

REPORT ON OIL ENGINE MACHINERY.

No. 1421

11 MAY 1934

Date of writing Report April 21 1934 When handed in at Local Office 5 May 10 34 Port of Cadiz
No. in Survey held at Malagorda Cadiz Date, First Survey April 15 1932 Last Survey April 18 1934
Reg. Book. 22902 on the Single Screw vessel Motor Ship "Campeche" Number of Visits 117

Built at Malagorda Cadiz By whom built Sociedad Espanola de Construcción Naval Yard No. 66 When built 1933-4
Engines made at Sealao Bilbao By whom made S. de C. N Engine No. PSL 60335 When made 1933
Donkey Boilers made at Valencia By whom made Union Naval de Levante Boiler No. 552-60336 When made 1932
Brake Horse Power 2 X 1500 Owners C.A.M.P.S.A. Port belonging to Yarragona
Nom. Horse Power as per Rule 476 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
Trade for which vessel is intended Carrying oils in bulk

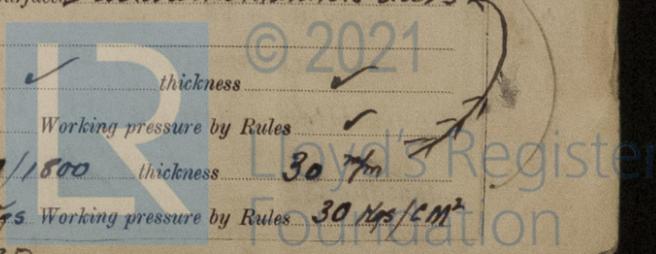
ENGINES, &c.—Type of Engines Construccion Naval Sulzer or 4 stroke cycle 2 Single or double acting Single
Maximum pressure in cylinders 600 lbs Diameter of cylinders 600 mm Length of stroke 1040 mm No. of cylinders 2 X 4 No. of cranks 2 X 4
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 440 mm Is there a bearing between each crank yes
Revolutions per minute 130 Flywheel dia. 2100 mm Weight 4800 kg Means of ignition Air Inj Kind of fuel used Gas oil
Crank Shaft, dia. of journals as per Rule 390 mm Crank pin dia. 390 mm Crank Webs Mid. length breadth 620 mm Thickness parallel to axis 245 mm
Flywheel Shaft, diameter as per Rule 400 mm Intermediate Shafts, diameter as per Rule 365 mm Thrust Shaft, diameter at collars as per Rule 400 mm
Main Shaft, diameter as per Rule Screw Shaft, diameter as per Rule 354 & 362 mm Is the main shaft fitted with a continuous liner yes
Cylinder Liners, thickness in way of bushes as per Rule 21 mm & 22 mm Thickness between bushes as per rule 16 mm Is the after end of the liner made watertight in the propeller boss yes
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner one length
If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes
If two liners are fitted, is the shaft lapped or protected between the liners yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft no
Length of Bearing in Stern Bush next to and supporting propeller 1830 mm
Propeller, dia. 12'-3" Pitch 11'-9" No. of blades 3 Material Bronce whether Moveable no Total Developed Surface 35.5 sq. feet
Method of reversing Engines Air Engine Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication as per Rule
Thickness of cylinder liners yes Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material yes
If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine yes
Cooling Water Pumps, No. two, Electric Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
Bilge Pumps worked from the Main Engines, No. engine Diameter 140 mm Stroke 320 mm Can one be overhauled while the other is at work yes
Pumps connected to the Main Bilge Line { No. and Size 2 of 40 tons How driven Steam

Ballast Pumps, No. and size 3-2 of 325 & 1 of 40 tons Lubricating Oil Pumps, including Spare Pump, No. and size 2 C.M. Drysdale 30 tons
Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 1 Ballast 200 T, 2 Bilge 60 T, 1 Fuel bilge 90 T, 2 Oil, 2 Circulating water, 2 Transfer 26 T, 1 Transfer 27 T, 2 Fuel pumps 1 fresh water 6 T 1 Sanitary 35 T & 2 feed.
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 Electric 60 T, 1 electric 90 T, 1 S.M. 200 Tons
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes
Are all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks Valves and cocks
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes Are the Overboard Discharges above or below the deep water line in lead line level
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes
Are all pipes pass through the bunkers yes How are they protected yes
Are all pipes pass through the deep tanks yes Have they been tested as per Rule yes
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another yes Is the Shaft Tunnel watertight Not tunnel Is it fitted with a watertight door yes worked from yes
If the vessel is a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes

