

# AHT ASD "BRAVEHEART"

Call Sign: CQTU

IMO NUMBER: 9263461

Home Port: MADEIRA

Type of Vessel: DEEP SEA /  
ESCORT/ANCHOR HANDLING /  
FIRE FIGHTING / SALVAGE /  
STERN DRIVE TUG

Classification: R.I.N.A. - SALVAGE  
TUG; UNRESTRICTED  
NAVIGATION, FFQ1, AUT-UMS,  
TPF 1012, ESCORT TUG

Owner:  
BARRY TOWAGE & OFFSHORE  
S.A. - MADEIRA - PORTUGAL

Builder:  
ROSETTI MARINO S.P.A. -  
RAVENNA - ITALY

Design:  
WORLDWIDE MARINE ENGINEERING B.V. - IJMUIDEN - THE NETHERLANDS



## Technical Data

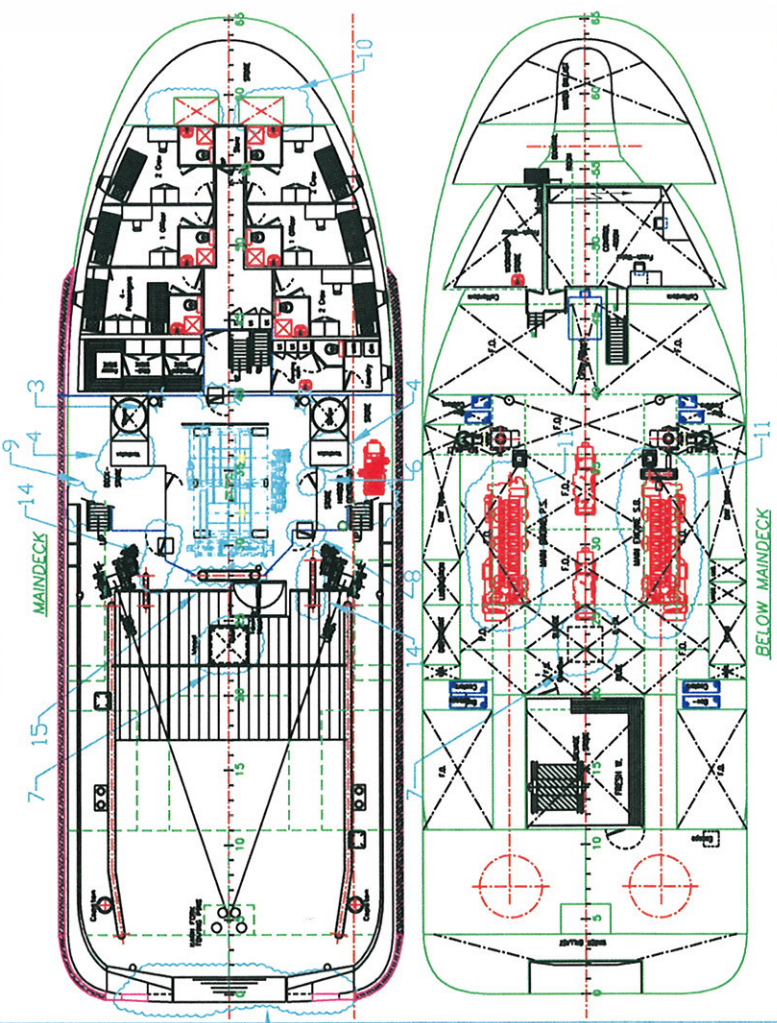
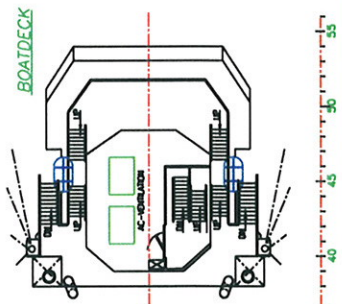
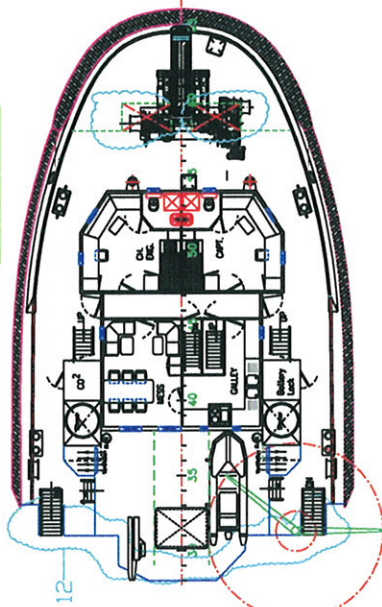
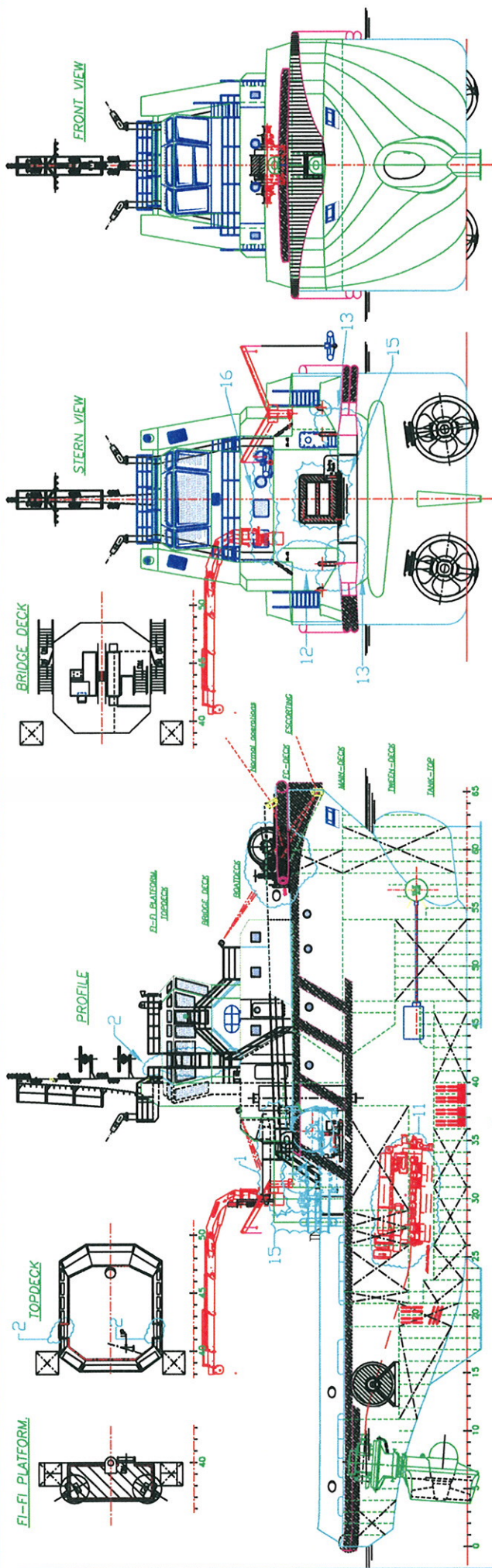
Length overall	39,40 mt.	Built	July 2003
Beam Moulded	13,00 mt.	Displacement at full load	1615,26 Tons
Design draft	5,20 mt.	Gross Tonnage	850 GT
Depth	6,40 mt.	Light ship	1080 Tons
