

## REPORT ON OIL ENGINE MACHINERY.

No. 71426

5 FEB 1947

Received at London Office

Date of writing Report 31-1-1947 When handed in at Local Office

Port of GLASGOW

No. in Survey held at  
Reg. Book.

GLASGOW

Date, First Survey 21. 8. 45

Last Survey 27. 1. 1947

Number of Visits 6

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

MOTOR VESSEL "MUTLAH"

Tons: Gross 6652  
Net 4457

Built at GLASGOW

By whom built CHAS. CONNELLY CO. LTD.

Yard No. 453 When built 1947

Engines made at GLASGOW

By whom made BARCLAY CURLEY CO. LTD.

Engine No. 162 When made 1947

Donkey Boilers made at GLASGOW

By whom made BARCLAY CURLEY CO. LTD.

Boiler No. 162 When made 1947

Brake Horse Power 2500

Owners JAMES NOURSE LTD.

Port belonging to LONDON

Nom. Horse Power as per Rule 516

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted YES

Trade for which vessel is intended

OCEAN GOING

OIL ENGINES, &amp;c. Type of Engines Dorsford Opposed Piston 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 640 lb/sq. in. 23 5/8 600 7/8 Length of stroke 2320 7/8 No. of cylinders 3 No. of cranks 3 (x3)

Mean Indicated Pressure 88 lb/sq. in. Diameter of cylinders 600 7/8 Length of stroke 2320 7/8 No. of cylinders 3 No. of cranks 3 (x3)

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1200 7/8 Is there a bearing between each crank Yes

Revolutions per minute 108 Flywheel dia. F 2300 7/8 F 6.19 Tons Weight A 5.62 Means of ignition Comp. Kind of fuel used Diesel

Crank Shaft, Solid forged dia. of journals as per Rule 418 7/8 as fitted 450 7/8 Crank pin dia. 450 7/8 Crank Webs Mid. length breadth 650 7/8 Thickness parallel to axis 255 7/8

Flywheel Shaft, diameter as per Rule 450 7/8 Intermediate Shafts, diameter as per Rule 11.93 7/8 Thrust Shaft, diameter at collars as per Rule 318 7/8

Tube Shaft, diameter as fitted 15 1/2 Is the tube shaft fitted with a continuous liner Yes

Screw Shaft, diameter as per Rule 13.20 7/8 as fitted 15 1/2 Is the screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 13 1/8 Thickness between bushes as per Rule 13 1/8 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 5'2"

Propeller, dia. 15'3" Pitch 11'9" No. of blades 4 Material H.B. BLADES 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 decelerated Yes Means of lubrication

Forced Thickness of cylinder liners 25 7/8 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

Cooling Water Pumps, No. Two Is the sea suction provided with an efficient strainer which can be cleared within the vessel F.W. COOLED. Yes

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 1 @ 150 tons/hr. 1 @ 95 tons/hr. How driven 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 @ 150 tons/hr. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size M. Eng. 85 7/8 + 608 7/8 SPARE 7'4 1/2 x 15"

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" 1/2 Dam 2 @ 2" 1/2 Bilge 1 @ 2" In Pump Room

In Holds, &amp;c. No. 1, 4 &amp; 5 Holds 2 @ 3" No. 2 &amp; 3 Holds 2 @ 4" Tunnel Well 1 @ 2 1/2"

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 steam-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 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 None 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 Top grating

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 10 1/2 - 2 1/2 Stroke Driven by

Auxiliary Air Compressors, No. Two No. of stages 3 Diameters 10 1/2 - 8 1/4 Stroke 6 Driven by Steam

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 Diameter 1700 7/8 Stroke 608 7/8 Driven by Main engine

Auxiliary Engines crank shafts, diameter as per Rule as fitted Ne. Position

Have the Auxiliary Engines been constructed under special survey Is a report sent herewith



AIR RECEIVERS:—Have they been made under survey

Yes ✓

State No. of Report or Certificate

See marks below

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

Yes ✓

Is a drain fitted at the lowest part of each receiver

Yes ✓

Can the internal surfaces of the receivers be examined and cleaned

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

by Rules

Actual

Starting Air Receivers, No.

