

## REPORT ON OIL ENGINE MACHINERY.

No. 94656

Received at London Office

2 FEB 1937

Date of writing Report

19

When handed in at Local Office

22.1.37 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at  
Reg. Book.

Newcastle on Tyne

Date, First Survey 13 March 1936 Last Survey 19/4/36

Number of Visits 77

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

PORT JACKSON.

Tons Gross 9687  
Net 5826

Built at Newcastle (Wallsend) By whom built Swan Hunter & Wigham Richardson Yard No. 1515 When built 1937.  
Engines made at Glasgow By whom made Barclay Curle & Co Ltd Engine No. 108 When made "  
Donkey Boilers made at Annan By whom made Cochran & Co Boiler No. When made "  
Brake Horse Power 11,500. Owners Commonwealth & Dominion Line. Port belonging to LONDON  
Nom. Horse Power as per Rule 2025. As Refrigerating Machinery fitted for cargo purposes Yes. Is Electric Light fitted Yes.  
Trade for which vessel is intended UK to New Zealand & Australian Ports. 78 9/16 - 88 9/16

IL. ENGINES, &c.—Type of Engines Barclay-Curle - Dorsford opposed piston 2 or 4 stroke cycle 2. Single or double acting Single  
Maximum pressure in cylinders 568 lb. Diameter of cylinders 725 1/4" Length of stroke 2250 No. of cylinders 8. No. of cranks 8.  
Mean indicated pressure 87 lb. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge See GLASGOW RPT. NO 57721  
Revolutions per minute max 120 Flywheel dia. — Weight — Means of ignition Compression Kind of fuel used Heavy oil.  
Crank Shaft, dia. of journals as per Rule 15.07" Crank pin dia. — Crank Webs Mid. length breadth shrunk Thickness parallel to axis  
Flywheel Shaft, diameter as per Rule 15.625" Intermediate Shafts, diameter as per Rule 15.83" Thrust Shaft, diameter at collars as per Rule  
Tube Shaft, diameter as per Rule 17 1/2" Is the shaft fitted with a continuous liner yes.  
Bronze Liners, thickness in way of bushes as per Rule 25 1/32" Thickness between bushes as per rule 19/32" 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 junctions made by fusion through the whole thickness of the liner C.L. in one length  
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 tight fit.  
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 If so, state type mang. whether Moveable Yes Total Developed Surface 88 sq. feet  
Propeller, dia. 16'-3" Pitch 16'-3" No. of blades 4 Material Bronze Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with  
Method of reversing Engines Comp. Air Direct Is a governor or other arrangement fitted to prevent racing of the engine when detached yes Means of lubrication  
forced Thickness of cylinder liners Are the exhaust pipes and silencers water cooled or lagged with DISTILLED  
non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine WATER USED.  
Cooling Water Pumps, No. Two Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
What special arrangements are made for dealing with cooling water if discharged into bilges

Bilge Pumps worked from the Main Engines, No. None Diameter Stroke Can one be overhauled while the other is at work  
Pumps connected to the Main Bilge Line No. and Size Two: One Bilge Pump 150 tons/hr & one Ballast Pump 12" 650 tons/hr  
Ballast Pumps, No. and size One 12" Elec driven 650 tons/hr Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Two {1-9" 11" two throw; 1-100 tons/hr screw displacement  
Are two independent means arranged for circulating water through the Oil Cooler Yes. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
Pumps, No. and size:—In Machinery Spaces four of 3" In Pump Room  
In Holds, &c. No 1 Hold, 2 of 3 1/2"; No 2 Hold, 2 of 3 1/2"; No 3 Hold, 2 of 3 1/2"; No 4 Hold, 4 of 2 1/2"; No 5 Hold, 3 of 2 1/2"; Tunnel well, 1 of 3"  
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two (1 port & 1 starboard) of 6"  
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes. Are the Bilge Suctions in the Machinery Spaces  
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  
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes Are the Overboard Discharges above or below the deep water line 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 pass through the bunkers none How are they protected  
What pipes pass through the deep tanks none 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 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 Yes Is it fitted with a watertight door Yes worked from 2nd deck.  
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No. None on Main Engines. No. of stages Diameters Stroke Driven by  
Auxiliary Air Compressors, No. Two (Weirs) No. of stages 3. Diameters Stroke Driven by Elec. Motors.  
Small Auxiliary Air Compressors, No. One (Weir) No. of stages 2. Diameters Stroke Driven by Steam Engine.  
Scavenging Air Pumps, No. 2. (See Glasgow Report No 57721.) Stroke THREE 375 KW. ALLEN'S ENGS NO K1/56979  
Auxiliary Engines crank shafts, diameter as per Rule See London Rpt 103481. Position 2 on Port & 1 on Starboard in Eng. Room.  
AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule. Yes.

