

Retrofitting Offshore Wastewater Treatment Plants: A Case Study in Offshore Operations

At G&O Bioreactors, we specialize in designing bioreactors that treat wastewater biologically, ensuring operations that protect marine ecosystems from untreated wastewater. This case study explores how we provided a leading offshore operator with a tailored wastewater treatment solution, ensuring compliance and operational efficiency.

The Customer Challenge: Replacement for Compliance and Capacity

A major offshore energy company required a replacement for their existing offshore wastewater treatment system. Their primary goals were to meet stringent effluent requirements and increase system capacity to support a growing crew size. By achieving these objectives, they aimed to enhance operational efficiency, ensure regulatory compliance, and support a more robust workforce onboard.

G&O Solution: Flexibility and Compliance in Action

To address their needs, we delivered a tailored solution emphasizing:

Our approach to system design is highly adaptable, making it possible to execute large-scale projects that would otherwise be unfeasible. Standard solutions were not an option due to the unique physical constraints of the installation site. Instead, our team developed a custom solution:

- Scalable Designs: Systems tailored to fit exact specifications.
- Innovative Thinking: Creative problem-solving for complex installations.
- Customer Commitment: As one team member noted, “We are small enough to take on challenges and large enough to succeed with them.”

Modularity: A Building-Block Approach

Retrofit projects like this one often involve tight physical spaces and existing infrastructure. Our modular design approach overcame these challenges by:

- Designing smaller, adaptable modules that could be assembled onsite, minimizing downtime and disruption to ongoing operations.
- Ensuring seamless integration into existing systems, reducing the need for extensive structural modifications.
- Simplifying logistics while maintaining performance, leading to faster project execution and cost savings for the customer.



Engineering and Documentation Excellence

Each retrofit project demands extensive engineering and precise documentation:

- Customized Solutions: Designing systems that fit around existing piping and structures.
- Detailed Processes: Every project involves a drawing-intensive process that essentially becomes a new development task.
- Regulatory Compliance: Ensuring adherence to environmental regulations such as DNV type-approval and Green Passport standards.

According to our engineering team, “Each project involves a drawing-intensive process, which essentially becomes a new development task each time.”

Comprehensive Service and Support

We back our cutting-edge bioreactor systems with robust 24/7 professional service, ensuring our customers achieve maximum reliability and cost-effectiveness. Our global support network offers assistance through direct contact and local partners worldwide, ensuring quick response times and minimized downtime. Genuine G&O spare parts come with a 12-month warranty, reducing long-term costs and guaranteeing the durability of replacements. Additionally, expert maintenance through our authorised service partners ensures optimal performance, extends equipment lifespan and maintains consistent operation standards.




Results: A Sustainable Solution

This project highlights the strength of G&O's solutions for offshore wastewater treatment. By combining flexible designs, modularity, and top-tier engineering, we delivered a system that:

- Meets strict environmental regulations.
- Supports increased crew capacity.
- Protects marine ecosystems.

At G&O Bioreactors, we continue to push boundaries, ensuring our bioreactors perform efficiently in the most demanding environments. If you're seeking an innovative, sustainable solution for wastewater treatment, we're ready to help. Contact us today to learn more about how we can support your operations

Contact G&O Bioreactors to learn more

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