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# Seven Rio

## Vessel Info

*Full specification overleaf*

**Seven Rio** is a construction / flex-lay vessel capable of operating in water depths of up to 3,000m.

- Length 145.9m x breadth moulded 29.9m
- Service Speed 13.0 knots
- Special Purpose Ship Code Compliant
- Accommodation 120 persons
- 100t AHC crane
- 25t AHC crane
- 2x work-class ROVs

## Fast Facts

- Proven track record operating in water depths up to 3,000m in Brazil and US (Gulf of Mexico) for pre-salt area projects
- Work-class ROVs rated to 3,000m for pipelay and ROV support operations
- ECO Lloyds notation at design/service
- Vertical Lay System rated to 550t top tension capacity for flexible products and moonpool designed to hang off products (flexible and rigid) up to 600t load capacity



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subsea 7

## General Information

Classification	<b>Lloyds Register, Pipe Laying Vessel, Helicopter Landing Area, +100A1, WDL(10t/m<sup>2</sup> FR.15-49, 5t/m<sup>2</sup> FR.10-15 and FR.49-119), +IWS, ECO, +LMC, UMS, ICC, DP(AA), NAV1, IBS, CAC3, Shipright (SERS, BWMP(S), MPMS (CM), ThCM, IHM-EU+), EDD, LI.</b>
Flag State Authority Port of Registry:	<b>Brazil Government Rio de Janeiro</b>

## Principal Dimensions

Length Overall	<b>145.9m</b>
Breadth moulded	<b>29.9m</b>
Depth to maindeck	<b>13.0m</b>
Draught (operational)	<b>7.2m</b>
Draught (max)	<b>8.3m</b>
Deadweight (operational)	<b>14,207t</b>
Deadweight (max)	<b>12,760t</b>
Max displacement	<b>26,967t</b>
Gross Tonnage	<b>18,602t</b>
Net Tonnage	<b>5,580t</b>
Air draft (with TLS vertical)	<b>66.9m at 6.6m draught</b>
Air draft (with TLS inclined)	<b>47.4m at 6.6m draught</b>

## Main Deck

Deck strength	<b>10t/m<sup>2</sup> partially on aft deck, 5t/m<sup>2</sup> elsewhere</b>
Deck area	<b>1,200m<sup>2</sup> (approx)</b>

## Tank Capacities (100%)

Marine Gas Oil	<b>2,197m<sup>3</sup></b>
Potable Water	<b>998m<sup>3</sup></b>
Ballast Water	<b>4,696m<sup>3</sup></b>
Anti-Heel tanks	<b>1,525m<sup>3</sup></b>
Technical FW (in WB tanks)	<b>633m<sup>3</sup></b>

## Power and Propulsion

Service Speed	<b>13 knots (approx)</b>
Main Engines / Generators	<b>6x 3,840kW (Wartsila diesel electric)</b>
Propulsion (Wartsila)	<b>3x 2,950kW stern azimuth thrusters 2x 2,400kW retractable bow azimuth thrusters 2x 2,200kW bow tunnel thrusters</b>

## Vessel Speeds and Fuel Consumption

Maximum Speed	<b>13.5 knots</b>
Economic Speed	<b>10.0 knots</b>
Economic Speed Fuel Consumption	<b>34.8m<sup>3</sup>/day</b>

## DP Systems

DP Classification	<b>DP (AA) - Class II</b>
DP System	<b>KPOS DP22 dual redundancy</b>
Reference Systems	<b>3x DGNSSs (3x Veripos LD 900) 2x HiPAP 501 (with Hain) 1x Cyscan MK4 (1x Laser Units) 2x Radius 1000 (2x Radius Interrogators) 1x SceneScan (1x Laser Units) 3x MGCs (Kongsberg R3) 4x Wind Sensors (2x Gill US + 2x Mech)</b>
Environmental Sensors	

## Cranes

<b>MacGregor Offshore Knuckle Boom Crane</b>	
Main line (AHC)	<b>100t</b>
Whip line (man riding)	<b>10t</b>
<b>MacGregor Auxiliary Knuckle Boom Crane</b>	
Main line (AHC)	<b>25t</b>
Whip line (man riding)	<b>10t</b>
<b>HS Marine Service Crane on the TLS tower</b>	
Main line (man riding)	<b>25t</b>
<b>HS Marine Combined Knuckle Boom/Telescopic Stern Crane</b>	
Main line	<b>30t</b>
<b>TTS Stores / Moonpool Handling Knuckle Boom Crane</b>	
Main line	<b>5t</b>
<b>TTS Stores / Moonpool Handling Telescopic Boom Crane</b>	
Main line	<b>10t</b>

## ROV Systems

The vessel is fitted with two over side launched work-class Forum XLX-C ROVs rated to 3,000m.

## Helideck

D value	<b>22.2m</b>
T value	<b>12.8t</b>

The vessel is fitted with an approved and certified helideck suitable for Sikorsky S92 and Super Puma operations.

## Pipelay Systems

The vessel is fitted with two underdeck storage carousels, with a capacity for 2,500t and 1,500t of product. A vertical (tiltable) lay system (550t top tension capacity) is permanently installed for deployment of a range of flexible products with a diameter from 50 to 647.6mm. The lay tower can operate at up to 10° and is fitted with two tensioners, each of 275t capacity which can be retracted clear of the firing line, and with two wire centralisers. The system has two A&R winches, one 637t capacity with 3,500m wire and one 200t capacity with 3,000m wire. The moonpool is designed to hang off products up to 600t and is fitted with a mechanism to allow the product to be rotated under full load.

## Comms Systems

The vessel is fitted with an extensive communications system including a dual KU/C Band VSAT satellite communication system, WIFI entertainment system, 2x Inmarsat C and Inmarsat F systems.

## Accommodation

120 persons	
Single cabins (with dayroom)	<b>4</b>
Single cabins	<b>40</b>
Double cabins	<b>38</b>
Hospital (not included in total)	<b>3</b>



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