

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

-3 NOV 1930

Date of writing Report 10 When handed in at Local Office 1st Nov. 1930 Port of BELFAST

No. in Survey held at BELFAST Date, First Survey 19th May 1930 Last Survey 28th Oct 1930
Reg. Book. 91489 on the Steel Sc. "MAVIS" (Number of Volls 33)

Tons Gross 900. Net 800.

Built at Belfast By whom built Workman, Clark (1928) Ltd. Yard No. 520. When built 1930.

Engines made at Belfast By whom made Workman, Clark (1928) Ltd. Engine No. 520. When made 1930.

Boilers made at Belfast By whom made Workman, Clark (1928) Ltd. Boiler No. 520. When made 1930.

Registered Horse Power Owners The General Steam Navigation Co. Ltd. Port belonging to London.

Nom. Horse Power as per Rule 189.2 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

Trade for which Vessel is intended

ENGINES, &c.—Description of Engines Triple expansion reciprocating. Revs. per minute 90.

Dia. of Cylinders 17 $\frac{1}{2}$ ", 29", 48". Length of Stroke 33". No. of Cylinders 3. No. of Cranks 3.

Crank shaft, dia. of journals as per Rule 9.51" as fitted 9 $\frac{3}{4}$ ". Crank pin dia. 9 $\frac{3}{4}$ ". Crank webs Mid. length breadth 14 $\frac{5}{8}$ " Mid. length thickness 6" shrunk Thickness parallel to axis 6" Thickness around eye-hole 4 $\frac{5}{8}$ ".

Intermediate Shafts, diameter as per Rule 9.057" as fitted 9.25". Thrust shaft, diameter at collars as per Rule 9.51" as fitted 9 $\frac{3}{4}$ ".

Tube Shafts, diameter as per Rule 10.095" as fitted 10 $\frac{3}{4}$ ". Is the tube screw shaft fitted with a continuous liner? Yes.

Bronze Liners, thickness in way of bushes as per Rule .605" as fitted $\frac{11}{16}$ ". Thickness between bushes as per Rule .454" as fitted $\frac{7}{16}$ ". 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? 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? Yes. 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 3'-7".

Propeller, dia. 12'-6" Pitch 13'-0" No. of Blades 4 Material Bronze whether Moveable No. Total Developed Surface 47 sq. feet.

Feed Pumps worked from the Main Engines, No. 2 Diameter 3" Stroke 16 $\frac{1}{2}$ ". Can one be overhauled while the other is at work? Yes.

Bilge Pumps worked from the Main Engines, No. 2 Diameter 3" Stroke 16 $\frac{1}{2}$ ". Can one be overhauled while the other is at work? Yes.

Feed Pumps { No. and size 2-6"x8 $\frac{1}{2}$ "x13" 1-4"x6"x7" Pumps connected to the Main Bilge Line { No. and size 2000 { One 6"x6"x6" Duplex. How driven Steam. How driven Steam. { One 6"x4 $\frac{1}{2}$ "x6" Duplex.

Ballast Pumps, No. and size 1-6"x6"x6" Duplex. Lubricating Oil Pumps, including Spare Pump, No. and size.

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 4-2 $\frac{1}{2}$ ". 1-2 $\frac{1}{2}$ " off-dam suction. In Pump Room 1-2" tunnel well. In Holds, &c. 2-2" No 1 hold. 2-2 $\frac{1}{2}$ " No 2 hold. 2-2 $\frac{1}{2}$ " aft hold.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-5". Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-3 $\frac{1}{2}$ ". 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? Yes.

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? Below.

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? No 1 & 2 hold suction. How are they protected? Wood casing.

What pipes pass through the deep tanks? 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 Engine room top grating.

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 3400 sq. ft.

Is Forced Draft fitted? No. No. and Description of Boilers 2 cyl multi. Working Pressure 200 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes.

IS A DONKEY BOILER FITTED? No. If so, is a report now forwarded? Yes.

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

PLANS. Are approved plans forwarded herewith for Shafting? No. Main Boilers 24/4/30. Auxiliary Boilers. Donkey Boilers.

(If not state date of approval)

Superheaters. General Pumping Arrangements. Oil fuel Burning, Piping Arrangements.

SPARE GEAR.

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

State the principal additional spare gear supplied

- 1- cast iron propeller.
- 1- set thrust block pads.
- 6- condenser tubes.
- 20- " tube forules.
- 1- set air pump valves.
- 6- boiler tubes.

The foregoing is a correct description,

pro WORKMAN CLARK (1928) LIMITED,

Manufacturer.

Secretary.



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Lloyd's Register
Foundation

W280-0071

1930 May 19. 20. 30 June 4. 13. 20. 23. 24. 25. 26 July 2. 7. 9. 10. 24. 25. 29 Aug. 12. 22. 25
 During progress of work in shops - - 26. 28. 29 Sept 4. 14. 18. 22. 25. 26. 30 Oct 20. 22. 28
 Dates of Survey while building
 During erection on board vessel - -
 Total No. of visits 33

Dates of Examination of principal parts—Cylinders 23/6/30. 2/7/30. 7/8/30. Slides 23/6/30. 2/7/30. Covers 23/6/30. 2/7/30.
 Pistons 25/7/30. Piston Rods 25/7/30. Connecting rods 9/7/30.
 Crank shaft 8/7/30. Thrust shaft 8/7/30. Intermediate shafts 26/8/30.
 Tube shaft 29/8/30. Screw shaft 24/6/30. 26/8/30. Propeller 29/8/30.
 Stern tube 29/8/30. Engine and boiler seatings 18/9/30. Engines holding down bolts 18/9/30.
 Completion of fitting sea connections 14/10/30.
 Completion of pumping arrangements 9/10/30. Boilers fixed 18/9/30. Engines tried under steam 28/10/30.
 Main boiler safety valves adjusted 28/10/30. Thickness of adjusting washers $SP \frac{1}{32}'' S \frac{3}{8}'' PP \frac{3}{8}'' S \frac{3}{8}''$
 Crank shaft material Steel Identification Mark J.K.W. 8/7/30. Thrust shaft material Steel Identification Mark J.K.W. 8/7/30.
 Intermediate shafts, material Steel Identification Marks J.K.W. 26/8/30. Tube shaft, material Steel Identification Mark 19/9/30.
 Screw shaft, material Steel Identification Mark J.K.W. 26/8/30. Steam Pipes, material Steel Test pressure 600 lbs. Date of Test 22/9/30.
 Is an installation fitted for burning oil fuel No. 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 ✓
 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 was constructed under special survey. The materials and workmanship are sound and good. The main engines and auxiliaries were tried under steam at a moored trial and sea trial with satisfactory results. In my opinion the vessel is eligible for notation in the Register Book + LMC 10.30 CL. Boiler pressure 200 lbs.

It is submitted that
 this vessel is eligible for
 THE RECORD. + LMC 10.30
 C-L.

J. 6/11/30.

The amount of Entry Fee ... £ 3 : 0 :
 Special ... £ 47 : 5 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 1st Nov. 1930
 When received, 19.11.1930

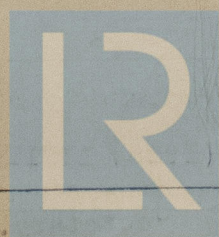
John K. Williams.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 11 NOV 1930

Assigned

+ Lmb. 10.30 CL



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