



.....Bondcheck V 95



Bondcheck V 95

The easy to use electronic coin tapper.

The Bondcheck V 95 is an instrument used for testing various bonded or laminated components. It can be used to proof delaminations and other defects, where the main range of applications is in the carbon- and glass-fibre lamination as well as honeycomb structures.

The setup of the Bondcheck V 95 is fairly easy. A handheld probe is used for the scanning of the inspection area. Changes of the mechanical impedance created by defects and imperfections are detected and indicated.

The coupling of the sensors is done dry without coupling liquid.

The constant pressure of the spring-loaded sensors guarantees mainly a stable display.

„Electronic cointapper“ would be an appropriate description for the instrument.

Special circuits and evaluation methods minimize the operation procedure without affecting the reliability and range of applications.

Types of probes.

Two probes belong to standard equipment of the Bondcheck V 95, which cover most of the inspection tasks. The probes differ by their method of operation and frequency. They cover different ranges of material thickness and complement each other in the operation range.

SP probe.

The SP probe is suitable for thin materials.

Transmitter and receiver are mounted on one axis and allow punctual measurements. The excitation is done piezoelectrical with highly attenuated pulses. The frequency generated depends on the mechanical impedance of the construction and ranges from 3

kHz up to 7 kHz. Amplitude and duration of the pulses are evaluated and show the response of the tested material. The SP probe has a very good local resolution.

Delaminations with an area expansion of 20 mm² or smaller can be detected, depending on their depth. A slight movement of the meter appear in honeycomb constructions when scanning over the cells due to this local sensitivity.



RSP probe.

The RSP probe is optimized for thicker material or delamination at the backside of honeycomb constructions. The excitation is done also piezoelectrical but by using the pitch-catch mode. This means one piezo bar is used as a transmitter and the other as a receiver. The frequency is about 15-17 kHz. The resolution of this probe is also extreme well due to the very short distance of the sensors where the detectable defect size depends on the depth.

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Applications.

Battery operation.

The power consumption of the bondtester is very low.

A standard 9V battery block allows an usage for about 20 hours.

Operation on AC powerline is therefore not necessary.

When using rechargeable batteries the usage of an external „intelligent“ battery charger is recommended.

Detectable defects

The Bondcheck V 95 can indicate defects, which cause a different mechanical impedance of the material.

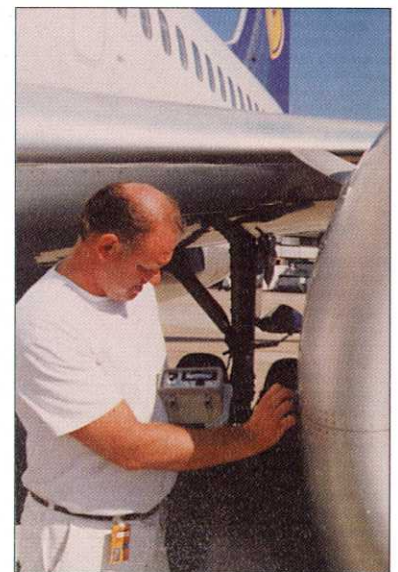
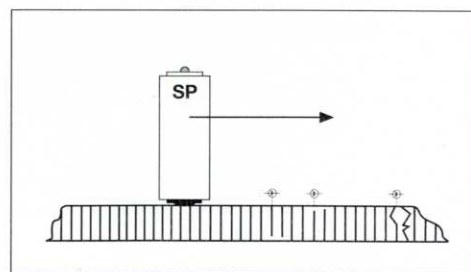
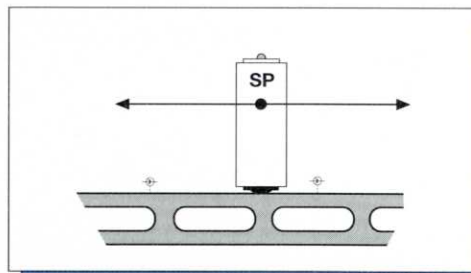
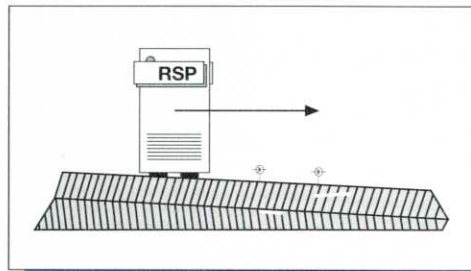
Excited by the sensor, they would show a different vibration response.

These are f.ex.

- delaminations
- mechanical damages caused by foreign objects
- hail and lightning strikes
- loss of strength caused by heat
- variations in the thickness
- osmosis damages on fiber glass boats.

Possible material combinations.

- multilayer laminates / fiber laminate materials
- laminate - metal bonding
- laminate - honeycomb bonding
- metal - metal bonding
- foams (hard and soft)
- metal soldering
- metal - ferrous metal brazing
- wood laminates.



Range of applications.

The following contains only some typical examples for possible applications...

- manufacturing control of laminates etc.
- aircraft maintenance
- ship and yacht manufacturing
- container manufacturing
- sailplane inspection
- hard foam control
- ... your application ?

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Specification.

Size	about 200x150x65 mm
Weight	1.5 kg
Display	voltage meter pointer; optical and acoustical alarms
Power supply	9V battery block or accumulator
Modes of operation	transmitter/reciever mode: pitch catch (RSP); monocrystal mode (SP);
Analog output	0 - 2V
Thickness range (CFRP)	0.2 mm up to 12 mm thickness
Thickness range honeycombs	up to 20 mm thickness

The purchaser is solely responsible for the suitability in accordance with the technical regulations and applicability of our instruments.

**For detailed information or demo please contact
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