

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

25 OCT 1924

Date of writing Report 22<sup>nd</sup> Oct 1924 When handed in at Local Office 23/10 1924 Port of Antwerp.  
 No. in Survey held at Koboken. Belgium. Date, First Survey 22<sup>nd</sup> Aug. Last Survey 20<sup>th</sup> Oct 1924  
 Reg. Book. on the S/S "RUBENS." (Number of Visits 8)  
 Built at Koboken. By whom built Antwerp Eng. Co. Ltd. Yard No. 83. When built 1924.  
 Engines made at Sunderland. By whom made N.E. Mar. Eng. Co. Ltd. Engine No. 2558 when made 1924.  
 Boilers made at Sunderland. By whom made N.E. Mar. Eng. Co. Ltd. Boiler No. 2558 when made 1924.  
 Registered Horse Power \_\_\_\_\_ Owners Comptoir Charbonnier Maritime Port belonging to Antwerp.  
 Nom. Horse Power as per Rule 214 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted yes.

## ENGINES, &amp;c.—Description of Engines

Dia. of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ Revs. per minute 98 No. of Cylinders \_\_\_\_\_ No. of Cranks \_\_\_\_\_  
 Dia. of Crank shaft journals as per rule Dia. of Crank pin \_\_\_\_\_ Crank webs \_\_\_\_\_ Mid. length breadth \_\_\_\_\_ Thickness parallel to axis \_\_\_\_\_  
 as fitted \_\_\_\_\_ Mid. length thickness \_\_\_\_\_ Thickness around eye-hole \_\_\_\_\_  
 Diameter of Thrust shaft under collars as per rule Diameter of Tunnel shaft as per rule Diameter of Screw shaft as per rule Is the Screw shaft  
 as fitted \_\_\_\_\_ as fitted \_\_\_\_\_ as fitted \_\_\_\_\_  
 fitted with a continuous liner the whole length of the stern tube \_\_\_\_\_ Is the after end of the liner made watertight in the propeller boss \_\_\_\_\_  
 If the liner is in more than one length are the joints burned \_\_\_\_\_ If the liner does not fit tightly at the part  
 between the bearings in the stern tube, is the space charged with plastic material insoluble in water and non-corrosive \_\_\_\_\_  
 If two liners are fitted, is the shaft lapped \_\_\_\_\_ Is an approved appliance fitted at the after end of the shaft to permit  
 of it being efficiently lubricated \_\_\_\_\_ Length of Stern Bush \_\_\_\_\_ Diameter of Propeller \_\_\_\_\_  
 Pitch of Propeller See Sunderland report No. of Blades \_\_\_\_\_ State whether Moveable \_\_\_\_\_ Total Surface \_\_\_\_\_ square feet.  
 No. of Feed Pumps fitted to the Main Engines \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 No. of Bilge Pumps fitted to the Main Engines \_\_\_\_\_ Diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 Total number and size of power driven Feed and Bilge Auxiliary Pumps one 6" x 4" x 6" duplex, one 9" x 10" x 10" duplex.  
 No. and size of Pumps connected to the Main Bilge Line one 9" x 10" x 10"  
 No. and size of Ballast Pumps one 9" x 10" x 10" No. and size of Lubricating Oil Pumps, including Spare Pump ✓  
 Are two independent means arranged for circulating water through the Oil Cooler ✓ No. and size of suction connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps;—In Engine and Boiler Room 4-3" and in Holds, &c. No 1 hold 2-3, No 2 hold 3-3"

No. and size of Main Water Circulating Pump Bilge Suctions one 6" joined to pump. No. and size of Donkey Pump Direct Suctions  
 to the Engine Room Bilges 2-3" 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 connections with the sea direct on the skin of the ship yes. Are they Valves or Cocks Both valves & cocks.  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes. Are the Discharge Pipes above or below the deep water line above & 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 are carried through the bunkers Forward hold suction How are they protected wood casing & steel plate.  
 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 Screw Shaft Tunnel watertight yes. Is it fitted with a watertight door yes. worked from Cyl. platform.

