

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

-5 NOV 1930

Date of writing Report 4-11-1930 When handed in at Local Office 4-11-1930 Port of Aberdeen

No. in Survey held at Aberdeen Date, First Survey 17-4-30 Last Survey 1-11-1930  
 Reg. Book. on the S.S. "BIRCHGROVE" (Number of Visits 26.)

Gross 640.48  
 Net 246.98  
 Tons

Built at Aberdeen By whom built J. Lewis & Sons Ltd. Yard No. 122 When built 1930

Engines made at Aberdeen By whom made J. Lewis & Sons Ltd. Engine No. 203 when made 1930

Boilers made at Hellburn By whom made Palmer's Co. Ltd. Boiler No. 1154 when made 1930

Registered Horse Power Owners R.W. Miller & Co. Ltd. Port belonging to Sydney, N.S.W.

Nom. Horse Power as per Rule 118 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which Vessel is intended Coasting.

ENGINES, &c.—Description of Engines Triple expansion. Revs. per minute 114

Dia. of Cylinders 14"-24½"-40" Length of Stroke 27" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 7.7" Crank pin dia. 8½" Crank webs Mid. length breadth 11¼" Thickness parallel to axis 5⅝"  
 as fitted 8⅝" Mid. length thickness 5⅜" Thickness around eye-hole 3¼"

Intermediate Shafts, diameter as per Rule 7.33" Thrust shaft, diameter at collars as per Rule 7.7" as fitted 8⅝"

Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 8.04" Is the tube shaft fitted with a continuous liner yes  
 as fitted 8⅝" as fitted 8⅝"

Bronze Liners, thickness in way of bushes as per Rule .54" Thickness between bushes as per Rule .405" Is the after end of the liner made watertight in the propeller boss yes  
 as fitted ⅝" as fitted ⅝"

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

Length of Bearing in Stern Bush next to and supporting propeller 2-9"

Propeller, dia. 8-6" Pitch 13-6" No. of Blades 4 Material Bronze whether Moveable no Total Developed Surface 33 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 2¾" Stroke 13½" Can one be overhauled while the other is at work yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 2¾" Stroke 13½" Can one be overhauled while the other is at work yes

Feed Pumps { No. and size One 5x7x12" Single Cylinder Pumps connected to the { No. and size One 8x4½x8" Duplex (General Service)  
 How driven Steam Main Bilge Line { How driven One 7x8x8" (Ballast)  
Steam

Ballast Pumps, No. and size One 7x8x8" 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 3 @ 2½" dia; also one @ 2" from tank top under engines. yes

In Holds, &c. Two @ 2½" dia, 1 P & 1 S.

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 4" 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 liners

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 — Is it fitted with a watertight door — worked from —

MAIN BOILER, &c.—(Letter for record S) Total Heating Surface of Boilers 2100 sq. ft.

Is Forced Draft fitted no No. and Description of Boilers One S.E. Main Working Pressure 200 lb.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes, Newcastle Rpt. No. 86048.

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? —

PLANS. Are approved plans forwarded herewith for Shafting no 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 requirements, also 1 set air pump valves & guards, 12 safety valve spring, 12 condenser tubes, 24 ferrules; 6 plain boiler tubes; 1 propeller, 1 screw shaft; 1 cylinder escape valve for each size fitted; 12 junk ring studs, 12 cylinder cone studs; 1 main & 1 away check valve & seat; 1 feed relief valve spring, 1 feed pump ram, 1 bilge pump ram, 1 W.M. thrust liner; 1 eccentric strap. Spares for away pumps & dynamo engine.

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

Manufacturer.



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Lloyd's Register  
Foundation

004612-004620-0175



1930.  
April 17. May 20. 27. 30. June 18. July 14. 17. Aug. 5. 13. 14. 15. 18. 28. Sep. 9.  
During progress of work in shops --  
Dates of Survey while building  
During erection on board vessel --  
Sep. 17. 18. 29. 30. Oct. 7. 9. 11. 17. 21. 22. 23. Nov. 1.  
Total No. of visits 26.

Dates of Examination of principal parts—Cylinders 27-5-30 Slides 17-7-30 Covers 27-5-30  
Pistons 17-7-30 Piston Rods 5-8-30 Connecting rods 5-8-30  
Crank shaft 2-5-30 Thrust shaft 15-8-30 Intermediate shafts ✓  
Tube shaft ✓ Screw shaft 15-8-30 Propeller 14-8-30  
Stern tube 14-8-30 Engine and boiler seatings 9-9-30 Engines holding down bolts 17-9-30  
Completion of fitting sea connections 9-9-30  
Completion of pumping arrangements 23-10-30 Boilers fixed 17-9-30 Engines tried under steam 23-10-30  
Main boiler safety valves adjusted 22-10-30 Thickness of adjusting washers  $\frac{3}{8}$  P.S.  
Crank shaft material Steel Identification Mark 725 J.H. Thrust shaft material Steel Identification Mark 828 P.F.  
Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓  
Screw shaft, material Iron Identification Mark 826 P.F. Steam Pipes, material S.D. Copper Test pressure 400 lb. Date of Test 18-9-30  
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 ✓  
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 + L.M.C. 11.30 C.L. in the Register Book.

It is submitted that  
this vessel is eligible for  
THE RECORD + L.M.C. 11.30 C.L.

*P. Fitzgerald*  
8/11/30

The amount of Entry Fee ... £ 3 : - : - When applied for,  
Special  $\frac{3}{5}$  L.M.C. Fee = £ 17 : 14 : - 4-11-1930  
Donkey Boiler Fee ... £ : : : When received,  
Travelling Expenses (if any) £ : : : 18.12.1930

Committee's Minute

Assigned

TUE. 11 NOV 1930

CERTIFICATE VALIDATED

*P. Fitzgerald*

Engineer Surveyor to Lloyd's Register of Shipping.



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