Beyond the Sea

"Make effective, universal and essential kite traction for vessels of all sizes"

The company

- Beyond the Sea's team is currently composed by 42 members.

- We work closely with several partners, which are all experts in their field: Kley France, Porcher, Cousin, ADV propulse, Ecole Polytechnique, … ;

- We currently market 2 products: **SeaKite** and **LibertyKite.**

- More than 180 boats equipped worldwide with one of our LibertyKite product.

- We develop our SeaKite product step by step and are marketing the 25 and 50 m² system (up to 5 tons of traction), 2 boats are already equipped with SeaKite and 2 more will be equipped within the next 6 months (Le Forbin from Geogas et le Jason from Les Abeilles.

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LibertyKite is a self-stable kite wing, extremely easy to implement, intended for towing boats from 4 meters in 10 knots of wind, and allows navigation in case of engine failure, dismasting and damage, but also to reduce fuel consumption and increase the autonomy of the boat.

Already marketed in 4 sizes: 10, 20, 40 and 80 m², LibertyKite is present worldwide on more than 160 boats (small yachts, offshore racing, catamarans, etc.).

Beyond the Sea by Yves Parlier created the **SeaKite,** a complete automatic kite traction system, environmentally friendly.

Indeed, it consists of a kite, a launch mast, a return plate, electronic sensors, a KiteBox (winches and autopilot) and a human-machine interface.

All this system offer fuel savings and allow the boat to reduce drastically its carbon footprint.

Connected to the vessel by its lines, **SeaKite** can be piloted automatically and fly hovering or in dynamic depending on the wanted traction force. The kite can be used alone or in addition to another mode of propulsion.

The system adapts to all types of boats.

