

**BOGAZICI // SHIPPING**

**BOGAZICI ASD ESCORT TUG BOATS**



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## DESIGN FEATURES

The new Bogazici 65+ TBP Multipurpose ASD Escort Tug for LNG Terminals and Harbours is exclusively designed in Spain by Cintraval-Defcar and its basic and class designs were based on the well proven previously built Bogazici 65+ TBP ASD Escort Tug Boats with some alterations. The design is made with the intention of meeting more demanding requirements of the tug operators. This new version has two accommodation decks compared to 3 decks of its predecessors.

These new , all welded steel construction; high performance ASD tug boats are twin Z-drive CP propelled and powered by diesel engines , offer a good stability and sea keeping together with an excellent manoeuvrability thank to its bow thruster. This combination gives the tug boat a bollard pull of over 65 tons ahead, over 60 tons astern and a free running speed of 13,5 knots.

As per the calculations of Bureau Veritas the tug boat produces 75 tons Escort power.

Overall design features provide to the operators a multipurpose platform for various tasks such as escort services, assisting the berthing and unberthing of vessels at harbour premises and terminals, pulling and pushing during vessel's mooring manoeuvrings, open sea and harbour tug services from the stern, aft and sides, anchor handling and deck load carrying.

The large fuel bunker capacity and fresh water quantity give the tug opportunity and flexibility of carrying out long distance towing and supply works.

The tug boat is fendered for heavy duties and can safely operate in the push-pull mode. The fender system consists of forward fender being adequate to support up to 80 metric tons of pushing. Both sides of the vessel and aft corners are protected with neoprene rubbing bars. Fenders are made of synthetic rubber compound with resistance against oil pollution, seawater, ozone, UV radiation and high and low temperature.





- I ✕ HULL
- ESCORT TUG
- SALVAGE TUG
- OIL RECOVERY
- UNRESTRICTED NAVIGATION
- FIRE FIGHTING SHIP 1
- WATER SPRAYING
- ✕ MACH
- AUT-UMS

# WHEELHOUSE

**W**heelhouse of the Bogazici Escort & Harbour series is specially designed for a maximum visibility at any direction, especially for the best visibility of fore and aft winches in every weather conditions.

The wheelhouse, completely insulated and lined, is designed as a combined wheelhouse, chartroom and radio room and is equipped with control consoles, radars, alarms, chart table and navigation desk.

Big windows give the master a good visibility in every direction including full view of the fore escort winch , boat deck and aft deck. The small windows over enable the master to have a good vision upwards as well.

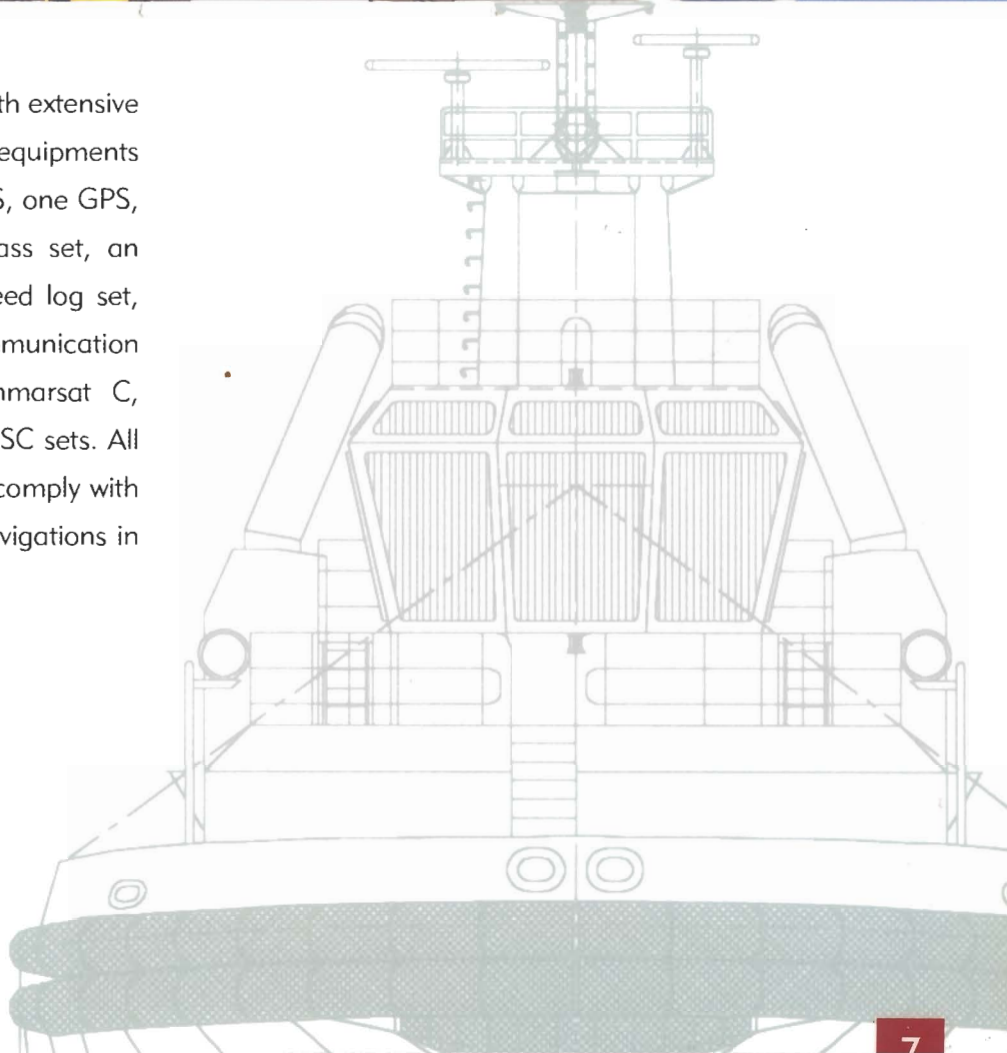
The wheelhouse is equipped mainly with two longitudinal control consoles and one special adjustable and rail mounted pilot seat, thus the visibility of the ship's aft and fore and viewing angle of the master are further improved.

