

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY,

Received at London Office

-4 JUL 1934

Date of writing Report 24-6-34 When handed in at Local Office 26. 6. 1934 Port of Glasgow

No. in Survey held at Glydebank & Bowling Date, First Survey 13. 2. 34 Last Survey 21-6-1934  
 Reg. Book. on the S.S. "Broom" (Number of Visits 28)

Built at Bowling By whom built Scott & Sons Yard No. 325 When built 1934  
 Engines made at Glydebank By whom made Aitchison Blair & Co. Engine No. 186 When made 1934  
 Boilers made at Glasgow By whom made D. Rowan & Co. Boiler No. 392 When made 1934

Registered Horse Power 48.5 Owners Kirkcubbin S.S. Co. Ltd. Port belonging to Leury  
 Nom. Horse Power as per Rule 79 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes No

Trade for which Vessel is intended Coasting

**ENGINES, &c.**—Description of Engines Triple Expansion Revs. per minute 130

Dia. of Cylinders 11 1/4" - 20" - 32" Length of Stroke 24" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 30-12-33 Crank pin dia. 6 5/8" Crank webs Mid. length breadth 13 1/8" Thickness parallel to axis 4 5/16"  
 as fitted 6 5/8" Mid. length thickness 4 5/16" shrunk Thickness around eye-hole 3 1/4"

Intermediate Shafts, diameter as per Rule 30-12-33 Thrust shaft, diameter at collars as per Rule 30-12-33  
 as fitted none as fitted 6 5/8"

Tube Shafts, diameter as per Rule 30-12-33 Screw Shaft, diameter as per Rule 30-12-33 Is the { tube } shaft fitted with a continuous liner { yes }  
 as fitted none as fitted 7 1/4" { screw }

Bronze Liners, thickness in way of bushes as per Rule 19/32" Thickness between bushes as per Rule 9/16" 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 one length  
 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 Length of Bearing in Stern Bush next to and supporting propeller 30"

Propeller, dia. 9' 0" Pitch 9' 3" No. of Blades 4 Material O.C. whether Moveable yes Total Developed Surface 28 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 2" Stroke 12 1/2" Can one be overhauled while the other is at work yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2" Stroke 12 1/2" Can one be overhauled while the other is at work yes

Feed Pumps { No. and size 1-6 1/4" x 5" x 6" Pumps connected to the Main Bilge Line { No. and size 1-6 1/4" x 5" x 6" (Ballast pump) }  
 How driven Steam How driven Steam

Ballast Pumps, No. and size 1-6 1/4" x 5" x 6" Lubricating Oil Pumps, including Spare Pump, No. and size none

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 yes

In Pump Room none In Holds, &c. 3 - 2 1/4"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-2 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 3/2" 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 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 Hold sections, & fore peak How are they protected Wood ceiling

What pipes pass through the deep tanks none 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 none Is it fitted with a watertight door yes worked from yes

**MAIN BOILERS, &c.**—(Letter for record S) Total Heating Surface of Boilers 1489 sq. ft.

Is Forced Draft fitted no No. and Description of Boilers 1 - multitubular Working Pressure 205

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes See Report No. 54408

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 yes Main Boilers yes Auxiliary Boilers yes Donkey Boilers yes  
 (If not state date of approval)

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

### SPARE GEAR.

Has the spare gear required by the Rules been supplied yes  
 State the principal additional spare gear supplied 2 - propeller Blades

The foregoing is a correct description,

Manufacturer.

AITCHISON, BLAIR, LIMITED

Lloyd's Register Foundation

99242

1934 July: 13 Mar: 18 13 22 28 Apr: 3 11 19 25 May: 2 10 16 18  
 During progress of work in shops - - -  
 Dates of Survey while building - - -  
 1934 Mar: 26 Apr: 11 16 May: 4 9 11 17 18 June: 5 8 11 13 15 21  
 During erection on board vessel - - -  
 Total No. of visits 28

Dates of Examination of principal parts—Cylinders 13-3-34 di Slides 25-4-34 di Covers 13-2-34 di  
 Pistons 1-3-34 di Piston Rods 1-3-34 di Connecting rods 1-3-34 di  
 Crank shaft 8-3-34 di Thrust shaft 13-3-34 di Intermediate shafts none  
 Tube shaft ✓ Screw shaft 3-4-34 di Propeller 2-5-34 di  
 Stern tube 28-3-34 di Engine and boiler seatings 4-5-34 Engines holding down bolts 5-6-34  
 Completion of fitting sea connections 17-5-34  
 Completion of pumping arrangements 15-6-34 Boilers fixed 8-6-34 Engines tried under steam 21-6-34  
 Main boiler safety valves adjusted 15-6-34 Thickness of adjusting washers P 9/32", S 5/16  
 Crank shaft material 8 Identification Mark 9383 Thrust shaft material 8 Identification Mark 9428  
 Intermediate shafts, material none Identification Marks none Tube shaft, material none Identification Mark ✓  
 Screw shaft, material 8 Identification Mark 9428 Steam Pipes, material Copper Test pressure 410 Date of Test 8-6-34  
 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 ✓ 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 has been built under special survey in accordance with the approved plans, and the Society's Rules and requirements the materials and workmanship are good, it has been securely fitted on board, and satisfactorily tried under steam, and is in our opinion eligible for the record + L. M. C. 6-34.

Glasgow.

The amount to be sent to the Registrar of Shipping should be written on or below the space for Committee's Minute.

23/6/34

The amount of Entry Fee ...	£ 2 : -	When applied for	27.6.34
Special ...	£ 11 : 17	When received	2.7.34
Donkey Boiler Fee ...	£ :		
Travelling Expenses (if any) £	:		

Jas Cairns, W. & Co.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 3 JUL 1934

Assigned + L.M.C. 6,34

CERTIFICATE WRITTEN



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