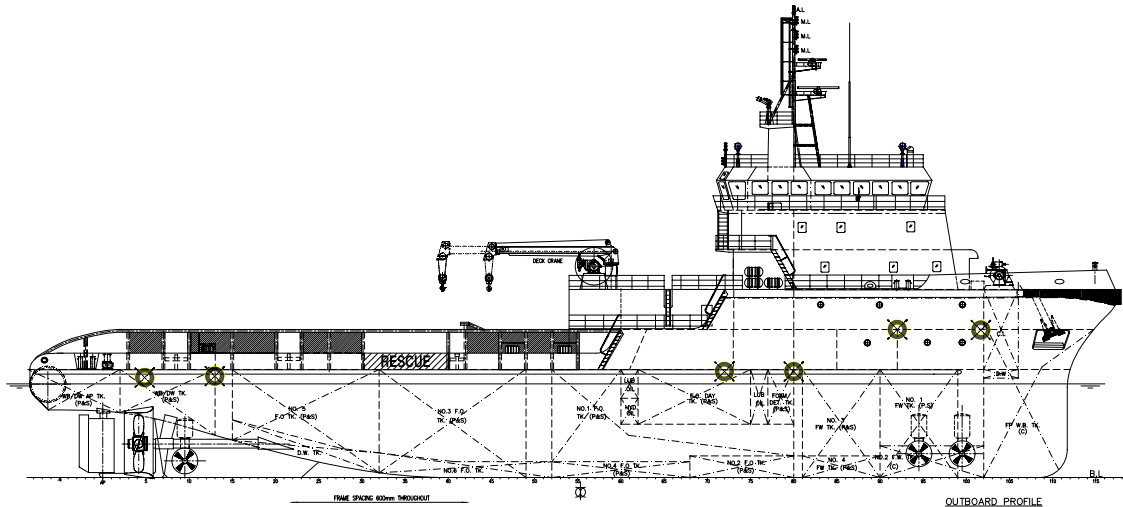




DEEP SEA SUPPLY ASA



## 15 000 BHP ANCHOR HANDLING TUG SUPPLY VESSEL

**BUILT BY JAYA SHIPBUILDING & ENGINEERING**

**FOR DEEP SEA SUPPLY ASA**

Twin screw Khiam Chuang design Anchor Handling Tug/Supply Vessel completely outfitted and equipped for Anchor Handling, Towing, Fire Fighting, Dynamic Positioning, Rescue, Offshore Supply and other related duties. The Vessel will be classed as Offshore Support Anchor Handling Supply Vessel, Fire Fighting Class 1, DPS-2, ACCU for Unrestricted Service..

Twin manoeuvring consoles are fitted in the wheelhouse stations, forward and aft. The Dynamic Positioning with "joy-stick" controls provided at the aft controls. The wheelhouse is designed to ensure excellent all-round view as far as practicable. View to the aft deck and aft overhead is ensured by fitting lower level and deck head windows.

### **CLASSIFICATION**

American Bureau of Shipping (ABS): Class +A1(E) Offshore Support Vessel AH, Towing Vessel, Fire Fighting Class 1, +AMS, +DPS-2, +ACCU.

### **MAIN ENGINES**

The Main Engines are : 2 x Wartsila 12V32 output 5520 kW each at 750 rpm.  
Propulsion System : 2 x 4D1000 LIPS CPP

### **GENERATORS – MAIN**

Two (2) x 100% identical marine diesel generating sets, heat exchanger cooled, each rated at 370 kW, 440 V, 3 Phase, 60 Hz, 0.8 p.f.

### **TUNNEL THRUSTER UNITS**

Bow Tunnel Thruster Units : 2 x Kawasaki KT-88B3, each 680 kW  
Stern Tunnel Thruster Unit : 1 x Kawasaki K-88B3, 680 kW  
Tunnel Thruster Units with controllable pitch propellers are each driven by an electric motor and all necessary controls and interlocks.

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## **PRINCIPAL PARTICULARS**

Length Overall (Mld)	: 75.40 m
Length B.P. (Mld)	: 67.16 m
Breadth (Mld)	: 16.80 m
Depth (Mld)	: 7.50 m
Max. Operating Draft (Mld)	: 6.10 m
Cargo Deck Area	: 485 m <sup>2</sup>

### **Capacities**

Deck Cargo (VCG 1.0 m above deck)	: 1000 tonnes
Approx. capacities with tanks 100% full:-	
Freshwater, total	: 490 m <sup>3</sup>
Fuel Oil	: 1300 m <sup>3</sup>
Drill Water/Water Ballast	: 535 m <sup>3</sup>
Base Oil	: 110 m <sup>3</sup>
Liquid Mud (s.g. max 2.4)	: 585 m <sup>3</sup>
Lube & Hydraulic Oil Storage	: 20 m <sup>3</sup>
Bilge Holding Tank	: 9 m <sup>3</sup>
Dirty Oil Tank	: 9 m <sup>3</sup>
Foam Tank	: 12 m <sup>3</sup>
Dispersant Tank	: 12 m <sup>3</sup>
Rig Chain Locker	: 2 x 100 m <sup>3</sup>
Cement Tanks (4) (2 grades), total	: 226 m <sup>3</sup>
Freezer (Ship's use)	: 11.5 m <sup>3</sup>
Chiller (Ship's use)	: 11.5 m <sup>3</sup>

