Leonardo da Vinci

THE MOST ADVANCED CABLE LAYING VESSEL IN THE WORLD

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**DESCRIPTION**

Leonardo da Vinci is a DP3 ship built for the most challenging worldwide cable installation works. With her two carousels of 10,000 tons and 7,000 tons load capacity and her capstan able to sustain a maximum tension of 100 tons, the vessel is equipped to conduct the deepest power cable lay up to 3,000 m water depth. Moreover, she can also be used on any kind of offshore projects - from shallow to deep waters - including cable burial with a wide range of ROV vehicles. The vessel is designed with an operation endurance of 90 days and max speed above 14 knots. The accommodation for 120 persons is designed to offer comfort, ample working spaces and recreational areas for all personnel, including fully equipped gym, auditorium, game room, dayroom and officers lounge.

**BURIAL TOOLS**

Leonardo da Vinci can be equipped with Prysmian’s Hydroplow, Heavy Duty Plough and Seamole, to carry out simultaneous lay and burial or post lay burial operations, dependent upon project requirements. The vessel can also be a platform for state-of-the-art jet trenching ROVs and Mass Flow Excavator tools.
VESSELS KEY FEATURES

**Classification:**
C-HULL MACH, Cable Laying Ship, Dynapos AM/AT RS, HELIDECK, COMF-NOISE CREW A, COMF-VIB CREW C, COMF-AIR, PMS, GREEN PLUS, AUT-UMS, FATIGUELIFE (30), MANOVR, CARGO HANDLING, DANGEROUS GOODS, SPS, Battery Powered (2x750 kWh).

**Cable Laying capabilities:**
- Bundled cable laying.
- Simultaneous laying and burial.
- Cable jointing facilities in a covered area of about 240 m² (30x8 m).
- Designed for laying power cables up to 3,000 m water depth.

**DP capabilities:**
- DP3 ADV.
- ERN Star 99.99.99.98 (to be confirmed).

**Hybrid power system:**
- 6 Diesel Generators + 2 Energy Storage Systems.

**Propulsion system:**
- 3 x Aft Azipod®.
- 2 x Forward Retractable Azimuth Thrusters.
- 2 x Bow Tunnel Thrusters.

**Carousels:**
- Aft 10,000 tons load capacity.
- Fwd 7,000 tons load capacity.
- Max combined load above 13,000 tons.

**Cranage:**
- 100 tons AHC offshore crane.
- 20 tons offshore crane.

**A-frame assembly:**
- 80 t A-frame with 180 t AHC towing winch.
- Two enclosed hangars for work class ROV’s.
- Helideck certified for take-off and landing of Sikorsky S92 type (18 pax) and AW 101.
PRINCIPLE DIMENSIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Measurement</th>
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<tbody>
<tr>
<td>Length overall</td>
<td>171 m</td>
</tr>
<tr>
<td>Breadth moulded</td>
<td>34 m</td>
</tr>
<tr>
<td>Summer draught moulded</td>
<td>8.5 m</td>
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<tr>
<td>Deadweight</td>
<td>18,400 tons</td>
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<tr>
<td>Max displacement</td>
<td>36,400 tons</td>
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<tr>
<td>Gross Tonnage</td>
<td>27,500 tons</td>
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<tr>
<td>Bollard Pull</td>
<td>200 tons</td>
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CABLE OPERATIONS KEY FEATURES

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Capacity</td>
<td>10,000 tons, 7,000 tons</td>
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<tr>
<td>Core Diameter</td>
<td>6 m</td>
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<tr>
<td>Outer Diameter</td>
<td>Aft carousel 28 m, Fwd carousel 25 m</td>
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<tr>
<td>Tank Height</td>
<td>7 m</td>
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CAROUSEL LOADING TOWER

- 5 m MBR Pick up Arm with motorised cable engine

STATIC TANK

- Static tank for Fibre Optic cables 350 tons capacity

STARBOARD LAYING LINE

- DDHB machine: Caterpillar “pads” type 5 tons and 3 tons at 35 m/min (laying mode)
- Capstan: 6 m diameter and 100 tons max pulling tension (at max speed of 35 m/min or 1.1 knots in laying mode)
- Stern sheave: 6 m diameter fitted with dynamometer

PORTSIDE LAYING LINE

- Linear machine: Caterpillar “pads” type 25 tons and 3 tons at 35 m/min (laying mode)
- Stern sheave: 6 m diameter fitted with dynamometer