framatome

Automated UT Inspection

of Large Shafts, Shells, Disks, Rotors, Domes, Cavities and Bores

Tailor-made, reliable and state-of-the-art inspection systems for various inspection tasks

Challenge

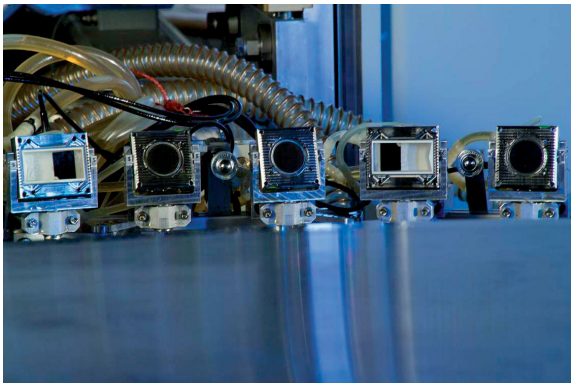
Steel products like large shafts, shells and disks are difficult to inspect and require innovative inspection techniques. Reliable and reproducible results, operational quality and maximum coverage of the inspection area have to be ensured.

Solution

Framatome's advanced phased array techniques are capable of sweeping over the maximum range of incidence angle. This allows the largest possible coverage and discrimination between signals from part geometry variations and from possible defects in close vicinity of geometry transitions. Therefore, a high reliability in flaw detection is achieved and concurrently the number of probe heads is reduced. Precise inspection results are achieved in short testing periods with maximum signal information for reliable assessment.

Framatome also provides hardware and software solutions:

- Modular and versatile multichannel and phased array ultrasonic (UT) equipment SAPHIR*quantum*
- Customized design of the probe system to ensure maximum inspection coverage over the length for circumferential defects and defects in volume
- High positioning accuracy and repeatability
- Advanced software with online tomographic displays, 3D projection displays (C-scan and B-scan) and A-scan signal display, as well as all recording options for optimum traceability, easy flaw position detection and on-line tomography.

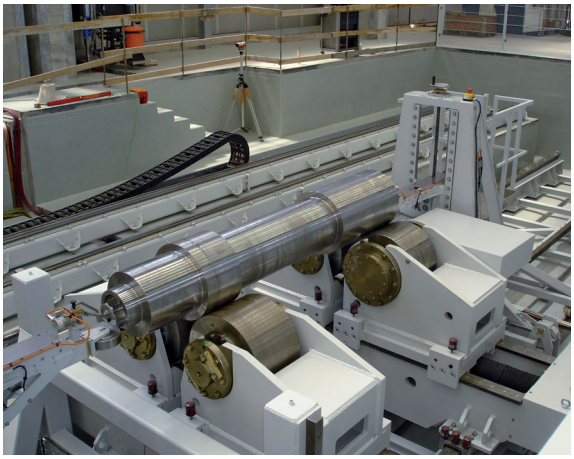


Customized probe holder

Disc inspection

Customer benefits

- Easy detection of defects with tomographic representation
- Significant reduction of number of probes allowed through phased array technique
- Tailored software with integrated user-friendly operating interface
- Proves the high quality of your products



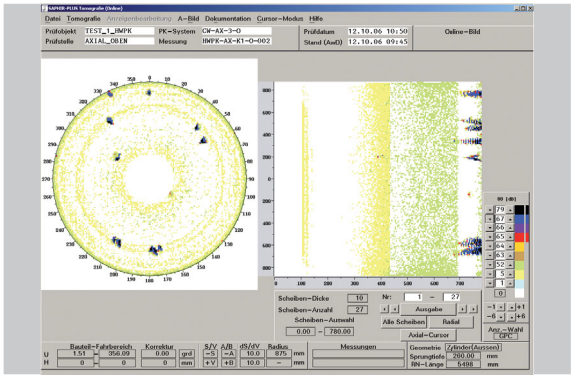
Shaft inspection

Your performance
is **our** everyday **commitment**

Technical information

- Shafts with up to 300 t, 25 m length, 2.5 m diameter
- One roller support adjustable in height for varying shaft diameter
- Discs with up to 120 t, 3 m height, 6 m diameter
- Additional shell inspection with the latest design
- Precise 5 axes mechanics or more
- Fully automated operation
- Online data presentation and evaluation
- Reduced number of probes allowed by dedicated tailored phased array sensors
- Remote and independent evaluation
- Minimized susceptibility to electromagnetic noise
- Individual customization for various inspection requirements

Immersion disc inspection system

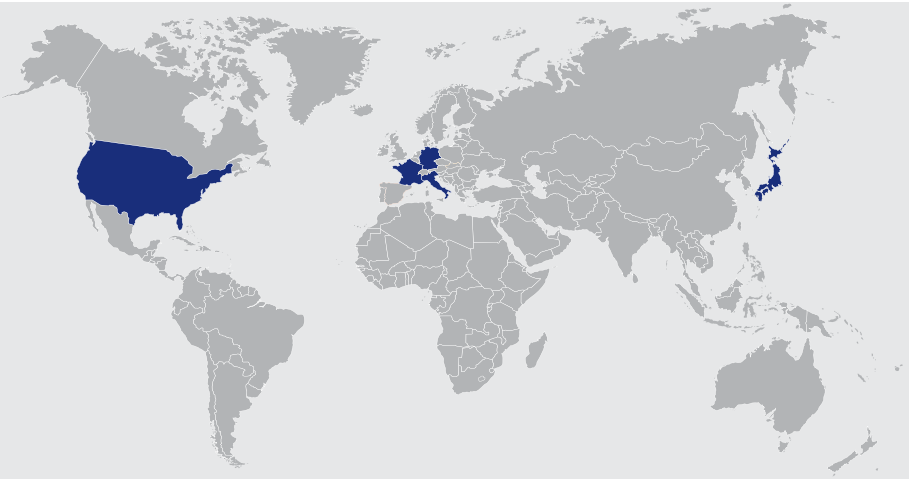


On-line tomography: selectable display of cumulated cross sections or single cross section both with side projection display

References

Our systems fulfill the current requirements in steel business and are established in the following countries:

- Germany
- USA
- Japan
- Italy
- France.



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