

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 11 DEC 1930

Date of writing Report Dec. 9th 1930 When handed in at Local Office Dec. 10th 1930 Port of Aberdeen
 No. in Survey held at Aberdeen Date, First Survey 1-7-29 Last Survey 5-12-1930
 Reg. Book on the T.S.S. "CALDARE" (Number of Visits 54)
 Built at Aberdeen By whom built J. Lewis & Sons Ltd. Yard No. 109 Tons { Gross 760.33
 Engines made at Aberdeen By whom made J. Lewis & Sons Ltd. Engine No. 190/1 Net 281.45
 Boilers made at Aberdeen By whom made J. Lewis & Sons Ltd. Boiler No. 153/4 When built 1930
 Registered Horse Power 175 Owners Australian Steamships Proprietary Ltd. Port belonging to Sydney N.S.W.
 Nom. Horse Power as per Rule 175 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 Revs. per minute 125
 Dia. of Cylinders 12-21-34 Length of Stroke 24 No. of Cylinders 6 No. of Cranks 6
 Crank shaft, dia. of journals 6.45 as per Rule 6.45 Crank pin dia. 6.34 as fitted 6.34 Crank webs Mid. length breadth 10 Thickness parallel to axis 4.4
 Intermediate Shafts, diameter 6.14 as per Rule 6.14 Thrust shaft, diameter at collars 6.45 as per Rule 6.45 as fitted 6.34
 Tube Shafts, diameter 6.85 as per Rule 6.85 Is the scree shaft fitted with a continuous liner yes
 Screw Shaft, diameter 7.38 as per Rule 7.38 as fitted 7.38
 Bronze Liners, thickness in way of bushes 5.03 as per Rule 5.03 Thickness between bushes 3.77 as per Rule 3.77 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 yes
 Propeller, dia. 8-6 Pitch 11-0 No. of Blades 4 Material Brass whether Moveable no Total Developed Surface 24.4 sq. feet
 Feed Pumps worked from the Main Engines, No. none Diameter 2.34 Stroke 12 Can one be overhauled while the other is at work yes
 Bilge Pumps worked from the Main Engines, No. 1 each Diameter 2.34 Stroke 12 Can one be overhauled while the other is at work yes
 Feed Pumps { No. and size Two 6" x 8 1/2" x 13" Weir's Pumps connected to the { No. and size One 8" x 9" x 9" duplex
 How driven Steam Main Bilge Line How driven Steam
 Ballast Pumps, No. and size One 8" x 9" x 9" duplex Lubricating Oil Pumps, including Spare Pump, No. and size yes
 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 Two 2 1/2", one forward & one aft; Boiler room using suction 2 3/4" dia.
 In Holds, &c. Main hold P & S. each 2 3/4" forward end; 2 3/4" each, after end

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 5" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 3"
 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 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 forward suction How are they protected under linings
 What 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 yes Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 3406 sq. ft.
 Is Forced Draft fitted no No. and Description of Boilers 2 S.E. Main Working Pressure 180 lbs.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes
 IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? yes
 PLANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers yes Donkey Boilers yes
 Superheaters yes General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes

SPARE GEAR. State the articles supplied:— As per Rule, also 2 screw shafts, 2 propellers (C.I.)
1 eccentric strap, 2 pairs crank pin brasses, 12 boiler plain tubes, 6 stay tubes, 2 main & 2 away feed check valves & spindles, 2 bilge pump valves & seats, 6 ballast pump valves, HP & IP piston rings & springs, 2 HP piston valve rings, air pump rod & bucket, pair top end brasses, 1 valve spindle, 25 condenser tubes, 50 ferrules, Circulating pump impeller & shaft, Valve chest & shuttle for Weir's pump, 2 seats & complete set of valves for Weir's pump.

The foregoing is a correct description,
 FOR JOHN LEWIS & SONS, LTD.,

John Lewis & Sons Ltd.
 Secy.

Manufacturer.



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1929. 1930.
During progress of work in shops -- July 1. 10. Sep. 9. Oct. 3. Nov. 22. Dec. 7. 18. Jan. 14. 21. 31. Feb. 8. 11. 14. 19. March 5. 11. 13. 18. 20. April 12. 17.
May 2. 20. 27. 29. June 9. 13. 18. 26. 27. July 1. 3. 4. 7
During erection on board vessel --- July 16. 17. 29. 30. Aug. 5. 7. 8. 12. 14. 18. Sept. 1. 3. 4. 5. 15. 18. 29. Nov. 27. ²⁹ Dec. 5.
Total No. of visits 54

Dates of Examination of principal parts—Cylinders 11-12-18 & 20/3/30 Slides 17-4-30 Covers 11-13-18 & 20/3/30
Pistons 18-6-30 Piston Rods 27-5-30 Connecting rods 27-5-30
Crank shafts 9 & 24-7-29 Thrust shaft 1-7-30 Intermediate shafts ✓
Tube shaft ✓ Screw shaft 29-5-30 Propellers 9 & 13-6-30
Stern tubes 29-5-30 Engine and boiler seatings 7-7-30 Engines holding down bolts 17-7-30
Completion of fitting sea connections 7-7-30
Completion of pumping arrangements 29-11-30 Boilers fixed 17-7-30 Engines tried under steam 29-11-30
Main boiler safety valves adjusted 27-11-30 Thickness of adjusting washers PP $\frac{5}{16}$ " B $\frac{5}{16}$ " F; SP $\frac{3}{8}$ " S $\frac{3}{8}$ "
Crank shaft material Steel Identification Mark E191, 353 JH. Thrust shaft material Steel Identification Mark 3424 P.F.
Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓
Screw shafts, material Iron Identification Mark 3424 P.F. Steam Pipes, material ~~Weldless Steel~~ Test pressure 540 lb. Date of Test 25-8-30
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 ✓
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 has been constructed under special survey in accordance with the approved plans & the Rules of this Society.

The materials & workmanship are good.

The machinery has been efficiently installed on board the vessel, tried under working conditions, & found good.

The machinery is eligible in my opinion to have the record $\frac{1}{2}$ LMC 12.30 C.L. in the Register Book.

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for, 9-12-1930
Special ... £ 43 : 15 : -
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : : : 26.12.30

P. Fitzgerald.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI. 19 DEC '30

+ Lmb. 12 30



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