

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

No. 77720

FRI. APR. 4 1924

Date of writing Report 19 When handed in at Local Office 21/3 / 19 24 Port of NEWCASTLE-ON-TYNE
 No. in Survey held at Newcastle Date, First Survey 11 Sept. 1923 Last Survey 20 March 1924
 Reg. Book. on the SAN SALVADOR (Number of Visits 54)
 Built at Newcastle By whom built Li. M. Armstrong Whitworth & Co. Ltd. Yard No. 992 Tons { Gross 5650
 Engines made at Newcastle By whom made Wallsend Slipway & Eng. Co. Ltd. Engine No. 840 Net
 Boilers made at Newcastle By whom made Wallsend Slipway & Eng. Co. Ltd. Boiler No. 840 When built 1924
 Registered Horse Power Owners Eagle Oil Transport Co. Ltd. when made 1924
 Nom. Horse Power as per Rule 538 Port belonging to London
 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Inverted Triple Expansion
 Dia. of Cylinders 27" 45" 75" Length of Stroke 48" Revs. per minute No. of Cylinders 3 No. of Cranks 3
 Dia. of Crank shaft journals as per rule 14.06" as fitted 14.75" Dia. of Crank pin 14 7/8" Crank webs Mid. length breadth 23 1/4" Mid. length thickness 9 7/8" Thickness parallel to axis shrunk Thickness around eye-hole
 Diameter of Thrust shaft under collars as per rule 14.06" as fitted 14.75" Diameter of Tunnel shaft as per rule 13.39" as fitted none Diameter of Screw shaft as per rule 15.19" as fitted 15 3/4" Is the Screw shaft fitted with a continuous liner the whole length of the stern tube Yes 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 joints burned 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 appliance fitted at the after end of the shaft to permit of it being efficiently lubricated No
 Length of Stern Bush 5' 7" Diameter of Propeller 18' 9" square feet
 Pitch of Propeller 17' 9" No. of Blades 4 State whether Moveable Yes Total Surface 110 4
 No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 4 1/2" Stroke 26" Can one be overhauled while the other is at work Yes
 No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 4 1/2" Stroke 26" Can one be overhauled while the other is at work Yes
 Total number and size of power driven Feed and Bilge Auxiliary Pumps 2 - 8" x 10 1/2" x 21" Main Feed
 No. and size of Pumps connected to the Main Bilge Line 1 - aux Feed & General Service 8" x 6" x 8"
 No. and size of Ballast Pumps 1 - 10" x 12" x 12" 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 2 - 3 1/2" Engine Room 2 - 3 1/2" Boiler Room and in Holds, &c. none

No. and size of Main Water Circulating Pump Bilge Suctions One - 14" No. and size of Donkey Pump Direct Suctions
 to the Engine Room Bilges One 3 1/2" 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 connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
 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 Both
 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 none How are they protected
 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 none Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record)

Forced Draft fitted Yes No. and Description of Boilers 3 Single-End Cyl. Mult. Total Heating Surface of Boilers 7896 sq. ft.
 Working Pressure 180 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded? Yes

PLANS. Are approved plans forwarded herewith for Shafting (If not state date of approval)

Main Boilers

Auxiliary Boilers

Donkey Boilers

General Pumping Arrangements

Oil fuel Burning Piping Arrangements

SPARE GEAR.

State the articles supplied:—One Propeller shaft—2 spare blades—One pair Bottom End Bearings—Two Top End, Two bottom end and Two main Bearing Bolts—One set Coupling Bolts—12 Inrub ring studs—Slide Valve spindle—Eccentric shaft—50 Condenser Joints—100 Ferrules—Air Pump Rod—One Spring for each H.P. and L.P. pistons—Spring for H.P. piston valve set of air pump valves—set of valves and seats for one hotwell pump and one bilge pump—Escape Valve Spring for H.P. and L.P. cylinders—20 plain and one stay tubes for Boilers—one dozen flange flanges + 4 dozen washers—One valve lid for each main & auxiliary feed check valves—2 main safety valve springs—set of valves and seats for main feed pump also set of bucket pump:—One set of valves and seats for each auxiliary feed, general service and ballast pump
 A quantity of assorted bolts, nuts and washers.

