

REPORT ON OIL ENGINE MACHINERY.

No. 58710

Received at London Office

AUG 25 1937

Date of writing Report

19

When handed in at Local Office

21. 8. 37 Port of Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey 16th June 1936 Last Survey 17th Aug 1937

Number of Visits 67

Single
on the ~~Triple~~ Screw vessel
Quadruple"SALACIA"Tons { Gross 5494.99
Net 3286.12.

Built at Glasgow By whom built Harland + Wolff Ltd Yard No. 9826 When built 1937
Engines made at Glasgow By whom made - do - Engine No. 982 When made 1937
Donkey Boilers made at Belfast By whom made - do - Boiler No. 982 When made 1937
Brake Horse Power 5500 Owners Donaldson Line Ltd Port belonging to Glasgow
Nom. Horse Power as per Rule 1025 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
Trade for which vessel is intended International.

OIL ENGINES, &c.—Type of Engines Vertical Int. Combustion Airless Injection 2 or 4 stroke cycle 2 Single or double acting D.A.
Maximum pressure in cylinders 700 lb sq. in. Diameter of cylinders 24 7/16 in. Length of stroke 1400 mm No. of cylinders 5 No. of cranks 5
Mean Indicated Pressure 100 " " Flywheel dia. 2500 mm. Weight 5000 Kp. Means of ignition Compression Kind of fuel used Diesel Oil.
Revolutions per minute 104 Crank pin dia. 485 mm. Crank Webs Mid. length breadth 930 mm Thickness parallel to axis 250 mm
Crank Shaft, dia. of journals as per Rule 439.1 mm as fitted 485 mm 115 mm. dia. central hole 75 mm Mid. length thickness 250 " Thickness around eye hole 217 "
Flywheel Shaft, diameter as per Rule 439.1 mm as fitted 460 mm Intermediate Shafts, diameter as per Rule 15.36 " as fitted 15 3/4 " Thrust Shaft, diameter at collars as per Rule 16.13 " = 409 mm as fitted 460 mm
Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 16.98 " as fitted 17 1/2 " Is the { tube screw } shaft fitted with a continuous liner { yes. }
Bronze Liners, thickness in way of bushes as per Rule .82 " as fitted 27 3/32 " Thickness between bushes as per rule .615 " as fitted 23 3/32 " 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 -
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 -
If 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 shaft no If so, state type - Length of Bearing in Stern Bush next to and supporting propeller 6'-1"
Propeller, dia. 19'-6" Pitch 14'-6" 12'-0" No. of blades 4 Material Bronze whether Moveable no Total Developed Surface 125 sq. feet
Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication Forced Thickness of cylinder liners 4.2 mm. Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine -
Cooling Water Pumps, No. 1 @ 200 tons/hour, 1 @ 150 tons/hour 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. One Diameter 90 tons/hour Stroke Rotary Can one be overhauled while the other is at work -
Pumps connected to the Main Bilge Line { No. and Size One 90 tons/hour, 2 Bilge Pumps, 200 tons/hour each, One oil fuel transfer pump. How driven Main engine, Steam 32 tons/hour. Steam.
Is the cooling water led to the bilges no If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements -
Ballast Pumps, No. and size Two 200 tons/hour. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 @ 200 tons/hour. Steam.
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 2 @ 3"; 4 @ 2 1/2"; 1 @ 2"; Cofferdam, 1 @ 2"; Gutterways 4 @ 2 1/2". In Pump Room -
In Holds, &c. Nos. 1-2-3-5+6 Holds, P.S., 3" each; No. 4 hold, P.S. 2 1/2"; No. 6 hold P.S. 2"; No. 5 hold gutterway (2) + Cofferdam 1 each 2"; Tunnel well 3".
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 3 @ 5" dia.
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces led 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 both
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
What pipes pass through the bunkers none How are they protected -
What pipes pass through the deep tanks none Have they been tested as per Rule -
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 yes Is it fitted with a watertight door yes worked from Top platform.
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -
Main Air Compressors, No. 2 No. of stages 2 Diameters 120 cm. ft. Stroke 350 lb. sq. in. Driven by Steam engine.
Auxiliary Air Compressors, No. Two No. of stages 2 Diameters 120 cm. ft. Stroke 350 lb. sq. in. Driven by Main engine.
Small Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 120 cm. ft. Stroke 350 lb. sq. in. Driven by Main engine.
Scavenging Air Pumps, No. 2 Diameter Rotary Stroke Driven by Main engine.
Auxiliary Engines crank shafts, diameter as per Rule as fitted all auxiliary machinery steam driven. Position

