

ACOUSTIC IMAGING SCANNER

The Acoustic Imaging Scanner (AIS) employs the changeable ultrasonic transducer subs at the bottom of the tool. The transmitter sends ultrasonic pulses from 300 Hz up to 1 MHz and measures the ultrasonic waveforms reflected from the internal and external surfaces.

The resonant frequency of the casing provides the casing wall thickness, external and internal casing flaws, and casing corrosion. AIS provides a high-resolution view of the internal surface of the casing and reveals fractures and channels at very high angular and vertical resolutions that can detect channels or other types of inconsistency inside cement bond.

In open hole wells AIS provides determination of the angle of inclination and fracture dip azimuth and layers of various acoustic impedance.

Applications:

- Cement quality evaluation in terms of inter cement bond defects
- Internal and external casing inspection with a high level of detailization (corrosion evaluation and monitoring)
- Perforation intervals assessment
- Fractures and cavities evaluation for open hole wells

Advantages:

- 2 in 1 (tubular thickness evaluation + cement bond)
- Wide range of casing diameters coverage

Tool Specifications	
Changeable transducers	Yes
Working frequency	300 Hz – 1 MHz
Diameter detectable range	4.5"-9.625" (114-244 mm)
Maximum Operating Temp	150°C (302°F)
Maximum Operating Pressure	11,600 PSI (80 MPa)
Logging speed	1.0-5.0 m/min
Tool length	8.2 ft (2.5 m)
Tool OD	3.0"-5.7" (76.2-144.8 mm)
Tool weight	154 lbs (70 kg)
Acoustic Transducer 1 OD	2.9"
Acoustic Transducer 2 OD	3.4"
Acoustic Transducer 3 OD	5.7"
SRO / Memory	Surface read-out
H2S resistance	6% standard

