Inspection
- Composite Material Inspection
- Plastics Inspection
- Material Bonding Inspection
- Asset integrity

Typical Parts

- Honeycomb / foam core plates
- Composite parts

Inspection Techniques

- Manual UT

Features and Benefits

- Profile and scrolling view (coloured B-scan)
- Full and high-precision encoded mapping views (merged C-scans)
- Multiple saved A-scan references, which makes a better defect comparison tool

For further information or support, please contact the Sonatest Applications Team: applications@sonatest.com

Recommended Tool Package

Category	Part #	Description
Acquisition Unit	PRISMA UT BNC* KIT or PRISMA UT LEMO KIT	Standard base model; no option required to drive Dryscan probe: Prisma UT BNC Standard Kit or Prisma UT LEMO Standard Kit
Probe	RP25HS-1	
Cable	152087 or 152088	Twin Transducer Cable TPC-BZ (BNC to Lemo 00) or Twin Transducer Cable TPC-LZ (Lemo 1 to Lemo 00)

Get in touch with your local Sonatest expert, available in more than 50 countries over 5 continents!

Sonatest (Head Office)
Dickens Road, Old Wolverton Milton Keynes, MK12 5QQ t: +44 (0)1908 316345 e: sales@sonatest.com
Sonatest

(North America)
12775 Cogburn, San Antonio Texas, 78249
t: +1 (210) 697-0335 e: sales@sonatestinc.com

