

## REPORT ON OIL ENGINE MACHINERY.

No 67107

Received at London Office

26 MAY 1943

Date of writing Report

19

When handed in at Local Office

24.5.43

Port of

GLASGOW

No. in Survey held at  
Reg. Book.

GLASGOW

Date, First Survey

1st Oct 1941

Last Survey

18th May 1943

Number of Visits

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

"SOCOTRA"Tons } Gross  
Net

Built at

GLASGOW

By whom built

BARCLAY CURLE &amp; CO. LD.

Yard No. 691

When built

1943

Engines made at

-Do-

By whom made

-Do-

Engine No. 691

When made

1943

Donkey Boilers made at

-Do-

By whom made

-Do-

Boiler No. 691

When made

1943

Brake Horse Power

9000

Owners

P. O. STEAM NAV. CO. LD.

Port belonging to

LONDON

Nom. Horse Power as per Rule

1721

Is Refrigerating Machinery fitted for cargo purposes

NO

Is Electric Light fitted

YES

Trade for which vessel is intended

268

OIL ENGINES, &c.—Type of Engines OPPOSED PISTON 2 or 4 stroke cycle 2 Single or double acting SINGLE

Maximum pressure in cylinders

568 lb.

Diameter of cylinders

670 mm

Length of stroke

2320

No. of cylinders

8

No. of cranks

8

Mean Indicated Pressure

85 1/4 lb.

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

1300 mm

Is there a bearing between each crank

YES

Revolutions per minute

119

Flywheel dia.

A2493 mm

Weight

1.15 tons

Means of ignition

COMP.

Kind of fuel used

DIESEL OIL

Crank Shaft,

Solid forged  
Semi built  
All built

dia. of journals

as per Rule

as fitted

Crank pin dia.

500 mm

Crank Webs

Mid. length breadth

710 mm

Thickness parallel to axis

285 mm

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

Tube Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the shaft fitted with a continuous liner

YES

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

YES

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

If two liners are fitted, is the shaft lapped or protected between the liners

shaft

No

If so, state type

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

Propeller, dia.

15'-9"

Pitch

16'-4 1/2"

No. of blades

3

Material

CS+MB

whether Moveable

YES

Total Developed Surface

74 sq. feet

Method of reversing Engines

DIRECT

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

YES

Means of lubrication

FORCED

Thickness of cylinder liners

25 mm

Are the cylinders fitted with safety valves

YES

Are the exhaust pipes and silencers water cooled or 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.

3

Fresh Water

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

Bilge Pumps worked from the Main Engines, No.

-

Diameter

Stroke

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

1-Ballast pump 12 1/2" x 14" x 26"

2-Bilge &amp; Gen. Service 10 1/2" x 9" x 18"

How driven

5 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

One 12 1/2" x 14" x 26"

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

308" x 9" 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

4 @ 3" 2 @ 2 1/2" 2 @ 2 1/2" oily bilge

In Pump Room

In Holds, &amp;c.

Nos 1, 3 &amp; 5 Holds 2 @ 3" Nos 2 &amp; 4 Holds 2 @ 3 1/2" TUNNEL WELL 1 @ 2 1/2"

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

1 @ 5" 1 @ 6"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-bones

YES

Are the Bilge Suctions 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

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

BOTH

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

YES

Is it fitted with a watertight door

NO

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

15 1/2" - 3 3/4"

Stroke

8"

Driven by

-

Auxiliary Air Compressors, No.

2

No. of stages

3

Diameters

15 1/2" - 12 1/2"

Stroke

8"

Driven by

STEAM ENGINE

Small Auxiliary Air Compressors, No.

1

No. of stages

2

Diameters

6 1/4" - 4 1/2"

Stroke

4 1/2"

Driven by

-Do-

What provision is made for first Charging the Air Receivers

STEAM DRIVEN COMPRESSOR

Scavenging Air Pumps, No.

ONE ON EACH ENGINE

Diameter

1550 mm

Stroke

1320 mm

Driven by

MAIN ENGINE

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

No.