MAIN BOILERS, &c.—(Letter for record \_\_\_\_\_) Total Heating Surface of Boilers 3632 #  
 Is Forced Draft fitted No. No. and Description of Boilers Two Single Ended Marine Working Pressure 180 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes.IS A DONKEY BOILER FITTED? None.If so, is a report now forwarded? ✓

PLANS. Are approved plans forwarded herewith for Shafting ✓ Main Boilers yes. Auxiliary Boilers ✓ Donkey Boilers ✓  
 (If not state date of approval)

General Pumping Arrangements yes. Fuel Furning Piping Arrangements ✓

SPARE GEAR. State the articles supplied:—Two connecting rod top end & 2 bottom end bolts & nuts, 2  
main bearing bolts & nuts, 1 set of coupling bolts & nuts, 2 feed & 2 bilge pump valves, 1  
set of assorted bolts & nuts, 1 cwt of iron bars & 2 cwt of iron plates, 1 propeller, 1  
air bottom end brasses, 2 piston rod nuts, 6 junk ring studs & nuts, 12 cylinder  
over studs & nuts, 1/2 set air pump valves, 2 safety valve springs, 18 Condenser  
tubes & 36 ferrules, 17 boiler tubes & etc.

the boilers can be worked separately. Safety valves adjusted to 185 lbs per sq. in. & are fitted  
 with easing gear. Smallest distance between boilers & bunkers = 15".

The foregoing is a correct description

Manufacturer.



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Dates of Survey while building  
During progress of work in shops - -  
During erection on board vessel - - -  
Total No. of visits 8

Dates of Examination of principal parts - Cylinders ✓ Slides ✓ Steam pipes tested 20.9.24.  
Covers ✓ Pistons ✓ Rods ✓  
Connecting rods ✓ Crank shaft ✓ Thrust shaft ✓  
Tunnel shafts ✓ Screw shaft ✓ Propeller 28.8.24.  
Stern tube ✓ Engine and boiler seatings 22.8.24. Engines holding down bolts  
Completion of pumping arrangements 18.10.24. Boilers fixed 26.9.24. Engines tried under steam 20.10.24.  
Completion of fitting sea connections 22.8.24. Stern tube 28.8.24. Screw shaft and propeller 28.8.24.  
Main boiler safety valves adjusted 7.10.24. Thickness of adjusting washers All washers 9/16" thick.  
Material of Crank shaft ✓ Identification Mark on Do. ✓  
Material of Thrust shaft ✓ Identification Mark on Do. ✓  
Material of Tunnel shafts ✓ Identification Marks on Do. ✓  
Material of Screw shafts ✓ Identification Marks on Do. ✓  
Material of Steam Pipes brought iron Test pressure 540 lbs per sq. in. Date of Test 20.9.24.  
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 carrying and burning oil fuel been complied with ✓  
Is this machinery duplicate of a previous case yes. If so, state name of vessel S/S "Dunston".

General Remarks (State quality of workmanship, opinions as to class, &c.)

The workmanship & materials are good.  
The machinery has been fitted on board under Special Survey, tried under steam in full working condition, & found satisfactory.

The machinery of this vessel is eligible in my opinion to have the notation of + L.M.C. 10.24, in the Society's Register Book.

NOTE:- A report on the Electric Lighting arrangements will be forwarded in due course.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 10.24. CL

J.W.D. [Signature]  
27/10/24

The amount of Entry Fee ... £ : : When applied for,  
Special ... £ 10 : 14 : 25-10-1924  
Donkey Boiler Fee ... £ 995 : :  
Travelling Expenses (if any) £ : : When received, 27-10-1924

Committee's Minute JUES 28 OCT 1924  
Assigned + L.M.C. 10.24  
C.L.

A.L. Filditch  
Engineer Surveyor to Lloyd's Register of Shipping.



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