



ASTILLEROS ZAMAKONA, S.A.

Puerto Pesquero, s/n  
48980 SANTURCE - BILBAO - SPAIN  
Tel.: (34) 94 493 70 30  
Main office fax: (34) 94 461 25 80  
Design office fax: (34) 94 483 16 02  
E-mail: zamakona@zamakona.com  
http://www.astilleroszamakona.com

Since 1914



## The New Neptune Series

These new multipurpose and antipollution vessels are the result of collaboration between Zamakona and Rolls Royce.

Designated in-house as "Neptune Class", this series is a ground-breaking development in multipurpose tugs capable of effectively handling environmental crises and disasters. With a total length of 80 meters and highly sophisticated equipment, this vessel is able to operate anywhere, under any conditions.



# 80-METER MULTIPURPOSE OCEAN-GOING AND RESCUE TUGBOAT



ASTILLEROS ZAMAKONA, S.A.





ASTILLEROS ZAMAKONA, S.A.

# A LATEST-GENERATION VESSEL FOR PRESENT AND FUTURE CHALLENGES

## 80-METER MULTIPURPOSE OCEAN-GOING AND RESCUE TUGBOAT

The vessel is designed to carry out a range of tug & rescue missions with vessels on the open sea in all weather conditions.

It has advanced anti-pollution and fire-fighting systems, giving it great response potential in all types of incident. Its total thrust is 228 tons.

The vessel is fitted out to collect oil spills through a floating arm and containment boom system supported by suction pumps and tanks which also allow it to transfer waste to a second vessel or to shore. In addition, it incorporates a complete system for dispersants.

It operates as a support vessel with the capacity to work with external personnel, such as fire-fighters, divers or technicians.

It is also equipped to handle buoys and anchors on the high seas, collect solid waste and cargo adrift.

Length overall (approx.)	80.00 m	Fire Fighting Class	Fi Fi 2 - Water Spray
Breadth	18.00 m	Dynamic positioning	DP2 (DYNAPOSTAM / ATR)
Depth to Main Deck	8.25 m	<b>Tank Capacities at 100%</b>	
Speed	17.50 knots.	F.O.	1,519.50 m³
Bollard Pull	228 ton	Fresh Water	547.00 m³
Range min., (speed at 80% M.C.R.)	9,000 miles	Oil recovery "ORO"	1,749.80 m³
Crew	18 men + 6 reserve	Foam	41.60 m³
Survivors	29 people	Dispersant	28.80 m³

## PROPULSION AND MANOEUVRABILITY

The vessel is powered by four diesel engines, each pair driven by variable-pitch propeller housed within its own nozzle and controlled by two flap-type active rudders. Its manoeuvrability is increased through two electric-driven bow thrusters; one of the retractable type and the other super-silent conventional transverse.

There are two additional transverse thrusters in the stern. All the transverse thrusters are of controllable pitch.

This arrangement guarantees a manoeuvrability under all navigating conditions of the vessel, even at 1 or 2 knots.

Added to this is a redundant Class 2 dynamic positioning system and fully integrated propulsion control, with joystick system.

- Main Engines ..... 4 BERGEN B32:40L8P
- Maximum continuous rating (MCR)..... 4,000 kW. (5,440 BHP)
- Revolutions ..... 750 r.p.m.
- Propulsion..... 2 KAMEWA ULSTEIN FOD III P ¼ - 4100N

## NAVIGATION EQUIPMENT

Radar Band X  
Radar Band S  
Radio direction finder MF/HF  
Radio direction finder VHF  
AIS  
Gyrocompass  
Satellite compass  
AutoPilot  
GPS  
Echo-sounder  
Echo sounder repeater  
ECDIS

## EXTERNAL COMMUNICATION SYSTEM

GMDSS  
VHF-DSC  
MF/HF DSC  
Inmarsat C  
Video conference  
VHF Aeronautic



## CRANES

The vessel has two duckbill-type cranes for handling the equipment it can carry and operate on the afterdeck, loading and unloading 10' and 20' containers, among others.

- 2 Cranes
- SWL ..... 20.0 ton
- Maximum reach ..... 15.0 m
- Minimum reach ..... 3.7 m



## WINCHES

On deck, the vessel has all the elements for mooring, anchoring, rescue, assistance, handling of the tug and handling of anchors, such as:

- 1 combined windlass and mooring winch with 40-ton braking power.
- 2 after capstans with a pull of 10 tons.
- 1 forward towing winch with a pull of 95 tons.
- 1 double-drum cascade-type hauling winch with a capacity for 1,700 meters of 83 mm cable each and a pull of 307 tons and dynamic braking of 350 tons.
- 1 disk-type towing hook of 250 tons of working load.
- 2 manoeuvring winches of 10 tons with a capacity of 300 meters of cable of 16 mm diameter.
- 2 sets of roller fairleads for a pull of 300 tons and stopper for 600 tons in stern.
- 1 stern gantry with a capacity of 50 tons at 8 meters from the stern of the vessel.

## COLLECTION OF WASTE AND STORAGE

The vessel can collect, store, transfer and discharge oil from a spill or from a vessel in distress with two containment booms situated on the sides of the vessel, of a length of 15 meters.

The waste is pumped through booster pumps to the inside of the oil-collection vessels and subsequently to land, on decantation within the tanks.

- 2 Floating Arms
- Hyd. pumps for Arms Capacity ..... 2 x 550 m³/h
- Oil recovery tanks submersible pumps Capacity ..... 4 x 100 m³/h
- Booms ..... 1 x 300 mts self-inflatable 1,000 mm freeboard  
1 x 150 mts self-inflatable 600 mm freeboard
- Skimmers ..... TRANSREC 150
- Pump (normal viscosity) Capacity ..... 400 m³/h
- Pump (high viscosity) ..... 2 x 100 m³/h 10 bar
- Inert Gas Plant ..... Nitrogen Plant of 40Nm³/h
- Dispersant equipment ..... 2 arms of 5.1 m

## EXTERIOR FIRE-FIGHTING SYSTEM

The vessel is equipped with an exterior "FIRE-FIGHTING SHIP 2 WATER SPRAY" installation to fight fires on other vessels and to protect itself, at a distance of 160 meters and 70 meters high.

- Fire Fighting Pumps ..... 2 x 3,900 m³/h – 16 bar
- Foam pump ..... 2 x 36 m³/h – 8 bar
- Monitors (Foam/water) ..... 2 x 2,400 m³/h [1800 (water) / 600 foam]]
- Monitors (Water) ..... 1 x 2,400 m³/h
- Water spray system ..... 600 m³/h



## WORK AND RESCUE VESSELS

The vessel is equipped with two auxiliary craft, one for search and rescue work and the other for waste collection, handling barriers, towing auxiliary equipment, etc. The search and rescue craft has a 200 HP waterjet propeller, capable of travelling at 33 knots. The work craft has a bollard pull of 2 tons.