

REPORT ON OIL ENGINE MACHINERY.

No. 64350

Received at London Office

Date of writing Report 13. 9. 41 When handed in at Local Office 10. 9. 41 Port of Glasgow
No. in Survey held at Reg. Book. 10. 9. 41 Date, First Survey 28. 11. 39 Last Survey 10. 9. 19 41
Number of Visits 74
on the Single Twin Triple Quadruple Screw vessel "DINGLEDALE"
Tons Gross 8145 Net 4755
Built at Glasgow By whom built Harland & Wolff, Ltd. Yard No. 10446 When built 1941
Engines made at Glasgow By whom made Harland & Wolff, Ltd. Engine No. 10446 When made 1941
Donkey Boilers made at Belfast By whom made Harland & Wolff, Ltd. Boiler No. 10446 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

IL 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 dia. of journals as per Rule Appd. 460 mm as fitted 460 mm Crank pin dia. 460 mm Crank Webs Mid. length breadth 800 mm Thickness parallel to axis 267 mm
{ Semi built All built Bored 136 mm Bored 136 mm Mid. length thickness 267 mm shrunk Thickness around eyehole 235 mm.
Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule Appd. 19" as fitted 19" Thrust Shaft, diameter at collars as per Rule Appd. 18 1/4" as fitted 18 1/4"
Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule Appd. 18" as fitted 18" Is the { tube } shaft fitted with a continuous liner { yes
Bronze Liners, thickness in way of bushes as per Rule Appd. 7/8" as fitted 7/8" Thickness between bushes as per Rule Appd. 11/16" as fitted 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 ✓
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 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'-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 48 & 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 ✓
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 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 ✓
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 ✓
In Holds, &c. ✓
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
d 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 steel, & direct Are they fitted with Valves or Cocks both Inc. Discharge
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
That pipes pass through the bunkers none How are they protected ✓
That pipes pass through the deep tanks none 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 ✓ 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. 2 No. of stages 2 Diameters 280 & 245 Stroke 130 mm Driven by Steam engine
Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 280 & 245 Stroke 130 mm Driven by Steam engine
Small Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 280 & 245 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 ✓ Is a report sent herewith ✓

AIR RECEIVERS:—Have they been made under survey *yes* State No. of Report or Certificate *2.618*
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 55" Ends 8 1/2"*
Seamless, lap welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *Ends 26/30 "* Working pressure by Rules *356 lb* Actual *356 lb*

IS A DONKEY BOILER FITTED? *yes* If so, is a report now forwarded? *Yes. Belfast Rpt N 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*
(If not, state date of approval)
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-- 20. 28 Sep. 3 19. 24. 27 Oct. 4. 9. 15. 28 Sep. 3 19. 24. 27 Oct. 4. 9. 15. 28 Nov. 11. 28 Dec. 5. 19. 20. 23 24 26. 30. 31 Dec. 1940
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 *1044 P.F. TEST NO. 3* 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.*

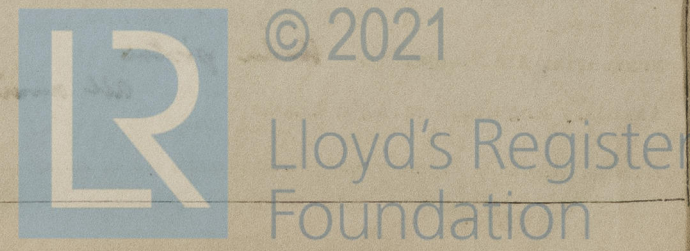
Is the flash point of the oil to be used over 150° F. *yes*
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *yes*
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *✓* If so, have the requirements of the Rules been complied with *✓*
If 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.*

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* *all Eng.* *2 DB 150 lb*

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



Certificate required in Duplicate.
GLASGOW

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

(MADE AND PRINTED IN ENGLAND)