

Rpt. 4b

## REPORT ON OIL ENGINE MACHINERY.

No. 48209

Received at London Office

25 JUL 1928

Date of writing Report

10

When handed in at Local Office

21-7

10

Port of

GLASGOW.

No. in Survey held at  
Reg. Book.

Date, First Survey

1-2-28

Last Survey

10-4-1928

Number of Visits

40335

Single

Twin

Triple

Quadruple

Screw vessel

"CLYDEFIELD"

Tons

Gross 6758

Net 3949

Built at

By whom built

D. &amp; W. Henderson &amp; Co. Ltd.

Yard No.

8084

When built

1928-

Engines made at

By whom made

Harland &amp; Wolff Ltd.

Engine No.

808

When made

1928-

Donkey Boilers made at

By whom made

D. &amp; W. Henderson &amp; Co. Ltd.

Boiler No.

808

When made

1928

Brake Horse Power

3400

Owners

Hunting &amp; Son, Ltd.

Port belonging to

Newcastle

Nom. Horse Power as per Rule

647

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which vessel is intended

Carrying Petroleum in Bulk.

IL ENGINES, &amp;c.

Type of Engines

Diesel, vertical reciprocating or 4 stroke cycle

Single or double acting

Single

Maximum pressure in cylinders

500 lbs./in.<sup>2</sup>

Diameter of cylinders

740 mm

Length of stroke

850 mm

No. of cylinders

8

No. of cranks

8

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

1004 mm

Is there a bearing between each crank

Yes

Revolutions per minute

90

Flywheel dia.

7.46 ft.

Weight

2.7 tons

Means of ignition

Compression

Kind of fuel used

Diesel oil

Crank Shaft, dia. of journals

as per Rule 506.5 mm

Crank pin dia.

520 mm

Crank Webs

Mid. length breadth 840 mm

shrunk

Thickness parallel to axis 320 mm

Flywheel Shaft, diameter

as per Rule 506.5 mm

Intermediate Shafts, diameter

as per Rule 520 mm

Thrust Shaft, diameter at collars

as per Rule 1.6 1/4"

as fitted

as per Rule 1.6 1/4"

Tube Shaft, diameter

as per Rule 506.5 mm

Screw Shaft, diameter

as per Rule 1.6 1/4"

Is the tube

screw

shaft fitted with a continuous liner

Yes

Bronze Liners, thickness in way of bushes

as per Rule 7/8"

Thickness between bushes

as per Rule 13/16"

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

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

Propeller, dia.

18'-0"

Pitch

14'-3"

No. of blades

4

Material

Bronze

whether Moveable

No

Total Developed Surface

100 sq. feet

Method of reversing Engines

Reversed air

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Yes

Means of lubrication

Thickness of cylinder liners

53 &amp; 32 mm

Are the cylinders fitted with safety valves

Yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Lagged

Cooling Water Pumps, No.

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.

Diameter

Stroke

Can one be overhauled while the other is at work

Yes

Pumps connected to the Main Bilge Line

No. and Size

How driven

Ballast Pumps, No. and size

Lubricating Oil Pumps, including Spare Pump, No. and size

Are two independent means arranged for circulating water through the Oil Cooler

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces

In Holds, &amp;c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-bones

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

Are all Sea Connections fitted direct on the skin of the ship

Are they fitted with Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates

Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes pass through the bunkers

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

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

Is the Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes

worked from

Yes

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.

One

No. of stages

Three

Diameters

860, 775 &amp; 202

Stroke

560 mm

Driven by

Main Engines

Auxiliary Air Compressors, No.

Two

No. of stages

Three

Diameters

400, 350 &amp; 212

Stroke

260 mm

Driven by

Steam Engines

Small Auxiliary Air Compressors, No.

Yes

No. of stages

Yes

Diameters

Yes

Stroke

Yes

Driven by

Yes

Scavenging Air Pumps, No.

Yes

Diameter

Yes

Stroke

Yes

Driven by

Yes

Yes

Yes

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

Steam Auxiliaries.

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

Safety valves on pipe lines: portable pumps on receivers.

Can the internal surfaces of the receivers be examined

Yes

What means are provided for cleaning their inner surfaces

Holes &amp; loose ends.

Is there a drain arrangement fitted at the lowest part of each receiver

Yes

High Pressure Air Receivers, No.