The control consoles contain main engines' controls and readings, propellers' controls and readings, master stick for propeller controls, FiFi monitors' control panel and aft towing winch control panel, autopilot, escort(fore) winch control panel, bow thruster control unit, satellite compass readings, GPS, AIS, wipers' control, echo sounder readings, Navtex equipment, chart plotter, radars, communication equipment, typhoon control, navigation lights control panel, deck light and projectors' switches and alarm panels. Frequency of use and importance of such devices are the main criteria while designing user friendly control consoles which aim to give to the master a full access to every important information on time for keeping the tug boat up and running.





**T**he wheelhouse is equipped with extensive nautical and communication equipments consisting of two radars, one AIS, one GPS, a satellite and magnetic compass set, an autopilot, echo sounder and speed log set, chart plotter and a navtex. Communication pack comprises GMDSS, Inmarsat C, Inmarsat Mini M and two VHF/DSC sets. All exterior communication systems comply with international requirements for navigations in area A3 of GMDSS system.

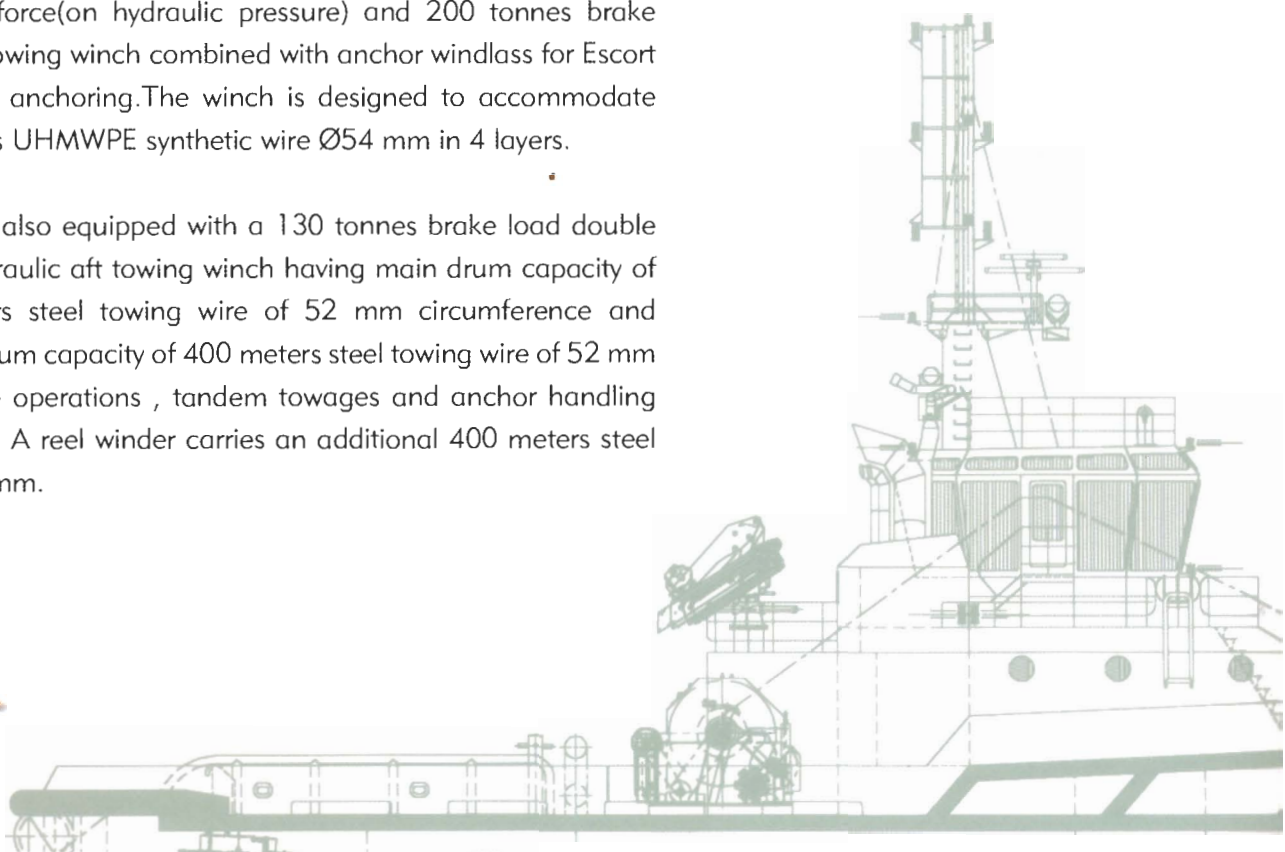


## DECK EQUIPMENT



**T**he tug is equipped on the forecastle with a hydraulic 80 tonnes rendering force (on hydraulic pressure) and 200 tonnes brake load fore towing winch combined with anchor windlass for Escort duties and anchoring. The winch is designed to accommodate 200 meters UHMWPE synthetic wire  $\varnothing 54$  mm in 4 layers.

