



LR, Cargill, Minerva Dry and NACKS team up to develop new energy efficient and methanol ready Kamsarmax bulk carrier design

The bulk carrier will be methanol and rotor sail ready, excel in energy efficiency and environmental performance following the result of a Joint Development Project.

Lloyd's Register (LR), Cargill International, Minerva Dry Inc. and Nantong COSCO KHI Ship Engineering Co Ltd (NACKS) have collaborated on the design of a Kamsarmax bulk carrier with methanol and rotor sail capability as the result of a Joint Development Project (JDP) established in 2022.

The design will provide a new energy efficient bulk carrier at a time when ship owners and operators must consider their environmental, social and governance (ESG) strategies in line with new and upcoming environmental regulations which mandate the limiting of greenhouse gas (GHG) emissions.

The JDP included input on user requirements from one of the largest dry bulk operators, Cargill, and brings together the operational experience of ship owner Minerva Dry with the design expertise of leading Chinese shipyard NACKS. LR acted as a trusted adviser throughout the joint development project as the sole classification society for the design of this unique vessel.

Nikos Kakalis, Global Bulk Carriers Segment Director, Lloyd's Register said:

“Lloyd's Register is proud to have collaborated on this JDP with Cargill, Minerva Dry and NACKS to design an energy efficient and future fuel ready Kamsarmax bulk carrier, bringing innovation to practice.”

“And it is absolutely vital that stakeholders across the maritime value chain continue to work together to provide commercially viable bulk carriers to meet the sector's demands whilst prioritising designs that comply with tightening GHG emission regulations, as evidenced by this JDP.”

Chris Hughes, Decarbonisation Specialist, Cargill International said:

“It's been great to work closely with NACKS, Minerva Dry and LR on this project; they all brought a lot of knowledge and experience to the project; plus a willingness to challenge the status quo, and to consider new ideas and technologies. Rather than starting with a conventional fuelled design and adding on some limited “readiness” we essentially designed a methanol fuelled ship first, and worked backwards from there for the methanol-ready version. The result is a design that is truly ready and feasible for conversion”.

Kostas Papadodimas, Technical Manager, Minerva Dry said:

“We are at a time when the shipping industry is undergoing a transformation process caused mainly by the rapid technological advancement and the requirements and targets set towards the decarbonization of our industry. As such, Minerva Dry is committed to working with industry stakeholders and business partners in developing solutions that will enable the decarbonisation of shipping transportation. We are very glad that we were given the opportunity to provide our insights and operational experience in this JDP that has resulted in the development of an optimised and energy efficient design of a Kamsarmax bulk carrier with futureproofing capabilities and sustainability elements, being at the same time commercially relevant today”.

Mingfeng Lu, Technical Director, NACKS said:

“It is really a big honour for NACKS to develop the new energy-efficient alternative fuel ready Kamsarmax Bulk Carrier with Minerva Dry, Cargill and Lloyd’s Register. Through the concerted efforts of all parties, the JDP project was successfully executed. “

“The methanol-ready dual fuel Kamsarmax BC is another breakthrough in developing “Carbon-Neutral” vessels in NACKS by comprehensive research on optimal arrangement of methanol storage tanks, fuel supply and refuelling systems. By optimizing the hull form and implementation of energy saving devices, the vessel provides significant improvement in energy efficiency comparing with the last generation of Kamsarmax BC. It can satisfy the requirement of EEDI Phase 3 by using conventional fuel, with the potential for greater improvement in it following the utilization of wind propulsion and methanol fuel in the future.”

“NACKS will continue to be committed to research on new clean energy vessels and application of green technology, to provide a wide variety of green energy products and innovative solutions for our clients who have the common values and goals.”

ENDS

About Cargill

Cargill helps the world’s food system work for you. We connect farmers with markets, customers with ingredients and families with daily essentials—from the foods they eat to the floors they walk on. Our 160,000-plus team members around the world innovate with purpose, empowering our partners and communities as we work to nourish the world in a safe, responsible, sustainable way.

From feed that reduces methane emissions to waste-based renewable fuels, the possibilities are boundless. But our values remain the same. We put people first. We reach higher. We do the right thing. It’s how we’ve met the needs of the people we call neighbors and the planet we call home for 158 years—and how we’ll do so for generations to come. For more information, visit [Cargill.com](https://www.cargill.com) and our [News Center](#).

About Lloyd’s Register

Trusted maritime advisers, partnering with clients to drive performance across the ocean economy.

Lloyd’s Register (LR) is a global professional services group specialising in marine engineering and technology. Created more than 260 years ago as the world’s first marine classification society, to improve and set standards for the safety of ships.

Today we are a leading provider of classification and compliance services to the marine and offshore industries, helping our clients design, construct and operate their assets to accepted levels of safety and environmental compliance.

We also provide advice, support and solutions on fleet performance and optimisation, voyage optimisation, enhancing our clients' digital capability. Our digital solutions are relied upon by more than 20,000 vessels.

In the race to zero emissions, our research, technical expertise and industry-firsts are supporting a safe, sustainable maritime energy transition.

Lloyd's Register Group is wholly owned by the Lloyd's Register Foundation, a politically and financially independent global charity that promotes safety and education.

About Minerva Dry

Minerva Dry Inc. is an ISM and ISO 14001 certified ship management company, operating a fleet of 12 bulk carriers with a total dwt of 1.4 million tons. The vision of Minerva Dry is to be the shipping company of choice, recognized for its people, its performance, and business ethos.

www.minervamarine.com

About NACKS

NANTONG COSCO KHI SHIP ENGINEERING CO., LTD. (hereinafter referred to as "NACKS") is a joint venture shipbuilding enterprise in China. The company since establishment in 1995 strives "to be the best carrier provider of global marine logistics". NACKS is the pioneer and active participant in shipbuilding industry to apply alternative energy.

www.nacks.com

For media enquiries contact

Nicola Good
External Communications Director
Lloyd's Register
T +44 20 7076 6452
M +44 7855 113 273
E nicola.good@lr.org

Lloyd's Register
71 Fenchurch Street, London EC3M 4BS, UK
T +44 (0)20 7709 9166
E news@lr.org

www.lr.org