

Seven Borealis

7



Type:
Pipelay / Heavy Lift

Classification:
DnV Class plus NMD
Letter of Compliance,
for worldwide operations

The *Seven Borealis* is our state-of-the-art strategic enabler ideally suited to meeting the exacting requirements of today's ultra-deep and deepwater projects in the world's deepest and harshest environments.

- Length 182m x breadth 46m
- 600t tension S-lay up to 46-inch pipe diameter
- 937t top tension J-lay system up to 24-inch pipe diameter
- 2,800t onboard pipe storage
- Heave compensated 5,000t crane
- Accommodation for 399 persons
- 2 x workclass 3,000 rated ROVs

Seven Borealis

General Description

Type	Pipelay / Heavy Lift
Classification	DnV Class plus NMD Letter of Compliance, for worldwide operations
Notation	+ 1A1, Crane Vessel, DYNPOS AUTRO, Clean design, NAUT-AW, OPP-F, HELDK (SH), Dk⊕, E0, BIS
Call Sign	C6YG8
Flag	Bahamas
Year Built	Delivery 2012

Principal Dimensions

Length Overall (m)	182.2m
Breadth (m)	46.2m
Depth Main Deck (m)	16.1m
Operating Draft (m)	8.5m to 11.35m
Transit Speed (knots)	12 knots
Endurance (days)	45 days in transit with 220 persons 45 days on DP with 399 persons

DP System

DP Classification	K-POS DP Class 3
Reference Systems	3 x Gyros, 3 x MRU, 4 x wind sensors, 3 x DGPS, 2 x HiPAP, 1 x Radius, 1 x Taut Wire + interfaces for extra Taut Wire, 1 x Fanbeam, 2 x Seapath 320

Power and Propulsion

Main Engines/Generators	
Number	6
Type	Rolls-Royce B32:40 V12A 720 rpm diesel engines
Power (kW)	5,760kW

Emergency/Harbour Generator	
Number	1
Type	MTU, V12 4000 Series
Power (kW)	1,600kW

Thrusters for Propulsion and DP	
Number	2 x azimuth thrusters
Type	Rolls-Royce UUC 455 FP, underwater demountable
Power (kW)	5,500kW
Location	Stern

Thrusters for DP	
Number	4 x azimuth thrusters, vertically retractable
Type	Rolls-Royce UL 305 FP
Power (kW)	3,200kW
Location	3 at bow, 1 at stern
Number	1 x tunnel thruster
Type	Rolls-Royce TT 3,000 CP
Power (kW)	2,500kW
Location	Bow

Main Deck

Clear Deck Area (m ²)	730m ²
Deck Strength (t/m ²)	10t/m ²
Pipe Deck Storage Capacity	2,800t

Capacities

Fuel Oil	HFO/MDO: 3060m ³ , MDO: 3360m ³
Lubricating Oil (m ³)	64m ³
Fresh Water (m ³)	1,123m ³
Ballast Water (m ³)	20,600m ³
Technical Water (m ³)	700m ³

Accommodation

Berths (No.)	231 in single or double cabins or 405 in single / double / 4 x man cabins
Cabins (No.)	127

Helideck

Type	Aluminium - Suitable for S-92 NMD compliant
------	--

Cranes

Main Crane Capacity (mt)	5,000t (stability permitting)
Location	Main deck centreline aft
Manufacturer	Huisman Equipment BV
Dual Main Hoist, Revolving	4,000t at 40m radius 1,500t at 78m radius
Auxiliary Hoist (Subsea Hook)	1,200t at 70m radius, 4 falls 600t at 103m radius, 2 falls
Operating Water Depth (m)	6,000m - single fall
Active Heave Compensation	Auxiliary hoist only
Whip Line	Single fall: 55t at all radii Double fall: 110t at all radii
Main Crane Tugger Winches	4 x 45t pull. Constant tension up to 22t each
Main Crane Comments	Main block is splittable into two blocks/ hooks to allow jacket upending Three point lifts can be achieved using the two main blocks and the auxiliary block
Auxiliary Cranes	
Number	3
Capacity and Location	40t Dreggen knuckle boom on starboard side 40t Dreggen knuckle boom on port side Aft 36t Huisman PMOC on port side Fwd

Pipelaying Systems

Rigid S-lay:	
Max Tension (t)	600t dynamic
Tensioners (No. and type)	3 x Huisman BV vertical two track tensioners Variable speed electric drive motors
Pipe Range (inches)	4.5 - 46 inches with coating
Storage Capacity of Pipe (t)	4 x 700t SJs on starboard side deck Total 2,800t
Work Stations (No.)	11 single joint stations or 6 double joint stations
Stinger (m)	3 section stinger Stinger length 92.5m, radius 70 to 300m
Operating Water Depth (m)	20m - 3,000m
A&R Capacity (t)	600t traction winch, 200t CT drum winch
S-lay Comments	Steep S-lay system, up to 90 deg departure

Rigid J-lay:	
Max Tension (t)	750t static, 937t dynamic
Pipe Range (inches)	4-inch minimum, 24-inch maximum with coating (Friction Clamp), 36-inch with coating (Collar), 72-inch clearance for passing through inline tees, etc
Work Stations (No.)	2 work stations
Joint Type	WS1 for welding/NDT, WS2 for NDT/coating Double joint nominal length 24.6m, range 19.0m to 26.0m, 40t maximum weight
Operating Water Depth (m)	3,000m
A&R Capacity (t)	600t dynamic outside J-lay tower 360t dynamic insider J-lay tower
PLET Handling capacity	100t
J-lay Comments	Active gimbaling mode - gimbal max angle 15°. Tower can handle pipe catenary using either friction clamps or collar clamps
Outriggers	Portside provision for 1,000t hangoff Starboard side provision for 1,225t hangoff

Flexible lay:	Provision for future system installation
----------------------	--

ROV System

ROVs (No. and type)	2 x workclass ROVs, ACV type by Schilling
Operating Depth Rating (m)	3,000m with 1,500m long tether
ROV Comments	LARS: Techmal HF 135 using an electric Active Heave Compensation winch Umbilical winch: MacArtney MASH 34.4-3400