

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 19 1945 When handed in at Local Office 14/11/45 Port of Belfast
 No. in Survey held at Belfast Date, First Survey 7 June 1945 Last Survey 12 Nov 1945
 Reg. Book S.S. 'EMPIRE' 'REBELLA' (Number of Visits 46) Tons ^{Gross} 980 _{Net} 350
 Built at Glasgow By whom built Harland & Wolff Yard No. 1318G When built 1946
 Engines made at Belfast By whom made Harland & Wolff Ltd Engine No. 1318G When made 1945
 Boilers made at Belfast By whom made Harland & Wolff Ltd Boiler No. 1318G When made 1945
 Registered Horse Power _____ Owners The Admiralty Port belonging to Glasgow
 Nom. Horse Power as per Rule 144 145 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which vessel is intended _____

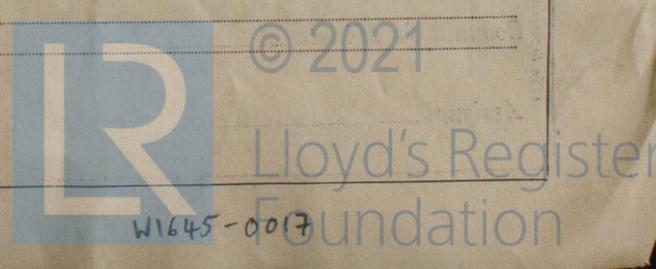
ENGINES, &c.—Description of Engines Three Cylinder Triple Expansion Revs. per minute 130
 Dia. of Cylinders 13 1/2" - 22 3/4" - 38" Length of Stroke 27" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule Crank pin dia. 7 3/8" Mid. length breadth _____ Thickness parallel to axis 4 1/2"
 as fitted 7 3/8" Crank webs _____ shrunk _____ Thickness around eye-hole 3 1/2"
 as per Rule _____ Mid. length thickness _____ Thickness around eye-hole as approved
 Intermediate Shafts, diameter _____ Thrust shaft, diameter at collars _____
 as fitted 7 1/4" as fitted 7 3/8"
 Tube Shafts, diameter _____ Screw Shaft, diameter _____
 as fitted _____ as fitted 8 1/2" - 7 3/8" at fore end Is the tribo screw shaft fitted with a continuous liner Yes
 as per Rule _____ as per Rule _____
 Bronze Liners, thickness in way of bushes _____ Thickness between bushes _____ 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 _____ If so, state type Newark Length of Bearing in Stern Bush next to and supporting propeller 31.2"
 Propeller, dia. 9'-0" Pitch 10'-0" No. of Blades 4 Material Man Iron whether Moveable Solid Total Developed Surface 32.6 sq. feet
 Feed Pumps worked from the Main Engines, No. _____ Diameter _____ Stroke _____ Can one be overhauled while the other is at work _____
 Bilge Pumps worked from the Main Engines, No. _____ Diameter _____ Stroke _____ 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. _____

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 5) Total Heating Surface of Boilers 2370 4 ✓
 Which Boilers are fitted with Forced Draft Yes Which Boilers are fitted with Superheaters _____
 No. and Description of Boilers Two Multitubular Cylindrical Working Pressure 200 lbs/sq. in. ✓
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes ✓
 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 6.4.45 Main Boilers 23.9.45 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 Please see attached List

The foregoing is a correct description.
 H. HARLAND & WOLFE, LIMITED
H. Marshall
 Manufacturer.



1945

During progress of work in shops -- June 7, 12, 14, 25, 28 July 6 Aug 2, 6, 8, 9, 14, 17, 18, 22, 23 Sept 3, 5, 6, 7, 8, 10, 11, 12, 18, 16, 19, 20, 21, 24, 26, 27, 28, 29 Oct 3, 4, 5, 9, 12, 16, 17, 23, 25, 26, 29 Nov 12 = 46

Dates of Survey while building { During erection on board vessel - - -

Total No. of visits

Dates of Examination of principal parts - Cylinders 14.8.45, 18.8.45, 28.8.45 Slides 4.10.45 Covers 28.8.45 / 18.8.45

Pistons 4.10.45 Piston Rods 1.8.45 & 15.9.45 Connecting rods 17.8.45 & 18.8.45

Crank shaft 1.9.45 Thrust shaft 17.9.45 Intermediate shafts 28.9.45

Tube shaft - Screw shaft 10.9.45 Propeller 24.9.45

Stern tube Engine and boiler seatings 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 28/32 Tm Identification Mark LLOYD No 1119 857 R/M Thrust shaft material Steel 28/32 Tm Identification Mark LLOYD T915 857

Intermediate shafts, material Steel 28/32 Tm Identification Marks LLOYD No 483 4264 S.M.A. Tube shaft, material - Identification Mark -

Screw shaft, material Steel 28/32 Tm Identification Mark LLOYD No 483 7885 T.D.S. 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 Yes. If so, state name of vessel A.M. Yacht 1317 G.

General Remarks (State quality of workmanship, opinions as to class, &c. These engines have been constructed under special survey in accordance with the Rules. The materials & workmanship are good. The terms of the Admiralty Machinery Specification have been complied with. This machinery has now been dispatched to Glasgow.

The amount of Entry Fee ... £ : : } When applied for, 14/11/19 45

Special (Classification + 25%) £ 18 : - : } When received,

Donkey Boiler Fee ... £ : : }

Travelling Expenses (if any) £ : : }

Paul S. Thomas
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 FEB 1946

Assigned SEE ACCOMPANYING MACHINERY REPORT.

