

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 61406

AUG 16 1939

Received at London Office

Date of writing Report

19

When handed in at Local Office

14. 8.

19

Port of

Glasgow

No. in Survey held at

Glasgow

Date, First Survey

29: 6: 37

Last Survey

8-8-1939

Reg. Book.

Number of Visits

126

38502

on the

Single
Triple
Quadruple

Screw vessel

CAPE CLEAR

Tons

Gross 5085

Net 2976

Built at

Port Glasgow

By whom built

Lithgous & Co.

Yard No. 906

When built

1939

Engines made at

Glasgow

By whom made

David Rowan & Co. Ltd.

Engine No. 1020

When made

1939

Donkey Boilers made at

Glasgow

By whom made

David Rowan & Co. Ltd.

Boiler No. 13936

When made

1939

Brake Horse Power

2850

Owners

Lyle Shipping Co.

Port belonging to

Glasgow

Nom. Horse Power as per Rule

599

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines Rowan Doxford opposed piston 2 or 4 stroke cycle 2 Single or double acting SA

Maximum pressure in cylinders

570 lb/sq. in.

Diameter of cylinders

22"

Length of stroke

85"

No. of cylinders

4

No. of cranks

12

Mean Indicated Pressure

90 lb/sq. in.

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

1950 mm & 1750 mm

Is there a bearing between each crank

no

Revolutions per minute

110

Flywheel dia.

Two 2120 mm

Weight

1-3.77 tons

Means of ignition

compression

Kind of fuel used

Heavy oil

Crank Shaft,

Solid forged

Semi built

All built

dia. of journals

as per Rule 400 mm

as fitted 420 mm

Crank pin dia.

420 mm

Crank Webs

Mid. length breadth

610 mm

Thick. parallel to axis

240 mm

Flywheel Shaft,

Solid forged

Semi built

All built

dia. of journals

as per Rule 400 mm

as fitted 420 mm

Crank pin dia.

420 mm

Crank Webs

Mid. length breadth

610 mm

Thick. parallel to axis

240 mm

Intermediate Shafts,

Solid forged

Semi built

All built

diameter

as per Rule 12.43"

as fitted 14 1/2"

Thrust Shaft,

diameter at collars

as per Rule 13.05"

as fitted 420 mm

Tube Shaft,

diameter

as per Rule

as fitted

Screw Shaft,

diameter

as per Rule 13.762"

as fitted 15 1/2"

Is the

tube

screw

shaft fitted with a continuous liner

yes

Bronze Liners,

thickness in way of bushes

as per Rule

as fitted

775"

Thickness between bushes

as per Rule

as fitted

681"

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

no

If so, state type

no

Is an approved Oil Gland or other appliance fitted at the after end of the tube

yes

Length of Bearing in Stern Bush next to and supporting propeller

5'-2"

Propeller, dia.

16'-0"

Pitch

11'-6"

No. of blades

4

Material

Bronze

whether Moveable

no

Total Developed Surface

94

Method of reversing Engines

compressed air

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

yes

Means of lubrication

greased

Thickness of cylinder liners

23 mm

Are the cylinders fitted with safety valves

yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material

lagged

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

ME cooling by fresh water

Cooling Water Pumps, No.

1 on ME, 1 spare duplex

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.

none

Diameter

Stroke

Can one be overhauled while the other is at work

no

Pumps connected to the Main Bilge Line

No. and Size

How driven

all steam

Is the cooling water led to the bilges

no

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements

Ballast Pumps, No. and size

1 @ 14" & 10 1/2" x 24"

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

1 - steam 8" & 7" x 18"

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

2 @ 3" 2 @ 2" oily bilge connected to transfer pump

In Pump Room

In Holds, &c.

N° 1-2 @ 3" N° 2-2 @ 3 1/2" Deep tank-2 @ 2 1/2" N° 3-2 @ 3" N° 4-2 @ 3" Tunnel well-1 @ 2 1/2" (fitted at bulk)

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

2 @ 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

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

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

What pipes pass through the bunkers

none

How are they protected

none

What pipes pass through the deep tanks

the peak ballast pipe N° 1 & 2 had bilge pipes

Have they been tested as per Rule

see clerk report on hull

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 upper deck

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

Main Air Compressors, No.

none

No. of stages

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

2

No. of stages

3

Diameters

Stroke

Driven by

Small Auxiliary Air Compressors, No.

none

No. of stages

Diameters

Stroke

Driven by

What provision is made for first Charging the Air Receivers

Steam driven compressors

Scavenging Air Pumps, No.

