

Neumarkt, 18. April 2023

For the energy mix of tomorrow – DEHN protects the production and transport of "green hydrogen"

Over the past few years few topics have been as intensively discussed as our energy supply. What components should our energy mix have in the future to support the further development and expansion of the various megatrends of our time? Particularly in the recent past, the topic of hydrogen has become increasingly prominent, but only a few players are currently venturing into the subject. A first coordinated initiative is the " Hydrogen Center Bavaria (H2.B) ", which links partners from industry, science and politics. DEHN has been part of the alliance since the beginning of 2023. For regardless of whether it is a matter of producing or transporting "green hydrogen", comprehensive protection against lightning strikes and surges is essential.

Due to the increasing demand for energy worldwide, new approaches and technologies are constantly being researched that could close any gaps in the supply. The benefits of the technology are obvious. Hydrogen is very easy to store and transport. A standard gas pipeline, for example, can transport eight times as much energy as a 380-kV double overhead power line – and at only a fraction of the cost. "Green hydrogen" stands out in particular as a pollutant-free, mobile energy source that can be further processed into synthetic fuels, for example.

"Green hydrogen" is produced through the electrolysis of water – only electricity from renewable energy sources is used in the process. This often represents an obstacle to the rapid spread of hydrogen as an energy source to this day. What needs to be taken into account during the production, transport (in tanks or via pipelines) to the final application (hydrogen filling station) and storage of hydrogen are the possible effects of lightning strikes and surges.

The Ordinance on Industrial Safety and Health (BetrSichV) and the Ordinance on Hazardous Substances (GefStoffV) transpose the European Directive 1999/92/EC into national law in Germany. Technical guidelines for operational safety (TRBS) and for hazardous substances (TRGS) flesh out the respective ordinances and provide operators with information on risk assessment.

Press release

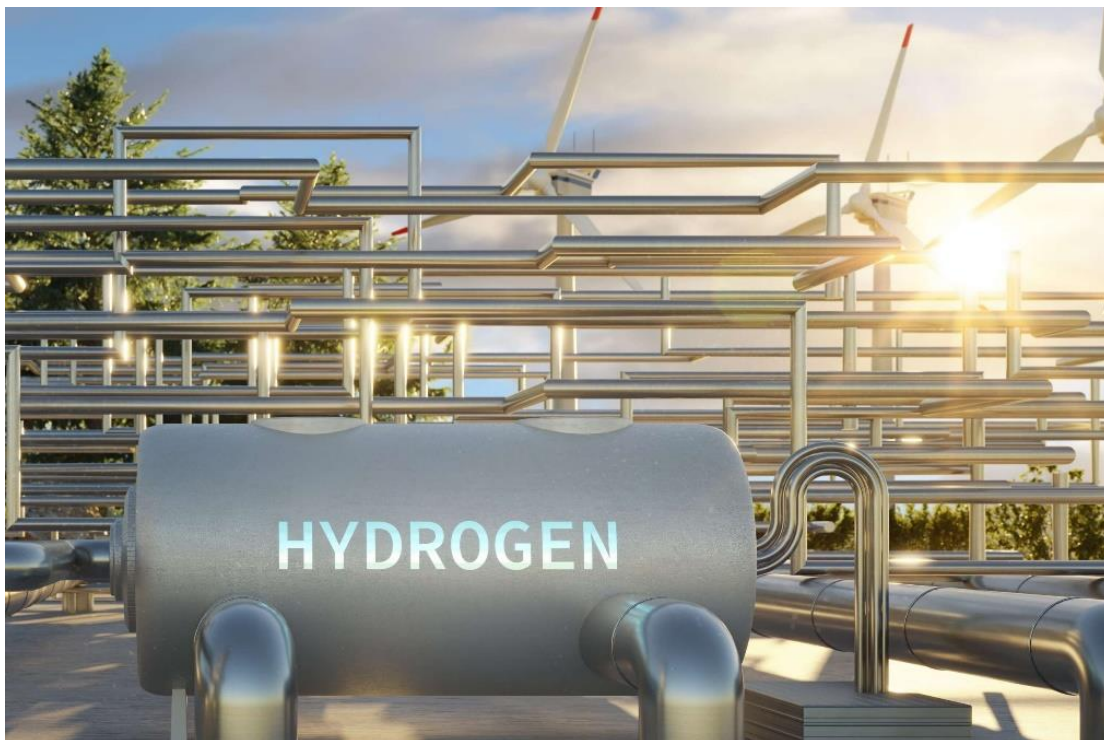


They recommend protection measures for the respective ignition source and this includes protection against the effects of a lightning strike and protection against surges.

"Working with hydrogen also means being aware of the high risk of the gas exploding," says Tobias Braun, Global Business Development Manager at DEHN. "With our comprehensive portfolio covering earthing, external lightning protection and surge protection, also for systems located in a hazardous area, we develop comprehensive protection concepts for system operators that minimise risks during the production, transport, storage and use of hydrogen.

A comprehensive lightning and surge protection concept and the use of optimally matched products increase the availability and service life of the installations and systems".

DEHN is able to draw on decades of experience and helps with the planning and realisation of the lightning protection zone concept, also taking into account hazardous areas. In this way, the risks of sparking due to a direct lightning strike or discharge of conducted and induced interference energies can be reduced to a safety-related and also economically justifiable level. DEHN surge protective devices meet the requirements resulting from the operating parameters of the systems and installations, including those of explosion protection.



Press release



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About DEHN SE

DEHN SE is a leading, globally active, family-owned company for electrical engineering with around 2,300 employees worldwide and provides innovative products and solutions as well as comprehensive services in the fields of surge protection, lightning protection and safety equipment. DEHN focusses on protecting plant and building technology, transport, telecommunications and process industry systems, photovoltaic systems and wind turbines alongside many other applications. The company's continuous growth is based on more than 100 years of experience as well as the highest quality standards and consistent customer and market orientation.