Can the internal surfaces of the receivers be examined and cleaned Yes. Is a drain fitted at the lowest part of each receiver Yes.  
High Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness  
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules  
Starting Air Receivers, No. THREE. Total cubic capacity 810 cub. ft Internal diameter 5'-0" thickness 1 9/32"  
Seamless, lap welded or riveted longitudinal joint Material M. Steel Range of tensile strength 30 to 34 tons. Working pressure by Rules 602 lb/sq. in.  
Actual 600 lb/sq. in.



IS A DONKEY BOILER FITTED? *yes. Two Boilers.* *If so, is a report now forwarded? yes. Glasgow Rpts*  
*Are the donkey boiler intended to be used for domestic purposes only No. One Waste Exp Gas Boiler in E.P. Casings No. 57077.*  
*one oil fired Vert. Boiler on P. side in Eng. Room. + 57078.*

PLANS. Are approved plans forwarded herewith for Shafting *2/4/36* Receivers *17/3/36* Separate Tanks *15/6/36*  
(If not, state date of approval) *Pumping Arrangements in Machinery Space 20/5/36*  
Donkey Boilers. General Pumping Arrangements. *Oil Fuel Burning Arrangements + 2/6/36.*

### SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes.*

State the principal additional spare gear supplied

*4 Propeller Blades (2 R. & 2 L.),  
7 Studs & nuts for Blades  
1 propeller shaft complete.*

FOR THE FOREGOING IS A CORRECT DESCRIPTION,  
*G. J. Tweedy*  
DIRECTOR, Manufacturer.

Dates of Survey while building  
During progress of work in shops -- *1936*  
*Mar. 13. Apr. 24. May 12. 15. 22. 29. June 2. 3. 9. 11. 12. 15. 18. July 2. 10. 13. 14. 17. 21. 24. 30. Aug 6. 14. 19. 23.*  
During erection on board vessel -- *31. Sep. 1. 2. 3. 4. 14. 25. Oct. 6. 12. 15. 16. 19. 20. 23. 26. 27. 28. 30. Nov. 2. 9. 11. 12. 16. 19. 20. 23. 26. 27. Dec. 2. 3. 4. 8. 9. 10. 11. 14. 16. 17. 18. 21. 24. 28. 31. 1937*  
Total No. of visits *77.*

Dates of Examination of principal parts—Cylinders *See Glasgow Rpt 57721.* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*  
Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *23/9/36 To 28/10/36* Tube shaft *✓*  
Screw shaft *28/8/36* Propeller *19/11/36* Stern tube *16" + 23" Oct 1936* Engine seatings *11/12/36* Engines holding down bolts *11/12/36*  
Completion of fitting sea connections *19/11/36* Completion of pumping arrangements *12/1/37.* Engines tried under working conditions *mooring trial 11/1/37 at sea 19/1/37 & 20/1/37*  
Crank shaft, Material *✓* Identification Mark *✓* Flywheel shaft, Material *✓* Identification Mark *✓*  
Thrust shaft, Material *✓* Identification Mark *✓* Intermediate shafts, Material *M. Steel* Identification Marks *See list below*  
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *M. Steel* Identification Mark *✓*  
Is the flash point of the oil to be used over 150° F. *Yes*  
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yes*  
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *No* 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.)

*The Machinery has been installed under special survey in accordance with the Rules, and the materials and workmanship are good.*

*The machinery has been satisfactorily tested under full working conditions and is, in my opinion for the records Oil Eng. + L.M.C. 1.37. T.S. 2.D.B. 100*

The amount of Entry Fee .. £ *See Colas Rpt* When applied for,

Special *1/5 install* £ *30 : 2/6* 27 JAN 1937

3 Starting Air Receiver Donkey Boiler Fee ... £ *9 : 9-0* When received, *SD*

Travelling Expenses (if any) £ : *20.2 37 22/2*

Committee's Minute *FRI 12 FEB 1937*

Assigned *+ L.M.C. 1.37*  
*2 D.B. - 100 lbs*  
*oil eng. Ch*

*A Watt.*

Engineer Surveyor to Lloyd's Register of Shipping.



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