Auxiliary Air Compressors, No. 1 each engine No. of stages Three Diameters 540/480/150 Stroke 400 mm Driven by Main engine
Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 240/80 Stroke 140 mm Driven by Aux Engines
All Auxiliary Air Compressors, No. one No. of stages 2 Diameters 90/35 mm Stroke 120 mm Driven by Steam
Suctioning Air Pumps, No. one each engine Diameter 1340 mm Stroke 650 mm Driven by main engine
Auxiliary Engines crank shafts, diameter as per Rule 135 mm

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes Fitted with condensate ends
Are the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces Fitted with manhole doors
Is there a drain arrangement fitted at the lowest part of each receiver yes
High Pressure Air Receivers, No. 2 Cubic capacity of each 400 Internal diameter 150 mm thickness 30 mm
Seamless, lap welded or riveted longitudinal joint yes Material SA Steel Range of tensile strength 41-47 kg Working pressure by Rules 30 kg/cm²
Low Pressure Air Receivers, No. two Total cubic capacity 24 C.M. Internal diameter 1440/1800 thickness 30 mm
Seamless, lap welded or riveted longitudinal joint yes Material SA Steel Range of tensile strength 41-47 kg Working pressure by Rules 30 kg/cm²

See Copy Letter 2.6.34



IS A DONKEY BOILER FITTED? *Yes two*

If so, is a report now forwarded? *Yes*

PLANS. Are approved plans forwarded herewith for Shafting Receivers Separate Tanks
(If not, state date of approval) Donkey Boilers General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR *Supplied as per rules.*



The foregoing is a correct description,

Antonio D. Guerra

Manufacturer.

Dates of Survey while building
During progress of work in shop: 1932 April 15-21 May 4-13-19-28 June 4-29 July 8-22-26 Aug 2-11-20-23-30 Sept 23-30 Oct 10-19
During erection board vessel: 1933 Jan 3-5-9-16-19-28 Feb 16-25 Mar 2-23 April 3-13-15-28 May 2-13-18-22 June 5-13-22-28 July 1-8-11
Total No. of visits: 1934 Jan 4-8-9-11-15-14-26-30 Feb 1-5-8-16-19-22-24-27-28 Mar 2-3-6-12-13-15-14-22-23-27-29-31 Apr 3-4-11

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods

Crank shaft Flywheel shaft Thrust shaft Intermediate shafts Tube shaft

Screw shaft Propeller Stern tube *Slab Feb 25 1933* Engine seatings *Jan 1933* Engines holding down bolts *Feb 1934*

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions *Mar 31 April*

Crank shaft, Material *SM Steel* Identification Mark *PN 164 52* Flywheel shaft, Material *SM Steel* Identification Mark *Nº 64 A-B*

Thrust shaft, Material *SM Steel* Identification Mark *4 Thrust* Intermediate shafts, Material *SM Steel* Identification Marks *Nº 138-16-17*

Tube shaft, Material Identification Mark Screw shaft, Material *SM Steel* Identification Mark *Nº 42 52*

Is the flash point of the oil to be used over 150° F.

Is this machinery duplicate of a previous case If so, state name of vessel *yes "Campero"*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The above machinery has been mounted board under special survey in accordance with the Society's Rules and Regulations. The workmanship quite satisfactory. All pipes, cocks, valves and connections have been tested by hydraulic pressure in accordance with the rules. The alignment of shafting carefully checked and found correct. The main and all auxiliary machinery and their accessories have been officially tested at sea and found to be satisfactory. The safety valves of air receivers were adjusted to 30 ATMS. In my opinion this vessel's machinery is eligible to be entered in the Register Book with notation of L.M.C. 4.34*

Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute)

The amount of Entry Fee ... £	0.00	When applied for,	13.4.1934
Special ... £	60.00	When received,	29.5.34
Donkey Boiler Fee ... £	0.00		
Travelling Expenses (if any) £	0.00		

Committee's Minute **FRI 15 JUN 1934**
+ Lmb 4.34 2d B 150lb
oil in 2d C.L.

Y. Prolect
Engineer Surveyor to Lloyd's Register of Shipping