one double acting

Diameter

1850 mm

Stroke

540 mm

Driven by

main engine

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

steam driven

Position

Have the Auxiliary Engines been constructed under special survey

no

Is a report sent herewith

yes

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AIR RECEIVERS:—Have they been made under survey yes State No. of Report or Certificate Glasgow C 36942

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 and cleaned yes

Is a drain fitted at the lowest part of each receiver yes

Injection Air Receivers, No. two

Cubic capacity of each 220 feet

Internal diameter 3'-6"

thickness 1"

Seamless, lap welded or riveted longitudinal joint riveted

Material Steel

Range of tensile strength 28-32 tons

Working pressure 602

by Rules
Actual

Starting Air Receivers, No. two

Total cubic capacity 220 feet

Internal diameter 3'-6"

thickness 1"

Seamless, lap welded or riveted longitudinal joint riveted

Material Steel

Range of tensile strength 28-32 tons

Working pressure 602

by Rules
Actual

IS A DONKEY BOILER FITTED? yes

Is the donkey boiler intended to be used for domestic purposes only no

If so, is a report now forwarded? yes

PLANS. Are approved plans forwarded herewith for Shafting yes

(If not, state date of approval)

Receivers no forwarded with copy Separate Fuel Tanks yes

Donkey Boilers yes

General Pumping Arrangements no

Pumping Arrangements in Machinery Space yes

Oil Fuel Burning Arrangements yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes

State the principal additional spare gear supplied as per attached list

The foregoing is a correct description,

for David Rowan & Co. Ltd
Arch. N. Grierson

Manufacturer.

Dates of Survey while building
During progress of work in shops: 1937 June: 29 Sep: 28 Oct: 4, 8, 11, 13, 18, 20 Nov: 8, 9, 15, 26 Dec: 3, 8, 28 (1938) Jan: 11 Feb: 11, 23
During erection on board vessel: Mar: 8, 23, 25 Apr: 5, 6, 8, 27, 28 May: 12, 16, 17, 18, 20, 24, 25 June: 1, 29 July: 11, 14 Aug: 10, 15, 23, 24, 30
Total No. of visits 126-29, 31 Apr: 6, 12, 18, 19, 21, 24, 25 May: 2, 6, 17, 26, 31 June: 2, 21, 22, 28, 29 July: 1, 7, 11 Aug: 3, 8

Dates of Examination of principal parts—Cylinders 27-12-38 Covers — Pistons 15, 16, 17-3-39 Rods 26-1-39 Connecting rods 26-1-39

Crank shaft 19-4-39 Flywheel shaft see crankshaft Thrust shaft see crankshaft Intermediate shafts 29-3-39 Tube shaft —

Screw shaft 19-4-39 Propeller 21-3-39 Stern tube 17-10-38 Engine seatings 9-8-39 Engines holding down bolts 28-6-39

Completion of fitting sea connections 9-8-39 Completion of pumping arrangements 11-7-39 Engines tried under working conditions 8-8-39

Crank shaft, Material 9-Steel Identification Mark 7665 L.C.D. Flywheel shaft, Material see crankshaft Identification Mark —

Thrust shaft, Material see crankshaft Identification Mark — Intermediate shafts, Material 9-Steel Identification Marks 1248169 L.C.D. 21-3-39

Tube shaft, Material — Identification Mark — Screw shaft, Material 9-Steel Identification Mark 13863 J.N. 19-4-39

Identification Marks on Air Receivers N° 20295
LLOYD'S TEST
800 LBS
W.P. 600 LBS
L.C.D. 2-11-38

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with yes

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo no

If so, have the requirements of the Rules been complied with —

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with —

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.)

The workmanship and materials are good.

The machinery has been constructed under Special Survey, satisfactorily fitted in the vessel, tried under working conditions and found good.

It is eligible in my opinion for Classification and the Record + LMC 8.39
2 DB 120 lb.

The amount of Entry Fee .. £ 6 :

Special ... £ 104 : 19 :

Donkey Boiler Fee ... £ 11 : 4 :

ELECTRIC WELDING FEE
Travelling Expenses (if any) £ 12 : 12 :

Committee's Minute

Assigned + LMC 8.39

2 DB 120 lb.

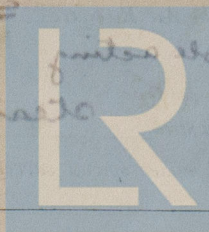
When applied for,

12-8-39

When received,

16-8-39

Engineer Surveyor to Lloyd's Register of Shipping.



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