

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 48196

Received at London Office 23 MAR 1931

Date of writing Report 9th March 1931 When handed in at Local Office 14th March 1931 Port of Bilbao

No. in Survey held at Reg. Book.

Date, First Survey 14th May 1930 Last Survey 27th Feb. 1931

Number of Visits 49.

899.50 on the Twin Screw vessel

CAMPOAMOR

Tons Gross 7872.44 Net 4444.63

Built at Bilbao

By whom built In. Euskalduna

Yard No. 92 When built 1931

Engines made at Augsburg

By whom made Maschf. Augsburg Nürnberg

Engine No. 060 When made 1930

Donkey Boilers made at Bilbao

By whom made In. Euskalduna

Boiler No. 116 When made 1931

Brake Horse Power 2 x 1600

Owners In. Armadoria del Mariposa de Petrol. S.A.

Port belonging to Bilbao

Net. Horse Power as per Rule 754

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

Trade for which vessel is intended Carrying petroleum in bulk

L ENGINES, &c.—Type of Engines Heavy oil engine (K7 Vn 60/110) 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 45 atm. Diameter of cylinders 600 mm Length of stroke 1100 mm No. of cylinders 2 x 7 No. of cranks 2 x 7

Position of bearings, adjacent to the Crank, measured from inner edge to inner edge 854 mm Is there a bearing between each crank Yes

Revolutions per minute 125 Flywheel dia. 2100 mm Weight 6300 kgs Means of ignition Injection Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule 390 mm Crank pin dia. 390 mm Crank Webs Mid. length breadth 550 mm Thickness parallel to axis 242 mm

as fitted 390 mm Mid. length thickness 242 mm Thickness around eye-hole 162.5 mm

Flywheel Shaft, diameter as per Rule 320 mm Intermediate Shafts, diameter as per Rule 360 mm Thrust Shaft, diameter at collars as per Rule 320 mm

as fitted 320 mm as fitted 360 mm as fitted 320 mm

Propeller Shaft, diameter as per Rule 380 mm Is the shaft fitted with a continuous liner Yes

as fitted 380 mm

Cylinder Liners, thickness in way of bushes as per Rule 424 mm Thickness between bushes as per Rule 16 mm Is the after end of the liner made watertight in the

as fitted 424 mm as fitted 16 mm

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 Yes

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

Two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube

Yes No If so, state type Lignum vitae Length of Bearing in Stern Bush next to and supporting propeller 1900 mm

Propeller, dia. 3.725 m Pitch 3.45 m No. of blades 4 Material Bronze whether Moveable Yes Total Developed Surface 5 sq. feet

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes Means of lubrication

Direct Thickness of cylinder liners 45 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

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 Yarn

Working Water Pumps, No. 1 off each engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

2 independent pumps, No. 1 each Diameter 135 mm Stroke 300 mm Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size 2 - 135 x 300 mm; 1 Bilge - 200 mm; 1 Bilge - 60 mm; 1 Sanitary - 30 mm

How driven Main engine; Steam; duplex; Electric; centrif.; Electric; duplex

Lubricating Oil Pumps, No. and size 1 Duplex - 200 mm F.R. Lubricating Oil Pumps, including Spare Pump, No. and size 1 off each engine 42 mm and 1 off

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 6 @ 95 mm, 3 @ 82 mm Independent Pump suction { In Pump Room 2 @ 106 mm

Holds, &c. 4 @ 102 mm; Branch cargo line suction { 1 off 102 mm; 1 off 90 mm; 1 off 82 mm

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 Bilge @ 180 mm; 1 Bilge @ 95 mm

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 Yes

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 Above

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

How are they protected Yes Have they been tested as per Rule Yes

Are all pipes pass through the deep tanks 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

partment to another Yes Is the Shaft Tunnel watertight No Is it fitted with a watertight door worked from Yes

Is the 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. 2 No. of stages 3 Diameters 260/220/60 mm Stroke 200 mm Driven by air engine

Full Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 33 mm Stroke 30 mm Driven by steam engine

Refrigerating Air Pumps, No. 1 Diameter 130 mm Stroke 30 mm Driven by

auxiliary engines crank shafts, diameter as per Rule 130 mm

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes

Are the internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes

Pressure Air Receivers, No. 2 Main Engine Cubic capacity of each 10,000 litres Internal diameter 1500 mm thickness 26 mm

Seamless, lap welded or riveted longitudinal joint Material S.M. steel Range of tensile strength 35-45 Working pressure Actual 30 atm.