The foregoing is a correct description

Manufacturer.



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FOR THE WALLSEND SLIPWAY & ENGINEERING CO., LIMITED.

Lloyd's Register Foundation

W411-0224

1922
 During progress of work in shops - -
 26 May 11 June 11 July 25 Aug 3 10 21 Oct 17 Nov 19
 1923
 1. 28 Oct 2 5 16 17 20 24 26 Nov 2 20 Dec 6 15 Jan 3 10 19 25 Feb 2 7 8 13 14 27 Mar 1 2 7 9 13 14 15 16 22 Apr 6 9 12
 1924
 26 May 11 June 11 July 25 Aug 3 10 21 Oct 17 Nov 19 Jan 14 22 31 Feb 5 7 8 13 18 25 Mar 20
 Dates of Survey while building
 During erection on board vessel - - -
 Total No. of visits 54.

Dates of Examination of principal parts - Cylinders	2. 10. 22	Slides	12. 4. 23
Covers	27. 2. 23	Pistons	8. 2. 23
Connecting rods	1. 3. 23	Crank shaft	25. 1. 23
Tunnel shafts		Screw shafts	10. 1. 23 25. 1. 23
Stern tube	9. 4. 23	Engine and boiler seatings	17. 10. 23
Completion of pumping arrangements	29. 2. 24	Boilers fixed	8. 2. 24
Completion of fitting sea connections	17. 10. 23	Stern tube	17. 10. 23
Main boiler safety valves adjusted	29. 2. 24	Thrust shaft	25. 1. 23
Material of Crank shaft	S. M. Steel	Propeller	12. 4. 23
Material of Thrust shaft	S. M. Steel	Engines holding down bolts	8. 2. 24
Material of Tunnel shafts	✓	Engines tried under steam	29. 2. 24
Material of Screw shafts	S. M. Steel	Screw shaft and propeller	17. 10. 23
Material of Steam Pipes	A. W. Iron	Thickness of adjusting washers	2nd Boiler P.S. 3/4" 1st Boiler P.S. 7/16" 2nd Boiler P.S. 3/4" 1st Boiler P.S. 3/4"
Is an installation fitted for burning oil fuel	Yes	Identification Mark on Do.	6301-6304. J.P. R.L.A.
Have the requirements of the Rules for carrying and burning oil fuel been complied with	Yes	Identification Mark on Do.	6306 J.P. R.L.A.
Is this machinery duplicate of a previous case	Yes	Identification Marks on Do.	✓
		Identification Marks on Do.	6319 J.P. R.L.A. 3025B 1088 P.M.C.G., R.L.A.
		Test pressure	540 lbs/sq. in.
		Date of Test	22. 1. 24 + 8. 2. 24
		Is the flash point of the oil to be used over 150°F.	No.
		If so, state name of vessel	"San Quirino"

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

The machinery of this vessel has been built under special survey. The materials and the workmanship are sound and good. The main steam engine machinery has been tried out under steam and the Boilers' safety valves adjusted to the working pressure.

The oil fuel installation has been fitted in accordance with the Rules and has been successfully tried out. The machinery of this vessel is eligible, in my opinion, to have notation $\frac{1}{2}$ L.M.C. 3. 24 C.L. fitted for oil fuel $\frac{1}{2}$ F.P. above 150°F.

It is submitted that
 this vessel is eligible for
 THE RECORD. + LMC 3. 24. FD. CL.

Note: Fitted for oil fuel 3. 24. F.P. above 150°F.

The amount of Entry Fee ... £ 6: - -
 Special ... £ 101: 18 - -
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :

Committee's Minute TUE. 8 APR. 1924
 Assigned + L.M.C. 3. 24
 + D. C.L.

Fitted for oil fuel 3. 24
 + P. above 150°F.