



# TAN CANG OFFSHORE SERVICES JSC.

## Vessel Specification



# TC VIGOUR

## Technical Specification

AHTS Vessel : 8,810 HP  
 Bollard Pull: 118 tonnes  
 Clear Deck Space: 425 m<sup>2</sup>  
 DP2

*“Our success is driven by the customers”*

### MAIN PARTICULARS

#### GENERAL

ABS \*A1, Towing Vessel, FFV1, Offshore Support Vessel, Circle E, \*AMS, \*ACCU, \*DPS-2

Built	PT Nanindah Mutiara Shipyard, Batam, 2010
Call sign	9V7216
IMO no	9443530
Flag	Singapore
GRT	2147 T
NRT	664 T

#### PRINCIPAL DIMENSIONS

Length Overall	66.0 m
Length, BP	57.0 m
Breadth Moulded	16.0 m
Depth Moulded	7.3 m
Draft (max)	6.2 (with skeg; 7.05m) metres

#### CAPACITIES

Deadweight	approx 2500 tonnes at 6.2m draft
Clear Deck Area	33m x 12.9m = 425.0 m <sup>2</sup>
Deck Strength	5 T/m <sup>2</sup>
Deck Cargo Capacity	870 T
Fuel	827m <sup>3</sup> in dedicated tanks. 1615m <sup>3</sup> combined use Mud/Brine tanks and Rig Chain Locker
Portable Water	468.0 m <sup>3</sup>
Ballast Water / Drill Water	911 m <sup>3</sup>
Brine / DMA / Glycol / Liquid Mud	28.0 m <sup>3</sup> in 2 dedicated tanks
Liquid Mud	468m <sup>3</sup> in 6 dedicated tanks
Dry Bulk	185m <sup>3</sup> total capacity in 4 tanks

#### DISCHARGED PUMPS

Fuel Oil	1 x 100m <sup>3</sup> /hr at 7 bar
Dirty Oil	1 x 10m <sup>3</sup> /hr at 2.0 bar
Potable Water:	1 x 150m <sup>3</sup> /hr at 7 bar
Drill Water	1 x 150m <sup>3</sup> /hr at 7 bar
Mud	1 x 75m <sup>3</sup> /hr at 8 bar
Brine / Mud:	1 x 75m <sup>3</sup> /hr at 8 bar
Dry Bulk	80 cbm/hr - 5.6 bar (2 compressors)
Cargo Flow Meters	Fuel Oil and Potable Water
Hose Connections	Fuel: 4" Camlock OR Drybreak Potable Water: 4" Camlock Drill Water: 4" Camlock Mud: 5" Camlock Brine: 5" Camlock Bulk: 5" Camlock Adapters: 5" to 4" reducer, 4" to 3" reducer

Technical parameters are subject to change without notice

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## MACHINERIES

### MACHINERY

Main Engines	2 x 4,405 BHP, 3,285kW (8,810 BHP, 6,570kW) MAN B&W 9L27/38
Propulsion	2 x MAN B&W Alpha CPP Propellers in MAN AHT Kort nozzles Steering: 2 x Rolls Royce High Lift Independent Rudders, 2 x Rolls Royce Tenfjord Electro-Hydraulic Steering Gear
Bow Thrusters	2 x 600 kW (805 BHP) Brunvoll Tunnel Thrusters, approximately 9.0 tonnes thrust each
Stern Thrusters	2 x 600 kW (805 BHP) Brunvoll Tunnel Thrusters, approximately 9.0 tonnes thrust each
Shaft Generators	2 x Leroy Somer shaft generators, 1,300kW, 1,600kVA each, 440V, 60Hz
Auxiliary Generators	1 x Caterpillar 3406 Diesel Generator, 270kW, 440V, 60Hz
Emergency Generators:	1 x Air Cooled Caterpillar 3406 Diesel Generator, 270kW, 440V, 60Hz

