

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

Received at London Office

28 JUL 1943

Date of writing Report 5-7-43 19 43 When handed in at Local Office 8 JUL 43 19 43 Port of LIVERPOOL  
 No. in Survey held at NORTHWICH Date, First Survey Dec 19<sup>th</sup> 1941 Last Survey July 2<sup>nd</sup> 1943  
 Reg. Book 346 (Number of Visits 40)  
 on the ss. "C. 614" Tons { Gross 346 Net 140  
 Built at Northwich By whom built W. J. Yarwood & Sons Yard No. 713 When built 1943  
 Engines made at Northwich By whom made do Engine No. 209 When made 1943  
 Boilers made at Birkenhead By whom made Cammell Laird & Co Boiler No. 2242 When made 1943  
 Registered Horse Power 59 Owners Admiralty (Naval Stores Dept) Port belonging to Admiralty  
 Nom. Horse Power as per Rule 59 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 Trade for which vessel is intended Admiralty Coaling Lighter

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 385 I.H.P. 180  
 Dia. of Cylinders 10 1/2 x 17 1/2 x 29" Length of Stroke 19" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule Crank pin dia. 5 3/4" Crank webs shrunk Mid. length breadth 3 1/2"  
 as fitted 5 3/4" Mid. length thickness shrunk Thickness around eye-hole 2 9/16"  
 Intermediate Shafts, diameter as per Rule Thrust shaft, diameter at collars as per Rule  
 as fitted ✓ as fitted 5 3/4"  
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner No  
 as fitted ✓ as fitted 6 1/4"  
 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 ✓ 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 Yes If so, state type Yarwood Length of Bearing in Stern Bush next to and supporting propeller 2'-2"  
 Propeller, dia. 7'-0" Pitch 6-9 No. of Blades 4 Material CI whether Moveable Yes Total Developed Surface 18 sq. feet  
 Feed Pumps worked from the Main Engines, No. 1 Diameter 2" Stroke 9 1/2" Can one be overhauled while the other is at work ✓  
 Bilge Pumps worked from the Main Engines, No. 1 Diameter 2" Stroke 9 1/2" Can one be overhauled while the other is at work ✓  
 Feed Pumps { No. and size 1-2x9 1/2" 1-6x4x12 Pumps connected to the { No. and size 1-2x9 1/2" 1-5x5 1/2x6 (G.S.) 1-6x4x12 (Feed  
 How driven M. Eng. Steam Main Bilge Line { How driven ME. Steam Steam (with lockable  
 Ballast Pumps, No. and size 1-5x5 1/2x6 (G.S.) 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 2-2"  
 In Pump Room ✓ In Holds, &c. 2-2" (Fore hold) and 2-2" (aft hold)

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-3 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size 1-2 1/2" Are all the Bilge Suction Pipes in holds and tanks 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 Kingston 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 ✓ 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 ✓ Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 1105 sq. ft.  
 Which Boilers are fitted with Forced Draft None Which Boilers are fitted with Superheaters ✓  
 No. and Description of Boilers 1 SB Working Pressure 200 lbs/sq. inch  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Liv. Rpt 119126  
 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 31-5-43 Main Boilers Approved Auxiliary Boilers ✓ Donkey Boilers ✓  
 (If not state date of approval)  
 Superheaters ✓ General Pumping Arrangements 6-7-42 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 ✓

The foregoing is a correct description.

*W. J. Yarwood*  
Manufacturer.



1941 1942  
 Dec 19. Jan 26. Mar 20. June 12. July 14. 22. 29. Aug 18. Oct 16. 20. Nov 3. 11. 20. Dec 4. 16. 29  
 1942  
 Jan 12. 19. 26. Feb 2. 9. 12. 17. 24. Mar 4. 10. 16. 24. 30. Apr 13. 20. 28. May 5. 12. June 8. 15. 23. 24. July 2

Dates of Survey while building  
 During progress of work in shops - -  
 During erection on board vessel - - -  
 Total No. of visits 40

Dates of Examination of principal parts -  
 Cylinders 13-11-42 Slides 4-12-42 Covers 4-12-42  
 Pistons 2-2-43 Piston Rods 20-3-42 Connecting rods 20-3-42  
 Crank shaft 19-1-43 Thrust shaft 2-2-43 Intermediate shafts  
 Tube shaft Screw shaft 24-2-43 Propeller 24-2-43  
 Stern tube 17-2-43 Engine and boiler seatings 12-2-43 Engines holding down bolts 16-3-43  
 Completion of fitting sea connections 17-2-43  
 Completion of pumping arrangements 8-6-43 Boilers fixed 10-3-43 Engines tried under steam 24-6-43  
 Main boiler safety valves adjusted 24-6-43 Thickness of adjusting washers Port 13/32" Star 17/32"  
 Crank shaft material M.S. Identification Mark 6482 JFC 7-11-41 Thrust shaft material M.S. Identification Mark 6485 JFC 13-1-41  
 Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark  
 Screw shaft, material M.S. Identification Mark 6484 JFC 13-1-42 Steam Pipes, material Copper Test pressure 400 Date of Test 7-4-43 H. Glasgow  
 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. 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 Similar to "C.85" (Yard No. 648)

General Remarks (State quality of workmanship, opinions as to class, &c.)  
 The Machinery of this vessel has been built under special survey and in accordance with the Society's Rules. The material & workmanship are good. After erection in the shop, the machinery together with the boilers and auxiliaries have been placed on board in an efficient manner. The safety valves adjusted under steam and an accumulation test held. The span gear checked. Upon completion, a basin trial of the machinery at full power was held at Northwich with satisfactory results. In my opinion the machinery of this vessel is eligible to be classed in the Register Book, with a notation of + LMC 7.43 T.S. (019)

The amount of Entry Fee	£ 2 : 0	When applied for,
Bal. Special	£ 7 : 12	23 JUL 1943
Donkey Boiler Fee	£	When received,
Travelling Expenses (if any)	£ 5 : 15/6	19

C. Reed  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 27 JUL 1943  
 Assigned Yours nit to London. [Signature]  
 + LMC 7.43 15-0-0  
 7-8-0  
 7-12-0

