

Seeing through  
steel to avoid those  
heart-stopping  
moments!



# MDET™ Universal Detector

from

**AnTech**  
Special Engineering Projects

# MDET™ Universal Detector

A non-invasive wellhead sensor designed both to meet the needs of oil service providers running tool strings and to improve safety in the wellhead operating area. By letting you know the instant a tool or the end of a section of coiled tubing passes a given point inside the Riser, MDET prevents accidents, protects equipment and leads to safer and more efficient jobs.

Strapped to the wellhead Riser, the MDET sensor constantly monitors changes in magnetic field. When the passing end of the coiled tubing or the magnet sub in a down-hole tool moves past the sensor, an audible and visual warning is relayed to the operator. This warning, once acted upon, can prevent the tube end from being pulled accidentally through the stripper.

## Features at a glance

1

**Detection Capability.** A non-invasive system for detecting tools or broken tubing in the Riser. Can also be used for tool deployments, cement plug launches and ball drops. The system automatically compensates for objects not centralised in the Riser and for spurious changes in the ambient magnetic field.

2

**Easy Setup.** Simply strap the sensors to the Riser, connect to the control panel and power supply and detection can start immediately.

3

**Warning Signals.** The control panel's large display gives a clear visual indication when an object is detected in the Riser. This is accompanied by a loud audible warning. Two data-out ports also provide high/low alarm and analogue logging signals for input to alarm control systems.

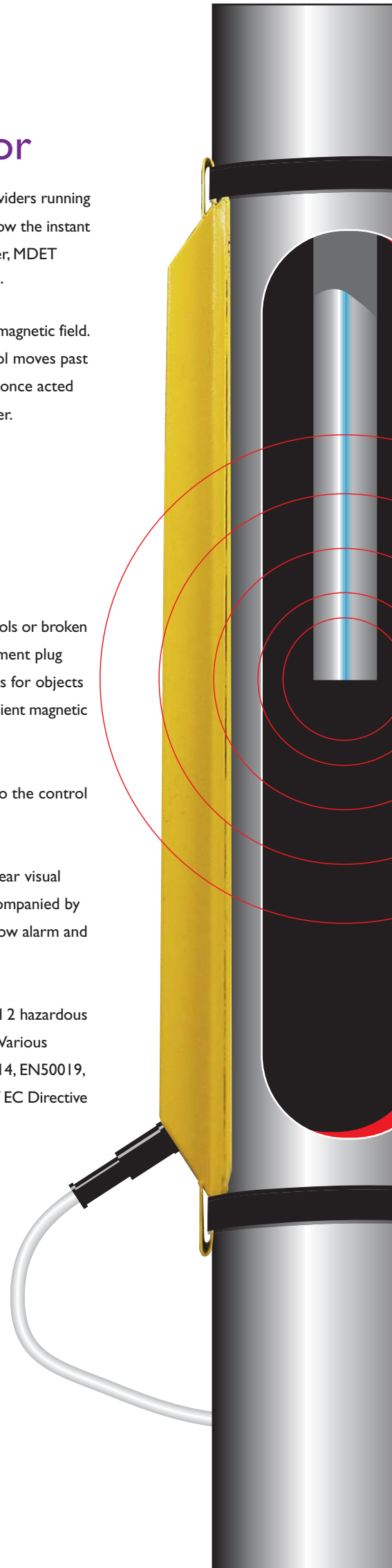
4

**Certification.** Sensors are certified for use in Zones 0, 1 and 2 hazardous areas. The Control Box is certified for use in Zones 1 and 2. Various components comply also with international standards: EN50014, EN50019, EN50020 and EN50028. MDET also meets the requirements of EC Directive 94/9/EC (ATEX).

5

**Subsea Operation.** The standard MDET is designed and produced for use on a Riser at the surface. A subsea version is available for deepwater operations.

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# Applications

1

## End of Coiled Tubing Detection

When the coiled tubing breaks down hole, it's essential to find the end before it pulls through the stripper. MDET gives the warning you need.

2

## Detecting Tools in the Riser\*

Need to know when the tool string is in the Riser? It's easy with MDET.

3

## Tool Deployment\*

When deploying tools under pressure, MDET enables accurate detection within the BOP.

