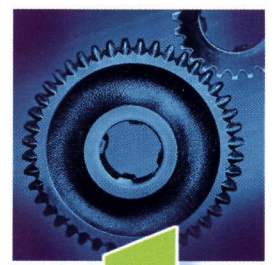
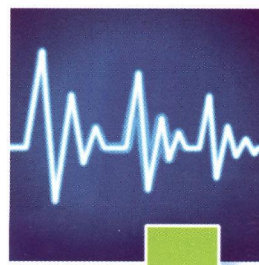
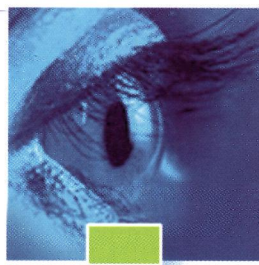
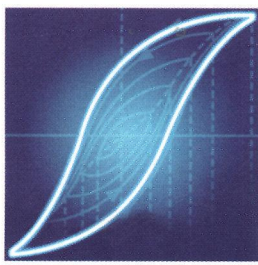
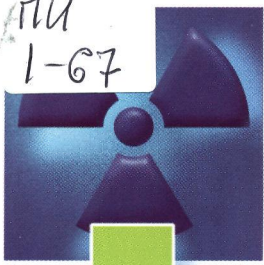


ANU  
1-67



# Insight

Non-Destructive Testing and Condition Monitoring

October 2013





Published by:  
 The British Institute of Non-Destructive Testing  
 Newton Building, St George's Avenue  
 Northampton NN2 6JB, UK  
 Tel: +44 (0)1604 89 3811;  
 Fax: +44 (0)1604 89 3861;  
 E-mail: info@bindt.org; Website: www.bindt.org

**Volume 55 Number 10**

**October 2013**

Comment, by Professor R A Smith ..... 530

NEWSDESK: Shining the spotlight on tomorrow's nuclear talent ..... 533

OBITUARY: Winfield Aloysius Stewart ..... 533

**SPECIAL FEATURE: RADIOGRAPHY**

Automatic classification approach to weld defects based on PCA and SVM,  
 by Weilei Mu, Jianmin Gao, Hongquan Jiang, Zhao Wang, Fumin Chen and  
 Changying Dang ..... 535

Simulation of beam hardening in X-ray tomography and its correction using  
 linearisation and pre-filtering approaches,  
 by K Arunmuthu, M Ashish, T Saravanan, John Philip, B P C Rao and T Jayakumar ..... 540

Effect of exposure and scattering on signal-to-noise ratio for improved  
 defect sensitivity in X-ray radiography,  
 by T Saravanan, K Arunmuthu, John Philip, B Purna Chandra Rao and T Jayakumar ... 548

**FEATURES**

Comparative study of E-shaped coil and evolution of new methodology for  
 crack detection using eddy current testing,  
 by D Roy, R Chakraborty and B K Kaushik ..... 553

Interacting effects of clustering defects on MFL signals using FEA,  
 by Qiang Song ..... 558

The influence of a bobbin probe's radial offset on eddy current testing of tubes,  
 by Mengbao Fan, Binghua Cao, Wei Li and Fangqin Liu ..... 561

**REGULAR FEATURES**

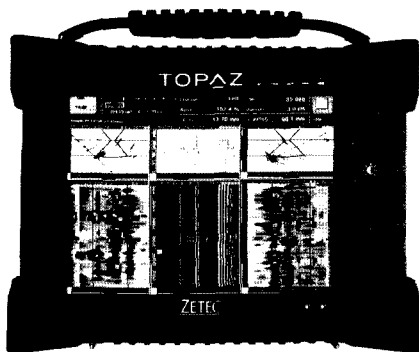
International Diary ..... 567

NDT Info ..... 572

Product Showcase ..... 581

Associate Members/Index to Advertisers ..... 584

**COVER**



Zetec's Topaz is a fully integrated TOFD and phased array ultrasonic system for weld inspection. This month's front cover picture shows Topaz's layout displaying real-time corrected merged views with weld overlay lines for the two phased array probes as well as the TOFD image.

The newly-released software upgrade consolidates the instrument's stand-alone capabilities by providing on-board guidance, calculation and operation through the total inspection process.

Everything is on-board:

- Inspection preparation
- Parameter calculation and configuration
- Configuration of inspection and data analysis display layouts
- Calibration
- Fast and powerful data acquisition
- Analysis, sizing and defect characterisation
- Reporting.

Zetec  
<http://topaz.zetec.com/>  
[www.zetec.com](http://www.zetec.com)

