

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 27 JUL 1927

Date of writing Report July 14<sup>th</sup> 1924 When handed in at Local Office July 14<sup>th</sup> 1924 Port of GLASGOW.

No. in Survey held at Groon Date, First Survey 10<sup>th</sup> Jan Last Survey July 13<sup>th</sup> 1924  
 Reg. Book. on the S.S. THE DUKE. (Number of Visits 24) Gross 820  
 Tons Net 1924.

Built at Groon By whom built Ailsa Shipbuilding Coy. Ltd Yard No. 400 When built 1924.

Engines made at Groon By whom made do Engine No. 135. when made 1924.

Boiler made at Glasgow By whom made D. Rowan & Co Ltd Boiler No. 345. when made 1924.

Registered Horse Power 124. Owners J. Hay and Sons Port belonging to Glasgow.

Nom. Horse Power as per Rule 124. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

Trade for which Vessel is intended

## ENGINES, &amp;c.—Description of Engines

Triple Expansion Revs. per minute 92

Dia. of Cylinders 15" 25" 42" Length of Stroke 30" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals 8.33" Crank pin dia. 8.2" Crank webs 1-4 1/4" Thickness parallel to axis 5 3/4"  
 as fitted 8.2" Mid. length breadth 5 3/4" Thickness around eye-hole 3 3/4"  
 as per Rule 4.93" Mid. length thickness 5 3/4" as fitted 8.33"

Intermediate Shafts, diameter None Thrust shaft, diameter at collars 8.2"  
 as fitted None as per Rule 8.2" as fitted 8.2"

Tube Shafts, diameter None Screw Shaft, diameter 8.89" Is the tube shaft fitted with a continuous liner Yes.  
 as fitted None as fitted 8.89"

Bronze Liners, thickness in way of bushes 5/8" Thickness between bushes 5/8" Is the after end of the liner made watertight in the propeller boss Yes  
 as fitted 5/8" as fitted 5/8"

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.

Propeller, dia. 11'-6" Pitch 13' No. of Blades 4 Material C. Iron whether Movable No. Total Developed Surface 48.5 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 15" Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 15" Can one be overhauled while the other is at work Yes

Feed Pumps No. and size 1 Duplex 6" x 4 1/4" x 6" Pumps connected to the Main Bilge Line No. and size 4" x 8" x 8"  
 How driven Steam How driven Steam

Ballast Pumps, No. and size 1 4" x 8" x 8" 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 Three @ 2 1/4"

In Holds, &c. For Hold 2 @ 3"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 3" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 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

That Pipes pass through the bunkers FOR BILGE How are they protected Wood covering

That 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 None Is it fitted with a watertight door — worked from —

MAIN BOILERS, &c.—(Letter for record (S)) Total Heating Surface of Boilers 2160 sq. ft.

Forced Draft fitted No. No. and Description of Boilers One (S.E.) Marine 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? —

PLANS. Are approved plans forwarded herewith for Shafting — Main Boilers — Auxiliary Boilers — Donkey Boilers —

(If not state date of approval)

Superheaters — General Pumping Arrangements — Oil fuel Burning Piping Arrangements —

SPARE GEAR. State the articles supplied:— Two connecting rod top end bolts and nuts

Two bottom end bolts and nuts Two main bearing bolts

One set of coupling bolts One set of feed and bilge pump valves

a quantity of assorted bolts and nuts and Iron of various sizes

One C I propeller.

The foregoing is a correct description,  
FOR AILSA SHIPBUILDING CO., LIMITED.

J. McNaughton

ENGINEER MANAGER.

Manufacturer.



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Lloyd's Register  
Foundation

003311-003320-0209



25804

1927 Jan 10-14-21-27 Feb 8-18 Mar 8-17-22-28 Apr 11-22 May 5-10-23-31 June 7-10-14-17 July 4-11-18

Dates of Survey while building

During progress of work in shops - - - 13

During erection on board vessel - - - 13

Total No. of visits 24

Dates of Examination of principal parts—Cylinders 22-4-24 Slides 5-5-24 Covers 22-4-24

Pistons 5-5-24 Piston Rods 5-5-24 Connecting rods 14-3-24

Crank shaft 14-3-24 Thrust shaft 14-3-24 Intermediate shafts -

Tube shaft - Screw shaft 4-6-24 Propeller 4-6-24

Stern tube 4-6-24 Engine and boiler seatings 10-6-24 Engines holding down bolts 4-4-24

Completion of fitting sea connections 14-6-24

Completion of pumping arrangements 6-4-24 Boilers fixed 4-4-24 Engines tried under steam 13-4-24

Main boiler safety valves adjusted 11-4-24 Thickness of adjusting washers SV 32 PV 16

Crank shaft material S Identification Mark LLOYDS No 1415 DCB Thrust shaft material S Identification Mark LLOYDS No 1415 DCB

Intermediate shafts, material - Identification Marks 14-3-24 Tube shaft, material - Identification Mark 14-3-24

Screw shaft, material S Identification Mark LLOYDS No 1415 DCB Steam Pipes, material Copper Test pressure 400 lbs Date of Test 4-4-24

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 carrying and burning oil fuel been complied with

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

General Remarks (State quality of workmanship, opinions as to class, &c.) The engines have been constructed under Special Survey in accordance with the Rules of the Society. The workmanship and materials are of good quality. The engines and boiler have been securely fitted on board the vessel and tried under steam with satisfactory results. It is submitted that this vessel is eligible for a record of LMC 4-24.

It is submitted that this vessel is eligible for THE RECORD + LMC 7.27. GL.

David C. Barr.  
26/7/27

The amount of Entry Fee ... £ 3 : 0 :  
Special ... £ 19 : 1 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ 3 : 3 :  
When applied for 26 JUL 1927  
When received 3/8/27

David C. Barr.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 26 JUL 1927

Assigned + LMC 7.27



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