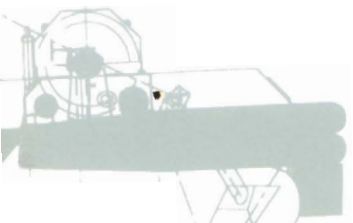
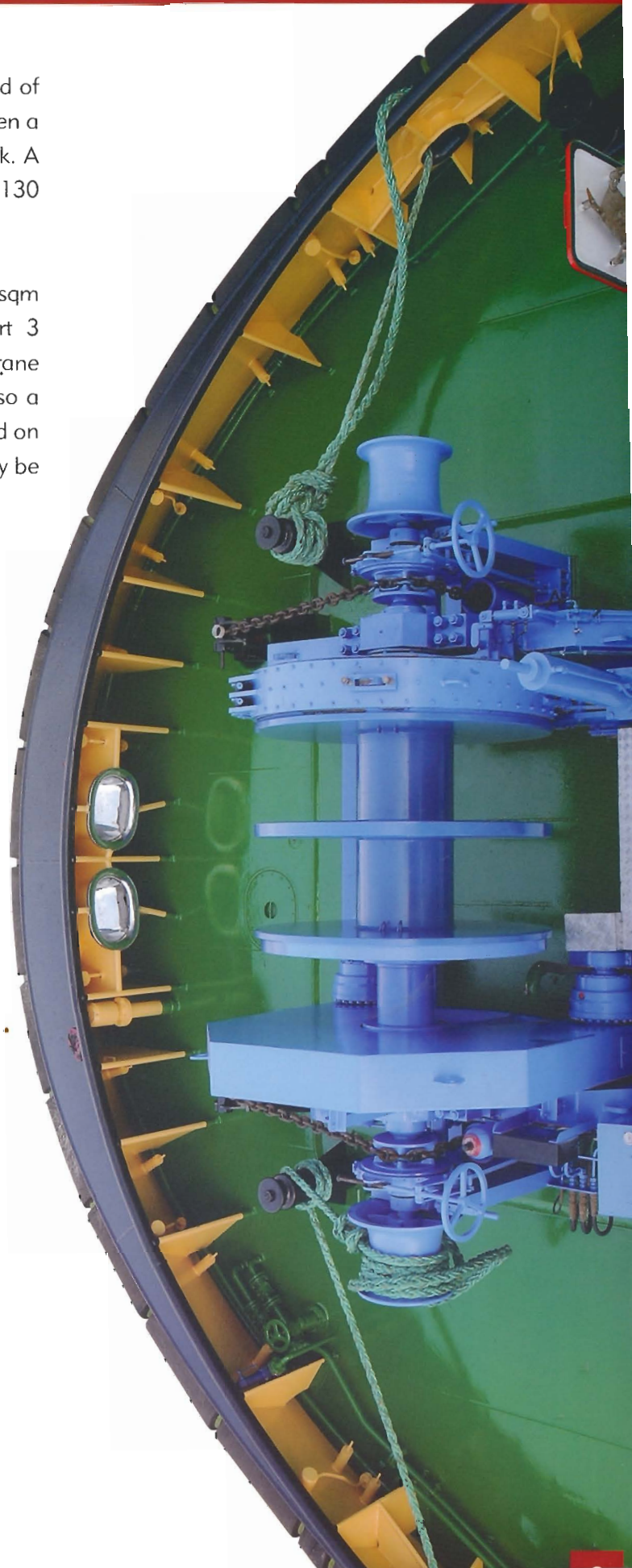
The tug is also equipped with a 130 tonnes brake load double drums hydraulic aft towing winch having main drum capacity of 800 meters steel towing wire of 52 mm circumference and auxiliary drum capacity of 400 meters steel towing wire of 52 mm for salvage operations, tandem towages and anchor handling operations. A reel winder carries an additional 400 meters steel wire of 52mm.



## DECK EQUIPMENT

**A** towing hook with a standard working load of 65 tonnes is mounted on the towing bit and then a hydraulic towing pin is located on the aft deck. A stern roller of 1,000 mm x 3,000 mm with 130 SWL is fitted in the tug's stern.

Aft deck has a strength capacity of 5 tonnes/sqm and container fixtures to carry and transport 3 pieces 20ft ISO containers. A Palfinger deck crane with 1150 kg at 12,4 m lifting capacity is also a part of the deck layout. A rescue boat is located on the boat deck to where a rescue boat davit may be optionally mounted.

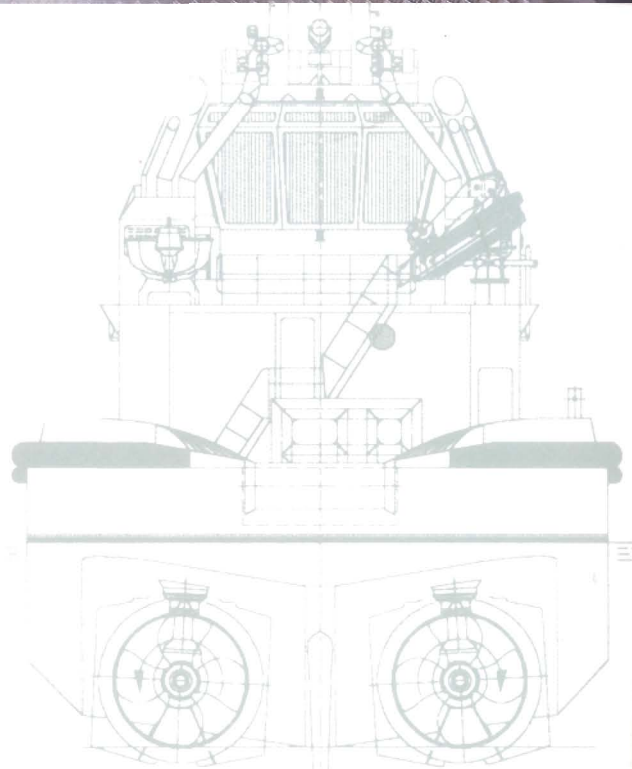


## ENGINE ROOM



**S**pacious engine room of the tug boat is well arranged to maintain all equipments accessible in there . Another feature is that anti skid aluminium floor makes all valves and pipes accessible under floor as well.

