






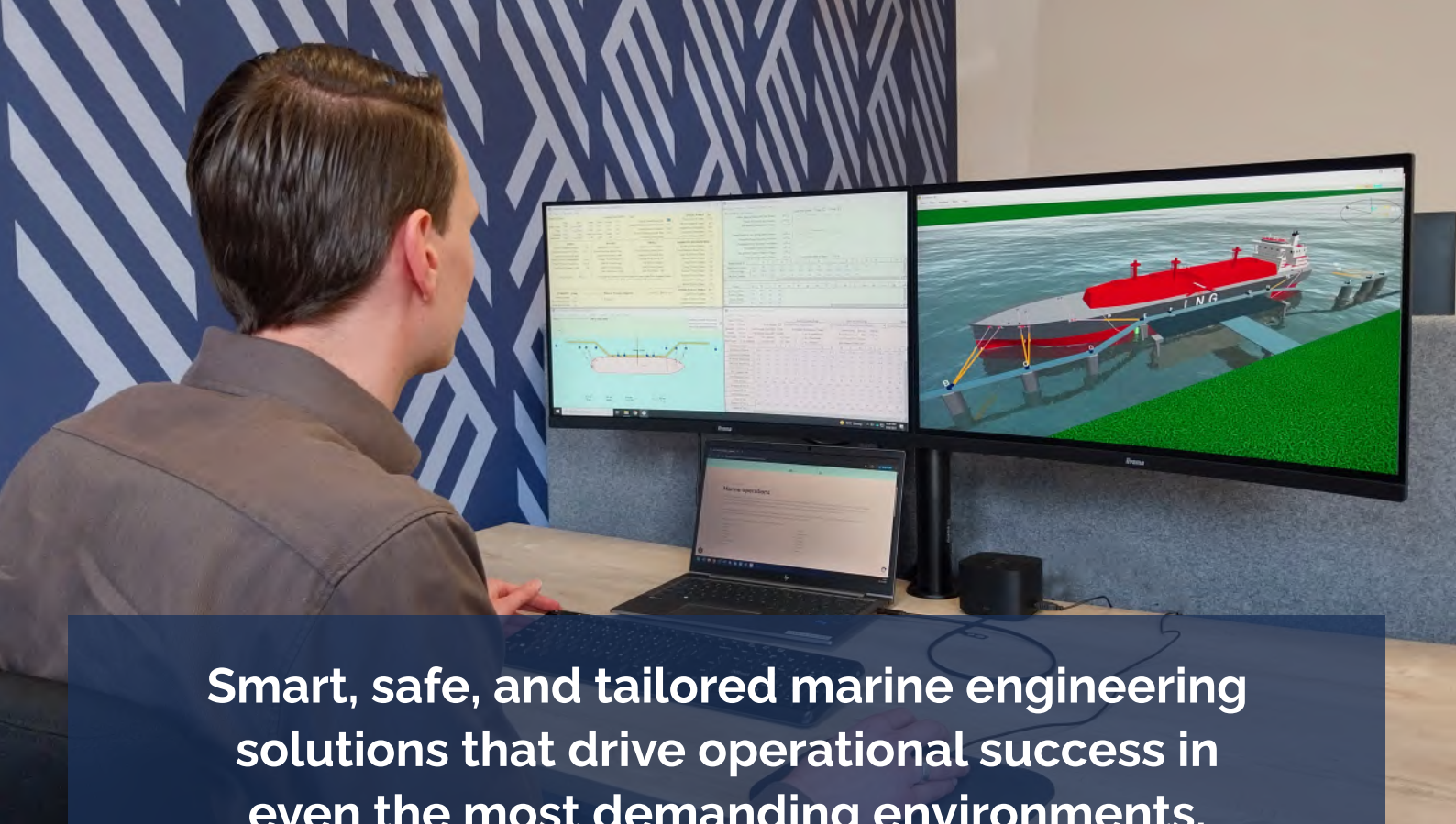
Our field of expertise

Marine operations

Reliable engineering solutions for complex offshore and maritime operations, from initial feasibility to operational support.

What sets us apart?

-  Custom engineering solutions for each unique operational challenge.
-  In-depth expertise across offshore, subsea, and shipping industries.
-  From feasibility studies to operational execution and post-operation evaluations.
-  Smart, practical designs that optimize efficiency and safety.
-  Trusted by leading maritime companies for critical marine operations worldwide.

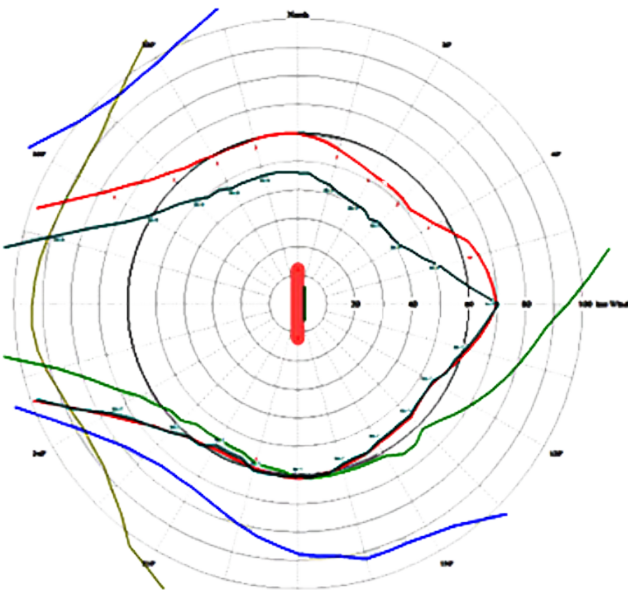


Smart, safe, and tailored marine engineering solutions that drive operational success in even the most demanding environments.

