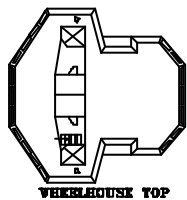




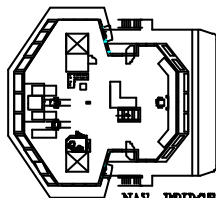
DP I anchor handling tug supply vessel

LARS GRAEL

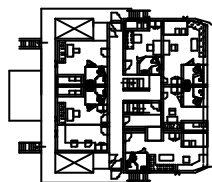
85 Metric ton bollard pull
150 Metric ton line pull winch



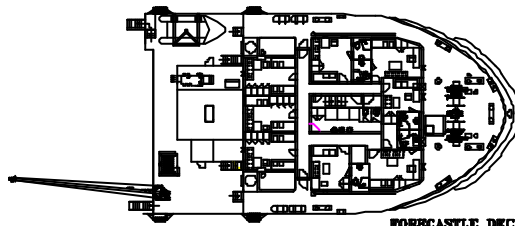
WAREHOUSE TOP



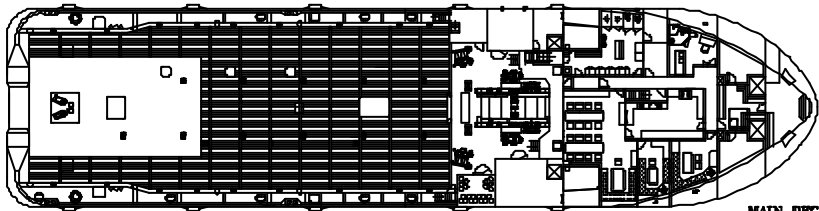
NAV. BRIDGE DECK



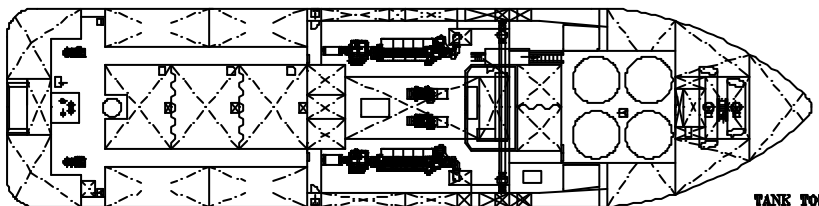
UPPER DECK



FORECASTLE DECK



MAIN DECK



TANK TOP

This anchor handling tug supply vessel has been designed by CONAN WU to carry out general services for the offshore industry.

It is fitted with a class DP1 system, Fi-Fi I system, and easy to upgrade for standby/service duties.

It is equipped with a waterfall double drum winch with large capacity suitable for towing, anchor handling and offshore terminal operations.

« Photo: BOURBON THERA Sistership of LARS GRAEL »

16-04-2007



DP I anchor handling tug supply vessel

LARS GRAEL

7,183 bhp

MAIN CHARACTERISTICS

Length overall:64.80 m.
Breadth moulded:16.00 m.
Depth main deck:5.80 m.
Max draft:4.90 m.
Deadweight at max draft:1,603 t
Bollard pull:85 t.
Gross tonnage: 2,014

REGISTRATION

Type:AHTS. vessel CONAN WU Design.
Owner:Bourbon Offshore.
Delivery:2006.
Builder:Dayang Shipyard - China.
Flag:BRAZIL.
Classification: BV. Class 1✳Hull, ✳Mach, Tug, Supply Vessel, Unrestricted navigation,
Fire Fighting Ship I Water spray, DYNAPOS AM/AT (Class 1), ✳ AUT-UMS.
Optional: Special Service/Stand by Rescue Vessel.

PERFORMANCE

Consumption: 30 m³/day at 14 knots (maxi speed 100 %).
25 m³/day at 12 knots (service speed 80 %).
15 m³/day at 9 knots (economic speed 50 %).

ACCOMMODATION

- Fully air-conditioned.
- Accommodation for 28 persons composed of:
 - 6x single cabins, 5x 2 men cabins, 3x 4 men cabins.
- 1 Office, 1 hospital, 2 mess/day rooms, laundry, galley, provision rooms, stores.