4

## Cement Plug Launches\*

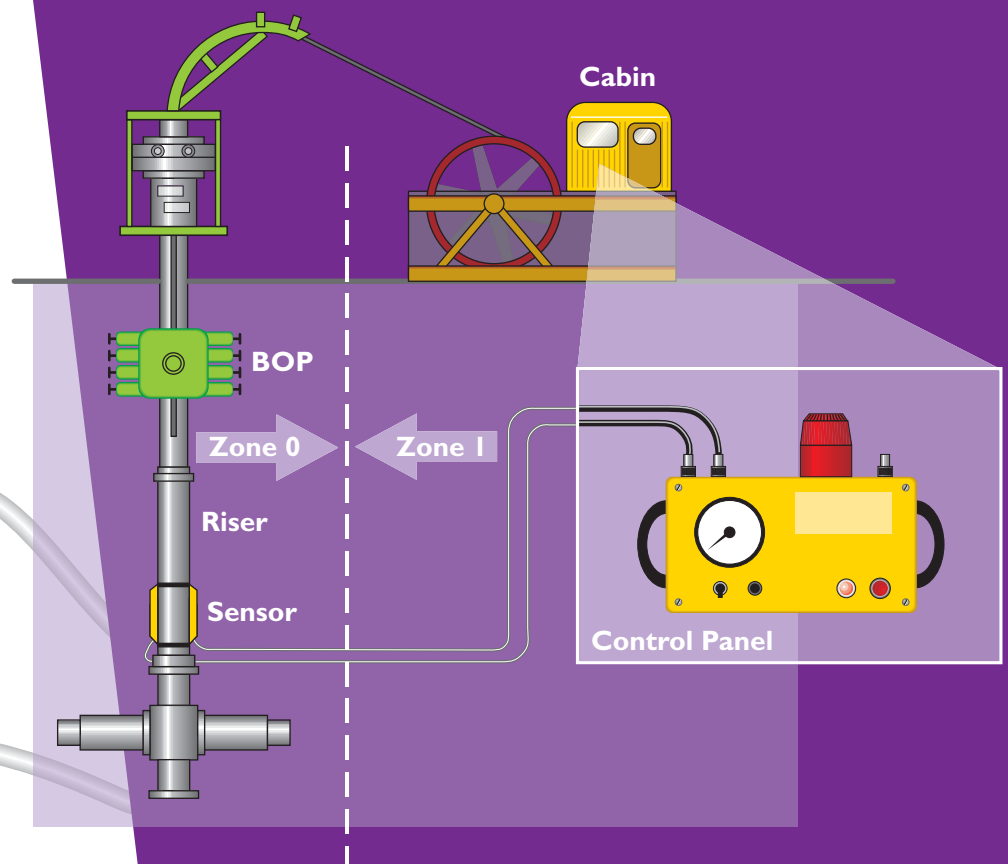
Not sure if the cement plug has been launched? With MDET you can be certain.

5

## Ball Drop\*

By using AnTech's specially developed magnetic ball, MDET can tell you precisely when the ball has been released down hole.

\* Requires additional magnet-sub, magnet ring or magnetic ball, as appropriate.



# Ratings/Specifications

The following ratings and specifications do not apply to the Subsea MDET™ Universal Detector for which further information is available on request.

## MDET™ Universal Detector

<b>Input Voltage</b>	110V or 230V
<b>Operating Temperature Range</b>	-4°F to +104°F (-20°C to +40°C)
<b>Sealing Classification</b>	IP54
<b>Certification</b>	EC Directive 94/4/EC (ATEX)
<b>International Standards:</b>	
<b>All Items</b>	EN50014:1997 (Amendments A1 – A2)
<b>Control Panel</b>	EN50019:2000, EN50028:1987
<b>Sensors</b>	EN50020:1994
<b>Sensor Clamping Mechanism</b>	Straps
<b>Riser Height for attachment of Sensors</b>	32" (800mm)
<b>Max Distance – Control Panel to Sensors</b>	160ft (50m)
<b>Riser* Outside Diameter</b>	4" to 8" (100mm to 150mm) typical
<b>Wall Thickness</b>	1" (25mm) max
<b>Type</b>	Any Steel

\*The tool performance depends on the function required and Riser size. Please ask for further information on specific applications.



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### About AnTech Ltd

AnTech specialises in the design and manufacture of innovative products for the international upstream oil and gas industries. The Company is known throughout the world for its range of award-winning coiled tubing tools and related permanent completion products.

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