Break Power SeaKite®

Dynamic

Static

Bird

Flag
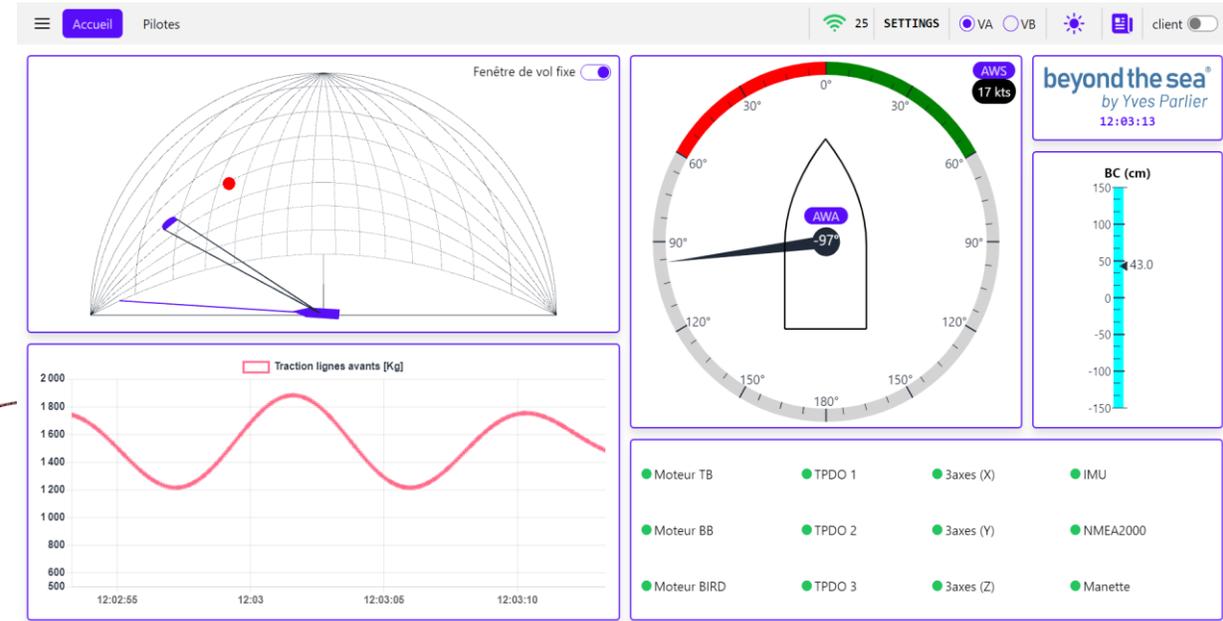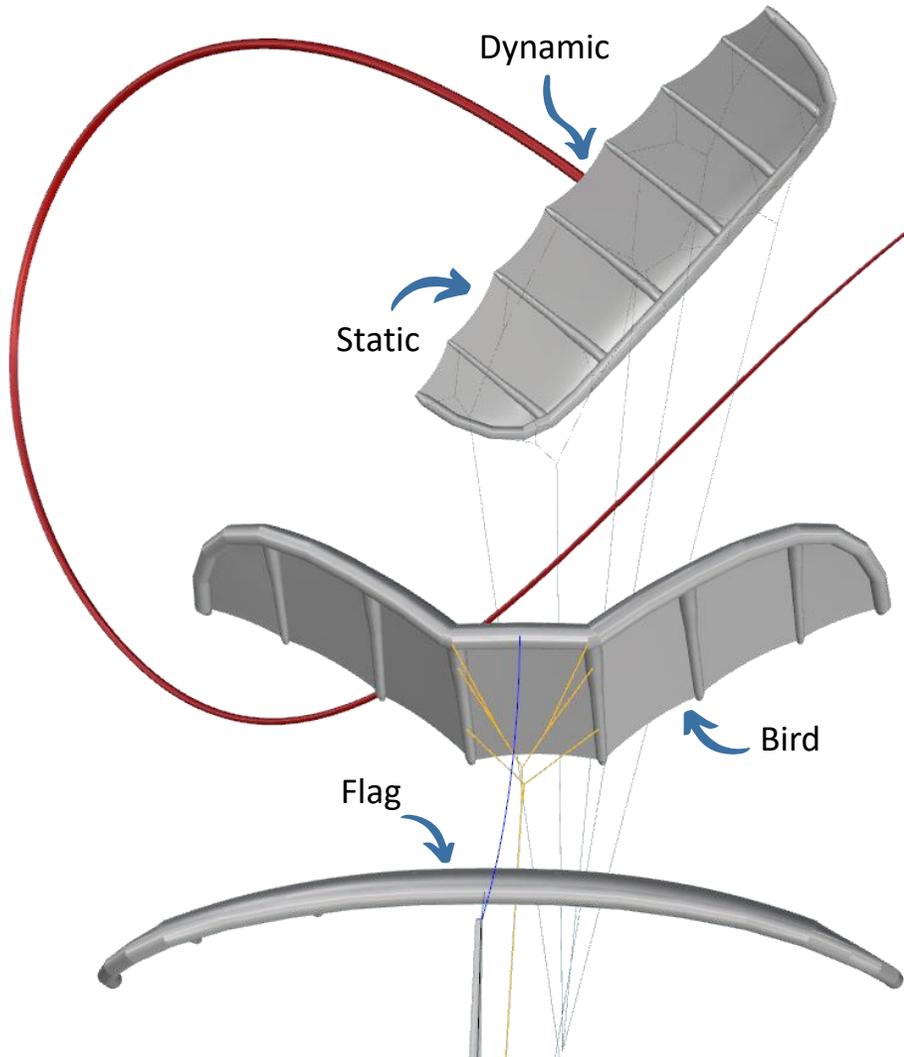
4 types of flights:

- **DYNAMIC FLIGHT** : the kite is positioned in the direction of the wind and describes 8, the traction is maximum.
- **STATIC FLIGHT** : the kite is perpendicular to the wind, the traction is medium.
- **BIRD MODE** : the wing has almost no more aerodynamic performance, but is self-stable, it is the safety mode. This mode is used for safe launch and recovery of the kite.
- **FLAG MODE**: the kite is tangent to the wind flow at the top of the mast and doesn't have any power.

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Roadmap

Today	S2 2024-2025	2027 – 2028
25 m² and 50 m²	100 m² and 200 m²	400 m² - 800 m²
10 m to 40 m	24 m to 150 m	> 150 m

Performance study

Aerodynamic force prediction program + Hydrodynamic study + Weather routing

Propulsive force vs True Wind Angle (TWA) from 0 to 180° for different True Wind Speed (TWS) for a 400 m². Vship = 12 knots

