# **Deep Arctic**

Purpose-designed and built diving support and heavy construction vessel





take it further.



Vessel can be equipped on request with Vertical Lay System (as shown) and associated mobile equipment

The Deep Arctic is a purpose designed and built diving support and heavy construction vessel suitable for the demanding North Sea market. She is capable of working throughout the year in virtually all sea and weather conditions.

# Capabilities

Launched in 2009 the vessel is designed, constructed and certified for worldwide operations. The Deep Arctic provides services, which include saturation dive support for offshore construction and Inspection, Repair and Maintenance (IRM) operations.

The vessel is one of the most modern diving support vessels in the world thanks to its Hyperbaric Monitoring and Control System (HMCS), which is used to support the 24-man diving chamber complex. The vessel is designed with special emphasis on good sea-keeping abilities and excellent station-keeping performance. The Deep Arctic has low fuel consumption and features which comply with DNV CLEAN DESIGN environmental requirements.

#### Cranage

The main lifting facility is a heave compensated box boom crane, with a lifting capacity of 400 Te at a radius of 11 m (harbour lifts). The vessel also has a knuckle boom crane with a lifting capacity of 58 Te at 11 m radius.

Located at the dive workstation are two knuckle boom cranes with a lifting capacity of 5 Te at 14 m radius, which are suitable for offshore and subsea use.

# Remotely Operated Vehicles (ROVs)

The vessel is fitted with two Workclass ROV Systems each equipped with heave compensated launch and recovery systems (LARS) and a dedicated hangar. These vehicles are rated to 3,000 mwd and capable of supporting a payload of 3 Te using various work packages.

An observation class ROV is installed on deck. The ROV systems are capable of carrying out intensive simultaneous diving and ROV operations.

#### Diving systems

The saturation diving complex, which is rated to 350 msw, consists of two 6-man and four 3-man living chambers and two 3-man diving bells (7.5 m3 each). The system is supported by two 18man hyperbaric lifeboats and is fully compliant with Norwegian 'NORSOK' standards.

#### Pipe laying facilities

The vessel can be equipped with VLS (Vertical Lay System), and

# **Specifications**

Principal dimensions	
Length overall	156.9 m
Length BP	137.7 m
Breadth	27 m
Depth to 1 <sup>st</sup> Deck	12 m
Draft (design)	6.5 m
Draft (scantling)	8.5 m

Deadweight 10.996 Te at 8.5 n

# Cranage

- Main lifting facilities
- Type box boom crane Main hoist 400 Te at 11 m
- (harbour lift)
- Auxiliary hoist 30 Te at 46 m Active heave compensation

# Additional lifting facilities

- 58 Te at 11 m (harbour lift) -Knuckleboom crane
- 5 Te at 15 m Provision crane
- 2 x 5 Te Offshore cranes

#### **Deck space**

- 1,700 m<sup>2</sup> at 10 Te/m<sup>2</sup>
- Deckload 5,500 Te at 1 m above the deck

# Capacities

Fuel oil Fresh water Ballast water

Working moonpool

7.2 m x 7.0 m

**Dive moonpool** 2 off 4.2 m x 3.6 m

#### **DP system**

Kongsberg K-Pos dual redundant main system with single K-Pos back up system

## **Reference systems**

- 3 x MRU
- 3 x Gyros
- 4 x Wind sensors ■ 1 x Fanbeam
- 3 x DGPS
- 1 x Seapath
- 2 x HPR
- 2 x Tautwires

#### **Environmental Regulatory** 99.99.99 Number

## **Power plant**

6 x Wartsila 7L32 Total generated power 20.2 MW

# **Propulsion**

Forward 2 x 1.9 MW tunnel thrusters 2 x 1.5 MW retractable azimuth

thrusters

# Aft

3.500 m<sup>3</sup>

1,800 m<sup>3</sup>

8,700 m<sup>3</sup>

2 x 3 MW Contra rotating	
azimuth thrusters	
1 x center propeller	4 MW

- 1 x center propeller 1 x flap rudder

# Endurance

-uel consumptior	i (typical)
In port	5 m³/day
On DP	30 m³/day
Transit	60 m³/dav

FW making capacity 1 x 25 Te/day 2 x 35 Te/day

#### Maximum speed

16.5 knots at 5.8 m draught

Helideck Sikorsky S-92

Accommodation 140 persons in 99 cabins

#### Lifesaving appliances

- Lifeboats 4 x 70 persons
- MOB SPHL 2 x 18 divers + 2 x 6 crews

# **Diving system**

Fuel consumption (typical) 350 msw

- Depth rating
- No. in saturation No. of bells
- Bell volume
- 7.5 m<sup>3</sup> System volume 347 m<sup>3</sup>

24

2

- Gas storage at 200 bar 36,500m<sup>3</sup>
- Reclaim system fitted to bell
- Gas recovery for chambers
- Moonpool aeration system

## ROV

1 x 1,500m Observation Class ROV 2 x 3,000m Work Class ROVs

# Flag

Bahamas

# Classification

1A1, ICE-C, SF, COMF-V(3)C(3), HELDK-SH, E0, DYNPOS-AUTRO, NAUT-AW, CLEAN DESIGN, DK(+), TMON, LR-SAT

# Year built / Builder

2009 / STX Soeviknes

carousel/reels to install flexible risers and flowlines through the working moonpool.

# **Dynamic Positioning System**

The vessel (DP Class 3) is fitted with a dual Kongsberg K-Pos Dynamic Positioning System. DP computer positioning is aided by multiple position reference systems including fanbeam, taut wires, HIPAP and DGPS solutions.

#### Machinery / Propulsion

The vessel is powered by 6 Wartsila 7L32 diesel engines, each driving a generator, which provide a total output of 20.2 MW.

#### Working deck

The open deck is 1,700m2 with a uniform loading capacity of 10 Te/m2. Additional under-deck storage and a lay-down area are also available.

# Accommodation

The Deep Arctic is fitted with 58 single cabins and 41 double cabins, each arranged with separate toilet and shower. Recreational facilities include mess-room, dayrooms, library, cinema and gymnasium. Accommodation is available for 140 people.



CRANE RADIUS (M)











HEADQUARTERS **Technip** 89 avenue de la Grande Armée 75773 Paris Cedex 16 France Phone: +33 (0)1 47 78 24 00

CONTACTS **Technip Marine Operations Services** David McGUIRE Phone: +44 (0) 1224 271000 E-mail: dmcguire@technip.com

Technip UK Limited Enterprise Drive, Westhill, Aberdeenshire, AB32 6TQ, UK Phone: +44 (0) 1224 271000 Fax: +44 (0) 1224 271271

# www.technip.com



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