

REPORT ON OIL ENGINE MACHINERY.

No. 64614

Received at London Office

13 NOV 1941

Date of writing Report

When handed in at Local Office

11. 11. 1941 Port of

Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey 12. 2. 40 Last Survey 1-11-1941

Number of Visits 115

Single
on the Twin
Triple
Quadruple
Screw vessel

NOTTINGHAM

Tons Gross 8532
Net 5021

Built at Glasgow By whom built Alex Stephen & Sons Ltd Yard No. 576 When built 1941
Engines made at Glasgow By whom made Barclay Curle & Co Ltd Engine No. 129 When made 1941
Donkey Boilers made at Hyde By whom made J. Adamson & Co Ltd Boiler No. 2567 When made 1940
Brake Horse Power 6400 Owners The Federal Steam Navigation Co Ltd Port belonging to London
Nom. Horse Power as per Rule 1294 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes
Trade for which vessel is intended 26 3/8 91 1/16

OIL ENGINES, &c. Type of Engines Worcester opposed piston 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 640 lb per sq. in. Diameter of cylinders 67.0 in. Length of stroke 23.20 in. No. of cylinders 6 No. of cranks 18

Mean Indicated Pressure 85 lb per sq. in. SIDE RODS CENTRES

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 113 Flywheel dia. 8' 2 3/8" Weight 4 tons Means of ignition compression Kind of fuel used Diesel

Crank Shaft, Solid forged dia. of journals as per Rule as appd 530 mm. Crank pin dia. 530 mm. Crank Webs Mid. length breadth 754 mm. Thickness parallel to axis 300 mm. Semi built dia. of journals as fitted 530 mm. Mid. length thickness 300 mm. Thickness around eye hole 221 mm. All built

Flywheel Shaft, diameter as per Rule as appd 460 mm. Intermediate Shafts, diameter as per Rule as fitted 16" Thrust Shaft, diameter at collars as per Rule as fitted 500 mm.

Tube Shaft, diameter as per Rule as fitted 18" Is the screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule as fitted 32" Thickness between bushes as per Rule as fitted 5/8" 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 Is an approved Oil Gland or other appliance fitted at the after end of the tube

shaft no If so, state type Length of Bearing in Stern Bush next to and supporting propeller 5' 10"

Propeller, dia. 16' 9" Pitch 15' 0" No. of blades 4 Material steel whether Moveable yes Total Developed Surface 92 sq. feet

Method of reversing Engines direct air Is a governor or other arrangement fitted to prevent racing of the engine when declutched 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. Two (fresh water) Is the sea suction provided with an efficient strainer which can be cleared within the vessel only

Bilge Pumps worked from the Main Engines, No. none Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and size All centrifugal pumps - Bilge - 100 tons per hr. Gen. service - 100 tons per hr. Ballast - 470 tons per hr.

How driven all by electric motor

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 centrifugal 470 tons Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 centrifugal each 65 tons

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 @ 3" In Pump Room

In Holds, & N°1 hold - 2 @ 3". N°2 hold - 2 @ 3". N°3 hold - 2 @ 2 1/2". N°4 hold - 2 @ 3 1/2". N°5 hold - 1 @ 3". Tunnel well - 1 @ 2 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 3 @ 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

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 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 hold bilge and freshwater pipes How are they protected in pipe tunnel

What pipes pass through the deep tanks only as above 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 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. 2 No. of stages 3 Diameters 12 3/4" - 5" Stroke 7" Driven by electric motor

Auxiliary Air Compressors, No. 2 No. of stages 3 Diameters 12 3/4" - 5" Stroke 7" Driven by

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

What provision is made for first Charging the Air Receivers small compressor with hand starting

Scavenging Air Pumps, No. 1 Diameter 18.52 mm. Stroke 14.80 mm. Driven by main engine

Auxiliary Engines crank shafts, diameter as per Rule as fitted see certificate here

Have the Auxiliary Engines been constructed under special survey yes

Is a report sent herewith NO other reports issued

FORD PORT - Nottingham

AFT PORT -

STARBOARD -

W1201-0130

Lloyd's Register
Foundation

AIR RECEIVERS:—Have they been made under survey

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

Can the internal surfaces of the receivers be examined and cleaned

Injection Air Receivers, No.