The tug boat is powered with a pair of NRF box cooled Caterpillar 3516B high displacement engines, each of them delivering 2,100 kW at 1,600 rpm to a pair of Schottel rudder propellers SRP 1515CP with 4 bladed 2600 mm.  $\varnothing$  controllable pitch propellers. A Schottel bow thruster STT 110T-LK gives the tug an excellent manoeuvrability.





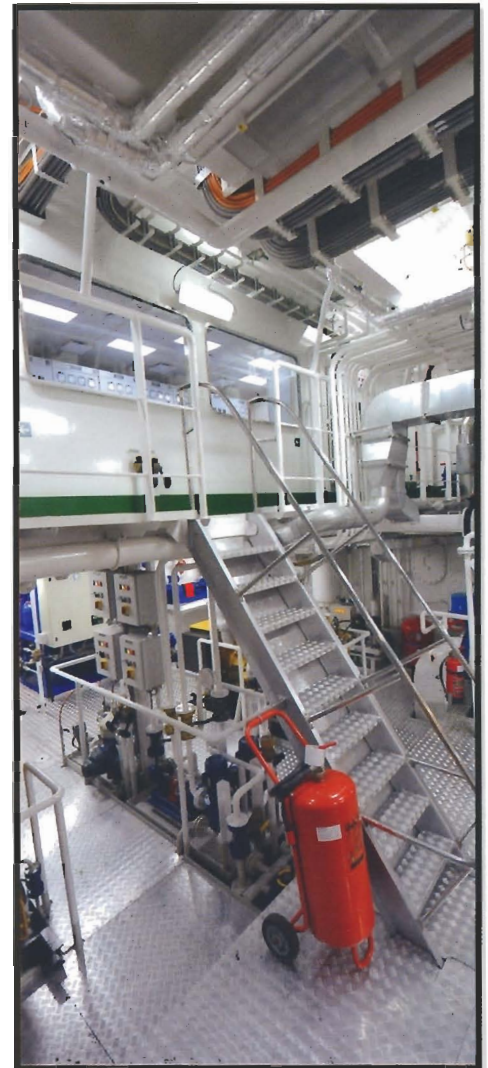
## ENGINE ROOM

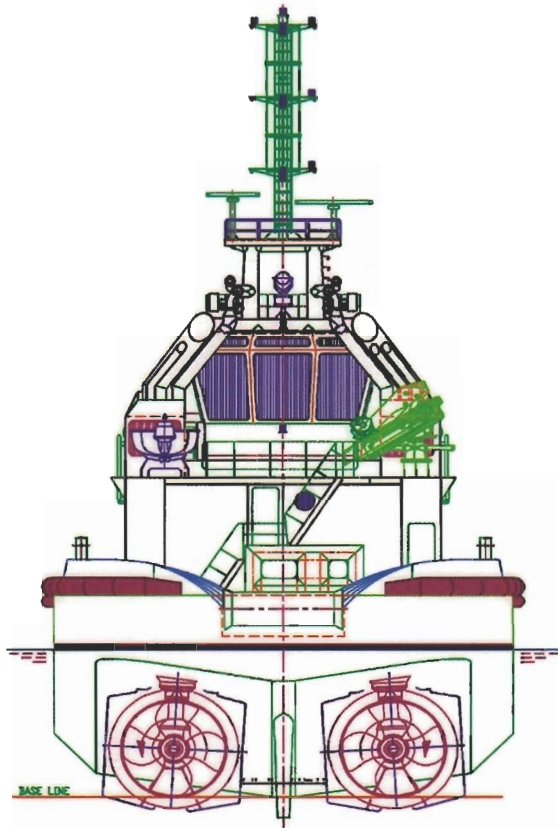
**T**hree Caterpillar C9 generator sets running at 1,500 rpm produce 150 kW each. The spacious engine room has an air conditioned Engine Control Room with the most modern electronic power management and advanced monitoring systems. Alfa-Laval fuel separator provides the engines with the highest possible clean fuel. The vessel is equipped with most modern Fire Extinguishing System of FM 200. Also equipped with a Facet oily water separator and Facet sewage treatment installation, the tug boat meets the latest .IMO regulations.

The main switchboard located in the engine control room is dead front type and disposes of control switches and protection of the generators and switches to distribute the energy to the secondary boards and starters.

