

Orange Marine cable ship

# Sophie Germain

Specializing in the maintenance of submarine cables



The New Vessel will be the first vessel of its generation designed specifically for the repair of different types of submarine cables, either fiber optic telecommunications cables or Wind Farms Intra-array power cables.

She will be fitted with:

- a last generation ROV (Remotely Operated Vehicle) stored in an hangar
- an Offshore crane
- fiber optic cable lay equipment and Power cable lay spread including a carrousel
- high standard accommodations

The vessel is specially designed with a high focus on station keeping performances and low fuel consumption.

She is environmental friendly in accordance with CLEANSHIP requirements and equipped with several solutions enabling CO2 emission saving:

#### Hybrid power generation

Combination between Generating Set (GS) and batteries enabling to operate safely on 1 GS during cable work. In the event of a sudden stop of this GS, the batteries take over before return to normal conditions.

#### Optimized specific consumption

The 2 main GSs are semi-fast engines which have the best specific consumption on the market.

#### Power step

The 4 GSs have different powers of 2x1920kW and 2x990kW. The automatic combination of these GSs enables to optimize the fuel consumption depending of the situation of the vessel and the weather conditions.

#### Main thrusters of Azipod technology

The electric motor is located in the thruster at the propeller. No angle transmission and maximum efficiency.

#### Hull designed with a thin buoyancy shape

100m x 18.8m. A hull optimized for a repair cable loading and a transit speed of 12.5 knots.

#### On Shore power supply

During stand-by periods at her base, the vessel is connected to shore power supplied primarily by photovoltaic panels.

#### Pollution reduction of emissions

Low sulfur diesel (Diesel Oil LowSulfur <0.1%) used, regardless of the geographical location of the vessels.

Nitrogen oxides will be reduced by installing a system comparable to a catalytic converter.  
Reduction of rejects and possibility of total retention of treated water for 7 days.



Orange  
Marine



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# Main characteristics

## Dimensions

- LOA: 100.00 m
- Moulded Breadth: 18.80 m
- Length between Perpendiculars: 82m
- Max draft: 5.7m
- Deadweight at max Draft: 1800 T
- Displacement: TBC

## General

- Classification Society: B.V.
- Classification Notation:

HULL MACH, Special service, Cable laying vessel, Unrestricted navigation, AUT-UMS, AM/AT-R

AVM-DPS, ALM, ALM-MR, ALM-SUBSEA, ALP

COMF-NOISE 2, COMF-VIB 3

ICE CLASS IC

INWATERSURVEY

GREEN PASSPORT EU

CLEANSHIP

NDO-7 days

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## Performance

- Maximum speed: 14.5 knts
- Cruise speed: 12.5 knts

## Liquid capacities

- Fuel: 600 m3
- Potable water: 515 m3
- Ballast: 1750 m3

## Accommodation

- Officers: 34+2x2 Berths
- Owner's Representatives: 4 Berths
- Petty Officers & Crew: 24+2x2 (+1x6 for protection personnel)
- Total accommodation: 67 cabins, 76 persons on board
- Hospital: 1
- Lounges: 3
- Mess Room: 1
- Gymnasium: 1

## Propulsion

- Type Diesel Electric:
- Fuel Used: Marine DO Low Sulphur (max 0.1%)
- Main engines: 2x1920 kW + 2x990kW, Diesel / 2x900 RPM + 2x1800 RPM
- Main Propulsion: Azipod DO98A, 2x1700 KW
- Bow Thrusters: 2 tunnels, 1000 KW

## Dynamic positioning

- DP System: DP2
- Class: IMO
- Environmental Design: Current: 1.5 knts, Wind: 25 knts
- Reference Systems: DGPS, HPR SONARDYNE

## Cable machinery

- Sheaves: 1+1x2 / 4m, Bearing: Yes
- Drum Cable Engines: 2/4m, 25 Tons, Fleeting knives7

## Main crane

- Offshore Crane: 10t/20m

## Cable capacity

- Cable Tanks:  
Tank 1 - Forward Tank  
Diameter: 8.8m  
Tonne/tank: 500  
Tank 2 - Carousel  
Diameter: 12m  
Tonne/tank: 800  
Tank 3 - Recovery Tank  
Diameter: 5.7m

