

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY

No. 56871
16 APR 1936

Received at London Office

Date of writing Report 19... When handed in at Local Office 14. 4. 1936 Port of Glasgow
No. in Survey held at Reg. Book. Date, First Survey 7. 10. 35 Last Survey 7/4/1936
Number of Visits 39

on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel "BABINDA" Tons Gross 659 Net 325

Built at Bowling By whom built Scott and Sons Yard No. 337 When built 1936
Engines made at Glasgow By whom made British Auxiliary Ltd. Engine No. 718 When made 1936
Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
Brake Horse Power 725. Owners Australasian United S.N. Co Port belonging to Maryborough
Nom. Horse Power as per Rule 156. ✓ Is Refrigerating Machinery fitted for cargo purposes No ✓ Is Electric Light fitted Yes ✓
Trade for which vessel is intended Foreign 13 3/8 22 1/2"

OIL ENGINES, &c. Type of Engines British Polar (M357 type) 2 or 4 stroke cycle 2 Single or double acting Single ✓
Maximum pressure in cylinders 400 lbs. Diameter of cylinders 340 7/8 ✓ Length of stroke 570 7/8 ✓ No. of cylinders 5 ✓ No. of cranks 5 ✓
Mean Indicated Pressure 100 lbs. ✓

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 484 7/8 ✓ Is there a bearing between each crank Yes ✓
Revolutions per minute 250 Flywheel dia. 1210 7/8 ✓ Weight 1.57 tons Means of ignition Comp. ✓ Kind of fuel used Diesel oil ✓
Crank Shaft, dia. of journals as per Rule 216 7/8 ✓ as fitted 220 ✓ Crank pin dia. 220 7/8 ✓ Crank Webs Mid. length breadth 208 7/8 ✓ Mid. length thickness 122 ✓ Thickness parallel to axis shrunk ✓ Thickness around eye-hole ✓

Flywheel Shaft, diameter as per Rule 216 7/8 ✓ as fitted 260 ✓ Intermediate Shafts, diameter as per Rule 148 7/8 ✓ as fitted 6 ✓ Thrust Shaft, diameter at collars as per Rule 155 7/8 ✓ as fitted 260 ✓
Tube Shaft, diameter as per Rule ✓ as fitted ✓ Screw Shaft, diameter as per Rule 6 3/4 appd. ✓ as fitted 6 3/4 ✓ Is the tube screw shaft fitted with a continuous liner Yes ✓

Bronze Liners, thickness in way of bushes as per Rule 9/16" appd. ✓ as fitted 9/16" ✓ Thickness between bushes as per rule ✓ as fitted ✓ 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 ✓

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 ✓ If so, state type ✓ Length of Bearing in Stern Bush next to and supporting propeller 27" ✓

Propeller, dia. 2360 mms. Pitch 1470 mms. No. of blades 4 R.H. Material Bronze ✓ whether Moveable No ✓ Total Developed Surface 2.47 sq. ft. ✓
Method of reversing Engines Direct ✓ Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes ✓ Means of lubrication Grease ✓

Thickness of cylinder liners 26.5 7/8 ✓ 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 ✓
Cooling Water Pumps, No. 1 Ballast Pump connection ✓ Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes ✓
Bilge Pumps worked from the Main Engines, No. 2 ✓ Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size 1 Ballast Pump. 4" 80 tons/hr. ✓ How driven Electric motor ✓
Is the cooling water led to the bilges Overboard ✓ 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 off 4" 80 tons/hr. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 off 15/18 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 1 off 8 R. aft. 3" ✓ 1 off Cofferdam. ER. Ford. 3" ✓ In Pump Room ✓
In Holds, &c. 2 off. (P+S.) 3" ✓

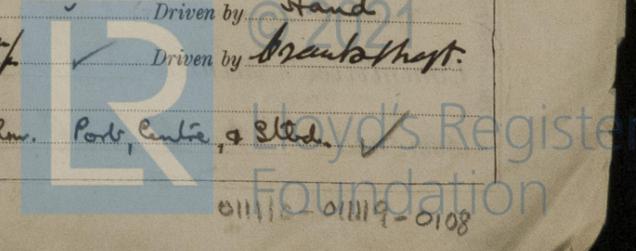
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 off 3" to G.S.P. ER. Ford. & 1 off 4" Bilge injection to Ballast Pump. ✓
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes ✓ Are the Bilge Suctions in the Machinery Spaces led from easily 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 Valves and 2 cocks for compressors ✓
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 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 None ✓

What pipes pass through the bunkers None ✓ How are they protected ✓
What pipes pass through the deep tanks ✓ 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 None ✓ Is it fitted with a watertight door ✓ worked from ✓
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 ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓
Auxiliary Air Compressors, No. 2 off ✓ No. of stages 2 ✓ Diameters ✓ Stroke ✓ Driven by Electric Motor ✓