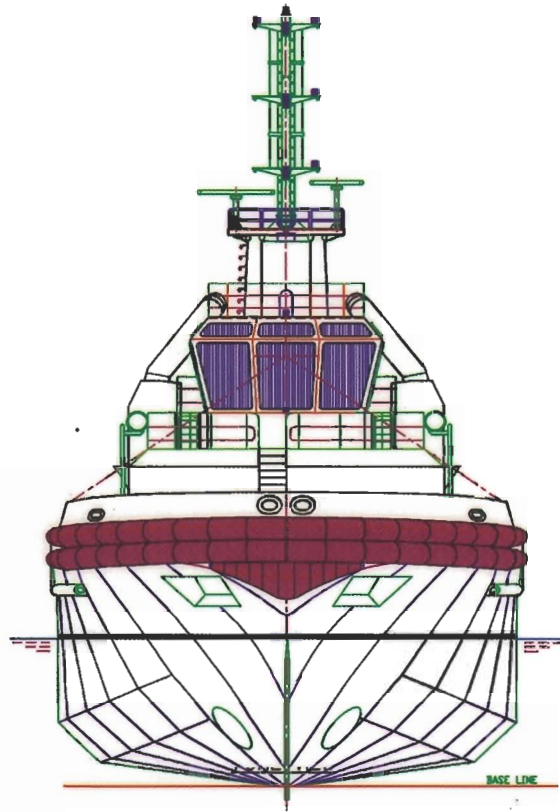
The large fuel bunker capacity and fresh water quantity give the tug opportunity and flexibility of carrying out long distance towing and supply works.

The tug has a small workshop with bench and vertical drilling machine to carry out small repairs for herself and for salvage purposes.

