

Offshore support vessel / cable layer

Pierre de Fermat

Pioneering vessel optimized for the clients' new needs



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Orange Marine new building, the offshore support vessel / cable ship Pierre de Fermat, was delivered in November 2014. The contract for construction was signed in August 2012 with VARD. The design - CLV O1 - is the result of close co-operation between VARD design in Aalesund in Norway and Orange Marine. The hull was built at the VARD Braila yard in Romania and the vessel was completed at the builder's Brattvaag shipyard in Norway.

High technology design

Intended for subsea operation and cable installations, the new unit has numerous special features, including low resistance hull lines designed for speed and low fuel consumption. The bow and hull designs help to reduce power consumption by 18 to 32%.

Eco friendly

The vessel is environmentally friendly, enabling high reduction of harmful emissions, waste storage solutions, water ballast treatment, eco-subsea coating and shore power supply.

Performance and precision

The DP2 powerful propulsion is securing high levels of sea keeping capabilities, making it possible to turn the ship over 180 degrees with 2 knots of current and 40 knots of wind without losing position. Passive stabilization tanks help preventing the ship from rolling.

Optimized power

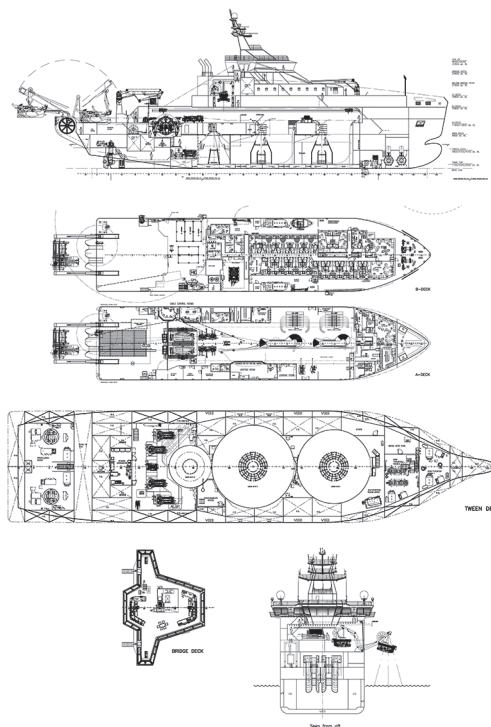
Power is provided by four generator sets, developing 2,250 kWe each. Three generators out of the four available are sufficient to cope with the highest propulsion power demands, ensuring high reliability. Transit at economic speed with two engines efficiently running will optimize fuel consumption.

Multiservice equipment

The ship is equipped with a 40 T A-frame located at the aft station, fitted with a winch system operating to 4,000 m.

A 300 kW work class ROV Hector, is stored in a hangar. The ROV operates down to 2,000 m to survey, trench the seafloor up to 1.5 m. With its two manipulators, Hector can carry the full set of intervention tasks.

The ship is also designed with two main cable tanks and one spare tank offering 2,300 t of cable storage capacity. Accommodation for 80 people, meets high standard comfort requirements. 360 degree panoramic windows at wheelhouse offer excellent visibility.



Main particulars

Registration

- **Classification:** Bureau Veritas
- **Flag:** French
- **Entering service:** mid 2014
- **Notations:** AUT - IMS, ICE CLASS IC, COMF-NOISE 2, CONF-VIB 3, DPS-2/FMEA

Dimensions

- **Length overall:** 100.1 m
- **Length between PP:** 86.8 m
- **Breadth moulded:** 21.5 m
- **Depth from main deck:** 8.8 m
- **Maximum draught:** 7.1 m
- **Deadweight at max draught:** 4000 t



Capacities

- **Deck area:** A-Deck 380 m² @ 10 t/m²
B-Deck 150 m² @ 10 t/m² 50 m² @ 5 t/m²
 - **Tank # 1:** dia 14,25 m x h 7,7m
 - **Tank # 2:** dia 16 m x h 7,7m
 - **Tank # 3:** dia 8,2 m x H 7,3m
- overall cable load capacity: 2,300 t

Accommodations

- **Accommodations for:** 80 Persons
- **Cabins:** 70 single + 5 double
each cabin has direct access to private toilet (shower, WC, wash basin) and daylight.

Performance & machinery

Propulsion

- **Diesel electric:** CAT 4 x 2,250 kW + CAT Harbour 1 x 715 kW
- **Main propulsion:** 2 x 2,500 kW FP azimuth thrusters
- **Bow thrusters:** 2 x 880 kW FP tunnel + 1 x 880 kW FP azimuth

Speed and consumption

- **Maximum Speed:** 15.0 knots @ 31 t
- **Service Speed:** 12.0 knots @ 14 t
- **Endurance:** 45 days
- **Bollard pull:** 80 t
- **Intact max wind sustainable:** 36 knots at heading 100
- **DP Control:** DP Class-II, Convertteam DPS21
- **Reference system:** 3 x DGPS, 1 x HPR Sonardyne



Equipment

ROV Hector 7

- **Size:** L 5 x l 3.3 x h 2.1 m weight in air: 9 t
- **Max depth:** 2,000 m
- **Power installed:** 300 kW
- **Manipulators:** 2 x Schilling CONAN
- **Tools:** cutter Webtool and grippers 6T SWL
- **Cable tracking:** TSS 440 + TSS 350
- **Sonar / profiler:** SIMRAD MESOTECH
- **Tool with jetting nozzles:** 1.5 m burial capability
- **LARS:** SWL 13 T @ 5.5m SS6

Deck equipment

- **A-frame:** SWL 40 T @ 12 m SS5
- **Winch:** 65 T SWL tension compensated Tow 4,000m
- **Knuckle-boom crane:** 5 t @ 24 m
- **Provision crane:** 2 t @ 15 m
- **Work Boat:** Svendborg 7.5 m - B. Pull 2 t
- **Fast rescue craft:** Maritime Partner Weedo 600 echo-sounder 6,000 m / 10,000 m

Communication

- **Fleet Broadband:** 2 x FBB500
- **VSAT:** KU-Band interfaced with PABX and FBB
- **Video Network:** 32 cameras and 50 monitors
- **Inmarsat:** 2 x SAT C

