

# 8,000 bhp DP2 70m Anchor Handling Tug Supply Vessel

## PRINCIPAL PARTICULARS

Length Overall	70.50 m
Length Waterline	62.40 m
Breadth Moulded	16.60 m
Depth Moulded	7.20 m
Draft designed	4.50 m
Draft scantling	5.90 m
Built	PR China/2011
GRT / NRT	2,558 / 767
Class	American Bureau of Shipping (ABS)
Notation	+A1(E) +AMS AH Towing Vessel +DPS-2 Fire Fighting Vessel Class-1 Offshore Support Vessel
Flag	Singapore
Call Sign	TBA

## PERFORMANCE

Maximum Speed	14.4 knots, approx.
Designed Speed	13.0 knots, approx.
Economical Speed	10.0 knots, approx.
Type of Fuel	Marine Gas Oil
Bollard Pull	105 mt, approx

## CARGO CAPACITIE S

Deadweight	2,500 mt at scantling draft
Deck Cargo	900 mt
Deck Strength	10 mt/m <sup>2</sup> for area abt. 160m <sup>2</sup> , rest area 5 mt/m <sup>2</sup>
Clear Deck Area	480 m <sup>2</sup> approx.
Fuel Oil	988 m <sup>3</sup> approx.
Fresh Water	441 m <sup>3</sup> approx.
Ballast/Drill Water	601 m <sup>3</sup> approx.
Liquid Mud	497 m <sup>3</sup> approx.
Brine Tank	378 m <sup>3</sup> approx.
Cement Tank	220 m <sup>3</sup> (2 x 2035 ft <sup>3</sup> & 2 x 1850 ft <sup>3</sup> ) approx.
Freezer / Chiller	16 m <sup>3</sup> / 16 m <sup>3</sup> approx.
Foam / Detergent	11 m <sup>3</sup> / 3 m <sup>3</sup> approx.
Rig Chain Locker	174 m <sup>3</sup> approx.

## PUMPS

Fuel Oil Crago	1 x 100 m <sup>3</sup> /h @ 80m head; Kral
Fresh Water Cargo	1 x 100 m <sup>3</sup> /h @ 80m head; Itur
Drill Water/W.Ballast	1 x 100 m <sup>3</sup> /h @ 80m head; Itur
Liquid Mud	2 x 75m <sup>3</sup> /h @ 24 barg head; Netzsch
Brine	1 x 50m <sup>3</sup> /h @ 80m head; Mission
Bulk Cement air compressor	2 x 20 m <sup>3</sup> /min @ 80 psi (5.6 kg/cm <sup>2</sup> ) Airman SWS75S

## PROPULSION SYSTEM

Main Engines	2 x 2,942 kW (8,000 bhp) @ 750 rpm Niigata 8MG28HLX
Main Generators	2 x Volvo D12 MG HE @ 1,800 rpm driving Stamford alternator HCM534C rated at 350 kW/440 V/60 Hz/3 Ph
Emergency Generator	1 x Volvo D 7A T @ 1,800 rpm driving Stamford alternator UCM274E-1 rated at 99 kW/440 V/60 Hz/3 Ph
Shaft Alternator	2 x 1,800 kW @ 1,800 rpm, 440 V/60 Hz/3 ph
Bow Thruster	2 x 680 kW electric-driven Kawasaki KT-88B3, tunnel type (CPP); Thrust 103 kN (10.5T)
Stern Thruster	1 x 680 kW electric-driven Kawasaki KT-88B3, tunnel type (CPP); Thrust 103 kN (10.5T)
Steering Gear	2 x 6.3 tm / 45 deg rudder angle; Wagner
Propulsion	2 x CPP Type with Kort Nozzles, Scana Volda
Rudders	2 x High Lift type

## DECK EQUIPMENT

Anchor Windlass	1 x electro-hydraulic HAW; Mentrade
Gypsies	40 mm (Ø) chains (subject to class requirement) rated pull 17.3 mt @ 9 m/min
Mooring Drum	1 x 100m x 50mm PP rope rated pull 12 mt @ 10 m/min
Warping drum	400 mm (dia)
Bow Anchors	2 x 2,040 kg AC-14 HHP stockless anchors, China
Anchor Chains	2 x 440 m (L) x 38 mm (dia) Grade U3
Capstan	2 x 5 mt @ 19m/min electro-hydraulic HVC; Mentrade Head size 400 mm (dia)
Tugger Winch	2 x 12 mt @ 24 m/min electro-hydraulic HUW; Mentrade Drum Capacity: 200 m (L) x 24 mm (dia) SWR

