

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

-4 JUL 1934

Date of writing Report 29-6-1934 When handed in at Local Office 30.6.34 Port of Glasgow
No. in Survey held at Clydebank & Bowling Date, First Survey 13.2.34 Last Survey 28-6-1934
Reg. Book on the S.S. "Thorn" (Number of Visits 30) Gross 347 Tons Net 121
Built at Bowling By whom built Scott & Sons Yard No. 326 When built 1934
Engines made at Clydebank By whom made Aitchison Blair & Co. Engine No. 187 When made 1934
Boilers made at Glasgow By whom made D. Rowan & Co. Boiler No. 393 When made 1934
Registered Horse Power Owners Frontier Towing & S. Co. Ltd Port belonging to Harp
Nom. Horse Power as per Rule 79 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No
Trade for which Vessel is intended Boasting.

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute 130
Dia. of Cylinders 11 1/2" - 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 none Thrust shaft, diameter at collars as per Rule 30-12-33 as fitted 6 5/8"
Tube Shafts, diameter as per Rule none Screw Shaft, diameter as per Rule 7 1/4" Is the tube shaft fitted with a continuous liner? yes
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 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? light
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 30"
Propeller, dia. 9'-0" Pitch 9'-3" No. of Blades 4 Material C.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 1-5" x 3 1/2" x 6" Pumps connected to the Main Bilge Line No. and size 1-6 1/4" x 5" x 6" (Ballast pumps)
How driven Steam Lubricating Oil Pumps, including Spare Pump, No. and size none
Ballast Pumps, No. and size 1-6 1/4" x 5" x 6" 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 1-2 1/2", 2-2" In Holds, &c. 3-2 1/4"
In Pump Room

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-3 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2 1/2"
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 suction & for peak How are they protected? Hood 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 8) Total Heating Surface of Boilers 1489 sq. ft.
Is Forced Draft fitted? no No. and Description of Boilers 1- horizontal Working Pressure 205
IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes
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 & CO. LTD.

Arch. Blair

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Lloyd's Register

002846-002852-0042

1934 July: 13 Mar: 1. 8. 13 22. 28 Apr: 3. 11. 19 25 May: 2. 10. 16. 18. 23
During progress of work in shops - -
1934 Mar: 26 Apr: 11. 16 May: 2. 4. 9. 17. 29 June: 3. 8. 11. 13. 22. 28
During erection on board vessel - - -
Total No. of visits 30

Dates of Examination of principal parts—Cylinders 8-3-34 di Slides 26-3-34 di Covers 26-3-34 di
Pistons 1-3-34 di Piston Rods 13-2-34 di Connecting rods 1-3-34 di
Crank shaft 13-3-34 di Thrust shaft 13-3-34 di Intermediate shafts 9-4
Tube shaft Screw shaft 3-4-34 di Propeller 25-4-34 di
Stern tube 26-3-34 di Engine and boiler seatings 4-5-34 Engines holding down bolts 13-6-34
Completion of fitting sea connections 17-6-34
Completion of pumping arrangements 22-6-34 Boilers fixed 5-6-34 Engines tried under steam 22-6-34
Main boiler safety valves adjusted 22-6-34 Thickness of adjusting washers P 5/16. 5 1/32"
Crank shaft material 8 Identification Mark 9384 Thrust shaft material 8 Identification Mark 9384
Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark
Screw shaft, material 8 Identification Mark 9429 Steam Pipes, material Copper Test pressure 410 Date of Test 13-6-34
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 "Broom"
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.

30/6/34

The amount of Entry Fee ... £ 2 : -
3/5 Special ... £ 11 : 17 : 29.6.34
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : 2.7.34
When applied for,
When received,

Committee's Minute GLASGOW 3 JUL 1934

Assigned + L.M.C. 6.34

Jas. Cairns. W. Deth.
Engineer Surveyor to Lloyd's Register of Shipping.