

TWIN AUXILIARY SURVEYING SHIPS
« H-2 » & « H-3 »
OF NAVY HYDROGRAPHIC INSTITUTE, CADIZ (Spain)

These two auxiliary surveying vessels were built by the Astano Company at its Perlio (El Ferrol del Caudillo) shipyards; they were delivered to the Navy on May 29, 1951, when they became the property of the Hydrographic Institute. The main purpose of these ships is collaboration with the first-class ships *Tofino* and *Malaspina* in hydrographic operations.

The vessels' main characteristics are as follows:

Length overall	29.70 meters
Length between perpendiculars	25.50 meters
Breadth	6.10 meters
Depth	3.25 meters
Maximum draught	3.40 meters
Tonnage	256 tons
Power	300 H.P.
Speed	9.3 knots
Cruising range	1,300 miles

The hull is wooden; the main parts are of common oak, and other sections are of pine.

The ship is propelled by an engine of the Christian Meyer type coupled with feed-pump, air-pump and suction-pump, and powered by a Lancashire-type return boiler with two 9-ton flues, with forced draught of the closed fire-chamber by means of two 1.5 HP electric fans.

Propellers	1
Fuel	coal

Electric power is obtained through use of two 6-Kw., 110-volt dynamos, powered by a one-cylinder steam engine and one-cylinder Diesel engine respectively.

The complement of each vessel consists of one officer specializing in hydrography, two petty officers whose specialty is hydrography, two engineers, and 18 seamen, 5 of whom are also trained in hydrography.

Each ship is provided with an extra cabin for use by an additional officer the work might eventually require.

The draughting-room contains a 2 × 1.20-meter work-table.

Each vessel is equipped with a Hughes MS 21 G echo-sounder, and with a steam-winch on the quarter-deck for sweeping and wire-dragging.

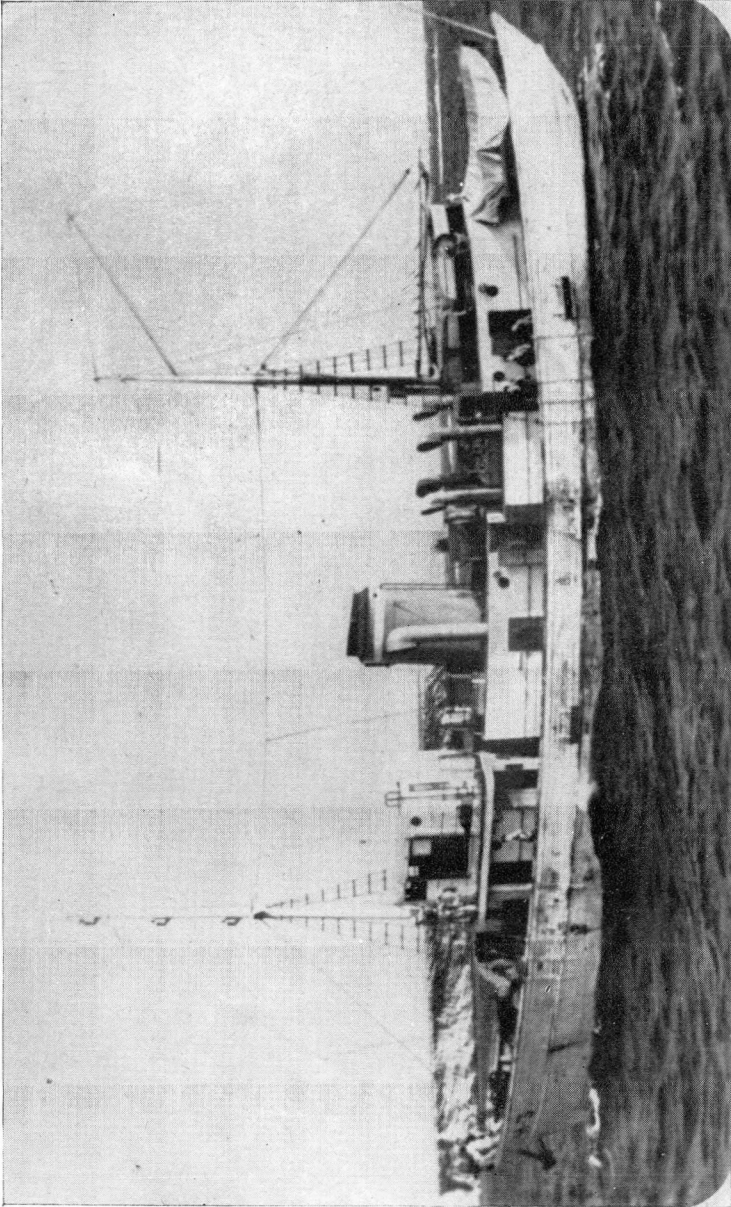
They are also provided with 400-meters Lucas sounding-machines, necessary hydrographic equipment and instruments, and a 4-meter barge, enabling small-scale surveys to be carried out without help from the mother-ship.

Compasses and logs are of native manufacture, except as regards the Walker logs that also form part of the ships' equipment.

