

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 1932 When handed in at Local Office 4 NOV 1932 Port of Sunderland.  
 No. in Survey held at Sunderland. Date, First Survey 2nd March Last Survey 31 Oct 1932  
 Reg. Book. on the "JOHN HOPKINSON."  
 Built at Sunderland By whom built J. P. Austin & Son, Ltd. Yard No. 326 Tons { Gross 1314  
 Engines made at Sunderland By whom made J. Dickinson & Son, Ltd. Engine No. 912 when made 1932  
 Boilers made at Sunderland By whom made J. Dickinson & Son, Ltd. Boiler No. 912 when made 1932  
 Registered Horse Power Owners London Power Co. Ltd. Port belonging to London.  
 Nom. Horse Power as per Rule 142.47 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.  
 Trade for which Vessel is intended Collier.

ENGINES, &c.—Description of Engines Triple Expansion Steam Revs. per minute 75  
 Dia. of Cylinders 17" x 28" x 46" Length of Stroke 33" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 9.309 Crank pin dia. 9 1/2" Crank webs Mid. length breadth 18 1/4" Thickness parallel to axis 5 7/8"  
 as fitted 9.5" Mid. length thickness 5 7/8" shrunk Thickness around eye-hole 4 3/16"  
 Intermediate Shafts, diameter as per Rule — Thrust shaft, diameter at collars as per Rule 9.309  
 as fitted — as fitted 9.5"  
 Tube Shafts, diameter as per Rule — Screw Shaft, diameter as per Rule 9.949 Is the { tube } shaft fitted with a continuous liner { Yes.  
 as fitted — as fitted 10.25" { screw }  
 Bronze Liners, thickness in way of bushes as per Rule 0.6 Thickness between bushes as per Rule 0.45 Is the after end of the liner made watertight in the  
 as fitted 9/16" as fitted 0.59" 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 —  
 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 No. Length of Bearing in Stern Bush next to and supporting propeller 3' 6"  
 Propeller, dia. 13' 0" Pitch 13' 6" No. of Blades 4 Material C.I. whether Movable No. Total Developed Surface 53 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 16 1/2" Can one be overhauled while the other is at work Yes.  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 3 1/2" Stroke 16 1/2" Can one be overhauled while the other is at work Yes.  
 Feed Pumps { No. and size 1- 5 1/4" x 3 1/2" x 5" Pumps connected to the { No. and size 1- 9" x 11" x 10" Ballast Pump.  
 { How driven Steam Main Bilge Line { How driven Steam  
 Ballast Pumps, No. and size 1- 9" x 11" x 10" Lubricating Oil Pumps, including Spare Pump, No. and size —  
 Are two independent means arranged for circulating water through the Oil Cooler —  
 Bilge Pumps;—In Engine and Boiler Room 1- 3" in Engine Room 1- 2 1/2" off Well 1- 3 1/2" direct to Ballast Pump.  
 In Holds, &c. 2 at 2 1/2" In Hold. 2 at 3" off Hold.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 at 5" Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size 1 at 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 Sea Connections fitted direct on the skin of the ship Yes. Are they fitted with Valves or Cocks Both 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 Above.  
 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 Hold bilge & tank pipes. How are they protected Wood casing.  
 What pipes pass through the deep tanks Bilge suction pipes to 1st Hold. P.S. 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 None. Is it fitted with a watertight door — worked from —

MAIN BOILERS, &c.—(Letter for record (S) ) Total Heating Surface of Boilers 2240 sq. ft.  
 Is Forced Draft fitted No. No. and Description of Boilers 1. S.B. Working Pressure 200 lbs.  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes.  
 IS A DONKEY BOILER FITTED? Yes. If so, is a report now forwarded? Yes. Returned.  
 PLANS. Are approved plans forwarded herewith for Shafting — Main Boilers Yes. Auxiliary Boilers — Donkey Boilers Yes.  
 (If not state date of approval)  
 Superheaters — General Pumping Arrangements With Ship Report. Oil fuel Burning Piping Arrangements —

