Deepwater rigid S-type pipelaying and crane vessel

VESSEL RESOURCES

MAIN PARAMETER

- Length overall: 162.3m (267.5m when including deep-water stinger)
- Breadth moulded: 37.8m
- Depth moulded: 9.1m
- Working draft range: 5.8m-6.6m
- Deadweight: 9594.75 t
- Gross registered tonnage: 32550t Net registered tonnage: 9765t
- Dynamic positioning: DP-2 / 3, Kongsberg k-pos dp-22
- Thrusters: 8 sets in total
- Main engine / generator: 6 sets MAN
- Life saving equipment:

Lifeboat 4 x 66 people, liferaft 6 x 25 people, 2 x 20 people, quick rescue boat 1

- Endurance (days):

38 days sailing @ 55 tons / day
59 days DP operation @ 35 tons / day
46 days pipelaying @ 45 tons / day

- Mooring system:

2 combined mooring / anchor winches, 2 mooring winches
8 shallow water positioning winches (positioning anchor cable: 8 x 64mm x 1000m, without positioning anchor)

- Tensioner: normal 4 × 125t, (max. 4 × 160T)
- Pipelaying method: S-lay
- Deck capacity:

The free deck area is about 2800 m^2; 5t / m^2; and 10t / m^2
Variable deck load 4000 tons, in addition to 80% consumables

- Maximum operating water depth: 3000m
- Lifting capacity: 1200 / 690 tons (tail fixed back rope / full swing)
- Stinger:

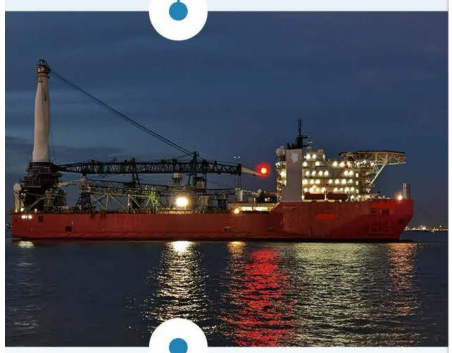
Deepwater stinger: divided into 3 sections, and the fixed separation angle is 90 °.
The displacement control length is 105.2 M
Shallow water stinger: 1 section of fixed cantilever support, with a length of 38.5 M

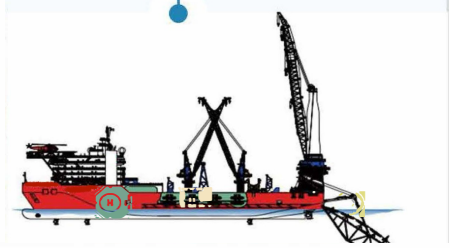
- Accommodation capacity:

110 cabins accommodate 264 people. One hospital

- Communication equipment:

2 VSAT, VHF radio, GMDSS and SSB internal telephone, PA / GA system and broadband Internet with Wi-Fi





available in oceans around the world

Providing underwater development services

From the laying of large-diameter submarine pipelines to the high bottom tension requirements with high redundancy requirements, the vessel has performed well. Even though

In very shallow waters, the eight-point conventional mooring system can also operate on closer beaches.

the versatile vessel can

Work in any oil and gas area around the world except polar regions. As an enhanced powertrain

It is a DP2-class, next-generation rigid S-type pipelaying crane vessel, which can support shallow water and

Deepwater development. Its project delivery performance demonstrates this. The ship has

