

# REPORT ON OIL ENGINE MACHINERY.

No. 11426

30 APR 1936

Received at London Office

Date of writing Report 29. 4. 1936 When handed in at Local Office 29. 4. 1936 Port of BELFAST

No. in Survey held at BELFAST Date, First Survey 19. Jan. 1935 Last Survey 25. April 1936

Reg. Book. 28784 on the <sup>Simple</sup> Twin <sup>Triple</sup> Screw vessel KANIMBLA Tons <sup>Gross</sup> 10984.56 <sup>Net</sup> 6584.79

Built at Belfast By whom built Harland + Wolff Ltd. Yard No. 955 When built 1936  
Engines made at Belfast By whom made Harland + Wolff Ltd. Engine No. 955 When made 1936  
Donkey Boilers made at Belfast By whom made Harland + Wolff Ltd. Boiler No. 955 When made 1936  
Brake Horse Power 8500 Owners Mc Sharrath, McEacham Ltd. Port belonging to Melbourne  
Nom. Horse Power as per Rule 1305 Is Refrigerating Machinery fitted for cargo purposes Yes / Is Electric Light fitted Yes /  
Trade for which vessel is intended Ocean going 29 1/8 59 1/16

**OIL ENGINES, &c.** Type of Engines Harland Wolff - B.M. Anders Sign. 2 or 4 stroke cycle 4 Single or double acting Single  
Maximum pressure in cylinders 70 lbs. Diameter of cylinders 740 mm Length of stroke 1500 mm. No. of cylinders 16 No. of cranks 16  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1020 mm. Is there a bearing between each crank Yes /  
Revolutions per minute 108 Flywheel dia. 2482.8 mm. Weight 2500 kg. Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule approved Crank pin dia. 525 mm. Crank Webs Mid. length breadth 874 mm. Thickness parallel to axis 320 mm  
as fitted 525 mm. x 115 mm. Mid. length thickness 320 mm. Thickness around eye hole 228.5 mm.

Flywheel Shaft, diameter as per Rule approved Intermediate Shafts, diameter as fitted 14 3/4" Thrust Shaft, diameter at collars as per Rule approved  
as fitted 15 3/4" as fitted 15 3/4"

Tube Shaft, diameter as per Rule approved Screw Shaft, diameter as fitted 16 3/4" Is the shaft fitted with a continuous liner Yes /  
as fitted 16 3/4" Is the after end of the liner made watertight in the propeller boss Yes /

Bronze Liners, thickness in way of bushes as per Rule 8" Thickness between bushes as per rule 6" Is the after end of the liner made watertight in the  
as fitted 7" as fitted 6 3/2" If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes /

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 Yes /  
If two liners are fitted, is the shaft lapped or protected between the liners Yes / Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft No /

Propeller, dia. 16' 9" Pitch 7' 3" x 14' 6" No. of blades 3 Material C.S. Brs. whether Moveable Yes / Total Developed Surface each 73 sq. feet  
Length of Bearing in Stern Bush next to and supporting propeller 87"

Method of reversing Engines Air Motor Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes / Means of lubrication forced /  
Thickness of cylinder liners 53 mm. Are the cylinders fitted with safety valves Yes / Are the exhaust pipes and silencers water-cooled or lagged with non-conducting material Yes /

Cooling Water Pumps, No. Two Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes /  
If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine 2 1/2" funnel

Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work Yes /  
Pumps connected to the Main Bilge Line No. and Size Four of 113 Tons/hr (Two Bilge - One Fire + Emergency Bilge - One Ballast) How driven Electric Motors

Ballast Pumps, No. and size One 113 Tons/hr Lubricating Oil Pumps, including Spare Pump, No. and size Two of ca. 140 Tons/hr  
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 Main Motor Room 4 of 2 1/2" Overboard 3 of 2 1/2" Crank Pits 2 of 2 1/2" Cofferdams 2 of 2 1/2" In Pump Room 2 of 2 1/2"

In Holds, &c. Nos. 123 & 5 Holds 2 of 3 1/2" ea. No. 4 Hold 2 of 3 1/2" 1 of 3 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Four of 5 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 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 Yes /  
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 on m.l.

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 upper 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. No. of stages Diameters Stroke Driven by /  
Auxiliary Air Compressors, No. Two No. of stages 2 Diameters 4 1/4, 130 + 115 mm Stroke 120 mm. Driven by Electric Motors

Small Auxiliary Air Compressors, No. One No. of stages 2 Diameters 106 + 35 mm Stroke 80 mm. Driven by Steam Engine  
Scavenging Air Pumps, No. Diameter Stroke Driven by /

Auxiliary Engines crank shafts, diameter as per Rule 190 mm. No. — Two Position — On Tank Top in Aux. Motor Room.  
as fitted 280 mm.

