GLO Marine

RETROFITS

# Installation of two BWTS units of 1000m³ onboard a Semi-Sub Barge performed in Gabon

**CLIENT** DIXSTONE NETHERLANDS

**YEAR** 2024

**PLATFORM TYPE**

Semi-Submersible Barge

**CLASS**

INSB

**SOW**

3D scan, Feasibility, Engineering & Class Approval, Installation, Commissioning and Water Sampling

**2**

BWTS INSTALLED OF 1000M3/H EACH

**1**

DAY FOR 3D SURVEYS & PUMP ROOM SCANS

**2**

PIPE SPOOLS REMOVED DURING THE WHOLE INSTALLATION PROCESS

CLIENT CONTEXT

## Complex BWTS installation need

Dixstone Netherlands aimed to install a ballast treatment system on the semi-submersible barge Karaveg, a project that presented significant challenges due to the barge's ballast water pumps capacity.

The complexity of this task required careful planning and precision to ensure the system would function effectively and safely.

From the outset, the project was about making the right decisions and finding the most suitable solutions.

THE CHALLENGE

## Implementing a tailored BWTS solution

This project involved detailed assessments of the barge's structure, understanding the specific requirements for the ballast system, and selecting the appropriate technology to meet those needs. The goal was to enhance the barge's stability and operational efficiency while adhering to industry standards and regulations.
After conducting the feasibility study, we decided, together with the owner, to install two treatment systems to ensure the efficient operation of the barge Karaveg. Ballast water treatment systems were installed in pump room, distributed one in each side, portside and starboard. We had one team on-site for 48 days to handle the installation of the two BWTS.

Our team worked closely with the client throughout the process, ensuring clear communication and effective problem-solving.

The project highlighted the importance of strategic decision-making and the implementation of tailored solutions to overcome technical obstacles and achieve project goals.

THE WORK TO BE DONE

## Project phases

- 3D laser scanning & Survey
- Feasibility study
- Engineering & class approval
- Procurement and Prefabrication
- Installation Supervision
- Commissioning
- Water Sampling

# Involvement of GLO Marine throughout the project stages

## 01. 3D Scanning & Survey

Dedicated field service team deployed to remote location in Port Gentil in Gabon where the semi-submersible barge Karaveg was and performed 3D scans of pump room along with the survey in just 1 day.

## 02. Feasibility Study

Advanced feasibility study and troubleshooting to determine the best cost and time effective solutions in order to minimize impact on existing structures. We decided, together with the owner, to install two systems to ensure the efficient operation of the barge Karaveg. One system was installed on the starboard side and one on the port side.

## 03. Basic Design & Class Approval

This project involves basic design engineering for a ballast water treatment system, developed in close coordination with the vendor (BIO-SEA). The collaborative approach ensured that the design met all necessary standards, resulting in a smooth approval process with no comments from the Classification Society.

## 04. Detail Design

This project entails a 3D detail design of piping arrangements and equipment foundations for a ballast water treatment system. The design accommodates heavy equipment with robust foundations integrated into the ship's structure with minimal impact. The large piping, necessary for high ballast water capacity, is strategically arranged to minimize disruption to the existing ship piping system, thereby reducing costs.

## 05. Installation Supervision

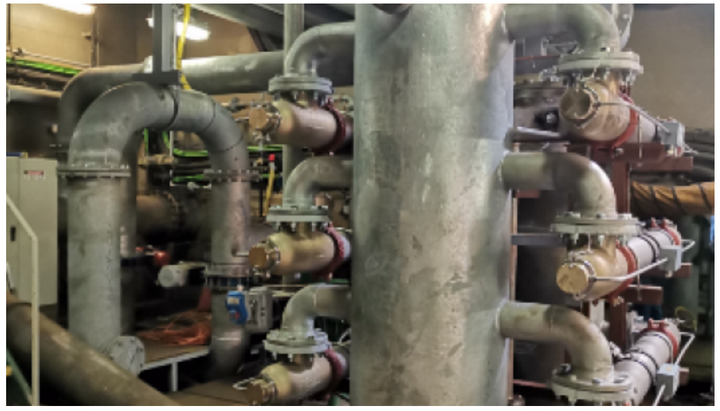
Our dedicated Project Manager meticulously planned the installation process, which was scheduled to be completed over a 48-day window. Each day was mapped out with clear Key Performance Indicators (KPIs) to ensure that every aspect of the project stayed on track. The project plan was then handed over to our on-board Installation Supervisor, who took charge of leading the yard's team of workers. Throughout the installation, our Installation Supervisor provided daily updates on the actual progress made, comparing it against the forecasted schedule. These updates were shared with the client to maintain transparency and clarity, allowing for a clear understanding of the project's status at all times. Thanks to careful planning, strong collaboration, and a focus on safety, the installation was successfully completed within the designated timeframe.

# The outcomes

## Final results

- Cost savings from efficient planning & project management
- No time lost
- Pipe and foundation prefabrication in 10-14 days, challenge due to vessel schedule and close installation date
- Only two pipe spools were removed during the whole installation process.
- Best engineering solution for optimized installation process
- 2 BWTS installed on one ship
- Peace of mind during the whole process – very good communication and status control

2 x 1000 cubic meters ballast water treatment system inside of a semi-sub barge.



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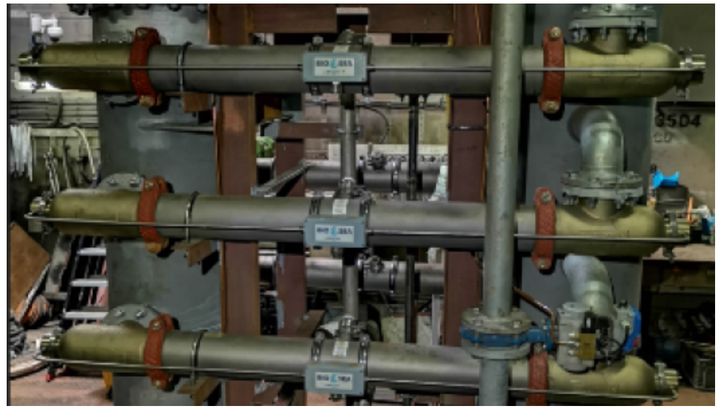

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