-

Position

-

Have the Auxiliary Engines been constructed under special survey

-

Is a report sent herewith

-

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AIR RECEIVERS: — Have they been made under survey YES State No. of Report or Certificate —  
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. 3 Total cubic capacity 711 cu. ft. Internal diameter 5'-0" thickness 1 5/16"  
Seamless, lap welded or riveted longitudinal joint RIVETED Material STEEL Range of tensile strength 29/33 tons 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 Shafing YES Receivers YES Separate Fuel Tanks 2-10-41  
Donkey Boilers YES General Pumping Arrangements YES Pumping Arrangements in Machinery Space 3-12-41  
Oil Fuel Burning Arrangements 15-11-41  
SPARE GEAR.  
Has the spare gear required by the Rules been supplied YES  
State the principal additional spare gear supplied LIST ATTACHED



The foregoing is a true and correct copy of the original as submitted to me by the Manufacturer.

Alexander Macmillan

Manufacturer.

Dates of Survey while building — During progress of work in shops — 1941 Oct 1, Dec 9, 16, 24, 31 1942 Jan 5, 8, 13, 14 Feb 2, 9, 13, 27 Mar 3, 9, 12, 13, 18, 21, 23, 26 Apr 1, 9, 16, 24 May 6, 7, 13, 20  
During erection on board vessel — Jan 3, 9, 12, 15, 17, 23, 25, 29, 30 Jul 3, 6, 10, 14, 16, 31 Aug 3, 6, 10, 14, 21, 27 Sep 11, 14, 17, 30 Oct 2, 9, 14, 21, 26, 29 Nov 3, 5, 10, 18, 23, 25 Dec 3, 7, 9, 11  
Total No. of visits 86

Dates of Examination of principal parts — Cylinders 25-6-42 Covers — Pistons 21-8-42 Rods 21-8-42 Connecting rods 16-10-42  
Crank shaft 5-11-42 Flywheel shaft 5-11-42 Thrust shaft 5-11-42 Intermediate shafts 30-12-42 Tube shaft —  
Screw shaft 15-1-43 Propeller 15-1-43 Stern tube 2-2-43 Engine seatings 8-2-43 Engines holding down bolts 7-4-43  
Completion of fitting sea connections 8-2-43 Completion of pumping arrangements 6-5-43 Engines tried under working conditions 18-5-43  
Crank shaft, Material S.M. Steel Identification Mark 10941A5B+ Flywheel shaft, Material — Identification Mark —  
Thrust shaft, Material S.M. Steel Identification Mark 10941A5B+ Intermediate shafts, Material S.M. Steel Identification Marks 10941A5B+  
Tube shaft, Material — Identification Mark — Screw shaft, Material S.M. Steel Identification Mark 10941A5B  
Identification Marks on Air Receivers LLOYD'S TEST 800 LBS.  
W.P. 600 LBS. A.T.B. 15-1-43 + 22-1-43

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 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 Yes If so, state name of vessel "EMPIRE TRUST" GLS. R.

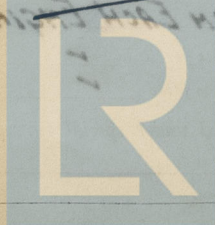
General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been built under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. It has been satisfactorily installed in the vessel, tested under working conditions and found efficient and, in my opinion, is eligible to be classed with record + LMC 5, 43 And notation CL 2 DB 120 lb.

6 steam pipes 5" to 3 1/2" dia. Pressure Pipe as per GLS. R. C. 4820p

The amount of Entry Fee .. £ 6 : - : When applied for, 25 MAY 1943  
Special ... £ 143 : - :  
WELDING FEE ... £ 25 : 4 :  
Donkey Boiler Fee ... £ 9 : 9 :  
AIR RECEIVERS ...  
Travelling Expenses (if any) £ 9 : 9 :  
When received, 19

Committee's Minute GLASGOW 25 MAY 1943

Assigned -1 Lmc 5.43 Air Eng  
2 DB 120 lb



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