

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

-8 JUL 1937

Received at London Office

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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 21 Oct 1936 Last Survey 21 June 1937
Reg. Book. on the new steel S/S "IRON KNIGHT."
Built at Glasgow By whom built Lithgow Ltd. Yard No. 9023 When built
Engines made at Bedford By whom made W.A. Allen & Co. Ltd. Engine No. R/63654 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 21 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted 70.
Trade for which Vessel is intended 50 K.W.

ENGINES, &c.—Description of Engines Compound Steam Reciprocating Revs. per minute 550
Dia. of Cylinders 6 1/2 x 10 1/2 Length of Stroke 5 No. of Cylinders 2 No. of Cranks 2
Crank shaft, dia. of journals as per Rule as fitted 3 1/4 Crank pin dia. 3 1/4 Crank webs Mid. length breadth 4 1/4 Mid. length thickness 2 Thickness parallel to axis Thickness around eye-hole
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 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 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 Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room In Pump Room In Holds, &c.

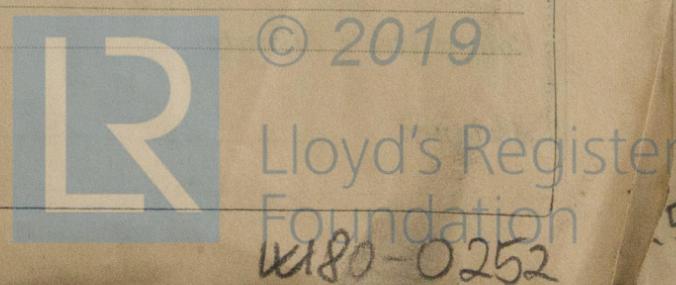
Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size
Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes
Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, 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 lb.
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
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 brass; 1 H.P. + L.P. piston rings; 2 sets of metallic packing for rods.

The foregoing is a correct description.

H. Pledge, for W.A. Allen, Manufacturer. 1/7/37.



GENERATING

Dates of Survey while building:

 During progress of work in shops: 1936 Oct 21 Nov 4. 6. Dec 29. 30. 1937 Jan 6 Feb 19. 23

 March 5. 16 April 12 ^{MAY 25} June 18 21 + 22

 During erection on board vessel:

 Total No. of visits: 15 (in shops)

Dates of Examination of principal parts—Cylinders 29.12.36 Slides 29.12.36 Covers 6.1.37

 Pistons 16.3.37 Piston Rods 16.3.37 Connecting rods 12.4.37

 Crank shaft 5.3.37 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 MAC 6-3-37 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.)

This generating engine has been constructed under special license 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 condition with satisfactory results.

 The machines have been forwarded to Glasgow for fitting on board.

Certificate to be sent to Lloyd's Register of Shipping, 25 Abchurch Lane, London, E.C. 4.

The amount of Entry Fee ... £ : : When applied for,

 Special ... £ 5-5-0 -8 JUL 1937

 Donkey Boiler Fee ... £ : : When received,

 Travelling Expenses (if any) £ 1-4-6 7/9/1937 don. arrive

H. K. Gamett

 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____

 Assigned _____