

## Description

One of today's major challenges in NDT is the inspection of composite materials and adhesive bonds. To meet this challenge TWI has acquired the Stavely BondMaster™ 1000+.

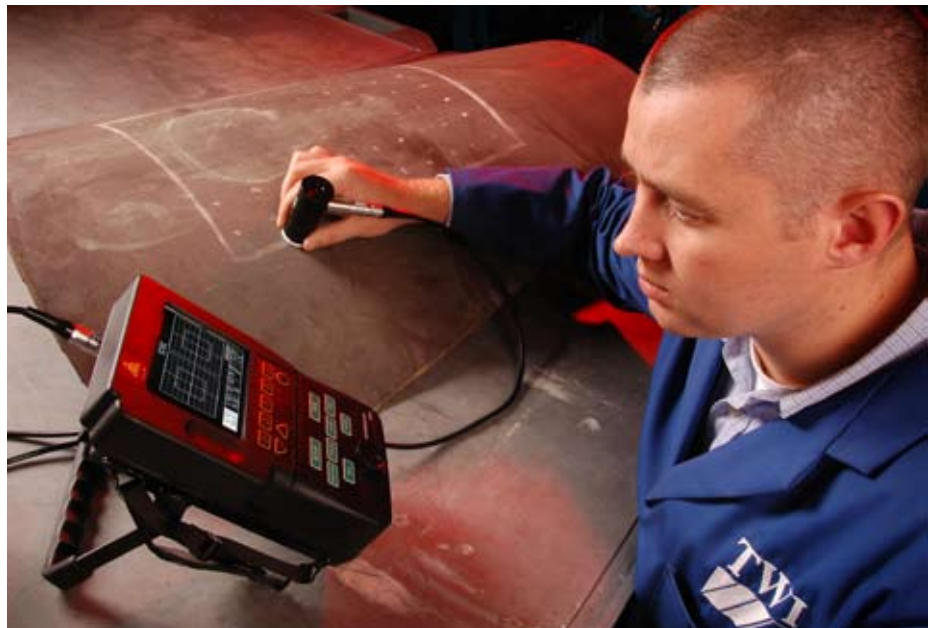
This versatile, full multi-mode instrument integrates three inspection methods - Resonance, MIA (Mechanical Impedance Analysis), and Pitch/Catch mode, with the addition of the new RF display mode.

The Resonance mode uses a small, contact probe and requires the use of a couplant. A resonance is set up in the probe, which is affected by changes in the structure beneath the surface. Disbonds are detected by changes in phase and amplitude of probe resonance.

MIA measures the surface stiffness and mass under a single contact probe. Changes in phase and amplitude can indicate bond line flaws. It requires no couplant and is used in conjunction with a spring-loaded holder that ensures constant surface pressure.

The Pitch/Catch method does not require couplant and uses two transducers mounted in a single probe. One transmits either a burst of energy or a sweep across a band of frequencies and the other receives the transmitted sound. Variations in phase and amplitude indicate defects.

BondMaster 1000+ offers the user the ability to select the method best suited to inspect a wide variety of composite materials. It is very light (1.8kg) and well adapted to site use having a six to eight hour battery life. Its display



*Stavely BondMaster™ 1000+ and hand held contact probe*

mode can be selected - colour LCD or monochrome LCD for indoor or bright outdoor conditions or a Hi-Brite Electroluminescent (EL) display for normal to dark conditions.

PowerLink™ technology is used to configure the instrument according to the type of test to be carried out. This is done automatically when the sensor is connected. Built-in calibration modes assist the user in optimising the test parameters. A variety of sensors in each of the test technologies are available.

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For more information on the services offered in this leaflet, contact:

### **NDT Technology Group**

TWI Ltd, Granta Park, Great Abington, Cambridge, CB21 6AL, UK  
Tel: +44 (0)1223 899000 Fax: +44 (0)1223 892588

TWI Technology Centre (Wales) Ltd, ECM², Hoel Cefn Gwrgan, Margam, Port Talbot, SA13 2EZ, UK  
Tel: +44 (0)1639 873100 Fax: +44 (0)1639 864679

E-mail: [ndt@twi.co.uk](mailto:ndt@twi.co.uk)  
Website: [www.twi.co.uk](http://www.twi.co.uk)