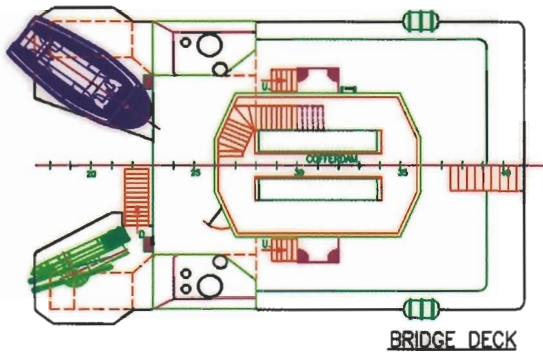




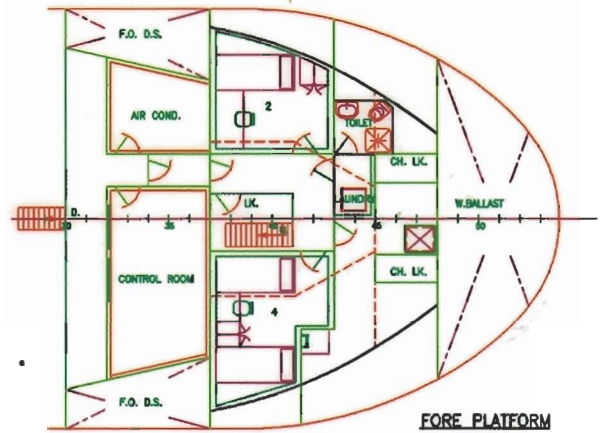
AFT VIEW



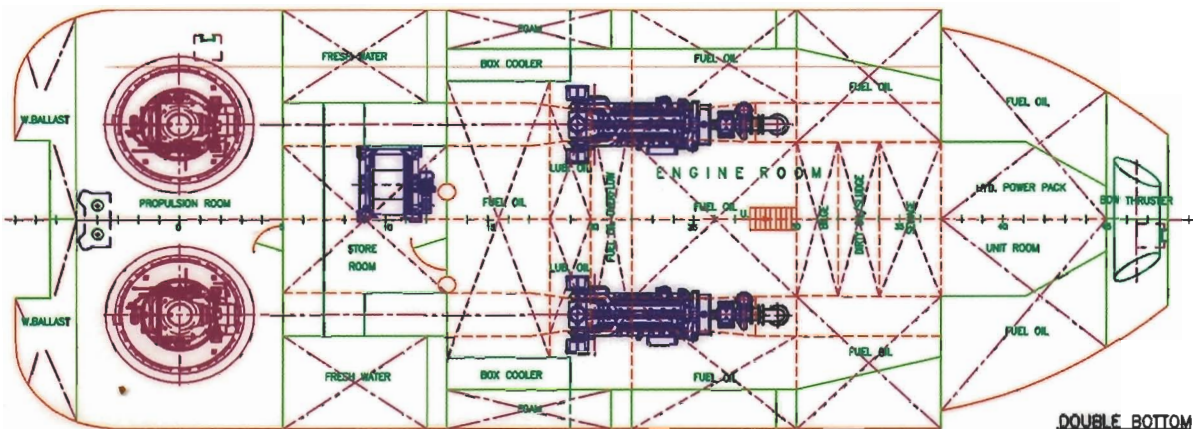
FORE VIEW



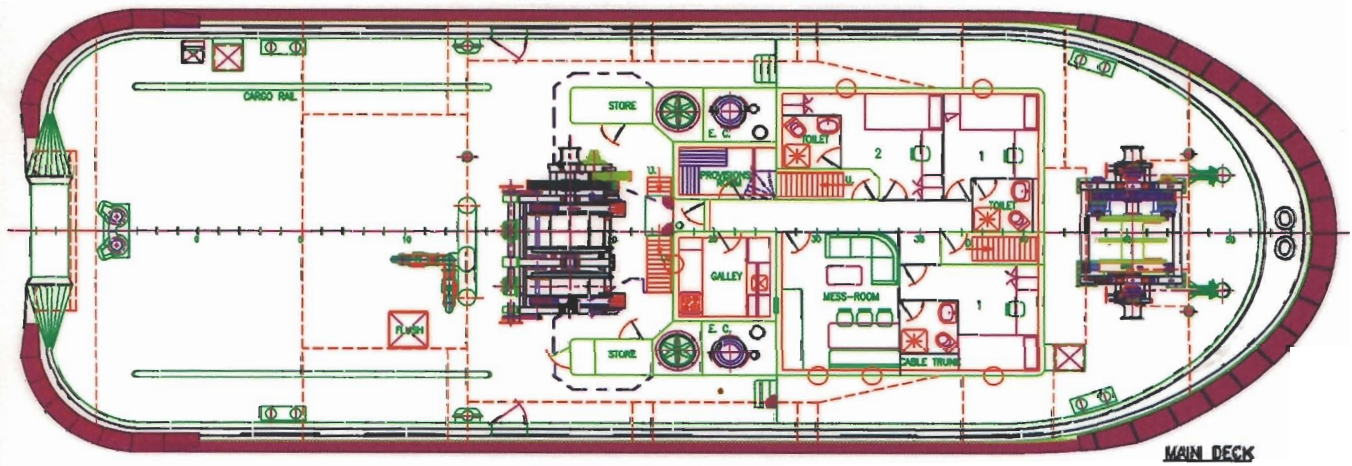
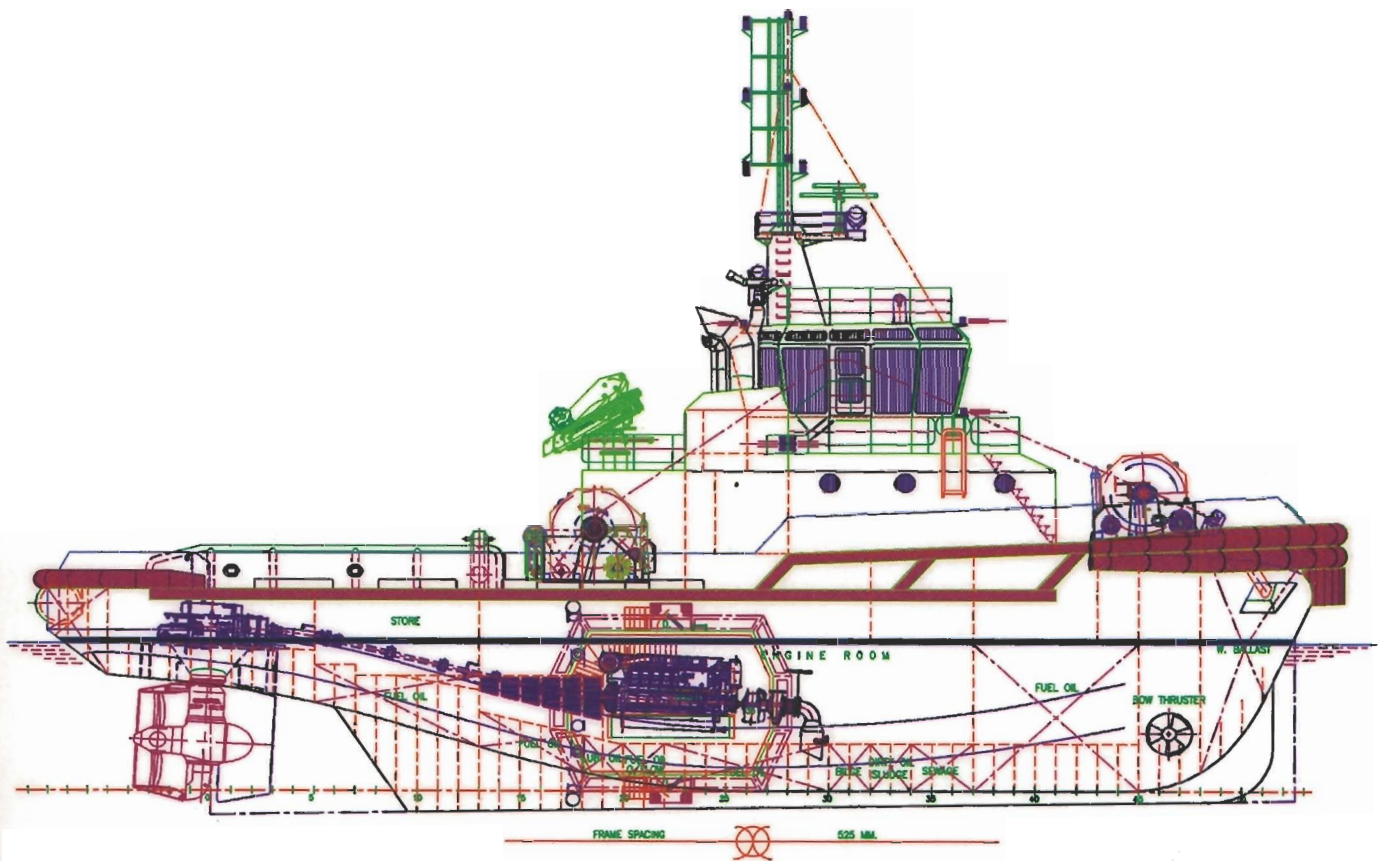
BRIDGE DECK



