



KNUD E. HANSEN

SHIP DESIGN SINCE 1937

WE DESIGN SHIPS

Since 1937

LEGACY

For over 85 years, KNUD E. HANSEN has been a leading independent consultancy, offering comprehensive design, engineering, and project management services to shipyards and ship owners worldwide. Our expertise includes innovative vessel design, efficiency improvements, and operability enhancements.

We specialize in design development for new builds, conversions, and retrofits.

Our consultancies also cover machinery optimization and structural modifications, HVAC engineering, Interior Design, VR modelling, lifetime vessel support and project management.

Since 1937, more than 800 vessels have been constructed to our designs and over 400 conversions undertaken together with more than 500 hull lines. We have executed thousands of surveys and technical studies providing extensive engineering analyses, demonstrating our extensive experience and capabilities.

We design ships from a “blank piece of paper”.

KNUD E. HANSEN CORE SERVICES

Naval Architecture. Machinery Design & Engineering. Marine HVAC Design. Interior Design, Graphic Design & Virtual Reality.

Our consultancies and lifetime support services including:

- Serving as the owner's technical consultant and representative.
- Reviewing designs and approving plans.
- Site Inspections.
- Conducting feasibility studies.
- Performing energy audits.
- Implementing annual or periodic vessel surveys.



KNUD E. HANSEN CORE SERVICES

■
Naval
Architecture

■
Machinery Design
& Engineering

■
Marine HVAC
Design

■
Interior
Design

■
Consultancy
& Representation



The icebreaker RSV NUYINA was designed for the Australian Government to resupply their Antarctic bases and for research and scientific work.

"The crew states that RSV NUYINA is the best ship they have sailed".

Favel Parrett, crew and novelist

Why choose us?

Tailored Maritime Solutions

Tailor-made Design

Our designs exceed industry standards and are customized to meet the specific needs of our clients. By utilizing both proven and cutting-edge technologies, we deliver practical solutions that are tailored to our clients' requirements while introducing a fresh perspective to each project. Through forward-thinking strategies, we enhance our designs to ensure that our customers receive vessels that not only meet but exceed their performance and efficiency expectations, all while addressing their current needs.

Our design philosophy remains centered on maximizing the design capabilities of vessels by carefully balancing technological trade-offs, allowing our clients to achieve commercial success for nearly nine decades.

Technology Trade-off

Our primary objective is to enhance the efficiency of vessels and decrease the operational expenses associated with transporting each ton per nautical mile.

Through the implementation of cutting-edge fuel-saving techniques and the utilization of advanced technologies, we strive to maintain lightweight ships and prepare propulsion systems for future advancements. This approach allows us to maximize payload capacity while minimizing the release of CO₂ emissions.

We are fully dedicated to assisting our clients in achieving commercial success by enhancing their cargo carrying capabilities. In a time when the maritime industry is just beginning to address carbon emissions, our designs seamlessly integrate proven and innovative solutions that result in significant environmental improvements, all while ensuring vessel efficiency, capacity, and performance remain uncompromised.

► Top left: FINNSIRIUS, 5100LM 1800PAX RoPax (2019). Top right: CO₂ Tanker Development (2024). Top center: BAKKAFLOSSUR, 7000m³ Hybrid Well Boat/Life Fish Carrier (2020). Lower center right: 440PAX Phoenix World Village (2020). Lower center left: AIMS 35m research vessel (2019). Lower right: FUTURE WAY, 6500PCC CarCarrier (2021). Bottom left: BOREAS, 175m Wind Turbine Installation Vessel (2021). Bottom right: DANA V, 70m Arctic Research Vessel (2019)

▼ 220PAX Mississippi River Cruise Vessel (2022)







▲ **QUEEN MARY 2 passing Kronborg Castle in Elsinore.** The entire HVAC of Queen Mary 2 is designed by KNUD E. HANSEN, a leader in the design and engineering of heating, ventilation, and air conditioning (HVAC) systems for maritime and offshore environments. Our extensive portfolio of HVAC-related projects includes examples from all over the world on vessels of all types and sizes, both newbuild and refit & conversion. Vessels we have worked on include cargo, cruise FPSOs, naval, passenger & RoRo, super yachts, private expeditions and offshore supply, rigs and platforms.

Experience and Expertise

We place great emphasis on experience and expertise at KNUD E. HANSEN to ensure the delivery of tailor-made solutions that combine past, present, and future design concepts.

Our diverse team includes highly skilled maritime designers and engineers, along with innovative young minds, fostering an international environment capable of navigating cultural and sectoral diversity.

Close collaboration with our clients is at the core of our approach, from concept design to project management and beyond. Through our combined proficiency in design and engineering, we strive to optimize all aspects of new builds and systems, ultimately achieving energy-efficient solutions.

