



# HAI YANG SHI YOU 291



深圳海油工程水下技术有限公司  
COOEC Subsea Technology Co., Ltd.

## GENERAL DESCRIPTION

Name:	HAI YANG SHI YOU 291
Type:	AHTS Construction and Field Support Vessel
Owner:	COOEC (China Offshore Oil Engineering Co.,Ltd.)
Design:	STX Europe AH04
Year of build:	2010
Accommodation:	90 persons
Gross Tonnage:	8252
Net Tonnage:	2476
Area of Operation:	Worldwide
Flag:	China
Classification	
DNV class:	1A1 Tug Supply Vessel SF COMF-V ( ) E0 DYNPOS-AUTR NAUT-OSV (A) CLEAN DESIGN DK (+) HL (.) TMON

## TECHNICAL SPECIFICATION

### Main Dimensions

Overall length:	109.4 m
Length between pp:	98 m
Breadth:	24 m
Depth:	9.8 m
Draft:	7.8 m

### Winches

#### Main

1 x BRATTVAAG Water Fall triple drum (SL500W-3)

#### Towing / working Drums - 500 t

1 x Declutchable towing drum  
1,500 mm Ø x 3,750 mm Ø x 4,100 mm length  
1 x Declutchable working drum  
1,500 mm Ø x 3,750 mm Ø x 4,100 mm length  
Wire capacity 6,700 m of Ø 76 mm each

#### Anchor handling Drum - 500t

1 x Declutchable ah/wire drum  
3,500 mm Ø x 5,400 mm Ø x 8,200 mm length  
With dividing flange socket part:  
18,700 m of Ø 76 mm wire  
2 x BRATTVAAG Secondary winches  
170 t pull @ 0 - 23 m / min

### Additional

2 x Hydraulic windlass / mooring 20 t pull  
2 x Hydraulic tugger 24 t pull

### Deck Space

Main Deck Area:	1,070 m <sup>2</sup> @ 10 t / m <sup>2</sup>
Deck Material:	Timber
Chain Locker:	1,150 m <sup>3</sup>
Moonpool dimension:	7 m x 7 m
Size of ROV hangar (m <sup>2</sup> ):	25 m x 35 m

### Speed

Maximum:	17.5 knots
Economic Transit:	12 knots

### Communication Equipment

VSAT:	1 set
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### Cargo capacity summary

Fuel oil:	2417.2 m <sup>3</sup>
Ballast water:	3713.7 m <sup>3</sup>
Rig chain lockers:	1194.3 m <sup>3</sup>
Slop:	18.4 m <sup>3</sup>
FW Tank capacity:	956.4 m <sup>3</sup>
Number of FW tanks:	6

### Fuel consumption

In Port:	3 m <sup>3</sup> / 24 hrs
Transit:	23 m <sup>3</sup> / 24 hrs
DP:	8 m <sup>3</sup> / 24 hrs
FW Making Capacity:	30 m <sup>3</sup> / 24 hrs

### Propulsion

Main engines: 2 x Wartsila 16V32 - 7680 kW each/2 x Electric drives 3500 KW Each  
Bollard Pull: 361t  
Total output: 25760 + 200 kW  
(Emergency Generator)  
Generators: 4 x Wartsila 8L26 - 2600 kW each

Drive type shaft/diesel-electric:  
2 x Siemens 1FJ3 905-10 - 4444 kVA each  
Fuel type MGO/HFO: MGO

### Thrusters

Bow thruster:  
2 x Wartsila/Lips FT 275 - 1500 kW each  
Azimuth thruster:  
Wartsila/Lips FS225 MNR - 1500 kW  
Stern thrusters:  
2 x Wartsila/LIPS - 1200 kW each



## Generators

Shaft generators make:	Siemens 1FJ3 905-10
Shaft generators capacity:	4444 kVA each
Aux generators Make:	Wartsila 8L26
Aux generators capacity:	2600 kW each
EM generator make:	Nogva Scania
EM generator capacity:	200 kW

## Roll reduction system

Roll reduction system type:	Stab tanks
Number of roll reduction tanks:	2

## Anti heeling system

Number of tanks:	4
Size of tanks:	
DBWT5PS -	180.9 m <sup>3</sup> , DBWT5SB- 180.9 m <sup>3</sup> ,
DBWT6PS -	166.3 m <sup>3</sup> , DBWT6SB- 163.6 m <sup>3</sup> ,
Number of pumps:	2
Capacity of pumps:	1400 m <sup>3</sup> /hour

