



# REVERSED STERN DRIVE TUG 2513

## "BIS VIRIDIS"

### GENERAL

Yard number  
Basic functions  
Classification

515005  
Towing and mooring operations  
Bureau Veritas  
I \* HULL • MACH Tug Coastal Service  
AUT UMS INWATERSURVEY COMF-  
NOISE 3, COMF-VIB 3  
Incl. IMO III EAIPP certificate  
Ø Escort Tug  
Ø Fire Fighting Ship 1  
Ø Water spray  
Ø Lloyd's Register  
\* 100 A1 Tug Specified Coastal Service,  
LMC UMS IWS CAC 3  
Ø \* 100 A1 Escort Tug Specified Coastal  
Service, LMC UMS IWS CAC 3  
Ø Fire Fighting Ship 1  
Ø Water spray  
Epoxy paint system

Painting

### DIMENSIONS

Length overall 24.73 m  
Beam overall 13.13 m  
Depth at sides 4.95 m  
Draught aft 5.50 m  
Displacement 525 t  
(98% consumables)

### TANK CAPACITIES

Fuel oil 77.4 m<sup>3</sup>  
Fresh water 10.2 m<sup>3</sup>  
Bilge water 6.0 m<sup>3</sup>  
Sewage 6.0 m<sup>3</sup>  
Dirty oil 2.5 m<sup>3</sup>  
Lubrication oil 2.5 m<sup>3</sup>  
Urea 3.0 m<sup>3</sup>  
Ø Foam 12.2 m<sup>3</sup>  
Ø Dispersant 3.3 m<sup>3</sup>

### PERFORMANCES

Bollard pull ahead 75.0 t  
Bollard pull astern 70.0 t  
Speed ahead 12.9 kn  
Speed astern 12.6 kn

### PROPULSION SYSTEM

Main engines 2x MTU 16V 4000 M63L-1A  
Total power 4480 bkW (6008 bhp) at 1800 rpm  
Thrusters Rolls Royce US 255  
Propeller diameter 2700 mm  
Forced ventilation 60.000 m<sup>3</sup>/h  
Exhaust emission IMO Tier III compliant

### AUXILIARY EQUIPMENT

Generator set 2x Caterpillar C4.4 TA, 81 kVA, 400 V, 50 Hz  
Ø Generator set 2x Caterpillar C4.4 TA, 94 kVA, 440 V, 60 Hz  
General service pumps 2x Azcue CA 50/3A 20 m<sup>3</sup>/h at 2.35 bar  
Bilge water pump Azcue CA 32/0.5 3.6 m<sup>3</sup>/h at 1.1 bar  
Fuel pump Azcue BR-41-10 12 m<sup>3</sup>/h at 1 bar  
Fuel oil purifier 2x CJC, PTU3 27/81 3x FA/BLA 27/27  
Cooling system Closed box cooling system  
Fresh water pressure set Azcue MO-31/10  
Hydraulic system Double main engine driven pumps  
Ø Sewage treatment plant Tecnicomar Ecomar 20  
Ø Oil pollution control Dispersant pumpset with two spray booms  
Ø Fifi set Diesel driven pump 600, 1200, 2400 or Ø with water spray  
Ø Fifi monitor 1x 600, 1x 1200 or 2x 1200 m<sup>3</sup>/h, water/foam

### DECK LAY-OUT

Anchor 1x 360 kg Pool (High Holding Power)  
Anchor winch Hydraulic 10 m/min  
Towing winch Hydraulically driven split drum 31 ton pull up to 11 m/min, reduced  
pull up to 38 m/min, 175 ton brake  
SWL 100 ton  
Fendering Cylinder + block bow fender, D-fender side/aft and Ø tyre fendering

### ACCOMMODATION

For 4 (Ø 6) persons, completely insulated and finished with durable modern linings, sound absorbing ceiling in the wheelhouse and floating floors. Air-conditioned wheelhouse, accommodation and 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.

