

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 10 When handed in at Local Office 23 JUL 1942 Port of LIVERPOOL  
No. in Survey held at WIGAN Date, First Survey 28/7/41 Last Survey 2/7/ 1942  
Reg. Book on the single screw tug "EMPIRE TOBY" (Number of Visits 35)  
Built at Thorne By whom built Richard Bundon Ltd. Yard No. T 376 Tons { Gross  
Engines made at WIGAN By whom made WORSLEY MESNES Engine No. 9951 When made 1942  
Boilers made at STOCKTON By whom made IRONWORKS LTD. Boiler No. 6584 When made "  
Registered Horse Power Owners Port belonging to  
Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted  
Trade for which Vessel is intended

22 ENGINES, &c.—Description of Engines TRIPLE EX. INVERTED DIRECT ACTION SURFACE CONDENSERS Revs. per minute 140  
Dia. of Cylinders 12" 20" + 32" Length of Stroke 22" No. of Cylinders 3 No. of Cranks 3  
Crank shaft, dia. of journals as per Rule 6.4" Crank pin dia. 6.5" Crank webs Mid. length breadth 9.6 Thickness parallel to axis 4.12  
as fitted 6.5" Mid. length thickness 4.12 shrunk Thickness around eye-hole 2.8  
Intermediate Shafts, diameter as per Rule 6.12" Thrust shaft, diameter at collars as per Rule 6.4  
as fitted 6.25" as fitted 6.5  
Tube Shafts, diameter as per Rule 7.08" Is the { tube } shaft fitted with a continuous liner { No  
as fitted 7.12" { screw }  
42 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes 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  
shaft YES If so, state type NEWARK PATENT TYPE NO 3 (Solid) Length of Bearing in Stern Bush next to and supporting propeller 2'-5"  
Propeller, dia. 8'-0 Pitch No. of Blades 4 Material Cast Iron Whether Moveable NO Total Developed Surface 28 sq. feet  
Feed Pumps worked from the Main Engines, No. 1 Diameter 2 1/2" Stroke 12" Can one be overhauled while the other is at work  
Bilge Pumps worked from the Main Engines, No. 1 Diameter 2 1/2" Stroke 12" Can one be overhauled while the other is at work  
Feed Pumps { No. and size Pumps connected to the { No. and size  
How driven Main Bilge Line How driven  
Ballast Pumps, No. and size 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  
In Pump Room In Holds, &c.

22 Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room Bilges,  
No. and size Are the Bilge Suction Pipes in holds and tunnel well fitted with stram-boxes  
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  
Are they fitted with Valves or Cocks  
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Overboard Discharges above or below the deep water line  
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate  
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  
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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

22 MAIN BOILERS, &c.—(Letter for record ) Total Heating Surface of Boilers Working Pressure  
Is Forced Draft fitted No. and Description of Boilers  
IS A REPORT ON MAIN BOILERS NOW FORWARDED?  
IS A DONKEY BOILER FITTED? If so, is a report now forwarded?  
Is the donkey boiler intended to be used for domestic purposes only  
PLANS. Are approved plans forwarded herewith for Shafting NO Main Boilers Auxiliary Boilers Donkey Boilers  
(If not state date of approval)  
Superheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements

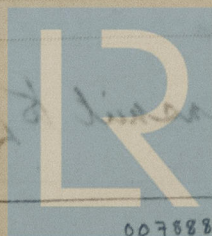
## SPARE GEAR.

Is the spare gear required by the Rules been supplied YES  
State the principal additional spare gear supplied ONE EACH PISTON RINGS FOR MP & LP PISTONS.  
12 CONDENSER TUBES. 24 FERRULES + PLUGS.  
ONE PAIR MAIN BEARING BRASSES, WITH BOLTS + NUTS.

The foregoing is a correct description.  
FOR WORSLEY MESNES IRONWORKS LTD.

J. A. Helling  
Director.

Manufacturer.



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Lloyd's Register  
Foundation

007888-007894-00790



1941  
July 20. Aug 20. 22. 25. Sept 2. 19. 24. Oct 7. 10. 15. 17. 24. Nov 6. 13. 20. Dec 4. 19. 1942  
Jan 5. 15. Feb 5. 19. Mar 5. 13. 26. Apr 2. 9. 16. 23.  
May 14. 21. June 11. 25. July 2.

Dates of Survey while building  
During progress of work in shops - -  
During erection on board vessel - - -  
Total No. of visits 35+

Dates of Examination of principal parts—Cylinders 13 - 2 - 42 Slides 13 - 2 - 42 Covers 13 - 2 - 42  
Pistons 19 - 2 - 42 Piston Rods 5 - 2 - 42 Connecting rods 5 - 2 - 42  
Crank shaft 13 - 2 - 42 Thrust shaft 5 - 2 - 42 Intermediate shafts 5 - 2 - 42  
Tube shaft ✓ Screw shaft 5 - 2 - 42 Propeller 26 - 3 - 42  
Stern tube ✓ Engine and boiler seatings Engines holding down bolts  
Completion of fitting sea connections Boilers fixed Engines tried under steam  
Completion of pumping arrangements Thickness of adjusting washers  
Main boiler safety valves adjusted Crank shaft material STEEL Identification Mark 2292 Thrust shaft material STEEL Identification Mark 2282  
Intermediate shafts, material Identification Marks 2283 Tube shaft, material Identification Mark  
Screw shaft, material STEEL Identification Mark 2284 Steam Pipes, material Test pressure Date of Test  
Is an installation fitted for burning oil fuel ✓ 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. THIS ENGINE HAS BEEN  
BUILT UNDER SPECIAL SURVEY IN ACCORDANCE WITH  
THE RULES THE MACHINERY MATERIALS &  
WORKMANSHIP ARE GOOD).  
THE ABOVE ENGINES HAVE BEEN DISPATCHED TO  
HULL FOR FITTING TO R. JUNCTIONS YARD NO T376.

Certificate to be sent to

The amount of Entry Fee ... £ 8 : 10 :  
Special SPEC. FEE £ 2 : 2/6  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ 7 : 8/4

When applied for, 24 JUL 1942  
When received, 19

H. Yaylor.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 28 JUL 1942  
Assigned Transmitted to London.