Introduction of THE MULTIPLE-ANGLE TOFD WEDGE

High Density Poly Ethylene (HDPE)

High Density Poly Ethylene (HDPE) pipe is becoming a popular substitute for steel pipe. Varieties of polyethylene used in industry can have an acoustic velocity range from about 2100 m/s to about 2600 m/s.

Using PMMA or polystyrene as a refracting wedge material could result in very little refraction or even negative refraction. Elastomeric materials designed by Innovation Polymers range from approximately 1025 m/s to about 1600 m/s, ensuring positive refraction for all applications on polyethylene.

Innovation Polymers has designed wedges specifically for TOFD applications on HDPE. Interchangeable plugs made from Innovation Polymers’ low velocity elastomeric polymers permit the user to select a refracted angle option best suited for the TOFD inspection at hand. These wedges are primarily intended for the TOFD inspection of high density polyethylene butt fusion joints. The modular concept consists of a standard housing, replaceable plug inserts and a threaded plate to accommodate different sized probes up to 12.5 mm (0.5 inch) diameter.

- Standard plugs are available in ACE™, Aqualene™, and Aqualink™.

- Standard plates are anodized aluminium with either 3/8-32 or 11/16-24 threaded opening for probes.

- Standard incident angle is 35° on a flat contact surface.

The standard materials provide refracted angles based on the polymer tested. User determines the best plug material, based on the polymer tested, its thickness, and the Probe Centre Spacing (PCS) for the desired depth of the beam crossing point.

Scan of 25.5 mm HDPE plate (2530 m/s) with ACE™ 400 insert. PCS=82 mm. Five 10 mm long Vee notches

Supplied with irrigation nozzles
Custom modifications are available
Different incident angles available
Threaded probe-plates and curvatures can be added

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