## Cadeler - Pacific Orca & Pacific Osprey

**General:**

The self-elevating and self-propelled vessels were designed for Cadeler A/S (former Swire Blue Ocean), Denmark, for installation of offshore wind turbines and support in the offshore oil & gas sector. The first of the two vessels was delivered from Samsung Geoje Shipyard in October 2012 and the second is expected to follow in the winter of 2013.

**Main Particulars:**

The vessels are equipped with six 105 m long truss-type legs and a high-speed rack-and-pinion jacking system. The long legs enable them to jack to a height of 17 m above the water on 60 m water depth, and thus elevated safely above the waves they can survive even the most severe storm conditions. Should 60 m water depth not be enough the legs can be lengthened by further 15 m. The 1,200 t work-around-leg crane is capable of installing 500 t heavy nacelles on top of turbine towers 120 m above the sea, and the 4300 m2 cargo deck has space for up to twelve 3.6 MW turbines. The relatively fine hull lines in the bow gives the vessels a good speed even in higher waves and with 4 stern thrusters, 2 bow thrusters + 2 drop-down thrusters and a DP-2 dynamic positioning system the vessels have state-of-the-art maneuverability. The accommodation holds 111 crew single cabins with private bathrooms as well as necessary crew facilities and offices. A heli-deck is fitted forward above the accommodation block for transfer of crew.

**Capacity:**

| | |
|---|---|
| Length o.a. | 160.90 m |
| Length p.p. | 155.60 m |
| Breadth | 49.00 m |
| Depth to main deck | 10.40 m |
| Draught, design. | 5.50 m |
| Draught, max. | 6.00 m |
| Deadweight for jacking | 8,400 t |

**Speed:**

| | |
|---|---|
| Service speed, 90 % MCR, 15 % S.M. | 13.50 knots |

**Machinery and Equipment:**

| | |
|---|---|
| Diesel electric | |
| Main generator sets | 8 x 2.8 MWe |
| Stern thrusters | 4 x 3.4 MW Compact Azipod |
| Bow thrusters | 2 x 2.2 MW retractable + 2 x 2.2 MW tunnel |

**Miscellaneous:**

| | |
|---|---|
| Capacity of main crane's main hoist | 1200 t @ 31 m (2x 600 t hooks) |
| Capacity of main crane's aux. hoist | 500 t @ 50 m |
| Capacity of aux. crane | 40 t @ 40m |
| Helicopter landing deck | D= 22 m @12.8 t |
| IMO number "Pacific Orca"/ "Pacific Osprey" | 9601326/9621704 |

**Scope of Work:**

Conceptual and Tender Design developed for the Owner, including:
General design and contract specification
Lines plan and supervision of towing tank and wind tunnel testing
Stability and lightweight calculation
Structural design
Layout of machinery spaces

**Ref. No.:**

KEH 07086 / 10073

KNUD E. HANSEN
SHIP DESIGN SINCE 1937