

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 20-1-1944 When handed in at Local Office 1944 Port of HULL
 21-12-43
 No. in Survey held at Hull Date, First Survey 31.5.43 Last Survey 18.1.1944
 Reg. Book on the STEAM TUG EMPIRE VINCENT A/MS 623. (Number of Visits 30)
 Built at SELBY By whom built Cochrane & Son Ltd Yard No. 1274. Tons { Gross 274
 Engines made at HULL By whom made C. Smith & Co Ltd Engine No. 734. When built 1944
 Boilers made at HULL By whom made C. Smith & Co Ltd Boiler No. 734. When made
 Registered Horse Power Owners Ministry of War Transport Port belonging to
 Nom. Horse Power as per Rule 132 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 122
 Dia. of Cylinders 15"-25"-42" Length of Stroke 27" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 8.05 as fitted 8 1/4" Crank pin dia. 8 1/4" Mid. length breadth 15 1/2" Thickness parallel to axis 5 1/4"
 as fitted 8 1/4" Crank webs Mid. length thickness 5 1/4" shrunk Thickness around eye-hole 3 3/8"
 Intermediate Shafts, diameter as per Rule 7.665 as fitted 8" Thrust shaft, diameter at collars as per Rule 8.05 as fitted 8 1/4"
 Tube Shafts, diameter as per Rule as fitted NONE Screw Shaft, diameter as per Rule 8.865 as fitted 9 1/4" Is the { tube screw } shaft fitted with a continuous liner { No
 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
 at of Yes If so, state type "NEWARK" Length of Bearing in Stern Bush next to and supporting propeller 3'-2 1/2"
 Propeller, dia. 10'-0" Pitch 11'-9" No. of Blades 4 Material C.I. whether Moveable Solid Total Developed Surface 38 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 15" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 15" Can one be overhauled while the other is at work Yes
 Feed { No. and size One 6" x 4 1/2" x 6" Pumps connected to the { No. and size 7 1/2" x 5" x 6" Duplex { 2 - 2 3/4" x 15"
 Pumps { How driven Independent Steam Main Bilge Line { How driven Independent Steam M.E.
 SALVAGE Ballast Pumps, No. and size One 12" x 9" x 12" 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 2 @ 2 1/2" + 2 @ 3" Dia. Boiler Room 2 @ 2 1/2"
 In Pump Room In Holds, &c. One @ 2" Dia in each of the following:—fore
 peak tank, fore hold, aft hold, and aft peak tank
 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 Two at 3" (included 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 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 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 S) Total Heating Surface of Boilers 2390 sq. ft.
 Which Boilers are fitted with Forced Draft. NONE Which Boilers are fitted with Superheaters. NONE
 No. and Description of Boilers One S.B. Working Pressure 200 lbs./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 28.7.41 Main Boilers 3-7-41 Auxiliary Boilers NONE Donkey Boilers NONE
 (If not state date of approval)
 Superheaters General Pumping Arrangements 3.9.41 Oil fuel Burning Piping Arrangements 8.5.42.

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 AMOS & SMITH LTD.

W. C. Brown

Manufacturer.

DIRECTOR



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EMPIRE VINCENT.

During progress of work in shops - - { 1943 May 31. June 1.4 Aug 24. 26. / Oct 2. 27. Nov. 16. 18. 19. 23. 24. }
 Dates of Survey while building { 1943 Aug 26 Sep 18. Oct 2. Nov 23. Dec 8. 15. 22. 28. 28. 30. }
 During erection on board vessel - - - { 1944 3. 6. 7. 9. 12. 18. }
 Total No. of visits 30.

Dates of Examination of principal parts—Cylinders 16/11/43. 18/11/43. 19/11/43. Slides 27/10/43. Covers 16/11/43. 18/11/43. 19/11/43.
 Pistons 27-10-43. Piston Rods 27-10-43. Connecting rods 16-11-43.
 Crank shaft 16-11-43. Thrust shaft 28-9-43. Intermediate shafts 28-10-43.
 Tube shaft — Screw shaft 26/8/43. Propeller 26/8/43.
 Engine and boiler seatings 8/12/43. Engines holding down bolts 28/12/43.
 Completion of fitting sea connections 26/8/43.
 Completion of pumping arrangements 7/1/44. Boilers fixed 28/12/43. Engines tried under steam 7/1/44.
 Main boiler safety valves adjusted 7/1/44. Thickness of adjusting washers Both 5/16".
 Crank shaft material F.I. Steel Identification Mark 35FW 27/1/43. Thrust shaft material F.I. Steel Identification Mark 45FW 7/4/43.
 Intermediate shafts, material F.I. Steel Identification Marks 45-442. Tube shaft, material — Identification Mark —
 Screw shaft, material F.I. Steel Identification Mark JS 24-8-43. Steam Pipes, material STL Test pressure 600lb Date of Test 6/1/44.
 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. YA. If so, state name of vessel Steam Tug. EMPIRE PAT. 51723.

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 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 near full power as practicable in the basin, were found satisfactory in every respect.

The vessel is eligible, in my opinion, when classed to have the records of LMC 1,44 and O.R. and the notations T 3 Cy. 15", 25", 42"-27".
 132 NHP 200 lbs/□ 13B. 3 C.F. Q.S. 63 H.S. 2390.
 Fitted for oil fuel 1,44. F.P. above 150° F.

The amount of Entry Fee ... £ 3 : 0 :
 Special CLASS (M) £ 33 : 0 :
 Donkey Boiler SPEC (M) £ 8 : 5 :
 Travelling Expenses (if any) £ : :
 When applied for, FEB 1944
 When received, 19.

Committee's Minute TUES. 8 FEB 1944

Assigned + LMC 1.44 O.E.

W. Shields & J. Phelan
 Engineer Surveyors to Lloyd's Register of Shipping.



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