### **Speed and Bollard pull**

The vessel is to demonstrate about 15 knots speed with vessel loaded to ballast condition and a minimum Bollard Pull of about 170 tonnes in the ahead condition. The main engines are to develop their 100% MCR continuous rated brake horsepower for the free running speed trials and for bollard pull trials.

Cruising speed at 90% MCR abt. 14 knots.

## **CEMENT SYSTEM**

### **Cement System General:**

The system is designed for simultaneously loading / discharging of 2 grades of cement with a maximum specific gravity of 2.4. The system is suitable for two (2) grades of cement. Loading / discharge station arranged at deck - on port and on starboard aft. Loading and discharge lines to be shared.

Loading / discharge operation to be from Central Control Panel located in Wheelhouse aft position. Quick couplings are to be provided complete with reducer. Remote indication of pressure and tank levels with a continual indication from 0 to 100% tank levels.

Cargo Capacity	: Approx. 226 cu.m total
Operation Pressure	: 5.6 bar
Cargoes	: Cement, Barite, Bentonite

### **Tanks:**

Four (4) off vertical cement tanks. All tanks for 5.6 bar working pressure. Test pressure 1.5 times working pressure.

## **STERN ROLLER**

One (1) Ø2300mm/2500mm x 4500mm length, 500 tonnes SWL

## **ANCHOR HANDLING TOWING WINCH**

Brattvaag SL350W/BSL350W Double Drums Waterfall Type

### **Drums:**

Two declutchable drums Ø1050mm/2850mm x 3500mm length.  
Wire capacity: 3500m of Ø76mm dia. each  
The drums are fitted with band brakes of robust design.  
Brake and clutch control: manual / remote controlled.  
Brake holding load: 450 tonnes on 1st layer both drums.

Winch capacity driven at 60 bar pressure by two pumps PV GS 2200 - 46 and two pumps units PV GS 940-46.

### **Hoisting 1st Step (two driving units):**

1st layer	350 tonnes pull at 0-9.3 m/min
Mid layer	204 tonnes pull at 0-16 m/min
Top layer	143 tonnes pull at 0-22.7 m/min

### **Lowering:**

1st layer	32 m/min
Mid layer	55 m/min
Top layer	74 m/min

### **Dynamic Braking:**

1st layer	64-437 tonnes at 0-50 m/min
Mid layer	37-255 tonnes at 0-88 m/min
Top layer	26-178 tonnes at 0-125 m/min

## **WINDLASS/MOORING WINCH COMBINED**

One (1) electro-hydraulic Brattvaag LBFMG 630  
Cable Lifters: 2 x Ø46 grade 2 chain, declutchable  
Drums: 2 x Ø400mm/1250 mm x 1000mm length, declutchable  
Drum wire/rope capacity: 230m x Ø60 mm  
Warping Ends: Ø500mm x 500mm, fixed

## **TUGGER WINCHES**

Two (2) electro-hydraulic Brattvaag WM4110  
Drum: 1 x Ø450mm/900 mm x 500mm length  
Drum Capacity on 1st layer: 15 tonnes at 0-23 m/min  
Warping End: 1 x Ø400mm x 450mm

## **CAPSTANS**

Two (2) electro-hydraulic Brattvaag CM4110  
Warping head: Ø450mm x 450mm, fixed with drum  
Capacity: 10 tonnes pull at 0-25 m/min

## **STORAGE REELS**

One (1) electro-hydraulic Brattvaag ALM13220  
Drum: 1 x Ø1000mm/3000mm x 3300mm length, fixed with parking brake  
Drum Storage: 3500m x Ø76mm wire rope  
Drum Capacity on 1st layer: 20 tonnes pull at 0-16 m/min

One (1) electro-hydraulic Brattvaag ALM13220  
Drum: 1 x Ø1000mm/3000mm x (2000+500)mm length, fixed with parking brake socket compartment  
Drum Storage: 2100m x Ø76mm wire rope on storage part  
Drum Capacity on 1st layer: 20 tonnes pull at 0-16 m/min

## **DECK CRANE**

One (1) electro-hydraulic telescopic boom.  
Capacity: 5.9 tonnes at 6m, 2.2 tonnes at 12.2m

## **TOWING PINS & SHARK JAW COMBINED**

One (1) electro-hydraulic Karm Fork M330195  
Tow Pins: 2 x Ø450mm with flaps for horizontal locking  
Shark Jaw (Fork): 1 x Ø500mm for wire/chain upto 162mm