Small Auxiliary Air Compressors, No. 1 off ✓ No. of stages Single ✓ Diameters ✓ Stroke ✓ Driven by Hand ✓
Scavenging Air Pumps, No. 6 ✓ Diameter 800 7/8 DA ✓ Stroke 350 7/8 ✓ Driven by Steam ✓
Auxiliary Engines crank shafts, diameter as per Rule 127 mms. ✓ as fitted 130 mms. ✓ No. 3. ✓ Position Ford Eng. Rm. Port, Centre, & Star. ✓



AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Y/A* ✓
 Can the internal surfaces of the receivers be examined and cleaned *Y/A* ✓ Is a drain fitted at the lowest part of each receiver *Y/A* ✓
High Pressure Air Receivers, No. *None* 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. *2* ✓ Total cubic capacity *56.5 ft.* Internal diameter *650%* thickness *14 1/2*
 Seamless, lap welded or riveted longitudinal joint *Welded* Material *S* Range of tensile strength *28-32 Tons* Working pressure by Rules *376 lbs*
 If so, is a report now forwarded? *Plan with 5 BREZE* Actual *350 lbs*

IS A DONKEY BOILER FITTED? *No*
 Is the donkey boiler intended to be used for domestic purposes only? *Yes*
PLANS. Are approved plans forwarded herewith for Shafting *Logbook 7-11-33* Receivers *295.33* Separate Fuel Tanks _____
 (If not, state date of approval) _____
 Donkey Boilers _____ General Pumping Arrangements _____ Pumping Arrangements in Machinery Space _____
 Oil Fuel Burning Arrangements _____

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes* ✓
 State the principal additional spare gear supplied _____

No sp. attached List.

The foregoing is a correct description,
For BRITISH AUXILIARIES, LIMITED,
24/2/36 *McKerrow* Manufacturer.

DIRECTOR
 Dates of Survey while building
 During progress of work in shops— 1935 Oct: 7. 10. 17. 22 Nov: 8. 13. 20 Dec: 2. 10. 18. 20. 23. 26 (1936) Jan: 7. 13. 15. 17. 29. 31 Feb.
 During erection on board vessel— 1935 Oct: 28 Dec: 16 (1936) Jan: 7. 27. 30 Feb: 3. 4. 10. 17. 20. 26 Mar: 2. 4. 10. 16. 23. 25
 Total No. of visits *39* Apr: 6. 7

Dates of Examination of principal parts—Cylinders *23. 12. 35* Covers *15. 1. 36* Pistons *17. 1. 36* Rods _____ Connecting rods _____
 Crank shaft *3. 5. 35 (FR)* Flywheel shaft *and* Thrust shaft *8. 11. 35* Intermediate shafts _____ Tube shaft _____
 Screw shaft *6. 11. 35* Propeller *30. 1. 36* Stern tube *28. 10. 35* Engine seatings _____ Engines holding down bolts *17. 2. 36*
 Completion of fitting sea connections *4. 2. 36* Completion of pumping arrangements *7. 4. 36* Engines tried under working conditions *7. 4. 36*
 Crank shaft, Material *SM. Eng. steel* Identification Mark *9348-3.5.1935* Flywheel shaft, Material *and* Identification Mark _____
 Thrust shaft, Material *do* Identification Mark *E 218-PK* Intermediate shafts, Material *SM Eng. steel* Identification Marks *2221 CRR*
 Tube shaft, Material *do* Identification Mark *9443-2.11.35* Screw shaft, Material _____ Identification Mark *Working 2219 CRR. 2220 5-11-35*

Is the flash point of the oil to be used over 150° F. *Y/A* ✓
 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 _____ 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 *Y/A* If so, state name of vessel *Mt. Gale. Y/A. Report No. 56169.*

General Remarks (State quality of workmanship, opinions as to class, &c.)
This machinery has been built under special survey and in accordance with the Rules. The materials and workmanship are good. It has been efficiently secured in position on board and afterwards tried under full working conditions with satisfactory results.

This machinery is eligible, in my opinion to be classed in the Register Book with notation of +L.M.C. 4-36.

The safety valves on the starting air receivers were adjusted to a safe working pressure but it was agreed by Mr. Rogers, representing the engine builders, British Aux. Ltd., that their closing action was not satisfactory. These will be replaced by a different type of valve, to be supplied to the owners as soon as possible.

The amount of Entry Fee .. £ 3 : - :
 Special £ 39 : - :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for, **15 APR 1936**
 When received, **27. 4. 1936**

J. Buchanan
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 15 APR 1936**

Assigned *+ L.M.C. 4.36*



© 2021

Lloyd's Register Foundation