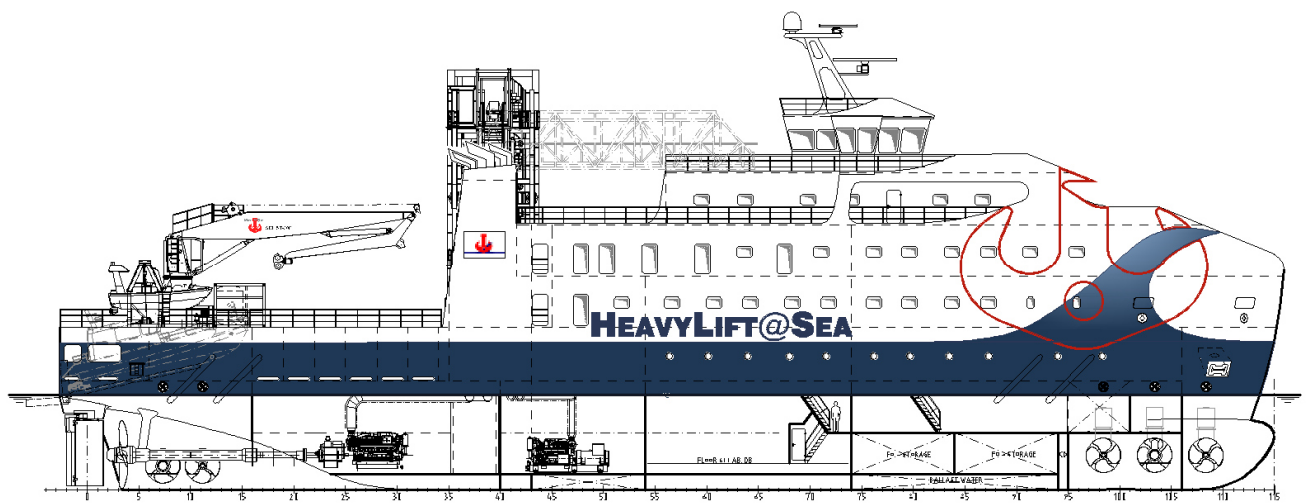


OAV 2436

OFFSHORE ASSISTANCE VESSEL



HeavyLift@Sea GmbH
Offshore Solutions and Ship Design
Veritaskai 2
21079 Hamburg
Germany
Phone +49 (0) 40 30 38 326 40
Mail info@heavyliftatsea.de
Web www.heavyliftatsea.de

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General

The vessel is designed for service and support operations in Offshore windfarms. The main operational case will be accommodation, preparation and support of technicians for offshore wind energy plants (WEP). Therefore the vessel shall be equipped with

1. Accommodation space for 60 persons
2. Cargo area for spare parts and tools
3. Heave compensated gangway system for safe access to the WEP
4. Offshore crane for handling spare parts and tools to the WEP
5. DP-system of class 2
6. Roll reduction tank system
7. Daughter craft with redundant propulsion in a stern garage of the ship

The layout of the ship is designed for optimal workflow for the technicians and the cargo.

Main Dimension

Length over all	abt.	71,40 m
Length between perpendiculars	abt.	69,00 m
Breadth moulded	abt.	16,70 m
Depth to main deck	abt.	6,30 m
Depth to working deck	abt.	9,30 m
Draught		
max.	abt.	5,60 m
design	abt.	5,50 m
Air draught (crane arm in rest)	abt.	31,90 m

Deadweight / Speed

Deadweight @ max. draught	abt.	1.800 t
Trial speed @ design draught	abt.	13,00 kn
Gross tonnage	abt.	3.500

Cargo hold / Packing Area / Deck Area

One cargo hold with a capacity of up to 6 TEU and with direct access to the covered packing area and the lift is arranged. The container can be reached from 2 sides.

The cargo hold is covered with 2 pontoon hatch covers.

Dimensions:

Cargo hold:	abt.	10,80 x 15,20 m
Packing area:	abt.	120 m ²
Deck area / Deck load	abt.	300 m ² @ 5 t/m ²

Transfer systems

The vessel is equipped with several possibilities to transfer the service technicians from the OAV to the offshore structures. All these systems are workable up to a minimum wave height of $H_s = 2.50\text{m}$.

These transfer systems are:

Gangway

The motion compensated gangway is arranged on portside. In combination with installed lift cargo up to a weight of 300 kg can be transferred via pallet truck between the OAV and the offshore structures, without using the crane.

Daughter Craft

The daughter craft is arranged in a stern hangar for a safe boarding of service technicians and cargo up to 500 kg. This arrangement allows a safe launching and recovering of the Daughter Craft even in worse weather conditions.

Boatlanding

For the use of external vessels (e.g. crew transfer vessels) the OAV is equipped with an additional boatlanding for a safe entering of the OAV.

Crane

The main crane will be arranged portside and will be of knuckle boom type. The operation is possible in harbour and offshore condition. The operation in offshore condition is possible up to a significant wave height of $H_s = 2.50\text{m}$.

Load steps:

Harbour condition:	abt.	25 tons @ 20 m
Offshore condition:	abt.	5 tons @ 20 m

Tank Capacities

Fuel oil	abt.	450 m ³
Fresh water	abt.	380 m ³
Ballast water	abt.	1.000 m ³
Sewage	abt.	200 m ³

Machinery / Propulsion

Main engine	abt.	2 x 1.400 kW
Auxiliary engine	abt.	3 x 1.200 kW
Emergency and Harbour Diesel	abt.	1 x 370 kW
Propeller		2 x controllable pitch propeller
Rudder		2 x high lift flap rudder
Bowthruster	abt.	3 x 1.000 kW
Sternthruster	abt.	2 x 800 kW

Dynamic Positioning System

The vessel will be equipped with a dynamic positioning system according to class notation of DPYNPOS AUT-R.

The system will consist of:

2 DP operator control work stations

Environmental sensors:

- 3 x Gyrocompass
- 2 x Windsensor
- 2 x Motion Reference Unit

Position reference sensors:

- 2 x independent DGPS
- 1 x Laser Range and Bearing System
- 1 x Laser Radar system

There is an interface to the motion compensated gangway.

Operational modes:

- Manual / Joystick mode

- Remote center of rotation
- Automatic heading for minimum thrust
- Hold position mode
- Hold area mode
- Standby (offline) mode
- Offline (internal) simulator
- Transit (pilot mode) low speed and high speed
- Hold relative mode

Accommodation

Total capacity of single cabins 60

Additional space for:

- Change rooms
- Offices and meeting rooms
- Cinema
- Fitness room
- Mess rooms

Class Notation

DNV  1A1 PASSENGER SHIP; CLEAN DESIGN; BIS; DYNPOS AUT-R; DK+(5); COMF-V(3)C(3); E0; NAUT-OC;