VITCEA

EURAMET

EMRP VITCEA: Validated Inspection Techniques for Composites in Energy Applications

Stakeholder Workshop: 7th June 2017

National Physical Laboratory, Teddington TW11 0LW, UK,

For NPL location and details of rail links / hotels etc refer to : http://www.npl.co.uk/contact-us/directions-to-npl/

Euramet-EMRP Project VITCEA will encourage industry adoption of promising NDE techniques, such as microwave, active thermography, laser shearography and phased array/air-coupled ultrasonics, thus enabling the increased use of FRPs for energy applications. This will be achieved through the provision of operational procedures based on the comprehensive evaluation and development of each technique for detecting a range of defects typical to FRP composites that are used in wind, wave, tidal, oil and gas and transport sectors.

Advancing the state-of-the-art

- *Development of novel defect manufacturing methods and production of energy sector specific reference defect artefacts*
- *Formulation and validation of operational procedures for novel NDI techniques applied to FRPs,*
- *Development of novel measurement techniques for characterising underpinning material properties*
- *Development of NDI technique specific data reconstruction and signal processing methods for defect sizing*
- *Development of predictive models simulating defect detection*
- *Theoretical POD assessments for FRPs using novel NDI techniques*
- *Generation of comparative experimental and theoretical POD data*

More information about the project can be found at the following link:

If you would like to attend this event or require further details, please contact: Michael.gower@npl.co.uk

Project partners

NPL, UK , **BAM**, Germany , **PTB**, Germany, **CMI**, Czech Republic, **CEA**, France

NPL BAM Federal Institute for Materials Research and Testing PTB CMI cea

Workshop Agenda

9.30-10.30	**Meet at NPL Reception – Coffee and Networking** *(refer to map link below)*	
	Allow 5 mins for Q&A after each session	
10.30	**Introduction to the VITCEA Project:** Objectives, Methods, Description of Defect Artefacts, Materials Characterisation	**NPL**
11.00	**Objective Benchmarking of NDE Techniques** Round-Robin intercomparison & POD assessments	**NPL/CEA**
11.20	**Overview of Thermographic Techniques**: General principles, materials & applications suited, results of round-robin intercomparison analysis	**BAM**
11.50	**Overview of Ultra-sonic techniques** (Air Coupled + Phased array): General principles, materials & applications suited, results of round-robin intercomparison analysis	**BAM**
12.20	**Overview of Laser Shearography techniques:** General principles, materials & applications suited, results of round-robin intercomparison analysis	**NPL**
12.50	**Lunch Break**	
13.30	**Overview of Microwave techniques:-** General principles, materials & applications suited, results of round-robin intercomparison analysis	**NPL**
14.00	**NPL Lab-tour** (Laser Shearography and Microwave techniques) :	**NPL**
15.00	**Coffee Break**	
15.15	Q&A - General Discussion - Next Steps / Future Projects - Wrap Up	
16.00	**Close**	

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