

REPORT ON OIL ENGINE MACHINERY.

No. 61030

Received at London Office

MAY 20 1939

Date of writing Report 4-5-39 When handed in at Local Office 6:5:39 Port of Glasgow

No. in Survey held at Dumbarton Date, First Survey 18:2:38 Last Survey 3-5-1939
eg. Book. Number of Visits 62

on the ^{Single} Twin ^{Triple} Screw vessel

Royal Daffodil

Tons { Gross 2060
Net 1046

Built at Dumbarton By whom built W. Denny & Sons Ltd. Yard No. 1330 When built 1939

Engines made at " By whom made " " Engine No. 1082 When made 1929.

Donkey Boilers made at None By whom made " Boiler No. " When made "

Brake Horse Power 4500 Owners General S. F. C. Ltd. Port belonging to London

Com. Horse Power as per Rule 841 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended English Channel.

MAIN ENGINES, &c. Type of Engines Sulzer 2 or 4 stroke cycle Yes Single or double acting Yes

Maximum pressure in cylinders 850 lbs. Diameter of cylinders 360 m/m Length of stroke 600 m/m No. of cylinders 12 No. of cranks 24 total

Mean Indicated Pressure 443 m/m Is there a bearing between each crank Yes

Revolutions per minute 320 Flywheel dia. 1247.66 Weight 277.7 KC Means of ignition Corro Kind of fuel used Diesel

Crank Shaft, Solid forged dia. of journals 25-2-38 as per Rule 240 m/m as fitted Crank pin dia. 240 m/m Crank Webs Mid. length breadth 380 m/m Thickness parallel to axis solid

Intermediate Shafts, diameter 250 m/m as per Rule 250 m/m as fitted Intermediate Shafts, diameter 25-2-38 as per Rule 7 3/4 as fitted Thrust Shaft, diameter at collars 250 m/m as fitted

Propeller Shaft, diameter None as per Rule None as fitted Screw Shaft, diameter 8 5/16 as per Rule 8 5/16 as fitted Is the shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes 9/16 as per Rule 9/16 as fitted Thickness between bushes 7/16 as per Rule 7/16 as fitted 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 one length

When 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

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

propeller, dia. 6'-9" Pitch 8'-6" No. of blades 3 Material Bronze whether Moveable No Total Developed Surface 22.5 sq. feet

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

Thickness of cylinder liners 26 m/m Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material No If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Up Turned

Cooling Water Pumps, No. 2 Upright each 150 tons per hr 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. None Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size 1 G.S. 50 tons per hr, 1 G.S. 50 tons per hr How driven Motor Motor

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 1-50 tons per hr Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 each 80 tons per hr

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 Turbines 4-2", 1-2 1/2", 2-1 1/2", E.R. 1-2 1/2" In Pump Room none

in Holds, &c. Baggage hold 1-2", Crews space 1-2", Chain locker 1-2", Officers Accom. 2-2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-3 1/2", 1-4"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces

protected 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 Valves

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 below

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 None

What pipes pass through the bunkers None 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 No Is it fitted with a watertight door No 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 Stub

Main Air Compressors, No. 4 total No. of stages 1 Diameters 110 m/m Stroke 340 m/m Driven by Main Eng.

Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 2-9" & 1-3 1/2" Stroke 8" Driven by motor

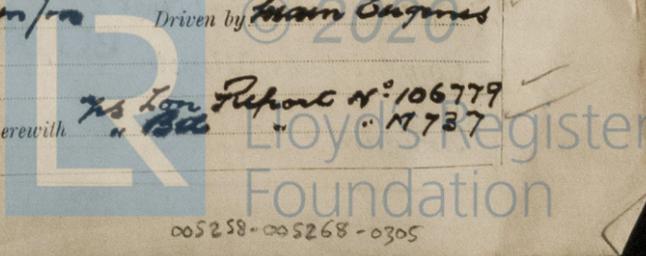
Small Auxiliary Air Compressors, No. None No. of stages Diameters Stroke Driven by

