

**SHEN DA**

**Pipelay**



*The SHEN DA is a DP Class 3 Vessel designed with a reel-lay system capable of rigid, flexible, umbilical and piggyback lay, maximum to water depths up to 3000m for worldwide operations.*

- Length overall 184.1m
- Breadth moulded 33.0m
- Reel total storage capacity of 4,000Te
- Carousel total storage capacity of 5,000Te
- Pipe-In-Pipe up to 18''(T35mm)/12''(T25.4mm)
- Maximum dynamic top tension 550Te
- Offshore AHC 400Te crane (Single fall)
- ROV Hangar
- Accommodation for 180 persons

## General Information

Classification	DNVGL Register, +1A, Crane vessel, Diving support vessel (SAT, Surface), Pipe laying vessel, ICE(C), SPS, COAT-PSPC(B), HELDK (S, H), BIS, E0, DYNPOS(AUTR), DYNPOS(AUTRO), ECA(Sox-A), NAUT(OSV(A)), Clean (Design), COMF(V-3,C-3), BWM(T), Recyclable
Built	QWHI, China
Flag State	People's Republic of China
Port of Registry	Shanghai

## Principal Dimensions

Length Overall	184.1m
Breadth	33.0m
Depth to main deck	14.4m
Draught design	7.5m
Dead weight	13,916Te
Gross Tonnage	29,272Te
Net Tonnage	8,782Te

## Main Deck

Deck Area	1,800m <sup>2</sup>
Deck Strength	15Te/m <sup>2</sup> (aft-#46) 10Te/m <sup>2</sup> (other area)

## Power and Propulsion

Main Engines/Generators	6x4630kW
Propulsion	3x5500kW Main Azimuth Thrusters 2x3100kW Retractable Thrusters 2x3100kW Tunnel Thrusters

## Dynamic Positioning Systems

DP Classification	DYNPOS(AUTR) DYNPOS(AUTRO)
DP System	GE
Reference Systems	3 x DGPS 2 x CYSCAN 1 x Mini Radar Scan 2 x Acoustic Sonardyne 2 USBL HPR (1 x DPS-INS) 2 x Taut Wire
ERN Number	99.99.99.99

## Speed

Full Speed	15.0 Knots
Service speed	12.0 Knots ( MGO 53.4te/day ) VLSFO for Mobilization

## Tank Capacities (100%)

Marine Gas Oil	2,410m <sup>3</sup>
VLS Fuel Oil	2,490m <sup>3</sup>
Potable Water	1,150m <sup>3</sup>
Ballast Water	Sufficient
Technical FW	300m <sup>3</sup>
Heeling Tanks	3,170m <sup>3</sup>

## Cranes

Main Crane(AHC)	400t @ 30.6m (Single fall, Subsea) Subsea Depth 0~3000m 800t @ 18m (Double fall, Offshore)
Auxiliary Crane	50t @ 35m (Single fall, Offshore) 100t @ 17m (Double fall, Offshore)
Reel Assist Crane	10t @ 20m (Man ride)
Tower Top Crane	20t @ 15m (Man ride)
Tower Mid Crane	10t @ 15m (Man ride)

## Pipelay Systems

The vessel is fitted with one 4,000Te storage reel and can stow rigid pipe up to 18" OD (23.6" coated). Under the deck, there has a 5,000Te storage carousel that can stow flexible & umbilical up to 650mm OD. Optional piggyback reel can be fitted as required; the tower can lay 2"-6" piggyback pipe along with the rigid pipe laying.

The maximum dynamic top tension is 550Te, supplied by 2 x 275Te tensioners. Tower ramp angle from 40-90 degrees. The system can deploy PLETs up to 8m x 7m x 8m, PLET maximum weight 100Te. The system is fitted with primary 615Te and secondary 200Te A&R winches.

