



# AZIMUTH STERN DRIVE TUG 2411

"COLUMBIA"

## GENERAL

|                 |  |
|-----------------|--|
| Yard number     | 513410                                       |
| Delivery date   | May 2017                                     |
| Basic functions | Towing, mooring and fire-fighting            |
| Classification  | Bureau Veritas                               |
|                 | I * HULL • MACH Tug Unrestricted             |
|                 | Navigation AUT UMS Inwater Survey Fire       |
|                 | Fighting Ship 1 Water spray                  |
| Flag            | Italy  |
| Owner           | Rimorchiatori Riuniti Porto di Genova S.r.l. |

## DIMENSIONS

|                |         |
|----------------|---------|
| Length overall | 24.47 m |
| Beam overall   | 11.33 m |
| Depth at sides | 4.60 m  |
| Draught aft    | 5.61 m  |
| Displacement   | 492 t   |

## TANK CAPACITIES

|                 |                     |
|-----------------|---------------------|
| Fuel oil        | 67.6 m <sup>3</sup> |
| Fresh water     | 8.8 m <sup>3</sup>  |
| Sewage          | 3.2 m <sup>3</sup>  |
| Foam            | 6.3 m <sup>3</sup>  |
| Dispersant      | 3.1 m <sup>3</sup>  |
| Dirty oil       | 2.9 m <sup>3</sup>  |
| Lubrication oil | 4.8 m <sup>3</sup>  |
| Bilge water     | 2.0 m <sup>3</sup>  |

## PERFORMANCES

|                     |         |
|---------------------|---------|
| Bollard pull ahead  | 71.0 t  |
| Bollard pull astern | 69.0 t  |
| Speed ahead         | 13.2 kn |
| Speed astern        | 13.0 kn |

## PROPULSION SYSTEM

|                    |                                 |
|--------------------|---------------------------------|
| Main engines       | 2x Caterpillar 3516C TA HD+/D   |
| Total power        | 4200 bkW (5632 bhp) at 1600 rpm |
| Azimuth thrusters  | Rolls Royce US 255              |
| Propeller diameter | 2600 mm fixed pitch             |
| Forced ventilation | 30.000 m <sup>3</sup> /h        |

## AUXILIARY EQUIPMENT

|                        |   |
|------------------------|---|
| Main generator sets    | 2x Caterpillar C4.4 TA, 86 kVA, 230/400 V, 50 Hz  |
| General service pump   | 2x Sterling AKHA 5101, 20 m <sup>3</sup> /h at 14 m.w.g.  |
| Fuel oil header pumps  | 2x Sterling R35/40, 3.4 m <sup>3</sup> /h at 4 bar  |
| Fuel oil filters       | 2x Nelson coalester type  |
| Sewage treatment plant | Tecnicomar ECOMar 20  |
| Bilge water separator  | Facet capacity 0.5m <sup>3</sup>  |
| Oil pollution control  | Dispersant pump set with 2 spraybooms   |
| Fifi system            | Diesel driven pump of 2700 m <sup>3</sup> /h (Fire Fighting Ship 1) and two electrically controlled monitors of 1200 m <sup>3</sup> /h each |
| Waterspray             | 300 m <sup>3</sup> /h   |

## DECK LAY-OUT

|                     |  |
|---------------------|--|
| Anchor              | 2x 360 kg Pool (High Holding Power)  |
| Anchor/towing winch | Hydraulically driven two speed split drum and warping head 33 ton up to 11 m/min, reduced pull up to 51 m/min, 150 ton brake on second layer |
| Capstan             | Electrically driven, 5 ton at 15 m/min   |
| Towing hook fore    | Mampaey SWL 100 ton  |
| Towing hook aft     | Mampaey SWL 100 ton  |
| Fendering           | Cylinder + block bow fender with water spray, D-fender side/aft, cylinder fender at transom corners  |
| Workboat            | 1x 4-meter inflatable workboat with 25 hp outboard engine  |

