

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 28-7-43. When handed in at Local Office SEP 1943. Port of HULL. Date, First Survey 5.10.42. Last Survey 17.8.1943. No. in Survey held at HULL. Reg. Book on the steam tug **EMPIRE MUSTANG**. Tons Gross 242 Net nil. Built at GAINSBOROUGH By whom built J.S. Watson & Co. Yard No. 1534. When built 1943. Engines made at HULL By whom made Chas. D. Holmes & Co. Engine No. 1686. When made 1943. Boilers made at HULL By whom made Chas. D. Holmes & Co. Boiler No. 1631. When made 1943. Registered Horse Power Owners Ministry of War Transport. Port belonging to. Nom. Horse Power as per Rule 177. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes. Trade for which vessel is intended Towing Services.

ENGINES, &c.—Description of Engines Triple Expansion. CONTRACT Revs. per minute 116. Dia. of Cylinders 16", 26", 43". Length of Stroke 30". No. of Cylinders 3. No. of Cranks 3. Crank shaft, dia. of journals as per Rule 8.8" as fitted 9 1/8". Crank pin dia. 9 1/8". Crank webs Mid. length breadth — Mid. length thickness — Thickness parallel to axis 5 3/4" shrunk Thickness around eye-hole 4 1/16". Intermediate Shafts, diameter as per Rule 8.38" as fitted 8.58". Thrust shaft, diameter at collars as per Rule 8.8" as fitted 9 1/8". Tube Shafts, diameter as per Rule — as fitted NONE. Screw Shaft, diameter as per Rule 9.7" as fitted 9 1/8". 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. Length of Bearing in Stern Bush next to and supporting propeller 42". Propeller, dia. 11'-0". Pitch 11'-8". No. of Blades 4. Material C.I. whether Moveable Solid. Total Developed Surface 46 sq. feet. Feed Pumps worked from the Main Engines, No. 2. Diameter 3". Stroke 18". Can one be overhauled while the other is at work Yes. Bilge Pumps worked from the Main Engines, No. 2. Diameter 3". Stroke 18". Can one be overhauled while the other is at work Yes. Feed Pumps {No. and size One 7" x 5" x 6" Duplex How driven Independent Steam Pumps connected to the Main Bilge Line {No. and size One 7" x 7" x 8" Duplex How driven Ind. Str. M.E.}. Ballast Pumps, No. and size One 7" x 7" x 8" 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" 2 @ 2 1/2". In Pump Room Forward Bilge, After peak. In Holds, &c. One @ 2" Dia in each of the following:—Fore Peak. Main Water Circulating Pump Direct Bilge Suctions, No. and size One 5 1/2". Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One @ 2 1/4" One @ 2 1/4" in B.R. 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 On Plated Brass. 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. None. How are they protected. —. 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 Tunnel watertight No. Is it fitted with a watertight door — worked from —.

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2778 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 210 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? —. Can the donkey boiler be used for domestic purposes only. —.

PLANS. Are approved plans forwarded herewith for Shafting 3-1-41 Main Boilers 8-8-40 Auxiliary Boilers — Donkey Boilers — (If not state date of approval)

Superheaters — General Pumping Arrangements 1-11-40. 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 A Specification.

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

W.R. Evans

Manufacturer.



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EMPIRE MUSTANG.

Dates of Survey while building: During progress of work in shops - - - 1943. Apr. 9th. 16. 29. 30. May 4. 10. 14. 20. 21. 22. 29. June 7. 10. 11. 19. July 2.
 During erection on board vessel - - - 1943 MAY 28, JLY. 16, 19, 22, 23, 29. AUG. 3, 9, 10, 11, 13, 17.
 Total No. of visits 35.

Dates of Examination of principal parts - Cylinders 11/5/43. 20/5/43. 19/5/43. Slides 10-5-43. Covers 11/5/43. 20/5/43. 19/5/43.
 Pistons 8/6/43. 10/6/43. Piston Rods 2/5/43. Connecting rods 27/5/43.
 Crank shaft 29.5-43. Thrust shaft 11/4/43. Intermediate shafts 17/12/42.
 Tube shaft ✓ Screw shaft 5/10/42. Propeller 28.5.43
 Stern tube 28.5.43. Engine and boiler seatings 16.7.43. Engines holding down bolts 16.7.43.
 Completion of fitting sea connections 28.5.43.
 Completion of pumping arrangements 10.8.43. Boilers fixed 16.7.43. Engines tried under steam 10.8.43.
 Main boiler safety valves adjusted 10.8.43. Thickness of adjusting washers F 7/16" A 13/32".
 Crank shaft material F.1. Steel. Identification Mark 407. CP. 4-5-43. Jaw. CP. 468. 2/4/43. Thrust shaft material F.1. Steel. Identification Mark 126 AWJ. 19-12-41 C.P.
 Intermediate shafts, material F.1. Steel. Identification Marks 8956 CP. 26/8/42. Tube shaft, material None. Identification Mark -
 Screw shaft, material F.1. Steel. Identification Mark 8655. A. Steam Pipes, material Steel. Test pressure 630 lb. Date of Test 3.8.43.
 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. No. If so, state name of vessel. S. Tug. EMPIRE BIRCH HUL. Rpt. 51472.

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The Machinery of this Vessel, has been constructed in accordance with the approved plans, the Rules, and the Specifications, of tested material made by firms accredited by the Society.
 The Workmanship and Materials are good.
 The Machinery and auxiliaries have been fitted on board, and when tried under steam at as best full power as practicable in the basin, were found satisfactory in every respect.
 It is eligible, in our opinion, when classed to have records of
 L.M.C. 8.43. and O.G. and Water T. 3 Cy. 16", 26" 43", - 30" 177NH
 One S.B. 210 lb 1/2" 3. Cy. G.S. 64 # HS. 2778 # F.D.

Certificate to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee	£ 3	When applied for 6 SEP 1943
Special	£ 44 : 5	
Donkey Boiler Fee	£ 11 : 1	When received,
Travelling Expenses (if any)	£ :	

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

Committee's Minute ... FRI. 17 SEP 1943
 Assigned ... + LMC 8.43 J.A. 09