SPARE GEAR. State the articles supplied:— 1. C.I. Propeller, — 2 each top & bottom end bolts & nuts —  
 2 main bearing bolts & nuts — 1 set coupling bolts & nuts — 2 each feed & Bilge pump valves  
 1 set air pump valves — 12 Plain boiler tubes — 6 Condenser tubes — 1 set feed donkey  
 valves — 1 set ballast donkey valves — 1/2 cwt. assorted plate — 1/2 cwt. assorted bar —  
 50 assorted bolts & nuts — 6 junk ship bolts & nuts.

The foregoing is a correct description,

John Dickinson &amp; Sons, Limited.

W. H. Robertson.

Manufacturer.

Director.



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Lloyd's Register  
Foundation

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1932. *Apr.* 2. 7. 8. 31. *May* 6. 10. 13. 25. 26. 30. *June* 2. 3. 6. 7. 8. 14. 15. 16. 21.  
*July* 5. 8. 12. 16. 19. 22. 25. 27. *Aug.* 4. 5. 11. 12. 23. 25. 29. 31. *Sep.* 2. 5. 7. 9. 13. 21. 26.  
*Oct.* 6. 11. 12. 14. 17. 19. 24. 25. 26. 27. 28. 31.  
 During progress of work in shops - -  
 During erection on board vessel - - -  
 Dates of Survey while building  
 Total No. of visits **54**

Dates of Examination of principal parts—Cylinders *HP* 16-7-32 *MP* 8-7-32 *LP* 12-7-32 Slides 12-7-32 Covers *HP* 12-7-32 *LP* 22-7-32  
 Pistons *HP* 12-7-32 *LP* 22-7-32 Piston Rods 25-5-32 Connecting rods 12-7-32  
 Crank shaft 12-7-32 Thrust shaft 12-7-32 Intermediate shafts -  
 Tube shaft ✓ Screw shaft 26-9-32 Propeller 6-10-32  
 Stern tube 12-10-32 Engine and boiler seatings 19-7-32 Engines holding down bolts 24-10-32  
 Completion of fitting sea connections 19-9-32  
 Completion of pumping arrangements 26-10-32 Boilers fixed 24-10-32 Engines tried under steam 26-10-32  
 Main boiler safety valves adjusted 26-10-32 Thickness of adjusting washers *Stand.*  $\frac{3}{8}$ " *Pnt.*  $\frac{3}{8}$ "  
 Crank shaft material *Stel.* Identification Mark 329. *T.D.S.* Thrust shaft material *Stel.* Identification Mark 399 *T.D.S.*  
 Intermediate shafts, material - Identification Marks - Tube shaft, material - Identification Mark -  
 Screw shaft, material *Stel.* Identification Mark 458. *T.D.S.* Steam Pipes, material *Stel.* Test pressure 600 *lb.* Date of Test 19-10-32  
 Is an installation fitted for burning oil fuel *No.* 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 "TYNDALL"

General Remarks (State quality of workmanship, opinions as to class, &c. *The Engines and boiler of this vessel have been built under Special Survey. The materials & workmanship are good. On completion the machinery was fitted in the vessel and tried under steam with satisfactory results. The machinery of this vessel, is in a good and efficient condition, and reliable, in my opinion, to have the notations L.M.C. 10-32, C.L.*

The amount of Entry Fee ... £ **3 : 0 :** When applied for,  
 Special ... £ **35 : 15 :** **4 NOV. 1932**  
 Donkey Boiler Fee ... £ : : When received,  
 Travelling Expenses (if any) £ : : **7. 11. 32**

Committee's Minute  
 Assigned **+ R. M.C. 10-32**  
 CERTIFICATE WRITTEN.

*W. West.*  
 Engineer Surveyor to Lloyd's Register of Shipping.