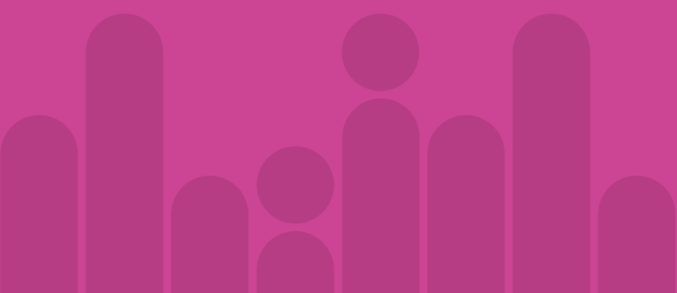


SITE TOURS

10 NOVEMBER 2022



Site Tours

10 November 2022

SITE TOUR RUHR METROPOLITAN REGION “HY Production, Transport and Distribution”

KROHNE Messtechnik

KROHNE is a global manufacturer and provider of process instrumentation, measurement solutions and services in many industries. Founded in 1921 and headquartered in Duisburg, Germany, KROHNE has over 4,000 employees and offers extensive application knowledge and local contacts for instrumentation projects in over 100 countries. In addition to its product portfolio, KROHNE offers special solutions such as custody transfer metering systems, pipeline leak detection and a flow computer for hydrogen to make processes cost-efficient and safe.

MAN Energy Solutions SE

MAN Energy Solutions is one of the most famous and traditional German machinery and plant construction companies. Today, we are pursuing the goal of enabling our customers to achieve their climate goals effectively and economically. We are primarily involved in those areas in which direct electrification does not lead to success and the use of complex mechanical engineering solutions become necessary. Our portfolio, from shipping to energy supply and storage, also includes the entire value chain for hydrogen and hydrogen-based synthetic fuels.

H2Herten Anwenderzentrum

H2Herten is a technology centre for hydrogen applications. A publicly accessible test platform for a hydrogen-based energy system based on wind power is operated here, whose power electronics also offer the simulation of other load profiles and the testing of various components from water treatment and electrolysis to compression, storage and reconversion. A hydrogen filling station and a production facility for fuel cell drives for trains are located in the vicinity.

Site Tours

10 November 2022

SITE TOUR RUHR METROPOLITAN REGION “Research Landscape Ruhr”

MAX-PLANCK-INSTITUT FÜR KOHLEFORSCHUNG

The Max-Planck-Institut für Kohleforschung focuses on research into energy- and resource-saving chemical transformations, especially on catalysis in all its facets. The aim is to develop new, tailor-made catalysts that can be used, for example, to efficiently synthesize complex natural substances or medical agents, or to convert biomass into fuels and important basic chemicals. Research is also being conducted into the storage of hydrogen.

Fraunhofer-Institut für Umwelt-, Sicherheits- und Energietechnik UMSICHT

Fraunhofer UMSICHT is a pioneer for a sustainable world. Exploiting the potential of hydrogen is the objective of the scientists at Fraunhofer UMSICHT. They work – together with other research institutions, industry and commerce – on solutions for the use of hydrogen. This includes the development of materials and components for electrolysis and fuel cells as well as the implementation of cross-sectoral approaches such as Power-to-X or Carbon Capture and Utilization (CCU).

Gas and Heat Institute Essen e.V. (GWI)

As the leading energy institute in the branch, the GWI works on sustainable energy supply and efficient energy use in all sectors. The GWI stands for the entire H2 value chain from generation to transport to end use. In addition to overall system analyses, experimental studies on H2 use in the heat and industrial sectors are carried out at the GWI. Due to the close interaction between the research and development, testing laboratory and education departments, the GWI is the point of contact for everything to do with hydrogen.

Westfälische Hochschule

At the Westphalian University of Applied Sciences R&D activities regarding polymer electrolyte membrane based hydrogen technology are being pushed forward since more than 15 years. New approaches for electrode structures and catalytic layers are being focused on the one hand, whereas on the other hand different fuel cell and electrolyser systems are being developed based on the patented principle of hydraulic single cell compression. High-pressure hydrogen production could already be realized in a near industrial scale up to 45 kW and 100 bar.

Site Tours

10 November 2022

SITE TOUR RUHR METROPOLITAN REGION "Hydrogen in the industry"

Zentrum für Brennstoffzellentechnik

ZBT is one of the leading research institutes in Europe for fuel cell and hydrogen technologies and a sought-after R&D partner in both European and national cutting-edge research as well as in industrial projects focusing on automotive applications and stationary power generation. For the approx. 150 employees at ZBT an outstanding technical infrastructure is available, which includes production facilities, test facilities, chemical laboratories and high-tech analytics.