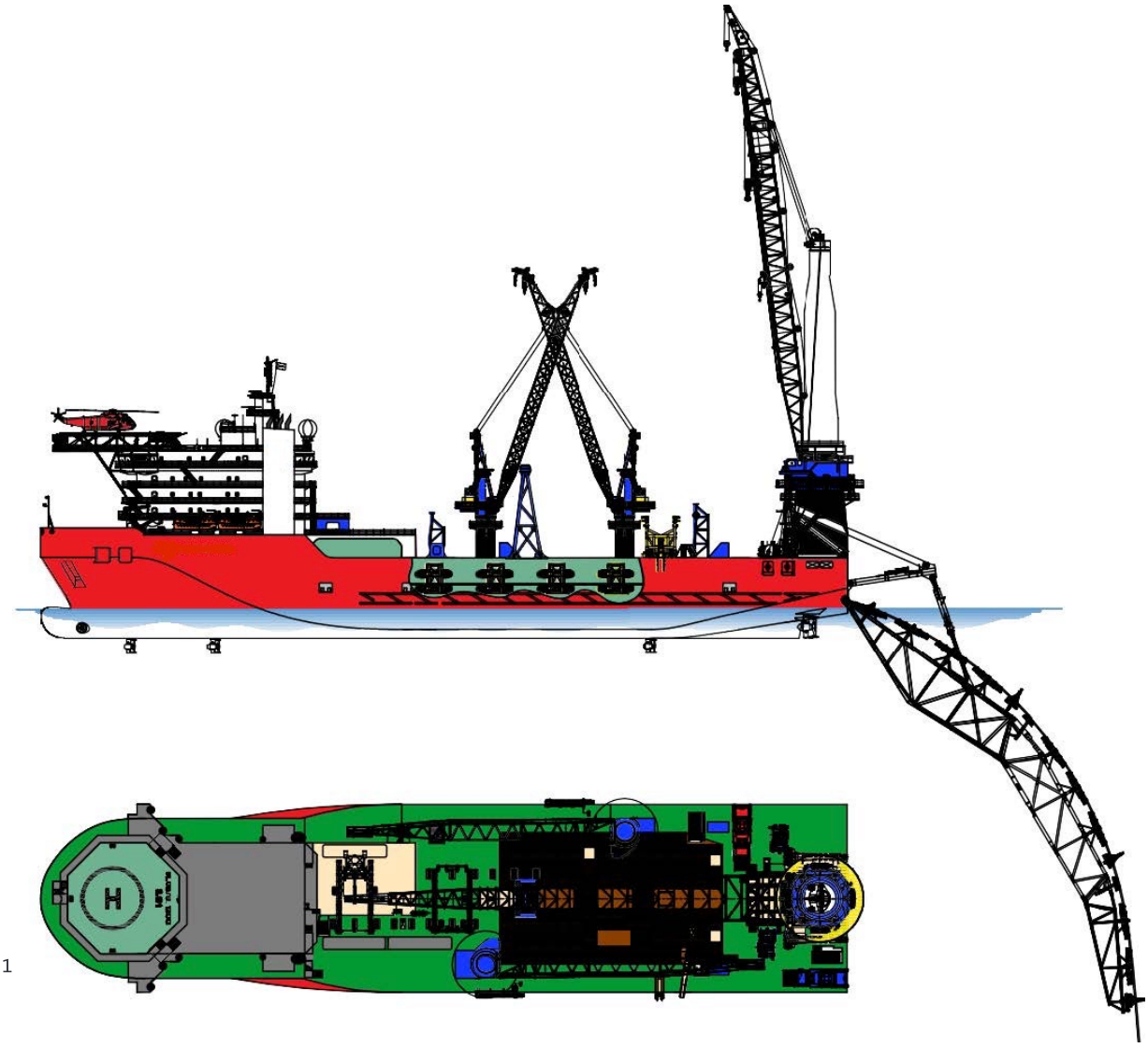
Continuous pipe laying and high pipe laying efficiency can support a range of pipe laying projects.

In addition, it has been upgraded and transformed to have the ability to carry out online structural work on the operation line.

Installation (such as FLETs, ILS and PLETs, etc.). Equipped with complete standard S-shaped shop

Pipe work such as assembly, welding, non-destructive testing and joint coating. also

capable of heavy-lift installation of topside module attachments.



