



Kongsberg Maritime will supply design, engineering and equipment for two MGO/Biofuel and methanol-ready tankers for Sirius Rederi AB

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Kongsberg Maritime: Press Kit - Marintec 2023

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Please find below the Kongsberg Maritime press kit for Marintec 2023, as follows:

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methanol ready chemical tankers

- 2. Kongsberg Maritime current projects 2023
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1. Kongsberg Maritime to provide design, engineering and equipment on pair of methanol ready chemical tankers

Kongsberg Maritime has won a contract to supply design, engineering, and equipment for two MGO/Biofuel and methanol-ready chemical tankers for Swedish tanker operator Sirius Rederi AB. These highly advanced, low emission 15,000dwt tanker vessels will feature a range of Kongsberg Maritime equipment and can operate on battery-powered hybrid propulsion. Options for further vessels are included.

This latest contract builds on a current nine-ship programme with fellow Swedish owner Terntank, with a similar design and equipment package. All 11 vessels will be built at the China Merchants Jinling Shipyard (Yangzhou) Dingheng. The first ship for Sirius will be delivered in July 2026

As part of a contract valued at around NOK 100 million (approx. €8.3 million), Kongsberg Maritime will also supply steering gear, Promas with flap rudder and CPP, tunnel thruster with Mcon thruster control system, K-Chief integrated automation systems including Vessel Insight, AutoChief propulsion control system and deck machinery. This is in addition to design and engineering services.

Rune Ekornesvåg, Sales Director Ship Design in Kongsberg Maritime, said: "This latest contract for our fuel efficient and low emission tanker design, confirms the continuing drive by progressive ship owners to adopt sustainable technologies into fleet renewals.

"We're delighted to be working with Sirius and China Merchants Jinling Shipyard on this project, to deliver the next generation of cargo ship, with a combination of energy saving and clean technologies."

The NVC 614 CT design features an efficient hull form of Ice Class 1A, with a wave piercing bow and distinct styling of the forecastle deck and forward and aft signal masts to match the design of rest of the Sirius fleet.

Main propulsion and manoeuvring are provided by the efficient Promas propulsion system, which combines a controllable pitch propeller and flap rudder into one propulsion unit, delivering fuel consumption savings of more than 6% when compared to alternative propulsion systems.

Jonas Backman Managing Director of Sirius Rederi AB said, "With Evolution 15K we're taking another step forward – for our customers, colleagues and the environment. Our new tanker has been designed to provide the highest levels of sustainability, efficiency and safety as well as excellent working conditions.

The partnership with Kongsberg started several years ago when we were working closely to find the best future vessel for our customers. They listen to our requirements and goals for low emission vessels and at the same time make a workplace for our crew to feel safe and at home. This has resulted in a contract for two newbuilding's, which the ambition for many more. With these vessels we are well on our "Pathway to ZERO."

China Merchants Jinling Shipyard added: "Since the yard signed the first 15,000-ton LNG dual-fuel chemical tanker contract with Kongsberg Maritime's design team in 2014, we have opened the door to the chemical tanker market in Northern Europe, with cutting-edge energy-saving and low-carbon designs such as dual-fuel propulsion, in-line shaft generator, and DC-LINK. This was already an advanced design eight years ago, it was a challenge for China Merchants Jinling Shipyard and Kongsberg Maritime, but we succeeded with our joint efforts.

"We hope to continue to work with Kongsberg Maritime in the future to design and build future ships that are more popular with the market and shipowners".

The new vessels are to have an Energy Efficiency Design Index close to 40% below the 2025 Phase 3 requirements.

ENDS

2. Kongsberg Maritime current projects 2023

Kongsberg Maritime is currently supplying technology solutions and equipment to

a range of significant projects, globally. This document provides a summary of some of the most significant projects currently in progress during 2023, across Integrated Solutions, Remote & Autonomous technology, and the latest vessel designs driving decarbonisation in the industry.

Integrated Solutions

Equipment package for Cadelar's latest WTFIV - Kongsberg Maritime is supplying technology and engineering for the latest large Wind Turbine and Foundation Installation Vessel (WTFIV) for Cadeler, a shipping and construction company operating in the offshore wind industry.

Construction is taking place at COSCO Shipping Heavy Industry's shipyard in Qidong, China, and the latest F-class vessel is to be delivered in 2026. This is the fourth Cadeler offshore installation vessel with Kongsberg Maritime technology. The optimised thruster package, electrical solutions, and integrated control system, including dynamic positioning system, allow operations in all weather conditions and include digital tools needed to improve sustainability and reliability.

