

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 18 NOV 1942 FEB 1943

Date of writing Report 19... When handed in at Local Office 19... Port of...
 No. in Survey held at **WIGAN** Date, First Survey **20/8/41** Last Survey **29/10/1942**
 Reg. Book... (Number of Visits **49**)
 on the **EMPIRE HARRY** Tons Gross... Net...
 Built at **GOOLE** By whom built **GOOLE SHIPBUILDING + REPAIR (GL) YARD** No. **387** When built...
 Engines made at **WIGAN** By whom made **WALKER BROS** Engine No. **43290** When made **1942**
 Boilers made at... By whom made... Boiler No. ... When made...
 Registered Horse Power... Owners... Port belonging to...
 Nom. Horse Power as per Rule **197** Is Refrigerating Machinery fitted for cargo purposes... Is Electric Light fitted...
 Trade for which vessel is intended...

ENGINES, &c.—Description of Engines **TRIPLE EXPANSION INVERTED CYLINDER** Revs. per minute **113 1/2**
 Dia. of Cylinders **16 1/2" x 27" x 46"** Length of Stroke **30"** No. of Cylinders **THREE** No. of Cranks **THREE**
 Crank shaft, dia. of journals as per Rule **9.0"** as fitted **9.25"** Crank pin dia. **9 3/8"** Mid. length breadth **17 1/2"** Thickness parallel to axis **6"**
 Crank webs Mid. length thickness **6"** shrunk Thickness around eye-hole **4"**
 Intermediate Shafts, diameter as per Rule... as fitted... Thrust shaft, diameter at collars as per Rule... as fitted...
 Tube Shafts, diameter as per Rule... as fitted... Screw Shaft, diameter as per Rule... as fitted... Is the {tube / screw} shaft fitted with a continuous liner {...}
 Bronze Liners, thickness in way of bushes as per Rule... as fitted... Thickness between bushes as per Rule... 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 at... If so, state type... Length of Bearing in Stern Bush next to and supporting propeller...
 Propeller, dia. Pitch No. of Blades Material whether Moveable Total Developed Surface sq. feet
 Feed Pumps worked from the Main Engines, No. **2** Diameter **3"** Stroke **15"** Can one be overhauled while the other is at work **NO**
 Bilge Pumps worked from the Main Engines, No. **2** Diameter **3"** Stroke **15"** Can one be overhauled while the other is at work **NO**
 Feed Pumps {No. and size / How driven} Pumps connected to the Main Bilge Line {No. and size / 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... Sections, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room... In Pump Room... In Holds, &c...
 Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-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 all Sea Connections fitted direct on the skin of the ship... 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...

MAIN BOILERS, &c.—(Letter for record...) Total Heating Surface of Boilers...
 Which Boilers are fitted with Forced Draft... Which Boilers are fitted with Superheaters...
 No. and Description of Boilers... Working Pressure...

IS A REPORT ON MAIN BOILERS NOW FORWARDED?
IS A DONKEY BOILER FITTED? 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 Main Boilers Auxiliary Boilers Donkey Boilers
 (If not state date of approval)

Superheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements

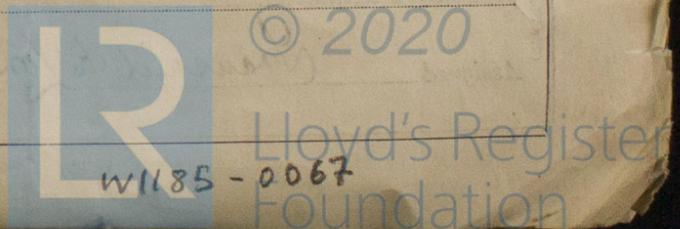
SPARE GEAR.

Has the spare gear required by the Rules been supplied **YES**
 State the principal additional spare gear supplied

The foregoing is a correct description.

as per plan

Manufacturer.



1941
 During progress of work in shops -- Aug 20. 22. Sept 2. 26. Oct 7. 17. 24. Nov 6. 13. 20. 25. Dec 4. 12. 19. 1942
 July 2. 9. 16. 23. Aug 10. 20. Sept 3. 17. 24. Oct 1. 8. 9. 15. 22. 29.
 Dates of Survey while building
 During erection on board vessel ---
 Total No. of visits 49 +

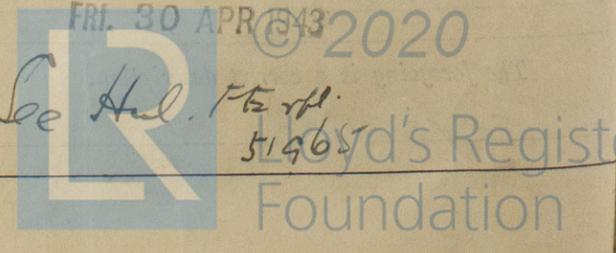
Dates of Examination of principal parts—Cylinders 9-6-42 Slides 9-6-42 Covers 9-6-42
 Pistons 24-9-42 Piston Rods 24-9-42 Connecting rods 24-9-42
 Crank shaft 28-5-42 Thrust shaft - Intermediate shafts -
 Tube shaft - Screw shaft - Propeller -
 Stern tube - Engine and boiler fittings - Engines holding down bolts -
 Completion of fitting sea connections -
 Completion of pumping arrangements - Boilers fixed - Engines tried under steam -
 Main boiler safety valves adjusted - Thickness of adjusting washers -
 Crank shaft material STEEL Identification Mark 2305 28-5-42 Thrust shaft material - Identification Mark -
 Intermediate shafts, material - Identification Marks - Tube shaft, material - Identification Mark -
 Screw shaft, material - Identification Mark - 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.)
 THESE ENGINES HAVE BEEN BUILT UNDER SPECIAL SURVEY IN ACCORDANCE WITH THE RULES. THE MATERIALS & WORKMANSHIP ARE GOOD.
 THE ABOVE ENGINES HAVE BEEN DISPATCHED TO GOOLE FOR FITTING TO GOOLE SHIPBUILDING & REPAIRING CO LD) TUB NO A/MS 404.

The amount of Fee ... £ 19 : 14 :
 Special SPECIFICATION 4 : 18/6
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ 7 : 2/1:
 When applied for, 11 NOV 1942
 When received, 19

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

Committee's Minute LIVERPOOL '17 NOV 1942
 Assigned Transmitt to London



Certificate to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)