HYDRAULIC TUG WINCHES CONSTANT TENSION SYSTEM FOR AN OFFSHORE CRANE

**BACKGROUND**

This equipment has been built for the Castoro II, multi-purpose vessel fleet performing pipelay and offshore construction of platforms, STARTER teams have designed and produced a tugging system for the main crane for a leading provider of services to the oil and gas industry, focusing on difficult activities in deepwater and remote areas.

**OBJECTIVES**

Installation of 4 winches, equipped with dedicated hydraulic power units on the main crane of 1,100 tons of capacity for installing offshore platforms and offshore structure.

Design and implementation of the winch system that stabilizes loads of up to 800 tons, guiding and placing them on the platform, together with the centralized control.

**CHALLENGES**

Technical requirements and specifications requesting a winch winding speed of 30m per minute, the setup of a system of constant tension counteracting the effect of roll, previously unavailable on a vessel of this type.
STARTER SOLUTION

Involvement at very early stage of STARTER project teams to define, jointly with the customer team, the specifications and technical aspects required for operation in an environment characterized by extreme climatic conditions.

A system of winches with a centralized control interface ensuring the highest level of control and security in such an environment.

RESULT

The equipment fully meets the technical requirements set forth in the specifications and replaces leased equipment previously rented each time that such operations were required.

The system consists of four ARGOS winches of 15,000 daN each, together with their hydraulic power unit operating in an environment characterized by extreme climatic conditions (temperature, maximum salinity and humidity).

STARTER proposed load tests at an early stage to test and fine tune the main winch functions and performed static and dynamic endurance tests for several hours.

TECHNICAL SPECIFICATIONS:

Application: Tugger winches with constant tension mode.

Effort: 15 000 daN - first layer - static: 27 000 daN.

Speed: 30 m/mn.

Wire rope capacity: 250 m Ø 38 mm.