

AERONAUTICS & AEROSPACE



**CONTROLE
MESURE
SYSTEMES**



**Your Manufacturing Partner for
Non-Destructive Testing Solutions**

Eddy Current and Ultrasonic Testing

www.cmsndt.com

METAL & STEEL INDUSTRY

Since 1988, CONTROLE MESURE SYSTEMES has been designing and manufacturing Non-Destructive Testing (NDT) equipment using Eddy Current and Ultrasonic technologies.

We provide customized and turnkey solutions to guarantee an efficient and reliable quality inspection for your tubes, bars and wires.

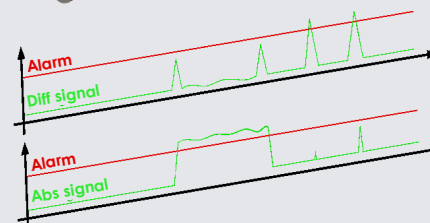
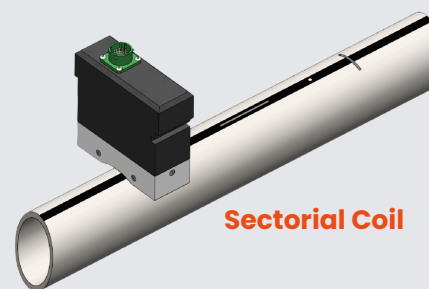
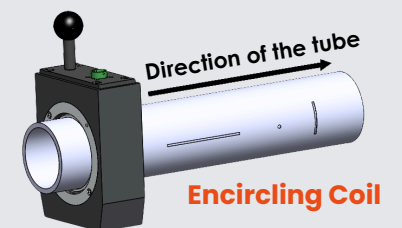
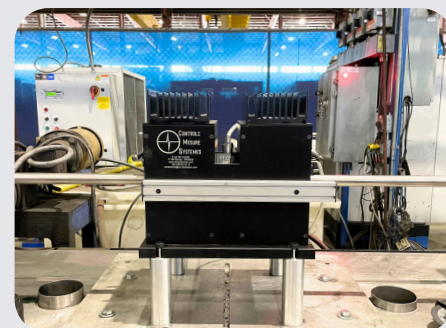
► BY EDDY CURRENT METHOD

⊕ Detection of short, transverse defects and open welds

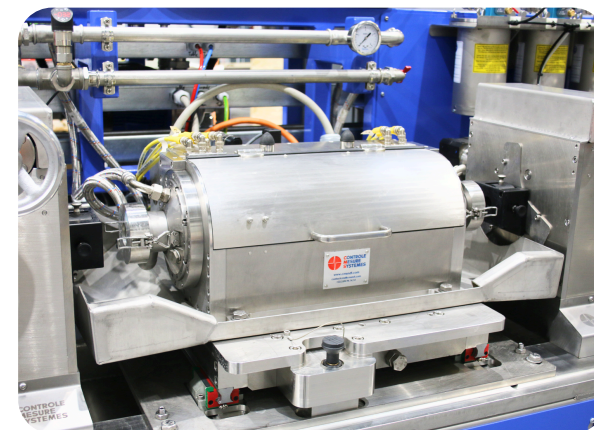
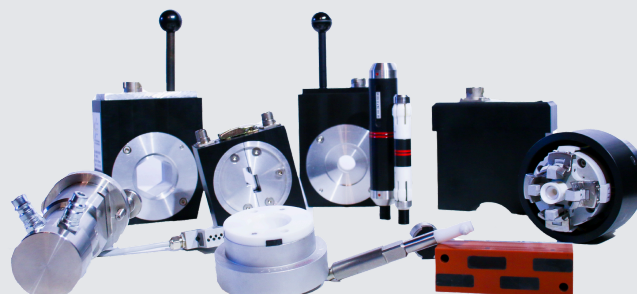
Inspection using an **Eddy Current encircling or segment coil** to detect short and transverse defects, as well as open welds. This method allows for the high-speed inspection of magnetic or non-magnetic products with various profiles.

These coils are connected to our Eddy Current generators, Zet@Micro or Zet@Premium.

The user-friendly interface of our software enables the operator to adjust Eddy Current settings, display signals, and set alarm thresholds.



