

## REPORT ON OIL ENGINE MACHINERY.

No. 82273.

23 JAN 1928

Received at London Office

Date of writing Report 9-1-1928 When handed in at Local Office 12-1-1928 Port of

NEWCASTLE-ON-TYNE.

No. in Survey held at Jarro

Date, First Survey 27 April 1927 Last Survey 12 Jan 1928

Reg. Book.

Number of Visits 46.

10000 on the Single } Screw vessels "BRITISH LOYALTY"

Tons: Gross 6950  
Net 4080

Built at Hebburn

By whom built Palmers S. &amp; J. Co. Ltd.

Yard No. 969 When built 1928

Engines made at Winterthur

By whom made Sulzer Bros.

Engine No. 5678 When made 1928

Donkey Boilers made at Jarro

By whom made Palmers S. &amp; J. Co. Ltd.

Boiler No. 969 When made 1928

Brake Horse Power 2700

Owners Tankers Ltd.

Port belonging to London

Nom. Horse Power as per Rule 748

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted YES

II. ENGINES, &c.—Type of Engines **SULZER DIESEL**

2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders

No. of cylinders

Diameter of cylinders

No. of cranks

Length of stroke

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

Is there a bearing between each crank

Revolutions per minute

Flywheel dia.

Weight

Means of ignition

Kind of fuel used

Crank Shaft, dia. of journals

as per Rule

Crank pin dia.

Crank Webs

Mid. length breadth

Thickness parallel to axis

Flywheel Shafts, diameter

as per Rule

Intermediate Shafts, diameter

as per Rule

Thrust Shaft, diameter at collars

as per Rule

Tube Shafts, diameter

as per Rule

Screw Shaft, diameter

as per Rule

Is the screw shaft fitted with a continuous liner

YES

Bronze Liners, thickness in way of bushes

as per Rule

Thickness between bushes

as per Rule

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

Length of Bearing in Stern Bush next to and supporting propeller

5' 3"

Propeller, dia. 15' 10 1/2"

Pitch 12' 7 1/2"

No. of blades 4

Material BRONZE

whether Moveable No

Total Developed Surface 82 sq. feet

Method of reversing Engines SERVO MOTOR

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

YES

Means of lubrication

FORCED Thickness of cylinder liners

Are the cylinders fitted with safety valves

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.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

Bilge Pumps fitted to the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

1 FIRE &amp; BILGE, 8' X 8 1/2" X 8

1 BALLAST - 10' X 12' X 12"

How driven

STEAM

Ballast Pumps, No. and size

1 @ 10' X 12' X 12" DUPLEX

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

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 Engine and Boiler Room

2 @ 3 1/2"

1 @ 5"

Holds, &amp;c.

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

1 @ 6"

Are all the Bilge Suction pipes in Hold and Tunnel Well fitted with strum-boxes

YES

Are the Bilge Suctions in the Machinery Space

Are they fitted with Valves or Cocks

YES

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

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

YES

Do any pipes pass through the bunkers

NONE

How are they protected

Do any 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

YES

Is the Shaft Tunnel watertight

YES

Is it fitted with a watertight door

worked from

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

In Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Savenging Air Pumps, No.

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

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

Are the internal surfaces of the receivers be examined

What means are provided for cleaning their inner surfaces

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

High Pressure Air Receivers, No.

Cubic capacity of each

Internal diameter

thickness

Unless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

Starting Air Receivers, No.

Total cubic capacity

Internal diameter

thickness

Unless, 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?

## HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....					
COVERS .....					
JACKETS .....					
PISTON WATER PASSAGES .....					
MAIN COMPRESSORS—1st STAGE .....					
2nd .....					
3rd .....					
AIR RECEIVERS—STARTING .....					
INJECTION .....					
AIR PIPES .....					
FUEL PIPES .....					
FUEL PUMPS .....					
SILENCER .....					
WATER JACKET .....					
SEPARATE FUEL TANKS .....					

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 see attached list.

The foregoing is a correct description,

*Palmers Shipbuilding & Iron Co., Ltd.* Manufacturer.

*W. Brown* 1927  
 Manager, Engine Works  
 Dates of Survey while building: During erection on board vessel ---  
 Total No. of visits 29.30. 1928 JAN. 4.5.12. 46  
 1927 APRIL 27. MAY 4.12.25. JUNE 10.29. JULY 4.11.13.19.20.26.  
 AUGUST 4.8.9.16.26.29.30. SEPT. 14.20.22. OCT. 6.10.13.21. NOV. 2.7.9.15.21.24.25.30. DEC. 2.5.12.14.19.20.27.

Dates of Examination of principal parts—Cylinders --- Covers --- Pistons --- Rods --- Connecting rods ---  
 Crank shaft --- Flywheel shaft --- Thrust shaft --- Intermediate shafts 22-9-27 Tube shaft ---  
 Screw shaft 16-8-27 Propeller 14-9-27 Stern tube 29-8-27 Engine seatings 10-10-27 Engines holding down bolts 30-10-27  
 Completion of fitting sea connections 14-9-27 Completion of pumping arrangements 2-11-27 Engines tried under working conditions 12-1-28  
 Crank shaft, Material --- Identification Mark --- Flywheel shaft, Material --- Identification Mark ---  
 Thrust shaft, Material --- Identification Mark --- Intermediate shafts, Material STEEL Identification Marks RL 13077 24/6/27  
 Tube shaft, Material --- Identification Mark --- Screw shaft, Material STEEL Identification Mark RL 13075 2/6/27  
 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 fitted on board the vessel, and tried under sea conditions and found satisfactory. Eligible in my opinion to have notation in the Register Book of +L.M.C. 1-28, C.L.

Please see Winterthur Report No. 75.

The amount of Entry Fee ... £ : :  
 Special ... £ 22 : 9 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for 27 JAN 1928  
 When received 26.1.28

Committee's Minute

Assigned

+L.M.C. 1:28 C.L.  
 Oil Engines 200 150lb

*Thomas Napier*  
 Engineer Surveyor to Lloyd's Register of Shipping.



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