## Accommodation

180 persons	
State Cabins	6 (3 available for Clients)
Single Cabins	58
Double Cabins	58

## Helideck

The helideck is approved for Sikorsky S92 and S61N; D-value 22.2m, Maximum take-off weight 12.8t

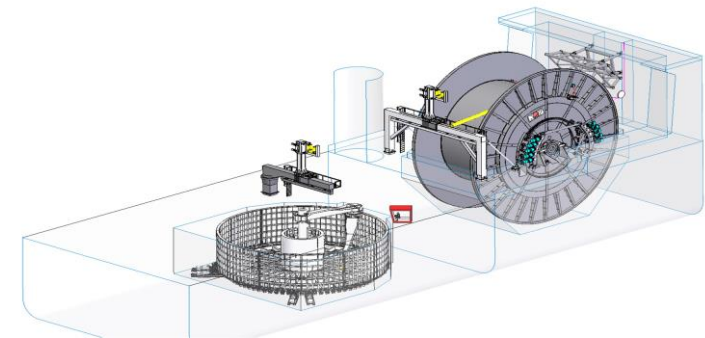
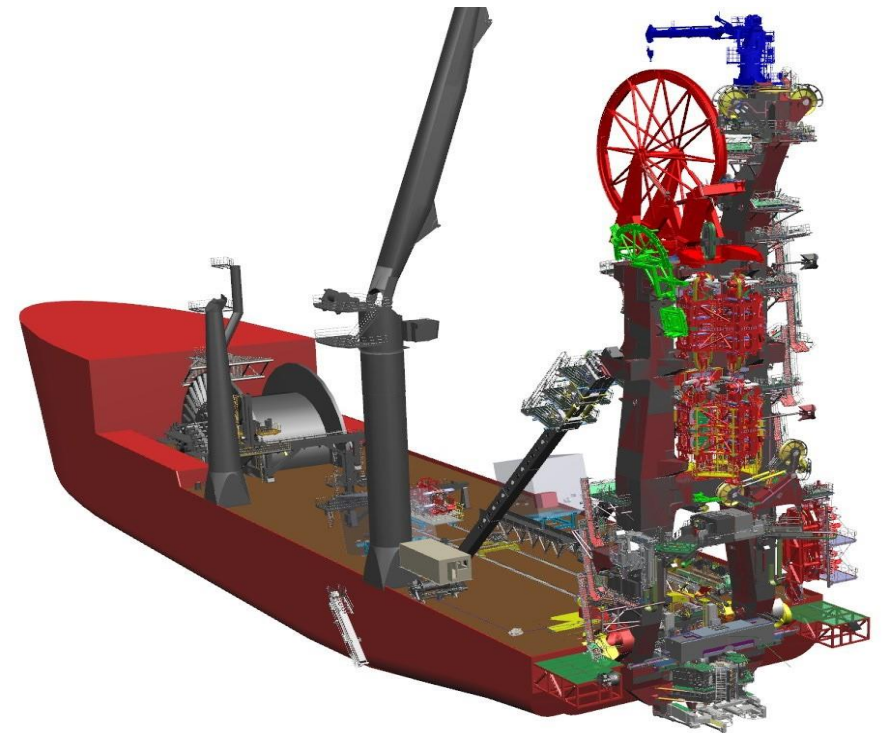
## Year Built

2022Q4

## REEL LAY SYSTEM



- 550Te Reel Lay System (RLS) delivered by IHC
- Maximum Dynamic Top Tension 550Te
- Operation tower angles between 40 deg and 90 deg to the horizontal, stowed at 40 deg for transit and survival
- Piggyback system 2" to 6" diameter
- Tower top crane 20Te@15m, tower mid crane 10Te@15m
- 2 off 275Te tensioners, max laying speed 30m/min, max diameter variation (taper) 0-+200mm, max diameter step change +24mm, frame opening to allow 2.9m diameter end termination pass.
- Straighten capacity (4528kNm): Be competent for the stiffness of 18" pipe with 42mm thickness, Or Pipe-In-Pipe with 18"/ T35mm outer, 12"/ T25.4mm inner.
- 600t Hang off system. C-plate adaptor flex hang-off. Improved exit roller functionality
- Deck-mounted Worktable and tower-mounter workstation fitted
- Rigid Reel Capacity 4,000Te, Max Rigid Pipe 18" (457mm)
- Flexible/Umbilical basket capacity 5,000Te, Max Flexible Pipe Diameter 25" (635mm). Spooling arm and over head gangtry mounted for hand over the pipe and end termination.
- 100Te PLETs operated in Hs 4m, PLET envelope 8mx7mx8m exclude pipe stub.