Kongsberg Maritime's solutions are also designed to reduce CAPEX and OPEX costs. Tailored energy control functions optimise the vessel's energy efficiency, and the battery-hybrid electrical system includes advanced ThrustAllocator™ and PowerBoost™ functions. These can reduce the number of engines online and the amount of fuel required for crane operations and DP manoeuvring.

Next Generation PSV and AHTS Designs PSV/AHTS - Kongsberg Maritime has unveiled a new range of ship designs in its extensive UT Design portfolio. The new anchor handler (AHT) and platform supply vessels (PSV) have the option to include alternative energy sources and fuels, such as methanol, ammonia, and hybrid-battery power.

One of the great innovations of the anchor handler design offers significantly reduced energy consumption during anchor operations. This is achieved through the use of Kongsberg's cross-tensioning system where the load testing of anchors will use the power of the winches rather than the traditional approach of one or more vessels using bollard pull and engine power. This approach will lead to significant operational cost savings, enabling this crucial offshore task to be handled by a single ship.

Grimaldi Ro-Ro contract - Kongsberg Maritime is supplying an equipment package to Grimaldi Group for two new 7800-line metre (LM) Roll on – Roll off (Ro-Ro) vessels, which will be built at China Merchant Jinling Shipyard. The contract was signed in Q4 2022, and the vessels are scheduled for delivery in 2025.

The two new vessels will operate in hybrid mode and on a fully battery electric system when in port. The GG5G vessels reduce carbon dioxide emissions by half per unit transported on shorter routes.

Kongsberg Maritime will supply marine automation system and Auto Chief 600 propulsion control systems, hybrid systems, converters, battery energy storage of 5MWh, battery management system, manoeuvring and propulsion systems.

"Continuation of these vessels represents the future of commercial maritime vessels, incorporating practical hybrid technology that allows major cuts in carbon emissions. We have been developing integrated solutions for hybrid propulsion for years, reducing capex costs for ship owners and opex for operators, while ensuring high performance standards in battery-electric operation." Says Lisa Edvardsen Haugan, Kongsberg Maritime President.

Pioneering Remote & Autonomous shipping

AUTOSHIP – Earlier this year, Kongsberg Maritime successfully demonstrated a range of remote and autonomous technologies on a cargo vessel operating off the coast of Norway. The test cruise has been named one of the most complex autonomous journeys at sea so far.

The Eidsvaag Pioner, is one of the two vessels that are equipped for remoteoperated and autonomous transport demonstrations for the AUTOSHIP project, which is part of Horizon 2020, an EU research programme.

The Eidsvaag Pioner operates along the Norwegian coast and in fjord areas where it carries fish feed to ocean fish-farms. The demonstration was carried out over 13 hours and involved the vessel completing a voyage outside the coast of Kristiansund on the northwest coast of Norway. The ship undocked from port and sailed to the world's first ocean fish-farm, and back to port again, a journey of about 160 nautical miles in total.

It involved a mix of remote and autonomous operations during different stages of the voyage, including automatic docking and undocking from the quay. Kongsberg's autonomous technology then took control to navigate and manoeuvre out of the harbour and further out to open sea.

Driving decarbonisation through innovation

Future-proof Container Feeder - Kongsberg Maritime's innovative next generation 2000 TEU container feeder vessel design received Approval in Principle from classification society DNV in 2023.

The new design, known as 'Cobalt Blue' features a range of innovative features for the container feeder market. These include an open-top deck, forward deckhouse, and a modular design which will ensure the vessel can easily be upgraded over time to transition through fuel types during the working life of the ship.

The new vessel has been designed in partnership with Deltamarin (Finland) and its core aims are to offer ship owners a future-proof vessel that delivers efficiencies and sustainability benefits, while preparing the sector for future developments such as the need to switch to alternative fuels to meet tighter emissions requirements.

With the ship's the modular design, there is room for adding future innovations. It can be built now with a dual-fuel main engine, that will run on LNG or diesel fuels. Then there is the possibility to switch to low carbon fuels such as biogas, synthetic methane or ammonia in order to reduce greenhouse gas emissions.

Design and equipment for methanol-ready wind-assisted tankers - Kongsberg Maritime will supply ship design, engineering, and equipment for three MGO/Biofuel and methanol-ready tanker ships being built for Danish tanker operator Tärntank. These highly advanced, low emission 15,000dwt tanker vessels will feature wind assist technology plus Tärntank's own battery-powered Hybrid Solution®.