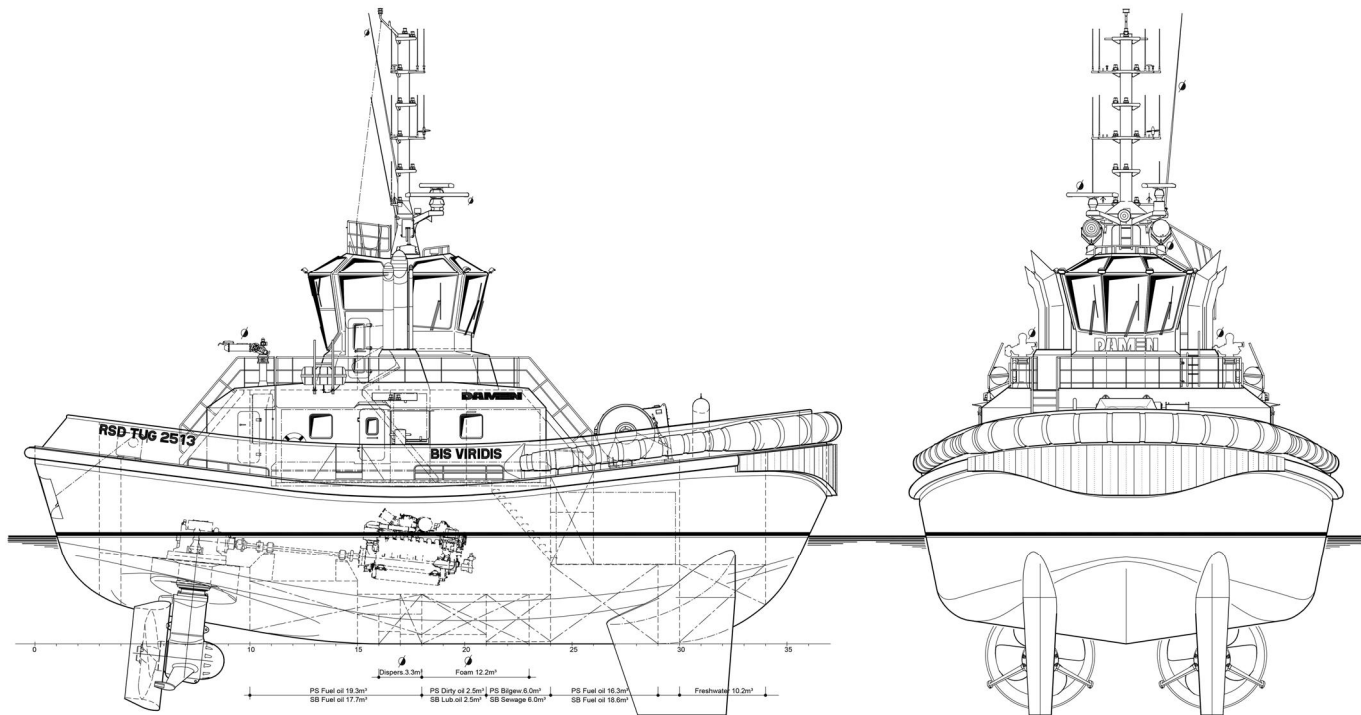
### NAUTICAL AND COMMUNICATION EQUIPMENT

Searchlight 1x Norselight, 2000 W + Ø 1x Norselight 2000 W  
Radar system 1x Furuno FAR-1518-BB + Ø 1x Furuno FAR-1518-BB  
Compass Cassens & Plath Reflecta 11  
Ø Gyro compass Anschuetz Standard 22 Compact  
Autopilot Simrad AP-70  
Satellite compass/GPS Simrad GN70/HS80A  
Echosounder Furuno FCV-628 or Ø Furuno FE-800  
Speed log Furuno DS-80  
VHF 2x Sailor 6222 + Ø 1x Sailor 6215  
VHF hand-held Jotron TR-20  
Ø UHF Motorola DM4400  
Navtex Furuno NX-700  
AIS Furuno FA-170  
Ø SSB Furuno FS-1575  
Ø LRIT Furuno Felcom 19  
EPIRB Jotron Tron-60S  
Sart Jotron Tronsart20  
Anemometer Gill Instruments GMX 500

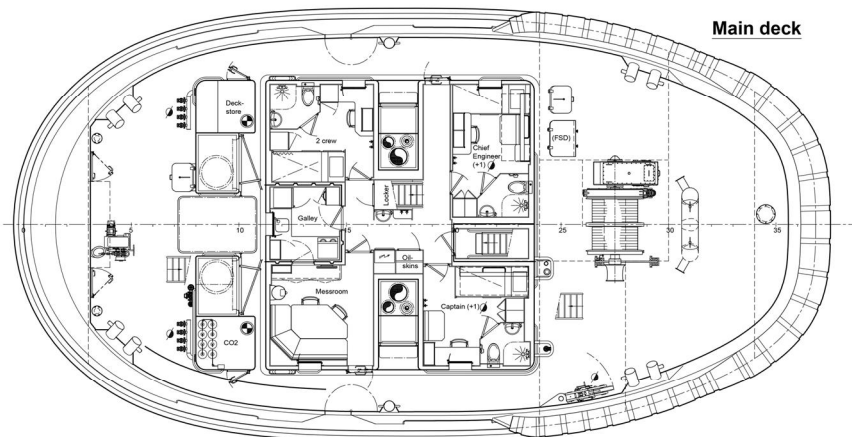
**DAMEN**

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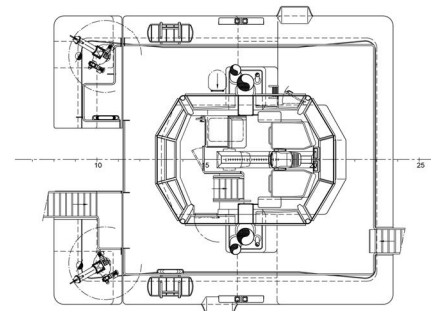
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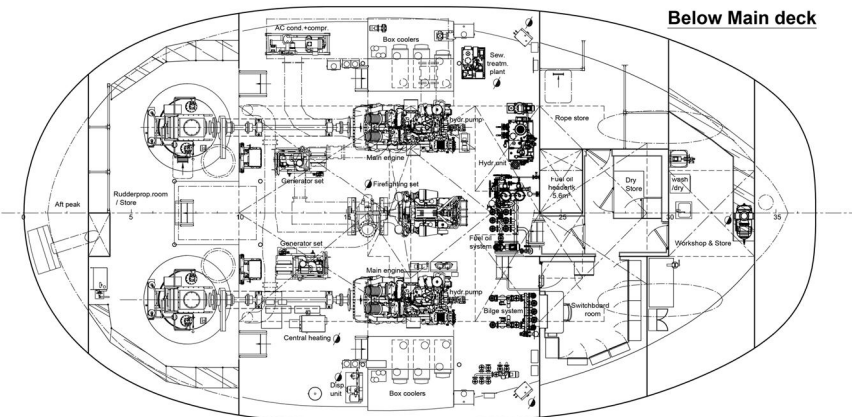
Main deck



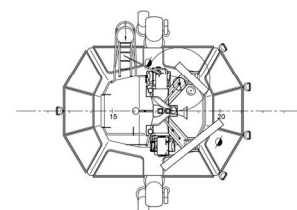
Bridge deck



Below Main deck



Top deck



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