

yes. Rpt. 4b

## REPORT ON OIL ENGINE MACHINERY.

No. 86794

Received at London Office

11 FEB 1931

Date of writing Report

19

When handed in at Local Office

10.2

10.31

Port of

Newcastle-on-Tyne

No. in Survey held at  
Reg. Book.

Wallsend

Date, First Survey 4 June 1930

Last Survey 2 Feb 1931

Number of Visits 69

on the <sup>Single</sup> ~~Triple~~ ~~Quadruple~~ Screw vessel

"Imperial Transport"

Tons { Gross 8022  
Net 4830

Built at

Glasgow

By whom built

Blythwood &amp; Co. Bay Yard No. 31

When built 1931

Engines made at

Wallsend

By whom made

North Eastern M &amp; Co. Ltd.

Engine No. 2165

When made

Donkey Boilers made at

Wallsend

By whom made

North Eastern M &amp; Co. Ltd.

Boiler No. 2165

When made

Indicated Horse Power

4000

Owners

Houlder Bros.

Port belonging to

Nom. Horse Power as per Rule

633

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which vessel is intended

28 3/4

63

## OIL ENGINES, &amp;c.

Type of Engines

North Eastern Marine

2 or 4 stroke cycle

Single or double acting S.A.

Maximum pressure in cylinders

560 lbs

Diameter of cylinders

130 mm

Length of stroke

1600 mm

No. of cylinders

8

No. of cranks

8

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

990 mm

Is there a bearing between each crank

Yes

Revolutions per minute

94

Flywheel dia.

2590 mm

Weight

4.36 tons

Means of ignition

compression

Kind of fuel used

F. Palant 150 F.

Crank Shaft, dia. of journals

as per Rule 485 mm

as fitted 490 mm

Crank pin dia.

490

Crank Webs

Mid. length breadth 980

Thickness parallel to axis 303

shrink

Thickness around eye-hole 245

Flywheel Shaft, diameter

as per Rule 485 mm

as fitted 490 mm

Intermediate Shafts, diameter

as per Rule 138

as fitted 144

Thrust Shaft, diameter at collars

as per Rule 138

as fitted 19

Tube Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule 14.66

as fitted 15.2

Is the tube screw

shaft fitted with a continuous liner

Yes

Bronze Liners, thickness in way of bushes

as per Rule 3/4

as fitted 3/4

Thickness between bushes

as per rule 1/16

as fitted 1/16

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

Yes

Length of Bearing in Stern Bush next to and supporting propeller

5'-6"

Propeller, dia.

14'-3"

Pitch

12'-11"

No. of blades

4

Material

Bronze

whether Moveable

No

Total Developed Surface

95

sq. feet

Method of reversing Engines compressed air

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

Yes

Means of lubrication

forced

Thickness of cylinder liners

10 mm

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

Up funnel

Cooling Water Pumps, No. Two centrifugal 6 1/2" Bore

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

1 @ 4 x 8 1/2 x 8" duplex Bilge

1 @ 9 x 10 x 10" duplex ballast

Steam

Steam

Yes

Ballast Pumps, No. and size

1 @ 9 x 10 x 10

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

2 @ 10 x 9 x 24

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

4 @ 3 1/2

1 @ 3

In Holds, &amp;c.

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

1 @ 5

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

Both

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

Both

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

Yes

How are they protected

Yes

What pipes pass through the deep tanks

Yes

Have they been tested as per Rule

Yes

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

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Yes

Main Air Compressors, No.

One

No. of stages

3

Diameters

HP 140 mm MP 150-640 LP 150 mm

Stroke

550 mm

Driven by main engines

Auxiliary Air Compressors, No.

1

No. of stages

3

Diameters

3 1/2 x 14 x 14

Stroke

9

Driven by

Steam

Small Auxiliary Air Compressors, No.

1

No. of stages

3

Diameters

Stroke

Driven by

Steam

Scavenging Air Pumps, No.

