

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**)

Gross Tons **760.33**
 Net Tons **281.45**
 When built **1930**

Built at **Aberdeen** By whom built **J. Lewis & Sons Ltd.** Yard No. **109** when made **1930**

Engines made at **Aberdeen** By whom made **J. Lewis & Sons Ltd.** Engine No. **190/1** when made **1930**

Boilers made at **Aberdeen** By whom made **J. Lewis & Sons Ltd.** Boiler No. **153/4** when made **1930**

Registered Horse Power _____ Owners **Australian Steamships Proprietary Ltd.** Port belonging to **Sydney N.S.W.**
 Mgr. **Howard Smith Ltd.**

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 as per Rule **6.45** Crank pin dia. **6.3/4** Crank webs Mid. length breadth **10** Thickness parallel to axis **4.4**
 as fitted **6.3/4** Mid. length thickness **4.4** shrunk Thickness around eye-hole **2.8**

Intermediate Shafts, diameter as per Rule **6.14** Thrust shaft, diameter at collars as per Rule **6.45**
 as fitted _____ as fitted **6.3/4**

Tube Shafts, diameter as per Rule _____ Screw Shaft, diameter as per Rule **6.85** Is the **hub** shaft fitted with a continuous liner **yes**
 as fitted _____ as fitted **7.3/8** Is the **screw** shaft fitted with a continuous liner _____

Bronze Liners, thickness in way of bushes as per Rule **.503** Thickness between bushes as per Rule **.377** Is the after end of the liner made watertight in the propeller boss **yes**
 as fitted **5/8** as fitted **7/16** 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 **2-5 1/2**

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 _____ Stroke _____ Can one be overhauled while the other is at work _____

Bilge Pumps worked from the Main Engines, No. **leaching** Diameter **2 3/4** Stroke **12** Can one be overhauled while the other is at work _____

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" duplex**
 How driven **Steam** Main Bilge Line How driven **Steam**

Ballast Pumps, No. and size **One 8" x 9" duplex** Lubricating Oil Pumps, including Spare Pump, No. and size _____

Are two independent means arranged for circulating water through the Oil Cooler _____ 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 wing 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 _____ 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 _____ 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? _____

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers **yes** Auxiliary Boilers _____ Donkey Boilers _____
 (If not state date of approval)

Superheaters _____ General Pumping Arrangements **yes** Oil fuel Burning Piping Arrangements _____

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.,

Jan. J. Donald Secy. Manufacturer.



1929. July 1. 10. Sep. 9. Oct. 3. Nov. 22. Dec. 7. 18. 1930. Jan. 14. 21. 31. Feb. 8. 11. 14. 19. March 5. 11. 13. 18. 20. April 12. 17.
 During progress of work in shops -- May 2. 20. 27. 29. June 9. 13. 18. 26. 27. July 1. 3. 4. 7
 Dates of Survey while building { 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 11-13-18 + 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 P.P. $\frac{5}{16}$ " $\frac{5}{16}$ " F; S.P. $\frac{3}{8}$ " $\frac{3}{8}$ "
 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. ✓

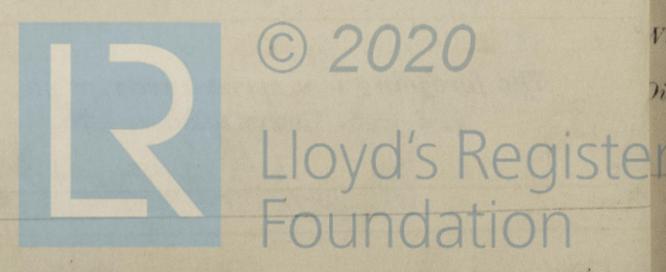
General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery of this vessel has been constructed under special survey in accordance with the approved plans & the Rules of this Society.
 The materials & workmanship are good.
 The machinery has been efficiently installed on board the vessel, tried under working conditions, & found good.
 The machinery is eligible in my opinion to have the record + LMC 12.30 C.L. in the Register Book.

Certificate to be sent to Aberdeen.

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for,
 Special ... £ 43 : 15 : - 9-12-1930
 Donkey Boiler Fee ... £ : : : When received,
 Travelling Expenses (if any) £ : : : 26.12.1930

P. Fitzgerald.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 19 DEC '30
 Assigned + LMC 12 30



CERTIFICATE WILL BE SENT