

## SEMI SUBMERSIBLE ACCOMODATION VESSEL

OUR CLIENT KEPPEL SHIPYARD Ltd

OPERATORS FLOATEL INTERNATIONAL Ltd



Photo of Floatel No.1

**DESCRIPTION OF THE PROJECT**

Novenco's Offshore division secured another large order from Keppel FELS Ltd in Singapore for delivering the HVAC systems to a FLOATEL, which includes an accommodation capacity for 500 persons, complete with full recreational facilities.

The floatel will be delivered from Keppel to Floatel International in the second quarter of 2010, and is being built to meet the most stringent rules and regulations for worldwide operation including the Norwegian North Sea sector.

The vessel's large payload and deck area, combined with dual cranes make it ideal for construction support during new construction and maintenance activities or for decommissioning of offshore oil and gas installations.

In addition to an eight point mooring system, the floatel will be the first to be equipped with DP3 (Dynamic Positioning 3) capabilities, resulting in a safer, environmentally friendly, and more optimal and reliable unit. The new floatel will be the industry's first in the North Sea in more than 20 years.

**CHALLENGES**

This type of project creates many challenges for the HVAC contractor.

The major problem to overcome was the very restricted space for the HVAC systems, not least the small plant rooms and lack of ventilation shafts.

The sound requirement in the cabins of 35 dba for ventilation meant finding space for addition sound attenuators in already crowded ductwork systems, use of heat recovery wheels meant

that additional ducts had to be routed back to the plant rooms and the difficult locations of the HVAC rooms in the lower and tween decks, placed in a high structural stress area, resulted in restricted penetrations allowances.

The demanding design criteria of -20/ +35 deg/85%RH to meet the North sea requirements, resulted in the need for very large chillers, again giving additional problems due to restricted space. The above places an extreme demand on the HVAC contractor and without the many years experience and expertise Novenco have in supplying ventilation systems to Offshore platforms, together with Novenco's ability to find solutions to solve unforeseen challenges as they arise, this project would not have been possible.

**SCOPE OF WORK**

Novenco's scope of work for this project was a complete HVAC turnkey contract, from detail design to final commissioning.

Novenco's main Offshore division, situated in Oslo Norway took overall responsibility for the overall management of the project including the detail system design and engineering, whilst their offices in Singapore looked after the installation works. Equipment supply includes all parts of the Air conditioning and ventilation systems, including refrigeration and provisional stores cooling.

The local HVAC control systems was also part of Novenco's scope

A more detailed description of Novenco's scope of work is enclosed below.

SCOPE OF SUPPLY:

**ACCOMMODATION AREA:**

- 21 inlet louvers in Aluminium
- 17 Air Handling units
- 21 local HVAC control panels
- 8 DX Split Unit with air cooled condenser
- 16 axial and centrifugal fans
- 105 fire dampers with electrical actuator
- 3 Chilled water units with fresh water cooled condensers
- 2 Provision plant cooling units (2x100%)
- 6 Self contained local cooling units with sea water cooled condensers
- 1 exhaust Galley hood with washing and fire fighting system
- 5 standard exhaust Galley hood
- 22 outlet louvers
- 3 spot extract systems



**DECK BOX AREA:**

- 1 lot Balancing dampers
- 1 lot Pressure relief dampers
- 1 lot Cabin units
- 1 lot Supply diffusers
- 1 lot Extract grilles and extract valves
- 1 lot Temperature sensors
- 1 lot 3 way control valves for chilled water
- 1 lot Chilled water flow transmitters
- 1 lot square and circular ducting incl insulation



Installation of HVAC plant including electrical installation for HVAC.

