

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. 36 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

Single
on the ~~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.

218

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 (13571 type)

2 or 4 stroke cycle

2

Single or double acting

Single

Maximum pressure in cylinders

400 lb/sq. in.

Diameter of cylinders

340 1/2

Length of stroke

570 1/2

No. of cylinders

5

No. of cranks

5

Mean Indicated Pressure

100 lb/sq. in.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

484 1/2

Is there a bearing between each crank

Yes

Revolutions per minute

250

Flywheel dia.

1210 1/2

Weight

1.54 tons

Means of ignition

Comp.

Kind of fuel used

Dist. oil

Crank Shaft, dia. of journals

as per Rule 216 1/2

as fitted 220

Crank pin dia.

220 1/2

Crank Webs

Mid. length breadth 308 1/2

Mid. length thickness 122

Thickness parallel to axis

Thickness around eyehole

Flywheel Shaft, diameter

as per Rule 216 1/2

as fitted 260

Intermediate Shafts, diameter

as per Rule 148 1/2

as fitted 6

Thrust Shaft, diameter at collars

as per Rule 155 1/2

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

as fitted 9/16 appd.

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 mm.

Pitch 1470 mm.

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 detached

Yes

Means of lubrication

Fract

Thickness of cylinder liners

26.5 1/2

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 off 4 1/2" 80 tons/hr.

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.

None

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.

1. Cren. Serv. Pump. 2 1/2" 30 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" 16 G.S.P. ER Ford.

1 off 4" Bilge suction 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 off

Diameter

800 1/2 DA

Stroke

350 1/2

Driven by

Steam

Auxiliary Engines crank shafts, diameter

as per Rule 127 mm.

as fitted 130 mm.

No.

3

Position

Fore Eng. Rm.

Port, Centre, & Star.

✓

011115-011119-0108

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

Can the internal surfaces of the receivers be examined and cleaned *Yps* ✓

Is a drain fitted at the lowest part of each receiver *Yps* ✓

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

IS A DONKEY BOILER FITTED? *No*

No

If so, is a report now forwarded? *Yps* ✓

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

PLANS.

Are approved plans forwarded herewith for Shafting *Logbook 7-11-33*
(If not, state date of approval)

By what class 22-5-33

Receivers *295.33*

Separate Fuel Tanks

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 *Yps* ✓

State the principal additional spare gear supplied

As per attached List.

The foregoing is a correct description,

For BRITISH AUXILIARIES, LIMITED,

24/2/36

McKerrow

Manufacturer.

DATES OF SURVEY
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 *5. 11. 35* Propeller *30. 1. 36* Stern tube *28. 10. 35* Engine seatings ✓ Engines holding down bolts *47. 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 *9448-3. 5. 1935* Flywheel shaft, Material *and* Identification Mark
Thrust shaft, Material *do* Identification Mark *E218-PK* Intermediate shafts, Material *SM. Eng. steel* Identification Marks *2221 CRR*
Screw 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. *Yps* ✓

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yps* ✓

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 *Yps* ✓

If so, state name of vessel *M.V. "Gale"* Yps. 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 our 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. Rodgers, 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 : - : When applied for,

Special ... £ 39 : - : 15 APR 1936

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : 27. 4. 1936

Committee's Minute GLASGOW 15 APR 1936

Assigned + L.M.C. 4.36



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