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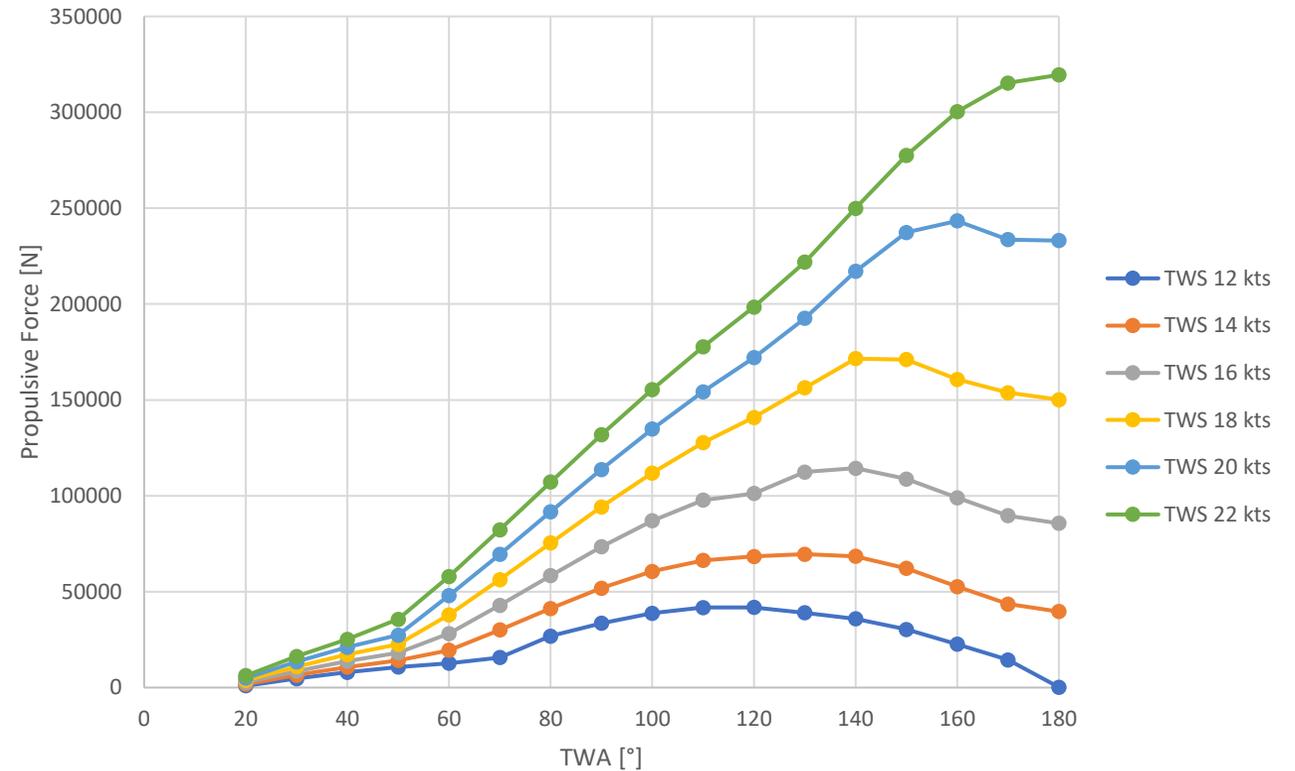
SeaKite system Overview

