

REPORT ON OIL ENGINE MACHINERY.

N^o 11099

MON. 18 AUG. 1919

Received at London Office

of writing Report

When handed in at Local Office

15th Aug 1919 Port of

Grimsby

in Survey held at

Lincoln

Date, First Survey

and

Last Survey July 1st 1919

Number of Visits

on the ^{Single} ^{Twin} ^{Triple} Screw vessels

2000 ton Schooners

Tons } Gross
 } Net

Built at

Australia

By whom built

Thos. & Mayall Yard No.

When built

Engines made at

Lincoln

By whom made

Ruston & Prosser (Eng. 10776) Engine No. 10776

When made 1919

Boilers made at

By whom made

Boiler No.

When made

Horse Power 320

Owners Commonwealth Government

Port belonging to

Horse Power as per Rule 91

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.

Type of Engines

Polinder

420 x 480

2 or 4 stroke cycle

2 Single or double acting

Single

Maximum pressure in cylinders

300 lbs

No. of cylinders

Four

No. of cranks

Four

Diameter of cylinders

16 7/32 16 1/2

Length of stroke

18 29/32 18 15/16

Revolutions per minute

225

Means of ignition

Hot Bulb

Kind of fuel used

Shale or Crude Oil

Is there a bearing between each crank

Yes

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

Distance between centres of main bearings

21 9/16

Is a flywheel fitted

Yes

Diameter of crank shaft journals

7 3/32

Diameter of crank pins

7 3/32

Breadth of crank webs

10 5/8

Thickness of ditto

4 3/8

Diameter of flywheel shaft

4 1/4

Diameter of tunnel shaft

as per Rule

Diameter of thrust shaft

6 7/8

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

Yes

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 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

Is the outer gland fitted to stern tube

Yes

Length of stern bush

Diameter of propeller

Area of propeller

34 1/4

No. of blades

3

state whether moveable

Yes

Total surface square feet

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

Yes

Are the cylinders fitted with safety valves

No

Means of lubrication

Forced. Sight feed

Are the exhaust pipes and silencers water cooled or lagged with 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

No. of cooling water pumps

One

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

No. of bilge pumps fitted to the main engines

One

Diameter of ditto

3 29/32

Stroke

5 1/2

No. of auxiliary pumps connected to the main bilge lines

None

How driven

No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps

None

In engine room

No. of ballast pumps

None

How driven

Sizes of pumps

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

Yes

Is a separate auxiliary pump suction fitted in

Are all the bilge suction pipes fitted with roses

Yes

Are the roses in Engine Room always accessible

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

Yes

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

Yes

Are they each fitted with a discharge valve always accessible on the plating of the vessel

Yes

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

Yes

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

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

One

No. of stages

Two

Diameters

4 1/2 4 1/2

Stroke

5 1/2

Driven by Cap on Fly Wheel

No. of auxiliary air compressors

None

No. of stages

None

Diameters

None

Stroke

Driven by

No. of small auxiliary air compressors

None

No. of stages

None

Diameter

None

Stroke

Driven by

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

Yes

RECEIVERS:—No of high pressure air receivers

Internal diameter

Cubic capacity of each

Material

Seamless, lap welded or riveted longitudinal joint

Seamless, lap welded or riveted longitudinal joint

Range of tensile strength

Working pressure by Rules

21 Cub ft

Material

Mild Steel

Working pressure by rules

Internal diameter

14 1/2

Is each receiver, which can be isolated, provided with a safety valve as per Rule

Yes

What means are provided for cleaning their

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

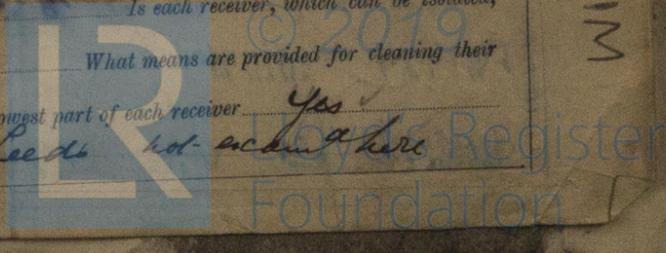
Yes

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

Are there any other

None

Air receivers made by Messrs Clayton of Leeds



1010
11
9510 - UIM
177 - 0156

IS A DONKEY BOILER FITTED?

If so, is a report note forwarded?

HYDRAULIC TESTS:-

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS			40 lbs.		These tests made by Admiralty officers. remain in constant attendance
" part covers & hot bulb, made of cast steel by F. H. Lloyd & Co. 650 lbs.			25 lbs.		
" JACKETS		Jackets	40 lbs.		
" PISTON WATER PASSAGES					
MAIN COMPRESSORS—1st STAGE					
" 2nd "					
" 3rd "					
AIR RECEIVERS—STARTING					
" INJECTION					
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
SILENCER			25 lbs.		
" WATER JACKET			25 lbs.		
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting *no but use as Receivers approved for Stockholm Engine* Separate Tanks *✓*

SPARE GEAR

The foregoing is a correct description,

RUSTON & PROSSER LIMITED. Manufacturer.

Dates of Survey while building: During progress of work in shops -- 12 July 1919; During erection on board vessel -- ; Total No. of visits

Dates of Examination of principal parts: Cylinders 1/7/19, Covers 1/7/19, Pistons 1/7/19, Rods 1/7/19, Connecting rods 1/7/19, Crank shaft 1/7/19, Thrust shaft 1/7/19, Tunnel shafts, Screw shaft, Propeller, Stern tube, Engine sealings, Engines holding down bolts, Completion of pumping arrangements, Engines tried under working conditions

Material of crank shaft: S. M. Steel, Identification Mark on Do. G.S.A., Forged by Langley Forge Co. Langley; Material of thrust shaft: S. M. Steel, Identification Mark on Do. G.S.A., Forged by Ruston & Prosser; Material of tunnel shafts, Identification Marks on Do.; Material of screw shafts, Identification Marks on Do.

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

Is this machinery duplicate of a previous one? Yes. State name of vessel: Steamer Limburg & Groningen, See Gen Repts 10866/1918.

General Remarks: (State quality of workmanship, opinions as to class) This engine has not been built under special survey. The materials were tested by Admiralty officers. The workmanship & materials are good. Prior to the examination of the parts detailed above this engine had been running for some months at the works of Messrs Ruston & Prosser at Lincoln. The engine has been sent to Australia and on completion the case will be eligible in my opinion for the notation LMC with date see London Ltr E 2/16/19 & E 22/17/19.

The amount of Entry Fee: £ 13 13 0; Special: £ 13 13 0; Donkey Boiler Fee; Travelling Expenses (if any) £ -12-0

J. D. Ritchie, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute: FRI. 6 AUG 1920, TUES. 21 SEP 1920

Assigned: see Ltr Rpt 2363

