

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 14-5-1940 When handed in at Local Office 25 MAY 1940 Port of HULL
 No. in Survey held at Hull Date, First Survey 20-6-39 Last Survey 20-4-1940
 Reg. Book. on the H.M.S. "BIRCH" (Number of Visits 73)
 Built at Beverley By whom built Cook, Mellor + Gummell & Co Yard No. 652 Tons { Gross 452
 Engines made at Hull By whom made C.D. Holmes & Co Engine No. 1554 Net 144
 Boilers made at do By whom made do Boiler No. do When built 1940-4.
 Registered Horse Power 156 Owners The Admiralty Port belonging to
 Nom. Horse Power as per Rule 156 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yr.
 Trade for which Vessel is intended

ENGINES, &c.—Description of Engines Simple Expansion CONTRACT Revs. per minute 160
 Dia. of Cylinders 13½ - 23 - 32 Length of Stroke 27 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 7.5" Crank pin dia. 7½" Crank webs Mid. length breadth shrunk Thickness parallel to axis 4 3/16"
 as fitted 7 7/8" Mid. length thickness 3 7/16" 3 1/8"
 Intermediate Shafts, diameter as per Rule 7.15" Thrust shaft, diameter at collars as per Rule 7.5"
 as fitted 7 7/8" as fitted 7 7/8"
 Tube Shafts, diameter as per Rule 8.2 Is the { tube } shaft fitted with a continuous liner { No
 as fitted 8 1/4" as fitted 8 1/4" { screw }
 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the
 as fitted 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 C. 1. Length of Bearing in Stern Bush next to and supporting propeller 36 1/2"
 Propeller, dia. 105" Pitch 9' 4" No. of Blades 3 Material C. 1. whether Moveable Solid Total Developed Surface 30 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2½" Stroke 15" Can one be overhauled while the other is at work Yr.
 Bilge Pumps worked from the Main Engines, No. 2 Diameter " Stroke " Can one be overhauled while the other is at work
 Feed { No. and size One 4 x 6 x 12 Weirs Pumps connected to the { No. and size One 6 x 5 1/2 x 15 Weirs } Donkey
 Pumps { How driven Independent Steam Main Bilge Line { How driven Independent Steam } pumps.
 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 Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room Engine Room 2 @ 2" dia + one @ 2 1/4" dia Boiler Room 2 @ 2" dia
 In Pump Room In Holds, &c. One @ 2" dia in each of the following:—Fore peak.
 Chain locker, Ashie Space, Magazine, Bunker, Shaft space, & After peak + Sprint Rooms
 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 @ 2 1/4" included above. Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yr.
 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 Yr.
 Are all Sea Connections fitted direct on the skin of the ship Yr. Are they fitted with Valves or Cocks Yr.
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yr. 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 Yr. Are the Blow Off Cocks fitted with a spigot and brass covering plate No.
 What Pipes pass through the bunkers Feed tank suction How are they protected Wood casing
 What pipes pass through the deep tanks None Have they been tested as per Rule Yr.
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yr.
 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 Yr. Is the Shaft Space watertight Yr. Is it fitted with a watertight door No worked from Access from
 flat above.

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2650.
 Which Boilers are fitted with Forced Draft Yr. Which Boilers are fitted with Superheaters None.
 No. and Description of Boilers One - S.B. Working Pressure 200 lb/0"
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yr.
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? Yr.
 Can the donkey boiler be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting 17-7-39 Main Boilers 17-7-39 Auxiliary Boilers Yr. Donkey Boilers Yr.
 (If not state date of approval)
 Superheaters Yr. General Pumping Arrangements 17-10-39 Oil fuel Burning Piping Arrangements Yr.

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yr.
 State the principal additional spare gear supplied Sa Attached List

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

Manufacturer.



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011890-011895-0139

1939. JUNE 20, AUG. 15, SEP. 5, 6, 11, 20, 21, 26, 27 OCT. 3, 5, 7, 9, 11, 14, 17, 18, 19,
 During progress of work in shops - - 23, 24, 26, NOV. 1, 6, 7, 8, 15, 24, 27, 28, DEC. 4, 6, 7, 9, 13, 14, 15, 18, 21, 28
 Dates of Survey while building During erection on board vessel - - 1940. JAN. 2, 4, 5, 10, 11, 15, 17, 18, 19, 19, 20, 22, 25, 25, 29, FEB. 1, 2, 3, 8, MAR. 8,
 11, 20, 28, 30, APR. 1, 3, 5, 6, 11, 15, 16, 17, 18, 20.
 Total No. of visits 73.

Dates of Examination of principal parts—Cylinders 26-10-39 Slides 14-10-39 Covers 14-10-39
 Pistons 14-10-39 Piston Rods 20-10-39 Connecting rods 20-10-39
 Crank shaft 6-11-39 Thrust shaft 26-9-39 Intermediate shafts 21-9-39
 Tube shaft ✓ Screw shaft 7-10-39 Propeller 11-11-39
 Stern tube 11-11-39 Engine and boiler seatings 11-11-39 Engines holding down bolts 2-1-40
 Completion of fitting sea connections 11-11-39
 Completion of pumping arrangements 8-1-40 Boilers fixed 2-1-40 Engines tried under steam 17-4-40
 Main boiler safety valves adjusted 2-2-40 Thickness of adjusting washers Both 3/8"
 Crank shaft material Steel Identification Mark 1714 AEG 3-7-39 1714 JD 17-8-39 Thrust shaft material Steel Identification Mark 1714 AEG 3-7-39 1714 JD 17-8-39
 Intermediate shafts, material Steel Identification Marks 1444 DLHC 6-11-39 Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material Steel Identification Mark 1735 AEG 9-8-39 Steam Pipes, material Steel Test pressure 600 lb/p Date of Test 11-1-40
 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. — If so, state name of vessel STANDARD ADMIRALTY TRAWLER.

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

The Machinery of this Vessel has been constructed & fitted on board in accordance with the approved Admiralty plans, the Specifications & the Society's Rules. The workmanship & materials are good & when tried under full working conditions at sea it was found satisfactory in every respect. An IHP of 770 @ 166 R.P.M. was obtained on trials, but in view of the Contract RPM of 160 the engines were never opened out. A single Vessel shortly after this obtained 1023 IHP @ 181 R.P.M. The Contract IHP is 850.

This Vessel is eligible, in my opinion, when classed to have the Record of L.M.C. 4-40 & O.G. & the notation T. 3 Cy. 13½, 23438-27 - 200 lb. 156 NHP., 1.S.B. 3 cf. G.S 63. H.S. 2650 F.D.

The amount of Entry Fee ... £ : : When applied for,
 Special ... £ 90 : 0 : 21-5-1940.
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : 13/6/1940

Committee's Minute

Assigned

+ Lamb 4.40
 J.D. O.P.

TUE 4 JUN 1940

Signature
 Engineer Surveyor to Lloyd's Register of Shipping.



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