

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 19 When handed in at Local Office 10 DEC 1945 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 16 Feb Last Survey 5 Jan 1945
 Reg. Book. "EMPIRE PASSMORE" (Number of Visits 2)
 on the
 Built at Blyth By whom built Blyth S.B. Co. Ld. Yard No. 313 Tons { Gross 974
 Engines made at Sunderland By whom made G. Clark (1938) Ld. Engine No. 1346 When built 1945
 Boilers made at Sunderland By whom made G. Clark (1938) Ld. Boiler No. 1346 When made 1945
 Registered Horse Power Owners Ministry of War Transport Port belonging to
 Nom. Horse Power as per Rule 162 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.
 Trade for which Vessel is intended

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute
 Dia. of Cylinders 13½"-22¾"-38" Length of Stroke 24" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 4.504" Crank pin dia. 4 1/8" Mid. length breadth 13" Thickness parallel to axis 4 13/16" shrunk
 as fitted 4 7/8" Mid. length thickness 4 13/16" Thickness around eye 4 15/16"
 Intermediate Shafts, diameter as per Rule 4.15" Thrust shaft, diameter at collars as per Rule 4.504" as fitted 4 7/8"
 Tube Shafts, diameter as per Rule 8.23" as fitted 8 1/2" Is the { tube } shaft fitted with a continuous liner { no liner }
 as fitted 8 1/2" as fitted 8 1/2"
 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 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
 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 Yes. If so, state type Hawash.
 Length of Bearing in Stern Bush next to and supporting propeller 3'-2"
 Propeller, dia. 9'-0" Pitch 8'-10" No. of Blades 4 Material Bronze whether Moveable No Total Developed Surface 32.6 sq. feet
 Feed Pumps worked from the Main Engines, No. — Diameter — Stroke — Can one be overhauled while the other is at work —
 Bilge Pumps worked from the Main Engines, No. — Diameter — Stroke — Can one be overhauled while the other is at work —
 Feed Pumps { No. and size Two 8" x 6" x 15" Pumps connected to the { No. and size 2 @ 4" x 8" x 10"
 How driven Steam Main Bilge Line How driven Steam
 Ballast Pumps, No. and size Two 4" x 8" x 10" Lubricating Oil Pumps, including Spare Pump, No. and size —
 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 1 @ 2½" in E.R. In Pump Room In Holds, &c. No. 1. 2 @ 2½" No. 2. 2 @ 3"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 6" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 4½"
 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 Both.
 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 Below
 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 How are they protected —
 What pipes pass through the deep tanks 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 S.) Total Heating Surface of Boilers 2490 sq. ft.

Which Boilers are fitted with Forced Draft Both Which Boilers are fitted with Superheaters —
 No. and Description of Boilers 2 SB. Working pressure 200 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes.

IS A DONKEY BOILER FITTED? —

Can the donkey boiler be used for domestic purposes only —

PLANS. Are approved plans forwarded herewith for Shafting (If not state date of approval)

Superheaters

General Pumping Arrangements

Oil fuel Burning Piping Arrangements

SPARE GEAR.

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

State the principal additional spare gear supplied (as per Specification.)

The foregoing is a correct description.

GEORGE CLARK 19080 LTD

Manufacturer.



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19+5. 17. 16. 27. April. 10. 16. May. 1. 14. 15. 16. 18. 22. 23. 24. 25. 28. 30. 31. June 1. 5. 6. 12. 20. 21. 22. 23.
 27. 29. July 1. 12. 18. 20. 31. Aug. 3. 13. 17. 20. 21. 24. 27. 28. 29. 30. 31. Sep. 3. 4. 5. 6. 7. 10. 12. 13. 17. 19. 27. 28.
 Oct. 1. 2. 4. 5. 8. 9. 15. 24. 25. 27. Nov. 2. 5. 7. 19. 22. Dec. 5.
 Total No. of visits 70

Dates of Examination of principal parts—Cylinders ^{HP.} 24/8/45 ^{MP.} 21/8/45 ^{LP.} 17/8/45 Slides 1/10/45 Covers 2 Cyls.
 Pistons 1/10/45 Piston Rods 14/9/45 Connecting rods 14/9/45
 Crank shaft 11/4/45 Thrust shaft 12/9/45 Intermediate shafts 19/9/45
 Tube shaft — Screw shaft 12/9/45 Propeller 12/9/45 + 6x 559.6.
 Stern tube 12/9/45 15/9/45 (NWC) Engine and boiler seatings 5/11/45 Engines holding down bolts 5/11/45
 Completion of fitting sea connections 15/9/45 (NWC)
 Completion of pumping arrangements Boilers fixed 5/11/45 Engines tried under steam 12.5.45
 Main boiler safety valves adjusted 205 lbs. 12.5.45 Thickness of adjusting washers P.B. 3/8 SV 3/8 S.M. 3/8 SV 3/8 N° 4585 WHF.
 Crank shaft material Ingot Steel Identification Mark N° 1346 WHF. 11/7/45 Thrust shaft material Ingot Steel Identification Mark 12/9/45
 Intermediate shafts, material Ingot Steel Identification Marks N° 4586 WHF. Tube shaft, material — Identification Mark —
 Screw shaft, material Ingot Steel Identification Mark N° 4584 WHF. 12/9/45 Steam Pipes, material SD Steel Test pressure 600 lbs. Date of Test 19/11/45.
 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 Not desired.
 Is this machinery duplicate of a previous case No. If so, state name of vessel "Empire Pavilion".

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been built under Special Survey in accordance with the approved Plans, Specification & the rules of the Society. The materials & workmanship are good. It has been securely fitted on board the vessel & tried under working conditions along side quay with satisfactory results.

The vessel has now returned to the Shipbuilders Yard at Blyth for completion.

To complete the Special Survey on the machinery the pumping arrangement remains to be tried when Shipbuilders piping is completed. Fire Extinguishing System to be completed & tested. Spare gear to be checked. Some minor items of pipe clamping, drains & lagging to be finished.

On the satisfactory completion of the Survey the machinery hull be eligible to have notation.

No LMC (built date), T.S (OC) 2 SB 200 lbs. Fitted for oil fuel (with date) F.P. above 150°F.

SUNDERLAND

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,
 Special ... £ 40 : 10 : 10 DEC 1945
 Donkey Boiler Fee ... £ 10 : 2 : 6
 Travelling Expenses (if any) £ : : : When received,

J. H. Fraser
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 15 MAR 1946

Assigned Su F.E. machy. rpt.