Hydrogen Europe:
European Hydrogen & Fuel cell Project Database

Project PRESLHY

Pre-normative research for safe use of liquide hydrogen

In the proposed project PRESLHY pre-normative research for the safe use of cryogenic liquid hydrogen (LH2) will be performed. The consortium consists of European key organizations from the International Association for Hydrogen Safety HySafe with the relevant background related to LH2 safety research and will be coordinated by Karlsruhe Institute of Technology KIT. The work program duly refers to the outcomes of Research Priorities Workshops commonly organized by IA HySafe, EC JRC, and US DoE. Via HySafe and IEA HIA it will be aligned with other international activities also dedicated to safety issues of LH2, in particular with current research done at Sandia National Laboratory SNL. The results will help to improve the knowledge base and state-of-the-art, which will be reflected in appropriate recommendations for development or revision of specific international standards. So, the main objectives of PRESLHY are to identify critical knowledge gaps and to close these by developing and validating new appropriate models. Based on these results and with the better understanding of the relevant phenomena, specific engineering correlations will be derived which will help to evaluate mitigation concepts and safety distance rules for LH2 based technologies. The derived models and correlations could be directly implemented in new standards ans/or will fill current gaps in risk assessment tools, like the US supported hydrogen risk assessment toolkit HyRAM, and increase their validated scope of application. In general it will remove over-conservative requirements for innovative solutions, allows for cost-efficient safer design and for internationally harmonised, performance based standards and regulations. These objectives are fully aligned with Euroepean scientific-technological interests and strategies and very important to further the safe introduction and scale-up of hydrogen as an energy carrier.

Project Information

Type of project : Research
Timing : 01/01/2018 > 31/12/2020
Project Budget : 1.905.862 €

Funding

European Union through FCH JU: **Grant agreement 779613** - **CORDIS link**

Project partners

Coordinator :

KIT - Karlsruher Institut für Technologie

Partners :

L'AIR LIQUIDE S.A

NCSR Demokritos - INRASTES

Ulster University

HEALTH AND SAFETY EXECUTIVE

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INTERNATIONAL ASSOCIATION FOR HYDROGEN SAFETY

PRO-SCIENCE - GESELLSCHAFT FUR WISSENSCHAFTLICHE UND TECHNISCHE DIENSTLEISTUNGEN MBH

THE UNIVERSITY OF WARWICK

Sub project(s)

Sub project 1

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Sub project categories

Research

Project Id: 1237

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