PRESS RELEASE

Tekniker showcases its capabilities covering the entire hydrogen value chain at EHEC 2024

- *Technology centre experts will give four presentations describing the organisation's knowledge and experience as regards developing new technologies to produce, store, transport and consume hydrogen*
- *During the conference, to be held at the Bilbao Exhibition Centre (BEC) from March 6 – 8, several demonstrators will be on display to show the organisation's potential with regard to internally boosting R&D in this area*

[Eibar, 4 March 2024] – The **Tekniker** technology centre, a member of the Basque Research and Technology Alliance (BRTA), will play an outstanding role at the EHEC 2024 conference to be held at the Bilbao Exhibition Center (BEC) from March 6 -8 by giving four lectures describing the organisation's technological capabilities covering the entire value chain of hydrogen.

During this new edition of the European forum, the technology centre will specifically explain the knowledge acquired at a regional, national and European level in the area of hydrogen and the experience acquired in researching and developing new technologies allowing hydrogen to be produced, stored, transported and used in the industry.

Lucía Mendizabal, the coordinator of Tekniker's Hydrogen Unit, will talk about the implementation of the PVD (Physical Vapor Deposition) technology applied to the fully automated and large-scale manufacture of components for electrolysis stacks and explain two collaborative projects carried out in Spain. Firstly, GREENH2PIPES, a project funded by CDTI under the MISIONES call, led by Enagás and in which Tekniker is developing new materials and components for PEM electrolysers to lessen manufacturing costs. Secondly, ELEKWIND, a project in which Tekniker is also participating and has received funding within the framework of PERTE (strategic project for economic recovery & transformation for renewables), renewable hydrogen and storage (ERHA) of the Spanish government.

The expert explains that “we are collaborating with other companies to improve the performance and resilience of alkaline electrolysis stacks to eventually produce green hydrogen based on wind power at a more competitive cost”.

Researcher Antia Villamayor, moreover, will give a paper explaining the progress made with regard to producing electrodes with ultra-low platinum loads for PEM electrolysers. Another Tekniker researcher, Fernando López, will present the organisation’s capabilities in relation to the characterisation of materials exposed to hydrogen atmospheres. Finally, Ane López, another Tekniker expert, will review the possibilities that sizing tools for the production of hydrogen offer for industrial applications.

The technology centre will be present on stand 11CL located in the space reserved by the Basque Country’s Energy Cluster where several demonstrators will be on display as proof of the organisation’s potential in terms of its in-house capabilities and facilities focused on boosting R&D in this area.

In the exhibition space, attendees will see bipolar plaques designed to distribute hydrogen correctly that feature a protective coating developed by PVD technology to prevent corrosion and enhance electrical conductivity.

Lucía Mendizabal adds that “during the trade fair we will also show how our know- how is used to design and optimise electrolysis cells. There will also be several parts available to perform on-site hydrogen embrittlement trials.

Hydrogen as a main focus

Tekniker’s presence at EHEC 2024 will serve to reinforce the organisation’s firm commitment with regard to hydrogen and will allow decarbonisation to advance via R&D.

To achieve this goal, the centre has a laboratory specifically designed to run experiments using hydrogen technologies that is equipped with a 1 kW test bench to run trials on new components as well as materials and designs for proton exchange membrane electrolysers (PEM) to explore new control and integration strategies. A 5 kW demonstrator electrolyser used to produce hydrogen is also available at the facilities.

Additionally, Tekniker has put together a team to evaluate the degree to which the mechanical properties of different materials exposed to pressurised hydrogen atmospheres are affected; a testbench to perform electrochemical trials has also been commissioned to ascertain to what extent materials are permeable to hydrogen and a reactor to develop and characterise organic fluids that carry hydrogen.

More about EHEC

The European Hydrogen Energy Conference (EHEC) is a reference forum in the European hydrogen sector. The event, held every other year, is organised by the Spanish Hydrogen Association (AeH2) and provides a meeting point for experts, researchers and industrial leaders dealing with hydrogen and a platform where it is possible to share the most recent advances, innovations and developments in terms of technologies based on hydrogen.

More about Tekniker

As regards hydrogen, Tekniker has design and optimisation capabilities for plants where green hydrogen is produced. The organisation can also develop control algorithms to minimise the cost of producing hydrogen and barrier coatings to prevent permeability and fine-tune digital analytical tools to define the optimum configuration of a plant producing green hydrogen to meet the requirements of the hydrogen consumption profile of a given industrial application.

The organisation is also an active member of several associations whose ultimate goal consists in furthering the development of hydrogen technologies that attest to the technology centre’s involvement in this area. It is also a partner of the Basque Hydrogen Corridor (BH2C) led by Petronor; an active member of the Hydrogen Europe Research group and of the Hydrogen Task Force of the Sectoral Hydrogen Forum sponsored by the Basque Country’s Energy Cluster; member of the Spanish Hydrogen Association and of the Spanish Technological Platform for Hydrogen and Fuel Cells (PTE-HPC); Tekniker is currently collaborating with national companies to boost R&D and the large-scale industrialisation of these technologies.

Further information:

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