Cubic capacity of each

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

Starting Air Receivers, No. **Two**

Total cubic capacity

360 cu ft

Internal diameter

4'-3 1/2"

thickness

1 3/4"

Seamless, lap welded or riveted longitudinal joint

Riveted

Material

steel

Range of tensile strength

29-33 tons

Working pressure

by Rules
Actual

**appd
600 lbs**

IS A DONKEY BOILER FITTED?

yes

If so, is a report now forwarded? **yes** **Inch Rpt No. 10353**

Is the donkey boiler intended to be used for domestic purposes only

Donkey steam heating & main engine circulating water warming

PLANS. Are approved plans forwarded herewith for Shafting

(If not, state date of approval)

11-10-39

Receivers

yes

Separate Fuel Tanks

yes

Donkey Boilers

no

General Pumping Arrangements

no

Pumping Arrangements in Machinery Space

yes

Oil Fuel Burning Arrangements

no

SPARE GEAR.

Has the spare gear required by the Rules been supplied

yes - one spare propeller blade - as approved 12-4-40 (E).

State the principal additional spare gear supplied

see attached list.

The foregoing is a correct description,

Alvander Macneil Manufacturer.

Dates of Survey while building
During progress of work in shops - 1940 Feb 12 May 7 June 19 July 7 Aug 1 Nov 19 Dec 20 25 Dec 26 9 12 17 20 30 (1941) Jan 6 10 22 24 31 Feb 13 20 Mar 3 10 Apr 10 May 6 26 June 6 20 23 July 7 11 15 Aug 6 9 19 20 22 27 29 Oct 1 7 = 42
During erection on board vessel - 1940 Apr 15 22 May 8 23 27 June 6 12 19 July 3 8 17 18 Aug 6 13 19 22 Sep 3 10 17 24 Oct 2 6 22 23 29 31 Nov 4 11 18 Dec 2 13 19 27 Jan 16 27 Feb 11 18 24 Mar 3 4 5 6 10 18 19 28 31 Apr 7 9 16 21 23 28 29 30 May 2 3 8 12 26 Dec 2 13 19 27 Jan 16 27 Feb 11 18 24 Mar 3 4 5 6 10 18 19 28 31 Apr 7 9 16 21 23 28 29 30 May 2 3 8 12 = 73
Total No. of visits **115** 19 23 30 June 12 July 21 24 Aug 5 28 Sep 16 18 24 Oct 2 7 9 21 Nov 1 = 73

Dates of Examination of principal parts—Cylinders **23-6-41** Covers — Pistons **23-6-41** Rods **23-6-41** Connecting rods **23-6-41**

Crank shaft **15-7-41** Flywheel shaft **15-7-41** Thrust shaft **15-7-41** Intermediate shafts **5-3-41** Tube shaft —

Screw shaft **23-5-41** Propeller **23-4-41** Stern tube **12-6-41** Engine seatings **21-7-41** Engines holding down bolts **18-9-41**

Completion of fitting sea connections **24-7-41** Completion of pumping arrangements **7-10-41** Engines tried under working conditions **1-11-41**

Crank shaft, Material **Steel** Identification Mark **9397 A.J.B.** Flywheel shaft, Material **same as crankshaft** Identification Mark **LLOYD'S 3816, 3853, 3875, 3877, 3879, 3881, & 5039 ERB all also**

Thrust shaft, Material **same as crankshaft** Identification Mark — Intermediate shafts, Material **Steel** Identification Marks **L.C.D. 5-3-41 LLOYD'S**

Tube shaft, Material — Identification Mark — Screw shaft, Material **Steel** Identification Mark **Nº 3809 ERB L.C.D. 23-5-41**

Identification Marks on Air Receivers
PORT
LLOYD'S TEST
800 LBS
W.P. 600 LBS
L.C.D.
3-11-40
STARBOARD
LLOYD'S TEST
800 LBS
W.P. 600 LBS
G.O.C.
3-10-40

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

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

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 **"Gloucester" Col. Rpt. Nº 64110**

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

The materials and workmanship 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 records LMC 11, 41. C.L.

Rob
11/11/41

The amount of Entry Fee .. £ **6** :

Special £ **132 : 7** : **11 NOV 1941**

Donkey Boiler Fee £ **12 : 12** :

Air Receivers £ **4 : 4** :

Travelling Expenses (if any) £ **4 : 4** :

Committee's Minute **GLASGOW 11 NOV 1941**

Assigned **11 Nov 11-41**

for A. J. Brown & self **Ch. Davis**
Engineer Surveyor to Lloyd's Register of Shipping.