A complete radio installation and radiotelephone with a double set of batteries on the bridge next to the sounding-room enable constant communication to be maintained. The entire radio equipment was built by *Marconi Española*.

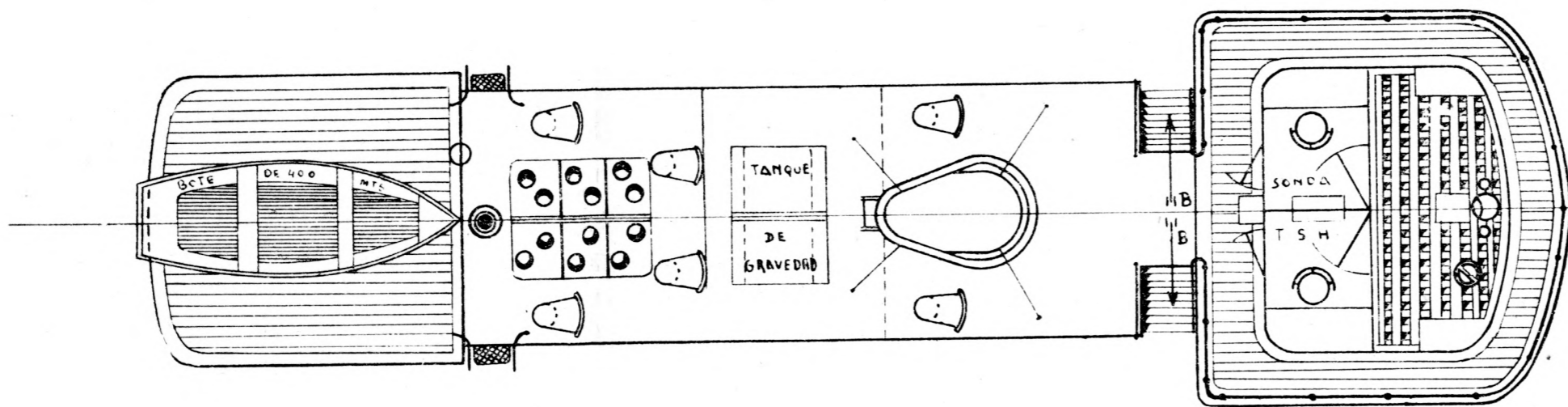
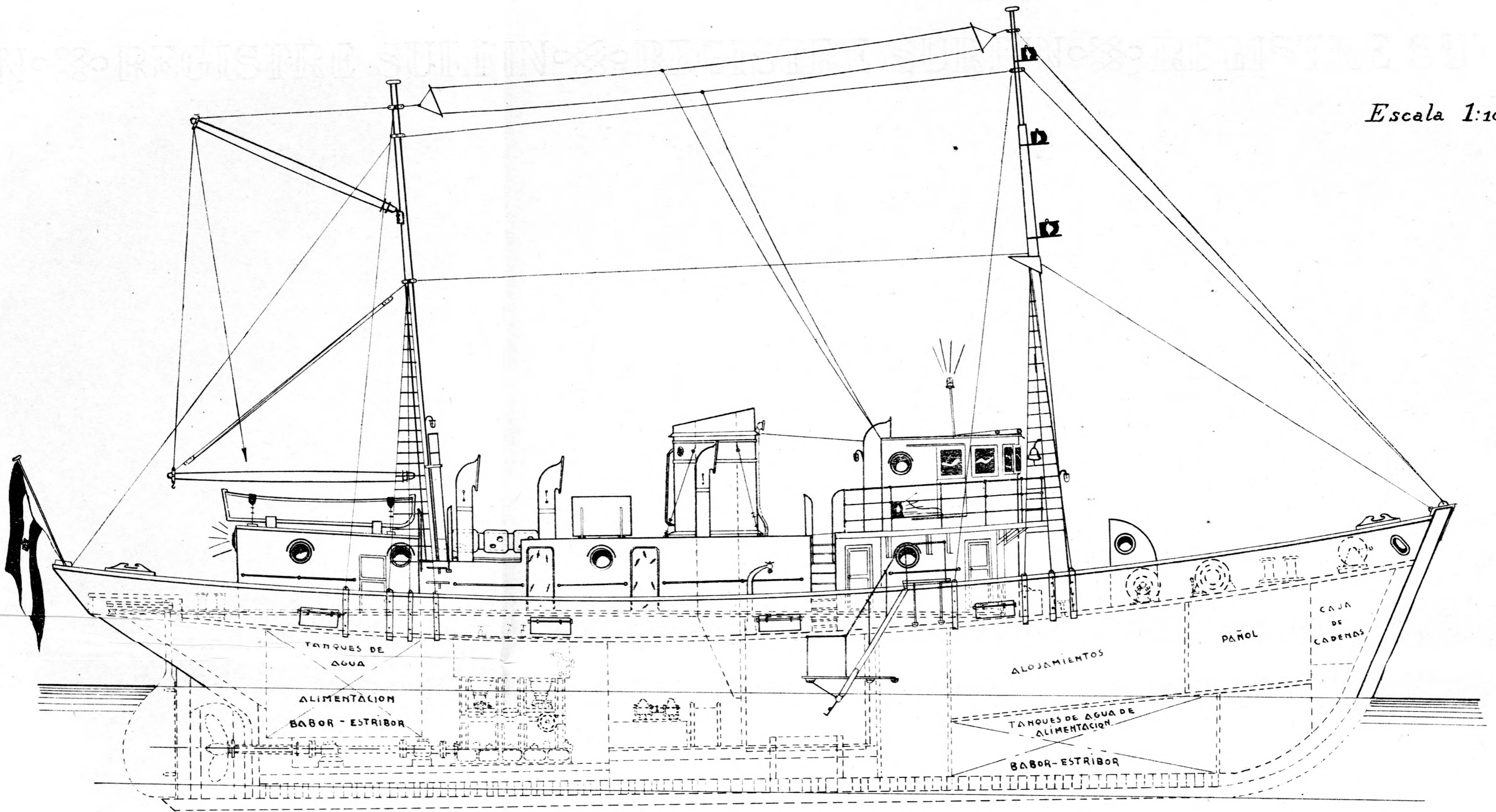
Each vessel is equipped with two portable 2-watt radiotelephones with a 15-mile range.

