

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 1962

Received at London Office

WED. AUG. 25 1920

Date of writing Report 19 Aug 1920 When handed in at Local Office

Port of

Stockholm

No. in
Reg. Book.

Survey held at

Stockholm

Date, First Survey 22.1.1918

Last Survey 5.8.

1920

Number of Visits 10

on the Single
Twin
Triple Screw vesselsTons Gross
Net

Master

Built at

By whom built

Yard No.

When built

Boilers made at

Stockholm

By whom made

J. C. G. Bolinders & Co., Ltd.

Engine No.

When made

1920

Boilers made at

By whom made

Boiler No.

When made

Horse Power

500

Owners H. J. Lovrabyasche Maschinenhandel

Port belonging to

Hag

Horse Power as per Rule

143

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Type of Engines Bolinders Oil Engine 2 stroke cycle 2 Single or double acting reversible.

pressure in cylinders 264.5 lbs.

No. of cylinders 4

No. of cranks 4

Diameter of cylinders 520 mm

stroke 750 mm

Revolutions per minute 160

Means of ignition Hot bulb

Kind of fuel used Crude oil

bearing between each crank

Yes

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

679 mm

between centres of main bearings

1050 mm

Is a flywheel fitted

Yes

Diameter of crank shaft journals as per Rule 235 mm

as fitted 240 mm

of crank pins

240 mm

Breadth of crank webs as per Rule 313 mm

as fitted 350 mm

Thickness of ditto as per Rule 132 mm

as fitted 134 mm

of flywheel shaft

as per Rule

Diameter of tunnel shaft as per Rule

as fitted

Diameter of thrust shaft as per Rule

as fitted

227 mm

230 mm

of screw shaft

as per Rule

as fitted

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

er end of the liner made watertight in the propeller boss

If the liner is in more than one length are the joints burned

er 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

ers are fitted, is the shaft lapped or protected between the liners

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

uter gland fitted to stern tube

Length of stern bush

Diameter of propeller

propeller

No. of blades

state whether moveable

Total surface

square feet

reversing

Timing

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

Yes

Thickness of cylinder liners none fitted

cylinders fitted with safety valves

no

Means of lubrication

pumps

Are the exhaust pipes and silencers water cooled or lagged with

acting material

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 2

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

e vessel

No. of bilge pumps fitted to the main engines

2

Diameter of ditto

160 mm

Stroke 66

e overhauled while the other is at work

No. of auxiliary pumps connected to the main bilge lines

How driven

umps

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

lds, etc.

No. of ballast pumps

How driven

Sizes of pumps

last pump fitted with a direct suction from the engine room bilges

State size

Is a separate auxiliary pump suction fitted in

oom and size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine Room always accessible

uices on Engine Room bulkheads always accessible

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

valves or cocks

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

scharge pipes above or below the deep water line

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

es, cocks, valves and pumps in connection with the machinery accessible at all times

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

tion between the sea and the bilges

Is the screw shaft tunnel watertight

Is it fitted with a watertight door

om

If 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

One

No. of stages

Two

Diameters 390/155 mm

Stroke 300 mm

Driven by Main engine

iliary air compressors

No. of stages

Diameters

Stroke

Driven by

all auxiliary air compressors

No. of stages

Diameters

Stroke

Driven by

evenging air pumps

none fitted

Diameter

Stroke

Driven by

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

Yes

ECEIVERS:—No of high pressure air receivers

1

Internal diameter

216 mm

Cubic capacity of each

50 litres

S.M. Steel

Seamless, lap welded or riveted longitudinal joint Seamless

Range of tensile strength min.

23 tons/sq. inch

7 mm

working pressure by Rules

634 lbs.

No. of starting air receivers

1

Internal diameter

582 mm

Total cubic capacity

650 litres

Material

S.M. Steel

Seamless, lap welded or riveted longitudinal joint

lap welded

Range of tensile strength min.

23 tons/sq. inch

thickness

9 mm

Working pressure by rules

225 lbs.

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

ner surfaces.

manhole

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

Yes

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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	4.5.8.1920	264.5 $\frac{\text{lbs}}{\text{sq inch}}$	529 $\frac{\text{lbs}}{\text{sq inch}}$	LLOYD'S TEST 529 LBS SKM 5.8.20 A	
" " COVERS	4.5.8.1920	ditto	ditto		
" " JACKETS	4.5.8.1920		50 $\frac{\text{lbs}}{\text{sq inch}}$		
" PISTON WATER PASSAGES	open pistons				
MAIN COMPRESSORS—1st STAGE	4.8.1920	117.5 $\frac{\text{lbs}}{\text{sq inch}}$	235 $\frac{\text{lbs}}{\text{sq inch}}$	A	
" 2nd "		441 —	882 —		
" 3rd "					
AIR RECEIVERS—STARTING	5.8.1920	15 Atm	30 Atm	LLOYD'S TEST 30 ATM WORKING PR 15 — No 2188 SKM 5.8.20 A	
" INJECTION	4.8.1920	30 Atm	60 Atm	LLOYD'S TEST 60 ATM WORKING PR 30 ATM No 2187 SKM 4.8.20 A	
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
2 SILENCERS	4.8.1920		50 $\frac{\text{lbs}}{\text{sq inch}}$	HYDR. TEST 50 LBS SKM 4.8.20 A	
" WATER JACKET	4.8.1920		ditto		
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting ^{Secretary's letter} 12.9.15; 21.10.15; 10.2.16 Receivers ^{Injection} 16.12.15; ^{Starting} 8.3.16 Separate Tanks —
(If not, state date of approval) 12.5.16

SPARE GEAR to be supplied and inspected when being fitted on board.

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building { During progress of work in shops — 22.1.8, 31.10, 28.11, 1918; 8.1919; 12.3, 26.3, 28.7, 4.5.1920
During erection on board vessel —
Total No. of visits 10

Dates of Examination of principal parts—Cylinders 28/5/1920 Covers 28/5/1920 Pistons 28/5/1920 Rods — Connecting rods 31.10.18
8.9.18 Crank shaft 28/5/20 Thrust shaft 28.11.18 8.1.19 5.8.20 Tunnel shafts 27/8/20 Screw shaft — Propeller — Stern tube — Engine seatings 26.3.20
Engines holding down bolts — Completion of pumping arrangements — Engines tried under working conditions in shop 28.7.20

Completion of fitting sea connections — Stern tube LLOYD'S No 2026 SKM 8.9.18 A Screw shaft and propeller —
Material of crank shaft S.M. Steel Identification Mark on Do. LLOYD'S No 3073 SKM 5.8.20 A
Material of tunnel shafts S.M. Steel Identification Marks on Do. LLOYD'S No 1595 SKM 22.1.18 A Material of screw shafts — 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? Yes If so, state name of vessel see Skm reports no 1799.1800

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

I am of opinion, that this engine is of superior material and workmanship, and as it has been designed and constructed under special survey, it is respectfully submitted that it be classed **LMC** as soon as it has been fitted on board to the satisfaction of the Society's local Surveyors

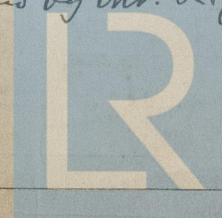
The amount of Entry Fee ... £ : : When applied for,
Special survey in shop £ 35 : 6 : 8 19 Aug. 1920
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : When received,
Sept 2. 1920

Committee's Minute

Assigned

Not for classing Committee

A. Gaxson
Engineer Surveyor to Lloyd's Register of Shipping.
assisted by Mr. K. J. Anderson



Lloyd's Register
Foundation