1

Diameter

Stroke

Driven by

Steam

Driven by

Steam

Driven by

Steam

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

Steam driven

IR 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

Yes

What means are provided for cleaning their inner surfaces

manholes

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

Yes

High Pressure Air Receivers, No.

Two

Cubic capacity of each

10.25 cu ft

Internal diameter

15 3/4"

thickness

3/8"

Seamless, lap welded or riveted longitudinal joint

Seamless

Material

Steel

Range of tensile strength

28 to 32 tons

Working pressure by Rules

1095 lbs

Starting Air Receivers, No.

Two

Total cubic capacity

880 cu ft

Internal diameter

5'-9"

thickness

1 1/8"

Seamless, lap welded or riveted longitudinal joint

Riveted

Material

Steel

Range of tensile strength

30 to 34

Working pressure by Rules

460 lbs

003591-003598-0104



IS A DONKEY BOILER FITTED? *yes two*  
PLANS. Are approved plans forwarded herewith for Shafting *yes*  
(If not, state date of approval)  
Donkey Boilers *yes* General Pumping Arrangements *sent to Glasgow* Receivers *yes* Separate Tanks *yes*  
Oil Fuel Burning Arrangements *yes*  
SPARE GEAR *As per list attached.*

The foregoing is a correct description.

*W. Campbell* Secretary  
*W. Campbell* Manufacturer.

Dates of Survey while building  
During progress of work in shops - 1930 June 4 July 2, 14, 18, 23, 25, 29 Aug. 5, 11, 18, 21, 25 Sep. 1, 2, 4, 5, 8, 9, 10, 14, 16, 17, 18, 19, 22, 23, 25  
During erection on board vessel - 29 Oct. 1, 2, 3, 6, 7, 8, 9, 10, 15, 16, 17, 21, 23, 24, 26, 31 Nov. 6, 7, 10, 11, 13, 17, 20, 24, 26 Dec. 3, 4, 5, 8, 9, 11, 17 Jan. 5, 12  
Total No. of visits *69*  
Dates of Examination of principal parts - Cylinders *2-9-30 to beam 8-10-30* Pistons *18-9-30 to 14-10-30* Rods *18-4-30* Connecting rods *19-9-30*  
Crank shaft *2-10-30* Flywheel shaft *21-10-30* Thrust shaft *21-10-30* Intermediate shafts *21-10-30* Tube shaft *✓*  
Screw shaft *2-10-30* Propeller *3-10-30* Stern tube *3-10-30* Engine seatings *10/3/31* Engines holding down bolts *10/3/31*  
Completion of fitting sea connections *13-2-31* Completion of pumping arrangements *21-4-31* Engines tried under working conditions *21-4-31*  
Crank shaft, Material *o.H. Steel* Identification Mark *24/65 W.B.* Flywheel shaft, Material *o.H. Steel* Identification Mark *18 L.Y.*  
Thrust shaft, Material *o.H. Steel* Identification Mark *18 L.Y.* Intermediate shafts, Material *o.H. Steel* Identification Marks *18 L.Y.*  
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *o.H. Steel* Identification Mark *406W + 65 L R.W.F.*  
Is the flash point of the oil to be used over 150° F. *yes.*  
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.)  
*This machinery has been built under Special Survey. Materials - Workmanship good. Hydraulic tests satisfactory, it has been shipped to Glasgow for installation in the Rosel. The Glasgow Surveyors have been notified*

NEWCASTLE-ON-TYNE.

Total fee.  
The amount of Entry Fee ... £ 6 - 0 - 0  
Special ... £ 85 - 6 - 4  
Donkey Boiler Fee ... £ 20 - 8 - 0  
Travelling Expenses (if any) £ *✓*  
When applied for, 10 FEB 1931  
When received, Low W 2 3/4 31

Committee's Minute GLASGOW 15 SEP 1931

Assigned See Glasgow Report No. 51756

*William Duthie*  
Engineer Surveyor to Lloyd's Register of Shipping.