

REPORT ON OIL ENGINE MACHINERY.

No. 64350

18 SEP 1941

Received at London Office

Date of writing Report 19 13. 9. 41 When handed in at Local Office 13. 9. 41 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 28. 11. 39 Last Survey 10. 9. 41

Reg. Book. Single on the Twin Screw vessel "DINGLEDALE" Number of Visits 74

Tons { Gross 8145
Net 4755

Built at Glasgow By whom built Harland & Wolff, Ltd Yard No. 1044 G When built 1941

Engines made at Glasgow By whom made Harland & Wolff, Ltd. Engine No. 1044 G When made 1941

Donkey Boilers made at Belfast By whom made Harland & Wolff, Ltd Boiler No. 1044 G When made 1941

Brake Horse Power 3500 (Metric) Owners British Admiralty. Port belonging to London

Nom. Horse Power as per Rule 502 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Tanker

II ENGINES, &c.—Type of Engines Heavy oil. Airless injection 2 or 4 stroke cycle 4 Single or double acting S.A.

Maximum pressure in cylinders 700 lb. Diameter of cylinders 650 mm Length of stroke 1400 mm No. of cylinders 8 No. of cranks 8

Mean Indicated Pressure 128 lb Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 844 mm Is there a bearing between each crank yes

Revolutions per minute 120 Flywheel dia. 2218.5 mm Weight 2150 Kgs. Means of ignition Compression Kind of fuel used Diesel oil.

Crank Shaft, { Solid forged
Semi built
All built } dia. of journals as per Rule App'd 460 mm Crank pin dia. 460 mm Crank Webs Mid. length breadth 800 mm Thickness parallel to axis 267 mm

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as fitted 19" Thrust Shaft, diameter at collars as per Rule App'd 18 1/4"

Tube Shaft, diameter as per Rule Screw Shaft, diameter as fitted 18" Is the { tube } shaft fitted with a continuous liner { yes

Bronze Liners, thickness in way of bushes as per Rule App'd 7/8" Thickness between bushes as per Rule App'd 11/16" 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

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 yes Is an approved Oil Gland or other appliance fitted at the after end of the tube

shaft no If so, state type yes Length of Bearing in Stern Bush next to and supporting propeller 5'-0"

Propeller, dia. 15'-9" Pitch 11'-3" No. of blades 4 Material Bronze whether Moveable no Total Developed Surface 83.77 sq. feet

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

forced Thickness of cylinder liners 68 & 25 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 yes

Cooling Water Pumps, No. 4 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. 2 (1 bilge & 1 sanitary) Diameter Each 32 tons per hour Stroke 32 tons per hour Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line { No. and Size Bilge Pump 32 tons/hr | Sanitary pump 32 tons/hr | Ballast Pump 200 tons/hr | Standby Bilge Pump 80 tons/hr

How driven Main engine | Main engine | Steam | 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 yes

Ballast Pumps, No. and size One, 200 tons/hour Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Two 40 tons/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 3 @ 3 1/2"; 2 @ 2 1/2"; 2 @ 2" In Pump Room yes

In Holds, &c. yes Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 @ 6"

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

and 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 Fabricated stools, & direct 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 only 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 bunters none How are they protected yes

What pipes pass through the deep tanks none Have they been tested as per Rule yes

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 yes

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes

Main Air Compressors, No. 2 No. of stages 2 Diameters 280 & 245 mm. Stroke 130 mm Driven by Steam engine

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 280 & 245 mm. Stroke 130 mm Driven by Steam engine

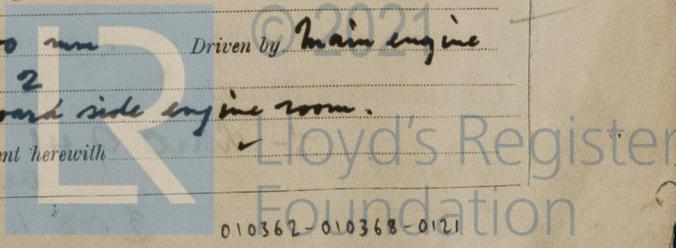
Small Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 280 & 245 mm. Stroke 130 mm Driven by Steam engine

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

Scavenging Air Pumps, No. Under piston Diameter 650 mm Stroke 1400 mm Driven by Main engine

Auxiliary Engines crank shafts, diameter as per Rule all auxiliaries steam driven No. 2 Position Starboard side engine room.