### DECK MACHINERY

Tuggers	2 x 10 tonnes Hydrakraft (ODIM)
Capstans	2 x 16 tonne (warping head) / 10 tonne (wire drum) Hydrakraft (ODIM)
Windlass	1 x 10 tonne Hydrakraft (ODIM) 2,100kg anchors with 440m x 36mm chain each side, plus 1 spare anchor (not onboard)
Bow Mooring	2 x mooring drums, capacity of 200m x 56mm rope each
Smit Towing Bracket	1 x 200 tonnes SWL located on the Forecastle
Crane Capacity	TTS, 5 tonnes at 13m radius

### TOWING AND ANCHOR HANDLING EQUIPMENT

Bollard Pull	Minimum 120 MT
Main Winch	1 x Hydrakraft (ODIM) 250 tonnes variable pressure Waterfall Winch
Load Capacity	250 tonnes pull on 1st layer simultaneously
Brake Capacity	320 tonnes 1st layer 207 tonnes mid layer 153 tonnes outer layer
Tow Drum Wire Capacity	1500m x 71mm diameter
AH Drum Wire Capacity	1500m x 71mm diameter
Chain Gypsy Cable Lifter	1 x 76mm, 1 x 84mm mounted on each side
Rig Chain Locker	195m <sup>3</sup> chain capacity
Stern Roller	Rolls Royce, SWL 350 tonnes, 5.5m x 2.0m diameter
Tow Pins / Guide Pins	1 pair of retractable Karmoy guide pins

Wire Chain Stopper	2 x retractable Karm Forks, SWL 300 tonnes for wire/chain up to 102mm
Spare Reel Capacity	1 x Hydrakraft (ODIM) variable pressure, 20 tonnes pull on 1st layer, 1400m x 71mm diameter
Pennant Storage Reels	2 x Hydrakraft (ODIM) variable pressure, 20 tonnes pull on 1st layer, 1000m x 76mm diameter
Wire Storage Reel:	Tow Wire: 71mm x 1,400m. Spare Tow Wire: 71mm x 1,400m. Towing Pennant: 71mm x 25m. Work Wire: 71mm x 300m Chaser Pennant: 71mm x 300m. Salvage Wire: 64mm x 30m.

### ELECTRONICS

Main Radar	1 x Furuno FAR-2117 X Band ARPA with 21" LCD display
Auxiliary Radar	1 x Furuno FAR-2137 X Band ARPA with 21" LCD display
Auto Pilot	1 x Tokimec PR 6000 Series
Gyro Compass	3 x Tokimec TG8000 with repeaters in wheelhouse and steering gear room
Magnetic Compass	1 x Cassen & Plath REFLECTA 1
Echo Sounder	1 x Skipper GDS102, Dual Frequency, 1500m water depth
DGPS	1 x Furuno GP-180 2 X Veripos LD-3 DGPS with Verify QC control system for DP System
Anemometer:	3 X Gill Instruments with Young Marine wind tracker Model 06206 display
Speed Log	1 x Furuno DS-80 Doppler Speed Log
Communications	1 x Furuno G.M.D.S.S. (Global Maritime Distress & Safety System) Area A3 set 1 x Furuno FS-2570 (250 W) MH/HF Radio 1 x Furuno FM-8800S (25 W) VHF DSC 1 x Furuno FM-8800D (25 W) VHF DSC 1 x Furuno FELCOM-15 Inmarsat-C 1 x Furuno FELCOM-15 Inmarsat-C/SSAS 1 x Furuno NX-700B Navtex Receiver 3 x McMurdo Portable GMDSS VHF Radios 1 x McMurdo EPIRB 2 x McMurdo SART Deck Communication System: Loudspeaker System PA System: Steenhans SPA - M1H & M4H
Weather Fax	Furuno FAX 408
AIS	1 x Furuno FA-150
VH	@ Fore & Aft Consol: Furuno FM- 8800S / 8800D (25W) VHF DSC
VRU	1 X TSS DMS-10 1 X TSS RP-30
BNWAS	MARTEK BNWAS