Main Engines	N° 2 WARTSILA diesel engines 9 L26 type, 2 x 2790 Kw. (7589 BHP)@ 1000 RPM.		
Propulsion	N° 2 ROLLS-ROYCE AQUAMASTER Azimut Thrusters, Stern Mounted, US 305 CP type, 3000 mm. Propeller diameter		
Auxiliary Engines	N° 2 VOLVO PENTA, TAMD 103 A type, 2x215 Kw.@ 1500 RPM.		
Emergency / Harbour Generator	N° 1 VOLVO PENTA, TAMD 74A RC type, 80 Kw @1500 RPM.		
Bow Thruster	N° 1 VOLVO PENTA diesel engine, D25 MS type, 450 Kw. @1500 RPM Driving N° 1 KAMEWA CP Propeller 90 TV type, total thrust 6 Tons.		
Bollard Pull	Ahead: <b>103.3 Tons</b> ; Astern: <b>92.3 Tons</b> (RINA CERTIFICATE)		
Speed	14.3 Knots		
Capacity	Fuel 415 m <sup>3</sup> Fresh Water 135 m <sup>3</sup> Foam 14 m <sup>3</sup>	Dirty oil 10 m <sup>3</sup> Sewage 6 m <sup>3</sup> Dispersant 10 m <sup>3</sup>	Ballast 98 m <sup>3</sup> Lub. Oil 10 m <sup>3</sup> Hyd. oil 10 m <sup>3</sup>