SeaKite® system

1/ Kite

2/ Forward lines

3/ Rear lines

4/ Bird line

5/ Textile Shackle

6/ Launch mast

7/ Anemometer

8/ KiteBox

9/ Traction plate

10/ ECU

11/ Controller

12/ HMI
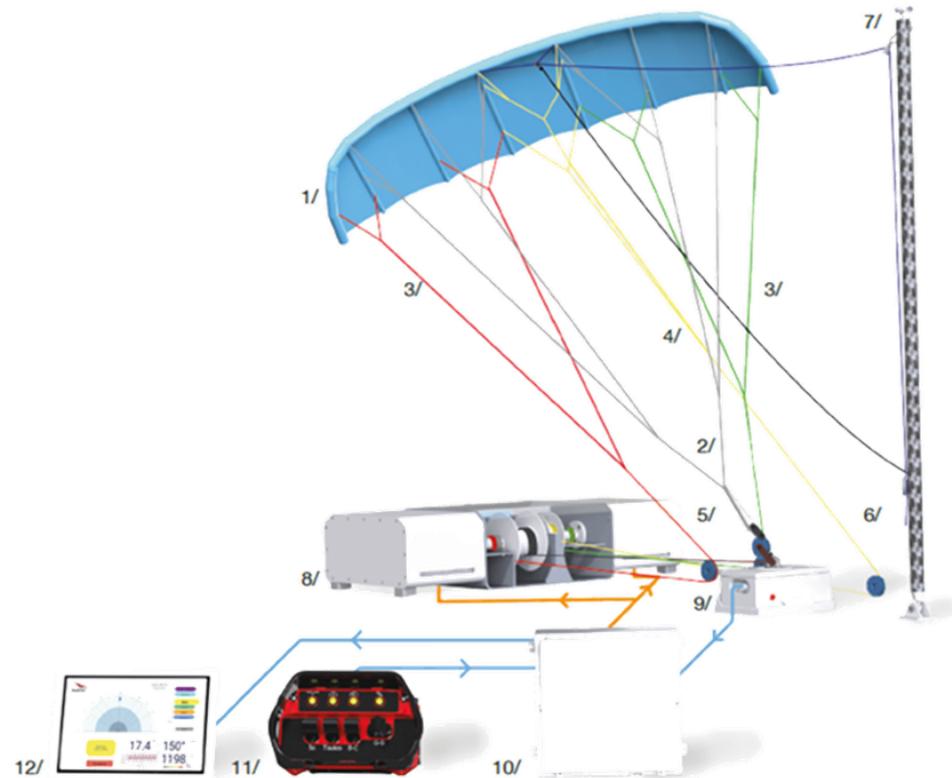
Concept :

- Kitebox → Winches

- Return Plate → 80 % of traction

- Mast → No structure, to prevent the kite from being in the trubulences

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Current system

- Two systems are currently installed onboard ships : the 25 et the 50 m².

Deo Juvante

Le SeaKite

Circa 24m

Yacht

KB 25 m²
Kite de 25 m²
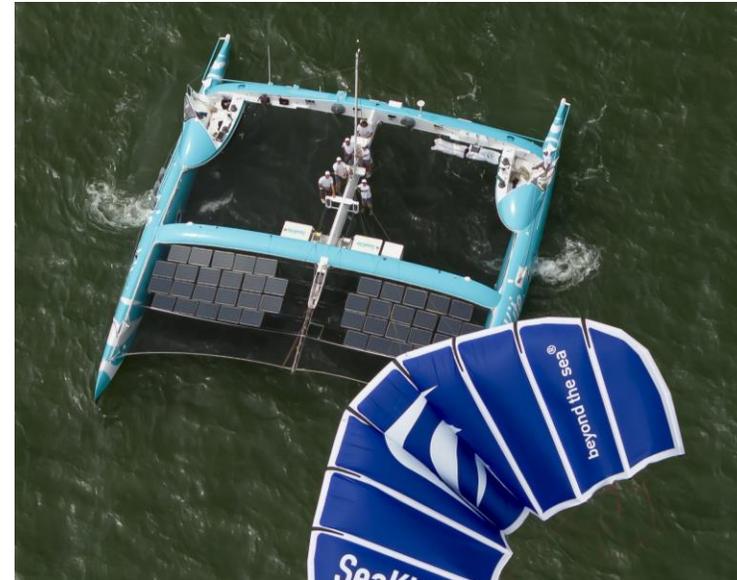
Demonstrator catamaran

KB 50 m²

25 & 50 m2 kites

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Current system – Deo Juvante

