

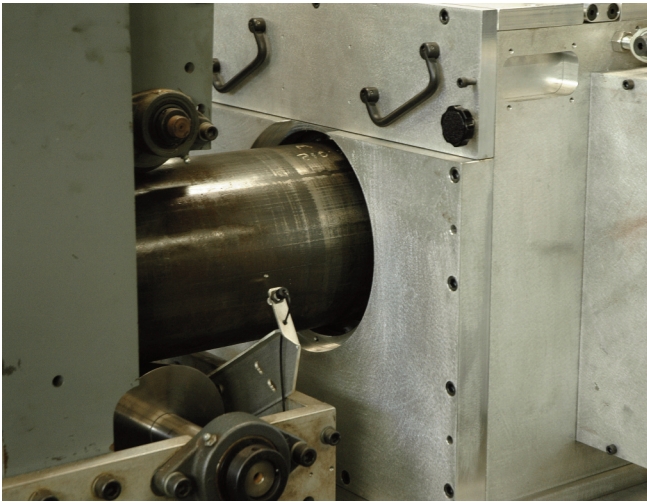
Round Billet Inspection Systems

MultiMac® Eddy Current & Echomac®
Ultrasonic Equipment



Eddy Current Inspection System

A new 750 RBT eddy current rotary was designed for the inspection of round billets up to 7.5" (190.5mm).



MultiMac® Electronics

- ☑ Contains 4 to 8 channels
- ☑ Windows® based user interface
- ☑ Set up may be done in less than 10 minutes and only requires an adjustment of the headplate probes

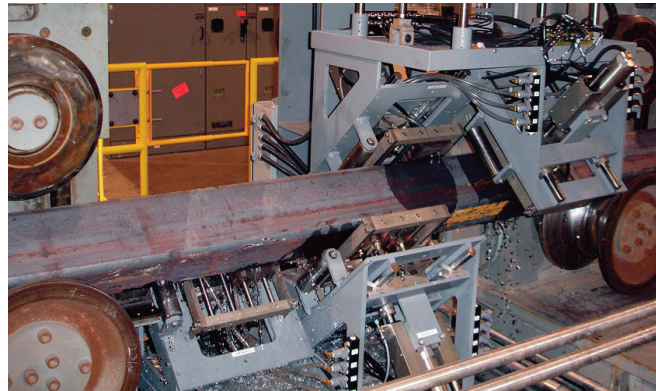
750 RBT Mechanics

In comparison to the previous system which only used 2 probes, the 750 rotary utilizes 4 probe arms that are each 90 degrees apart and each with 1 probe. The achievement of an even helix test pattern allows for faster throughput speeds and the independent control of each probe provides better results on billets that are off-center, bent, or on conditions of ovality.

The 750 RBT detects long, continuous surface defects and longitudinal notches or seams down to 0.015 of an inch.

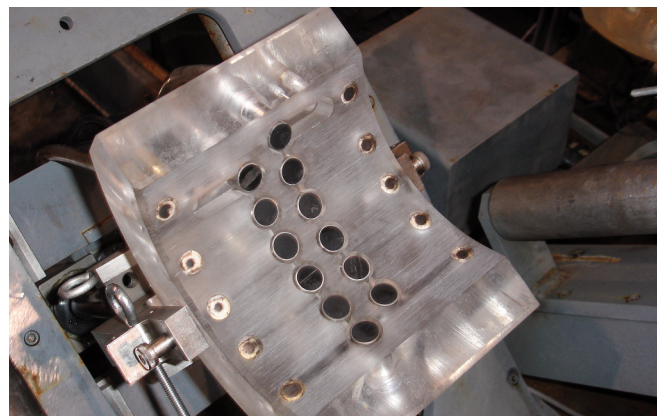
Ultrasonic Inspection System

For round billets, The system depicted below is re-arranged by removing the 3-4 shoes built for square inspection and replacing it with 4 round bar shoes (shown below). Each will cover 90 degrees around the billet's circumference for a total of 360 degrees of coverage. Each shoe will contain 12 transducers equally spaced for a total of 48. The transducer shoes will be adjusted to each respective bar diameter.



Echomac® FD-5 Electronics

- ☑ Standard Windows® computer and keyboard
- ☑ Software and PCI standard printed circuit boards mounted in an environmental cabinet
- ☑ There are 48 channels (expandable to 64)
- ☑ Availability of a tracking and marking system to identify indications



Detection of internal defects are in conformance with mill standard 2154

The UT inspection system detects internal flaws on hot rolled round billets up to 9" (225mm) at production speeds.