

H-TEC SYSTEMS introduces scalable Hydrogen Cube System (HCS) for hydrogen production on an industrial scale and expands production capacity

Module concept for scalable electrolysis power in the multi-megawatt range enables large CO₂ savings by using green hydrogen. H-TEC SYSTEMS provides information on the Hydrogen Cube System at the Hannover Messe.

Augsburg | May 23, 2022

H-TEC SYSTEMS will present its new PEM electrolysis Hydrogen Cube System (HCS), for the production of green hydrogen, to a broad audience at this year's Hannover Messe. The modular system is suitable for large multi-MW PEM electrolysis plants and applications in the industrial, chemical, and renewable energy sectors. The modular system allows for successive expansion and scaling, as projects are often already designed for later expansion.

Green hydrogen production on a multi-megawatt scale

The HCS is a modular building block system to realize large PEM electrolysis plants for producing green hydrogen. For this purpose, 2 MW Cubes can be combined to form multi-megawatt plants.

The cubes achieve a system efficiency of 74 percent and are equipped with an integrated process water treatment and power supply. In addition, fresh water and hydrogen treatment or heat extraction can be added to the system, depending on the customers' requirements.

A 10 MW HCS from H-TEC SYSTEMS can produce 4,500 kg of hydrogen per day. With 10 MW of renewable energy, 40 to 50 trucks or busses could be refueled with green hydrogen every day.

The system is designed for modular expansion. All modules can be linked so that the entire plant can be centrally controlled and monitored. The concept is suitable for plants that are to be expanded over the next few years. Projects can thus also start with a 4 MW system, even if the long-term goal is 50 MW or more.

Extended application areas enable high CO2 savings

With this innovative system, H-TEC SYSTEMS is expanding into larger industrial applications and thus enabling extensive CO2 savings through the use of green hydrogen, as compared to fossil resources. The HCS is suitable for applications in industrial production, such as chemical plants or steel production, as well as in the field of mobility (fleet refueling). For wind farm or PV park operators, the conversion of renewable energy into green hydrogen is a very viable option.

Steel production, which is one of the largest producers of emissions in Germany, provides an example of possible CO2 savings. According to the German Steel Industry Association¹, 26 tons of CO2 emissions can be saved for every ton of climate-neutral hydrogen used in steel production. A 10 MW HCS from H-TEC SYSTEMS with a daily production of 4,500 kg of green hydrogen would therefore reduce CO2 emissions by 117 tons per day, or 42 thousand tons annually.

"The current energy shortage is increasing the pressure on all sectors. At the same time, it offers a chance for many industries. The use of green hydrogen not only helps to significantly reduce CO2 emissions, but also to secure energy supply in the long term," explains Robin von Plettenberg, CEO of H-TEC SYSTEMS. "We are therefore very pleased to provide the Hydrogen Cube System, a modular and scalable system that makes it easier for companies in the chemical, mobility and energy sectors to start utilizing green hydrogen now, and also expand their projects at a later date."

H-TEC SYSTEMS expands production capacity

Due to the rapid growth of the hydrogen market, H-TEC SYSTEMS is expanding its production capacity. With the support of large-scale plant manufacturer and parent company MAN Energy Solutions, and direct access to Volkswagen's serial production expertise, an automated factory for the production of electrolysis stacks will be completed by the end of 2023. Depending on demand, a production capacity of 1000 MW can be reached by 2025, which will be continuously expanded in the following years.

¹ https://www.stahl-online.de/wp-content/uploads/WV-Stahl_Fakten-2020_rz_neu_Web1.pdf



H-TEC SYSTEMS Hydrogen Cube System (©H-TEC SYSTEMS)

Hannover Fair 2022

Trade fair visitors will be able to get a more detailed picture of the company as well as the new Hydrogen Cube System at the Hannover Messe from May 30 - June 2, 2022. The H-TEC SYSTEMS team are looking forward to an active exchange with the visitors in Hall 13 at Booth D 37.

H-TEC SYSTEMS offers further information in presentations accompanying the trade fair:

"Production of Green Hydrogen on a Megawatt Scale"

Tuesday, 31.05.2022, 12:20 - 12:35, Hydrogen + Fuel Cells Europe, Public Forum.

Robin von Plettenberg, CEO, H-TEC SYSTEMS GmbH.

Elevator Pitch: "Production of Green Hydrogen on a Megawatt Scale"

Wednesday, 01.06.2022, ca. 15:30, Hydrogen + Fuel Cells Europe, Elevator Pitches

Alexander Detke, Technical Sales Manager, H-TEC SYSTEMS GmbH

About H-TEC SYSTEMS

H-TEC SYSTEMS develops and produces innovative PEM electrolyzers and electrolysis stacks. With their technology, green hydrogen can be produced economically, efficiently and flexibly. The hydrogen specialists work at two locations in Germany for a successful energy transition across all sectors and have shaped the hydrogen economy as a technological pioneer for over twenty-five years. As part of the MAN Energy Solutions Group, H-TEC SYSTEMS supplies the key technology for the power-to-X value chain.

Further information: www.h-tec.com

PRESS CONTACT | H-TEC SYSTEMS GmbH

Emily Proell, Director Marketing & Communications:

e.proell@h-tec.com | +49 (0) 821 507697-559

Jessica Kuska, Communications Manager:

j.kuska@h-tec.com | +49 (0) 821 507697-146

GlobalCom PR Network

Wibke Sonderkamp:

wibke@gcpr.net | +49 (89) 360 363-40

Caroline Hannig-Sachon:

caroline@gcpr.net | +49 (89) 360 363-42