Two ✓

Total cubic capacity

278 cub. ft.

Internal diameter

4'0 1/2"

thickness

1 3/32"

Seamless, lap welded or riveted longitudinal joint

D.B.S.T.R.R.

Material

Steel

Range of tensile strength

26/33 ton

Working pressure

by Rules

Actual

app. 600 lb/sq. in.

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

(If not, state date of approval)

Yes ✓

Receivers

Yes ✓

Separate Fuel Tanks

Yes ✓

Donkey Boilers

Yes ✓

General Pumping Arrangements

13-12-45

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

2 M.B.

Propeller blades

1 cylinder liner with gasket

1 Main piston complete with, 1 upper & 1 lower piston pin

The foregoing is a correct description and the particulars of the installation as fitted are as approved for torsional vibration characteristics.

The foregoing is a correct description

A. Macneill

Manufacturer.

Dates of Survey while building

During progress of work in shops--

During erection on board vessel--

Total No. of visits

1945 Aug 21 Oct 4.23 Nov 29 Dec 3.11.46 Jan 9.29 Feb 12 Mar 12.19 Apr 8.11 May 3.14.17.24.30 Jun 3.5.6.7 Aug Jan 5.25 Aug 13.26.27 Sep 4.6.10.13.19.23.26 Oct 1.3.8.14.15.16.25.29 30 Nov 4.7.11.12.18.19.26 29 Dec 11.13.24 (1947) Jan 3.10.27 61.

Dates of Examination of principal parts—Cylinders

15-10-46

Covers

—

Pistons

30-10-46

Rods

30-10-46

Connecting rods

11-11-46

Crank shaft

3-10-46

Flywheel shaft

3-10-46

Thrust shaft

3-10-46

Intermediate shafts

15-10-46

Tube shaft

—

Screw shaft

15-10-46

Propeller

15-10-46

Stern tube

15-10-46

Engine seatings

5-11-46

Engines holding down bolts

13-12-46

Completion of filling sea connections

5-11-46

Completion of pumping arrangements

17-1-47

Engines tried under working conditions

27-1-47

Crank shaft, Material

O.H.S.

Identification Mark

3-10-46

Flywheel shaft, Material

O.H.S.

Identification Mark

3-10-46

Thrust shaft, Material

O.H.S.

Identification Mark

3-10-46

Intermediate shafts, Material

O.H.S.

Identification Marks

NK 15-10-46

Tube shaft, Material

—

Identification Mark

—

Screw shaft, Material

O.H.S.

Identification Mark

NK 15-10-46

Identification Marks on Air Receivers

LLOYDS TEST  
800 LBS/SQ. INCH  
WP 600 LBS/SQ. INCH  
NK 5-7-46

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

Perforated steam pipes, Foamite and sand box.

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

W. MARGATA G.L.S. RPT. N° 71183

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

This machinery has been constructed under special survey in accordance with the Rules and approved plans. The materials and workmanship are good, and the torsional vibration characteristics are in accordance with London Letter 9<sup>th</sup> March 1945 this machinery being an exact duplicate of the W. Margata (Glasgow Rpt. N° 71183). The machinery has been satisfactorily installed in the vessel, tested under full working conditions and found in good order, and in my opinion is eligible to be classed with Quord of + L.M.C. 1.47

2 D.B. 120 lbs and notation C.L. OIL ENGINE

See also Secp letter to Els 29.11.46 regarding restricted revolutions

The amount of Entry Fee

£ 6 : - : -

When applied for,

Special

£ 100 : 16 : -

4 FEB 1947

Donkey Boiler Fee

£ 12 : 12 : -

When received,

AIR RECEIVERS

£ 18 : - : -

Travelling Expenses (if any)

£ 4 : - : -

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Committee's Minute

GLASGOW

4 - FEB 1947

Assigned

1-1-47 Oil Eng.

2 D.B. 120 lbs.

W. Russell

Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation