

RECEIVED
Rpt. 4
NOV 1944

No. 52626

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 14-8-45 1945 When handed in at Local Office 2 NOV 1944 1944 Port of HULL Received at London Office 3 NOV 1944

No. in Survey held at HULL Date, First Survey 6.11.43 Last Survey 24.10.44 (Number of Visits 55)

Reg. Book on the STEAM TUG ENIGMA A/MS 791 Tons { Gross 762.24 Net 77.82

Built at SELBY By whom built Cochran & Sons Ltd Yard No. 1287 When built 1944

Engines made at HULL By whom made Chas. D. Holmes & Co. Engine No. 1679 When made "

Boilers made at HULL By whom made Chas. D. Holmes & Co. Boilers No. 1679 When made "

Registered Horse Power 269 Owners The Admiralty Port belonging to ✓

Nom. Horse Power as per Rule 269 ✓ 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 120

Dia. of Cylinders 18"-29½"-49" Length of Stroke 34" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 12.09 as fitted 10½" Crank pin dia. 10½" Crank webs Mid. length breadth Thickness parallel to axis 6 5/8" shrunk Thickness around eye-hole 4 5/8"

Intermediate Shafts, diameter as per Rule 9.6 as fitted 9 7/8" Thrust shaft, diameter at collars as per Rule 10-09 as fitted 10 1/4"

Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 11.037 as fitted 11 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

Propeller, dia. 11'-10½" Pitch 12-0 No. of Blades 4 Material C.I. whether Moveable Solid Total Developed Surface 53 sq. feet

Feed Pumps worked from the Main Engines, No. NONE Diameter — Stroke — Can one be overhauled while the other is at work —

Bilge Pumps worked from the Main Engines, No. Two Diameter 3 1/4" Stroke 18 1/2" Can one be overhauled while the other is at work YES

Feed Pumps { No. and size Two Weir 6"x8 1/2"x18" Pumps connected to the { No. and size One 7"x7"x8" Duplex Two 3 1/4"x18 1/2"x23" Ejector How driven One Duplex 7"x5"x6" Main Bilge Line How driven Independent Steam Main Eng. Steam

Ballast Pumps, No. and size One 7"x7"x8" Duplex Lubricating Oil Pumps, including Spare Pump, No. and size NONE One hand pump to Cofferdam

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 1/2" 2 @ 3" Steam Ejector Three 1 1/2" in Gutterways

In Pump Room Cofferdam One 2" In Holds, &c. One 2" Dia in each of the following Fore peak

Wave Ballast port & No. 1, Apr Peak

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 7" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 3" Steam 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 Cocks direct Are they fitted with Valves or Cocks B.O.A.

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 NONE Is it fitted with a watertight door — worked from —

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 4300

Which Boilers are fitted with Forced Draft ALL Which Boilers are fitted with Superheaters NONE

No. and Description of Boilers Two S.B. Working Pressure 220 lb 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 —

PLANS. Are approved plans forwarded herewith for Shafting 6.5.43 Main Boilers 15.3.43 Auxiliary Boilers — Donkey Boilers —

(If not state date of approval)

Superheaters — General Pumping Arrangements 28-6-43 Oil fuel Burning Piping Arrangements 6-10-43

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied 6 per Specification

The foregoing is a correct description.
CHARLES D. HOLMES & CO., LTD.
G.R. Evans

Manufacturer.



ENIGMA

1943. Nov. 6. Jan. 11. 18. Feb. 3. Mar. 31. Apr. 3. 14. 21. 28. May 3. 5. 10. 12. 19. 23. 26.
 June 1. 2. 5. 6. 9. 13. 15. 16. 23. 24. 30. July 5. 7. 11. 13. 18. Aug. 11. 26. Sept. 1. 20. Oct. 2.
 1944 Apr. 18. JUN 7. 22. JUL 21. 26. SEP 8. 13. 16. 18. 21. 22. 24. 28.
 OCT. 3. 10. 12. 19. 24.
 Total No. of visits 55.

Dates of Examination of principal parts—Cylinders 6/6/44 9/6/44 13/6/44 Slides 13-7-44 Covers 6/6/44 9/6/44 13/6/44
 Pistons 11/8/44 Piston Rods 20/6/44 Connecting rods 13/7/44
 Crank shaft 11/7/44 Thrust shaft 14/4/44 1/6/44 Intermediate shafts 3/4/44
 Tube shaft — Screw shaft 10/5/44 Propeller 22.6.44
 Stern tube 7.6.44 Engine and boiler seatings 8/9/44 Engines holding down bolts 16/9/44
 Completion of fitting sea connections 7.6.44
 Completion of pumping arrangements 10/10/44 Boilers fixed 16/9/44 Engines tried under steam 10/10/44
 Main boiler safety valves adjusted 10/10/44 Thickness of adjusting washers For P³/₈ S¹³/₃₂ AFT P⁷/₁₆ S³/₈. 2427, CP,
 Crank shaft material F. I. Steel Identification Mark 2429 CP. 14.4.44 Thrust shaft material F. I. STEEL Identification Mark 14.4.44
 Intermediate shafts, material D^o Identification Marks 5.4.44 Tube shaft, material — Identification Mark —
 Screw shaft, material D^o Identification Mark 6.4.44 Steam Pipes, material STEEL Test pressure 660 lb Date of Test 28.9.44
 Is an installation fitted for burning oil fuel YES Is the flash point of the oil to be used over 150° F. YES
 Have the requirements of the Rules for the use of oil as fuel been complied with YES
 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 "ENVOY" HULL REPORT NO 52467

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 Specification; of tested material made by firms approved by the Society.
 The Workmanship materials are good
 The Machinery & Auxiliaries have been fitted on board and, when tried under full power steam at full power in the river were found satisfactory in every respect.
 The Vessel is eligible, in our opinion, to be classed *LMC10.44.09 with the Notation T. 3 cy. 18", 29 1/2", 49" - 34". 269 NHP. 220 lbs 10' 2, S.B. 6 c.f. H.S. 4300 # F.D.
 Fitted for Oil Fuel 10.44. F.P. above 150° F.

The amount of Entry Fee ... £ 4 : 0 :
 Special + LMC ... £ 65 : 7 :
 25% SPEC ... £ 16 : 7 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, NOV 1944
 When received, 19

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

FRI, 17 NOV. 1944

Committee's Minute

Assigned

+ LMC 10.44
 20.09.



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