

CO-PATCH - composite patch repair for marine and civil engineering infrastructure applications

A project has begun involving 15 Small and Medium Enterprises and Research and Technology Development organisations funded by the European Commission with the intention of developing a novel, effective repair/reinforcement method for defects in large steel structures.

For several years, composite patching has proven its effectiveness and cost benefit in the aerospace industry. However, there are several fundamental differences between aerospace and bridge/marine/offshore steel applications, which dictate a separate approach and investigation of the problem.

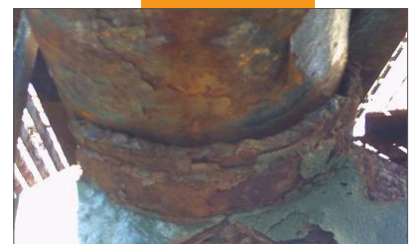
Project aims

- To demonstrate that composite patch repairs or reinforcements can be environmentally stable and can be used as permanent repair measures on large steel structures.
- To show that composite patch repair technology is an innovative and highly competitive product that caters to the needs of marine vessels and civil engineering infrastructures, the latter in the form of steel bridges.
- To demonstrate the reduction in maintenance costs and extension of design life of many large steel structures.
- To give the project partners the capability of providing high technology and high added value services worldwide, thus improving Europe's competitiveness in specialised and advanced repair work.

Advantages of composite patch repair

Composite patch repairs and/or reinforcements overcome many disadvantages of the traditional repair methods.

- They do not involve hot works in any way and, therefore, existing deadweight loading and proximity to explosive environments have no particular consequences.
- Patches can be applied directly on corroded steel members by performing a simple surface preparation.
- They can be completed faster.
- They exhibit good fatigue resistance.
- They do not cause stress concentrations.
- They result in low added weight.



Project partners:



National Technical University
of Athens (NTUA)



TWI Ltd (TWI)



Bureau Veritas (BV)



Hellenic Register of
Shipping SA (HRS)



Francisco Cardama SA
(CARDAMA)



Instituto de Soldadura
e Qualidade (ISQ)



Mettler SARL (Mettler)



NTNU
Norwegian University of
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Norges Teknisk –
Naturvitenskapelige Universitet
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The University of
Surrey (UniS)



Alveus doo (AS2CON)



Asociación de Investigación
Metalúrgica del Noroeste
(AIMEN)



CETENA
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CENTRO PER GLI STUDI
DI TECNICA NAVALE

Cetena SpA
(CETENA)

SSA

Shipbuilders & Shiprepairers Association

Shipbuilders and Shiprepairers
Association (SSA)

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