

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 13 FEB 1942

Port of **HULL**

Date, First Survey **4. 7. 41** Last Survey **22. 1. 1942**

No. in Survey held at **HULL** Reg. Book. **BUTSER**

on the **H.M.T. BUTSER**

Wrought at **BEVERLEY** By whom built **Cork Walker & Gemmell Ltd** Yard No. **683**

Engines made at **HULL** By whom made **Chas. D. Holmes Ltd** Engine No. **1593** When made **do**

Boilers made at **W. HARTLEPOOL** By whom made **Central Marine Eng. Works** Boiler No. **R. 347** When made **do**

Registered Horse Power **156** Owners **The Admiralty** Port belonging to **do**

Nom. Horse Power as per Rule **156** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

Trade for which Vessel is intended **do**

ENGINES, &c.—Description of Engines **Triple Expansion** Revs. per minute **120**

Dia. of Cylinders **15", 25", 42"** Length of Stroke **27"** No. of Cylinders **3** No. of Cranks **3**

Crank shaft, dia. of journals **8 1/2"** Crank pin dia. **8 1/2"** Crank webs **shrunk** Thickness parallel to axis **5 1/2"**

Intermediate Shafts, diameter **8 1/2"** Thrust shaft, diameter at collars **8 1/2"** Thickness around eye-hole **3 1/16"**

Tube Shafts, diameter **8 1/2"** Screw Shaft, diameter **9"** Is the shaft fitted with a continuous liner **Yes**

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**

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 **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 **No**

Propeller, dia. **10-9"** Pitch **11-7 1/2"** No. of Blades **4** Material **CI** whether Movable **Solid** Total Developed Surface **43** sq. feet

Feed Pumps worked from the Main Engines, No. **One** Diameter **3"** Stroke **16"** Can one be overhauled while the other is at work **Yes**

Bilge Pumps worked from the Main Engines, No. **One** Diameter **3"** Stroke **16"** Can one be overhauled while the other is at work **Yes**

Feed Pumps { No. and size **One 6" x 8 1/2" x 13"** Pumps connected to the Main Bilge Line { No. and size **One 3" x 16"** One **7" x 5" x 6"** Duplex One **3"** Ejector.

How driven **Independent Steam** How driven **Main Eng Independent Steam**

Ballast Pumps, No. and size **One 7" x 5" x 6"** Duplex Lubricating Oil Pumps, including Spare Pump, No. and size **None**

Are two independent means arranged for circulating water through the Oil Cooler **None** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **2 @ 2" dia and 3" Steam Ejector.**

In Pump Room **One 2" dia in each.** In Holds, &c. **Fore Hold D.S. 80 lbs. Spirit Rm. Magazine**

Main Water Circulating Pump Direct Bilge Suctions, No. and size **One 5"** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **One 3" 80 lbs. Ejector.**

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 **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 **Forward Suction** How are they protected **Wood Casing**

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 **Yes** Is it fitted with a watertight door **Yes** worked from **Yes**

MAIN BOILERS, &c.—(Letter for record **S**) Total Heating Surface of Boilers **2358** ft²

Is Forced Draft fitted **Yes** No. and Description of Boilers **One S. B.** Working Pressure **220 lb/in²**

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 **26-3-41** Main Boilers **30-1-41** Auxiliary Boilers **Yes** Donkey Boilers **Yes**

(If not state date of approval)

Superheaters **Yes** General Pumping Arrangements **15. 4. 41** 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 **As specified by Admiralty. See attached.**

BUTSER.

During progress of work in shops - - 1941. July 4. 11. 16. 29 Aug. 22. 27. 29 Sep. 5. 8. 12 Oct. 3. 8. 9. 10. 16. 17. 20. 21. 24. 31. Nov. 7. 8. 11. 12. 14. 15. 17. 22. 24. 28. 29. Dec. 1. 2. 9. 12. 13. 15. 16. 17. 24. 27. 29. 30. - 1942. Jan. 1. 2. 3. 5. 12. 15. 16. 21. 22.

Dates of Survey while building

During erection on board vessel - - -

Total No. of visits 53

Dates of Examination of principal parts—Cylinders 16/10/41. 8/10/41. 20/10/41. Slides 7/11/41. Covers 16/10/41. 8/10/41. 20/10/41.

Pistons 10/10/41. 17/10/41. 7/11/41. Piston Rods 24/10/41. Connecting rods 17/10/41.

Crank shaft 17/10/41. Thrust shaft 7/11/41. Intermediate shafts 27/8/41.

Tube shaft None. Screw shaft 12-9-41. Propeller 22/11/41.

Stern tube 29. 7. 41. Engine and boiler seatings 28. 11. 41. Engines holding down bolts 12. 12. 41.

Completion of fitting sea connections 29. 7. 41.

Completion of pumping arrangements 2. 1. 42 Boilers fixed 12. 12. 41. Engines tried under steam 16. 1. 42.

Main boiler safety valves adjusted 2. 1. 42 Thickness of adjusting washers 3/8" P. 7/16 B.

Crank shaft material M.S. 5955. Journals 5956. A.C.S. 2/8/41. Identification Mark Pm. 5700. A.C.S. 10/9/41. Thrust shaft material M.S. 5954. A.C.S. 21-8-41. Identification Mark 5954. A.C.S. 21-8-41.

Intermediate shafts material M.S. 5953. A.C.S. 2/8/41. Identification Marks 5953. A.C.S. 2/8/41. Tube shaft material None. Identification Mark 5954. A.C.S. 21-8-41.

Screw shaft material M.S. Identification Mark 5400. A.C.S. 20/8/41. Steam Pipes material Steel. Test pressure 660 lb. Date of Test H.B. 22. 7. 41. Marked.

Is an installation fitted for burning oil fuel. C.Y. 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. C.Y. 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. C.Y.

Is this machinery duplicate of a previous case. C.Y. If so, state name of vessel H.M.T. BIRD LIP.

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

The Machinery of the Vessel has been fitted on board under Special Survey in accordance with the Admiralty requirements & approved plans & the Society's Rules.

The Workmanship & Materials are good & when tried under strain it was found satisfactory in every respect.

It is eligible, in our opinion, when the vessel is cleared, to have the records of L.M.C 1-42 C.L. & the notation of T. 3 Cy. 15" 25" 42" - 27" 156 N.H. 220 lbs. 1. S.B. 3 cf. G.S. 63 H.S. 2358 F.D.

The amount of Entry Fee ... £ : : When applied for, 30 JAN 1942

Special ... £ 78 : 0 : 19

Donkey Boiler Fee ... £ 15 : 14 : 19

Travelling Expenses (if any) £ : : When received, 10 FEB 1942

Committee's Minute FRL 20 FEB 1942

Assigned + Lamb 1. 42 20. C.L.