

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office MAY 4 1938

Date of writing Report 28th April 1938 When handed in at Local Office 29 APR 1938 Port of LIVERPOOL

No. in Survey held at Lytham Date, First Survey 14th June 1936 Last Survey 19th April 1938
 Reg. Book. 37401 on the SS. "BROOMFIELD" (Number of Visits 27) Tons { Gross 659.98
 Net 273.66

Built at Lytham By whom built Lytham S. B. & S. G. Ltd. Yard No. 841 When built 1938
 Engines made at Lytham By whom made do Engine No. 535 When made 1938
 Boilers made at do By whom made do Boiler No. 530 When made 1938
 Registered Horse Power 88.68 Owners Zillah Shipping & Carrying Co. Ltd Port belonging to Liverpool
 (Inqrs. W. & A. Savage Ltd)
 Nom. Horse Power as per Rule 105 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended Roasting

Engines, &c.—Description of Engines Triple Expansion Steam Reciprocating for ocean going service Revs. per minute 115
 Dia. of Cylinders 12 3/4" 21" 36" Length of Stroke 24" No. of Cylinders 3 No. of Cranks 3 @ 120°
 Crank shaft, dia. of journals as per Rule 6.94 Crank pin dia. 7 1/4" Crank webs Mid. length breadth 9 1/2" Thickness parallel to axis 4 3/8" 5 1/4" 5 1/2"
as fitted 7" Mid. length thickness 4 1/2" Thickness around eye-hole 3 1/8"
 Intermediate Shafts, diameter as per Rule 6.61 Thrust shaft, diameter at collars as per Rule 6.94
as fitted none as fitted 7"
 Tube Shafts, diameter as per Rule none Screw Shaft, diameter as per Rule 7.4 Is the tube shaft fitted with a continuous liner yes
as fitted none as fitted 8" reduced to 7 1/4" at coupling as fitted 13/32"
 Bronze Liners, thickness in way of bushes as per Rule 3 7/64" 3 7/64" Thickness between bushes as per Rule 1 4/32" Is the after end of the liner made watertight in the propeller boss Yes
as fitted 1/2" If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Continuous
 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 shaft Yes If so, state type Lytham S. B. & S. G. Ltd. Length of Bearing in Stern Bush next to and supporting propeller 3-2"
 Propeller, dia. 9'-9" Pitch 9'-0" No. of Blades 4 Material C.I. whether Moveable Solid Total Developed Surface 28.25 sq. feet
 Feed Pumps worked from the Main Engines, No. none Diameter 2 1/2" Stroke 12" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 1/2" Stroke 12" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size one 6 1/2" x 4 1/2" 112" duplex Pumps connected to the { No. and size one 8 1/8" x 8" duplex forward ME
 How driven Independent Steam (both) Main Bilge Line { How driven Independent Steam bilge pump
one 1 1/2" injector bilge pump bilge pump
 Ballast Pumps, No. and size one 8" x 8" x 8" Vert. duplex Lubricating Oil Pumps, including Spare Pump, No. and size one 2" section worked from deck
 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 (common) 1 off 2 1/2" diam in E.R. 1 off each side in S.H. 2 1/2" diam after ME bilge pump has independent suction
1 off 2 1/2" diam in E.R.
 In Pump Room Yes In Holds, &c. 1 off each side in main hold 2 1/2" diam

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 off 3 1/2" diam Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 off 3" diam
 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 immediately below 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 Yes
 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 main hold bilge suction pipes How are they protected under close ceiling
 What pipes pass through the deep tanks no deep tanks 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 worked from
 (E 11.6.37) Standby means for circulating condenser provided by ballast pump.

MAIN BOILERS, &c.—(Letter for record E 4.3.36 Total Heating Surface of Boilers 1637 sq. ft.
 Is Forced Draft fitted Yes No. and Description of Boilers one single ended cyl. Multitubular Working Pressure 200 lb sq. in.
 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 E 7.5.36 Main Boilers E 4.3.36 Auxiliary Boilers Yes Donkey Boilers Yes
 (If not state date of approval) E 11.6.37
 Superheaters Yes General Pumping Arrangements E 11.6.37 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

1. eccentric strap complete
6. cam rollers, pins collars & collars
6. condenser tubes & 48 ferrules
6. cylinder cover studs
2. main bearing studs & nuts
2. sets shaft coupling bolts
1. set gland studs
- 1 set spare for metallic packing
6. plain boiler tubes

Spare propeller supplied to owners but not carried on board.

The foregoing is a correct description.

THE LYTHAM SHIPBUILDING and ENGINEERING COMPANY LIMITED

Manufacturer.



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Lloyd's Register Foundation

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1936. 24/6. 17/7. 4/8. 16/9. 1/10. 14/11. 8/12. 1937. 28/1. 1/3. 9/4. 5/5. 13/5. 17/6. 20/9. 3/11. 25/11. 2/12. 31/12.

Dates of Survey while building

During progress of work in shops -- 1938. 25/1. 1/3.

During erection on board vessel --- 1937. 16/11. 18/11. 1938. 25/1. 9/2. 23/2. 1/3. 11/3. 26/2. 19/4.

Total No. of visits 27.

Dates of Examination of principal parts—Cylinders 25.1.38. Slides 23.2.38. Covers 25.1.38.

Pistons 9.2.38. Piston Rods 13.4.37. Connecting rods 13.4.37.

Crank shaft 19.3.37. Thrust shaft 19.3.37. Intermediate shafts

Tube shaft ✓ Screw shaft 3.11.37. Propeller 16.11.37.

Stern tube 3.11.37. Engine and boiler seatings 16.11.37. Engines holding down bolts 9.2.38.

Completion of fitting sea connections 16.11.37.

Completion of pumping arrangements 19.4.38. Boilers fixed 9.2.38. Engines tried under steam 19.4.38.

Main boiler safety valves adjusted 19.4.38. Thickness of adjusting washers 5/16" port. 9/32" starboard.

Crank shaft material Hot Steel (C.S. webs) Identification Mark 19.3.37. WSS & RR. Thrust shaft material Hot Steel Identification Mark 1937. WSS & RR.

Intermediate shafts, material None Identification Marks LLOYDS 118. ✓ Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material Hot Steel Identification Mark 3.11.37. WSS & RR. Steam Pipes, material SDA Test pressure 400 lb. Date of Test 1.3.38.

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 ✓

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with No

Is this machinery duplicate of a previous case Yes If so, state name of vessel "BRACKENFIELD" L.S. R.H. No

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been constructed and fitted on board under Special Survey, in accordance with the approved plans, Secretary's letters and the Rules for Engines & Boilers. The materials and workmanship are satisfactory.

The machinery and boiler were examined under working conditions and the boiler safety valves adjusted under steam to the working pressure.

In my opinion, the machinery of this vessel is eligible to be classed in the Register Book and to have notation of + LMC 4.38. 158. 200 LBS. (OG).

Forging Reports in respect of Shafting, piston rods and connecting rods were forwarded with L.S. R.H. No 109965. (S.S. "Brackenfield")

The amount of Entry Fee ... £ 3 : 0 : When applied for, 2.9 APR 1938

Special ... £ 26 : 5 : When received, 12.5.19.38

Donkey Boiler Fee ... £ : : 16.5

Travelling Expenses (if any) £ 2 : 1/2

Committee's Minute LIVERPOOL 3 MAY 1938

Assigned + L.M.C. 4.38. R.D. J.S. (OG) CC

When Lennell
Engineer Surveyor to Lloyd's Register of Shipping.