

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office.

Date of writing Report 26-7-43. 5. When handed in at Local Office SEP 1943 19. Port of HULL. Received at London Office SEP 1943.

No. in Survey held at Reg. Book on the H.M. S.M. TRAWLER **BRYHER** 2703. Date, First Survey 11. 11. 42. Last Survey 1. 9. 1943. (Number of Visits 6.6.) Tons {Gross 458, Net 145.}

Built at BEVERLEY By whom built Colk Welton & Gemmell Ltd Yard No. 712. When built 1943.

Engines made at HULL By whom made Chas. D. Holmes Engine No. 1649. When made "

Boilers made at HULL By whom made Chas. D. Holmes La Boiler No. 1649. When made "

Registered Horse Power Owners Admiralty Port belonging to

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 Government Service

ENGINES, &c.—Description of Engines Triple Expansion CONTRACT Revs. per minute 150.

Dia. of Cylinders 13 1/2", 23", 38". Length of Stroke 27". No. of Cylinders 3. No. of Cranks 3.

Crank shaft, dia. of journals as per Rule 7.5" as fitted 7 3/8". Crank pin dia. 7 7/8". Crank webs Mid. length breadth — Mid. length thickness — Thickness parallel to axis 4 13/16" shrunk Thickness around eye-hole 3 15/16".

Intermediate Shafts, diameter as per Rule 7.15" as fitted 7 1/4". Thrust shaft, diameter at collars as per Rule 7.5" as fitted 7 3/8".

Tube Shafts, diameter as per Rule — as fitted —. Screw Shaft, diameter as per Rule 8.2" as fitted 8 1/4". Is the {tube screw} shaft fitted with a continuous liner {No.}

Bronze Liners, thickness in way of bushes as per Rule — as fitted —. Thickness between bushes as per Rule — as fitted —. Is the after end of the liner made watertight in the propeller boss. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner.

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. If so, state type NEWARK.

Propeller, dia. 105". Pitch 9'-4". No. of Blades 3. Material C.I. whether Moveable Solid. Length of Bearing in Stern Bush next to and supporting propeller 36 1/2". Total Developed Surface 30 sq. feet.

Feed Pumps worked from the Main Engines, No. 2. Diameter 2 1/2". Stroke 15". 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 15". Can one be overhauled while the other is at work Yes.

Feed Pumps {No. and size One 4" x 6" x 12" Weir. How driven Independent Steam. Pumps connected to the Main Bilge Line {No. and size One 6" x 5 1/2" x 15" Weir. How driven Independent Steam ALSO Donkey.

Ballast Pumps, No. and size None. 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 Eng. Rm 2 @ 2" dia. one @ 3 1/2" dia. Prokela 2 @ 2" dia. In Pump Room NONE. In Holds, &c. One @ 2" dia in each of the following:—Fore peak Chain Locker, ASDic Space, Magazine, Spirit Room, Bunker, Sharp Space and After-peak.

Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 5" dia. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One @ 3 1/2" dia (including above) 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 at W.L.

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. No.

What Pipes pass through the bunkers Feed Vault suction. How are they protected Wood casing.

What pipes pass through the deep tanks None. 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 ^{space} Tunnel watertight. Yes. Is it fitted with a watertight door. Access worked from flat above.

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 2650 sq ft.

Which Boilers are fitted with Forced Draft All. Which Boilers are fitted with Superheaters None.

No. and Description of Boilers One S.B. Working Pressure 200 @ 10'.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes.

IS A DONKEY BOILER FITTED? No. If so, is a report now forwarded? —

Can the donkey boiler be used for domestic purposes only. Yes.

PLANS. Are approved plans forwarded herewith for Shafting 17-7-39. Main Boilers 17-7-39. Auxiliary Boilers None. Donkey Boilers None. (If not state date of approval)

Superheaters None. General Pumping Arrangements 17-10-39. Oil fuel Burning Piping Arrangements None.

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes.

State the principal additional spare gear supplied See attached list.

The foregoing is a correct description.
FOR CHARLES D. HOLMES & CO., LTD.

W.R. Evans

Manufacturer.

"BRYHER"

1942. 1943.

During progress of work in shops -- Nov. 11, 25. Dec. 17, 28. Jan. 1, 16, 22, 29. Feb. 5, 12, 16, 19, 26. Mar. 2, 4, 5, 9, 10, 12, 24, 26. Apr. 2, 8, 9, 16, 21.
 May 4, 19, 26. June 10, 11, 15, 19, 30. July 2, 6.

Dates of Survey while building During erection on board vessel -- 1943 APR 5, 14. MAY 5, 19. JUN 4, 7, 11, 15, 23, 28. JULY 1, 6, 12, 13, 19, 20, 22, 26, 30.
 AUG 5, 9, 19, 23, 24, 25, 29, 30, 31. Sept 1.

Total No. of visits 66.

Dates of Examination of principal parts -- Cylinders 2/3/43, 4/3/43, 27/2/43. Slides 26-3-43. Covers 2/3/43, 4/3/43, 27/2/43.
 Pistons 17/4/43, 4/5/43. Piston Rods 2/4/43. Connecting rods 2/4/43.
 Crank shaft 26-3-43. Thrust shaft 16-2-43. Intermediate shafts 26/3/43 + 5/3/43.
 Tube shaft NONE. Screw shaft 26-3-43. Propeller 4/6/43.
 Stern tube 5-4-43. Engine and boiler seatings 23-6-43. Engines holding down bolts 23-6-43.
 Completion of fitting sea connections 5-4-43.
 Completion of pumping arrangements 6-7-43. Boilers fixed 23-6-43. Engines tried under steam 6-7-43, 31-8-43.
 Main boiler safety valves adjusted 6-7-43. Thickness of adjusting washers P 7/16" S 25/64".
 Crank shaft material F-1 Steel. Identification Mark 352 F.W. Thrust shaft material F-1 Steel. Identification Mark 9956 Co.
 Intermediate shafts, material F-1 Steel. Identification Marks 9954 Co. 5-1-43. Tube shaft, material NONE. Identification Mark 7-1-43.
 Screw shaft, material F-1 Steel. Identification Mark 360 F.W. Steam Pipes, material Steel. Test pressure 600 lb. Date of Test 2-7-43.
 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. ✓
 Is this machinery duplicate of a previous case. Yes. If so, state name of vessel HMT BIRCH Hull Rpt. No. 50672

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

The Machinery of this Vessel has been constructed in accordance with the approved Admiralty plans, the Specification, and the Society's Rules; of tested materials supplied by firms approved by the Society. The Workmanship and material are good.

The Machinery and auxiliaries have been fitted on board and, when tried under steam at as far as full power as practicable in the basin, were found satisfactory in every respect.

The Vessel is eligible, in our opinion, when classed, to have the records of L.M.C. 8, 43 and O.G. and the notation T.3 Cy 13 1/2" 23" 38" - 27".

156 N.H.P. 200 B. 1 S.B. 3. Cf. G. 5. 63. H.S. 2650. F. D.

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Certificate to be sent to

The amount of Entry Fee ... £ : : } When applied for, SEP 1943
 Special Sur. SPEC ... £ 39 : 0 : }
 Donkey Boiler Fee ... £ 36 : 0 : } When received, 36-
 Travelling Expenses (if any) £ : : } 19-

Committee's Minute ... FRI. 17 SEP 1943

Assigned ... + L.M.C. 9. 43 F.D. 00

Engineer Surveyor to Lloyd's Register of Shipping. J. Shields