In addition to the usual anchoring equipment, the ships are provided with kedge anchors enabling the use of cables, as during current measurements which were carried out during 5 consecutive days 5 miles off Alboran Island, at a depth of 126 meters.

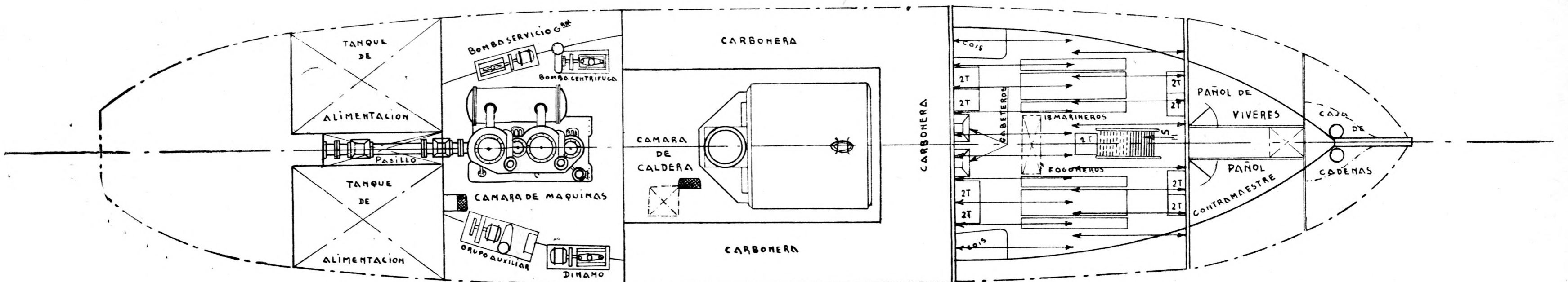
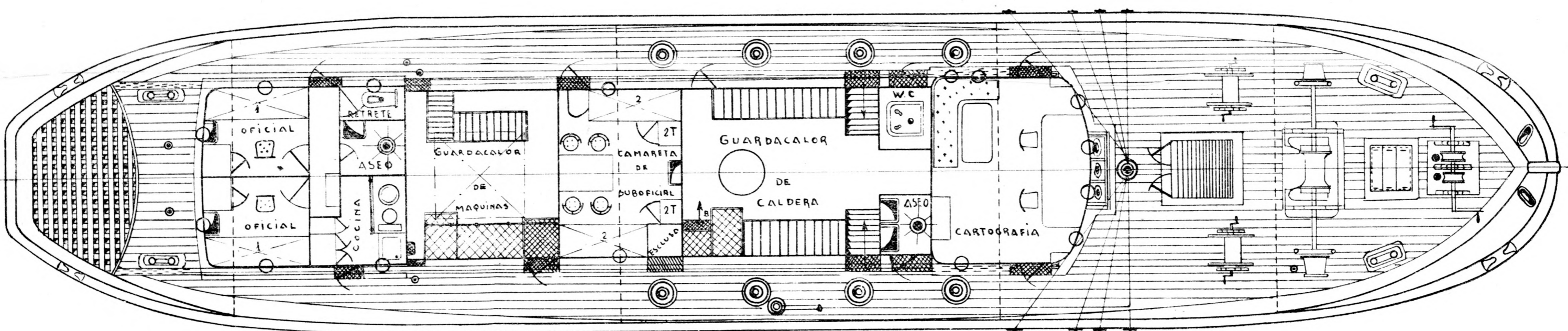
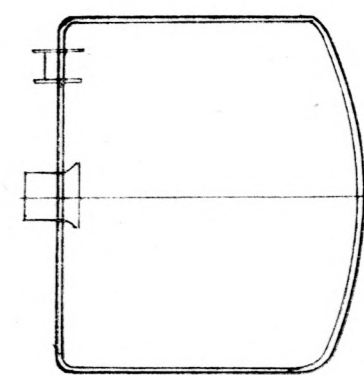


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Escala 1:100



TECHO DEL PUENTE



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