

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

1928

Received at London Office

Date of writing Report July 6th 1928 When handed in at Local Office 12 JULY 1928 Port of LIVERPOOL
 No. in Survey held at Birkenhead Date, First Survey Sept. 16th 1927 Last Survey July 2nd 1928
 Reg. Book. 43035 on the S. S. 'Tactician' (Number of Visits 10)
 Gross Tons 5887
 Net Tons 3683
 Built at Birkenhead By whom built Cammell Laird & Co Yard No. 935 When built 1928
 Engines made at D^o By whom made Cammell Laird & Co Engine No. 935 when made 1928
 Boilers made at D^o By whom made Cammell Laird & Co Boiler No. 935 when made 1928
 Registered Horse Power 524 Owners Chaente S. S. Co Ltd Port belonging to Liverpool.
 Nom. Horse Power as per Rule 524 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 - Reciprocating Revs. per minute 80
 Dia. of Cylinders 27" 46" 77" Length of Stroke 54" No. of Cylinders Three No. of Cranks Three
 Crank shaft, dia. of journals as per Rule 15.288" Crank pin dia. 15.98" Crank webs Mid. length breadth 23" Thickness parallel to axis 9.78"
 as fitted 15.36" Mid. length thickness 9.78" shrunk Thickness around eye-hole 7.1875"
 Intermediate Shafts, diameter as per Rule 14.56" Thrust shaft, diameter at collars as per Rule 15.288"
 as fitted 14.98" as fitted 15.98"
 Tube Shafts, diameter as per Rule 16.1" Screw Shaft, diameter as per Rule 16.78" Is the screw shaft fitted with a continuous liner yes
 as fitted 16.1" as fitted 16.78"
 Bronze Liners, thickness in way of bushes as per Rule .79 Thickness between bushes as per Rule .59 Is the after end of the liner made watertight in the propeller boss yes
 as fitted .78 as fitted .59 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner one length
 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 light
 If two liners are fitted, is the shaft lapped or protected between the liners yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft no
 Length of Bearing in Stern Bush next to and supporting propeller 6.2"
 Propeller, dia. 18.6" Pitch 18.6" No. of Blades 4 Material Bronze whether Moveable yes Total Developed Surface 110 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 4 1/2" Stroke 24" Can one be overhauled while the other is at work yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 3/4" Stroke 24" Can one be overhauled while the other is at work yes
 Feed Pumps No. and size two Woodson 10 1/2" x 8" x 2 1/2" Pumps connected to the Main Bilge Line No. and size one duplex 8" x 12" x 12", one duplex 10 1/2" x 13" x 24"
 How driven Steam driven How driven Steam driven
 Ballast Pumps, No. and size one 10 1/2" x 13" x 2 1/2" - one 8" Centrifugal 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 4 - 3 1/2" dia. Tunnel well 3"
 In Holds, &c. 1 Hold 2 0 3/2" dia. 1 Hold 2 0 3 1/2" dia.
1 to hold well section 3 1/2" dia.

Main Water Circulating Pump Direct Bilge Suctions, No. and size one 10" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one 5" dia.
 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 filled 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 are carried through the bunkers none How are they protected yes
 What pipes pass through the deep tanks none Have they been tested as per Rule yes
 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 yes Is it fitted with a watertight door yes worked from E. R. grating

MAIN BOILERS, &c.—(Letter for record Y) Total Heating Surface of Boilers 8208 sq. ft.
 Is Forced Draft fitted no No. and Description of Boilers Two D. E. return tube 2 DR Working Pressure 210 lb. sq. in.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes
 IS A DONKEY BOILER FITTED? yes If so, is a report now forwarded? yes
 PLANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers yes Donkey Boilers yes
 (If not state date of approval)
 Superheaters yes General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yes

SPARE GEAR. State the articles supplied:— one propeller shaft complete; sets of coupling bolts; Emergency Coupling complete; one propeller boss (C.S.); one bronze 13 C.S. Halls; 2 pairs of 1 1/2" x 1 1/2" brass bolts with nuts for same; sets of feed & bilge pump valves; sets of piston packing complete for each cylinder; two main bearing bolts & nuts; one air pump rod complete; air pump lead valve setting complete; metallic packing for H.V.P. piston rods; for one valve spindle; other items as detailed in attached list.

The foregoing is a correct description,
CAMMELL LAIRD AND COMPANY LIMITED,
 ENGINEERING MANAGER.

Manufacturer.



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1927. Sept 16, 20, 30. Oct 3, 7, 10, 14, 18, 20, 24, 27, 29, 31. Nov 7, 9, 10, 16, 18, 21, 22, 23, 25, 28, 29. Dec 2, 9, 10, 16, 19, 20, 21, 29.

Dates of Survey while building
 During progress of work in shops - - - 1928. Jan 3, 9, 11, 16, 19, 20, 23, 25, 30, 31. Feb 1, 6, 11, 17, 20, 22. Mar 5, 8, 14, 15, 19, 20, 21, 23, 26, 27, 28, 29, 30. Apr 4, 5, 10, 11, 12, 14, 16, 17, 18, 20, 24, 26, 27, 30. May 1, 2, 8, 9, 11, 15, 16, 17, 18, 21, 22, 24, 30, 31. June 6, 8, 14, 15, 18, 19, 20, 21, 25, 26, 28. July 2.
 During erection on board vessel - - -
 Total No. of visits 101.

Dates of Examination of principal parts - Cylinders 16/4/28 24/4/28 Slides 30/1/28 Covers 16/4/28
 Pistons 15/3/28 Piston Rods 15/3/28 Connecting rods 15/3/28
 Crank shaft 16/4/28 Thrust shaft 16/4/28 Intermediate shafts 16/4/28
 Tube shaft ✓ Screw shaft 16/4/28 Propeller 18/7/28
 Stern tube 15/5/28 Engine and boiler seatings 14/6/28 Engines holding down bolts 21/6/28
 Completion of pumping arrangements 28/6/28 Boilers fixed 6/6/28 Engines tried under steam 21/7/28.
 Main boiler safety valves adjusted 26/6/28 Thickness of adjusting washers Part. P 3/8 8 3/32 Slab. both 1 1/2".
 Crank shaft material Mild steel Identification Mark 11765 12783 2705 2708 2709 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 Thrust shaft material steel Identification Mark 12783
 Intermediate shafts, material steel Identification Marks 12787 9082 96 12792 12793 (space) Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material steel Identification Mark 12792 Steam Pipes, material Iron Test pressure 630 lb/sq. in. Date of Test 4/6/28 18/6/28
 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 carrying and burning oil fuel been complied with ✓
 Is this machinery duplicate of a previous case Yes If so, state name of vessel s.s. 'Logician'

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

This Machinery has been constructed under special Survey and is in accordance with the approved plans and the Rules. On completion it was examined under full working conditions during sea trial and found satisfactory, and is now eligible in my opinion for re-entry + LMC 7.28 in Register book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 7.28 CL.

J.M. 18/7/28. G.R.K.

The amount of Entry Fee ... £ 6. 0. 0
 Special ... £ 107. 4. 0
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for 12 JULY 1928
 When received, 3. 8. 28

J.D. Milton & W.S. Shields
 Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 13 JULY 1928

Assigned + LMC 7.28. Elec: Light