



Acoustic Signature Resonant System

Every part, product or component has its unique *acoustic resonant signature* that reflects its composition, dimensions and stiffness. The resonant frequencies are almost exactly the same from good part to part, however they will change when internal or external changes occur

How it works

Any deviation from the expected signature indicates a variation of the part characteristics or a change in its manufacturing process.

Voids, cracks, debondings, geometry or density variations, different material properties or manufacturing process deviations can be detected immediately.





Type of materials

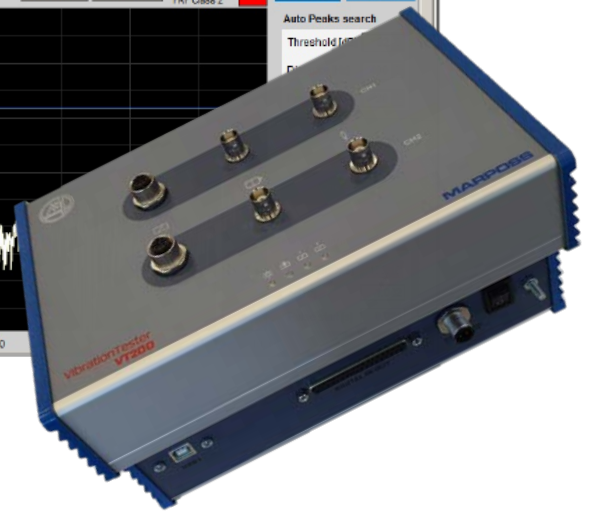
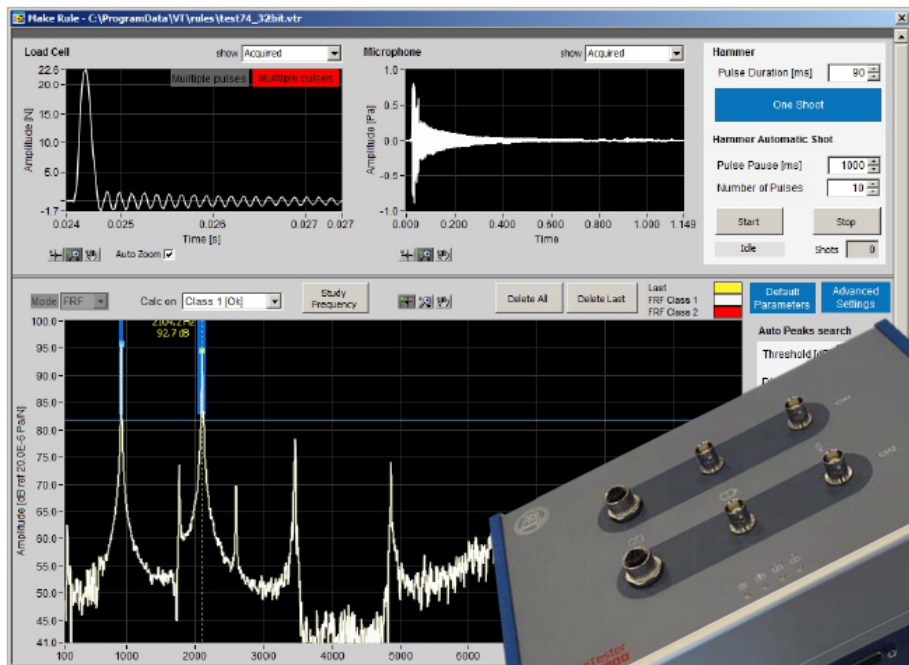
Excellent results have been obtained on

- Iron Casting, Forgings, Stampings, Moldings
- Aluminum Molding
- Sintered parts
- Metal Injection Molding (MIM)
- Precious Metals
- Clay \ Ceramics
- Composites
- Metal Bonding

Applications

The fast and cost effective solution for verifying voids, cracks, flaws on nuts, bolts, valve seats, milling tools, clutch plates, brake components and tiles.

Density distribution, inclusions or improper granularity can be detected on sintered parts even in pre-sintering state (green state)



System Components

- VT-100 Test Box 2 IEPE Input channel (simultaneous acquisition)
- Output 12Vdc for Hammer control
- Digital I/O port :start trigger, recipe programming, testResult, status

Load cell

High quality microphone

Electronic Hammer

- VT-100 Software: FFT/FRF Analysis, 1 Hz Frequency resolution, simple user Interface,
- test Rule management, results database, user Management (3 levels),
- Remote control via ActiveX Server