## Helicopter deck

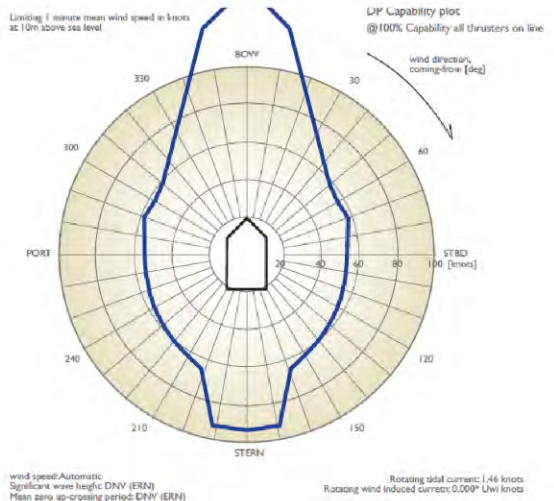
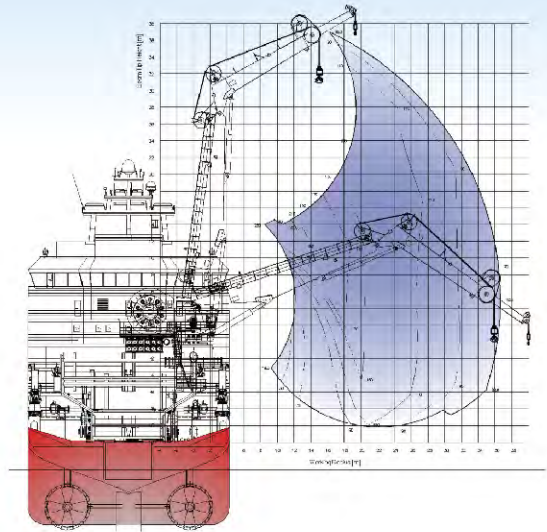
Type:	bow
Approvals:	dnv-heldek-sh
Diameter:	19.5m
Dimensioned for:	Super Puma

## Accommodation

Total number of bunks:	90
Crew single Cabins:	20
Crew double Cabins:	35

## CRANES

Type:	NOV AHC knuckle boom
SWL:	250t @ 13 mtrs, 20t @ 40mtrs
Wire type:	96mm Flexpack
	35x7 RHOL MBL 7810 Kn
Wire length:	2478M-2600M
Tugger winch (numbers SWL):	10t - 80004267 - SNV84403503-SNV84403504
SWL lift internal on deck (Harbour):	250t@9M
SWL External deck/sea (subsea lift):	n/a
SWL External deck-sea AHC lift:	n/a
SWL Sealift (deck to deck lift):	124t @ 16M
Personal lift capacity:	1t



## DP SYSTEM

Class definition:

E0 DYNPOS-AUTR NAUT-OSV(A)

Type: Class 2

DGPS: Seatex DPS 132 & Seatex DPS 200

Diff correction:

IALA and Spot beam 1 & 2 and XP

HPR: Hipap 500

Fan beam: MDL

Transponders: Yes

# TRITON XLX WORK CLASS ROV



## IHPU

Compensator volume (dirty pack): 6.5 L  
Integrated Clutch Control:

68 L/min @ 3,200 PSI

**Depth Rating** 3,000 m

## Vehicle dimensions

Length 3.22 m

Width 1.80 m

Height 1.95 m (2.15 m w/skid)

## Speed

Forward Speed : 3+ knots

Lateral Speed: 2 knots

## Bollard Pull (Nominal)

Forward 1,100 kgf

Lateral 1,100 kgf

Vertical 900 kgf

**Payload Capacity** 250 kg

## Manipulators

Schilling Titan 4 seven-function

Schilling Rigmaster five-function

## Camera

Manufacturer Kongsberg

Model OE 15-102 Near SIT

OE 14-366 Colour Zoom

OE 1358 & 14-108 (mini)

## Light

Manufacturer: Deep Sea Power & Light

Model: Sea Arc HID, Deep Multi Sealite

## Propulsion/Speed

Power Pack (Shaft/HP) 150

Thruster Horizontal 4 x 380 mm

Thruster Vertical 4 x 300 mm

Heading Control +/- 2.0 °

Pitch and roll control +/- 5.0 °

Depth control +/- 0.15 m

Altitude control +/- 0.15 m

Under-slung 3,000 kg

Aft load Capacity 600 kg

## TMS

Top-hat design, Type IV TMS

Tether capacity 440 m

## LARS

SWL 19.5 t in water, 13 tin air

Outreach 5.5 m

4th floor, Technology Building, No. 1067, Nanhai Road, Shekou, Shenzhen, China. 518067

Tel: 86-755-26694714

Fax: 86-755-26694615

E-mail: zj@mail.cooec.com.cn

URL: [www.cnoocengineering.com](http://www.cnoocengineering.com)