






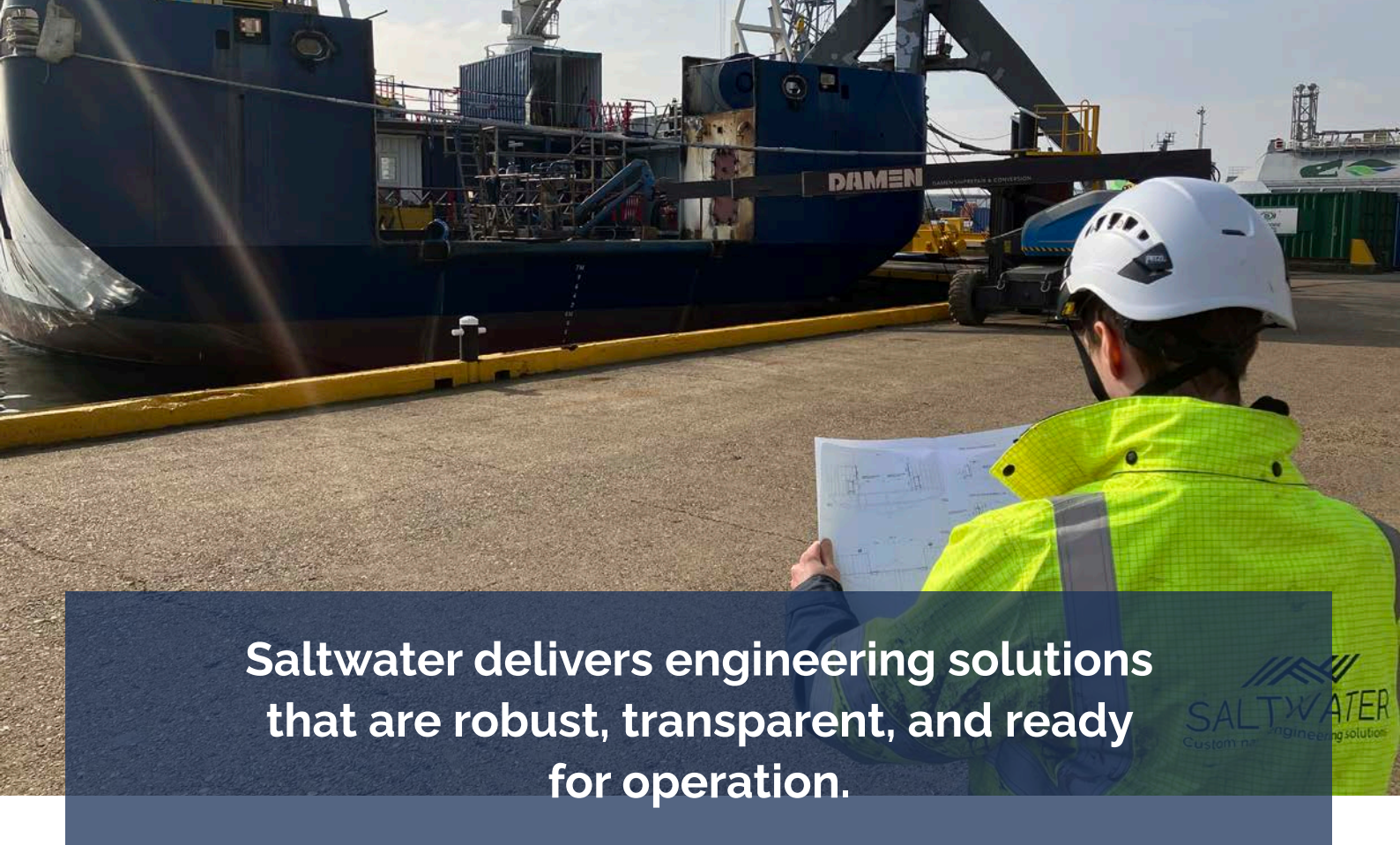
## Our field of expertise

# Equipment Design

Saltwater Engineering designs offshore and maritime equipment built for real operational conditions, from lifting and salvage systems to structural deck equipment.