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 Z. 618
 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 _____
Starting Air Receivers, No. 2 Total cubic capacity 800 Cu. ft. Internal diameter 5-1 23/32 thickness Shell 5/16 Ends. 3/8
 Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength Ends 26/30 Working pressure _____ by Rules _____ Actual 356 lb

IS A DONKEY BOILER FITTED? yes If so, is a report now forwarded? Yes. Belfast Rpt No 12865
 Is the donkey boiler intended to be used for domestic purposes only no (hand shaft 20-2-40)
PLANS. Are approved plans forwarded herewith for Shafting 20-10-39 Receivers Made at Belfast. Separate Fuel Tanks 5-10-40
 Donkey Boilers Made at Belfast General Pumping Arrangements 12-10-39 Pumping Arrangements in Machinery Space 4-12-40
 Oil Fuel Burning Arrangements 27-12-40

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes
 State the principal additional spare gear supplied as per attached list.

The foregoing is a correct description,
 For HARLAND AND WOLFF, LIMITED,
Wm. J. Wright. Manufacturer.

Dates of Survey while building
 During progress of work in shops-- 1939 Nov: 28 (1940) Jan: 11 Mar: 4 Apr: 30 May: 6-14 June: 20-26 July: 19-26-31 Aug: 13
 During erection on board vessel-- Jan: 4-6-7-8-9-10-16-25 Feb: 7-10-19-20 Mar: 4-17-19-20-21-24 Apr: 2-3-7-9-15-21-23-28 May: 8-12 June: 6-9-10
 Total No. of visits 74
 Dates of Examination of principal parts—Cylinders 10-1-41 Covers 10-1-41 Pistons 10-1-41 Rods 16-1-41 Connecting rods 7-2-41
 Crank shaft 21-10-40 Flywheel shaft ✓ Thrust shaft 21-10-41 Intermediate shafts 4-2-41 Tube shaft ✓
 Screw shaft 17-3-41 Propeller 17-3-41 Stern tube 17-3-41 Engine seatings 19-3-41 Engines holding down bolts 10-6-41
 Completion of fitting sea connections 24-3-41 Completion of pumping arrangements 10-9-41 Engines tried under working conditions 10-9-41
 Crank shaft, Material Steel Identification Mark 1064 P.F. TEST NOS. Flywheel shaft, Material ✓ Identification Mark ✓
 Thrust shaft, Material Steel Identification Mark S. 788 P.F. Intermediate shafts, Material Steel Identification Marks S. 804 P.F.
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material Steel Identification Mark S. 813 P.F.
 Identification Marks on Air Receivers No. 209, Lloyd's test. 585 lb. WP. 356 lb. RS. 14-2-41.

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 ✓ 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 ✓ If so, state name of vessel Similar to "San Emiliano"

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 afterwards tried under full working conditions with satisfactory results.
 The machinery is eligible in my opinion to be classed in the Register Book with notations of 1-LMC 9.41 C.L.; 2 DB WP. 150 lb.

Certificate required in Duplicate. GLASGOW

Committee's Minute to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee .. £ 6 : - : When applied for,
 Special £ 100 : 2 : 16 SEP 1941
 Donkey Boiler Fee £ : : : When received,
 Travelling Expenses (if any) £ : : : 19

Committee's Minute GLASGOW 16 SEP 1941
 Assigned 1-LMC 9.41 air Eng.
2 DB 150 lb

P. Fitzgerald & E. E. Murdoch
 Engineer Surveyor to Lloyd's Register of Shipping.