Launching mast

Traction plate
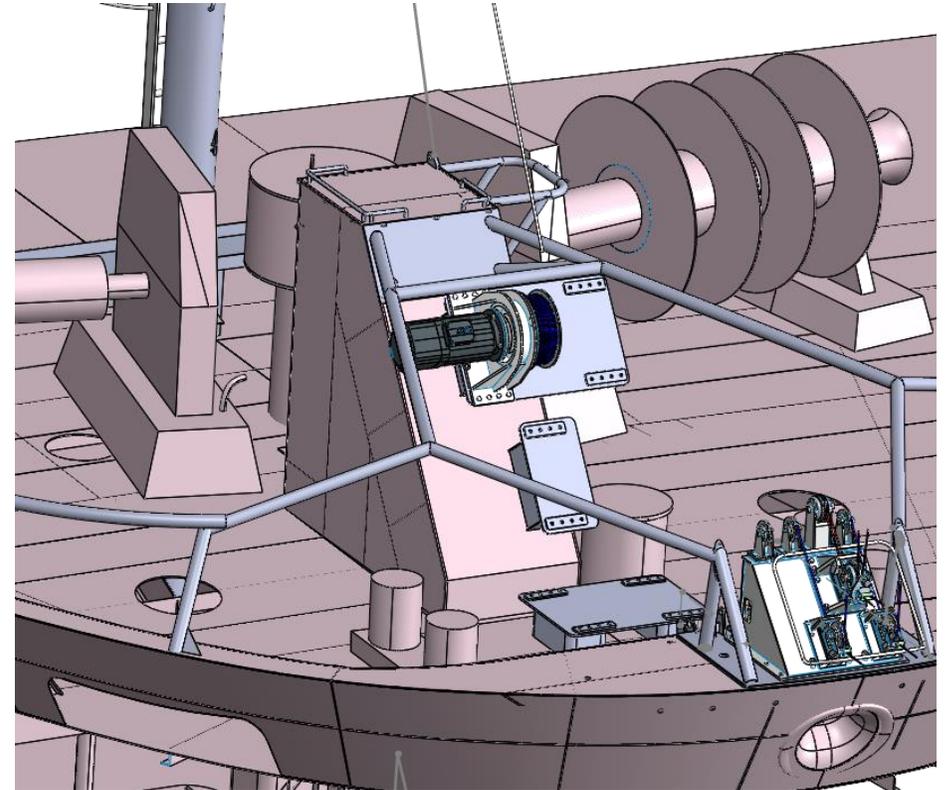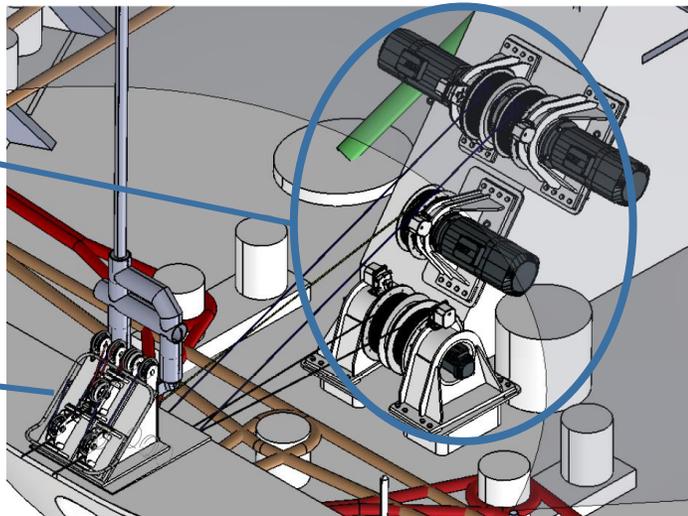
Fairleads