- ✓ **The Production software creates inspection reports automatically**
- ✓ **Several features are included in the standard version, such as the management of delays and outputs for sortings or marking operations**
- ✓ **Many accessories can be associated to inspect ferromagnetic products (magnetizing unit, opening magnetizing unit, sectorial magnetizing unit...)**



► BY ULTRASONIC METHOD

⊕ Shear and longitudinal wave inspection

CMS designs and manufactures a full range of **Ultrasonic rotating heads**, named RotoUTscan. They handle tubes with diameters ranging from 4 to 250mm (0.157 to 10"). The Ultrasonic transducers are submerged in water while rotating at very high speed around the product as it passes through the head.

Internal and external defects, including longitudinal, transverse, and oblique flaws, are detected by our multi-channel systems. The inspected defect size can be as small as 1.58x0.1x0.025mm (0.6x0.004x0.001") (HxWxD).

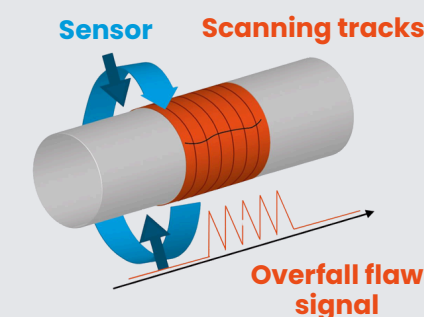
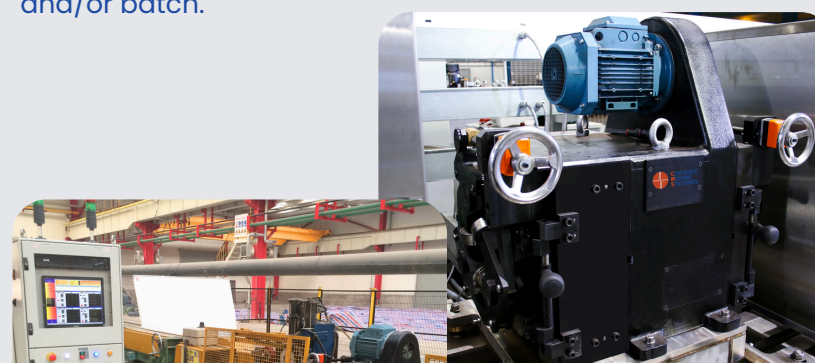
A RotoUTscan connected to our Ultrasonic instrument, MultiUTscan, can also perform highly accurate dimensional measurements, including wall thickness (WT), inner diameter (ID), outer diameter (OD), eccentricity, and ovalization, with an accuracy of $\pm 3\mu\text{m}/\pm 5\mu\text{m}$.

⊕ Detection of longitudinal defects

The CMS RotoETscan, an **Eddy Current rotary head**, is designed for the detection of longitudinal defects. Multiple sensors rotate at high speed around the product, ensuring complete coverage of its surface.

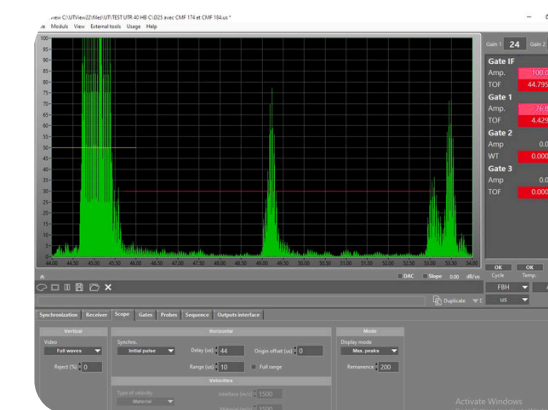
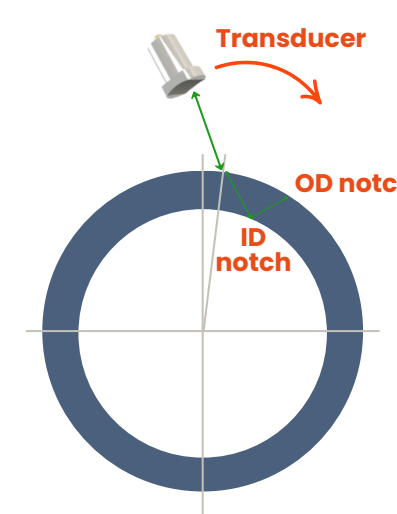
Our RotoETscan range, connected to the Zet@Master, enables inspection speeds of up to 6m/s (1200fpm) and covers product diameters ranging from 0.8 to 220mm (0.03 to 8.6").

