

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

11 JUL 1928

Date of writing Report 19 When handed in at Local Office 9. 7. 19 28 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 18. 11. 27 Last Survey 5-7-19 28  
 Reg. Book. on the new steel S/S "CUSTODIAN" (Number of Visits 5.6) Tons { Gross 5843  
 Net 3695

Built at Glasgow By whom built Wm Lonnell & Co Ltd Yard No. 412 When built 1928

Engines made at Glasgow By whom made David Rowan & Co Ltd Engine No. 883 when made 1928

Boilers made at Glasgow By whom made David Rowan & Co Ltd Boiler No. 883 when made 1928

Registered Horse Power Owners T & J Harrison Port belonging to Swinpool

Nom. Horse Power as per Rule 524 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which Vessel is intended General cargo

**ENGINES, &c.**—Description of Engines Triple expansion Revs. per minute 77

Dia. of Cylinders 27" 46" 77" Length of Stroke 54" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 15.288" Crank pin dia. 15.98" Crank webs Mid. length breadth 23" Thickness parallel to axis 9.78"  
 as fitted 15.38" Mid. length thickness 9.78" shrunk Thickness around eye-hole 6.716"

Intermediate Shafts, diameter as per Rule 14.56" Thrust shaft, diameter at collars as per Rule 15.288"  
 as fitted 14.58" as fitted 15.58"

Tube Shafts, diameter as per Rule 16.1" Screw Shaft, diameter as per Rule 16.78" Is the { tube } shaft fitted with a continuous liner { yes }  
 as fitted 16.1" as fitted 16.78" Is the { screw }

Bronze Liners, thickness in way of bushes as per Rule .79" Thickness between bushes as per Rule .593" Is the after end of the liner made watertight in the  
 as fitted .78" as fitted 13/16" 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

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 no Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft no

Propeller, dia. 18.6" Pitch 18.6" No. of Blades 4 Material Brass whether Moveable yes Total Developed Surface 110 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 4.5" Stroke 24" Can one be overhauled while the other is at work yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 4.3/4" Stroke 24" Can one be overhauled while the other is at work yes

Feed Pumps { No. and size 2 @ 10.5" & 8" x 24" Pumps connected to the { No. and size General donkey 12" & 8" x 12" and  
 How driven steam Main Bilge Line { How driven steam } (the bilge pump)

Ballast Pumps, No. and size 1 @ 10.5" & 13" x 24" duplex Lubricating Oil Pumps, including Spare Pump, No. and size 4

Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 4 @ 3.5"

In Holds, &c. No 1 hold - 2 @ 3.5" No 2 hold - 2 @ 3.5" No 3 hold - 2 @ 3.5" Deep tanks - 2 @ 3.5" No 5 hold - 2 @ 3.5"  
No 6 hold - 1 @ 3.5" Tunnel well 1 @ 3"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 10" Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size 1 @ 5" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes

Are the Bilge Suctions in the Machinery Space 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 stokehold plates yes Are the Overboard Discharges above or below the deep water line both

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 forward hold suction How are they protected under timber boards

What pipes pass through the deep tanks none 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 yes Is it fitted with a watertight door yes worked from upper deck

**MAIN BOILERS, &c.**—(Letter for record (R)) Total Heating Surface of Boilers 8208 sq ft

Is Forced Draft fitted no No. and Description of Boilers two double ended 228 Working Pressure 210

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A DONKEY BOILER FITTED? yes If so, is a report now forwarded? yes

PLANS. Are approved plans forwarded herewith for Shafting no Main Boilers yes Auxiliary Boilers no Donkey Boilers yes  
 (If not state date of approval)

Superheaters no. In ch. Rpt herewith General Pumping Arrangements with ship repairs Oil fuel Burning Piping Arrangements no

**SPARE GEAR.** State the articles supplied:— In accordance with the Rules and in addition:—  
one screw shaft, one propeller boss, four propeller blades, one Thompson coupling,  
one air pump rod, one circulating pump, impeller and shaft; one slide valve rod  
one eccentric sheave and strap.

The foregoing is a correct description,

For David Rowan & Co. Ltd  
Arch. W. Grierson

Manufacturer.



© 2020

Lloyd's Register Foundation

25184

1927 Nov 18-22 Jan 13-24 30 Feb 2-6-20 Mar 2-23-26-28-29-30 Apr 3-10-11-12-13-17-20-24-25-27

Dates of Survey while building

During progress of work in shops - - -  
During erection on board vessel - - -

Total No. of visits 515-6

Dates of Examination of principal parts - Cylinders 11-4-28 Slides 18-5-28 Covers 24-4-28

Pistons 7-5-28 Piston Rods 9-5-28 Connecting rods 27-4-28

Crank shaft 20-4-28 Thrust shaft 3-5-28 Intermediate shafts 12-4-28

Tube shaft - Screw shaft 3-5-28 Propeller 9-5-28

Stern tube 9-5-28 Engine and boiler seatings 5-6-28 Engines holding down bolts 18-6-28

Completion of fitting sea connections 31-5-28

Completion of pumping arrangements 29-6-28 Boilers fixed 25-6-28 Engines tried under steam 5-7-28

Main boiler safety valves adjusted 26-6-28 Thickness of adjusting washers all 1/32

Crank shaft material J. Steel Identification Mark LLOYD'S No 7850 20-4-28 J.D.B. Thrust shaft material J. Steel Identification Mark LLOYD'S No 7850 3-5-28 J.L.M.

Intermediate shafts, material J. Steel Identification Marks LLOYD'S No 7850 12-4-28 L.C.D. Tube shaft, material - Identification Mark -

Screw shafts, material J. Steel Identification Marks LLOYD'S No 7850 3-5-28 J.L.M. Steam Pipes, material Iron Test pressure 630 Date of Test 15/8-6-28

Is an installation fitted for burning oil fuel - Is the flash point of the oil to be used over 150°F. -

Have the requirements of the Rules for the use of oil as fuel been complied with -

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo no If so, have the requirements of the Rules been complied with -

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

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

The materials and workmanship are good.

The machinery has been constructed under special survey in accordance with the rules, satisfactorily fitted in the vessel, tried under steam and found good.

It is eligible in my opinion for classification and the Record + LMC 7, 28

It is submitted that this vessel is eligible for RECORD + LMC 7, 28 etc.

12/7/28

S. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 6 : : When applied for,

Special ... £ 101 : 4 : - JUL 1928

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : 7.7.28

Committee's Minute GLASGOW 10 JUL 1928

Assigned + LMC 7, 28.

Certificate to be sent to GLASGOW 7-7-28

The Surveyors are requested not to write on or below the space for Committee's Minute.

