



e.Rota

Real time Ultrasonic tube measuring

SOCOMATE

INTERNATIONAL

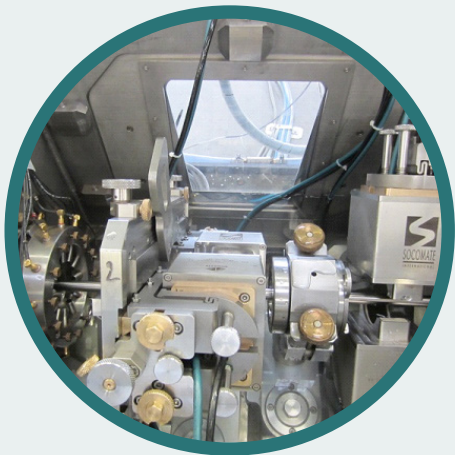


Gives in real time WT/ OD/ ID/ ECC and Ovality.

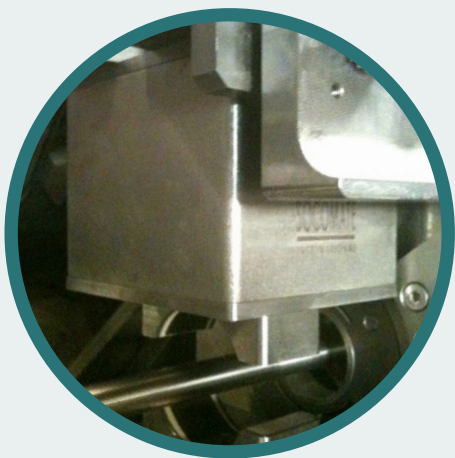
Offers 100% full dimensional measurement.

Save money on: Mechanical purchasing price, maintenance costs and setting time.

NO ROTATING PROBES and NO ROTATING TUBES without ANY MECHANICAL ROTATION.



e.Rota solution can be easily adapted for use on existing linear testing benches currently using rotary heads, encircling Eddy Current probes, Phased Array multi-element probes...



e.Rota solution offers the possibility to be upgraded with our FAAST* Phased Array UT system to get a 2 in 1 solution, which is an complete alternative to rotary head for dimensional and flaw detection.

FAAST Phased Array is used to detect longitudinal and transversal flaws with only 1 set of probes.

*For more information, please consult FAAST Phased Array commercial documentation, on www.socomate.com, or feel free to contact us.





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MAIN SPECIFICATIONS

e.Rota PRINCIPLE

- 3 up to 6 fixed pairs of transducers evenly positioned around tube cross-section
- Each pair with transducers opposite each other at 180° for OD measurement
- One fixed transducer measuring time reference for water temperature compensation
- Parallel firing on all transducers per tube cross-section
- High speed tube linear feeding - No rotating tube
- Up to 12 WT & 6 OD snapshot measurements per tube cross-section
- Real time full tube cross-section WT & OD restitution (**Patented**)
- ID, Eccentricity & Ovality real time processing from WT & OD cross-section raw data
- Fully identical results as Rotary Heads series guaranteed

APPLICATIONS

- COLD DRAWN TUBES
- HOT MILLED TUBES
- PRECISION TUBES
- NUCLEAR TUBES
- COMPLEMENTARY SOLUTION TO FLAW ROTARY HEAD
- COMPLEMENTARY SOLUTION TO PHASED ARRAY FLAW DETECTOR
- EASY ADAPTATION ON EDDY CURRENT LINEAR TESTING BENCHES

MAIN FEATURES

- Up to 400 points restitution per tube cross-section
- Up to 1000 cross-sections per second during linear feeding
- Up to 1µm measurement resolution
- Up to ± 3 µm measurement accuracy
- 60 000 RPM equivalent in line
- Min 0.4mm tube thickness
- Min of 0.6mm tube diameter

SPECIFICATIONS

- Up to 13 USPC7100LA* PCI cards per PC
- One transducer per UT card
- Up to 20 kHz
- Near surface resolution 0.4mm in steel with 20 MHz transducer
- A/D Digitizer: 200MSamples/s, 10 bits
- Wall Thickness (WT) resolution better than 1µm
- 3 WT monitoring Gates per channel:
 - **Gate IF:** Water distance with Min & Max tolerance alarms
 - **Gates 1 & 2:** Tube thickness with Min & Max tolerance alarms
 - **Triggering modes:** Main pulse, interface echo, echo-to-echo, artificial trigger
 - **Echo wave selection:** Positive/ Negative/ Both
 - **Start & Stop measurements:** Threshold, Max peak or zero-crossing.
- Real time in-line tube wall thickness specific processing software
- Real time WT/ OD/ ID/ ECC/ Ovality in data acquisition

*For more information, please consult USPC7100LA commercial documentation, on www.socomate.com, or feel free to contact us.

Socomate International maintains the right to modify the specification of their equipments, at any time and in whatever manner, in order to improve their performances.



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