## ACCOMMODATION

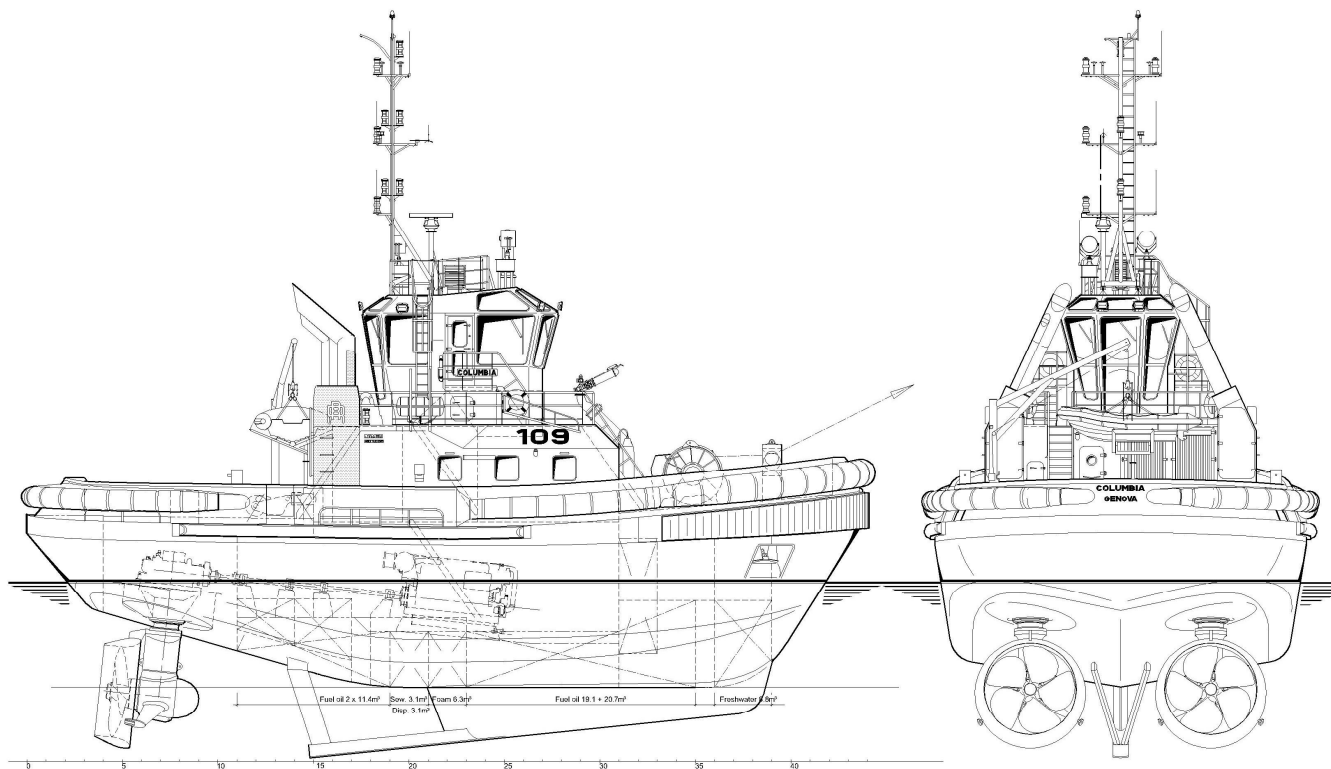
Air-conditioned and heated accommodation spaces for up to 4 persons, consisting of one captain's cabin, one chief engineer's cabin and one double crew cabin, galley, mess room and sanitary spaces.