Starting Air Receivers, No. 2 Air Engine Total cubic capacity 125 litres Internal diameter 405 mm thickness 17.5 mm

Seamless, lap welded or riveted longitudinal joint Material S.M. steel Range of tensile strength 45-50 Working pressure Actual 30 atm.

IS A DONKEY BOILER FITTED? *Two Donkey Boilers* If so, is a report now forwarded? *Yes*

Is the donkey boiler intended to be used for domestic purposes only? *General service*

PLANS. Are approved plans forwarded herewith for Shafting *✓* Receivers *✓* Separate Tanks *4/7/30*
(If not, state date of approval)
Donkey Boilers *4/6/30* General Pumping Arrangements *30/5/30 & 9/12/30* Oil Fuel Burning Arrangements *2/12/30*

SPARE GEAR.

Has the spare gear required by the Rules been supplied? *Yes*

State the principal additional spare gear supplied

Spare tail shaft & two propeller blades. One main engine cylinder liner, set top & bottom end, & main bearing brasses. The exhaust valves, set fuel pump stems, auxiliary engine cylinder cross complete. Various additional spares for main & auxiliary engines, pumps, compressors, electrical installation, boiler and oil fuel burning installation, etc.

POR LA COMPANIA EUSKALDUNA DE
CONSTRUCCION Y REPARACION DE BUQUES
*The foregoing is a correct description,
El Director.*

Manufacturer.

Dates of Survey while building
During progress of work in shops *✓*
During erection on board vessel *1930: May 14, July 14, Sept 9, Oct 10, 16, 20, 21, 25, 29, 30; Nov 4, 8, 12, 15, 18, 25, 26, 28, Dec 2, 4, 5, 6, 23, 29*
Total No. of visits *49.*
1931: Jan 5, 9, 15, 20, 27, 29, 30, 31; Feb. 2, 4, 6, 9, 10, 11, 12, 13, 14, 16, 20, 21, 23, 24, 25,

Dates of Examination of principal parts—Cylinders *25/11/30* Covers *28/11/30* Pistons *25/11/30* Rods *25/11/30* Connecting rods *18/11/30*

Crank shaft *8/11/30* Flywheel shaft *8/11/30* Thrust shaft *8/11/30* Intermediate shafts *8/11/30* Tube shaft *✓*

Screw shaft *16/10/30* Propellers *30/1/31* Stern tube *29/30/10/30* Engine seatings *16/10/30* Engines holding down bolts *5/12/30*

Completion of fitting sea connections *20/10/30* Completion of pumping arrangements *27/2/31* Engines tried under working conditions *20/2/31*

Crank shaft, Material *S.M. steel* Identification Mark *140705 859-5/5/30 V.S.* Flywheel shaft, Material *S.M. steel* Identification Mark *20/5/30 PK*

Thrust shaft, Material *S.M. steel* Identification Mark *140705 947-3/6/30 PK* Intermediate shafts, Material *S.M. steel* Identification Marks *8422-1/9/30*

Tube shaft, Material *S.M. steel* Identification Mark *140705 830-18/8/30 FS/H.L.* Screw shaft, Material *S.M. steel* Identification Mark *8375-25/9/30 J.*

Is the flash point of the oil to be used over 150° F. *Yes* *Woolf couplings - Cast steel - 140705 K 32+33-26/9/30 F.W.*

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yes*

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *✓* If so, have the requirements of the Rules been complied with *✓*

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *✓*

Is this machinery duplicate of a previous case *No* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The Machinery of this vessel (see Bremen Report N° 1296) has been satisfactorily fitted on board, in accordance with the Rules and Regulations and approved plans. The Machinery has been tested under full working conditions with satisfactory results and is eligible in my opinion to be classed, with the usual of L.M.C. 2,31, and notations of C.L. and 2 D.B. 150 lbs in the Register Book.*

N.B. Branch suction have been fitted from the main cargo oil lines for drawing the effordams at the fore and after ends of the cargo oil tanks (see London letters E 9/12/30 & 24/12/30); the previous suction to these effordams, as shown on the approved plan dated 30/5/30, have been dispensed with.

The amount of Entry Fee *£. 270- =* When applied for *14/5/31*
Special *1/5... £. 1520- =* When received, *19*
Donkey Boiler Fee (2)... *£. 1250- =*
Travelling Expenses (if any) *£. 125- =*

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.

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