Petrofac JSD6000 is a revolutionary high-end offshore services vessel with a unique capability to service multiple aspects of deep, ultra-deep and shallow water EPCI projects. Fitted with state of the art facilities, the Petrofac JSD6000 is also setting a new environmental benchmark for the international offshore industry.

At a glance:

- **Length**: 215.9 m
- **Breadth**: 49.0 m
- **5,000 mT revolving crane**
- **900 mT S-lay (1,050 mT optional)**
- **2,000 mT J-lay via moonpool**
High-end capability in deep and ultra-deepwater SURF, pipelay and heavy lift

**General specifications**

<table>
<thead>
<tr>
<th>Type</th>
<th>Deepwater derrick lay vessel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>ULSTEIN SOC 5000 design customised by Petrofac</td>
</tr>
<tr>
<td>Owner</td>
<td>Petrofac</td>
</tr>
<tr>
<td>Class</td>
<td>Lloyd’s Register</td>
</tr>
<tr>
<td>Ocean transit speed</td>
<td>12.0 knots</td>
</tr>
<tr>
<td>Positioning system</td>
<td>DP3</td>
</tr>
<tr>
<td>Propulsion azimuthing thrusters</td>
<td>2 x 6,500 kW</td>
</tr>
<tr>
<td>Aft azimuthing thrusters (retractable)</td>
<td>3 x 3,900 kW</td>
</tr>
<tr>
<td>Tunnel thrusters</td>
<td>2 x 2,500 kW</td>
</tr>
<tr>
<td>Main generator sets</td>
<td>6 x 9,600 kW</td>
</tr>
<tr>
<td>Emergency generator</td>
<td>1 x 1,500 kW</td>
</tr>
</tbody>
</table>

**Principal characteristics**

- Length overall: 215.9 m
- Length between p.p: 197.6 m
- Beam: 49.0 m
- Depth to main deck (moulded): 22.4 m
- Draught (operational): 10.9 m
- Total available thrust: 40.8 MW
- Total available power: 59.1 MW
- Accommodation: 399 persons

**Mission equipment**

- Main crane: 5,000 mt @ 45 m (recoiling)
- Deepwater lowering: 1,000 mt @ 450 m WD
- Deck handling crane: 3 x 25 mt @ 35 m
  - 1 x 25 mt @ 15 m
  - 1 x 35 mt @ 12 m
- (DML, 20 mt @ 2,000 m WD with AHC)

**S-Lay**

- Double joint: up to 60 inch OD
- Tension capacity: 4 x 225 mt dynamic, 1 x 150 mt (optional)
- Slinger length: from 94 m to 190 m

**J-Lay**

- Quadruple joints: up to 36 inch OD
- Holding & abandoning capacity: 2,000 mt
- Laying capacity: 1,500 mt dynamic
- Maximum water depth: 3,800 m
- Micropool: 25.2 x 9.8 m

**Winches**

- AAB winches: 2 x 750 mt lowering (2 x 600 mt recovering)
- Active heave compensator for AAB winches: 1 x 600 mt dynamic
- Combined lowering capacity: 1,500 mt dynamic
- Davits: 6 x 100 mt (optional)
- Maximum water depth: 3,800 m

The main crane and the J-Lay tower can both be lowered into a bridge passing position with an overall airdraft of 57.8 m.

**Working environment**

- Mechanical ventilation providing increased rates of fresh air to improve indoor air quality in living and working areas
- Accommodation with elevated ceilings of 2.4 metres, designed for comfort with regard to noise levels, light, vibrations and temperature

**Waste management**

- Food waste management system including macerating feeding stations, a vacuum unit and collecting tanks capable of holding food for up to two weeks
- Trash compactors facilitating onshore disposal of holding rubbish, filtering, welding and scraps, and preventing waste to avoid usage and disposal of plastic bottles

**Energy efficiency**

- Frequency converters for equipment such as pumps, compressors, fans etc. that contribute to energy savings by varying the running speeds of motors
- LED-type flood lights to reduce power consumption and heat emissions
- Heat recovery system from the exhaust gas and cylinder jacket water for heating of freshwater production from evaporators and chilled water production from the absorption chillers
- Latest generation of ‘common rail’ type diesel engines and generators providing high output, low fuel consumption and reduced emissions of CO₂ and NOₓ
- Highly efficient selective catalytic reduction system integrated into the diesel generators to reduce NOₓ emissions by up to 90%

**Pollution prevention**

- Automated greasing system for critical equipment to reduce pollution on deck
- Bilge water holding tanks capable of storing bilge water for several weeks in areas where discharge is not allowed
- Rainwater collected from operational decks will be sampled through a monitoring system to allow for treatment in the bilge system
- Bilge water facilities including a centrifugal separation system set at five parts per million to provide highly efficient treatment
- Membrane bioreactor sewage treatment plants for on-shore facilities and additional ballast tanks to store treated sewage for up to 10 days
- Innovative, high-speed fuel recovery separator system designed to recover reusable fuel from heavy fuel oil and marine gas oil

**Market leading environmental features**

- At 215 metres, the vessel is longer than three 747 airplanes laid nose-to-tail. There is deck space of more than 4,000 square metres, and its double-deck feature means that the ship has a pipe storage load capacity of 20,000 metric tons – greater than any existing deep water vessels.

The JSD6000 can lay pipes in either J-lay or S-lay modes. In S-lay installation, pipe leaves the rear of the vessel horizontally as it moves forward, forming an ‘S’ in the water and guided by the rear ‘slinger’. J-Lay installation inserts pipe in an almost vertical position, pipe is lifted via the boat’s tower and only curves once, the reduced stress allowing J-lay to work in deeper water.

The best design practices are being used to minimise the ecological footprint of our vessel. Example areas include:

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