

Press Information

Kyocera's high performance components work reliably – even in the most demanding environments

Hydrogen is an upcoming energy carrier regarding future solutions in many fields, Kyocera's components' excellent mechanical robustness and hermetic sealing technologies can offer the right solution for various applications. In order to present the newest innovations and possibilities in this field, Kyocera will exhibit its ceramic parts at the fair Hydrogen 2022, taking place in Bremen on October 19 and 20.

Kyoto/London, 06th October 2022. Due to the fact that Hydrogen is projected to be the energy carrier of the future and that the demand for hydrogen and corresponding investments is rising accordingly, Kyocera is furthermore setting standards in order to reach the aim of a more efficient future with their ceramic components. Kyocera's ceramics therefore have the appropriate characteristics to function reliably in the demanding environment and can be used in various hydrogen applications.

Hydrogen as the energy carrier of the future

Hydrogen is a highly flexible energy carrier. Owing to its quite difficult handling and transportation, special solutions using ceramic materials present new possibilities to overcome related challenges. If it is produced with renewable energies, it is also climate-friendly. Beside the advantages concerning the climate as well as the security of supply, hydrogen technologies and solutions have the potential to reach the global market and create future places of employment.

CO₂-free production of Hydrogen

Generally, one can distinguish between green, blue and turquoise Hydrogen. Especially green Hydrogen produced by electrolysis with water, is becoming significantly more important in the near future. Green Hydrogen is the major measure in order to reach the goals of the Paris Climate Agreement. Besides this fact, green Hydrogen stands out with its diversity of uses in different fields of application. For example, it is the only way to make certain processes in the chemical industry and the most practical way to replace coal in the steel industry. In the so-called electrolysis process, the water is broken down into Hydrogen and Oxygen with the help of electricity. The electricity required for the process comes exclusively from renewable energies. Furthermore, this means that the used energy as well as the production of Hydrogen are CO₂-free. Due to the special chemical properties of Hydrogen, safety and performance must be ensured throughout the entire value chain, i.e. production, transport and storage.

Ceramic in Hydrogen applications

Kyocera can supply high-performance ceramic materials showing high performance in harsh environment conditions, like in Hydrogen processes. The excellent mechanical robustness and hermetic sealing technologies can offer the right solution for various applications. By identifying the specific needs of your application, Kyocera is able to select or develop the most suitable material to provide the right custom solution for your needs.

Full assemblies based on individual customer's requirements

In total, Kyocera not only provides ceramic components, but fully customized solutions. Thanks to a big variety of shaping methods, many years of experience in brazing technology and a wide portfolio of coating technologies, Kyocera is able to provide full assemblies based on their customers' requirements and needs. Kyocera's electric feedthroughs are hermetically sealed and suitable, even for UHV applications. With a big range of available metal- and brazing materials, they can be adapted to be usable under different conditions such as corrosive environment, mechanical load/high pressure and high temperatures.

Kyocera at Hydrogen 2022

In order to present the advantages of ceramics for Hydrogen actions, Kyocera will participate at the trade fair Hydrogen 2022, taking place in Bremen on October 19 and 20. This year's motto is "Technologies & Solutions For A Low-Carbon Hydrogen Future". Kyocera will display its products at booth 8025.

About Hydrogen Fair Trade

Hydrogen is the world's largest and most important suppliers' trade fair for hydrogen technologies, materials, components and engineering solutions. Therefore, it is exclusively dedicated to discussing advanced technologies for the hydrogen and fuel cell industry. The trade fair's focus is bringing together the entire hydrogen value chain to focus on developing solutions and innovations for low-carbon hydrogen production, efficient storage and distribution, applications in a variety of stationary and mobile applications. Hydrogen fair presents the latest technologies and solutions, advanced materials, manufacturing equipment, infrastructure, test and evaluation tools and services to commercialize hydrogen as a mainstream provider of clean, renewable energy.

Further images are available by clicking the following link:

<https://transfer.serviceplan.com/index.php/s/GDWJRy4yEFJSbNy> (password: Hydrogen2022)



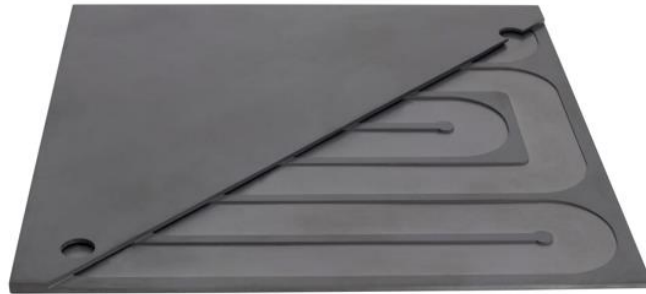
Feedthroughs



Dielectric rail for fuel cells



One-layer SiC heat exchanger



Laminated Substrate



Containment Shells



For more information on Kyocera: www.kyocera.co.uk

About Kyocera

Headquartered in Kyoto, Japan, KYOCERA Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the KYOCERA Group, which is comprised of 298 subsidiaries (as of March 31, 2022), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the most experienced producers of smart energy systems worldwide, with more than 45 years of know-how in the industry. The company is ranked #603 on Forbes magazine's 2021 "Global 2000" listing of the world's largest publicly traded companies.

With a global workforce of over 83,000 employees, Kyocera posted sales revenue of approximately €13,42 billion in fiscal year 2021/2022. The products marketed by the company in Europe include printers, digital copying systems, semiconductor-, fine ceramic-, automotive- and electronic components as well as printing devices and ceramic kitchen products. The KYOCERA Group has two independent companies in the United Kingdom: KYOCERA Fineceramics Ltd. and KYOCERA Document Solutions Ltd.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (approximately €710,000* per prize category).

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