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

Can the internal surfaces of the receivers be examined and cleaned.

Is a drain fitted at the lowest part of each receiver

High Pressure Air Receivers, No.

Cubic capacity of each

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

MANOEUVERING

Starting Air Receivers, No.

2

Total cubic capacity 700 Cu. ft.

Internal diameter 5'-10 5/16"

thickness

Actual shell 1 5/16" Ends 1 3/32" = 1 9/32"

Seamless, lap welded or riveted longitudinal joint

Riveted

Material Steel

Range of tensile strength Ends 26/30

Working pressure by Rules

Actual 356 lb. sq. in.

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval)

Receivers

Separate Fuel Tanks

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

as per attached list.

The foregoing is a correct description.
For HARLAND AND WOLFF, LIMITED.

Manufacturer.

Dates of Survey while building
During progress of work in shops--
During erection on board vessel--
Total No. of visits

Finnlestone Secretary 1936 June: 16 July: 31 Aug: 17 Sep: 16 29 Oct: 21 23 26 29 Nov: 12
24 Dec: 14 15 16 18 (1937) Jan: 11 20 27 Feb: 2 3 5 9 10 16 19 23 Mar: 2 5 9 10 22 23 24
30 31 Apr: 1 2 5 7 9 16 20 21 22 23 26 27 29 30 May: 3 7 10 19 24 31 June: 1 7 18 July: 5 16
13 26 Aug: 4 6 10 11 17 18 24 37 1/2

Dates of Examination of principal parts—Cylinders 3-5-37 Covers 7-5-37 Pistons 22-23-26/3/37 Rods 22-23-26/3/37 Connecting rods 21-4-37
Crank shaft 21-1-37 Flywheel shaft Thrust shaft 5-2-37 Intermediate shafts 23-2-37 Tube shaft
Screw shaft 5-2-37 Propeller 5-2-37 Stern tube 3-2-37 Engine seatings 9-2-37 Engines holding down bolts 12-7-37
Completion of fitting sea connections 9-3-37 Completion of pumping arrangements 6-8-37 Engines tried under working conditions 17-8-37
Crank shaft, Material Steel Identification Mark 6331 P. 7. Flywheel shaft, Material Identification Mark
Thrust shaft, Material Steel Identification Mark 6331 P. 9. Intermediate shafts, Material Steel Identification Marks 6768 P. 9.
Tube shaft, Material Identification Mark Screw shaft, Material Steel Identification Mark 6768 P. 9.

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

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

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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been built under Special Survey and in accordance with the approved plans and the Rules of this Society.

The materials and workmanship are good.

The machinery has been efficiently secured in position on board the vessel, and afterwards tried under full working conditions with satisfactory results.

The machinery is eligible in our opinion to be classed in the Register Book with notation of T-L.M.C. 8.37 C.L. 2 D.B. working pressure 120 lbs.

21/8/37

The amount of Entry Fee .. £ 6 : - :
Special ... £ 125 : 12-6 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 23 AUG 1937
When received, 6.9 19 37 26.9

Committee's Minute GLASGOW 24 AUG 1937

Assigned + L.M.C. 8, 37

2 D.B. - 120 lbs.

P. Fitzgould & W. Campbell
Engineer Surveyors to Lloyd's Register of Shipping.



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