Kitebox

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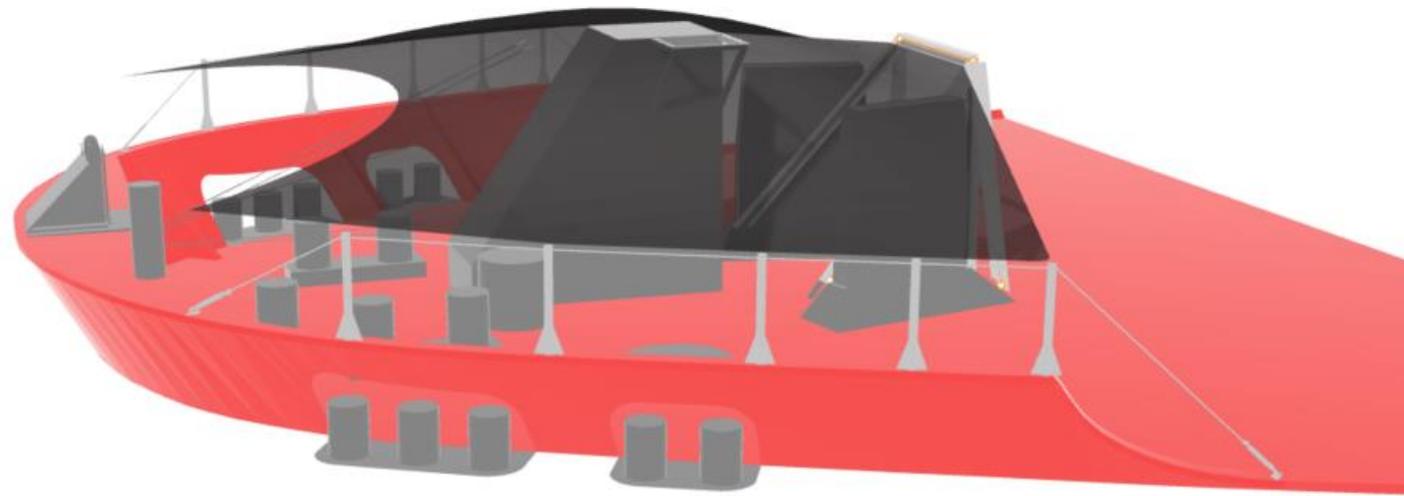*by Yves Parlier*
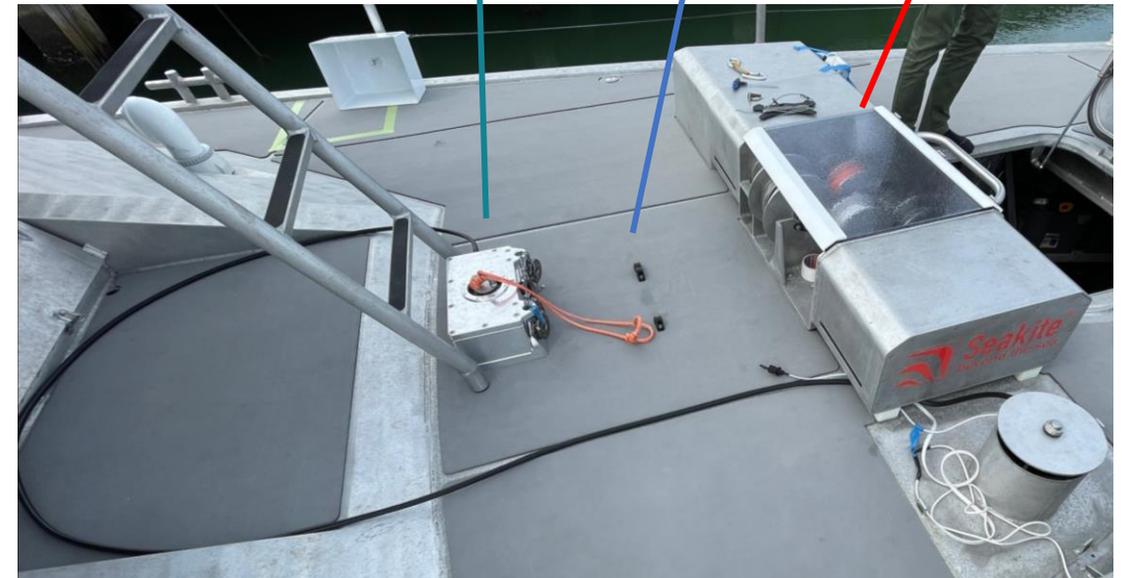
Forbin General Arrangement
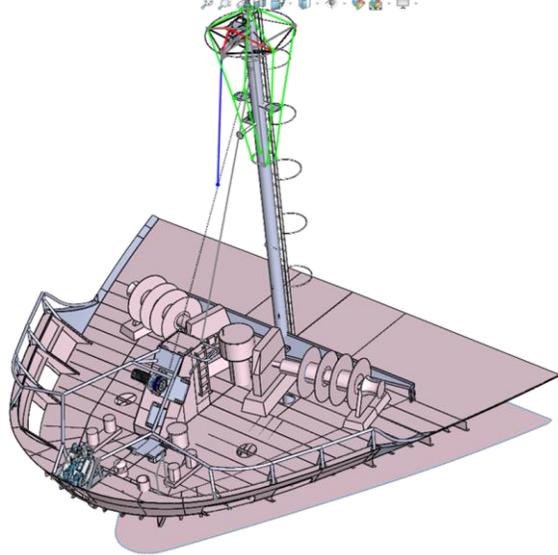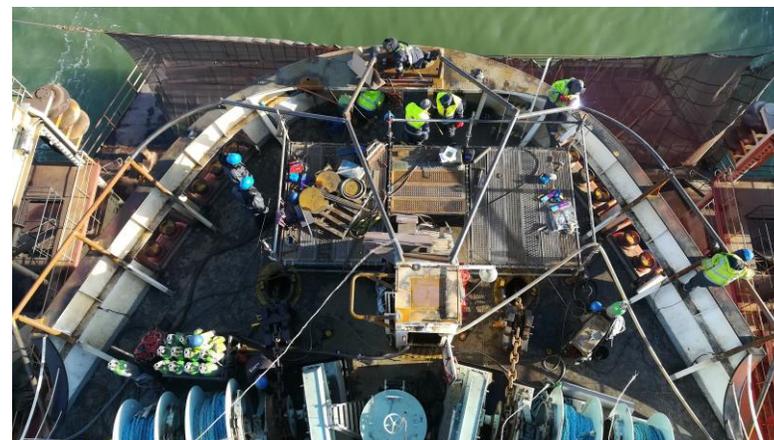