Towing/AH Winch	1 x electro-hydraulic double drum AHTW; Mentrade
Upper Drum Cap (Tow)	1,400 m (L) x 58 mm (Ø) SWR
Lower Drum Cap (AH)	1,400 m (L) x 58 mm (Ø) SWR
Line Pull	210 mt @ 8.0 m/min at 1st layer 80 mt @ 16 m/min at 1st layer 40 mt @ 23 m/min at 1st layer 20 mt @ 46 m/min @ 1st layer
Brake Holding	280 mt static @ 1st layer Remote control from aft control stand in wheelhouse
Cable Lifters	2 x for Ø76 mm and Ø81 mm rig chains
Rope Reel	1 x 8 mt @ 32 m/min electro-hydraulic HSR; Mentrade for 1,500 m (L) x 58 mm (dia) SWR
Stern Roller	6.0 m (L) x 2.0 m (dia); SWL 300 mt
Shark Jaws	2 x electro-hydraulic Karmfork - SWL 300 mt
Tow Pins	2 x electro-hydraulic with turntable top flapses
Deck Crane	1 x electro-hydraulic telescopic boom crane; 5.9mt@4m / 2.2mt@12m

## ACCOMMODATION

Berths	4 x 1 berth cabins = 4
	3 x 2 berth cabins = 6
	8 x 4 berth cabins = 32
Total	42
Hospital	1 x 1 berth cabin = 1
All cabins fully air-conditioned & c/w attached washroom	

## RADIO & NAVIGATION EQUIPMENT

GMDSS	Furuno RC-1800T (Area 3) comprising :
SSB	1x Furuno FS-2570 with built-in DSC
Inmarsat C	1 x Furuno Felcom-15 SSAS
VHF Radio	2 x Furuno FM-8800S with built-in DSC
Navtex Receiver	1 x Furuno NX-700 (type B)
SART	2 x McMurdo S4
EPIRB	1 x McMurdo E5 Smartfind
Portable VHF Radios	3 x McMurdo R2
X Band APRA Radar	1 x Furuno FAR 2117
Marine Radar	1 x Furuno FAR-2137S
Echo Sounder	1 x Furuno FE-700 with 2 x repeater FE-720
DGPS	1 x Furuno GP-150
Gyrocompass	3 x Anschuetz Standard 22
Autopilot	1 x Anschuetz Pilotstar D
Magnetic Compass	1 x Cassens & Plath Reflecta 1
Weather Fax	1 x Furuno FAX-408
Speed Log	1 x Furuno DS-80
AIS	1 x Furuno FA-150
DP	Marine Technologies Bridge Mate DP2 3 reference sensors (2 x DGPS + 1 x CyScan) Gate valve fitted for future hydro-acoustic sensor
Joystick	MT Bridge Mate JX

Vessel also fitted with Vingtor PA Talkbalk System & Self-Powered Telephones

## FIRE-FIGHTING EQUIPMENT & ANTI-POLLUTION EQUIPMENT

<b>EXTERNAL</b>	
FiFi System	Class 1 with water curtain all round
Fire Pump	2 x 1,700 m <sup>3</sup> /h @ 120m head driven by front PTO of M/E
Monitors - (water/foam)	1 x 1,200/300 m <sup>3</sup> /h;
- (water)	1 x 1,200 m <sup>3</sup> /h;
	Throw length / height 120 m from bow / 50 m at 70 m distance
Oil Dispersant System	1 set c/w 2 spray booms 6m (6 nozzles each)
<b>INTERNAL</b>	
Emergency Fire Pump	1 x 35m <sup>3</sup> /h at 60m head; Itur
BA Recharging Comp	1 x 260 ltrs/min @ 300bar Coltri MCH16/E-TS1
CO <sub>2</sub> system in engine room	
Fire Detection & Alarm System	Accommodation Common Area/Passageways & Engine Room

## MISCELLANEOUS

Search Lights	3 x 2,000 W
Floodlights	6 x 500 W
Liferafts	6 x 25 men SOLAS approved type
Rescue boat	1 x 6 men rigid inflatable c/w outboard motor
Oily Water separator	1 x 1 m <sup>3</sup> /h
Water Maker	1 x 5 m <sup>3</sup> /day Reverse Osmosis
Sewage Treatment Plant	1 x 40 men/day