

REPORT ON OIL ENGINE MACHINERY.

No. 49856

Report 4.2.1953 When handed in at Local Office 4.2.1953 Port of GLASGOW
 Survey held at GLASGOW Date, First Survey 6.7.51 GLASGOW Last Survey 21st January 1953
 Number of Visits

Single Screw vessel
 Glasgow By whom built Messrs Harland & Wolff Ltd. Yard No. 601436 When built 1953
 Glasgow By whom made Do. Engine No. 601436 When made 1953
 Made at Belfast By whom made Do. Boiler No. 1505/6 When made 1953
 Maximum 500 Owners Messrs Harland & Wolff Ltd. Port belonging to Newcastle
 Service Old M.N. (340 M.N. 150) Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Vessel is intended Oil tanker

&c. Type of Engines Opposed piston Airless injection 2 or 4 stroke cycle 2 Single or double acting Single
 in cylinders 700 lbs. Diameter of cylinders 750 mm Length of stroke 1500 + 500 No. of cylinders 6 No. of cranks 6
 Pressure 6.67 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in
 492 mm Is there a bearing between each crank Yes Revolutions per minute Maximum 120 Service
 945 mm Weight 7550 kg Moment of inertia of flywheel (lbs. in² or Kg. cm²) 26050 kg cm² Means of ignition Compression Kind of fuel used Diesel oil
 " " " " balance wts. (" " " ") 1040 kg

dia. of journals as per Rule As app. Crank pin dia. 575 mm Crank webs Mid. length breadth 1200 mm Thickness parallel to axis
 as fitted 575 mm Crank webs Mid. length thickness 290 mm shrunk Thickness around eyehole 298 mm
 as per Rule As app. Intermediate Shafts, diameter as per Rule As app. Thrust Shaft, diameter at collars as per Rule As app.
 as fitted 19 mm as fitted 575 mm
 as per Rule As app. Screw Shaft, diameter as per Rule As app. Is the screw shaft fitted with a continuous liner Yes
 as fitted 24 mm

Thickness in way of bushes as per Rule As app. Thickness between bushes as per Rule As app. Is the after end of the liner made watertight in the
 as fitted 1 1/8" as fitted 7/8" One length
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner One length
 It 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-
 two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland fitted at the after
 If so, state type Length of bearing in Stern Bush next to and supporting propeller 2' 11"

Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of
 Thickness of cylinder liners 5 1/2 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled
 conducting material Lapped If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
 Tunnel exhaust Cooling Water Pumps, No. and how driven 2 Steam driven Working F.W. 2
 are F.W. One S.W. One Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
 from the Main Engines, No. and capacity None Can one be overhauled while the other is at work
 the Main Bilge Line No. and capacity of each 1 Bilge & Sea Service (100 T/Hr) Sea Service (150 T/Hr) Ballast (300 T/Hr)
 How driven Steam
 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

and capacity 1 (300 T/Hr) Power Driven Lubricating Oil Pumps, including spare pump, No. and size 3 14" x 12 1/2" x 24"
 means arranged for circulating water through the Oil Cooler Yes Branch Bilge Suctions 3
 machinery spaces 3 4" Bore x 2-2 1/2" Oil gutterway fore end. In pump room 20 1/4" x 10 2 1/2"
 to the engine room bilges, No. and size 3-6" Bore (2 Port. 1 Starb.)
 on pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction in the machinery spaces led from easily
 placed above the level of the working floor, with straight tail pipes to the bilges Yes
 are fitted direct on the skin of the Ship Starb. Are they fitted with valves or cocks Values Are they fixed
 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
 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
 through the bunkers 4" Cofferdam suction How are they protected Pipe thickness increases

through the deep tanks None Have they been tested as per Rule Yes
 cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 means 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
 one compartment to another Yes Is the shaft tunnel watertight Yes app. Is it fitted with a watertight door worked from
 what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Yes
 compressors, No. 2 No. of stages 2 diameters 280 x 245 mm stroke 130 mm driven by Steam
 compressors, No. One "Distar" type No. of stages 2 diameters stroke driven by Diesel Eng. 6500/1

Air Compressors, No. No. of stages diameters stroke driven by
 made for first charging the air receivers Emergency air compressor Driven by oil engine Hand starting
 Pumps or Blowers, No. 2 How driven Roller Chain from crankshaft of Main engine
 Have they been made under survey Yes Engine Nos. 10854/5 44 AL III
 Makers name Two generators British Thomson Houston Position of each in engine room Starb. End
 One generator Compton Parkinson Report No. C4774

