

Reversed Stern Drive Tug 2513 Electric

STANDARD



PICTURE OF SIMILAR VESSEL

GENERAL

Basic functions	Towing, mooring, Ø fire-fighting and Ø oil pollution control
Classification	Bureau Veritas I * HULL • MACH Escort Tug Coastal Service AUT UMS INWATER SURVEY COMF-NOISE 3, COMF-VIB 3, ELECTRIC HYBRID (ZE), BATTERY SYSTEM Ø Fire Fighting Ship 1 Ø Water spray Ø Lloyd's Register *100 A1 Escort Tug, Specified Coastal Service, [*] LMC UMS CAC 3 Electric Hybrid DC Ø Fire Fighting Ship 1 Ø Water spray
Painting	Epoxy paint system

DIMENSIONS

Length overall	24.73 m
Beam overall	13.13 m
Depth at sites	4.95 m
Draught aft	6.50 m
Displacement (98% consumables)	615 t

TANK CAPACITIES

Fuel oil	46.7 m ³
Fresh water	11.2 m ³
Sewage	5.9 m ³
Dirty oil	1.9 m ³
Clean oil	1.9 m ³
Bilge water	5.9 m ³
Ø Foam	6.1 m ³
Ø Dispersant	3.7 m ³
Urea	1.5 m ³

PERFORMANCES

Bollard pull ahead	70 t
Bollard pull astern	65 t
Speed	12 kn

*Specified performances in full electric mode (battery powered)

PROPULSION SYSTEM

Main engines (electric)	2x Ramme TW 1400r_L
Total power	3700 bkW at 500 rpm
Azimuth thrusters	Kongsberg Maritime US 255 P30 FP
Battery capacity	2782
Propeller diameter	3000 mm
Forced ventilation	38.000 m ³ /h
Exhaust emission	IMO Tier III certified

AUXILIARY EQUIPMENT

Generator sets	2x Caterpillar C32TA, 1175 kVA, 690 V, 60 Hz
General service pumps	2x Azcuc CA 50/3B, capacity approx. 20 m ³ /h at 2.35 bar
Bilge water pump	Azcuc CA 32/0.5, capacity approx. 3.6m ³ /h at 1.1 bar
Fuel pump	Azcuc CA 40/1B, capacity approx. 12 m ³ /h at 1.2 bar
Fuel oil purifier	CJC, PTU3 27/81 incl. 3x FA/BLA 27/27 filter elements
Cooling system	Combination keel cooling and box cooling system
Fresh water pressure set	Azcuc MO-19/10 + 100 ltr pressure vessel
Hydraulic system	Double main engine driven pumps
Ø Sewage treatment plant	Selmar, Blue Sea plus 2500
Ø Oil pollution control	Dispersant pumpset with two spray booms
Ø Fifi set	1x Generator engine driven pump 1200 - 1400 m ³ /h or 2x generator engine driven pump each 1200 - 1400 m ³ /h (FIF1), Ø with water spray
Ø Fifi monitor	1x 1200 -1400 m ³ /h, water/foam or 2x each 1200 -1400 m ³ /h, water/foam (FIF1)

DECK LAY-OUT

Anchors	2x 360 kg Pool (High Holding Power)
Anchor winch	Electric, minimal hauling speed 9 m/min
Ø Second anchor winch	Electric, minimal hauling speed 9 m/min
Towing winch	Hydraulically driven two speed double drum, low speed pull 27 ton up to 30 m/min, high speed pull 27 ton up to 49 m/min, brake 200 ton
Ø Rendering-Recovery winch	Pull/low speed 30 ton up to 27 m/min on 2 nd layer, pull/high speed 30 ton up to 44 m/min on 2 nd layer, rendering 112 ton up to 82 m/min on 2 nd layer, brake 200 ton
Ø Towing hook	SWL 100 ton
Fendering	Cylindrical + block bow fender, D-fender side/aft

ACCOMMODATION

For 6 persons (MLC 2006 compliant), completely insulated and finished with durable modern linings, sound absorbing ceiling in the wheelhouse and floating floors. Air-conditioned wheelhouse, accommodation, battery room, switchboard room. Accommodation above main deck with a captain's cabin, chief engineer's cabin, one double crew cabin, pantry, mess/dayroom and sanitary facilities. The superstructure is mounted resiliently to reduce noise levels.