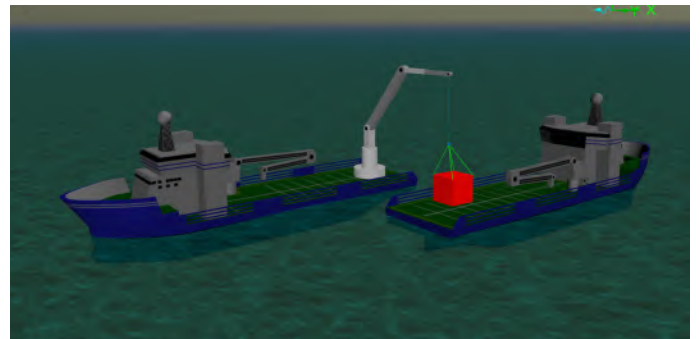
At Saltwater Engineering, we support our clients in planning, engineering, and executing marine operations with precision and care. Our Marine Operations service covers a wide scope of activities including towing and mooring analyses, heavy lift studies, installation support, and bespoke operational manuals.

MARINE OPERATIONS BY SALTWATER

Every project starts with a thorough understanding of the client's needs and operational challenges. Our experienced engineers conduct feasibility studies, assess operational risks, and design innovative, practical solutions that ensure safety, efficiency, and compliance with international standards. By integrating real-world experience with advanced simulation and calculation tools, we deliver realistic, executable operational plans.



Our engineers use tools like Octopus, HecStab, Optimoor and Femap to run clear simulations and calculations.



Simulating offshore lifting operations with Orcaflex.

ENGINEERING BY ADVANCED SOFTWARE

Our engineers are proficient in a wide range of industry-standard software, including Octopus, Orcaflex, HecStab, Femap, and Optimoor, enabling us to conduct detailed calculations, simulations, and visualizations. Making use of real-time measurements and model test results, these tools allow us to deliver results that meet the highest standards of classification societies and maritime regulations.

What distinguishes Saltwater Engineering is our ability to adapt quickly to changing project demands. We work closely with vessel owners, offshore contractors, and engineering firms, providing customized support throughout the operation lifecycle. Our flexible, problem-solving mindset and commitment to technical excellence make us the preferred partner for complex marine operations. Choosing Saltwater Engineering means choosing reliability, safety, and success with expert support every step of the way.

ENGINEERING PRECISION AT SEA: INSIDE SALTWATER'S MARINE OPERATIONS

At Saltwater Engineering, Marine Operations play a key role in our services. In this interview, we explore what makes an operation successful, the challenges involved, and how we connect theory with real-world conditions. We also highlight the value of client collaboration and share a recent project that showcases our expertise.

Q What does Marine Operations at Saltwater Engineering focus on?

At Saltwater Engineering, Marine Operations are primarily focused on how ships operate in specific environments. Our clients often approach us with questions about how to safely and efficiently use their existing vessels in particular situations.

We help clients answer questions such as how to safely moor their ship alongside a quay, how to load their vessel in a safe and compliant manner, and how the ship will behave in a specific environment along with the impact this has on both the cargo and vessel performance.

What makes a marine operation successful?

A successful marine operation depends on a practical approach, especially when working with the vessel's crew. It's important to communicate complex matters in a simple and clear way so that the crew understands exactly what they need to do to work safely. Our goal is to make sure everyone on board knows the procedures and feels confident in following them.

What is the most common challenge when executing these calculations?

The biggest challenge is often setting up the correct boundary conditions and collecting accurate information about the ship. This can be particularly difficult when dealing with older vessels or when documentation is incomplete or outdated.

How do you balance theoretical calculations with unpredictable real-world conditions at sea?

We set design limits, such as defining the maximum environmental conditions in which the operation can be safely performed. If bad weather is expected, our reports give a solid foundation to pause or stop operations for safety reasons. We also apply industry-standard

safety margins that have been proven to work well in real-world situations.

How do you ensure that each operational plan is tailored to the specific needs of the client?

We maintain close communication with the client and ideally also with the crew on board to ensure a thorough understanding of the vessel and its operations. Crew members often provide valuable insights into how they actually work with the vessel in practice. We complement their hands-on knowledge with the theoretical aspects of the operation. Whenever possible, we align our planning with their standard onboard procedures to ensure a smooth and efficient execution.

Can you mention a recent project where our services made a crucial difference?

As part of a stability assessment project for a research vessel, Saltwater was asked to establish a reliable stability baseline. Over the past years, numerous conversions had been carried out on board this vessel, many of which were poorly documented. One of the crew members even described the vessel's stability as "black magic." Clearly, this situation was far from ideal. By performing an inclination test, we were able to establish a new baseline for the vessel's stability calculations, providing the crew with a ship they could trust.

What sets Saltwater apart from other marine engineering firms?

What sets us apart is our hands-on approach. At Saltwater, we go on board to see and understand the situation directly. This ensures our solutions are not just theoretical, but practical, efficient, and tailored to real-world conditions.



**Are you facing a challenge?
Get in touch with one of our consultants**

Partner up with Saltwater

Everything Is Possible



Saltwater provides customized engineering solutions for the naval and offshore industry. Understanding your challenges enables us to deliver practical, quality products and clever solutions.

Mission

Our mission at Saltwater is to engineer and develop maritime solutions that reduce the environmental impact and support a low carbon footprint. We are committed to provide innovative and efficient engineering services that meet the needs of our clients while guaranteeing safety and quality.

Vision

At Saltwater, our vision is to be a leading force in the maritime engineering industry, striving for positive change through socially responsible practices. We envision a future where our engineering solutions help to create a healthier and more sustainable world. We are committed to ship conversions and new vessel designs, encouraging a culture of young innovators and collaborating with our partners and clients to achieve our shared goals.

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