

Visual representation of DTU Aqua's new multi-disciplinary research vessel, designed by Knud E. Hansen.



Focus on rising shipping activity in the Arctic

KNUDE. HANSEN has existed since 1937 and is an international leader in custom ship design and innovative marine technology solutions. In the future, there will be an increased need for the company's expertise in developing ships for the Arctic

KNUDE. HANSEN A/S is an internationally recognised marine engineering company with projects and activities right across the globe. The company's link to the North Atlantic, and in particular Greenland and the Faroe Islands, is based on a long history, as well as personal relationships for several of the company's employees.

KNUDE. HANSEN was for example behind the design of the coastal passenger ship m/s Sarfaq Ittuk of Arctic Umiaq Line, which was delivered in 1992, and on the basis of which a further two sister ships were built. Similarly, when two of these vessels

were extended in the year 2000, KNUDE. HANSEN was responsible for the conversion.

"We have a permanent office in Torshavn, and generally a great commitment to the North Atlantic area, including Greenland. The whole Arctic area is very close to our hearts. It's much more than just a market – it's part of our DNA to be present in the Arctic. Consequently, we also try to encourage young people from Greenland to take apprenticeships with us, and co-operate with the shipping companies to provide continuing training for employees who transfer to shore-based employment." – Finn Wollesen, managing director

Finn Wollesen's own association with Greenland dates back to the shipping routes of the 1960s, when the expedition and supply ships of the shipping company J. Lauritzen sailed back and forth between the Arctic and Antarctic for a lifetime. Finn Wollesen 'grew up' aboard the polar ships with his family, and sailed for three seasons on board the iconic 'Nella Dan' in the 1980s.

The opportunities in the Arctic match the competencies

There is no doubt that KNUDE. HANSEN has a sense for the ice. For the past 10-15 years,



Finn Wollesen, managing director of KNUDE. HANSEN, on a fish'n'dish tour in Qooqqut, Nuuk Fjord.

the company has designed ice-classed tonnage and specialized icebreaking vessels all kinds of tasks in the Arctic and Antarctic – including various types of tankers, fishing vessels, settlement supply ships and ferries.

In recent years, the company has closely monitored the growing international activity and increased geopolitical interest in the Arctic. For example during the latest election campaign in Denmark in the spring of 2019, the company organised an election meeting with politicians on Arctic developments.

"We are already seeing an increase in inquiries and orders from customers who will need ice-classed tonnage the next 20-30 years, and all the signs indicate a coming increase in shipping traffic in the region. Consequently, there will be an increased need for vessels designed to operate under these conditions, including patrol, fishing and exploration vessels. But of course, while you can build cargo and passenger ships that can handle the conditions, the increased traffic will also create a need to ensure emergency preparedness and assistance. It would be disastrous if a cruise ship got into distress high up in the Arctic." – Finn Wollesen, managing director.

Most recently, KNUDE. HANSEN has completed the concept development for a new

ice-reinforced multi-disciplinary marine research vessel in collaboration with DTU Aqua, as Denmark's current ocean-going marine research vessel, RV DANA IV, is expected to be retired in 2022.

The new marine research vessel is designed to be able to operate in the ice-filled belt between the open water and the solid ice, where other marine research vessels have to turn back. At the same time, the ship is designed to ensure minimal noise emission, and with the optimal lines for conducting hydro-acoustic measurements.

Together with the new marine research vessels for the Greenland Institute of Natural Resources and the Faroe Marine Research Institute (FAMRI) in the Faroe Islands, the three vessels will form a strong team within the Danish Commonwealth in relation to future marine studies in the North Atlantic and Arctic.

A market leader in technology and design

KNUDE. HANSEN's innovative skills are echoed in the company's offices in Denmark, the Faroe Islands, Canada, the USA, the UK, >>>

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The Australian research icebreaker RSV Nuyina is being built by the Dutch shipyard DAMEN, and is in the final phase of construction in the Galati shipyard in Romania.

Spain, Greece and Australia. With projects on seven continents and a staff of 20 different nationalities, Finn Wollesen encourages the employees to push idea development in direct dialogue with the customer.

“Design is done in close collaboration with our customers. We always try to contribute something new, and not let ourselves be bound by custom. The combination of fresh ideas, consultation with the customer and unique solutions is what drives our innovation.” – Finn Wollesen, managing director

As a global company, KNUD E. HANSEN is involved in the development of the virtual reality software ‘ShipSpace’, which has made it possible to involve the end-user directly in the development of the ship design, and to co-ordinate the technology development processes between shipyards, engineers and shipowners across geographical distances and time zones.

KNUD E. HANSEN has received international awards for the design of several Ro-Ro vessels, Ro-Pax (ferries), Explorer Cruise ships, Ro-Con and container vessels. With a series of Mega Ro-Ro ships for, amongst oth-

ers, DFDS, Grimaldi, Finnlines and Wallenius SOL, KNUD E. HANSEN has set entirely new standards over the past few years. Several of these ships have been designed to be ice-breaking with either LNG propulsion or diesel-mechanical hybrid engines, plus batteries to ensure zero emissions in port.

With the design of the Australian research icebreaker RSV Nuyina, KNUD E. HANSEN has seriously underlined the company’s international standard. The company’s co-operation with the Australian government in the development of RSV Nuyina has lasted more than ten years, but it is



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Finn Wollesen
Managing Director / E. Hansen

KNUD E. HANSEN’s office in the Faroe Islands is currently pushing the development of Live Fish Carriers in collaboration with the company Bakkafrost, and a fundamental new trawler design for the North Atlantic fisheries has also been developed in Torshavn.

also the largest single investment in a civilian ship in the history of Australia. When the ship is delivered to the Australian Antarctic Division in 2020, it will be the world’s largest conventional ice-breaking research vessel.