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H₂FC

Integrating European Infrastructure to support science and development of Hydrogen- and Fuel Cell Technologies towards European Strategy for Sustainable, Competitive and Secure Energy

Deliverable

D10.1 Task Force on models and codes evaluation (membership)

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Document History

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27.06.2012	1.1	UU/Deliverable draft created and circulated for discussion
5.10.2012	1.2	NCSR/D/Task force members for hydrogen storage added

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1 H₂FC WP4: Cyber Laboratory

Task JRA 4.1 “Identification of existent physical models and numerical codes” (partners involved: All; task leader: NCSR)

Deliverable 10.1: Task Force on Model and Codes Evaluation (membership)

1.1 Introduction

Task JRA 4.1 activities include

- Identification of existing physical models and numerical codes in areas of hydrogen safety, storage and fuel cells,
- Listing models’ application areas, referencing models’ description and validation cases (the list will be maintained during the project and updated),
- Identification of remaining bottle necks and deficiencies in software, and producing a roadmap for addressing them,
- Development of detailed model evaluation approach,
- Evaluation and ranking of models (ranking exercise will be carried out by the task force including project partners and external experts, with appropriate assessment procedures to be applied).

The activities are to be conducted by the CFD Task Force, which should be comprised by project partners and external to the project experts.

Deliverable D10.1 reports on the membership of the Task Force.

1.2 Task Force on models and codes evaluation (membership)

Identification of existing mathematical models, development of mechanisms for their comprehensive evaluation and ranking, analysis of their capabilities and guidance for their correct application is an outstanding need within hydrogen safety community and recognized by a FCH JU through a call for proposals SP1-JTI-FCH.2012.5.2 “*Computational Fluid Dynamics (CFD) model evaluation protocol for safety analysis of hydrogen and fuel cell technologies*”.

Initial membership of the CFD Task Force for hydrogen safety includes 5 partners, participating in the H₂FC project and active in hydrogen safety CFD research, and 2 external to H₂FC project industrial partners. It was formally established through the application to the January 2012 call by FCH JU through a project proposal “SUSANA” (“SUpport to Safety ANALysis of Hydrogen and Fuel Cell Technologies”). The “SUSANA” project consortium consists of:

- Karlsruhe Institute of Technology (“KIT”, Germany) (H₂FC partner). Involved experts:
 - Dr. Alexei Kotchourko, alexei.kotchourko@kit.edu,
 - Dr. Thomas Jordan, thomas.jordan@kit.edu,
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 - Dr. Alexander Lelyakin, alexander.lelyakin@kit.edu.
- University of Ulster (“UU”, United Kingdom) (H₂FC partner). Involved experts:
 - Prof. Vladimir Molkov, v.molkov@ulster.ac.uk,
 - Dr. Dmitriy Makarov, dv.makarov@ulster.ac.uk,
 - Dr. Sile Brennan, sl.brennan@ulster.ac.uk,
 - Dr. Maxim Bragin, m.v.bragin@ulster.ac.uk.
- Health and Safety Laboratory (“HSL”, UK) (H₂FC partner). Involved experts:
 - Dr. Mat Ivings, Matthew.Ivings@hsl.gov.uk,
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 - Dr. Adrian Kelsey, adrian.kelsey@hsl.gov.uk,
 - Dr. Stuart Hawksworth, stuart.hawksworth@hsl.gov.uk.
- Joint Research Centre (“JRC”, The Netherlands) (H₂FC partner). Involved experts:
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 - Dr. Maria Cristina Galassi, maria-cristina.galassi@ec.europa.eu.

- National Centre for Scientific Research Demokritos (“NCSR”, Greece) (H₂FC partner). Involved experts:
 - Dr. Alexandros Venetsanos, venets@ipta.demokritos.gr,
 - Mr. Elias Toliás, toliás@ipta.demokritos.gr,
 - Ms. Stella Giannissi, sgiannissi@ipta.demokritos.gr.
- Elementenergy (“EE”, United Kingdom) (external to H₂FC partner). Involved expert:
 - Dr. Shane Slater, shane.slater@element-energy.co.uk.
- HELION (“HELION”, France) (external to H₂FC partner). Involved experts:
 - Dr. Franck Verbecke, franck.verbecke@helion-fuelcells.com,
 - Mr. Didier Vannucci.

Initial membership of the Task Force on Model and Codes Evaluation for hydrogen storage includes:

- National Centre for Scientific Research “Demokritos” (“NCSR”, Greece). Involved experts:
 - Dr. Thanos Stubos, stubos@ipta.demokritos.gr,
 - Dr. Theodore Steriotis, tster@chem.demokritos.gr,
- University of Crete (Greece), (external to H₂FC partner). Involved experts:
 - Prof. George Froudakis, frudakis@chemistry.uoc.gr,
- Technical University of Denmark (external to H₂FC partner). Involved experts:
 - Dr. Tejs Vegge, teve@dtu.dk.