# OFFSHORE CRANES

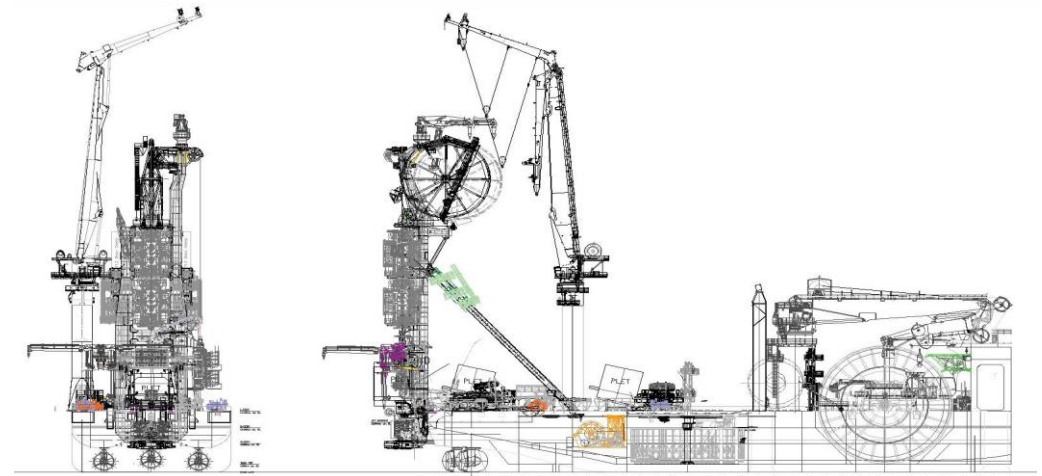
## 400Te MAIN CRANE

- NOV design Active Heave Compensate Knuckle Boom type
- Main Hook
  - Crane Load 400Te @ 30.6m (Single Fall, Subsea)
  - 800Te @ 18m (Double Fall, Offshore)
  - Down to 3000m depth
  - Coverage Main Deck, Reel, ROV Hangar
- Whip Line
  - Crane Load 40Te @ 59m (Subsea)
  - Man Riding Yes 3Te @ 59m
  - Coverage Main Deck, Reel



## AUX CRANE

- McGregor design Constant tension Knuckle Boom type
- Main Hook
  - SWL 50Te @ 30m (Single Fall, Offshore)
  - 10Te @ 61m (Single Fall, Offshore)
  - 100Te @ 15m (Double Fall, Offshore)
  - Coverage Pipelay Tower, Fireline outside stern, Main Deck
- Whip Line
  - SWL 8Te @ 63m
  - Man Riding Yes 2.5Te @ 63m



