

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

-8 JUL 1937

Received at London Office 8 JUL 1937

Date of writing Report 25 June 1937 When handed in at Local Office Bedford. Port of London
 No. in Survey held at Bedford. Date, First Survey 21st Oct 36 Last Survey 21st June 1937
 Reg. Book. on the new steel 515" IRON KNIGHT". (Number of Visits 7.)
 Built at Glasgow By whom built Lithgow Ltd. Yard No. 902 When built
 Engines made at Bedford By whom made W. H. Allen & Co. Ltd. Engine No. R/62648 When made 1937.
 Boilers made at - By whom made - Boiler No. - When made -
 Registered Horse Power - Owners - Port belonging to -
 Nom. Horse Power as per Rule 39. Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted yes.
 Trade for which Vessel is intended 90 K.W.

ENGINES, &c.—Description of Engines Compound Steam Reciprocating Revs. per minute 500
 Dia. of Cylinders 7 1/2 x 13 Length of Stroke 7 No. of Cylinders 2. No. of Cranks 2.
 Crank shaft, dia. of journals as per Rule 2.85 Crank pin dia. 3 1/2 Crank webs as per Rule 5 Mid. length breadth 5 Thickness parallel to axis -
as fitted 3 1/2 Mid. length thickness 2 1/2 Thickness around eye-hole -
 Intermediate Shafts, diameter as per Rule Thrust shaft, diameter at collars as per Rule
as fitted as fitted
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner -
as fitted as fitted screw
 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
 shaft - 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. - 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. -

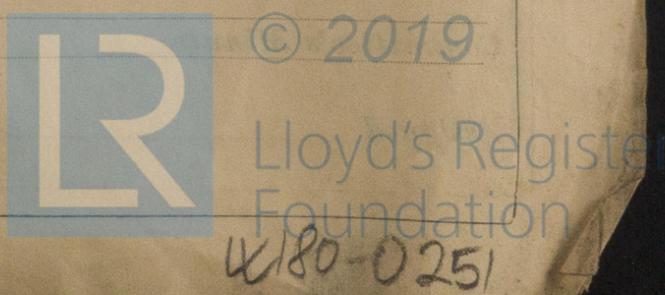
Main Water Circulating Pump Direct Bilge Suctions, No. and size - **Independent Power Pump Direct Suctions to the Engine Room Bilges,**
 No. and size - Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes -
 Are the Bilge Suctions in the Machinery Space led from easily accessible 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 -) Total Heating Surface of Boilers -
 Is Forced Draft fitted - No. and Description of Boilers - Working Pressure 250 lbs
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 - 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 1 set of top & bottom end brance; 1 H.P. & L.P. piston
 rings; 2 sets of metallic packing for rods.

The foregoing is a correct description.

H. Pease for W.H. Allen, Manufacturer. 1/7/37



GENERATING

During progress of work in shops -- 1936 Oct. 21, Nov. 4, 6, Dec. 29, 30, 1937 Jan 6, 15.
 Feb 8, 23, March 10, 12, 16, 22, MAY 25, June, 18, 21, 22.
 Dates of Survey while building { During erection on board vessel ---
 Total No. of visits 208 17 (In shops)

Dates of Examination of principal parts—Cylinders 27. 12. 36 Slides 16. 3. 37 Covers 6. 1. 37.
 Pistons 16. 2. 37. Piston Rods 12. 3. 37. Connecting rods 23. 2. 37.
 Crank shaft 10. 3. 37 Thrust shaft ✓ Intermediate shafts -
 Tube shaft ✓ Screw shaft - Propeller ✓
 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 Identification Mark HAG. 10.3.37 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.)
 The generating engine has been constructed under special survey in accordance with the requirements of the Rules. The materials have been made at Works approved by the Committee. The workmanship is good & on completion were tested under full & overload conditions with satisfactory results.
 The machinery has been forwarded to Glasgow for fitting on board.

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

The amount of Entry Fee ... £ : :
 Special ... £ 6-6-0 : : 8 JUL 1937
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ 1-4-6 : : 7/9/ 1937
 Don. Advice

M. K. Gamett
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned

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