

Exhibiting at CES® 2023

First exhibition at CES® as ENEOS Corporation

TOKYO – Dec 27, 2022 – ENEOS Corporation (ENEOS) will exhibit at CES® 2023, a global technological trade fair to be held in Las Vegas, U.S. on January 5-8, 2023.



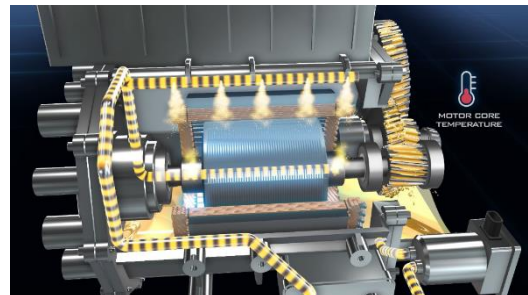
Image of Exhibition Booth (Las Vegas Convention Center, North Hall, #9627)

To create and innovate in energy, resources, and materials, we continue to take on the challenge of creating new value through the development of original technologies and open innovation with startups. In this exhibition, we will explore the possibility of expanding our business partners globally through the exhibition of lubricating fluid for electric vehicles (EV), data server liquid immersion cooling systems of GRC, and a cloud-based atomistic simulator Matlantis that accelerates material developments including lubricants.

1. EV fluids

EV, which is expected to become widespread in the future, will require dedicated fluids with superior insulating and cooling performance, as well as gear-protection performance. We have been involved in the development of a wide range of lubricants, including automotive lubricants, for many years.

By utilizing the technologies and knowledge accumulated through these developments, we have established our lubricating fluid technology to satisfy the new required performance for fluid at a high level. We will continue to offer innovative technologies and products and services. Our proprietary lubricant technology will continue to provide for our ever-advancing EV drive systems.



2. The data server immersion cooling system of GRC, Ltd. and cooling fluid for the data server developed jointly with GRC and ENEOS



In response to the rapid expansion of the digitalization society, the power consumption of data centers is expected to increase significantly in the future. Along with this trend, attention is also being paid to cooling technology aimed at reducing energy consumption at data centers. GRC (*) is a start-up company in Texas, U.S.A., which develops a data center cooling system. It is a pioneer in a single-phase liquid immersion cooling system that circulates hydrocarbon-based cooling fluid, which is efficient and has a minimal environmental impact, among other cooling technologies. We aim to create an environmentally friendly digital society by leveraging GRC's proprietary cooling technology and our lubricant development technology with low environmental impact and high-cooling efficiency.



3. Cloud-based Atomistic Simulator Matlantis to Accelerate Material Developments



Matlantis is a cloud-based atomistic simulator that can perform large-scale material discovery by simulating material behavior on an atomic scale. ENEOS and Preferred Networks, Inc. (Head Office: Chiyoda-ku, Tokyo; CEO: Toru Nishikawa, Preferred Networks, hereafter PFN(*)) jointly developed. By incorporating a deep learning model into a conventional physics simulator, computational speed can be increased to several tens of thousands of times faster than in the past, and it can be applied to various materials.

Matlantis is marketed by Preferred Computational Chemistry Co. and was launched as a cloud service in July 2021. As of September 1, 2022, total 41 of companies and research organizations use Matlantis. Matlantis has been used for discovery and development of a wide range of materials including catalysts, batteries, semiconductors, alloys, lubricating oils, ceramics, and chemicals. This exhibition also presents a specific case study of Matlantis for development of ENEOS's lubricating oil, in which the company examined the working mechanism of a potential material and performed high-speed searches.

(*) ENEOS Innovation Partners LLC (Corporate Venture Capital operated by ENEOS Group) invested in GRC and PFN.

In the ENEOS Group's long-term vision to 2040, we view the recent progress of the digital transformation as good opportunities and are working to create new value by developing and implementing innovative businesses. As part of these efforts, we will continue to take on the challenge of developing new technologies and services and contribute to the building of a sustainable society.

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About the ENEOS Group and ENEOS Corporation

Under ENEOS Holdings, Inc., the ENEOS Group has developed businesses in the energy and nonferrous metals segments, from upstream to downstream. The Group's envisioned goals for 2040 are: becoming one of the most prominent and internationally-competitive energy and materials company groups in Asia, creating value by transforming our current business structure, and contributing to the development of a low-carbon, recycling-oriented society with the pursuit of carbon neutral status in its CO2 emissions. ENEOS Corporation, one of the principal operating companies in the Group, is contributing to the achievement of the Group's envisioned goals through a broad range of energy businesses.

<https://www.hd.eneos.co.jp/english/>

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