

# REPORT ON OIL ENGINE MACHINERY.

No. 112116

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Port of IPSWICH

No. in Survey held at Reg. Book.

ROWHEDGE

Date, First Survey 23 FEBRUARY 1944 Last Survey 29 AUGUST 1944

Number of Visits 12

on the Single Screw vessel

## EMPIRE BARKIS

Tons Gross 340.32  
Net 138.75

Built at ROWHEDGE By whom built ROWHEDGE IRONWORKS LTD Yard No. 639 When built 1944  
 Engines made at GLASGOW By whom made BRITISH AUXILIARIES LTD. Engine No. 506 When made 1944  
 Donkey Boilers made at GLASGOW By whom made BRITISH AUXILIARIES LTD. Boiler No. 1 When made 1944  
 Brake Horse Power 395 Owners MINISTRY OF WAR TRANSPORT Port belonging to LONDON

Nom. Horse Power as per Rule 67/68 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES

Trade for which vessel is intended COASTAL TANKER

**II ENGINES, &c.**—Type of Engines 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders            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 Shaft, Solid forged dia. of journals            as per Rule            Crank pin dia.            as fitted            Crank Webs            Mid. length breadth            Kind of fuel used            Thickness parallel to axis             
Semi built            as per Rule            Crank pin dia.            as fitted            Crank Webs            Mid. length thickness            Kind of fuel used            Thickness around eye-hole             
All built            as per Rule            Crank pin dia.            as fitted            Crank Webs            Mid. length thickness            Kind of fuel used            Thickness around eye-hole           

Flywheel Shaft, diameter            as per Rule            Intermediate Shafts, diameter            as per Rule            Thrust Shaft, diameter at collars            as per Rule             
           as fitted            Intermediate Shafts, diameter            as fitted            Thrust Shaft, diameter at collars            as fitted           

Tube Shaft, diameter            as per Rule            Screw Shaft, diameter            as per Rule            Is the            shaft fitted with a continuous liner             
           as fitted            Screw Shaft, diameter            as fitted            Is the            shaft fitted with a continuous liner           

Bronze Liners, thickness in way of bushes            as per Rule            Thickness between bushes            as per Rule            Is the after end of the liner made watertight in the propeller boss             
           as fitted            Thickness between bushes            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           

If two liners are fitted, is the shaft            or protected between the liners            Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft           

Propeller, dia. 60" Pitch 39" No. of blades 3 Material Bronze whether Moveable no Total Developed Surface 8.85 sq. feet

Method of reversing Engines            Is a governor or other arrangement fitted to prevent racing of the engine when declutched            Means of lubrication           

Thickness of cylinder liners            Are the cylinders fitted with safety valves            Are the exhaust pipes and silencers water cooled or lagged with non-conducting material            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 on main engine + G.S.P. 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 ONE 85mm x 60mm How driven main engine General Service pump 22.8 tons/hr  
           No. and Size            How driven            aux diesel

Is the cooling water led to the bilges            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, G.S.P. 22.8 tons/hr. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size           

Are two independent means arranged for circulating water through the Oil Cooler            Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 2 @ 2 1/2" conn to both main + aux pumps; 1 @ 2 1/2" conn to M.E. pump in Pump Room to hand pump only.  
 In Holds, &c. 1 @ 2" in forward cofferdam conn. to hand pump only.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one @ 2 1/2" conn to a 23 tons/hr rotary pump aux driven.

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

Are all Sea Connections fitted direct on the skin of the ship            Are they fitted with Valves or Cocks           

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates            Are the Overboard Discharges above or below the deep water line           

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel            Are the Blow Off Cocks fitted with a spigot and brass covering plate           

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           

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            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. one No. of stages 2 Diameters 4 5/8" x 3 7/8" Stroke 2.75" Driven by aux diesel

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

What provision is made for first Charging the Air Receivers           

Scavenging Air Pumps, No.            Diameter            Stroke            Driven by           

Auxiliary Engines crank shafts, diameter            as per Rule            No.            Position             
           as fitted            No.            Position           

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

**AIR RECEIVERS:** — Have they been made under survey...  State No. of Report or Certificate...

Is each receiver, which can be isolated, fitted with a safety valve as per Rule...  **yes, safety valves also fitted on compressors.**

Can the internal surfaces of the receivers be examined and cleaned...  Is a drain fitted at the lowest part of each receiver...

**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.**...  Total cubic capacity...  Internal diameter...  thickness...

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

**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...  Receivers...  Separate Fuel Tanks...  21-3-44

Donkey Boilers...  General Pumping Arrangements...  Pumping Arrangements in Machinery Space...  17-3-44

Oil-Fuel Burning Arrangements...

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied...  **yes.**

State the principal additional spare gear supplied...

FOR THE ROWHEDGE IRONWORKS CO LTD

The foregoing is a correct description of the machinery...

MANAGING DIRECTOR...

Dates of Survey while building

During progress of work in shops...

During erection on board vessel...  1944: Feb 23 June 6, 17, 23, 25 July 6, 20 Aug 10, 16, 24, 25, 29

Total No. of visits... 12

Dates of Examination of principal parts

Cylinders...  Covers...  Pistons...  Rods...  Connecting rods...

Crank shaft...  Flywheel shaft...  Thrust shaft...  Intermediate shafts...  6-6-44

Screw shaft...  Propeller...  6-6-44

Completion of sea connections...  6-6-44

Completion of pumping arrangements...  24-8-44

Engines tried under working conditions...  24-8-44 + 25-8-44

Identification Marks on Air Receivers...

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... **Hose connection in E.R. and five extinguishers**

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo...  **oil tanker**

If so, have the requirements of the Rules been complied with...

Is this machinery duplicate of a previous case...  **yes**

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

The machinery (GLASGOW REPORT NO. 68618 + MANCHESTER REPORTS NOS. 11860/1) has been efficiently fitted on board this vessel, under Special Survey and in accordance with the approved plans & Rule requirements, examined under full working conditions & found satisfactory, and is eligible, in my opinion, to have notation of + LMC 8, 44.

Torsograph reading, taken on last vessel, Empire Boxer.

The amount of Entry Fee... £ 25.00

Special... £ 19.00

Donkey Boiler Fee... £ 19.00

Travelling Expenses (if any)... £ 19.00

Committee's Minute

Assigned

J.E. Turpie, Engineer Surveyor to Lloyd's Register of Shipping.



Certificate (if required) to be sent to the Surveyors or requested not to write on or below the space for Committee's Minute.