European Institute
for Energy Research
by EDF and KIT

COSMHYC DEMO

COmbined Solution of Metal HYdride and mechanical Compressors: DEmonstration in the hysoparc green H2 MObility project

Key Facts

Funding Agency
EU FCH 2 JU

Project Call
FCH-01-8-2020

Duration
01/2021 – 12/2023

Coordinator
European Institute for Energy Research (EIFER)

Partners
- EIFHYTEC
- NEL
- Steinbeis Europa Zentrum (SEZ)
- Communauté de Communes Touraine Vallée de l'Indre (CCTVI)
- MAHYTEC

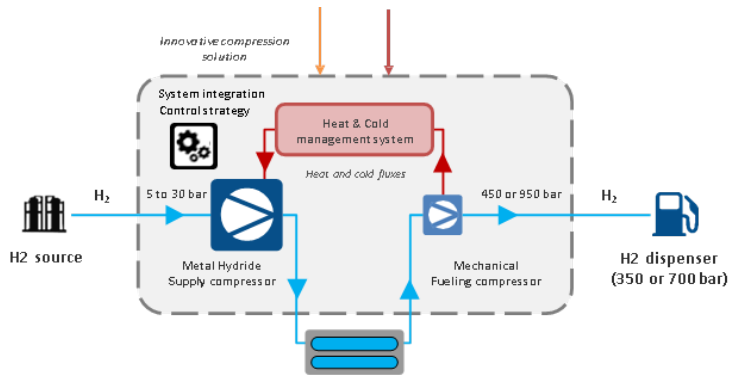
Website
https://www.cosmhyc.eu/

This project has received funding under the European Commission's Fuel Cells and Hydrogen 2 Joint Undertaking (JU) under grant agreement No 101007173.

FUEL CELLS AND HYDROGEN JOINT UNDERTAKING

Project Objectives

COSMHYC DEMO is the 3rd project of the FCH JU funded COSMHYC series. In the projects COSMHYC (start 2017) and COSMHYC XL (start 2019), the consortium first developed and tested an innovative hydrogen compression technology for hydrogen refueling stations (HRS), then scaled it up for heavy duty applications, enabling higher flow rates and daily capacities.
In COSMHYC DEMO, a full scale prototype of this technology will be demonstrated in a real-life dual-pressure HRS located in Tours, France, servicing a local fleet of FCEVs and compressing up to 200kg of hydrogen per day. This demonstration will showcase the maturity of the compression solution with regards to efficiency, reliability, low maintenance, low costs and flexibility.



COSMHYC DEMO hybrid compression concept

EIFER's Contribution

- Project coordination
- Data monitoring and evaluation
- Definition of hybridization concept
- Design, manufacture and testing of filling center

Main Project Output

- Techno-economic assessment of innovative compression solution in an hydrogen refueling station (HRS)
- Increased know-how in HRS-related hydrogen technologies (compression, storage, filling center)
- Advanced safety-related & regulatory expertise in commercial hydrogen installation's

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