FORE PLATFORM



DOUBLE BOTTOM



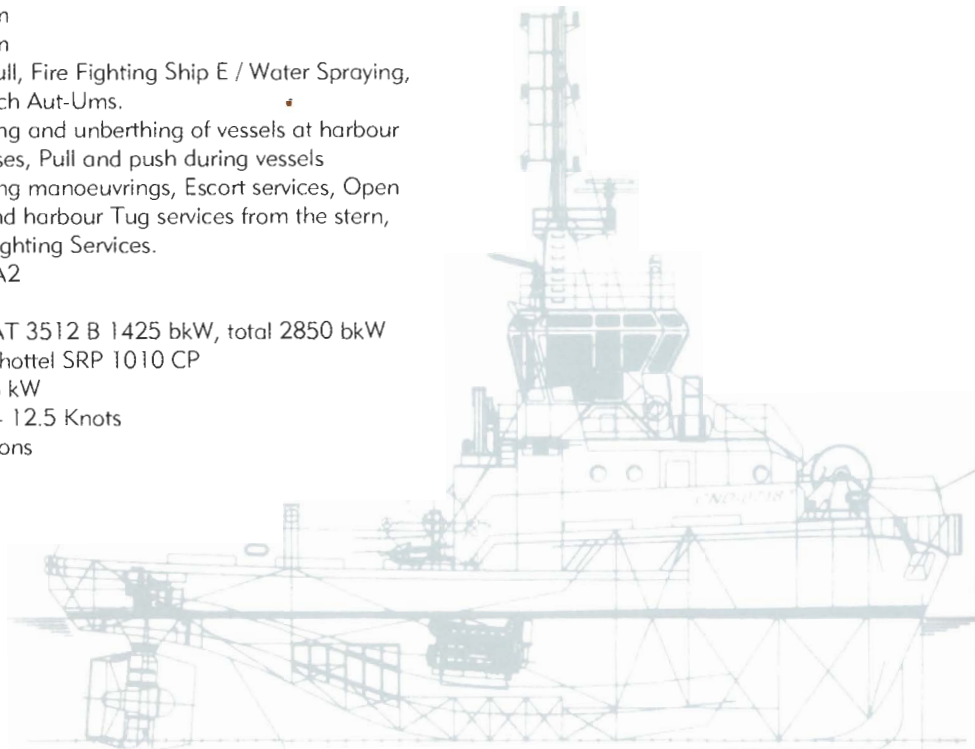
MTUG BOGAZICI 5 & MTUG BOGAZICI 6

# 40+ TONNES BP MULTIPURPOSE AZIMUTH STERN DRIVE TUG



## Principal Characteristics

Designer	: CintranaVal-Defcar / Spain
L.o.a.	: 25.00 m
L.b.p.	: 21.50 m
Breadth Moulded	: 9.80 m
Depth	: 4.70 m
Design Draft	: 3.40 m
Class Notations	: I <input checked="" type="checkbox"/> Hull, Fire Fighting Ship E / Water Spraying, <input checked="" type="checkbox"/> Mach Aut-Ums.
Services / Capabilities	: Berthing and unberthing of vessels at harbour premises, Pull and push during vessels mooring manoeuvrings, Escort services, Open sea and harbour Tug services from the stern, Fire Fighting Services.
Navigation/Communications	: Area A2
Complement (at sea / port)	: 6 / 3
Main Engine	: 2 x CAT 3512 B 1425 bkW, total 2850 bkW
Propulsion	: 2 x Schottel SRP 1010 CP
Diesel Generators	: 2 x 86 kW
Speed	: 12.0 – 12.5 Knots
Bollard Pull Ahead	: 40+ tons

