HYDROGRAPHIC SURVEY LAUNCHES
OF THE SPANISH HYDROGRAPHIC INSTITUTE

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The Hydrographic Institute has just brought into service four hydrographic survey launches to operate in conjunction with its two hydrographic ships Tofíño and Malaspina.

The design of these launches was studied in great detail, taking into account the sea conditions in which they must operate and the greater results in hydrographic work required of them. The fact that most of the work will be carried out along the coasts of the Sahara was especially taken into consideration, owing to the difficult sea and wind conditions and the heavy surf found along this coast, where the sea is hardly ever calm and there is no haven except Villa Cisneros. Since there is a heavy swell coming from the North Atlantic, the question of a decked vessel was considered with the stern anchor deck of light construction to economize on weight in the upper part of the ship. In the stern deck-house the sounding instrument and the radio telephone were installed in a convenient way to facilitate their operation by the ship’s personnel. These instruments are mounted on a table in caissons, the operating personnel being accommodated on fixed seats. The upper part of the fo’c’sle may be opened by means of two sliding panels allowing two observers to carry out measurements of horizontal angles with a sextant.

The launch’s rudder is the Kitchen model to facilitate manoeuvring, the skipper’s position being aft. At first, it had been planned to install the helm at the forward end of the stern deck-house, but owing to possible breakdown in the transmission, it was decided to install it aft. The watertight containers of the large capacity accumulator batteries for the sounding instrument, the telephone and lighting are installed in the forward cabin. These batteries may be charged by a dynamo driven by the engine, or by means of an independent source of supply.

For the sounding instruments, it was decided to use the outboard oscillator which is considered more practical than an installation fixed on the hull as it is easier to move.

The hull of these launches is made of oak for the keel, the false keel, the stem, the stern post and the deck beams; in black poplar for the frame; in teak for the outer surface and in Flanders pine for the rest. A collision bulkhead has been installed forward and the launch is provided with air-tanks.
Views of the survey launches of the Spanish Hydrographic Institute
The engine is fitted aft, uncovered, and is of the Barreiros-Diesel type, 40 h.p. and 2 300 revolutions/minute.

The specifications are as follows:

- Maximum length: 9.66 metres
- Length between perpendiculars: 9.50 metres
- Maximum width: 2.50 metres
- Moulded depth: 1.20 metres
- Draft: 0.769 metres
- Displacement: 5.352 tons

Fuel consumption and speed trials gave the following results:

- Average speed: 7.44 knots
- Fuel consumption in 2 hours 32 minutes: 25 litres
- Range: 217 miles

A list is given below of the equipment on board:

**Hydrographic equipment**

1. acoustic sounding instrument, type M S 26 F with outboard oscillator
2. radio telephone, model 4 B, made by Marconi Española S.A.
3. sextants
4. drawing table
5. stations pointers
6. mechanical 100-fathom sounding instrument
7. bottom sampling instrument

**Nautical equipment**

1. anchor of galvanized iron
2. cables, 30 m long and 63 mm in circumference
3. hawser, 36 m long and 95 mm in circumference
4. bridle of galvanized steel cable 16 mm in circumference for towing
5. 50 metres of galvanized chain for mooring
6. flagstaff
7. 5 oars, 4 metres long, in beech wood (one to be used for steering)
8. boat-hooks
9. 2 bailing scoops
10. buckets
11. circular buoys
12. life-jackets
13. 1 set of side fenders in hemp
14. 4 cylindrical fenders in cork, covered in canvas
15. 2 electric navigation lights (green and red)
16. electric masthead light
17. morse lamp
18. collapsible mast
19. compass
20. 5 brass thole pins
21. 1 chest for tools and accessories
22. 2 fire extinguishers
1 siren
1 fog horn
1 pistol for signals
1 floating anchor
CARACTERÍSTICAS

Longitud máxima: 9,887 m
Ancho máx. entre popa y proa: 3,345 m
Máx. ancho entre bordillos: 2,497 m
Puntal (borda ente interior apresto): 1,298 m

EMBARCAZONES DE SONDA PARA LAC:
BARRELL/MALASPINA
(TIPO DE PROYECTO)

[Diagrama de la embarcación con medidas y detalles]
EMBARCACONES / SONDAS para los buques hidrográficos