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 004308-004315-0070

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AIR RECEIVERS:—Have they been made under survey *Yes* State No. of report or certificate *X 478/*
State full details of safety devices *Safety valves fitted on air supply line also on each receiver*
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 *11 1/2* Internal diameter *5 1/2* thickness *1 3/32*
Seamless, welded or riveted longitudinal joint *Welded* Material *Steel* Range of tensile strength *29/33 T* Working pressure *100*
Starting Air Receivers, No. *Two* Total cubic capacity *2 x 540 = 1080* Internal diameter *5 1/2* thickness *1 3/32*
Seamless, welded or riveted longitudinal joint *Welded* Material *Steel* Range of tensile strength *29/33 T* Working pressure *100*
~~IS A~~ DONKEY BOILERS 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* Receivers *Yes* Separate *Yes*
(If not, state date of approval)
Donkey boilers *Yes* General pumping arrangements *Yes* Pumping arrangements in machinery space *Yes*
Oil fuel burning arrangements *Yes*
Have Torsional Vibration characteristics been approved *Yes* Date and particulars of approval *29 July 1952*
SPARE GEAR.
Has the spare gear required by the Rules been supplied *Yes* State if for "short voyages" only *No*
State the principal additional spare gear supplied *None Rule requirements only supplied*

The foregoing is a correct description,

For HARLAND AND WOLFE, LIMITED

Manufacturer.

Dates of Survey while building
During progress of work in shops: 1951 July 6, Nov. 22 (1952) Feb. 8, 19, 20, 21, Mar. 27, Apr. 15, 29, 30, May 7, 8, 9, 14, 19, 20, 21, 22, 26, 27, 28, June 26, 27, July 4, 7, 8, 9, 10, 28, 30, 31, Aug. 1, 4, 11, 13, 14, 18, 27, Sep. 11, 14.
During erection on board vessel: Sep. 17, 18, 19, 22, 24, 26, Oct. 3, 7, 8, 9, 10, 14, 21, 22, 23, 24, 27, 28, 29, 31, Nov. 4, 5, 9, 12, 13, 14, 17, 18, 19, 20, 28, 9, 10, 12, 15, 17, 18, 19, 22, 23, 24, 26, 29, 30, (1953) Jan. 4, 9, 12, 13, 15, 16, 21.
Total No. of visits: 103.

Dates of examination of principal parts—Cylinders 21 Oct 1952 Covers 21 Oct 52 Pistons 21 Oct 1952 Rods 21 Oct 1952 Connecting
Crank shaft 30/4/52 Flywheel shaft 24/11/52 Thrust shaft 24/11/52 Intermediate shafts 24/11/52 Tube shaft
Screw shaft 9/10/52 Propeller 9/10/52 Stern tube 4/8/52 Engine seatings 24/11/52 Engine holding down bolts
Completion of fitting sea connections 4/8/52 Completion of pumping arrangements 30/12/52 Engines tried under working conditions
Crank shaft, material O.H. Steel Identification mark JH36 30/4/52 Flywheel shaft, material Identification mark D.R.
Thrust shaft, material O.H. Steel Identification mark S.1734 GS.23/11/52 Intermediate shafts, material O.H. Steel Identification mark
Tube shaft, material Identification mark Screw shaft, material O.H. Steel Identification mark
Identification marks on air receivers LLOYDS Nos 565, 566 Lloyd's 584 1/2" W.P. 356 1/2" J.B.S. 26/8/52 114525
584 1/2" W.P. 356 1/2" J.B.S. 1/10/52

Welded receivers, state Makers' Name *Harland & Wolff Ltd Belfast*

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*

Full description of fire extinguishing apparatus fitted in machinery spaces *2-10 GALL. FOAM. 10. 2 GALL. FOAM. 2-2 1/2" NOSE VALVES. 1-30" 2 1/2" BORE NOSE VALVE 2-30" 2 1/2" BORE NOSE 1-SOFT SPRAY NOZZLE.*

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *Under* If so, have the requirements of the Rules been complied with

What is the special notation desired *None*

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with *Yes*

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, Speed restrictions, & *The Machinery has been*

Special Survey in accordance with the Rules of the Society, Approved

Letters The Materials & Workmanship are good. On completion the engine

on the Builders test bed under full power & found satisfactory.

The Machinery has now been securely fitted on board the vessel, full

have been carried out & varied loads including full power & found

A temporary notice board has been fitted at the control station stating that

operated continuously between 65-77 R.P.M. & the engine tachometer has been

This machinery is in my opinion eligible to be classed in the Register Book with the

have the notation of T.S.C. 2 D.B. 180 lb. Oil Engine with torsional endorsement.

The amount of Entry Fee 20% Old fee £41 4 80% New fee £208 0 0 Special Installation £145 0 0 When applied for 10 FEB 1953

Donkey Boiler Fee... £ When received 19

Travelling Expenses (if any) £ GLASGOW 10 FEB 1953

Committee's Minute + LMC. 1, 53 Oil Engine

Assigned with torsional endorsement 2 DB - 180 lb.

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