Kitebox

Return Plate
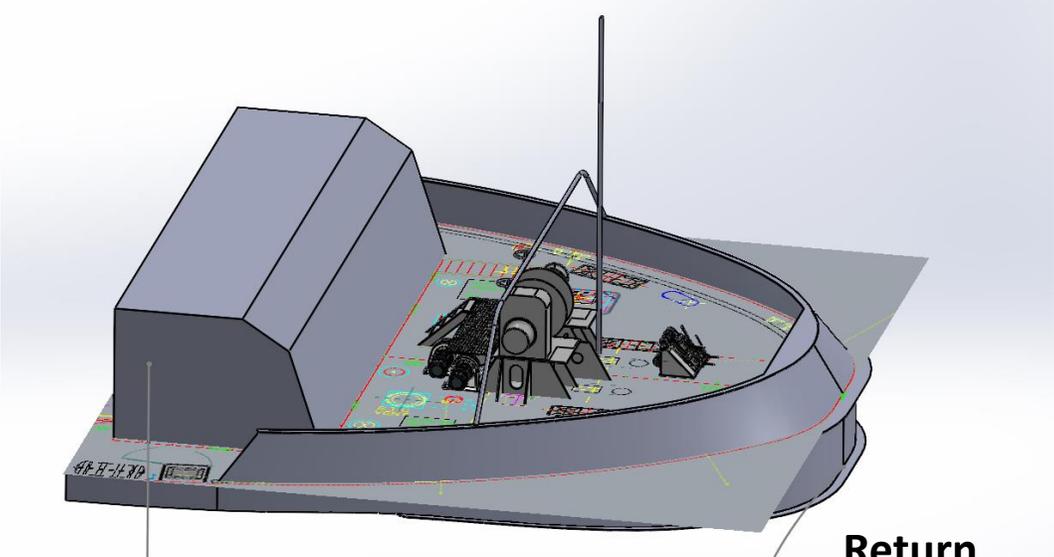
Forbin - Safety net

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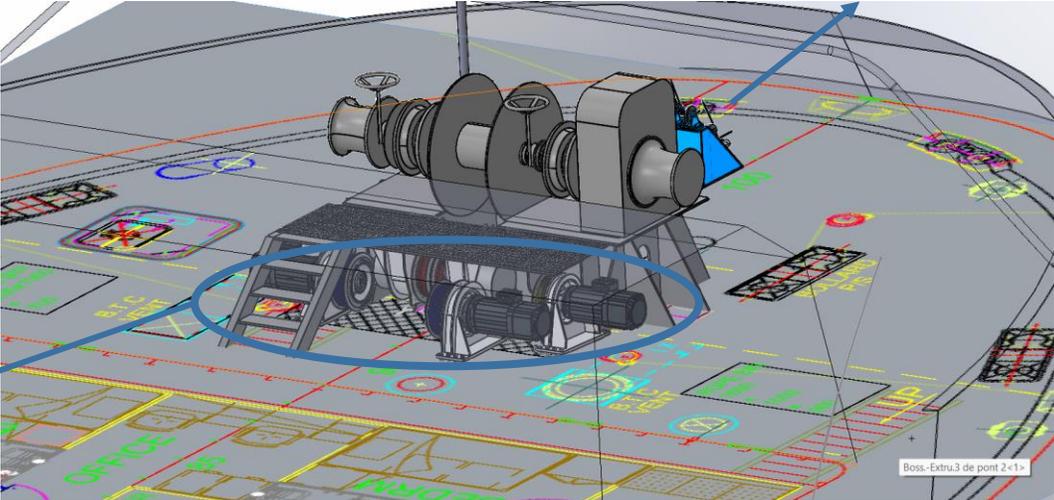
Forbin – Installation

- The vessel has been made « SeaKite friendly » during its dry dock in January 2024
    - Technical stop in Vlissingen
    - Reinforcement and welded interfaces for the traction plate, winches and mast
    - Protection arches for existing equipment and for the net installation
    - Electrical and hydraulic wiring

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Jason General Arrangement

Return Plate

Kitebox

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Thank you

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