The new vessels, being built at China Merchant Jinling Shipyard, will reduce carbon emissions using methanol-powered engines, wind-assisted propulsion, hybrid battery systems, and on-shore power. The wind-assist

technology is expected to reduce emissions by up to nineteen percent, in addition to the 40% reduction achieved on Tärntank's six previous vessels. The new vessels are to have an Energy Efficiency Design Index close to 40% below the 2025 Phase 3 requirements.

Kongsberg will supply steering gear, rudders, controllable pitch propellers, tunnel thrusters and thruster control systems, integrated automation systems including Vessel Insight, propulsion control systems and deck machinery. This is in addition to design and engineering services.

3. Kongsberg Maritime sustainability commitment

Kongsberg Maritime aims to be the leading partner in the decarbonisation of the maritime industry through its dedication to sustainability in product development, pioneering technologies, and environmental responsibility. A commitment to transparency and accountability underpins all of the company's sustainability initiatives. We believe that through collaboration, we can create a more sustainable future for all.

Through innovation, Kongsberg Maritime is delivering game-changing solutions for:

- Increased operational efficiency
- Reduction of energy consumption and,
- Reducing the environmental impact for maritime industries

Our sustainability commitment aims to:

Drive positive change - To drive change in the maritime industry we develop and deliver ground-breaking technologies for safe, sustainable, and efficient operations.

Reduce carbon footprint - To support our 2030 decarbonisation initiatives, we will cut internal fossil fuels by 50%, logistics emissions by 25%, and business travel emissions by 30%.

Pave the way for sustainable innovation - To always be at the forefront of technology advancements committed to investing in research and development to maintain its technological leadership. The company invests

approximately 7% of its revenue in R&D each year.

Collaborate for success - To foster open collaboration and earn your trust as we work together to champion profitable sustainability. Your partner of choice.

Lisa Edvardsen Haugen - President, Kongsberg Maritime, says: "As a technology provider, we recognise the opportunity to innovate and continuously improve our technology to drive smarter, greener, and more efficient operations at sea. We foresee a future where operations at sea are sustainable and greenhouse gas neutral, with Kongsberg Maritime technology being at the forefront of this transition, protecting people, and planet".

Kongsberg Maritime's approach to sustainability:

Sustainable product development - At our core, we are passionate about sustainability. It's not just a buzzword; it's our guiding principle, woven into every product we offer. When you choose our solutions, you're not only advancing your own sustainability goals but also becoming a vital part of the global effort to protect our precious oceans and planet.

Pioneering technologies for decarbonisation - We're not just following the tides; we're charting a new course in the maritime industry. Our pioneering technologies and solutions are dedicated to decarbonising this vital sector. We're leading the change in digitalising maritime operations, aspiring to be your foremost Energy Transition Partner and Integrator, and guiding your journey towards cleaner fuels. With a focus on seamless systems integration and emerging ocean space technologies, we're committed to a sustainable future at sea.

Energy Transition - Your trusted partner for expert advice, technical knowledge, and unbiased insights in the energy transition.

Digitalisation - We harness our digital frontrunner status and unrivalled integration expertise for maximum combined advantages.

Systems Integration - Our integrated solutions provide significant benefits in terms of increased operational efficiency, safety, and sustainability.

Emerging Ocean Space - We play a pivotal role in Offshore Wind. Our technology is relevant in the full life cycle of an offshore wind farm.

Kongsberg Maritime's environmental responsibilities

Protection of marine biodiversity - Our initiatives protect and preserve marine environments through sustainable business practices.

Energy efficiency - Our efforts reduce energy consumption and emissions in the company's operations and products.

Resource management - We manage resources responsibly, including waste reduction and recycling.

Media Information

APAC

Simon Qu
Head of Marketing & Communications - APAC
zhe.qu@km.kongsberg.comTel: +86 183 2158 5865

Rest of World

Craig Taylor
Senior Manager – PR & Communications
Craig.taylor@km.kongsberg.comTel: +44 (0) 7749 584 285

About Kongsberg Maritime

Kongsberg Maritime is a global marine technology company providing innovative and reliable technology solutions for all marine industry sectors. Headquartered in Kongsberg, Norway, Kongsberg Maritime has manufacturing, sales, and service facilities in 34 countries.

Kongsberg Maritime solutions cover all aspects of marine automation, safety, manoeuvring, navigation, and dynamic positioning as well as energy management, deck handling and propulsion systems, and ship design services.

Web: Kongsberg Gruppen | Kongsberg Maritime

Social media: LinkedIn | Twitter | Facebook

Contacts



Karen Bartlett
PR Account Director
PR & Communications
k.bartlett@saltwater-stone.com
+44 (0) 1202 669244