

## REPORT ON OIL ENGINE MACHINERY.

No. 59572

APR 13 1938

Received at London Office

S. 4. 1938 Port of GlasgowDate, First Survey 7<sup>th</sup> Apr 1937 Last Survey 30<sup>th</sup> Mar 1938Number of Visits 77

Writing Report

When handed in at Local Office

Survey held at Glasgow

Book.

on the Single  
Twin  
Triple  
Quadruple Screw vessel"KOOLAMA"Tons { Gross 4026  
Net 2213at GlasgowBy whom built Harland & Wolff Ltd Yard No. 1003 When built 1938Engines made at GlasgowBy whom made Harland & Wolff Ltd Engine No. 1003 When made 1938Boilers made at GlasgowBy whom made Harland & Wolff Ltd Boiler No. ✓ When made ✓Horse Power 3500/3900Owners GOVERNMENT OF WESTERN AUSTRALIA Port belonging to FREMANTLEHorse Power as per Rule 808Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yesFor which vessel is intended Australian CoastENGINES, &c.—Type of Engines Solid injection 2 or 4 stroke cycle 3 Single or double acting S.A.Mean pressure in cylinders 700 lb. sq. in. Diameter of cylinders 500 mm. Length of stroke 900 mm. No. of cylinders 6 No. of cranks 6Indicated Pressure 100 lb. sq. in. Is there a bearing between each crank yesBearings, adjacent to the Crank, measured from inner edge to inner edge 698 mm. Means of ignition Compression Kind of fuel used Diesel oilRevolutions per minute 140/146 Flywheel dia. 1654 mm. Weight 1000 kg. Mid. length breadth 800 mm. Thickness parallel to axis 208 mm.Shaft, dia. of journals as per Rule 323 mm. Crank pin dia. 340 mm. Crank Webs shrunk Mid. length thickness 208 mm. Thickness around eyehole 155 mm.Intermediate Shafts, diameter as per Rule 323 mm. Thrust Shaft, diameter at collars as per Rule 10.1" (300 mm.)Shaft, diameter as fitted Is the tube shaft fitted with a continuous liner yesScrew Shaft, diameter as per Rule 10.623" Is the screw shaft fitted with a continuous liner yesLiners, thickness in way of bushes as per Rule 11.8" (300 mm.) Thickness between bushes as per rule 11.8" (300 mm.) Is the after end of the liner made watertight in theIf the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner yesIf 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 yesIf 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 tubeLength of Bearing in Stern Bush next to and supporting propeller 48"If so, state type ✓ Material Brass whether Moveable no Total Developed Surface 42 sq. feetPitch 12-4 mm. No. of blades 3 Is a governor or other arrangement fitted to prevent racing of the engine when disconnected yes Means of lubricationMod of reversing Engines Direct Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged withThickness of cylinder liners 332 + 25 mm. Inducting 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 yesNo. of Water Pumps, No. 3 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yesPumps worked from the Main Engines, No. ✓ Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work yesPumps connected to the Main Bilge Line { No. and Size 1 Bilge, 70 ton per hour 1 Ballast, 150 ton per hour 1 General Service, 50 ton per hourHow driven Electric Motors 1 Emergency Bilge, 50 ton per hourcooling 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 pumpingPumps, No. and size One 6" Rotary Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Two 7" RotaryNo independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilges, No. and size:—In Machinery Spaces 4 @ 3" 4 @ 2 1/2" Tunnel, 3 @ 3" In Pump Room ✓Holds, &c. Holds, 4 @ 3" Sludge 4 @ 3" Copper dunnies 4 @ 2 1/2" Gutters, 2 @ 2 1/2" Tunnel 1 @ 4 1/2"Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 3 @ 4 1/2" 1 @ 6"All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaceseasily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yesSea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks bothThey 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 aboveEach 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 yesHow are they protected ✓Have they been tested as per Rule yesPipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

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

Department to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from BridgeWood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yesAir Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 90 cu. ft. air per minute Stroke ✓ Driven by Elec. MotorAuxiliary Air Compressors, No. 1 No. of stages 2 Diameters 2 3/4 x 1 1/8" Stroke 3" Driven by HandEnging Air Pumps, No. 2 off each engine Diameter 100 cu. metres Stroke per minute each Driven by Main engineAuxiliary Engines crank shafts, diameter as per Rule 139.4 mm.as fitted 180 mm.



AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule.

Can the internal surfaces of the receivers be examined and cleaned

Is a drain fitted at the lowest part of each receiver

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

MANOEUVERING

Starting Air Receivers, No.

Total cubic capacity

Internal diameter

thickness

Actual

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting  
(If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description.

FOR HARLAND AND WOLFF, LIMITED

Wm. J. Wright

Manufacturer.

Dates of Survey while building  
During progress of work in shops-- 1937 Apr: 7. 15. 20. 29 May: 10. 17. 19. 24 July: 5 Aug: 2. 4. 5. 6. 13. 18. 20. 24 Sep: 16. 21. 23  
During erection on board vessel-- 30 Oct: 4. 6. 12. 13. 18. 19. 25. 26. 27 Nov: 3. 4. 12. 15. 16. 19. 23. 24. 25. 29. 30 Dec: 2. 6. 7. 9. 13. 23  
Total No. of visits 77 24. 30. 31 (1938) Jan: 7. 12. 14. 17. 19. 21. 24. 28. 31 Feb: 2. 4. 14 Mar: 3. 4. 8. 11. 14. 15. 17. 18. 21. 22. 23  
25. 11. 37 2. 12. 37 9. 12. 37 9. 12. 37

Dates of Examination of principal parts—Cylinders 30-12-37 Covers 14-1-38 Pistons 19-1-38 Rods 19-1-38 Connecting rods 19-1-38

Crank shaft 5-3-11-37 Flywheel shaft 18-10-37 Thrust shaft 5-3-11-37 Intermediate shafts 25-10-37 Tube shaft 18-10-37

Screw shafts 18-10-37 Propeller 25-10-37 Stern tube 25-10-37 Engine seatings 6-12-37 Engines holding down bolts 8-3-38

Completion of fitting sea connections 6-12-37 Completion of pumping arrangements 22-3-38 Engines tried under working conditions 30-3-38

Crank shaft, Material Steel Identification Mark 1003 P.F. Flywheel shaft, Material Steel Identification Mark 7018. 7019. 7017

Thrust shaft, Material Steel Identification Mark 839 L.C.D. 7114 Intermediate shafts, Material Steel Identification Marks 7018. 7019. 7017

Tube shaft, Material Steel Identification Mark 840 P.F. Screw shaft, Material Steel Identification Mark 6737 L.C.D.

Is the flash point of the oil to be used over 150° F. yes (spec) 6738 L.C.D.

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 built under Special Survey and in accordance with the approved plans and the Rules of this Society.

The materials and workmanship are good.

The machinery has been efficiently installed in position on board the vessel and afterwards tried under full working conditions with satisfactory results.

The machinery is eligible in my opinion to be classed in the Register Book with notation of + LMC 3.38. C.L.

5/4/38

The amount of Entry Fee .. £ 6 : -

Special ... £ 115 : 8

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When applied for,

6. 14. 19. 38

When received,

4. 5. 19. 38

Committee's Minute GLASGOW 12 APR 1938

Assigned + L.M.C 3.38.

P. Fitzgerald & S. E. Murdoch  
Engineer Surveyors to Lloyd's Register of Shipping.



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