Owner's Representative

KNUD E. HANSEN's long-standing design expertise has led us to be many shipowners' preferred consultant for design reviews and plan approval during new build, conversion, and retrofit programs.

Throughout the entire design and construction cycle, we represent and protect the interest of ship owners and operators around the world. During the design phase we provide services including feasibility studies, plan reviews, and tender evaluations; during the construction phase we can perform plan approvals, on-site inspections, and vessel commissioning.

Lifetime Support

KNUD E. HANSEN provides unwavering support to our clients throughout the vessel's lifetime. From the construction phase, we offer project management or oversee the entire new-build program on behalf of the owner. Post delivery, we conduct periodic surveys and review technical, operational, and commercial performance.

Once the vessel is commissioned and in service, we assist in monitoring performance and conducting studies to enhance operations and reduce costs. With our extensive experience and expertise, clients have trusted us for decades to provide consultancy services that optimize vessel performance throughout its lifetime.

Cutting-edge Software

Explore cutting-edge ship design with KNUD E. HANSEN. Our multidisciplinary research and innovation lead to maritime solutions for both private and public sectors. We utilize top-tier software and techniques, including CFD modelling and dynamic simulation, to ensure precise speed and power predictions.

Our expertise encompasses in-house capabilities for interior design, 3D/VR modelling, and LCA consultancy. Through partnerships with leading research institutions, we conduct thorough research and rigorous model testing. With a global track record spanning industries and segments worldwide, our innovation and research reach unparalleled levels.

References

Our post-COVID initiatives involve pushing the boundaries of ship design and energy optimization as we strive to meet the 2050 decarbonization targets.

Our latest projects include:

- Mega Ro-Ro's and Car Carriers.
- Offshore SOV's and WTIV (Jack-Up Vessels).
- Carbon-capture CO₂ Tankers.
- Ro-Pax and Explorer Cruise Vessels.
- Trawlers and Well Boats.
- Marine Research Vessels.
- Navy Auxiliary Vessels, Coast Guard MPV's and Patrol Vessels.
- Relief and Supply Icebreakers.

"We began to work with KNUD E. HANSEN, when we needed an HVAC specialist for the Queen Elizabeth Class. They performed very well for us and we've worked with them on other projects as a result. In particular,

KNUD E. HANSEN showed themselves to be incredibly flexible, willing to mobilise as many people as we needed, and wherever we needed them to be. I attribute this adaptability to the close-knit, trusting relationships between personnel. The culture at KNUD E. HANSEN ensures total efficiency."

Shankar Rasiah, AERIUS

"KNUD E. HANSEN showed themselves to be very professional and totally dedicated to our project. Our cooperation could not have been better. We started out with one A4 page of specifications and, from this, KNUD E. HANSEN quickly developed the entire yacht."

Per Blinkenberg-Thrane,
24 M EXPLORER TYPE MOTOR YACHTS

"KNUD E. HANSEN designed a total of 18 ships for my family's company. We spent countless days discussing our dreams, aspirations and passions. The relationships we developed became so personal that design decisions became automatic. The creativity and talent in KNUD E. HANSEN is boundless. KNUD E. HANSEN provided us with precision, accuracy and consistent quality. We knew we had a reliable design to work on. And, of course, the personal attention was outstanding – we felt we were one big family."

Alex Panagopolus

▼ PACIFIC ORCA/ PACIFIC OSPREY , 160m Wind Turbine Installation Vessel (2010)





DENMARK

Main office

Lundegaarden, Claessensvej 1
3000 Elsinore
Denmark

Odense office

Kystvejen 100
5330 Munkebo
Denmark

AUSTRALIA

Suite 104
396 Scarborough Beach Road
Osborne Park 6017
Perth WA
Australia

FAROE ISLANDS

Vestara bryggja 15, 3 hædd
100 Tórshavn
Faroe Islands

SPAIN

Algeciras 1, Planta 1ª,
Módulo 3-4
11011 Cádiz
Spain

UNITED KINGDOM

93 Great Suffolk Street
London, SE1 0BX
United Kingdom

USA

1650 S.E. 17th Street,
Suite 212
Fort Lauderdale, FL 33316
USA

01 08 2024



WE DESIGN SHIPS We are a leading independent consultancy providing a comprehensive range of design, engineering and project management services to shipyards and ship owners around the world. Our innovative, customized solutions cover areas ranging from concept, tender/contract & basic design, to supporting the building and conversion process of all types of maritime vessels and offshore structures, to energy optimization and services for the offshore wind industry. Since 1937, over 800 vessels have been built and over 400 conversions carried out to our designs.

WWW.KNUDEHANSEN.COM