

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

29 MAY 1936

Date of writing Report 22/5/1936 When handed in at Local Office 28/5/1936 Port of NEWCASTLE-ON-TYNE *Sld. 8.7.36*  
 No. in Survey held at Newcastle on Tyne (Hebburn) Date, First Survey 5/11/35 Last Survey 28/5/1936  
 Reg. Book. on the Steel Screw Steamer ST. ATHAN "ST. HELENA" (Number of Visits) (See Letter) Tons Gross 4313  
 Built at Sunderland By whom built Messrs J. L. Thompson & Co. Ltd Yard No. 573 When built 1936  
 Recip. Engines made at Newcastle on Tyne By whom made White's Marine Eng. Co. Ltd Engine No. 4.C. When made 1936  
 Boilers made at Sunderland By whom made Messrs. Clark & Co. Ltd Boiler No. When made 1936  
 Registered Horse Power Owners St. Quentin Shipping Co. Ltd, Cardiff Port belonging to  
 Nom. Horse Power as per Rule 304 (combined with L.P. TURBINE) Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted  
 Trade for which Vessel is intended

**4 CYL. COMPOUND RECIP. ENGS. WITH S.R. GEARING. COMBINED R.P.M. 310. WITH L.P. TURB. WITH D.R. GEARING TO ONE SCREW SHAFT @ Revs. per minute 62.**  
 Dia. of Cylinders 2 of 10 1/4" + 2 of 19" Length of Stroke 13" No. of Cylinders 4 No. of Cranks 4  
 Crank shaft, dia. of journals as per Rule 5 1/2" Crank pin dia. 7 3/4" Crank webs Mid. length breadth 9 3/4" Thickness parallel to axis ✓  
 as fitted 7 3/4" Mid. length thickness 4 1/8" Thickness around eye-hole ✓  
 Intermediate Shafts, diameter as per Rule Thrust shaft, diameter at collars as per Rule  
 as fitted ✓ as fitted ✓  
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule Is the ✓ shaft fitted with a continuous liner ✓  
 as fitted ✓ as fitted ✓  
 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the  
 as fitted ✓ as fitted ✓ 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 Movable ✓ Total Developed Surface ✓ sq. feet  
 Feed Pumps worked from the Main Engines, No. None Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓  
 Bilge Pumps worked from the Main Engines, No. None Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓  
 Feed Pumps { No. and size 2 of 6" x 8 1/2" x 13" Pumps connected to the { No. and size ✓  
 How driven Steam Main Bilge Line 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 Blind 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 3730 sq. ft.  
 Is Forced Draft fitted Yes. No. and Description of Boilers Two Cylindrical "SCOTCH" Working Pressure 230 lb. sq. in.  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED?  
 IS A DONKEY BOILER FITTED? If so, is a report now forwarded?

**PLANS.** Are approved plans forwarded herewith for Shafting 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 beam Bearing bolts & nuts  
3 Piston Junk Ring Studs & Nuts, 3 Condenser Tubes, 20 Ferrules &  
20 packings for Main Condenser, 1 Set of Valves for Water Ends of Auxy. Pumps,  
1 HP & 1 LP. Escape Valve Springs, 20 Assorted Studs & nuts, 50 Assorted Bolt & nuts  
& Iron of various sizes

The foregoing is a correct description,  
 For White's Marine Engineering Co. Ltd.

Manufacturer.



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1935  
 Nov. 5-28. Dec. 20-31. Jan. 9-13. 17-22. 23-29. Feb. 6-12. 28. Mar. 4-9. 10-16. 24. Apr. 6-9. 28-29. 30.  
 May 19. 20. 26. 28.  
 1936  
 During progress of work in shops - -  
 During erection on board vessel - - -  
 Total No. of visits 27.

Dates of Examination of principal parts—Cylinders 9+13+16/1/36 Slides 10/3/36 Covers 9+13+16/1/36  
 Pistons 10/3/36 Piston Rods 10/3/36 Connecting rods 10/3/36  
 Crank shaft 10/3/36 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 in Shop 9/4/36.  
 Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓  
 Crank shaft material S.M. Steel Identification Mark CHLP.11-2-36 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 plan (of Crank shaft). The materials and workmanship are good. The Engine has been sent to Sunderland to be installed along with its LP Turbine and SR/OR Gearing on Messrs J L Thompson's Ship No 573. (S/S ST ATHAN).  
 The installation is eligible when satisfactorily installed to have the record + LMC. with date when completed.  
 The Main Condenser was constructed at the Hottum works under Special Survey and satisfactorily tested under 20 lbs/sq hydraulic pressure.

Allocation of Fees as follows:  
 Newcastle a/c { P.E. Machy £5-0-0  
 Recip Eng. £8-14-0  
 L.P. Turbine 10-11-0  
 London a/c { Gearing 9-0-0 Expenses £1-5-0  
 Sunderland a/c { 2 main Boilers 28-5-0  
 Installing machinery 14-2-0  
 £70-12-0

The amount of Entry Fee ... £ 5 : 0 : 0 When applied for, 28 MAY 1936  
 Special ... £ 70 : 12 : 0  
 Donkey Boiler Fee ... £ : : : When received, 31 JUL 1936  
 Travelling Expenses (if any) £ 1 : 5 : 0 1.7 8/17

A. A. Att.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 24 JUL 1936

Assigned

See J.E. Machy. Rph.



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