

REPORT ON OIL ENGINE MACHINERY.

No. 63609

Received at London Office

MAR 28 1941

Date of writing Report

19 ⁴¹ When handed in at Local Office 25: 3: 19 ⁴¹ Port of Glasgow

No. in Survey held at Glasgow
Reg. Book.

Date, First Survey 3rd May 1939 Last Survey 24th Mar. 1941.

Number of Visits 112

Single
Twin
Triple
Quadruple
Screw vessel

CAPE HAWKE

Tons { Gross 5081
Net 2933

Built at Port Glasgow By whom built Lithgow's Ltd. Yard No. 930 When built 1941

Engines made at Glasgow By whom made David Brown & Co. Ltd. Engine No. 1037 When made 1941

Monkey Boilers made at Dunan By whom made Cochran & Co. Dunan Ltd. Boiler No. 4493 When made 1941

Brake Horse Power 2850 Owners Lyle Shipping Co. Port belonging to Glasgow

Nom. Horse Power as per Rule 599 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended

ENGINES, &c.—Type of Engines Rover Oxford Opposed Piston 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 570 lb. Diameter of cylinders 560 mm Length of stroke 2160 mm No. of cylinders 4 No. of cranks 12

Mean Indicated Pressure 90 lb. Diameter of crank, measured from inner edge to inner edge 1120 mm Is there a bearing between each crank No

Revolutions per minute 110 Flywheel dia. 2120 mm Weight F. 8.77 tons Means of ignition Compression Kind of fuel used Diesel Oil

Crank Shaft, { Solid forged
Semi built
All built } dia. of journals as per Rule 420 mm as fitted 420 mm Crank pin dia. 420 mm Crank Webs Mid. length breadth 610 mm Thickness parallel to axis 240 mm
Mid. length thickness 240 mm Thickness around eye hole 193 mm

Flywheel Shaft, diameter as per Rule 12.43" as fitted 14 1/2" Thrust Shaft, diameter at collars as per Rule 13.05" as fitted 420 mm

Propeller Shaft, diameter as per Rule 13.762" 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 .775" as fitted 13/16" Thickness between bushes as per Rule .681" as fitted 3/4" 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 Yes

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 Yes

two liners are fitted, is the shaft lapped or protected between the liners No Is an approved Oil Gland or other appliance fitted at the after end of the tube Yes

propeller, dia. 16'-0" Pitch 11'-6" No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 94 sq. feet

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

Thickness of cylinder liners 23 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled 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 No

Cooling Water Pumps, No. 1 on M.E. 1 spare duplex Is the sea suction provided with an efficient strainer which can be cleared within the vessel F.W. Cooling

Large 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 @ 14" x 10 1/2" x 24" 1 @ 9" x 8" x 18" 1 @ 5" x 8" x 8" } How driven All steam

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 @ 14" x 10 1/2" x 24" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 ME 100 mm x 540 mm 1 steam 8" x 7" 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 2 @ 3" 2 @ 2" oily bilge In Pump Room -

Holds, &c. N°1-2@3" N°2-2@3 1/2" Deep tank 2@2 1/2" N°3-2@3" N°4-2@3" 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 strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces 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 none How are they protected -

What pipes pass through the deep tanks F.P. Ballast pipes. N°1 & 2 bilge pipes Have they been tested as per Rule See GRH. apt on hull.

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

On 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 3 Diameters 11 1/2"-2 3/4"; 11 1/2"-9 1/2"; 6 1/2" Stroke - Driven by steam

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

Is any provision made for first Charging the Air Receivers steam driven compressors

Revolving Air Pumps, No. one Diameter 1850 mm Stroke 540 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 -



AIR RECEIVERS:—Have they been made under survey Yes ✓ State No. of Report or Certificate GLS. Certs. C 4058

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 — by Rules — Actual —

Starting Air Receivers, No. 2 ✓ Total cubic capacity 220 cu. ft. Internal diameter 3'-6" thickness 1"

Seamless, lap welded or riveted longitudinal joint riveted ✓ Material steel Range of tensile strength 28/32 tons Working pressure 602 lb. by Rules 602 lb. Actual 600 lb.

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 Shafting Yes (If not, state date of approval) Receivers Yes Separate Fuel Tanks Yes

Donkey Boilers Yes General Pumping Arrangements — 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 List attached ✓

The foregoing is a correct description,

for David Rowan & Co. Ltd.

Arch^d N. Grierson

Manufacturer.

Dates of Survey while building: During progress of work in shops-- 1939 May: 3, 22, 26, 31 June: 13, 16, 20, 26, 29, 30 Aug: 3, 4, 7, 9, 15, 16, 24 Sep: 4, 11, 15, 19, 26 Oct: 2, 4, 12, 20, 24 Nov: 29 Dec: 8, 12, 18, 21 (1940) Jan: 9, 30 Feb: 23, 26 Mar: 4, 6, 28 Apr: 9, 11, 15, 16, 17 May: 8, 9, 14, 20, 21, 24, 27, 28, 31 July: 2, 9, 11, 16, 17, 25, 29 Aug: 5, 12, 27, 28, 29 Sep: 6, 20, 23, 24, 25, 26, 27 Oct: 3, 5, 10, 16, 18, 30 Nov: 1, 4, 5, 7, 8, 10 Total No. of visits: 12-19, 20, 25, 26 Dec: 6, 11, 12, 13, 27, 30 (1941) Jan: 2, 7, 30 Feb: 7, 12, 18, 19, 25 Mar: 3, 7, 12

Dates of Examination of principal parts—Cylinders 20-5-40 Covers — Pistons 20-9-40 Rods 20-9-40 Connecting rods 6-6-40

Crank shaft 2-7-40 Flywheel shaft 2-7-40 Thrust shaft 2-7-40 Intermediate shafts 17-6-40 Tube shaft —

Screw shaft 21-5-40 Propeller 30-12-40 Stern tube 9-5-40 Engine seatings 10-5-40 Engines holding down bolts 18-2-41

Completion of fitting sea connections 30-4-40 Completion of pumping arrangements 3-3-41 Engines tried under working conditions 7-3-41

Crank shaft, Material SM. steel Identification Mark 8719 F.D. Flywheel shaft, Material SM. steel Identification Mark 8719 F.D.

Thrust shaft, Material SM. steel Identification Mark 8719 F.D. Intermediate shafts, Material SM. steel Identification Marks 8719 A, B

Tube shaft, Material — Identification Mark — Screw shaft, Material SM. steel Identification Mark 8719 A, B

Identification Marks on Air Receivers

N^o 20552

LLOYD'S TEST 800 lb. WP 600 lb. L.C.D 18-6-40.

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 ✓

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 "CAPE CLEAR" GLS. R^o N^o 61406

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, in my opinion, is eligible to be classed in the Register Book with record + LMC 3, 41 and notation CL 2 DB 120 lb.

Glasgow

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

906
25/3/41

The amount of Entry Fee .. £ 6 : - : When applied for, 25 MAR 1941
Special £ 104 : 19 :
Donkey Boiler Fee £ 11 : 4 : When received,
WELDING FEE
Travelling Expenses (if any) £ 12 : 12 :

Committee's Minute GLASGOW 25 MAR 1941

Assigned -1- LMC 3, 41
2 DB 120 lb.
Oil Eng.

Engineer Surveyor to Lloyd's Register of Shipping.

