

GENERAL INFO

Basic Functions	Tug Boat - Outfitted for harbour duties, berthing, towing, fire fighting operations and assisting polishing control in the ports.
Design	Macduff Ship Design Ltd. Scotland
Classification Society	Bureau Veritas (BV)
Class Notation	BV † Hull † Mach. Tug Fire Fighting Ship 1 - Water Spaying, Unrestricted Navigation, AUT-UMS
Bollard Pull	44 TBP @AFT and 38 TBP @Forward
Speed	11.5 Knots

9 persons



Accommodation

DIMENSIONS

Length Over All (LOA)	30M
Breadth	11M
Depth	5M
Draught (Max.)	3M

TANK CAPACITIES

Fuel	144,33m3
Fresh Water	30,451m3
Sewage	11,66m3
Recovered Oil	11,66m3
M/E Lube Oil	9,037m3
Propeller Oil	4,125m3
Dirty Oil	9,037m3
Hydraulic Oil	4,125m3
Detergent	10,467m3
Foam	10,467m3

FIRE & SAFETY

External Fi-Fi System & Water Spring	2x Remote operated water, foam monitor
Fixed Fire Fighting Equipment	FM200- Fire Fighting System
Fire & Smoke Detection Systems	For E/R, Accomodation and all compartment monitored from wheelhouse & call (alarm) points at several locations c/w general alarm system from the central alarm panel
Safety Equipment	Inflatable life raft for 12 men RFD



NAVIGATION

Search Light 2x 3000W electric remote

Navigation & Communication 2x RADAR UNITS - 45NM Range

Equipment GPS navigator

Echo Sounder & Speed Log

MAGNETIC COMPASS - CASSENS&PLATH-STT

GYRO COMPASS - YOKOGAWA AUTO PILOT - Navigator ANEMOMETER - WALKER Chart Plotter - Lorenz 2x INMARSAT C - JRC

NAVTEX - JRC BNWAS - NAVITRON

AIS - JRC

TELEPHONE AND INTERNAL TALK-BACK SYSTEM, PHONTECH

BATTERYLESS TELEP - PHONETECH

VHF SETS - JATRON

VHF TRANSCEIVER (GMDSS) - JATRON

FLEET BROADBAND - JRC

ALDIS LAMP

DECK MACHINERY

TOWING WINCH & WINDLASS Hydraulic operated, min.130 tons break load, nominal pull 20

tons at 20m/min., combined with hyraulic anchor winch, with

two vertical warping heads

TOWING HOOK 2 x disk type, 65 tons SWL, quick release, on aft and fore deck.

ANCHORS & CHAIN 2x HHP, Pool type, 375kg each & 2x 165m - 19mm HT

Capstan On AFT deck,hydraulic

DECK CRANE Hydraulic operated, 1650kg@7.8m,230bar working

pressure, lifting moment 19.36 Tm

WORK BOAT 4,5m length, outfitted for MOB operations, outboard engine.

POLLUTION EQUIPMENT Removable dispersant/detergent spraying gear on each ship

side, mobile dispersant/detergent pump-set c/w gear, oil

containment booms, floating oil skimmers, independent power/

pump set, high pressure cleaner.

FENDERS W TYPE, RUBBER, 400x250 & Tire Fenders



MACHINERY MAIN ENGINE 2 x 1330kW, 900rpm - YANMAR Shafting & Propeller 2x 1273kW 900rpm, Z drive (SRP 1012 CP) - SCHOTTEL Generator 2x, C6.6 ACERT, 150 eKW(187kVA), 1800rpm 60Hz, 440V -**CATERPILLAR** Air Compressor & Air Bottle 63,6m³/h, 40bar, air cooled + 200lt air bottle 2 x 100m³/h, 18m, centrifugal SEA WATER PUPM (M/E COOLING) 2 x 100m³/h, 18m, centrifugal STAND-BY SEA WATER PUMP(M/E) $2 \times 40 \text{m}^3/\text{h}$, 25 mSTAND-BY FRESH WATER PUMP(M/E) **EMERGENCY BILGE/FIRE PUMP** 25 m³/h, 6bar, self priming **BILGE PUMP** 50 m³/h, 4bar, self priming **GENERAL SERVICE -FIRE-**50 m³/h, 6bar **DETERGENT PUMP** 20 m³/h, 2,5bar **FUEL TRANSFER PUMP FUEL OIL SERVICE PUMP** 4 m³/h, 2bar DOMESTIC SERVICE PUMP 2x with pressure vessel, 1 xfresh water and 1x sea water $\sim 3.2 \text{m}^3/$ h, 4bar/~200ltr, with stand-by pumps 2 x 0,8m³/h - 0,7MPa STAND-BY FUEL OIL PUMP(M/ E) 2m³/h - 2barDIRTY OIL PUMP(waste oil discharge pump) 0,5m³/h - 1bar SUMP OIL SUCTION PUMP Emergency diesel powered ~25m³/h, 8bar,self priming FIRE PUMP AIR CONDITIONING COOLING 25m³/h,2bar **PUMP**

3,5m³/h,2bar

4m³/h,0,7bar



SEWAGE DISCHARGE PUMP

HPP UNIT COOLING PUMP

ACCOMMODATION

HVAC Units 25 °C/ %65 rH, with one central A/C for accommodation

including cabins, mess room and galley, forced ventilation to comply with the extreme climate conditions. The wheelhouse

addition with separate A/C unit.

Accommodation Total 9 Persons: 3 single cabins for engineer, skipper & owner and

3 double cabins for crew all fitted with WC & Shower unit.















