

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

Std. No. 31972  
Hwe No. 94262

Date of writing Report

19

When handed in at Local Office

3 Oct 36 Port of

Received at London Office

-7 OCT 1936

DEC 1936

No. in Survey held at Newcastle on Tyne  
Reg. Book. on the Steel S/S LLANASHEDate, First Survey 10 MarchLast Survey 1 Oct

1936

(Number of Visits 30)Built at Sunderland By whom built Bartram & Sons, Ld.Yard No. 273Tons { Gross 4836  
Net 2911  
When built 1936Engines made at Newcastle  
LP Turbine " NewcastleBy whom made White's Marine Engg Co, Ltd Engine No. 6.C.When made 1936Boilers made at SunderlandBy whom made R.W. Hawthorn, Leslie & Co Turbine No. 9851When made 1936

Registered Horse Power

Owners Clanona Radcliffe S.S. Co. LtdPort belonging to CardiffNom. Horse Power as per Rule 348Is Refrigerating Machinery fitted for cargo purposes ☒Is Electric Light fitted ☒

Trade for which Vessel is intended

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

4 Cylinder Compound Recip Eng with S.R. Gearing,Engine Revs. p.m. 305Combined with L.P. Turbine with D.R. GearingProp. Revs. per minute 61Dia. of Cylinders 22 10 1/16 + 22 1/20Length of Stroke 13"No. of Cylinders 4No. of Cranks 4Crank shaft, dia. of journals 7 3/4"Crank pin dia. 7 3/4"Crank webs 9 3/4"Mid. length breadth 4 7/8"Thickness parallel to axis ☒Thickness around eye-hole ☒Intermediate Shafts, diameter 11.92"as fitted ☒Thrust shaft, diameter at collars 11.8"as fitted ☒Tube Shafts, diameter as per Ruleas fitted ☒Screw Shaft, diameter as per Ruleas fitted ☒

Is the { tube { shaft fitted with a continuous liner {

as fitted ☒Bronze Liners, thickness in way of bushes as per Ruleas fitted ☒Thickness between bushes as per Ruleas 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 as per RuleLength of Bearing in Stern Bush next to and supporting propeller ☒Propeller, dia. 18 1/2"Pitch 19 1/2"No. of Blades 4Material Brasswhether Moveable NoTotal Developed Surface 106 sq. feetFeed Pumps worked from the Main Engines, No. NoneDiameter ☒Stroke ☒Can one be overhauled while the other is at work ☒Bilge Pumps worked from the Main Engines, No. NoneDiameter ☒Stroke ☒Can one be overhauled while the other is at work ☒Feed Pumps { No. and size Two, 6" x 8 1/2" x 18"How driven Steam

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 Two 6" x 5 1/2" x 15"

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, &amp;c.—(Letter for record)

Total Heating Surface of Boilers

Is Forced Draft fitted ☒

No. and Description of Boilers

Working Pressure 230 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 No (26/2/36)Main Boilers ☒Auxiliary Boilers ☒Donkey Boilers ☒

(If not state date of approval)

Superheaters ☒General Pumping Arrangements ☒Oil fuel Burning Piping Arrangements ☒

## SPARE GEAR.

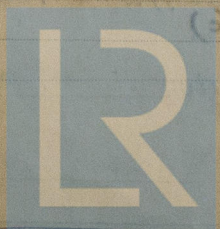
Has the spare gear required by the Rules been supplied Yes, viz.

State the principal additional spare gear supplied

2 top end bolts & nuts,2 bottom end bolts & nuts,2 main bearing bolts & nuts9 piston junk ring studs & nuts12 condenser tubes, 60 condenser ferrules,1 set of valves for water ends of auxy. pumps,1 HP & 1 LP Escape Valve Springs,Assorted bolts, studs & nuts, and iron of various sizes.1 C.I. PropellerThe foregoing is a correct description,  
FOR WHITE'S MARINE ENGINEERING COMPANY LTD.

MANAGER.

Manufacturer.



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Lloyd's Register  
Foundation

W1147-0146



1936  
 During progress of work in shops - - Mar. 10. Apr. 6. 9. 14. 28. 29. May 8. 13. 19. 26. June 5. 10. 19. 29. July 6. 10. 13. 22  
 Aug. 7. 18. 25. 28. Sep. 1. 2. 7. 10. 17. 25. Oct. 1.  
 Dates of Survey while building { During erection on board vessel - - -  
 Total No. of visits 30.

Dates of Examination of principal parts—Cylinders 9<sup>th</sup> 30<sup>th</sup> 4/36, 19/5/36 Slides 22/7/36 Covers 9<sup>th</sup> 30<sup>th</sup> 4/36 + 19/5/36.  
 Pistons 22/7/36. Piston Rods 22/7/36. Connecting rods 22/7/36.  
 Crank shaft 28/8/36 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 S.M. Steel Identification Mark 2322+2323 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 No If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. This Reciprocating Engine has been constructed under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. The Engine has been sent to Sunderland to be installed along with its L.P. Turbine in Messrs Bartram's Ship No 273.

Total S.H.P. Basis = Recip Engine 950 IHP x .90 = 855  
 L.P. Turbine 675 (given by Hawthorn Leslie Co)  
 Total = 1530 S.H.P.  
 Which, with 2 main Bls of 3570 sq ft (F.D.) @ 230 IHP - gives 348 N.H.P.  
 + auxy Bls of 1267 " (Nat. Draft.)  
 Total fee £77-4-0

#### Allocation of Fees:-

Newcastle a/c { 1<sup>st</sup> Entry, machy, £5-0-0  
 Recip. Eng. 10-5-0  
 L.P. Turbine (3<sup>rd</sup>) 11-12-0  
 London a/c SR/DR Gearing 9-0-0 Exp of - 19/4  
 Sunderland a/c 2 main & 1 auxy Bls. 30-18-0  
 Installing machy 15-9-0.

The amount of Entry Fee ... £ 5 : 0 :  
 Special LMC ... £ 77 : 4 :  
 Donkey Boiler Fee ... £  
 Travelling Expenses (if any) £ - : 12/4  
 (Lond. a/c)  
 When applied for, 6 OCT 1936  
 When received, 1.12.36  
 A. Watt  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FHL 18 DEC 1936

Assigned See minute on F.E. M.



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NEWCASTLE-ON-TYNE.

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