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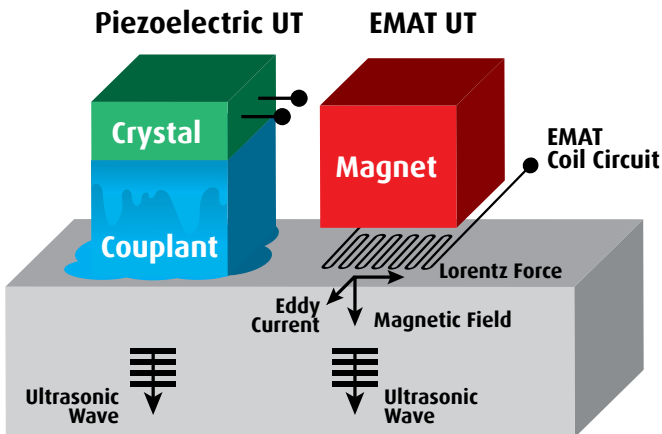
EMAT Technology

Acoustic Transducer (EMAT) technology provides effective assessment of corrosion in places where many other technologies fail to deliver.

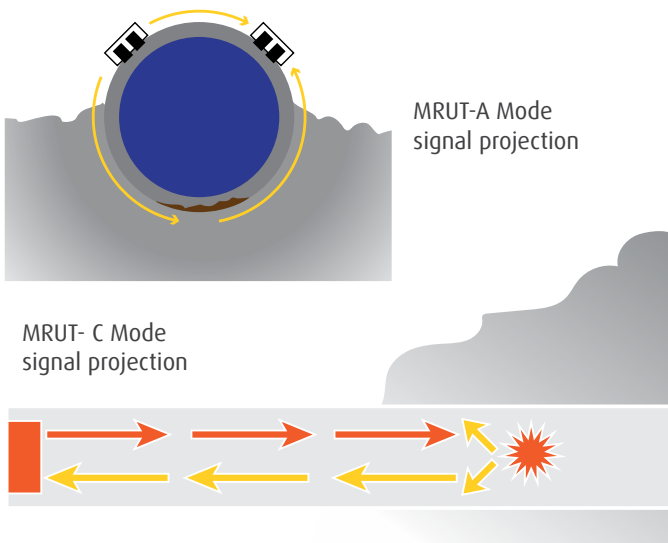
Take it on effectively with ALS.



MRUT-A Mode scanner on a 12" pipe



EMAT vs Conventional ultrasonic signals generation



Contact us today to speak to our asset integrity experts at: industrialcontactus@alsglobal.com

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Electromagnetic Acoustic Transducer (EMAT) technology provides effective assessment of corrosion in places where many other technologies fail to deliver.

EMAT is a reliable method of screening for corrosion and isolated pitting in many previously inaccessible areas. (EMAT) is a transducer for non-contact acoustic wave generation and reception in conducting materials. Its effect is based on electromagnetic mechanisms, which do not need direct coupling with the surface of the material. Due to this couplant-free feature, EMATs are particularly useful in harsh, i.e. hot, cold, clean or dry environments.

After decades of research and development, EMAT has found its applications in many industries such as primary metal manufacturing and processing, automotive, railroad, pipeline, boiler and pressure vessel industries, in which they are typically used for Non Destructive Testing (NDT) of metallic structures.

Key advantages of using EMAT

- No couplant is needed
- Dry inspection
- Uses a non-contact method
- Easier for sensor deployment
- Screen for corrosion from unlagged locations up to 3m each way (6m in total)

Applications of EMAT

- Thickness measurement for various applications
- Corrosion Under Supports (CUPS) using MRUT-A mode
- Flaw detection in steel products
- Plate lamination defect inspection
- Bonded structure lamination detection
- Laser weld inspection for automotive components
- Weld inspection for coil join, tubes and pipes
- Pipeline in-service inspection
- Railroad rail and wheel inspection
- Austenitic weld inspection for the power industry
- Material characterisation

Our approach to adopting technology

ALS continuously looks ahead and regularly invests in the latest technologies available to our industry. We do this so we can deliver the most advanced inspection methods in the field of asset care to our valued customers. Technologies such as EMAT, which supplement our existing inspection expertise are embraced by ALS only after successful method validation. This ensures we understand exactly where and how these technologies should be applied and are confident they will produce accurate results.