

Customer Odense Steel Ship Yard, Denmark



DESCRIPTION OF THE PROJECT

The Absalon class are a flexible support vessels with exchangeable weapon systems. The vessels are fitted with a 900 m² flexible deck. The ships can perform a number of international tasks, including transportation of personnel and equipment and act as command platform for land, air, and sea operations. The ships has a mine laying capacity and it also has the capacity to carry out humanitarian operations as a hospital ship. The ships are fitted with a 900 square meter flexible deck to perform in different operations and has a roll-on-roll-off (RO/RO) capacity aft.

DATA:

Length: 137 m

Beam: 19.5 m

Draught: 6.3 m

Displacement: 6.300 t

Speed: 23 knots

Class: DNV

Complement: 100 men, cabins for 169 men.

Total lodging capacity up til 300 men.

The ships are designed for worldwide operation.

SCOPE

For this project Novenco has supplied Heating, Ventilation and Air Conditioning (HVAC), NBC filtering, NBC pre wetting and Fire Fighting systems.

CHALLENGES

The overall requirements were narrow space for the equipment, low noise level, and shock requirements.

- For the supply and exhaust air terminals, the sound levels for the accommodation is up to passenger ship standards.
- The installation of equipment at a non foreseen space such as the NBC filtering system for re-loading room. The air conditioning systems for the ammo magazines require a solution to be integrated in the hull structure.
- All shock requirements have to be fulfilled either by test or calculation by finite elements method.
- Design of fixed FF system for maximum safety with minimum risk for crew.

SCOPE OF SUPPLY:**SYSTEMS**

- NBC pre wetting system
- Water mist Fire fighting systems
- HVAC system
- NBC filtering systems
- Air duct system
- Control system

PRODUCTS

- Air handling units
- Centrifugal and Axial Flow Fans
- Cabin units
- Bleeding valves
- Unit heaters
- Control panels
- Nozzles & pump units
- NBC units

SOLUTION / SUPPLIED SYSTEM

For the accommodation and control rooms a single pipe high pressure re-heat air conditioning and ventilation system, with surplus air to flex deck was selected.

By using this low sound, high pressure system the duct size was reduced to an absolute minimum.

The Flex deck ventilation system is with spark proof fans and explosion proof motors. The ventilation system for machinery spaces was designed to minimize IR signature.

The accommodation is air conditioned by two customized ZCR air handling units, and a number of exhaust fans.

For the engine rooms and Heli hangar our fire fighting system with low pressure fresh water mist was selected to give maximum crew safety. The low pressure water mist design was selected with focus on minimum maintenance at low cost.