Thyssen Krupp Electrical Steel / Klimahafen Gelsenkirchen

thyssenkrupp Electrical Steel is the only European and one of the world's leading manufacturers of energy-efficient grain-oriented electrical steel - a key product for the energy transition. We have set ourselves the goal of operating our production in a climate-neutral manner in the future - with green hydrogen, among other measures. Already today we are supplying transformer manufacturers and grid operators with bluemint® powercore® with reduced CO2 emissions. This is how we help to decarbonize the energy industry.

The lead project of the corporate initiative "Klimahafen Gelsenkirchen" also deals with the decarbonization of energy-intensive operations on the basis of green hydrogen. To this end, connection options to a future pipeline and decentralized generation options using an electrolyzer are being examined. The aim of the initiative is to become climate-neutral as quickly as possible.

Felco GmbH

Pipe and welding technology | assembly | maintenance | production of modular process plants. We apply these competences in the chemical, petrochemical, automotive, steel and pharmaceutical industries as well as in all renewable energy sectors. We manufacture plants for the production of H2, biogas, pharmaceutical, chemical and food products in our own workshops in skid construction. These modules are delivered by us as ready-to-operate plants throughout Europe and integrated at the customer's site. All approvals and certificates are up to date.

Site Tours

10 November 2022

SITE TOUR WESTPHALIA

A new real laboratory is being built

An innovative hydrogen habitat is being created at the former NATO airfield to attract hydrogen-related companies. The H2-Airport is a real laboratory for testing and further developing the grid-serving use of hydrogen in the stabilised interconnected grid. The project will be presented by Sebastian Niehoff, Managing Director of BEN-Tec GmbH. Coffee and canapés will be served in the former hangar.

The district of Steinfurt presents itself

Innovations from small and medium-sized businesses

Get an insight into the H2 activities of the district of Steinfurt and its HYMAT network. Experience practical examples from the region (details to follow).

Tour of the Saerbeck Bioenergy Park

Research and practice: hand in hand

A centre of excellence for renewable energies has been developed from a former ammunition depot of the German Armed Forces since 2011. Prof. Dr-Ing. Christof Wetter will present the H2 projects of Münster University of Applied Sciences - a reliable and innovative cooperation partner in research - and the university's own electrolyser. After lunch, a bus tour of the bioenergy park with Dr Tobias Lehberg (Mayor of Saerbeck) is scheduled.

Visit to the Enapter Campus

Setting up mass production for AEM electrolysers

Finally, you will visit the Enapter Campus, which is currently under construction. Here you will learn all about the advantages of the patented AEM technology, on the basis of which standardised plug-and-play products are manufactured for everyone. Quickly get into the production of green hydrogen with Enapter.

Site Tours

10 November 2022

SITE TOUR RHINELAND AREA

“Hydrogen Mobility & Hydrogen in chemical industry”

HyCologne – Hydrogen Region Rhineland: Hydrogen bus project

The HyCologne network links more than 50 players from politics, industry and research and initiates large-scale projects. Many hydrogen buses are already in use in the region. The two European bus projects CHIC and JIVE will be presented and the public transportation provider RVK will report on the experiences of their fleet of fuel cell buses. In addition, several provider of mobility solutions and buses will participate. The refueling of a hydrogen bus rounds off the program.

NOVYN, Rheinberg

As part of the INEOS chemical company, NOVYN is Europe's leading producer of vinyls. NOVYN operates a large-scale chlor-alkali electrolyser in Rheinberg, which produces chlorine, caustic soda and hydrogen. During the tour, INEOS will present the new hydrogen business it launched in November 2020, focusing in particular on its ambitions for the Rheinberg site and the wider North Rhine-Westphalia region. This will include the future 100-MW water electrolyser at its large integrated chemical site in Cologne.

Site Tours

10 November 2022

SITE TOUR RHINELAND MINING AREA

“From coal to the energy system of the future“

Forschungszentrum Jülich, Institute of Energy and Climate Research

Forschungszentrum Jülich is one of the largest research facilities in Europe with more than 7,000 employees and is a member of the Helmholtz Association. The Institute for Energy and Climate Research (IEK-14: Electrochemical Process Engineering) advances the marketability of electrolysers and fuel cells as well as the implementation of synthetic fuels in close cooperation with fundamental research and application-oriented development.

HC-H2 Helmholtz cluster, Brainergy Parc (tbc)

Details to follow soon