

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 59141

Received at London Office JAN 6 1938

Date of writing Report

19

When handed in at Local Office

8

10

Port of

Glasgow

No. in Survey held at  
Reg. Book.

Glasgow

Date, First Survey 12:11:36

Last Survey 29:12:1937

Number of Visits 54

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

"BRITISH SECURITY"

Tons { Gross 8470.35  
Net 4978.70

Built at Glasgow

By whom built

Harland &amp; Wolff Ltd.

Yard No. 974 When built 1937

Engines made at Glasgow

By whom made

Harland &amp; Wolff Ltd.

Engine No. 974 When made 1937

Donkey Boilers made at Belfast

By whom made

Harland &amp; Wolff Ltd.

Boiler No. 974 When made 1937

Brake Horse Power 2880 at 105 R.P.M.

Owners

British Tanker Co. Ltd.

Port belonging to London

Nom. Horse Power as per Rule 490

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted yes

Trade for which vessel is intended

Oil tanker.

## OIL ENGINES, &amp;c.

Type of Engines

Solid injection

2 or 4 stroke cycle 4

Single or double acting S.A.

Maximum pressure in cylinders

700 lb

Diameter of cylinders

740 mm.

Length of stroke

59 1/2

No. of cylinders

6

No. of cranks

6

Mean Indicated Pressure

128

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

972 mm

Is there a bearing between each crank

yes

Revolutions per minute

105

Flywheel dia.

2489 mm.

Weight

2540 Kp

Means of ignition

Compression

Kind of fuel used

Diesel Oil

Crank Shaft, dia. of journals

as per Rule 483 mm.  
as fitted 505 mm.

Crank pin dia.

505 mm.

Crank Webs

Mid. length breadth 840 mm.  
Mid. length thickness 310 mm.

Thickens parallel to axis

310 mm.

shrunk

Thickens around eye hole

222.5 mm.

Flywheel Shaft, diameter

as per Rule 483 mm.  
as fitted

Intermediate Shafts, diameter

as per Rule 13.6"  
as fitted 17"

Thrust Shaft, diameter at collars

as per Rule 14.3"  
as fitted 4.54 mm. (17.87")

Tube Shaft, diameter

as per Rule  
as fitted

Screw Shaft, diameter

as per Rule 15"  
as fitted 17"

Is the

tube

screw

shaft fitted with a continuous liner

yes

Bronze Liners, thickness in way of bushes

as per Rule .758"  
as fitted 3/8"

Thickness between bushes

as per rule .57"  
as fitted 1/2"

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

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'-0"

Propeller, dia. 17'-0"

Pitch 11'-6"

No. of blades 4

Material

Mg. Bmg.

whether Moveable

no

Total Developed Surface 89 sq. feet

Method of reversing Engines

Direct

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

yes

Means of lubrication

forced

Thickness of cylinder liners 536.32 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

Cooling Water Pumps, No. Three

2 " 100 "

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.

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 150 ton per hour

2 Bilge &amp; Sanitary pumps each 100 ton per hour

How driven

Steam.

(9x10x10)

Steam.

(7x8x8)

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 9x10x10

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 70 ton per hour

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

Port drain hot 3 1/2"; Starboard drain hot 3 1/2"; Aft. well 3 1/2"

In Pump Room

700 pump room + each 2 @ 4"

In Holds, &amp;c.

Fore hold one 3" Port &amp; one 3" Starboard

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

2 @ 6" &amp; 1 @ 4 1/2"

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

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

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.

2

No. of stages

2

Diameters

120 lbf air

Stroke

356 1/2 mm

Driven by

Steam engine

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Scavenging Air Pumps, No.

Under side of pistons

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter

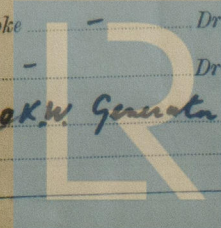
as per Rule

all aux. machinery steam driven except 30 K.W. Generator driven by a Diesel engine. For lighting only

as fitted

a Diesel engine. For lighting only

W1140-0192

Lloyd's Register  
Foundation



AIR RECEIVERS:—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

Is a drain fitted at the lowest part of each receiver

High Pressure 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

Starting Air Receivers, No. Two

Total cubic capacity

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

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

PLANS. Are approved plans forwarded herewith for Shafting

(If not, state date of approval)

Receivers

Separate Fuel Tanks

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description,

For HARLAND AND WOLFE, LIMITED.

Manufacturer.

Dates of Survey while building

During progress of work in shops--

During erection on board vessel--

Total No. of visits

Finnlestone Secretary

1936 Nov: 12, 24 Dec: 2, 18 (1937) Jan: 15, 19, 27 Feb: 12 Mar: 11, 15 Apr: 21

May: 4, 19, 31 July: 5 Aug: 2, 4, 8, 10, 12, 13, 17, 18, 20 Sep: 2, 3, 8, 13, 16, 17, 20, 21, 28 Oct: 4, 7, 11, 25

Nov: 2, 3, 10, 18, 19, 22, 25, 26, 29 Dec: 6, 11, 14, 21, 24, 29

Dates of Examination of principal parts—Cylinders 24-16-9-37 Covers 24-16-9-37 Pistons 10/17-8-37 Rods 10/17-8-37 Connecting rods 7-10-37

Crank shaft 4-8-37 Flywheel shaft 20-9-37 Thrust shaft 20-9-37 Intermediate shafts 20-9-37 Tube shaft 20-9-37

Screw shaft 20-9-37 Propeller 20-9-37 Stern tube 21-9-37 Engine sealings 27-10-37 Engines holding down bolts 6-12-37

Completion of fitting sea connections 27-10-37 Completion of pumping arrangements 21-12-37 Engines tried under working conditions 29-12-37

Crank shaft, Material Steel Identification Mark 974 P. 9 + text w Flywheel shaft, Material Identification Mark

Thrust shaft, Material Steel Identification Mark 6207 P. 9 Intermediate shafts, Material Steel Identification Marks 6075 P. 9

Tube shaft, Material Identification Mark Screw shaft, Material Steel Identification Mark 6268 P. 9

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 MV. "BROOMDALE" G.L. Rpt No. 59000.

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

The machinery of this vessel has been built under Special Survey and in accordance with the approved plans and the Rules of this Society.

The materials and workmanship are good.

The machinery has been efficiently secured in position on board the vessel and after-wards tried under full working conditions with satisfactory results.

The machinery is eligible in my opinion to be classed in the Register Book with notation of 1 LMC 12.37 C.L. 2 DB. W.P. 150 lb.

The amount of Entry Fee .. £ 5 : - : Special ... £ 98 : 10 : Donkey Boiler Fee ... £ : : Travelling Expenses (if any) £ : : When applied for, 5 - JAN 1938 When received, 3/1 1938

Committee's Minute

Assigned + Lmc 12.37

2 DB 150 lb oil eng. Ch.

P. Fitzgibbon + G. E. Murdoch.

Engineer Surveyor to Lloyd's Register of Shipping.



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