

## 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" (Number of Visits 15)  
 Built at Glasgow By whom built Lithgow & Co. Yard No. 90243 Tons Gross  
 Engines made at Bedford By whom made W. H. Allen & Co. Ltd. Engine No. R/63664 When made 1937  
 Boilers made at Bedford By whom made W. H. Allen & Co. Ltd. Boiler No. 1937  
 Registered Horse Power 21 Owners W. H. Allen & Co. Ltd. Port belonging to London  
 Nom. Horse Power as per Rule 21 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 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 3 1/4" Crank pin dia. 3 1/4" Crank webs Mid. length breadth 4 1/4" Thickness parallel to axis shrunk  
 Intermediate Shafts, diameter as per Rule as fitted Thrust shaft, diameter at collars as per Rule as fitted Thickness around eye-hole as fitted  
 Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the { tube } shaft fitted with a continuous liner { Yes }  
 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 Yes  
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes  
 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 Yes  
 If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft Yes  
 If so, state type Oil Gland Length of Bearing in Stern Bush next to and supporting propeller 12"  
 Propeller, dia. 48" Pitch 24" No. of Blades 3 Material Cast Iron whether Moveable No Total Developed Surface 100 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 6" Can one be overhauled while the other is at work Yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 6" Can one be overhauled while the other is at work Yes  
 Feed Pumps { No. and size 2 { Pumps connected to the { No. and size 2 {  
 { How driven Electric { Main Bilge Line { How driven Electric {  
 Ballast Pumps, No. and size 2 Lubricating Oil Pumps, including Spare Pump, No. and size 2  
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room Yes  
 In Pump Room Yes In Holds, &c. Yes

Main Water Circulating Pump Direct Bilge Suctions, No. and size 2 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2  
 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 Are they fitted with Valves or Cocks Yes  
 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 Yes  
 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 Yes How are they protected Yes  
 What pipes pass through the deep tanks Yes 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 Yes Is it fitted with a watertight door Yes worked from Yes

MAIN BOILERS, &c.—(Letter for record Yes) Total Heating Surface of Boilers 100  
 Is Forced Draft fitted Yes No. and Description of Boilers 2 Working Pressure 250 lb.  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 IS A DONKEY BOILER FITTED? Yes If so, is a report now forwarded? Yes  
 Is the donkey boiler intended to be used for domestic purposes only Yes  
 PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers Yes Donkey Boilers Yes  
 (If not state date of approval) Superheaters Yes General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements Yes

## 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 brasses; 1 H.P. & L.P. piston rings; 2 sets of metallic packing for rods.

The foregoing is a correct description.

H. Pledge. for W. H. Allen.

Manufacturer.

1/7/37.



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Dates  
of Survey  
while  
building

During progress of  
work in shops - -

During erection on  
board vessel - - -

Total No. of visits

1936 Oct 21 Nov 4. 6. Dec 29. 30. 1937 Jan 6 Feb 19. 23  
March 5. 16 April 12 June 18 21 + 22

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 Identification Mark 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 licence 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.

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

A. H. Gamett  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned



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