## NAUTICAL AND COMMUNICATION EQUIPMENT

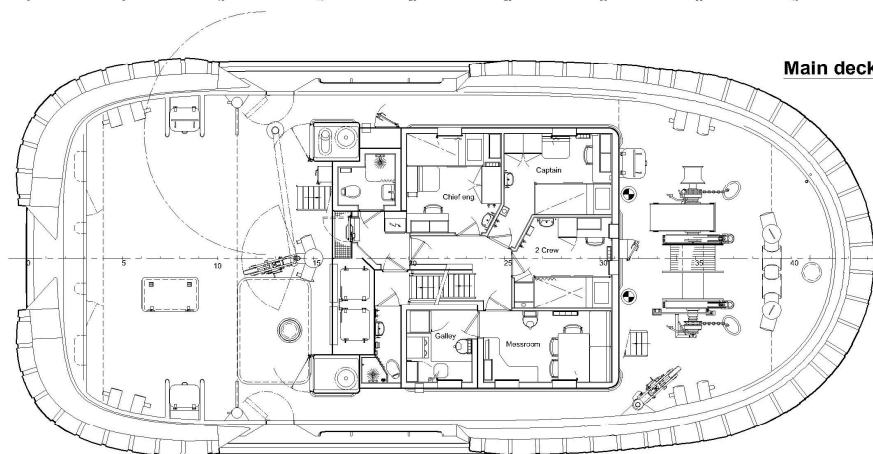
|                       |                            |
|-----------------------|----------------------------|
| Search light (FIFI 1) | 2x Pesch, 450 W, Xenon     |
| Radar system          | Furuno FAR-2117            |
| Autopilot             | Robertson AP-70            |
| DGPS                  | Furuno GP-170D             |
| Echosounder           | Furuno FE-800              |
| VHF                   | 2x Sailor Compact 6222     |
| VHF hand-held         | 2x Jotron TRON TR-20       |
| Compass               | 2x Magnetic, Kottler type  |
| Speed log             | Furuno DS-80               |
| Navtex                | Furuno NX-700              |
| AIS                   | Furuno FA-150              |
| EPIRB                 | Jotron Tron-60S            |
| Sart                  | Jotron Tronsart20          |
| Anemometer            | Observer Windsonic OMC 115 |

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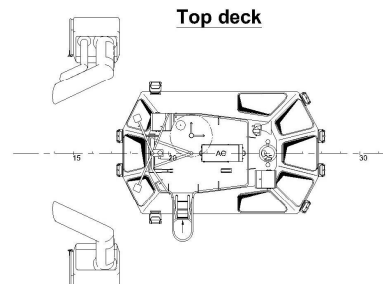
## "COLUMBIA"



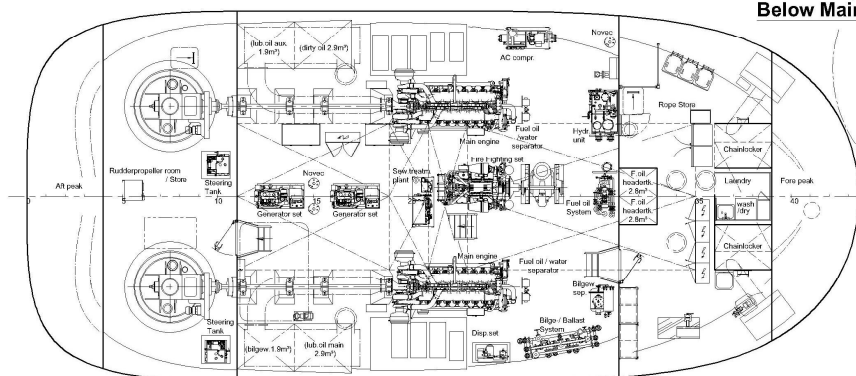
**Main deck**



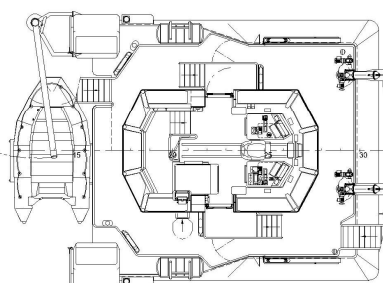
**Top deck**



**Below Main deck**



**Bridge deck**



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