INPEX CORPORATION IHI Corporation Mitsui O.S.K. Lines, Ltd.

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## INPEX, IHI, MOL Demonstrate Clean Ammonia Supply Chain Linking UAE and Japan

**Tokyo, Japan** - <u>INPEX CORPORATION</u> (INPEX), IHI Corporation (IHI) and Mitsui O.S.K. Lines, Ltd. (MOL) announced they have executed the demonstration of a clean ammonia supply chain linking the United Arab Emirates (UAE) and Japan.

The clean ammonia used for the demonstration was supplied by Abu Dhabi National Oil Company (ADNOC). It was produced by Fertiglobe, a joint venture between ADNOC and OCI.N.V. that is a key supplier of ammonia, using natural gas produced in Abu Dhabi. Most of the CO<sub>2</sub> emitted from the production of the ammonia was sequestered and injected into Abu Dhabi onshore oil fields in which INPEX has a participating interest, making it clean ammonia.

INPEX oversaw the entire process of the demonstration in close partnership with ADNOC. MOL transported the clean ammonia to Japan in an ISO tank container<sup>1</sup> with the support of Nippon Concept Corporation, in which the company holds shares. IHI utilized the clean ammonia to conduct a combustion experiment using an ammonia combustion turbine which is under development. SHOWA DENKO K.K. also provided support and cooperation in the transportation of the clean ammonia. Furthermore, His Excellency Shihab AI Faheem, Ambassador of UAE to Japan was in attendance for the delivery of the clean ammonia to IHI. <sup>1</sup> A container designed and manufactured to international (ISO) standards for the transportation of liquids.



Ammonia production plant in Abu Dhabi



Ceremony for clean ammonia supply chain demonstration at IHI



2,000-kilowatt-class gas turbine at IHI Yokohama Works

Ammonia is advantageous when used as an energy carrier (as a mode of storage and transportation) and emits no CO<sub>2</sub> when combusted. It is therefore expected to be utilized as fuel for power generation and marine transportation in line with global movements toward a decarbonized society.

As outlined in its "<u>INPEX Vision@2022</u>" announced on February 9, 2022, INPEX positions the development of a hydrogen and ammonia business as one of the company's 5 net zero businesses and seeks to commercialize three or more projects by around 2030 while aiming to produce and supply 100 thousand tons or more of hydrogen/ammonia per year. The company will continue to work towards building a hydrogen and ammonia supply chain linking Japan and Abu Dhabi, one of INPEX's core business areas, in cooperation with the Japanese government and customers as well as ADNOC, with which it has closely partnered for almost 50 years.

INPEX will also proactively address energy structure reforms to contribute to the realization of a net zero carbon society by 2050 while continuing to fulfill its responsibility of developing and providing a stable and efficient supply of energy to its customers.

IHI is actively promoting the creation of The Ammonia Value Chain including developing of Ammonia utilization technology to achieve carbon-neutral. This demonstration is important because it is necessary to bring together the parties who are related to production, transportation, storage and utilization in shared efforts to create The Ammonia Value Chain. IHI will keep developing technologies that leverage ammonia as an energy source that helps materialize a cleaner world and contributes to realize carbon-neutral society by 2050 via providing carbon-neutral solutions, not only by Ammonia utilization technology to reduce CO<sub>2</sub> but also carbon recycling technology for the effective use of CO<sub>2</sub>.

In June 2021, the MOL Group announced a target of achieving net zero greenhouse gas (GHG) emissions by 2050 in "MOL Group Environmental Vision 2.1", which laid out the group's approach to global environmental issues. The MOL Group will steadily accumulate a track record in safe, reliable transport of ammonia, which is expected to be in high demand as a next-generation clean energy source, and contribute to the realization of a decarbonized society through proactive participation in a broad range of value chains.

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