

AWS and DGS Probe Update



DGS PROBE FEATURES

- Perform DGS inspections using phased array technology
- Steering angle range of 45° to 70° with a single probe
- Integrated wedge design optimized for low noise performance for refracted shear inspection in metals
- Allows generation of proper refracted angle over a range of metal velocities

AWS PROBE FEATURES

- Meets AWS code requirements
- Covers all 3 AWS required angles (45°, 60°, and 70°) with a single probe
- Internal crosslinked polystyrene with markings for beam index point

DGS and AWS Phased Array Probes

Olympus NDT has released a new series of phased array probes for DGS and AWS code-compliant inspections. These probes allow code inspections to be performed at multiple angles using one probe. Finite angles can be calibrated and displayed, allowing the generation of proper refracted angles over a range of metal velocities.

The phased array DGS probe performs an inspection sweep from 45° to 70° using a single probe with an integrated wedge design. The probe fully meets the DGS requirements and can be used with the standard DGS sizing charts. The DGS probe series is available both in a 2 MHz, 8 element configuration and in a 4 MHz, 16 element linear configuration.

The AWS Phased Array Probe, when mounted to the external wedge, covers the inspection angles required for compliance with the AWS code (45°, 60°, and 70°). The phased array AWS probe is available in a 2.25 MHz, 16 element linear configuration.



2.25L16-AWS1 probe shown

DGS PROBES

Part number	Frequency	Number of elements	Pitch (mm)	Active aperture (mm)	Dimensions in mm (in.)		
					L	W	H
2L8-DGS1	2.0	8	1.0	8 × 9	27.3 (1.07)	16.8 (0.66)	22.3 (0.88)
4L16-DGS1	4.0	16	0.5	8 × 9	27.3 (1.07)	16.8 (0.66)	22.3 (0.88)

AWS PROBES

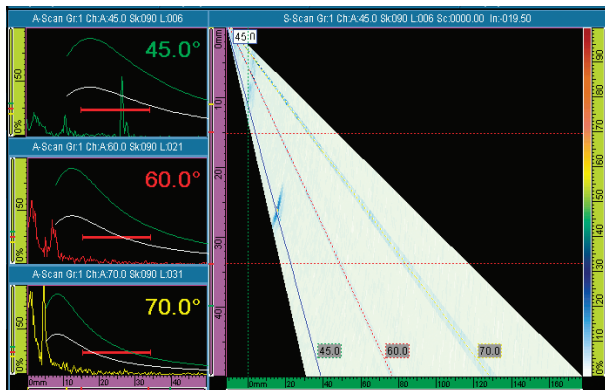
Part number	Frequency	Number of elements	Pitch (mm)	Active aperture (mm)	Dimensions in mm (in.)		
					L	W	H
2.25L16-AWS1	2.25	16	1.0	16 × 16	37.6 (1.48)	25.4 (1.0)	17.8 (0.70)

AWS WEDGES

Part number	Probe type	Nominal refracted beam angle (in steel)	Steering angle (°)	Dimensions in mm (in.)		
				L	W	H
SAWS1-N60S	AWS1	60° SW	45 to 70	45.3 (1.78)	38.0 (1.49)	30.3 (1.19)

DGS INSPECTIONS

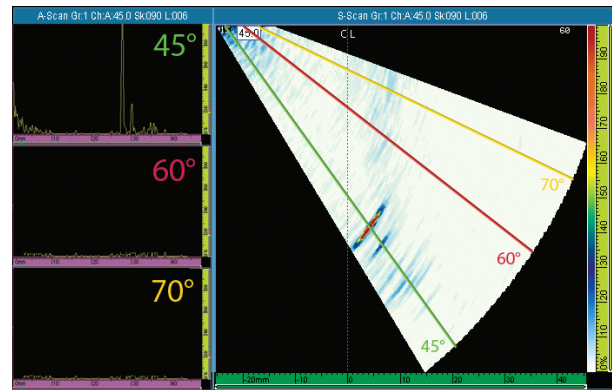
A DGS inspection with a phased array probe not only allows real-time visualization of defects through a sectorial scan but also incorporates the DGS sizing curves for 45°, 60°, and 70°. When defects are found and maximized at these angles, the defect size can be calculated by the instrument.



Typical display for DGS inspection

AWS INSPECTIONS

An AWS inspection using a phased array probe allows visualization of defects through a sectorial scan to improve detection. Simultaneous A-scan monitoring for 45°, 60°, and/or 70° can be accomplished with a single probe. D-rating evaluation can be performed.



Typical display for AWS inspection

OLYMPUS NDT INC. is ISO 9001 certified.

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