

REPORT ON OIL ENGINE MACHINERY.

No. 61406

AUG 16 1939

Received at London Office

Date of writing Report 19 When handed in at Local Office 14. 8. 39 Port of Glasgow
No. in Survey held at Glasgow Date, First Survey 29: 6: 37 Last Survey 8-8-1939
Reg. Book. 38502 on the Single Screw vessel CAPE CLEAR Number of Visits 126

Tons { Gross 5085
Net 2976

Built at Port Glasgow By whom built Lithgow's Yard No. 906 When built 1939
Engines made at Glasgow By whom made David Rowan & Co. Ltd Engine No. 1020 When made 1939
Donkey Boilers made at Glasgow By whom made David Rowan & Co. Ltd Boiler No. 1020 When made 1939
Boiler No. 13936
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

OIL ENGINES, &c.—Type of Engines Rowan Diesel opposed piston 2 or 4 stroke cycle 2 Single or double acting SA

Maximum pressure in cylinders 570 lbs/sq in Diameter of cylinders 22" Length of stroke 85" No. of cylinders 4 No. of cranks 12

Mean Indicated Pressure 90 lbs/sq in Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1950mm & 1750mm Is there a bearing between each crank no

Revolutions per minute 110 Flywheel dia. Two 2120mm Weight 1-3.77 tons Means of ignition compression Kind of fuel used Heavy oil

Crank Shaft, { Solid forged dia. of journals as per Rule 400mm as fitted 420mm Crank pin dia. 420mm Crank Webs Mid. length breadth 610mm Thickness parallel to axis 240mm
Semi built All built shrunk Thickness around eyehole 175mm

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

Tube 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 -

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 yes

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

Method of reversing Engines compressed 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 23mm 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. on M.E. 1 spare duplex Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes for compressors 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 1 @ 14" & 10 1/2" x 24" 1 @ 9" & 8" x 18" 1 @ 5" & 8" duplex.
How driven all 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 @ 14" & 10 1/2" x 24" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 - steam 8" & 7" x 8" M.E. - 1 @ 100mm x 540mm DA

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 - connected to transfer pump. In Pump Room

In 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" (fitted at eye)

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 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 none How are they protected -

What pipes pass through the deep tanks the peak ballast pipe, N° 1 & 2 hold bilge pipes Have they been tested as per Rule see cork report 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

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 - Stroke - Driven by -

Auxiliary Air Compressors, No. 2 No. of stages 3 Diameter 1 1/2" - 2 1/2" Stroke 6" Driven by steam

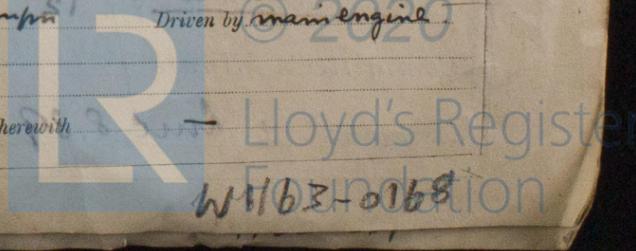
Small Auxiliary Air Compressors, No. none No. of stages - Diameters - Stroke - Driven by -

What provision is made for first Charging the Air Receivers steam driven compressors

Scavenging Air Pumps, No. one double acting Diameter 1850mm Stroke 540mm Driven by main engine

Auxiliary Engines crank shafts, diameter as per Rule steam driven as fitted 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 Glasgow C 36942

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. hyperbaric Cubic capacity of each 220 feet Internal diameter 3'-6" thickness 1"
Seamless, lap welded or riveted longitudinal joint Material Steel Range of tensile strength 28-32 tons Working pressure 602
by Rules Actual 600 lbs

Starting Air Receivers, No. two Total cubic capacity 220 feet Internal diameter 3'-6" thickness 1"
Seamless, lap welded or riveted longitudinal joint Material Steel Range of tensile strength 28-32 tons Working pressure 602
by Rules Actual 600 lbs

IS A DONKEY BOILER FITTED? yes one Bochman composite If so, are reports 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 Receivers no forwarded with copy of certificate. Separate Fuel Tanks yes

Donkey Boilers yes General Pumping Arrangements no 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 as per attached list

[Handwritten list of spare gear items including various shafts, pistons, and rods with identification marks.]

The foregoing is a correct description,

for David Rowan & Co. Ltd
Arch^{ts} N. Grierson

Manufacturer.

Dates of Survey while building
During progress of work in shops: 1937 June: 29 Sep: 28 Oct: 4, 8, 11, 13, 18, 20 Nov: 8, 9, 15, 26 Dec: 3, 8, 28 (1938) Jan: 11 Feb: 11, 23
Mar: 8, 23, 25 Apr: 5, 6, 8, 27, 28 May: 12, 16, 17, 18, 20, 24, 25 June: 1, 29 July: 11, 14 Aug: 10, 15, 23, 24, 30
During erection on board vessel: Sep: 2, 6, 7, 12, 14, 19, 20, 22, 29, 30 Oct: 3, 4, 5, 6, 13, 14, 17, 18, 21, 27, 28, 31 Nov: 1, 2, 3, 4, 7, 9, 14, 16, 24, 30
Dec: 6, 9, 15, 16, 27, 28, 29, 30 (1939) Jan: 10, 20, 24, 26 Feb: 15, 17, 21, 24, 27, 28 Mar: 1, 3, 7, 8, 10, 15, 16, 17, 21, 22
Total No. of visits 126-29, 31 Apr: 6, 12, 18, 19, 21, 24, 25 May: 2, 6, 17, 26, 31 June: 2, 21, 22, 28, 29 July: 1, 7, 11 Aug: 3, 8

Dates of Examination of principal parts—Cylinders 27-12-38 Covers — Pistons 15, 16, 17-3-39 Rods 26-1-39 Connecting rods 26-1-39

Crank shaft 19-4-39 Flywheel shaft see crankshaft Thrust shaft see crankshaft Intermediate shafts 29-3-39 Tube shaft —

Screw shaft 19-4-39 Propeller 21-3-39 Stern tube 17-10-38 Engine seatings 9xk Engines holding down bolts 28-6-39

Completion of fitting sea connections 9xk Completion of pumping arrangements 11-7-39 Engines tried under working conditions 18-8-39

Crank shaft, Material 9 Steel Identification Mark 7665 L.C.D. Flywheel shaft, Material see crankshaft Identification Mark —

Thrust shaft, Material see crankshaft Identification Mark — Intermediate shafts, Material 9 Steel Identification Marks 1248169 L.C.D. 29-3-39

Tube shaft, Material — Identification Mark — Screw shaft, Material 9 Steel Identification Mark 13863 J.N. 19-4-39

Identification Marks on Air Receivers
N^o 20295
LLOYD'S TEST
800 LBS
WP. 600 LBS
L.C.D. 2-11-38

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 no If so, state name of vessel —

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

The workmanship and materials 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 Remark LMC 8.39
2 DB 120 lb.

[Handwritten notes and signatures, including 'Glasgow' written vertically on the left margin.]

The amount of Entry Fee .. £ 6 :
Special £ 104 : 19 :
Donkey Boiler Fee ... £ 11 : 4 :
ELECTRIC WELDING FEE
Travelling Expenses (if any) £ 12 : 12 :
When applied for, 12-8-39
When received, 16-8-39

S. H. Davis
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 15 AUG 1939

Assigned + LMC 8.39
2 DB 120 lb.

