

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 19 When handed in at Local Office 23 FEB 1943 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey Sep 28 Last Survey Feb 4 1943
 Reg. Book (Number of Visits 4)
 on the EMPIRE HARRY
 Built at Gool By whom built Gool S B & R 6 Yard No. 387 Tons Gross 482 Net 39
 Engines made at Wigan By whom made Walker Bros Engine No. 43290 When built 1943
 Boilers made at Hartlepool By whom made Central Marine Eng W Boiler No. R 354 When made 1942
 Registered Horse Power Owners Ministry of Shipping
 Nom. Horse Power as per Rule 197 Is Refrigerating Machinery fitted for cargo purposes Port belonging to
 Trade for which vessel is intended Towing Purposes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines See Liverpool Report N° 118665
 Dia. of Cylinders Length of Stroke No. of Cylinders No. of Cranks
 Crank shaft, dia. of journals as per Rule 8.66" as fitted 8.75" Mid. length breadth Mid. length thickness Thickness parallel to axis Thickness around eye-hole
 Intermediate Shafts, diameter as per Rule 9.09" as fitted 9.25" Thrust shaft, diameter at collars as per Rule 10.04" as fitted 11"
 Tube Shafts, diameter as per Rule 11" as fitted 11" Is the 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 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 Newark Length of Bearing in Stern Bush next to and supporting propeller 3'-6"
 Propeller, dia. 11'-6" Pitch 11'-7 1/2" No. of Blades 4 Material C I whether Moveable NO Total Developed Surface 50 sq. feet
 Feed Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work yes
 Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work yes
 Feed Pumps No. and size 1-7" x 5" x 8" How driven Steam Pumps connected to the Main Bilge Line No. and size 1-7" x 7" x 8" How driven Steam
 Ballast Pumps, No. and size 1-7" x 7" x 8" Lubricating Oil Pumps, including Spare Pump, No. and size
 Are two independent means arranged for circulating water through the Oil Cooler
 Bilge Pumps:—In Engine and Boiler Room ENGINE ROOM 2-2 1/2" dia BOILER ROOM 1-2 1/2"
 In Pump Room In Holds, &c. FORWARD COMPARTMENT 1-2 1/2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-7" dia Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-3" dia + 1-3" dia BR
 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 or on robust fabricated steel boxes 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 Below
 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 Fore Peak & Forward Compartment 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 no tunnel Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 3020 sq ft
 Which Boilers are fitted with Forced Draft Main Boiler Which Boilers are fitted with Superheaters none
 No. and Description of Boilers 1 SE Cylindrical 1 SB Working Pressure 215 lbs/10"
 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 Main Boilers Auxiliary Boilers Donkey Boilers
 (If not state date of approval)

Superheaters General Pumping Arrangements 25/8/42 Oil fuel Burning Piping Arrangements 25/8/42

SPARE GEAR.

Has the spare gear required by the Rules been supplied Spare gear not checked.
 State the principal additional spare gear supplied Spare gear and outfit supplied to comply with the Rules Specification. W.S.B.

The foregoing is a correct description.

JOHN DICKINSON & SONS LTD.

Manufacturer.

W1185-0066

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Lloyd's Register
Foundation

During progress of work in shops - - 1942 Sep 28.30. Oct 5.8. Nov 5.7.9.10.11.13.16.17.19.20.24.26.30. Dec 3.9.10.14.15
17.18.21.22.24.28.29.31. 48 Jan 5.6.7.8.13.14.15.16.18.20.21.25.26.27.30. Feb 2.3.4.
During erection on board vessel - -
Total No. of visits 48

Dates of Examination of principal parts—Cylinders — Slides — Covers —
Pistons — Piston Rods — Connecting rods —
Crank shaft — Thrust shaft 9/10/42 Goolle Intermediate shafts 9/10/42 Goolle
Tube shaft — Screw shaft 9/10/42 Goolle Propeller 9/10/42 12/10/42 Goolle
Stern tube 9/10/42 Goolle Engine and boiler seatings 24/11/42 Engines holding down bolts 31/12/42
Completion of fitting sea connections 12/10/42 Goolle
Completion of pumping arrangements 25/1/43 Boilers fixed 15/12/42 Engines tried under steam 27/1/43
Main boiler safety valves adjusted 27/1/43 Thickness of adjusting washers Forward 7/16" After 3/8"
Crank shaft material Identification Mark Thrust shaft material Identification Mark JFC 22/5/42
Intermediate shafts, material Identification Marks JFC 22/5/42 Tube shaft, material Identification Mark
Screw shaft, material Identification Mark JFC 22/5/42 Steam Pipes, material Steel Test pressure 64.5 lb/sq in Date of Test 16/11/42
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. 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.)
The machinery of this vessel mentioned in Liverpool Report N° 118665 has been efficiently fitted on board in accordance with approved plans, specification & the requirements of the Rules & has been tried under working conditions at the Quayside & found satisfactory. It is in my opinion eligible for the
NOTATION * LMC with date when acceptance trial has been carried out
Fitted to burn Oil Fuel (FP above 150°F)
The acceptance trial will be held at Goolle.

NOTE :- The following steam pipes are made by the Gerty-Moon process
Steam to Capstan, Feed Donkey Pump, General Service Pump & Circulating Pump.

The acceptance trial was carried out at Goolle as stated above and found satisfactory.
W.S.S.

The amount of Entry Fee ... £ 3 : : : When applied for,
Special Specification ... £ 9 : 17 : 2 3 FEB 1943
Donkey Boiler Fee ... £ 2 : 9 : : When received,
Travelling Expenses (if any) £ : : : 19.

J Grieve
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute ... FRI. 30 APR 1943
Assigned ... + LMC 4.43
FD CG