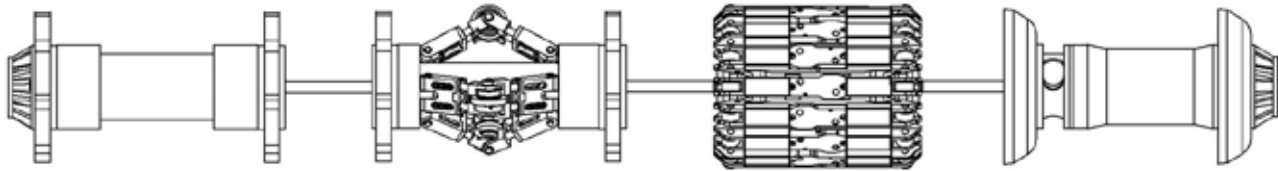


6" Magnetic Flux Leakage Inspection Tool



General			Measurement specifications		
Pipeline size	6	inch	Direction of magnetisation	axial	
Tool length	1500	mm	Maximum wall thickness for accurate measurement	11.1	mm
Weight	62	kg	Magnetisation level at maximum wall thickness	10	kA/m
No. of bodies	4		Axial sampling frequency, variable	1600	Hz
Inertial unit	3d mapping standard accuracy ¹		Circumferential sensor spacing	4	mm
Maximum runtime	24 ^(expandable)	hrs	Internal / External discrimination	Eddy current based	
Pipeline specifications			Odometers	3 channels	
Maximum pipe length	230 ^(expandable)	km	Marker system	Time benched GPS	
Minimum bore	127	mm	Pressure measurement accuracy	± 0.15	bar
Minimum bend radius	3 D		Temperature measurement	± 1	°C
Velocity range ²	0.1-4	m/s	Location accuracy		
Temperature range ³	0 - 60	°C	Location accuracy ⁵	0.1	%
Maximum pressure ⁴	300	bar	Accuracy to girth weld	0.1	m
Minimum back pressure	20	bar	Clock position resolution	± 5	°
Required differential launch	4	bar			

¹refer to 3D & inertial datasheet, GPS mapping available on request

²recommended operating range is 0.1-1.5 m/s

³higher temperatures available on request

⁴higher pressures available on request

⁵relative to closest above ground marker

Detection and sizing capabilities

Sizing accuracy is dependent on external factors, such as contamination of pipeline and operational conditions or heavily patterned seamless pipe. The below table specifies the sizing accuracy in terms of percentage of wall thickness (t) at 80% confidence level for welded pipe and seamless pipe.

Sizing accuracy in welded pipe				
Feature	Minimum depth at 90% POD	Depth sizing accuracy	Length sizing accuracy	Width sizing accuracy
General metal loss	5%	± 10%	± 10mm	± 10mm
Pitting	10%	± 10%	± 10mm	± 10mm
Axial grooving	10%	± 10%	± 10mm	± 10mm
Circumferential grooving	10%	± 10%	± 10mm	± 10mm
Axial slotting	20%	± 10%	± 10mm	± 10mm
Circumferential slotting	10%	± 10%	± 10mm	± 10mm
Corrosion near girth welds	20%	± 10%	± 10mm	± 20mm

Sizing accuracy in seamless pipe				
Feature	Minimum depth at 90% POD	Depth sizing accuracy	Length sizing accuracy	Width sizing accuracy
General metal loss	15%	± 10%	± 10mm	± 10mm
Pitting	15%	± 10%	± 10mm	± 10mm
Axial grooving	15%	± 10%	± 10mm	± 10mm
Circumferential grooving	15%	± 10%	± 10mm	± 10mm
Axial slotting	20%	± 20%	± 10mm	± 10mm
Circumferential slotting	15%	± 10%	± 10mm	± 10mm
Corrosion near girth welds	20%	± 20%	± 10mm	± 20mm

Identification of features			
Feature	Yes POI >90%	No POI <50%	Possibly 50% < POI < 90%
Internal / external discrimination	✓		
Metal loss feature in body of pipe	✓		
Metal loss feature in weld area	✓		
Metal loss pipe mill feature	✓		
Mid wall feature			✓
Grinding	✓		
Gouging	✓		
Dent / Dent with metal loss	✓		
Spalling			✓
Axial crack		✓	
Circumferential crack			✓
Eccentric pipeline casing	✓		
Fitting	✓		
Sleeve	✓		
Valve	✓		
Tee	✓		
Bends (5D or less)	✓		
Close metal object	✓		
Clock position of longseam weld	✓		
Girthweld	✓		
Patch	✓		