What provision is made for first Charging the Air Receivers Hand operated Air Comps. 3 each 75 per hr @ 300 lbs

Scavenging Air Pumps, No. 3 total Diameter 900 m/m Stroke 340 m/m Driven by Main Engines

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

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



AIR RECEIVERS:—Have they been made under survey *yes* ✓ State No. of Report or Certificate **C 37848** ✓
 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. *None* Cubic capacity of each *18 cu. ft.* Internal diameter *2'-4 1/2"* thickness *3/8"* ✓
 Seamless, lap welded or riveted longitudinal joint *riveted* Material *St. Steel* Range of tensile strength *28-32* Working pressure by Rules *200* ✓
 Starting Air Receivers, No. *3* ✓ Total cubic capacity *120 cu. ft.* Internal diameter *2'-9"* ✓ thickness *25/32"* ✓
 Seamless, lap welded or riveted longitudinal joint *yes* ✓ Material *S* ✓ Range of tensile strength *29-33* Working pressure by Rules *600* ✓

IS A DONKEY BOILER FITTED? *no* ✓ If so, is a report now forwarded? *yes* ✓
 Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting *yes* ✓ Receivers *yes* ✓ Separate Fuel Tanks *yes* ✓
 (If not, state date of approval) Donkey Boilers *None* ✓ General Pumping Arrangements *yes* ✓ 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 *1 - screw shaft, 1 - cyl. liner, 1 - cyl. cover.*

The foregoing is a correct description,

WILLIAM DENNY & BROTHERS LIMITED
 (ENGINEERING DEPT.)
 Manufacturer. *for W. Guthrie*

Dates of Survey while building
 During progress of work in shops-- 1938 Feb: 18 Mar: 1-30 Apr: 8-15-22-29 May: 13-25 June: 2-15-21-28-30 July: 4-7-8
 During erection on board vessel-- Aug: 1-3-5-12-17-19-23-26 Sep: 2-9-16-23-29 Oct: 6-11-19 Nov: 4-9-16-23 Dec: 2-8-16-22
 Total No. of visits *62* Jan: 7-11-19-24 Feb: 2-9-16-23 Mar: 2-9-16-20-23 Apr: 6-11-13-20-21-27 May: 3

Dates of Examination of principal parts—Cylinders *1-3-38* Covers *30-3-38* Pistons *30-3-38* Rods *8-4-38* Connecting rods *8-4-38*
 Crank shaft *18-2-38* Flywheel shaft *18-2-38* Thrust shaft *18-2-38* Intermediate shafts *19-8-38* Tube shaft ✓
 Screw shaft *5-8-38* Propeller *5-8-38* Stern tube *16-1-38* Engine sealings *4-11-38* Engines holding down bolts *16-2-39*
 Completion of filling sea connections *24-1-39* Completion of pumping arrangements *16-3-39* Engines tried under working conditions *23-3-39*
 Crank shaft, Material *S* Identification Mark *8725, 9015* Flywheel shaft, Material *S* Identification Mark *8725, 9015*
 Thrust shaft, Material *S* Identification Mark *8725, 9015* Intermediate shafts, Material *S* Identification Marks *8281*
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material *S* Identification Mark *457467*
 Identification Marks on Air Receivers *20299A, 20299B, 20299C, 20299D* Spare *458*

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 *not desired*
 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 machinery of this vessel has been built under special survey in accordance with the approved plans and the Society's Rules and requirements, the materials and workmanship are good, it has been securely fitted on board and satisfactorily tried under working conditions, and in my opinion is eligible for the record + L.M.C. 5-39.*

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6/5/39

The amount of Entry Fee .. £ 6 : -
 Special .. £ 117 : 1
 4-air receivers .. £ 8 : 8
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : :
 Committee's Minute **GLASGOW**
 Assigned *1-1 Dec 5, 39*

When applied for, from
 London **4 MAY 1939**
 When received,
 7. 6 1939
GLASGOW 9 - MAY 1939

Jas. Cairns
 Engineer Surveyor to Lloyd's Register of Shipping.

