

NEW CONFORMABLE DELAY LINE FOR FLAT, CONVEX AND CONCAVE SURFACES

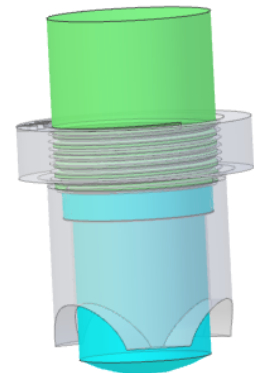


Innovation Polymers announces a new conformable delay line with a stabilizing holder

April 29, 2021

Ultrasonic thickness testing is probably one of the simplest and most common applications of ultrasonic technology. However, it can be frustrating trying to get a steady signal because the surface is rough or not flat. Innovation Polymers now provides a conformable delay line in a 3-legged holder that can improve stability of thickness readings.

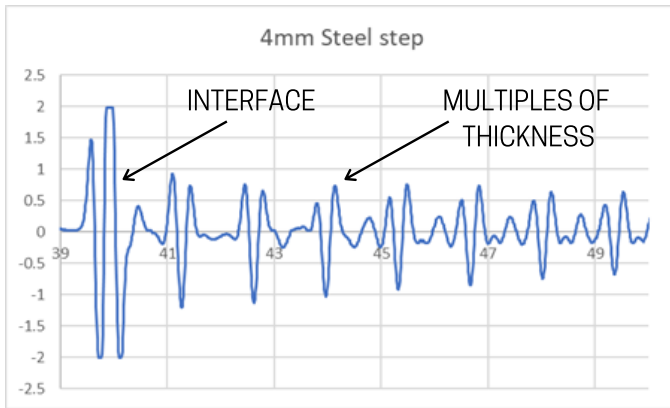
The research and development team at Innovation Polymers has combined their conformable elastomers with a delay line that has a spherical tip housed inside a three leg stabilizer that is threaded to match the most popular probe designs.



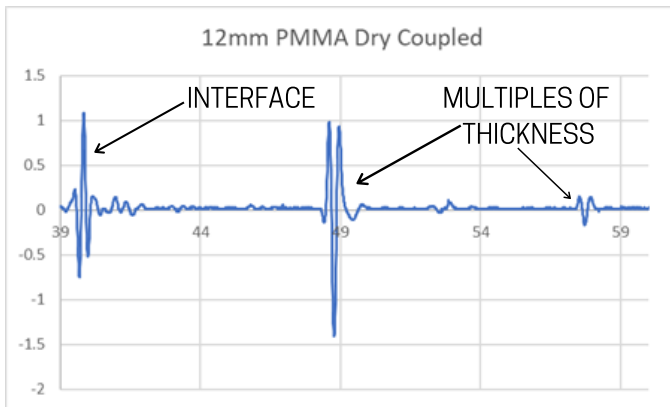
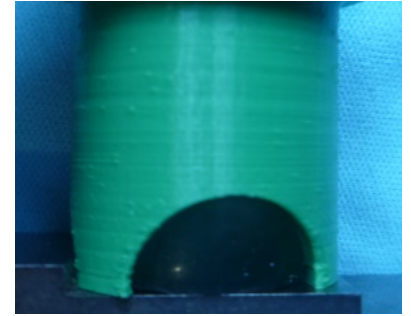
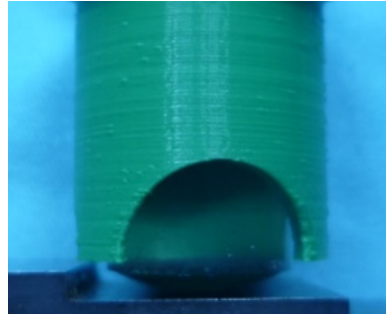
- Threaded to match popular probe designs
- 3 leg stabilizer
- Selectable conforming materials
- Spherical tip

- With a 3-leg durable plastic holder design, the delay line holder can adapt to a range of both concave and convex surfaces.
- Allows for a range of materials and hardness of low attenuation elastomers
- Pressing the assembly against the test piece compresses the delay line until the 3 legs stop the compression and provide a steady signal
- The spherical tip helps eliminate air from the couplant at the point of contact and conforms to the test surface shape (flat, convex, or concave)
- Single 14mm diameter delay line is used with options for several probe housing thread sizes (11/16"-32 TPI, 11/16"-24TPI and 5/8"-24TPI)
- Delay line length allows for measuring thickness of steel up to 75mm

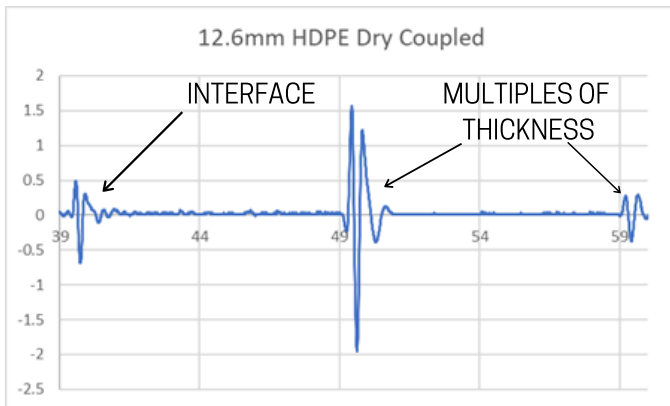
Examples of A-scans using a 5MHz probe and ACE delay-line:



High acoustic impedance difference produces a large interface signal



Polymer materials like polymethyl methacrylate (PMMA) have lower acoustic impedance than steel and provide a lower amplitude interface signal.



High Density PolyEthylene (HDPE) has an acoustic impedance of 2.45MRayls compared to 1.37MRayls for ACE. This results in the low interface signal less than half the amplitude of the air-backed backwall signal.

For more information on these and other elastomeric ultrasonic coupling solutions, please call Innovation Polymers at:

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