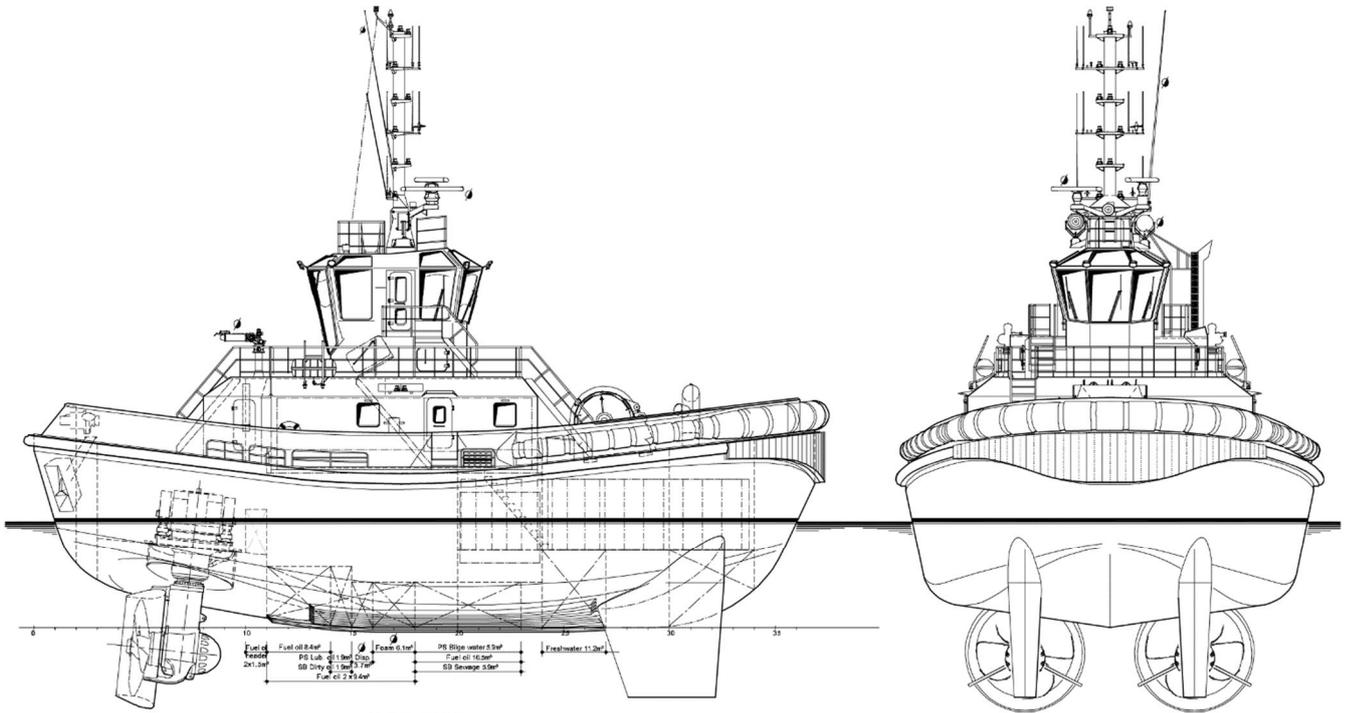
NAUTICAL AND COMMUNICATION EQUIPMENT

Searchlight	1x + Ø 1x Den Haan DHR300RCB, LED, 250 W
Radar system	1x Furuno FAR-1518 + Ø 1x Furuno FAR-1518
Compass	Cassens & Plath Reflecta 11
Electronic Chart System	Navi-Sailor 4000 ECS
Ø Gyro compass	Anschuetz Standard 22 Compact
Autopilot	Simrad AP-70
Satellite compass/GPS	Simrad GN70/HS80A
Echosounder	Skipper EMES60
Speed log	Furuno DS-80
VHF	2x Cobham Sailor 6222, one with DSC + Ø 1x Cobham Sailor 6215
VHF hand-held	Jotron TR-30
Navtex	Furuno NX-700B
AIS	Furuno FA-170
Ø SSB	Furuno FS-1575
Ø LRIT	Furuno Felcom 19
Inmarsat + Ø spare	Furuno Felcom 18
Ø ECDIS	Furuno FMD-3200
EPIRB	Jotron Tron-60S
Sart	Jotron Tronsart 20
Remote monitoring	Ready for Damen Triton

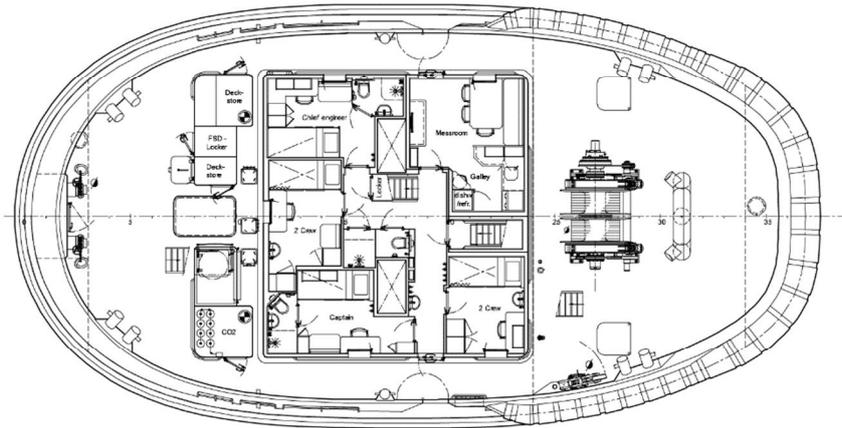
Ø = Optional equipment

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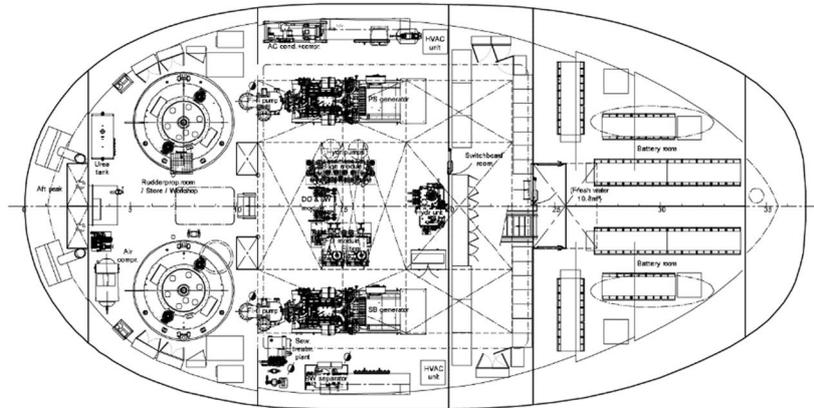
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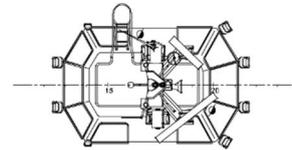
Main deck



Below Main deck



Top deck



Bridge deck

