

RECEIVED

pt. 4b.

6 JUN 1946

IN D.O.

REPORT ON OIL ENGINE MACHINERY.

No. 70705

Received at London Office

5 JUN 1946

Date of writing Report

19

When handed in at Local Office

3 6 1946

Port of

GLASGOW.

o. in
eg. Book.

Survey held at

GLASGOW.

Date, First Survey

31 Jan 1946

Last Survey

7th May,

19 46

Number of Visits

10

Single
Screw vessel

"EMPIRE TEDMUR"

Tons
Gross 890
Net 370

Built at

GLASGOW.

By whom built

A. & J. INGLIS LTD.

Yard No. 1313

When built

1946

Engines made at

GLASGOW.

By whom made

BRITISH POLAR ENGINES LTD.

Engine No. 591

When made

1946

Monkey Boilers made at

CARFIN.

By whom made

ALEX. ANDERSON & SONS LTD.

Boiler No. 3931/2

When made

1945.

Indicated Horse Power

640

Owners

MINISTRY OF TRANSPORT.

Port belonging to

GLASGOW.

Nom. Horse Power as per Rule

125

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Grade for which vessel is intended

INTERNATIONAL.

L ENGINES, &c. —Type of Engines

Heavy Oil M44M

2 or 4 stroke cycle

2

Single or double acting

S.A.

Maximum pressure in cylinders

See B.C. Report.

Diameter of cylinders

Length of stroke

No. of cylinders

No. of cranks

Mean Indicated Pressure

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

Solid forged

Semi built

All built

dia. of journals

as per Rule

as fitted

Crank pin dia.

Crank webs

Mid. length breadth

Mid. length thickness

shrink

Thickness parallel to axis

Thickness around eye-hole

Flywheel Shaft, diameter

as per Rule

as fitted

Intermediate Shafts, diameter

as per Rule

as fitted

Thrust Shaft, diameter at collars

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the

tube

screw

shaft fitted with a continuous liner

No

Bronze Liners, thickness in way of bushes

as per Rule

as fitted

Thickness between bushes

as per Rule

as fitted

Is the after end of the liner made watertight in the

Propeller boss

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

End of tube shaft

Yes

If so, state type

Newark

Length of bearing in Stern Bush next to and supporting propeller

21-9"

Propeller, dia.

71-6"

Pitch

41-4 3/4"

No. of blades

4

Material

Br.

whether moveable

No

Total developed surface

20.2

sq. feet

Method of reversing Engines

Direct

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

-

Means of

Lubrication

Forced

Thickness of cylinder liners

Are the cylinders fitted with safety valves

Yes

Are the exhaust pipes and silencers

water cooled

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.

1-M.E.

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.

2

Diameter

140 m/m

Stroke

90 m/m

Can one be overhauled while the other is at work

Yes

Pumps connected to the Main Bilge Line

No. and size

1 - M.E. 140 m/m x 90 m/m. 1 - G.S. 20 ton/hr. 1-Ballast 40 ton/hr.

How driven

M.E.

St. Ford. Aux. Vert Cent. Elect.

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

1-40 ton/hr.

1 - 20 ton/hr.

Power Driven Lubricating Oil Pumps, including spare pump, No. and size

2@3100 gall/hr.

In series but can be worked independently

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

3-2 1/2"

In pump room

1-3"

In holds, &c.

Independent Power Pump Direct Suctions to the engine room bilges, No. and size

1-3"

1-2 1/2"

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes

Yes

Are the bilge suction pipes in the machinery spaces led from easily

accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Yes

Are all Sea Connections fitted direct on the skin of the Ship

Yes

Are they fitted with valves or cocks

Valves

Are they fixed

sufficiently high on the ship's side to be seen without lifting the platform plates

Yes

Are overboard discharges above or below the deep water line

below

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

-

What 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 compartment to another

Yes

Is the shaft tunnel watertight

-

Is it fitted with a watertight door

-

worked from

-

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.