Two

Cubic capacity of each

290 litres

Internal diameter

4.16 mm

thickness

2.2 mm

Seamless, lap welded or riveted longitudinal joint

Seamless

Material

Steel

Range of tensile strength

28-32 tons/in.<sup>2</sup>

Working pressure by Rules

1250 lbs./in.<sup>2</sup>

Starting Air Receivers, No.

Two

Total cubic capacity

800 ft.<sup>3</sup> each

Internal diameter

6'-2" &amp; 6'-4" 1/2

thickness

Shell 1 1/2"; Ends 1 1/4"

Seamless, lap welded or riveted longitudinal joint

Riveted

Material

Steel

Range of tensile strength

28-32 tons/in.<sup>2</sup>

Working pressure by Rules

364 lbs./in.<sup>2</sup>

002101-002108-0115

IS A DONKEY BOILER FITTED? *Yes. Two off.* If so, is a report now forwarded? *Yes: gls. Rpt. 47937.*  
PLANS. Are approved plans forwarded herewith for Shafting? *Yes* Receivers *gls. Rpt. 9885* Separate Tanks *gls.*  
Donkey Boilers *Yes* General Pumping Arrangements *Yes* Oil Fuel Burning Arrangements *✓*  
SPARE GEAR *As per attached list.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building  
During progress of work in shops-- *1928 Feb. 11-13-14-15-17-21-22-24-27-29 Mar 2-6-9-12-13-16-19-21-27 Apr 2-3-4-5-6-10-11-13-17-19-20-23-26 May 1-14*  
During erection on board vessel-- *21-24-25-30-31 Jun 1-4-6-7-8-11-13-14-19 20-23-25-27-28-29 July 3-4-10*  
Total No. of visits *58*

Dates of Examination of principal parts—Cylinders *15-21-21-28* Covers *15-17-21-28* Pistons *9-12-3-28* Rods *7-12-3-28* Connecting rods *13-3-28*  
Crank shaft *22-2-28* Flywheel shaft *22-2-28* Thrust shaft *2-4-28* Intermediate shafts *2-4-28* Tube shaft *✓*  
Screw shafts *2-4-28* Propeller *19-3-28* Stern tube *19-3-28* Engine seatings *23-4-28* Engines holding down bolts *6-6-28*  
Completion of fitting sea connections *23-4-28* Completion of pumping arrangements *25-6-28* Engines tried under working conditions *28-6-28*  
Crank shaft, Material *Steel* Identification Mark *440YD'S + Ampers J.D.B. 21-2-28 Steel* Flywheel shaft, Material *Steel* Identification Mark *As per crank*  
Thrust shaft, Material *Steel* Identification Mark *440YD'S J.D.B.* Intermediate shafts, Material *Steel* Identification Marks *440YD'S 2203 J.D.B. 2584*  
Tube shaft, Material *None* Identification Mark *✓* Screw shafts, Material *Steel* Identification Mark *440YD'S 39 J.D.B. 2111 7.588 J.D.B. 7.583*  
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 *Oil tanker* If so, have the requirements of the Rules 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.) *These Engines have been built under Special Survey in accordance with the approved plans & the Rules of this Society; the material & workmanship are good; they have been properly fitted on board and tried under working conditions with satisfactory result.*

Donkey Boilers *gls. Rpt. 47937 (herewith).*  
Air Reservoirs *Bel. Rpt. 9885 (herewith).*

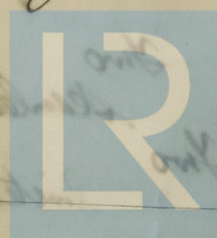
This Machinery is eligible, in our opinion, to be classed in the Register Book with notation: *L.M.C. 7.28; C.L.; Oil Engine.*

The amount of Entry Fee ... £ *6* : - : When applied for, *23-7-1928*  
Special *107/7/106-7/1*  
Donkey Boiler Fee ... £ *gls. Rpt. 47937* When received, *11-8-28*  
Travelling Expenses (if any) £ : : *✓*

Committee's Minute *GLASGOW 24 JUL 1928*

Assigned *+ L.M.C. 7.28*

*J.D. Boyle & J.D. McDonald*  
Engineers Surveyors to Lloyd's Register of Shipping.



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