



Continuous health monitoring and non-destructive assessment of composites and composite repairs on surface transport applications

28th June 2011

ENEA, Rome Headquarters Via Giulio Romano 41 - Rome (Italy)

On June 28, at ENEA Headquarters of Rome, research scientists by 11 partners from Europe will address topics relating to build a new and original way for continuous health monitoring and non-destructive assessment of composites and composite repairs on surface transport applications. The workshop will also introduce a certificated procedure and guidelines on these applications, in order to generate a cost effective manufacturing and maintenance procedure.

The main objective of ComPair project is for the consortium to investigate the use of various NDT techniques (i.e. phased array ultrasonics, thermography approaches, NIR imaging, laser profilometry) on composites that are used on the surface transport. The project is aimed to develop a robotic system that accommodates selected NDT techniques at the end of the project.

The ComPair project covers fundamental research activities, as well market analysis and product development activities. The work shop will introduce technical objectives as: the development of quantitative non-invasive NDT approaches for prompt assessment of composites during the manufacturing and assembly stages of the composite materials and structures; the development of health monitoring approach for the composite components on vehicles; the development of a robotic scanner which accommodate the transient thermal NDT approach for the in situ testing of the structures during inspection and maintenance and will demonstrate the performance of the robotic scanner by employing the transient thermal NDT approach on a modular basis; the development of a software that automatically detects defects and assists user /engineers in the analysis of the thermographic images.

AGENDA

- 9:00 Registration**
Welcome coffee
- 9:30 Welcome a Opening remarks**
STELLA FANOU E RINO ROMANI, ENEA
- 9:45 Introduction**
GRZEGORZ DOMANSKI, EC Officer (to be confirmed)
- 10:00 ComPair – A General Overview of the project**
KENNETH BURNHAM, TWI Project Co-ordinator
- 10:15 Keynote speeches on:**
Thermography assessment of composites
PANAGIOTIS THEODORAKEAS, National Technical University of Athens
Near IR imaging of composites
GEOFFREY DIAMOND, G-TRONIX
- 11:15 Keynote speech on:**
Robotic scanner for automated NDT evaluation
GIANNIS RODITIS, CERETETH (remotely)
- 11:45 Keynote speech on:**
Software for thermography and Near IR imaging analysis
S.P. SANTOSPIRITO, KCC

12:15 Keynote speech on:
Health monitoring using Acoustic emissions & ultrasonic guided waves
NICOLAOS TSOPELAS, Envirocoustics
KENNETHY BURNHAM, TWI
LIOUDAS MAZEIKA, Kauno University of Technology

13.15 Lunch

14:30 Round table discussion of all issues raised during session of
New opportunities for NDT in the composites applications

All

Chair Marco Vittori
with the participation of
ROBERTO FRASSINE, President of Assocompositi (to be confirmed)
CLAUDIO CAPPABIANCA, Technical Director of Italian Association of NDT and Monitoring
GIUSEPPE ACERNO, President of Aerospace Technology District of Puglia
LUCIANO DE OTO, Responsible for Advanced Composites, Lamborghini SpA

In cooperation with ComPair project partnership
ATOUTVEILLE (FR), CERETETH (GR), ENVIROACOUSTICS (GR), G-TRONIX (UK),
HEXCEL COMPOSITES (UK), KTU (LT), KCC (UK), NTUA (GR), TWI (UK), VTT (FI)

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