

REPORT ON OIL ENGINE MACHINERY.

No. 89173

Received at London Office

Date of writing report

4 AUG 1925

When handed in at Local Office

4 AUG 1925

Port of London (Spurich)

Now in survey held at

St. Yarmouth

Date, First Survey 22nd JulyLast Survey 29th July 1925

Reg. Book

Number of Visits 4

1590 on the ^{Single} ~~Twin~~ ^{Triple} Screw vessels Steel Aux. 3. Mot. M. "Cargo Shipper"Tons ^{Gross}
^{Net}

Master

Built at

Mantemhook

By whom built

Jeh. G. & H. Bodewes

Yard No.

When built

1919

Engines made at

Spurich

By whom made

Vickers-Petter Ltd.

Engine No.

When made

1919

Donkey Boilers made at

By whom made

Boiler No.

When made

Brake Horse Power

152

Owners

A. Redone & Co.

Port belonging to

Buenos Aires

Nom. Horse Power as per Rule

43

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

OIL ENGINES, &c.—Type of Engines

Semi Diesel

2 or 4 stroke cycle

2 Single or double acting

Single

Maximum pressure in cylinders

300

No. of cylinders

4

No. of cranks

4

Diameter of cylinders

12"

Length of stroke

14"

Revolutions per minute

300

Means of ignition

Hot bulb.

Kind of fuel used

Gas oil.

Is there a bearing between each crank

Yes

Span of bearings (Page 92, Section 2, par. 7 of Rules)

14 ³/₁₆"

Distance between centres of main bearings

24"

Is a flywheel fitted

Yes

Diameter of crank shaft journals

as per Rule

as fitted

5 ¹/₄"

Diameter of crank pins

5 ¹/₄"

Breadth of crank webs

as per Rule

as fitted

8 ³/₄"

Thickness of ditto

as per Rule

as fitted

3 ¹/₄"

Diameter of flywheel shaft

as per Rule

as fitted

5 ⁵/₈"

Diameter of tunnel shaft

as per Rule

as fitted

Diameter of thrust shaft

as per Rule

as fitted

5 ¹/₄"

Diameter of screw shaft

as per Rule

as fitted

5 ⁵/₈"

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

No liner

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 joints burned

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

If without liners, is the shaft arranged to run in oil

Yes

Type of outer gland fitted to stern tube

Buntson

Length of stern bush

22 ¹/₂"

Diameter of propeller

4'-0"

Pitch of propeller

3'-6"

No. of blades

4

state whether moveable

No

Total surface

8 ¹/₂ square feet

Method of reversing

Air

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

Yes

Thickness of cylinder liners

5/8"

Are the cylinders fitted with safety valves

Yes

Means of lubrication

Fuel.

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material ^{water} cooled. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Exhaust up funnel.

No. of cooling water pumps

one

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

Within the vessel

Yes

No. of bilge pumps fitted to the main engines

one

Diameter of ditto

4"

Stroke

3 ¹/₄ stroke

Can one be overhauled while the other is at work

Yes

No. of auxiliary pumps connected to the main bilge lines

one

How driven

Single cylinder

Sizes of pumps

4 dia. x 5 ¹/₄ stroke

No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room

Two, 1-2 ¹/₄ dia.

and in holds, etc.

Two, 2 ¹/₂ dia.

No. of ballast pumps

How driven

Sizes of pumps

Is the ballast pump fitted with a direct suction from the engine room bilges

Yes

State size

Yes

Is a separate auxiliary pump suction fitted in

Engine Room and size

No

Yes

2 ¹/₂ dia. 7/8"

Are all the bilge suction pipes fitted with roses

Yes

Are the roses in Engine Room always accessible

Yes

Are the sluices on Engine Room bulkheads always accessible

Yes

Are all connections with the sea direct on the skin of the ship

Yes

Are they valves or cocks

Both

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

Yes

Are the discharge pipes 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 all pipes, cocks, valves and pumps in connection with the machinery accessible at all times

Yes

Are the bilge suction pipes, cocks and valves arranged so as to prevent any

communication between the sea and the bilges

Yes

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

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

No. of main air compressors

No. of stages

Diameters

Stroke

Driven by

No. of auxiliary air compressors

No. of stages

Diameters

Stroke

Driven by

No. of small auxiliary air compressors

No. of stages

Diameters

Stroke

Driven by

No. of scavenging air pumps

Diameter

Stroke

Driven by

Diameter of auxiliary Diesel Engine crank shafts

as per Rule

as fitted

Are the air compressors and their coolers made so as to be easy of access

AIR RECEIVERS:—No of high pressure air receivers

Internal diameter

Cubic capacity of each

material

Seamless, lap welded or riveted longitudinal joint

Range of tensile strength

thickness

working pressure by Rules

No. of starting air receivers

Internal diameter

Total cubic capacity

2.75 each bottle

Material

Steel

Seamless, lap welded or riveted longitudinal joint

Seamless

Range of tensile strength

thickness

1/4"

Working pressure by rules

500 @ 28 tons

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

No

What means are provided for cleaning their

inner surfaces

None

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

Yes

IS A DONKEY BOILER FITTED? *No*

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 *Yes*
(If not, state date of approval)

Receivers *✓*

Separate Tanks *Daily supply tanks*

SPARE GEAR

As per attached list, examined & checked. also a spare propeller shaft placed on board. surveyed by Bureau Veritas. Certificate attached hereto.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops -
During erection on board vessel - -
Total No. of visits

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods
Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Engine seatings
Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions
Completion of fitting sea connections Stern tube Screw shaft and propeller
Material of crank shaft *Steel* Identification Mark on Do. *✓* Material of thrust shaft *Steel* Identification Mark on Do. *✓*
Material of tunnel shafts Identification Marks on Do. *✓* Material of screw shafts *Steel* Identification Marks on Do. *✓*

Is the flash point of the oil to be used over 150° F. *Yes*

Is this machinery duplicate of a previous case *✓*

If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines were constructed under the Bureau Veritas Survey, & are similar to a set now being constructed at the same builder, under this Society's Survey.

The working parts have been opened out & examined, the pumping arrangements found satisfactory. Engines tried under working conditions, & are now eligible in my opinion for the record of L.M.C. 7.25

The oil fuel tanks were partly filled with oil, they were made by the builder of the vessel, plans of same not obtainable. the plating is $\frac{1}{8}$ ". Stems double riveted, $\frac{5}{16}$ " rivets $1\frac{1}{8}$ " spaced. they are stiffened with angle bars riveted to sides & the plate. & in my opinion are efficient.

The amount of Entry Fee ... £ : : When applied for,

Special fee for class. £ 10 : 0 : *19 AUG 1925*

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

Travelling Expenses (if any) £ 2 : 0 : 0 *6.8.25 B.W.*

Committee's Minute *TUES. 11 AUG 1925*

Assigned *See other report*

Same No.

A.E. Farmer

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 1 JAN 1926

TUES. 15 FEB 1927



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