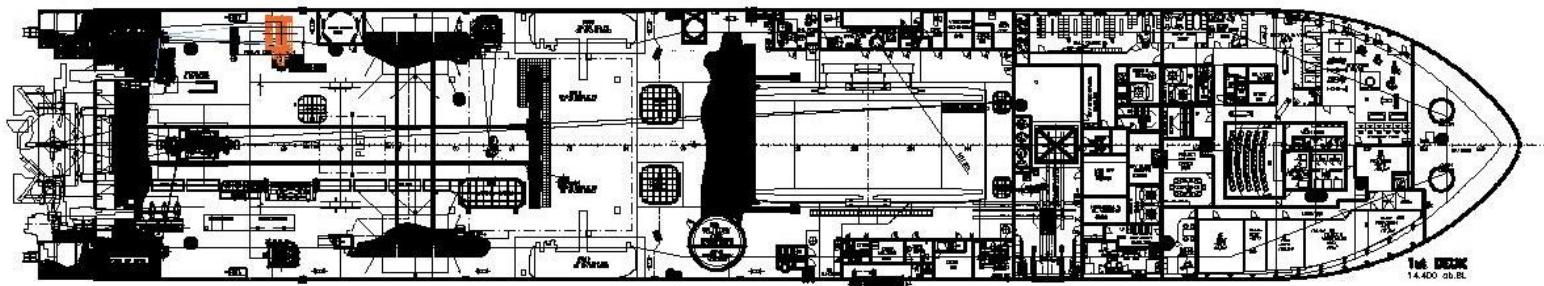
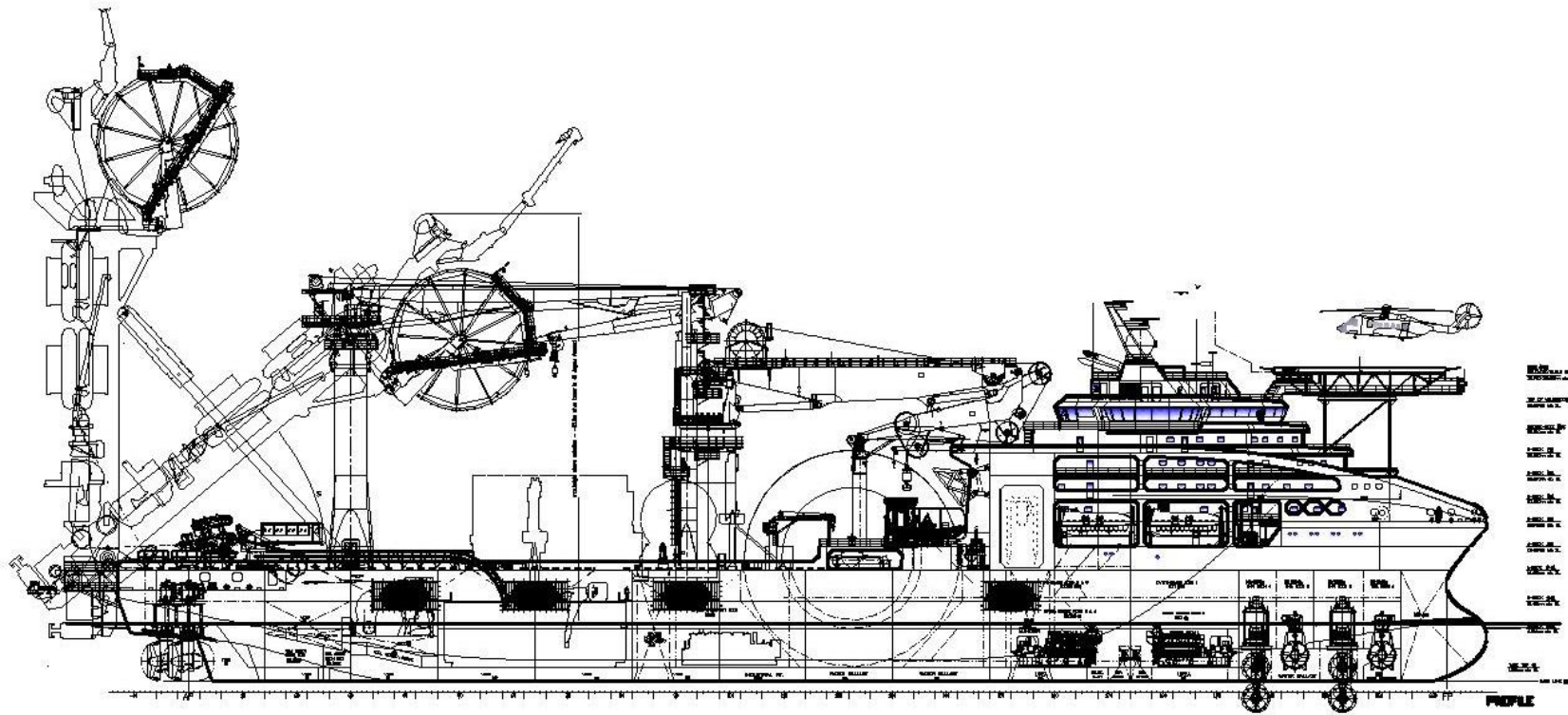
## WORK ROVs

- Only ROV hangar available
- Area and facilities for mobile ROVs on main deck available

## FACILITIES ON MAIN DECK

- Deck                      Wooden and steel (welding permitted)
- Power Supplies        440V AC 60Hz, output 1500kW
- Compressed Air        10 bar
- Cooling Water         Sea water, 11 bar
- Public Address (PA)   Covers Deck and Tower

# GENERAL ARRANGEMENT



COES is globally recognized for providing its know-how in four main business segments: offshore installation, towing, anchor handling and supply, salvage and wreck removal.