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A large offshore engineering ship with excellent performance

Capable of multi-functional, deep water, submarine pipe laying and large-scale lifting operations

Pipe laying equipment

The rigid S-shaped cable laying system is based on the traditional midship operating line layout and maximizes

Maximize the optimization of subsea pipeline welding efficiency.

The operation line is equipped with 11 workstations, which can realize a single node (12.2 meters

and double-node (24.4-metersubmarine pipeline construction.

Equipped with four 125-ton tensioners.

Equipped with online structure installation for submarine pipelines.

Based on the need for large amounts of pipeline storage on the main deck, the ship is equipped with high-performance

Support rollers and conveyors to safely transport pipe to the work line,

This enables uninterrupted production. Latest installation of production tracking software available

Provides real-time monitoring data.

Loading capacity

has an effective deck area of 2,800 square meters and can load up to 3,500 tons of

pipelines can meet various construction operation requirements. 10t/m2 The deck strength

ensures that large special equipment can be loaded during navigation.

Effectively improve the efficiency of offshore construction.

equipment

Equipped with 3-section deepwater stents with a total length of 97 meters to ensure that the pipeline adapts to the designed suspension

chain lines to improve the high strain of the bending section and maximize the ship's performance in various

Ability to lay pipelines under sea conditions and water depth conditions.

It is also equipped with shallow water stents to meet the requirements of specific projects.

A/R winch system

is equipped with an A/R traction winch system, including 2 cable storage winches. 108mm

and 64mm steel wire ropes respectively, available in 400 tons and 150 tons respectively tons of

dynamic traction.

Each system can be used in midship line pipe laying abandonment and recovery (A/Roperations.

You can also use the starboard main deck pulley guide device to install underwater structures.

Pack.

installed below deckA&RThe wire rope parameters of the winch are as follows:

400 Te - 3,000 m / 108 mm (4.25")Diameter rotation resistant wire rope

150 Te - 3,000 m / 64 mm (2.5")Diameter rotation resistant wire rope

Shallow water construction capabilities

The traditional 8-point anchoring positioning system is designed for use in areas where access is impossible within a water depth of 10 meters.

Working conditions for DP construction. The ship has the ability to carry out construction such as landing and towing,

and the transition from shallow water to DP pipelay operations.

At the same time, the shallow water pipe support design can support the laying of 4-inch to 60-inch submarine pipes, making the environment

dynamic positioning system

The main force positioning control system is Kongsberg K-Pos DP-22, backup

The system is K-Pos DP-12. Two omni-directional thrusters at the stern (2x4.5

MW) for propulsion and dynamic positioning. In addition, five retractable all-round

thrusters (5x2.4 MW) and a tunnel thruster (0.88

MW) for dynamic positioning. During pipelaying and heavy lifting operations, the vessel

The ship is constructed according to DP2/3 level.

Navigation/Integrated Ship Management System (IVMS)

The ship is equipped with a Kongsberg K-Thrust for thruster control and maneuvering

system, as well as a K-Chief security and alarm monitoring system, providing full

internal and external communication systems.

Kongsberg IVMS system meets IMO MCS 645, DP equipment level 2 and

Redundancy specification requirements for ABS DP-2 systems, set through common communications infrastructure

Achieve full ship control.

Mechanical/Propulsion Systems

Main machinery includes 6 diesel driven generators (3 MAN 8L 32/40 and

Three MAN 9L 32/40) are located in two electrically isolated engine rooms.

thrusters, pipelay operations and more to provide a total of 24.9 MW of power generation, with more than

Redundancy required by classification societies, statutory and performance requirements.