No. of stages

diameters

stroke

driven by

Auxiliary Air Compressors, No.

No. of stages

diameters

stroke

driven by

Small Auxiliary Air Compressors, No.

1

No. of stages

2

diameters

4 1/2" & 1 1/2"

stroke

3 1/2"

driven by

P. Aux. Eng.

What provision is made for first charging the air receivers

Small aux. compressor above.

Scavenging Air Pumps, No.

diameter

stroke

driven by

Auxiliary Engines crank shafts, diameter

as per Rule

2 1/2" and 3 1/2"

No. 1-18 Kw.

1-25 Kw.

1-6 1/2 Kw.

Have the auxiliary engines been constructed under special survey

Yes

Is a report sent herewith

Yes

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Lloyd's Register
Foundation

AIR RECEIVERS:—Have they been made under survey..... B.C. ✓ State No. of report or certificate SEE B.C. REPORT

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..... Cubic capacity of each..... Internal diameter..... thickness.....

Seamless, lap welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

Starting Air Receivers, No. 2 Total cubic capacity 56 cu.ft. Internal diameter 21-1 1/2" thickness 13/16"

Seamless, lap welded or riveted longitudinal joint Rivetted Material Steel Range of tensile strength..... Working pressure.....

IS A DONKEY BOILER FITTED Yes ✓ If so, is a report now forwarded Yes ✓

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

PLANS. Are approved plans forwarded herewith for shafting 2-12-35 and 4-9-44

Receivers 20-7-34 Separate fuel tanks 22-6-45.

Donkey boilers 5-8-44 General pumping arrangements 18-10-44

Pumping arrangements in machinery space 13-2-45.

Oil fuel burning arrangements.....

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes ✓

State the principal additional spare gear supplied See List.

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 10

Dates of examination of principal parts—Cylinders..... Covers..... Pistons..... Rods..... Connecting rods.....

Crank shaft..... Flywheel shaft..... Thrust shaft..... Intermediate shafts 24-1-46 Tube shaft.....

Screw shaft 24-1-46 Propeller 31-5-45 Stern tube 24-1-46 Engine seatings 31-1-46 Engine holding down bolts 14-3-46

Completion of fitting sea connections 31-1-46 Completion of pumping arrangements 7-5-46 Engines tried under working conditions 7-5-46

Crank shaft, material O.H. Steel Identification mark B.C. 594 Scav. Shaft, material O.H. Steel Identification mark B.C. 582

Thrust shaft, material O.H. Steel Identification mark B.C. 922 Intermediate shafts, material S.M. Steel Identification marks LDS. 14413

Tube shaft, material..... Identification mark..... Screw shaft, material O.H. Steel Identification mark LDS. 14413

Identification marks on air receivers B.C. TEST. B.C. TEST

7079 7076

27-11-45 E.F. 29-10-45 E.F.

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 ✓

Description of fire extinguishing apparatus fitted.....

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo..... 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 Yes ✓ If so, state name of vessel "EMPIRE BELGRAVE".

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been securely fitted on board the vessel and tried under working conditions and found satisfactory and is eligible in our opinion to be classed with record L.M.C. 5,46 and notation 2 D.B. 180 lb.

The Admiralty Specification has been complied with.

NOTE: The torsional vibration characteristics of the main engine were proved satisfactory on a sister vessel "EMPIRE CAMPDEN":

The amount of Entry Fee ... £ 3

INSTALLATION Special ... £ 10 8

SPECIFICATION Donkey Boiler Fee... £ 2 12

Travelling Expenses (if any) £

When applied for 4 JUN 1946

When received 19

Committee's Minute

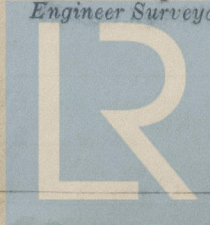
GLASGOW

4 JUN 1946

Assigned

Asl Eng 2 DB 180 lb

Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation