

Seven Rio

Construction/
Flex-lay

subsea 7



Seven Rio is a heavy construction 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
- Accommodation: 120 persons
- 100t AHC crane
- 25t AHC crane
- 2 x work-class ROVs
- Special Purpose Ship Code Compliant

General Information

Classification	Lloyds Register, +100A1, Pipe Laying Ship, Helicopter Landing Area, WDL(10t/ m2 Aft to Fr.120), *IWS, LI, ECO. LMC, UMS, OCC, DP(AA), NAV1, IBS, CAC3
Built	Merwede Shipyard, The Netherlands
Delivery	2015
Flag State Authority	Isle of Man Government

Dimensions

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

Manoeuvring and Propulsion Systems

Main Engines / Generators	6 x 3,840kW (Wartsila diesel electric)
Propulsion	3 x 2,950kW stern azimuth thrusters (Wartsila) 2 x 2,400kW retractable bow azimuth thrusters (Wartsila) 2 x 2,200kW bow tunnel thrusters (Wartsila)

Dynamic Positioning Systems

DP Classification	DP (AA) - Class II
DP System	KPOS DP22 dual redundancy
Reference Systems	3 x Veripos DGPS 2 x HiPAP 501

Speed / Consumptions

Service Speed	13 knots (approx)
---------------	-------------------

Tank Capacities (100%)

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

Cargo Deck

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

Communications Systems

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

Deck Cranes

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

ROV Systems

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

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.

Accommodation

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

Helideck

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

D value	22.2m
T value	12.8t