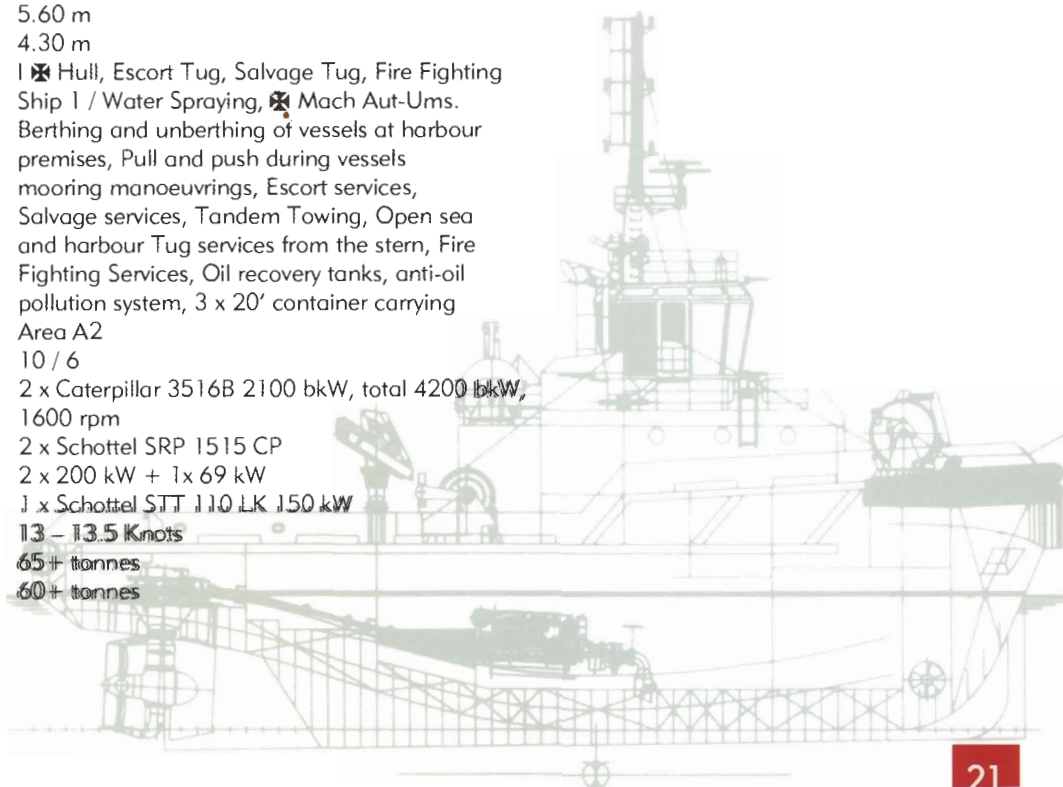


# 65+ TONNES BP MULTIPURPOSE AZIMUTH STERN DRIVE ESCORT TUG (A) FOR LNG TERMINALS AND HARBOURS



## Principal Characteristics

Designer	: Cintraval-Defcar / Spain
L.o.a.	: 32.50 m
L.b.p.	: 27.60 m
Breadth Moulded	: 11.70 m
Depth	: 5.60 m
Design Draft	: 4.30 m
Class Notations	: 1 $\boxtimes$ Hull, Escort Tug, Salvage Tug, Fire Fighting Ship 1 / Water Spraying, $\boxtimes$ Mach Aut-Ums.
Services / Capabilities	: Berthing and unberthing of vessels at harbour premises, Pull and push during vessels mooring manoeuvres, Escort services, Salvage services, Tandem Towing, Open sea and harbour Tug services from the stern, Fire Fighting Services, Oil recovery tanks, anti-oil pollution system, 3 x 20' container carrying
Navigation /Communication	: Area A2
Complement (at sea / port)	: 10 / 6
Main Engine	: 2 x Caterpillar 3516B 2100 bkW, total 4200 bkW, 1600 rpm
Propulsion	: 2 x Schottel SRP 1515 CP
Diesel Generators	: 2 x 200 kW + 1x 69 kW
Bow Thruster	: 1 x Schottel STT 110 LK 150 kW
Speed	: 13 – 13.5 Knots
Bollard Pull Ahead	: 65+ tonnes
Bollard Pull Astern	: 60+ tonnes

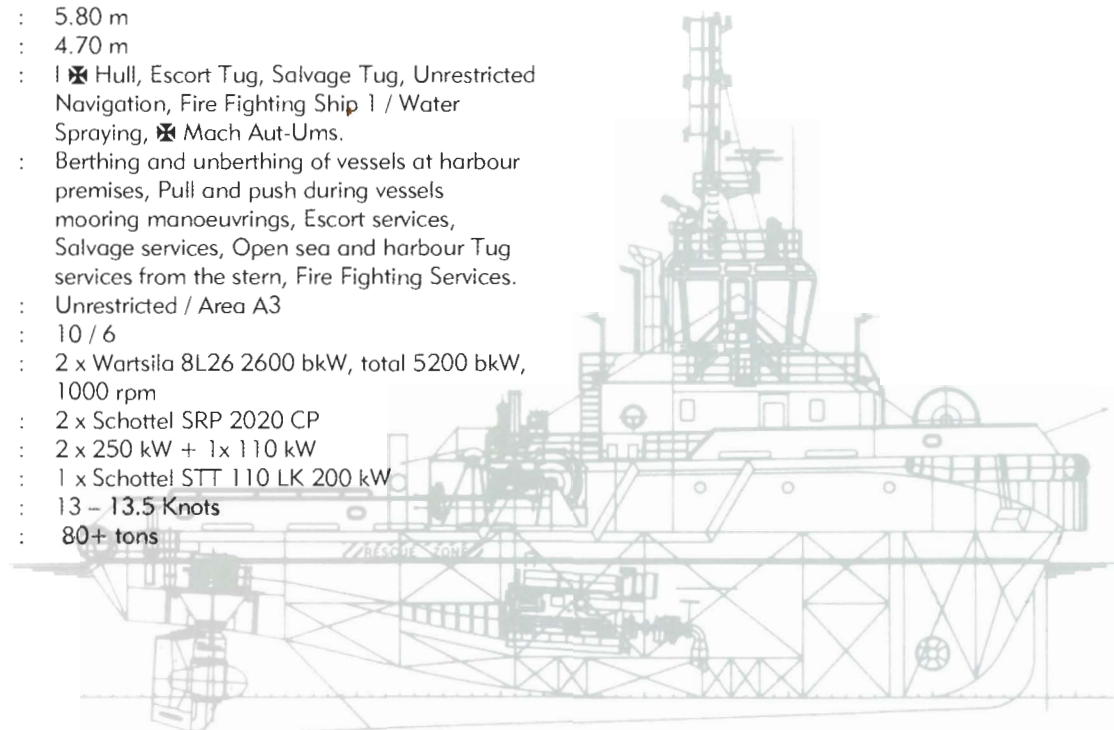


# 80+ TONNES BP MULTIPURPOSE AZIMUTH STERN DRIVE ESCORT TUG



## Principal Characteristics

Designer	: Cintraval-Defcar / Spain
L.o.a.	: 34.00 m
L.b.p.	: 29.00 m
Breadth Moulded	: 13.50 m
Depth	: 5.80 m
Design Draft	: 4.70 m
Class Notations	: 1 $\boxtimes$ Hull, Escort Tug, Salvage Tug, Unrestricted Navigation, Fire Fighting Ship 1 / Water Spraying, $\boxtimes$ Mach Aut-Ums.
Services / Capabilities	: Berthing and unberthing of vessels at harbour premises, Pull and push during vessels mooring manoeuvrings, Escort services, Salvage services, Open sea and harbour Tug services from the stern, Fire Fighting Services.
Navigation /Communication	: Unrestricted / Area A3
Complement (at sea / port)	: 10 / 6
Main Engine	: 2 x Wartsila 8L26 2600 bkW, total 5200 bkW, 1000 rpm
Propulsion	: 2 x Schottel SRP 2020 CP
Diesel Generators	: 2 x 250 kW + 1x 110 kW
Bow Thruster	: 1 x Schottel STT 110 LK 200 kW
Speed	: 13 – 13.5 Knots
Bollard Pull Ahead	: 80+ tons



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