

# REPORT ON OIL ENGINE MACHINERY.

No. 55340

Received at London Office 30 JAN 5

Date of writing Report 26-1-1935 When handed in at Local Office 26:1:35 Port of Glasgow

No. in Survey held at 6lydebant Date, First Survey 1.3.34 Last Survey 25-1-1935

Reg. Book. on the Single Twin Triple Quadruple Screw vessel "Fort Wyndham" Tons Gross 8580 Net 5033

Built at 6lydebant By whom built John Brown & Co. L<sup>td</sup> Yard No. 541 When built 1935

Engines made at 6lydebant By whom made John Brown & Co. L<sup>td</sup> Engine No. 541 When made 1935

Donkey Boilers made at Annan By whom made Cochran & Co. Annan Boiler No. 12846 When made 1935

Brake Horse Power 9400 Owners Babcock & Wilcox Boiler No. 69/322 When made 1935

Nom. Horse Power as per Rule 1882 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Trade for which vessel is intended New Zealand. 27.7 88.7

II ENGINES, &c. Type of Engines Dorsford opposed pistons 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 568 lbs. Diameter of cylinders 700 m/m Length of stroke 1300 No. of cylinders 4 No. of cranks 4-3 throw

Mean Indicated Pressure 90 lbs. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 7'-3 3/4" Is there a bearing between each crank Yes

Revolutions per minute 110 Flywheel dia. 8'-0" Weight 3 1/2 tons Means of ignition Comp. Kind of fuel used Heavy oil

Crank Shaft, dia. of journals as per Rule 500 m/m Crank pin dia. 540 m/m Crank Webs Mid. length breadth 770 m/m Thickness parallel to axis 320 m/m

Flywheel Shaft, diameter as per Rule 500 m/m Intermediate Shafts, diameter as per Rule 15" Thrust Shaft, diameter at collars as per Rule 500 m/m

Tube Shaft, diameter as per Rule None Screw Shaft, diameter as per Rule 17" Is the screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 27/32" Thickness between bushes as per Rule 27/32" 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 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 Right 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

Propeller, dia. 16'-6" Pitch 17'-0" No. of blades 4 Material C.I. Boss whether Moveable Yes Total Developed Surface 90 sq. feet

Method of reversing Engines Sliding cam Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication forced

Thickness of cylinder liners 25 m/m Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Yes

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine not overboard

Cooling Water Pumps, No. 2 F.W. 1-S.W. Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Large 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 1-150 tons, 1-350 tons, 1-75 tons. (all per hour) How driven Electric

Is the cooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

Ballast Pumps, No. and size 1-350 tons per hour Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2-9"x11" 100 tons per hour

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 Tunnel 1-3, 2-2 1/2, 2-3, E.R. 4-3, oily bilge 1-2, 1-3, Duct Kiel 1-3, In Pump Room None

Holds, &c. N°1 2-3 1/2, N°2 2-3 1/2, N°3 2-3 1/2, N°4 4-2 1/2, N°5 2-2 1/2, N°6 2-2 1/2 See Log 7-2-35

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2-6" Are the Bilge Suctions in the Machinery Spaces

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are they fitted with Valves or Cocks Valves

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 E.R. Copr. platform

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Steel

Main Air Compressors, No. 2 No. of stages 3 Diameters 15 1/2, 12 1/2, 3 3/4 Stroke 8" Driven by Indol

Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 6" - 2 1/2 Stroke 4 1/2" Driven by Steam

Small Auxiliary Air Compressors, No. None No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. 1-on each engine Diameter 1620 m/m Stroke 1300 m/m Driven by Main Engine

Auxiliary Engines crank shafts, diameter as per Rule as fitted See Log Report N° 100714



**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. *3* Cubic capacity of each *250* Internal diameter *5'-4"* thickness *1 13/32*

Seamless, lap welded or riveted longitudinal joint *T.R.D.B.S. Material* *S* Range of tensile strength *28-32* Working pressure *25.6* Actual *600*

Starting Air Receivers, No. *✓* Total cubic capacity *✓* Internal diameter *✓* thickness *✓*

Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure *by Rules* Actual *✓*

IS A DONKEY BOILER FITTED? *Yes* *2* If so, is a report now forwarded? *Yes*

Is the donkey boiler intended to be used for domestic purposes only *No*

PLANS. Are approved plans forwarded herewith for Shafting *18-1-34* Receivers *Yes* Separate Tanks *No*

Donkey Boilers *Yes* General Pumping Arrangements *Yes* Oil Fuel Burning Arrangements *✓*

**SPARE GEAR.**

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

State the principal additional spare gear supplied *See Attached List.*

*John Brown & Company, Limited.*  
The foregoing is a correct description,  
*W. Beck* Manufacturer.  
Sturtevant Secretaries

Dates of Survey while building

During progress of work in shops--	1934 Max: 1.8.13.15.21.28.29 Apr: 4.11.12.17.25.30 May: 3.4.7.9.11.14.16.18.21.22.23.25.28.29.30
During erection on board vessel--	1.3.7.11.12.13.15.18.20.22.25.26.27.29 July: 2.3.4.6.11.24.27.30 Aug: 2.3.6.7.8.10.13.15.16.17.20.21.22.27.28
Total No. of visits	135- 19.21.22.27.30 Dec: 3.4.6.10.12.13.14.17.18.20.21.25.26.28 (1935) Jan: 7.8.9.11.14.16.17.21.23.25

Dates of Examination of principal parts—Cylinders *1-3-34* Covers *30-4-34* Pistons *25-6-34* Rods *1-6-34* Connecting rods *14-5-34*

Crank shaft *4-4-34* Flywheel shaft *12-4-34* Thrust shaft *9-5-34* Intermediate shafts *11-7-34* Tube shaft *None*

Screw shaft *25-6-34* Propeller *11-7-34* Stern tube *21-5-34* Engine seatings *21-5-34* Engines holding down bolts *17-12-34*

Completion of fitting sea connections *18-10-34* Completion of pumping arrangements *23-1-35* Engines tried under working conditions *23-1-35*

Crank shaft, Material *S* Identification Mark *2007* Flywheel shaft, Material *S* Identification Mark *2007*

Thrust shaft, Material *S* Identification Mark *2007* Intermediate shafts, Material *S* Identification Marks *P.2103, 4335, 59, 4249, 2074, 4269, 4280*

Tube shaft, Material *None* Identification Mark *✓* Screw shaft, Material *S* Identification Mark *S.4334, 4337, 2075, 4259, 4268, 2102, 4336, P.250, S.2104*

Is the flash point of the oil to be used over 150° F. *Yes* Spare *243*

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 *Not required.*

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 of this vessel has been built under special survey in accordance with the approved plans and the Society's Rules and requirements, the materials and workmanship are good, it has been securely fitted on board and satisfactorily tried under working conditions, and is in my opinion eligible for the record + L. M. C. 1-35. 2 D. B. 100 lbs.*

GLASGOW

*26/1/35*

The amount of Entry Fee .. £ 6 : 0 : 0 When applied for, *28 JAN 1935*

Special ... £ 147 : 8 : 0

Entablature fee ... £ 25 : 4 : 0

Donkey Boiler Fee ... £ 9 : 9 : 0

3 Air Receivers

Travelling Expenses (if any) £ : : 0 When received, *1/3/1935*

*Jas Cairns*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 29 JAN 1935*

Assigned *+ L.M.C. 1,35*

TUE. 12 FEB 1935

CERTIFICATE WRITTEN *2 D.B. 100 lbs.*



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