sailing speed

Maximum speed 12 knots

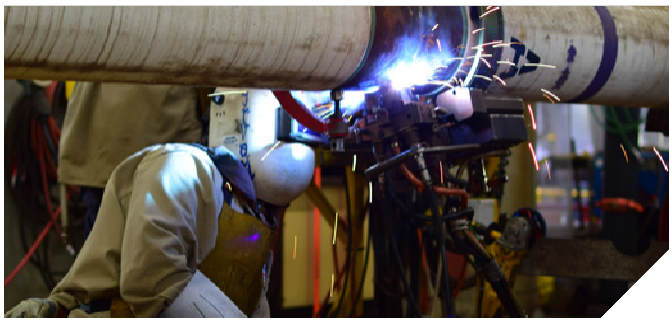
Living building facilities

Equipped with modern and comfortable accommodation facilities, it can accommodate 264 personnel and has all functions

Complete clinic, medical facilities, owner's accommodation, conference rooms, gymnasium and

Cinema entertainment room.

Wi-Fi networks are equipped in the owner, project office areas and public areas.



Work line pipe welding

operation line

Lifting equipment

Equipped with three cranes for large-scale lifting and offshore pipelines.

Laying and underwater installation.

` Two 40-ton MSB-12 cranes are located on the port and starboard sides respectively, used for pipelines

For hoisting and general hoisting operations, the 55m lifting radius can cover the entire ship and

Ships berthing Global

` One 1200-ton PC-37 heavy-duty crane is designed for large structures such as jackets

configuration installation. 1200 ton main hook (2x14for heavy lifting, 690

The auxiliary hook (2x8is designed to carry out 130-meter underwater installation work.

The 350-ton auxiliary hook and the 60-ton rigging hook have underwater working capabilities, which improves the ship's

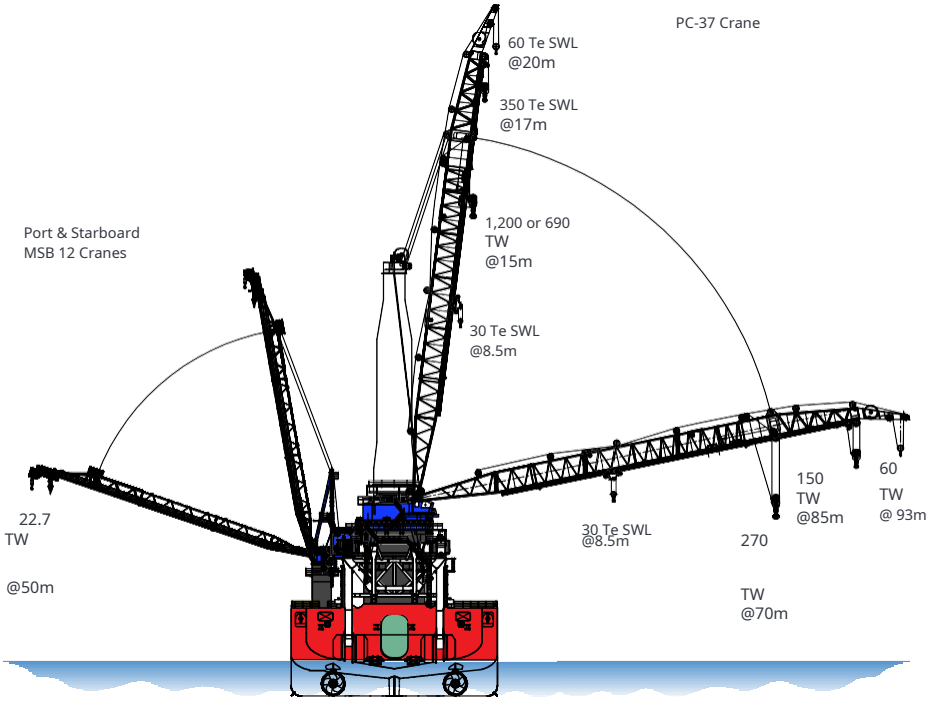
Installation and deployment capabilities, subhook and rigging hook at depths up to 93m and 213m respectively

Work underwater.

Underwater Robot (ROV)

The ship can deploy 2 work-level underwater robots (ROV) to support submarine pipeline laying and

Underwater installation and other work.