PROPULSION - MACHINERY

- **Main engines:** 2x 2,640 kW, MAK (total: 5.280 kW = 7,183 hp).
- **Propellers:** 2 Type CP, dia: 2,900 mm in nozzles.
- **Rudders:** 2 high lift flap type.
- **Shaft generators:** 2x 1,600 kVA at 1,800 rpm, 3x 450V 60 Hz.
- **Auxiliary generators:** 2x 440 kVA at 1,800 rpm, 3x 450V 60 Hz.
- **Emergency generator:** 1x 110 kVA at 1,800 rpm, 3x 450V 60 Hz.

THRUSTERS

- **Bow thrusters:** 2x 500 kW tunnel, electrically driven with CPP
- **Stern thruster:** 1x 500 kW tunnel, electrically driven with CPP

TOWING/ANCHOR HANDLING WINCH

- **Main winch:** 1 electro-hydraulic low pressure winch composed of 2 declutchable drums in waterfall arrangement each equipped with:
 - Drum size: Dia. 900/2,090 mm x 1,800 mm length.
 - Drum capacity: 1,500 m of 2¼" steel wire rope.
 - Brake holding load: 225 t on 1 st layer.
 - Rated Pull: 150 t on 1st layer at 0-8.4 m/min.
 - Combined spooling device for both drums.
 - 2 cable lifters 3" and 2½".
- **Windlass:** 1 combined mooring and windlass winch.
- **Storage reel:** 1 electro-hydraulic unit with 1 drum.
 - Pull at 1st layer: 12 t at 0-18 m/min.
 - Drum capacity: 1,500 m of 2¼" dia. wire.
 - Drum size: 800/2,200 mm dia x 1,500 mm length.
- **Stern roller:** 1x 250 mt SWL,
Dia: 1,500 mm, Length: 4,000 mm.
- **Towing pins:** 1 pair of vertical/retractable type, 250 t SWL.
- **Shark jaws:** 2 of 250 t SWL.
- **Tuggers:** 2x 11 t at 25m/min.
- **Capstans:** 2x 10 t at 14m/min.
- **Deck provisions crane:** 1.7 t at 14 m.

CAPACITIES & PUMPS

Cargo deck area:420 m² (33x13m) @ 5.0 t/m².
Deck cargo :800 tons @ 0.9 m above deck.
DW/WB:464 m³ – 1x120 m³/h at 7 bars.
Fuel oil cargo:.....607 m³ – 1x120 m³/h at 7 bars.
Fresh water:446 m³ – 1x 120 m³/h at 7 bars.
Liquid mud/Brine:392 m³ – 1x 120 m³/h at 7 bars.
Liquid mud tank are designed for products up to 2.5 sg and are equipped with agitators and circulation.
Chain locker/Brine/Mud:112 m³.
Dispersant:20 m³.
Foam:18 m³.
Bulk cement.....170 m³ – 4 tanks-sg 2.35- 2 products
2 air compressors– 2x20m³/min at 5.6 bars

ELECTRONICS

- **NAVIGATION**
 - 2 radars, 1 gyrocompass, 1 magnetic compass, 1 digital echo-sounder.
 - 1 speed log.
 - 1 autopilot system.
 - 1 GPS.
- **COMMUNICATION**
 - 1 radio system compliant with GMDSS A3 rules including:
 - 1 SSB duplex DSC 2 INMARSAT C 2 VHF EPIRB SART NAVTEX,
 - 1 Iridium system,
 - 1 INMARSAT F,
 - E-mail and on-board computer network system,
 - Automatic exchange telephone system with facilities in each room.

DYNAMIC POSITIONING SYSTEM (DP 1)

Comply with class notation DYNAPOS AM/AT (class 1).
- System allowing: dynamic positioning, automatic speed control.
- Reference system: 1 DGPS.
- Sensors: 1 gyrocompass, 1 wind sensor.

SPECIAL EQUIPMENT

- **Standby Rescue Equipment for 150 survivors:** (optional).
- **Life saving arrangement:** 1 MOB (Rescue boat) with davit,
 - Life rafts with equipment,
 - Lifebuoys, life Jackets.
- **FIFI I:** 2,400 m³/h, (Remote controlled from wheelhouse).
 - 2 water monitor 1,200 m³/h at 12 bars.
(with foam capacity 300m³/h).
 - Pumps: 2x 1,500 m³/h at 14 bars each.
 - Deluge system.
- **Pushing rubber bow fender.**

PRELIMINARY

All particulars believed to be correct but not guaranteed.

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