



Hydrogen Europe: European Hydrogen & Fuel cell Project Database

Project COPERNIC

COst & PERformaNces Improvement for Cgh2 composite tanks

A certain level of maturity of on-board compressed gaseous storage systems have been demonstrated through large Fuel Cell Electric Vehicle (FCEV) deployment projects like Clean Energy Partnership (100+ FCEVs). In addition, major car companies have confirmed their intent to start production by 2015. Nevertheless, major issues still remain to be addressed: - VOLUME: Actual CGH2 tank production is far from being capable of feeding the volume requested by the automotive industry. Therefore, current manufacturing equipment and production strategies are not designed for addressing such a market. - COSTS: Latest techno-economic analysis (DoE 05/2011) are still forecasting that industrial costs for 700bar CGH2 tanks may remain 4 to 5 times higher than expected targets. This is particularly critical with respect to a massive deployment of FCEV. COPERNIC will address the two major targets: performance improvements and cost reduction of 70MPa TypeIV composite vessels for automotive application in order to achieve targets and lead to rapid industrial exploitation owing to the strong contribution of 4 SME and industrial partners in the consortium. It will provide real scale demonstration on a pilot manufacturing line quantitative and technical and economic assessment of strategies including evolution of materials, components, processes and designs. Therefore, in full consistency with the call Topic, the COPERNIC project will contribute to: - Increase the maturity and competitiveness of CGH2 manufacturing processes evolving from classical automotive manufacturing technologies or concepts. - Decrease costs while improving composite quality, manufacturing productivity and using optimized composite design, materials and components. The scope of work has been defined taking into account past project outcomes (STORHY) and on-going project objectives (HYCOMP). COPERNIC will ensure that the deployment of FCEV is not inhibited by prohibitive high-pressure tanks cost or availability.

Project Information

Type of project : Research

Timing : 01/06/2013 > 30/11/2016

Project website: <http://www.project-copernic.com/>

Project Budget : 3.514.791 €

Funding

European Union through FCH JU: Grant agreement 325330 - [CORDIS link](#)

Project partners

Coordinator :

[CEA - Commissariat à l'énergie atomique et aux énergies alternatives](#)

Partners :

[Symbio](#)

[Nel Hydrogen](#)

RAIGI SAS

HOCHDRUCK REDUZIERTECHNIK GMBH

POLITECHNIKA WROCLAWSKA

OPTIMUM CPV

ANLEG GMBH

[Sub project\(s\)](#)

Sub project 1

Country: France

Address:

RUE LEBLANC 25 75015 PARIS 15

Sub project categories

Research

Project Id: 936

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