Deck Machinery	
<p>N° 1 Hydraulic Low Pressure HATLAPA main Towing / Anchor Handling Double Drum Reverse Waterfall Winch.</p> <p><u>Capacity:</u> Towing Drum 1000 mt. Steel Wire Ø 56 mm. – Anchor Handling Drum 900 mt. Steel wire Ø 56 mm. plus 250 mt. “DYNEEMA” Rope Ø 64 mm. in a separate section.</p> <p><u>Duty on towing:</u> 95 tons line pull @ 0 – 14 mt./min. 220 Tons brake load. Fitted with “Spooling Device” and Automatic Tension Control system.</p> <p>N°2 Hydraulic Low pressure HATLAPA Tugger Winches, Duty on towing 100 kN.</p> <p>N°2 Hydraulic Vertical Capstans, pulling capacity 50 kN..</p> <p>N° 1 “Disc type” MAMPAEY Towing Hook, S.W.L. 90 Tons.</p> <p>N° 1 Set of Hydraulic operated KARM FORKS and TOWING PINS.</p> <p>N° 1 pair of Hydraulic operated “Norman” PINS integrated in the aft bulwark.</p> <p>N°1 Stern Roller, 180 Tons. S.W.L., dimensions 4500 mm. x 1500 mm..</p> <p>N° 1 Hydraulic Low Pressure HATLAPA Anchor Windlass / Towing / Escort combined Winch with 2 Cable Lifters, 2 Warping Heads and 1 Drum suitable for 250 mt. DYNEEMA rope Ø 64 mm..</p> <p><u>Duty on Towing:</u> 125 Tons@ 0 – 10 mt./min. line pull, brake load 220 Tons. Fitted with Automatic Tension Control system for ESCORT duties.</p> <p>N° 1 Hydraulic powered HATLAPA spare Towing Wire Reel – 1000 m. steel wire Ø 56 mm. drum capacity</p> <p>N° 1 Hydraulic Marine EFFER Deck CRANE type 80000 3S, hoisting capacity 5500 kg@ 11.50 mt. or 6000 Kg@ 9.00 mt..</p>	
Fire Fighting Equipment	N° 2 diesel driven centrifugal Pumps 1450 mt <sup>3</sup> /h capacity each – n°2 electric remote controlled Monitors for water/foam 1200 mt <sup>3</sup> /h @ 125 mt. each. Self drenching System. Fully complied with FFQ1 RINA notation.
Cargo Discharge Pumps	<p><u>Diesel Oil</u> N°1 electric driven pump 80 m<sup>3</sup>/h @ 65 mt. head, dedicated pipe system with flow meter.</p> <p><u>Fresh Water</u> N° 1 electric driven pump 80 m<sup>3</sup>/h @ 65 m. head, dedicated pipe system with flow meter.</p>
Free Deck Space	Ample aft deck suitable for Anchors and Materials – 130 mt <sup>2</sup>
Accommodation	Living quarters fully heated and air conditioned, suitable for a crew of 10 plus 4 passengers: 4 single cabins, 3 double cabins, 1 four-berth cabin all with private facilities; mess room, galley, walk-in store, refrigerated store, freezing units.
Communications and Navigation equipment	GMDSS area A1+A2+A3 SATCOM for voice-fax-data – fleet 77 --- Mobile Phone Magnetic Compass

	Gyro Compass Auto pilot 2 Daylight Radars Ecosounder with 1 repeater Anemometer for true wind 1 DGPS 1 GPS 1 Electronic Chart System 1 VHF radio direction finder 1 Marinised Personal Computer 1 Colour Printer 1 Joystick for integrated manoeuvring system
Towing, Salvage and Anchor Handling equipment	2 Electric submersible pumps, 200 mt <sup>3</sup> /h capacity each, fitted with hoses and connections, cutting and welding equipment, ropes, wires, shackles, stretchers, pennant wires, towing chains, diving equipment. 2 wheelhouse remote controlled searchlights, fitted with 2000W XENON lamp
Antipollution System	1 Electric Driven dispersant pump connected, via a proportioning eductor with flow rate adjusting cock, to a pipe system with 2 spray booms with nozzles







### PRINCIPAL DIMENSIONS

LENGTH	HULL	39.10	mtr.
BREADTH	MID.	13.00	mtr.
DEPTH	MAINDECK.	6.40	mtr.
DRAFT	BASLINE	5.20	mtr.
	DRAFT MAX.	5.90	mtr.

### PRINCIPAL PARAMETERS.

SPEED 14 kn. ahead  
BOLLARD PULL 90 ton ahead  
FRAMESPACING 600 mm.

### TANK CAPACITIES.

FUEL OIL	415	cu. mtr.
FRESH WATER	135	cu. mtr.
Black/Grey	6	cu. mtr.
Sludge	6	cu. mtr.
DISPERSANT	14	cu. mtr.
FOAM	14	cu. mtr.
BILGE WATER	6	cu. mtr.
F.O.OVERFLOW	6	cu. mtr.
LUBRICATION OIL	16	cu. mtr.
HYDRAULIC OIL-total	7	cu. mtr.

20/2	H	Modification battery Tongue	General Modifications	WIP PROJECT	WIJSMULLER ENGINEERING B.V. IJMUUDEN – HOLLAND
2/18	H/18				
DATE					