Inspection results are displayed in real-time, and traceability is ensured through our Production software, which generates detailed inspection reports for each product and/or batch.



- ✓ **The Production software creates inspection reports automatically**
- ✓ **Several features are included in the standard version, such as the management of delays and outputs for sorting or marking units**
- ✓ **Several versions of probes are available in double function and in driver pick-up function**
- ✓ **Probes with various sizes of active elements can be installed**
- ✓ **Several options are available, including GAP correction (lift-off), the integration of a centrifugal plate, and diameter adjustment of the probes**

- ✓ **The water path of each transducer can be synchronized or adjusted individually**
- ✓ **Incidence angle and correction of 2 squints are easily adjustable**
- ✓ **Contactless signal transmission (capacitive module)**
- ✓ **Inspection speed up to 2m/s**
- ✓ **Very high signal repeatability (< 1 dB)**
- ✓ **Pulse Repetition Frequency (PRF) up to 20 kHz**

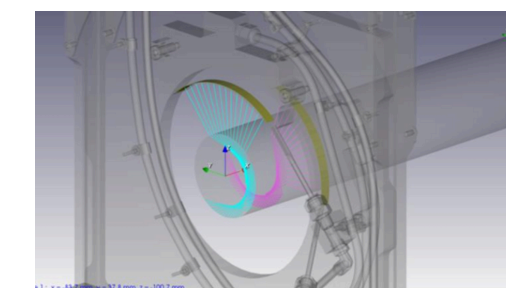


⊕ Bars inspection by encircling Phased Array Probes

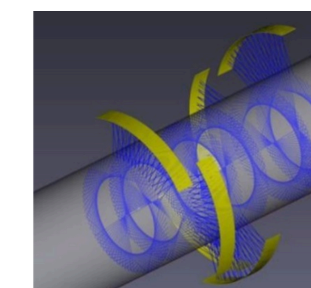
Our **UT Line** high-quality inspection solutions use Ultrasonic Phased Array probes integrated into fully automated testing systems to meet even the most stringent requirements for volume inspection.

The UT Line range is an in-line Ultrasonic Phased Array testing system that intergates multiple encircling PA probes. These transducers are located in an immersion tank within the floating head.

- ✓ **In-line 100% volume inspection**
- ✓ **Very high inspection speed up to 2m/s (400fpm)**
- ✓ **Floating head concept**
- ✓ **Round and square bars inspection in one system**



UT beam representaiton for the detection of SDH and FBH



The PA transducers' configuration is defined according to the standard defect size and the required inspection speed. Common standard defect size: FBH 0.7mm (0.027") and SDH 0.5mm (0.02").

The full traceability of this inspection is provided by our Probus software and the inspection report is created per bar and per batch.



Find out more on our website: www.cmsndt.com



► BY EDDY CURRENT AND ULTRASONIC METHOD

⊕ *Combined NDT bench with Eddy Current and Ultrasonic testing equipment*



CMS designs and manufactures a high performance inspection solution for tubes and bars. Surface inspection through Eddy Current and core inspection with Ultrasonic allow a 100% testing of the product. Thanks to our know-how and our 35 years of experience in NDT, we are able to offer a tailor-made solution to perfectly match your requirements.

Our proprietary supervisor software, **Probus**, centralizes data from all NDT equipment from the line into a single, user-friendly interface. It ensures full inspection traceability, generates detailed reports, and allows the customer to easily retrieve and review inspection data at any time.

***Precise and reliable solutions
for a high quality inspection***

YOUR MANUFACTURING PARTNER FOR NON-DESTRUCTIVE TESTING EQUIPMENT

Since 1988, CONTROLE MESURE SYSTEMES has been offering best-in-class turnkey inspection solutions using **Eddy Current** and **Ultrasonic** technologies. With quality at the core of our strategy, we leverage our full expertise to provide customized NDT solutions tailored to your quality standards and production requirements.

Our multidisciplinary team of engineers, specialized in R&D, mechanical design, electrical systems, and software development, continuously innovates with cutting-edge technologies to ensure the ongoing evolution of our products and their seamless integration into your production line.

We offer a comprehensive range of ET & UT testers, probes & transducers, dedicated software, and a full suite of accessories.

Headquartered in France with a strong global presence, we share our expertise worldwide through our U.S subsidiary, CMS Inc., and an extensive network of agents operating in over 20 countries.

ABOUT CMS



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