

Reels & Drums

Equinor Bacalhau Phase 1 Field Development Project

To design, manufacture, and test
drums for HFL jumper spooling
for use offshore

Enabling Cabling

Case study

sea-reelgood.com



Customer
Unitech /
Equinor

Location
Brazil,
Offshore

Delivery schedule
2022–2024

Total quantity
24 installation drums

summary

Design, Manufacturing, and Delivery of Steel Drums

The Bacalhau project is a joint venture between Equinor (40%, operator), ExxonMobil (40%) and Petrogal Brasil and Pré-sal Petróleo PPSA (20%). It is the first greenfield development in the Santos basin by an international operator in Brazil's pre-salt region. Bacalhau ultra-deepwater oil field is the first integrated low emissions subsea production system with subsea umbilicals, risers, and flowlines project in Brazil.

A customer of SEA, Unitech Offshore A/S were contracted to deliver the Bacalhau phase 1 subsea umbilical termination assembly, including 1 ¼" and 2" single line jumpers designed for gas lift. In 2022, SEA teamed-up with Unitech to design, manufacture, test, and deliver drums developed for HFL jumper spooling, ocean transport, and deployment in the field.





objective

Optimize drum design to provide lighter, cheaper, and a reliable solution

Key requirements:

- Build and deliver 24x 3900mm flange steel drums including cradles;
- Each drum to carry 2off HFL jumpers including termination heads;
- Review and optimize the existing Unitech design to meet the needs of all parties involved in the HLF delivery chain;
- Design drum interface to fit flying lead reel drive system;
- Lifting arrangement to fit lift riggings at multiple touch points;
- Verify drum design with Solidworks® stress analysis for all use scenarios;
- Provide a full MRB package;
- Safe delivery to client facility in Stord, Norway.

solution

Optimized reel design and fully executed project in-house

An account manager was assigned to support the customer through the entire project.

Our engineering and design department reviewed the original Unitech drum design and were able to optimize the design and provide a lighter option that met all of the technical requirements of the client.

As the design needs evolved, SEA demonstrated flexibility to modify the design to ultimately achieve client approval of the design. Final design drawings were provided to the client via our online REEL database.

Drum characteristics:

Product details

Single line jumpers (mm)

Weight (kg)

Jumper type

Length of jumper (m)

Drum details

Quantity of drums

Drum type

Flange diameter (mm)

Barrel diameter (mm)

Total width (mm)

Max load (ton)

Surface treatment

Dimensions

OD 47.4 mm & OD 68 mm

3000 kg each, 6000 kg on drum

HFL Assembly

80 - 207 m on drum

Dimensions

24

Steel S355JR

3900

3100 for cable / 1750 for termination unit

2600

6

According to ISO 12944:2018
(C5 - very high corrosivity)

results

Delivered a high-quality solution with lower CO₂ emissions

SEA and Unitech achieved a 10% steel reduction compared to the original design without compromising on product quality or safety.

The lighter design resulted in a win-win solution for Unitech and SEA with a tangible reduction in CO₂e emissions that also helped contribute to

Equinor's low carbon emissions target for the Bacalhau project. SEA delivered high-quality REEL GOOD drums on schedule and within budget, bolstering client satisfaction.

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contact us for cost effective solutions
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