## What sets us apart?

-  Engineered for demanding offshore environments
-  Practical engineering with strong attention to detail
-  Focus on safety, durability, and reliable performance
-  Efficient fabrication, installation, and operation
-  Seamless integration into marine operations



**Saltwater delivers engineering solutions that are robust, transparent, and ready for operation.**

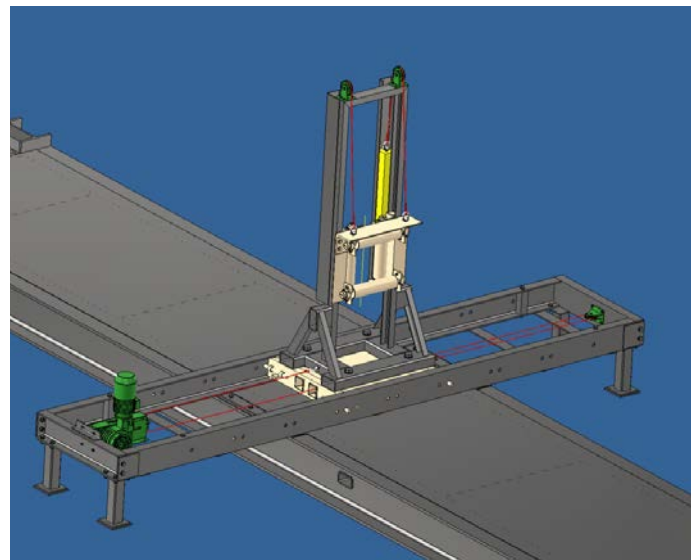


Offshore and maritime equipment operates in some of the most demanding environments in the world. Limited space, high loads, and harsh weather conditions leave no room for error. Equipment must perform reliably at all times, while ensuring safe and efficient operation within complex offshore systems.

In practice, this means that equipment design goes far beyond basic structural calculations. It requires a deep understanding of real operational conditions, installation constraints, and long-term performance under demanding use. Poorly designed equipment can lead to inefficiencies, safety risks, and costly modifications during construction or operation.

At Saltwater Engineering, we design equipment with a strong focus on real-world application. Our engineers combine practical experience with detailed analysis to develop solutions that are robust, functional, and built to perform in demanding offshore environments. From lifting equipment and salvage systems to structural solutions such as A-frames, davits, and deck-mounted equipment, every design is tailored to its operational context.

By considering fabrication, installation, and operational use from the early design stages, we ensure that our solutions are not only technically sound, but also efficient to build and easy to operate. This results in equipment that integrates seamlessly into offshore and maritime operations and delivers safe, reliable performance when it matters most.



## FROM A-FRAMES TO Z: FULL-SCOPE ENGINEERING FOR OFFSHORE LIFTING SYSTEMS

For Geoquip Marine, a new A-frame was required for installation on board the *Silvretta*, designed to support offshore lifting operations with a Safe Working Load (SWL) of 30 tonnes. Positioned at the stern, the system had to be integrated within the existing vessel structure, requiring local modifications to the shelter deck and bulwark.

The challenge was not only to design the A-frame itself, but to ensure a seamless fit with the vessel, its structural behaviour, and operational use. Building on Geoquip's extensive operational experience, we worked in close collaboration throughout the process.

### Full engineering scope and project support

Within this project, Saltwater carried out a broad scope of work. We performed FEM analyses to verify the structural strength of both the A-frame and the deck. In addition, we developed construction drawings, along with all required outfitting drawings for items such as stairs, platforms, and railings.

We also prepared demolition drawings, as well as drawings for reinstating the structure after removing existing components. This included modifications such as relocating doors, bollards, and stairs.

Based on a 3D scan, we verified whether the deck is sufficiently level for the installation of the foundation. In addition, we developed a load test arrangement and the corresponding test protocol in close collaboration with Geoquip.

During the construction phase, Saltwater also provided construction support, working closely with the yard to address questions and to effectively implement any changes arising during execution.



### Supporting safe and reliable offshore operations

These projects demonstrate how Saltwater Engineering supports offshore operations throughout the full lifecycle of complex lifting systems. Our work focuses on ensuring that structural integrity, operational requirements, and safety margins are aligned. By combining detailed structural analysis, practical engineering solutions, and close collaboration with all stakeholders, we help our clients adapt their equipment to changing demands with confidence.



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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