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## MACHINERIES

### PERFORMANCE

Speed / Fuel Consumption	At 100% MCR: 34m <sup>3</sup> /day (approx)
	Economical Speed 10-12 knots: 12m <sup>3</sup> /day (approx)
	Idle at Sea: 4m <sup>3</sup> /day (approx)
	Idle at Port: 0.8m <sup>3</sup> /day (approx)

### DYNAMIC POSITIONING

Type	GE DPS21- Duplex DP + IJS
Reference Systems	1 x Fanbeam Mk 5 complete with reflectors, 2 x Veripos LID35 DGPS with Verify QC
Control Modes	Joystick manual heading, Joystick auto heading, Dynamic Positioning, Model Control (dead reckoning), DP minimum power, Ship follow, Auto track, Auto Pilot, Auto Sail, ROV follow, Simulation (for training purposes)
Joystick	Independent Joystick

### ACCOMODATION

Berth	1 x Hospital
	1 x Library
	1 x Mess Room
	1 x Lounge
	*Total of 48 people

### ANTI-POLLUTION

Dispersant Tank	1 x 9.4m <sup>3</sup>
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Spray Booms	No booms onboard. Only dispersant nozzles, each with a 1 1/4" nozzle and a 3/4" nozzle.
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### STANDBY RESCUE EQUIPMENT

Rescue Boat	MP Springer 660 self righting with inboard 250 hp Yanmar diesel engine and Hamilton Water Jet propulsion. 10 person capacity. 33 to 35 knot top speed with 2 persons onboard.
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### Life Saving Equipment

Inflatable Liferrafts c/w Hammer Hydrostatic Release	6 x 16 person (3 x port side / 3 x starboard side)
Lifebuoys	2 x man overboard c/w light & smoke / 4 c/w light / 2 c/w buoyant line.
Lifejackets	42 x COSALT Premier c/w light & whistle

### EXTERNAL FIRE FIGHTING

Capacity	1,500m <sup>3</sup> /hr each Pumps: 2 x Jason Eureka
Monitors	2 x Kvaerner, capacity of 1,200m <sup>3</sup> /hr each
Throw Length	120m
Throw Height	50m

### ENVIRONMENTAL FEATURES

Mud tank of free flowing design with external stiffening, sloped floors and dedicated recirculation	
Low residue design bulk tanks	
Oily water separator	01 x oily water separator with 15 ppm monitor. Compliant with IMO - Resolution MEPC 107(49)
Sewage treatment plan	01
Galley macerator	
Cargo load/discharge station with save all to inboard tank	

### MISCELLANEOUS

- Design complies to latest rules and regulations from SOLAS 74, with amendments in force and IMO 469 (XII) "Guidelines for the design and construction of offshore supply vessel"
- Fitted with 2 x Halogen searchlights, each 2000 W, fitted on the wheelhouse top and remotely controlled from inside the wheelhouse
- Fitted with 6 x 1000 W high pressure sodium lights for the aft deck cargo area and 2 x 1000 W high pressure sodium lights in the crash rails to illuminate Anchor Handling area
- Removable section of crash rail, 6 m long, on Port and Starboard side forward to allow for fitting of ROV spread, etc
- Wood sheathed main deck except for the aft area, which is steel plated for Anchor Handling
- Welding and cutting equipment and lathe in workshop
- Fresh water ultra violet steriliser
- Flume passive roll damping system
- Fire detection system fitted to the accommodation, all store rooms and machinery spaces throughout the vessel
- CO2 fixed fire extinguishing system for Machinery Space, Emergency Generator Room, Paint Locker and Hydraulic Pump Room
- Local water spray Fire Fighting system according to SOLAS regulations
- Statutory liferafts, life-jackets and pyrotechnics
- DRAGER PAS Colt Airline and Escape Trolley Unit for tank rescue
- Electrical Sockets
- Deck Power Supply for RoV equipment / Charterer's equipment: 2 x 500A 440V 3ph; 1 x 63A 440V 3ph; 1 x 32A 440V 3ph  
Deck Power Supply for Refrigerated Containers: 6 x 440V 63A, 3ph
- Bulk tank cleaning air mask (not operational as requires filter/regulator. Presently on order).

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