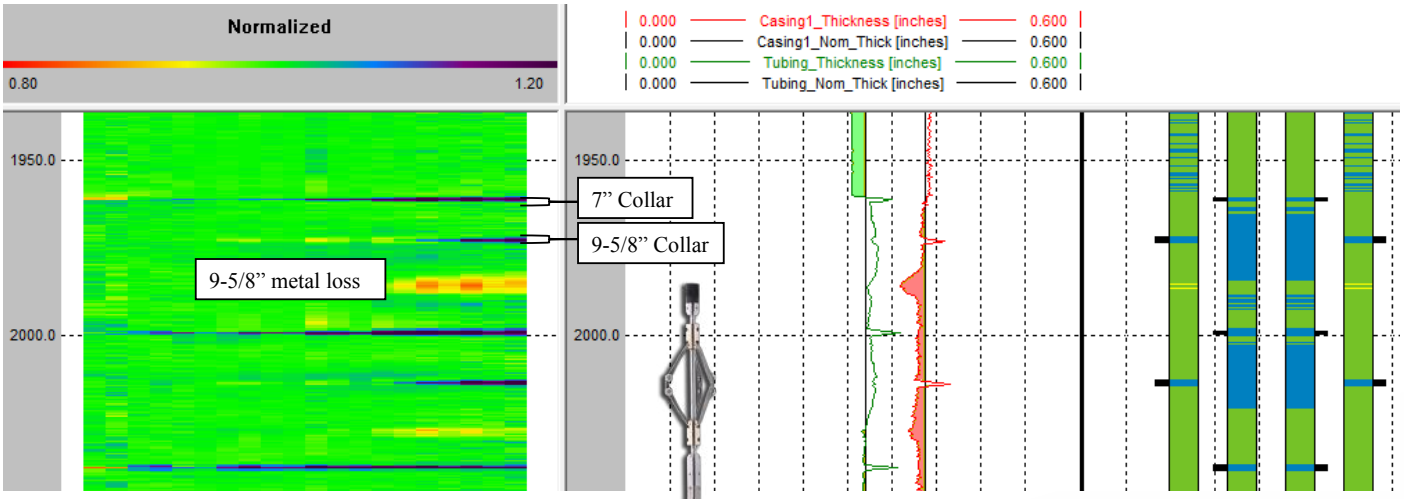
Magnetic Thickness Detector (MTD)

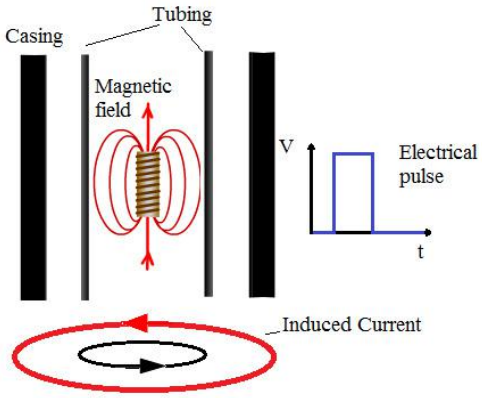
The Magnetic Thickness Detector (MTD) is a 1-11/16 in. O.D. corrosion measuring instrument primarily run through tubing with the unique ability to simultaneously inspect tubing and the casing behind it. The integrity of the casing string can be evaluated with neither the requirement for costly workover rig, nor the time consuming removal of the tubing string.

DESCRIPTION

The MTD can also be used to inspect tubing, production liner and single and multi-string casing strings. Comprised of four (4) different measurement sensors, the MTD provides an average metal thickness measurement for both the inner and the second tubulars, as well as identifies individual defects in either strings.

Integral Gamma Ray and wellbore temperature sensors allow accurate correlation and identification of temperature anomalies that may indicate holes or unexpected fluid flow. Combinable with Multi-Finger Caliper instruments, the two simultaneously logged instruments provide a comprehensive evaluation for both inner and secondary tubulars.





The MTD Tools works on the Pulsed Eddy Current (PEC) principle, which is a broadband Electromagnetic transmitted signal which sets up on eddy current flowing in the external tubular(s).

APPLICATIONS & FEATURES

- Quantitative evaluation of corrosion and damage of primary and secondary tubular up to 9-5/8 in.
- Combinable with Multi-Finger Caliper to provide a comprehensive evaluation of inner and outer tubular conditions
- Warrior Compatible
- MIPSPro ™ compatible for analysis and reporting
- GR and temperature sensors included
- Inner and Outer thickness and corrosion evaluation using Pulsed Eddy Current (PEC)

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SPECIFICATIONS

	MTD43C-B	MTD43C-C
General Specs		
Maximum Pressure	14,503 PSI (100 Mpa)	14,503 PSI (100 Mpa)
Maximum Temperature	350 °F (177°C)	350 °F (177°C)
Diameter	1.69 in. (43 mm)	1.69 in. (43 mm)
Length	88.72 in. (2253.5 mm)	88.72 in. (2253.5 mm)
Weight	20 lbs (9 kg)	20 lbs (9 kg)
Max. Logging Speed	16 ft/min (300 m/h)	16 ft/min (300 m/h)
Pipe String	2.362 in～12.756 in. (60 mm～324 mm)	2.362 in～12.756 in. (60 mm～324 mm)
Measuring Range	17-4 SST, Titanium & Al-Bronze	17-4 SST, Titanium & Al-Bronze
Steel Grade		
Wall Thickness Measurement		
First Pipe Measurement		
Pipe Wall Thickness	≤0.4724 in. (12 mm)	≤0.4724 in. (12 mm)
Measuring accuracy	± 0.0197 in. (0.5 mm)	± 0.0197 in. (0.5 mm)
Resolution	0.0059 in. (0.15 mm)	0.0059 in. (0.15 mm)
Sensor Type	Coils	Coils
Second Pipe Measurement		
Pipe Wall Thickness	≤0.984 in. (25 mm)	≤0.984 in. (25 mm)
Measuring accuracy	± 0.059 in. (1.5 mm)	± 0.059 in. (1.5 mm)
Resolution	0.0118 in. (0.3 mm)	0.0118 in. (0.3 mm)
Sensor Type	Coils	Coils
Temperature Measurement		
Range	32° F (0° C) - 350 °F (177°C)	32° F (0° C) - 350 °F (177°C)
Accuracy	±1 °C	±1 °C
Resolution	0.01 °C	0.01 °C
Response Time	≤2 sec	≤2 sec
Temperature Probe	Platinum Resistor PT100	Platinum Resistor PT100
Gamma Ray Measurement		
Dynamic Range	0-10000cps	0-10000cps
Accuracy	5 %	5 %
Resolution	1 cps	1 cps
Power Requirements		
Input Voltage	90 Volts (±10 %)	18-36 Volts
Input Current Required	60mA～130mA	250mA - 350mA
Signal Transmission Mode		
Transmission Mode	Serial Bus - SRO	CAN Bus - Memory Enabled

*Specifications are subject to change as tools are constantly being improved

For more information please refer to the below papers found on our website under NEWS section:

www.gowellpetro.com

1. SPWLA 2014 Paper
2. IPTC 2013 15545