Lifting weight curve

technical specifications

Main dimensions

Overall length of hull	162.3 m
Hull length (between vertical lines)	150.69m
Hull width	37.8m
Depth of hull	16.1m

Job draft 5.8m/6.6m

Full load displacement (7.2m draft)	32,550 Te
light ship weight	21,400 Te

Pipe laying system

Cabling mode	S-Lay
workstation	11
Applicable pipe diameter	4"-60"

tensioner

4 tensioners, total 500 Te(nominal), 640 Te(max)

tensioner	RE.MAC.UT/Vertical two tracks, electric
Tensioner capacity	125 Te(nominal)/ 160 Te (max) each

A/R winch

winch	NOV AmClyde/ TW-425/250
Deep water operation capability	400 Te

(Attach another400 Tewinch, up to800Te) Wire rope (length/diameter)

3,000m/108mm
3,000m/64mm

side crane

type	Mobile
quantity	6
ableforce	50 Te (each)

anchor winch

winch	Skagit/AED 285
type	Single drum/electric drive (after modification)

stinger

Deepwater stents	3 sections
Departure point	90°
type	Fixed, controllable length 105.2 m
Shallow water stents	1 section, fixed
length	38.5m

crane

main crane	NOV AmClyde/PC-37
type	Full rotation
Main hook (fixed mode)	1200Te@32m
Main hook (fixed mode)	900Te@32m
Vice hook	350Te@60m
rigging hook	60Te@89m
management crane	NOV AmClyde/MSB-12
type	Base type/full rotation
ability	
main hook	40Te@35m
Vice hook	9Te@54m

deck

Available area	about2,800m2
	5 Te/m2and10 Te/m2
deck load	4,000Te

powerplant

main generator set	MAN
quantity	6
power	3 x 4,409kW
	3 x 3,919 kW
emergency generator	1 x 1,000kW

Thruster

8 thrusters	Wärtsilä/LIPS
Main promotion and positioning	2 x 4,500 kWFull rotation
Positioning	5 x 2,400 kW full swing/retractable
	1 x 880 kW tunnel

dynamic positioning system

DPgrade	DP2/DP3
DPsystem	Kongsberg K-Pos DP-22
refer tosystem	3 x DGPS (2 x Veripos LD1, 1 x C-Nav 3050)
	1 CyScan Mk2, 1 RadaScan
	1 HPR (Sonardyne Fusion USBL)
	1 HiPAP 501
	2 taut wires, 3 x Gyros
	3xwindsensors, 3x MU's(MRU-5)
	4xdraft sensors, tension interface

Positioning and reference systems

Compass, dual-axis Doppler speedometer, autopilot

ARPA,radar andGPS

Battery life

fuel	2,285 Te
freshwater	1,435 Te
ballast water	11,280 Te
Endurance	

38Sky navigation mode @55 m3/sky
59skyDPmodel @35m2/sky 46Sky laying pipe mode @45 m3/sky

Air compressor

1x7 bar @ 1,075 m3/h

speed

maximum speed	12Festival

Helideck

Applicable to	Sikorsky S61-N, Super Puma and approval for EC225-11t
size	Octagonl D=22.4 m, t=9.6

mooring system

2xCombined mooring/anchor winch
2xmooring windlass
8xShallow water pipe laying positioning anchor windlass

Living building facilities

264people110Room	Single room:19indivual
	Double room:60indivual
	Quadruple room:31indivual
Medical beds	2indivual

Gym, Internet cafe, entertainment room, cinema, satellite TV

lifesaving system

lifeboat	4x66people
life raft	6 x 25people
	2 x 20people

1 x fast rescue boat

Passcommunication system

2 x VSAT, VHF radio, GMDSS and SSB internal telephone, PA/GA system and broadband internet with Wi-Fi

classification society

ABS X A1-Derrick/Pipelaying Vessel (E) X AMS X ACCU X DPS-2 Self-Propelled UWILD, CRC

Year of construction

2010