

A1.03. Detection Capability Sheet (5/8, +/-10%, 80%) 12/56" MagneScan

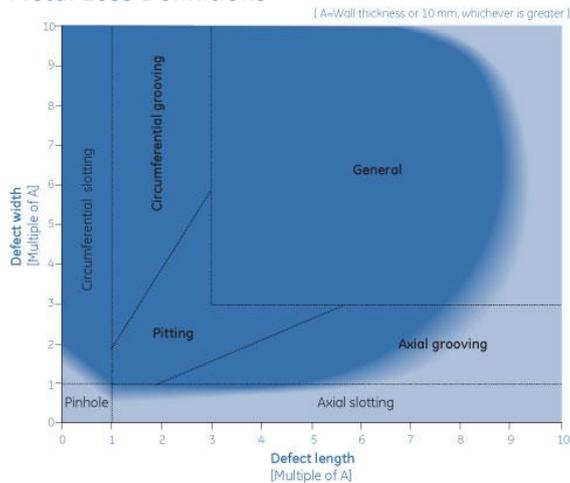
POF 12" to 56" MagneScan

Inspection of Seamwelded Pipes – Manual Sizing

Property	Full detection and sizing accuracy or metal loss in body of pipe					Full detection and sizing accuracy for metal loss in the vicinity of a weld*			
	Certainty (Probability)	General Metal loss	Pitting	Axial Grooving	Circumferential Grooving	General Metal Loss	Pitting	Axial Grooving	Circumferential Grooving
Min. Depth At 90% POD		5%	8%	8%	5%	9%	13%	13%	9%
Depth Sizing Accuracy	80% 90%	±10% ±15%	±10% ±15%	-15%/+10% -20%/+15%	-10%/+15% -15%/+20%	±15% -	±15% -	-20%/+15% -	-15%/+20% -
Width Sizing Accuracy	80% 90%	±20 mm ±25 mm	±20 mm ±25 mm	±20 mm ±25 mm	±20 mm ±25 mm	±25 mm -	±25 mm -	±25 mm -	±25 mm -
Length Sizing Accuracy	80% 90%	±15 mm ±20 mm	±10 mm ±15 mm	±20 mm ±25 mm	±20 mm ±25 mm	±20 mm -	±15 mm -	±25 mm -	±25 mm -

* The vicinity of the weld refers to the heat affected zone – not in the weld material.
 POD = Probability of Detection (reference diameters of the defect areas: 4A for General Metal Loss and 2A for Pitting where A = max(wt,10mm))
 POI =Probability of identification.

Pipeline Operators Forum (POF) Metal Loss Definitions



Identification of Features

<p>YES POI > 90%</p>	<ul style="list-style-type: none"> - internal/external discrimination - corrosion/metal loss; corrosion/metal loss cluster; artificial metal loss; pipe mill anomaly (metal loss) - wall thickness change (between two pipe joints and within a pipe joint) - dent - presence of debris; presence of touching metal to metal - eccentric pipeline casing; welded sleeve repair, composite sleeve repair (if metal content) - external support; ground anchor; pipeline fixture - off-take; tee; valve - bend - reference magnet
<p>NO POI < 50%</p>	<ul style="list-style-type: none"> - arc strike - crack in base material or longitudinal weld; anomaly in longitudinal weld - HIC; SCC; spalling - ovality - presence of weld deposit; presence of coating
<p>MAYBE POI ≤ 90% POI ≥ 50%</p>	<ul style="list-style-type: none"> - anode/CP connection (depending on wall thickness & type) - buckle; wrinkle; dent with metal loss - gouging; grinding - girth weld or spiral weld crack; girth weld or spiral weld anomaly; lamination - diameter change; adjacent tapering - crack arrestor

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 March 2006

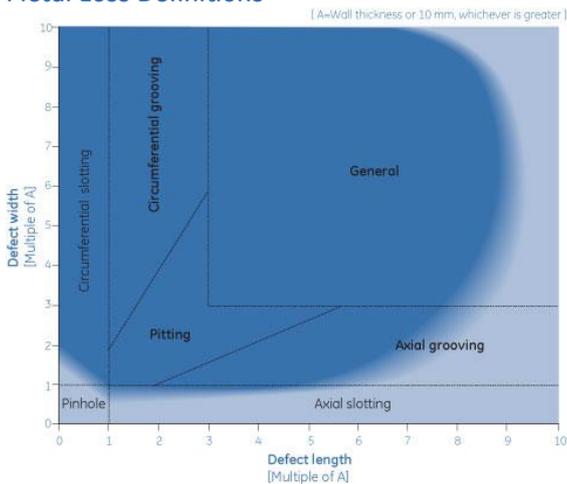
POF 12" to 56" MagneScan

Inspection of Seamless Pipes – Manual sizing

Property	Full detection and sizing accuracy or metal loss in body of pipe					Full detection and sizing accuracy for metal loss in the vicinity of a weld*			
	Certainty (Probability)	General Metal loss	Pitting	Axial Grooving	Circumferential Grooving	General Metal Loss	Pitting	Axial Grooving	Circumferential Grooving
Min. Depth At 90% POD		9%	13%	13%	9%	18%	24%	24%	18%
Depth Sizing Accuracy	80% 90%	±10% ±15%	±10% ±15%	-15%/+10% -20%/+15%	-10%/+15% -15%/+20%	±15% -	±15% -	-20%/+15% -	-15%/+20% -
Width Sizing Accuracy	80% 90%	±20 mm ±25 mm	±20 mm ±25 mm	±20 mm ±25 mm	±20 mm ±25 mm	±25 mm -	±25mm -	±25 mm -	±25 mm -
Length Sizing Accuracy	80% 90%	±15 mm ±20 mm	±15 mm ±20 mm	±20 mm ±25 mm	±20 mm ±25 mm	±20 mm -	±20 mm -	±25 mm -	±25 mm -

* The vicinity of the weld refers to the heat affected zone – not in the weld material.
 POD = Probability of Detection (reference diameters of the defect areas: 4A for General Metal Loss and 2A for Pitting where A = max(wt,10mm))
 POI = Probability of identification.

Pipeline Operators Forum (POF) Metal Loss Definitions



Identification of Features

YES POI > 90%	<ul style="list-style-type: none"> - internal/external discrimination - corrosion/metal loss; corrosion/metal loss cluster; artificial metal loss; pipe mill anomaly (metal loss) - wall thickness change (between two pipe joints and within a pipe joint) - dent - presence of debris; presence of touching metal to metal - eccentric pipeline casing; welded sleeve repair, composite sleeve repair (if metal content) - external support; ground anchor; pipeline fixture - off-take; tee; valve - bend - reference magnet
NO POI < 50%	<ul style="list-style-type: none"> - arc strike - crack in base material or longitudinal weld; anomaly in longitudinal weld - HIC; SCC; spalling - ovality - presence of weld deposit; presence of coating
MAYBE POI ≤ 90% POI ≥ 50%	<ul style="list-style-type: none"> - anode/CP connection (depending on wall thickness & type) - buckle; wrinkle; dent with metal loss - gouging; grinding - girth weld or spiral weld crack; girth weld or spiral weld anomaly; lamination - diameter change; adjacent tapering - crack arrestor

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