**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 Open ends / Is a drain fitted at the lowest part of each receiver Yes /

High Pressure Air Receivers, No. One Cubic capacity of each 180 litres Internal diameter 14" thickness 1/2"  
Seamless, lap-welded or riveted longitudinal joint Yes / Material Steel Range of tensile strength 24/28 Tons Working pressure by Rules 828 lbs. Actual 356 lbs.

Starting Air Receivers, No. Two Total cubic capacity 1800 C.F. Internal diameter 6'-4 1/8" thickness 1 1/4"  
Seamless, lap-welded or riveted longitudinal joint with d.b.s. Material Steel Range of tensile strength 28/32 Tons Working pressure by Rules 363 lbs. Actual 356 lbs.

and a List of  
in  
vessels  
a copy  
of  
20. 21. 22  
26. 27  
1. 23. 24  
11. 12. 31  
24. 25  
26. 27

IS A DONKEY BOILER FITTED?

Yes *Colanion Type* ✓ 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 Yes Receivers Yes Separate Tanks Yes  
 (If not, state date of approval)  
 Donkey Boilers Yes General Pumping Arrangements Yes Oil Fuel Burning Arrangements Yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied See appended list

The foregoing is a correct description

*A. Marshall*  
 Assistant Secretary, Manufacturer.

Dates of Survey while building	During progress of work in shops--	1935 Jan 19 Feb 8 May 21 23 June 6 30 Aug 22 30 Sept 16 17 20 23 24 25 28 Oct 1 2 3 4 9 10 15 21 26 28 30 31 Nov 4 6 8 11 12 13 15 16 21 22 26 27 30 Dec 2 3 4 5 10 11 12 13 16 18 20 23 24 27 28 30 31
	During erection on board vessel--	1936 Jan 1 3 4 6 9 8 9 10 11 15 20 21 22 23 24 25 27 28 30 Feb 1 3 4 5 6 7 10 11 12 14 17 18 20 21 25 26 27 28 Mar 2 3 4 5 6 10 11 16 17 18 20 23 24 26 27 28 30 31 Apr 1 2 4 6 7 8 9 10 14 15 16 17 18 20 21 22 23 24
	Total No. of visits	133

Dates of Examination of principal parts—Cylinders 8.11.35 to 4.3.36 Covers 20.9.35 to 12.36 Pistons 17.12.35 to 20.3.36 Rods 20.11.35 to 12.36 Connecting rods 12.25.35 to 7.1.36

Crank shafts 26.10.35 to 31.12.35 Flywheel shaft ✓ Thrust shafts 26.11.35 Intermediate shafts 6.1.36 to 10.1.36 Tube shaft ✓

Screw shafts 11.12.35 to 14.2.36 Propeller 29.11.35 Stern tube 26.11.35 Engine seatings 11.12.35 Engines holding down bolts 2.3.36

Completion of fitting sea connections 11.12.35 Completion of pumping arrangements 25.11.36 Engines tried under working conditions 2.11.36

Crank shaft, Material Ingot Steel Identification Mark P.4070's 224-5228 Flywheel shaft, Material ✓ Identification Mark 284.610-270-270-82

Thrust shaft, Material Ingot Steel Identification Mark L4070's 71 Intermediate shafts, Material Ingot Steel Identification Marks 82-91-610-125-257

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material Ingot Steel Identification Mark L4070's P.153 576 5000 25

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 of this vessel has been constructed to the Society's rules under special survey. The materials and workmanship are good. The main engines and auxiliary machinery have been efficiently installed and tried under working conditions with satisfactory results. The main generators were constructed under survey and the electrical installation tested in accordance with the rules.

In our opinion the vessel is now eligible for notation in the Society's Register Book

† L.M.C. 436. C.L., D.B 100 LBS. 0' OIL ENGINES.

Certificate (if required) to be sent to  
 (The Surveys are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee ..	£ 6 : - :	When applied for,	
Special ...	£ 132 : 12.6 :	29.4.1936	
Donkey Boiler Fee ...	£ 5 : 12 :	When received,	
AIR RECEIVERS	£ 8 : 8 :	13.5.36	7/15
Travelling Expenses (if any)			14/5

*W. Anness + Charles J. Hunter*  
 Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute

FRI, 15 MAY 1936

Assigned

*+ L.M.C. 436 D.B. 100 lbs  
 oil eng. G*