

REPORT ON OIL ENGINE MACHINERY.

No. 45214
16 MAR 1950

Date of writing Report 13th Mar 1950 When handed in at Local Office 14th March 1950 Port of GLASGOW
 To. in Survey held at GLASGOW Date, First Survey 26th Nov 1948 Last Survey 28th Feb 1950
 Reg. Book. Number of Visits 5
 on the Single Screw vessel MV. "WAZIRISTAN" Tons Gross 1051 Net 1051
 built at PORT GLASGOW By whom built LITHGOW'S L^{td} Yard No. 1051 When built 1950
 Engines made at GLASGOW By whom made D. ROWAN & CO L^{td} Engine No. 1214 When made 1950
 Donkey Boilers made at GLASGOW By whom made D. ROWAN & CO L^{td} Boiler No. 1214 When made 1950
 Brake Horse Power 1500 Owners COMMON BROS L^{td} Port belonging to SUNDERLAND
 NHP = 862
 I.N. Power as per Rule 895 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended Open Sea Service Carrying Petroleum in Bulk
 L ENGINES, &c. — Type of Engines 500hp opposed piston 2 or 4 stroke cycle 2 Single or double acting SINGLE
 Maximum pressure in cylinders 89 lb/sq in Diameter of cylinders 6 7/8 in Length of stroke 9 1/2 in No. of cylinders 4 No. of cranks 12
 Mean Indicated Pressure 570 lb/sq in Ahead Firing Order in Cylinders 1-3-4-2 Span of 1300 in adjacent to the crank, measured
 distance of side rods 1300 in Is there a bearing between each crank no Revolutions per minute 116
 Flywheel dia. 24 9/16 in Weight 37 cwt Moment of inertia of flywheel (lb. in² or Kg. cm²) 10.75 lb ft² Means of ignition Compu Kind of fuel used Kiesel
 Crank shaft, Semi built dia. of journals as per Rule 4 1/2 in as fitted 5 1/2 in Crank pin dia. 5 1/2 in Crank webs 150 in hole Mid. length breadth 7 1/2 in Kind of fuel used Kiesel
 Flywheel Shaft, diameter as per Rule 15 1/2 in as fitted 23 1/2 in Thrust Shaft, diameter at collars as fitted 5 1/2 in as per Rule 3 5/8 in
 Tube Shaft, diameter as per Rule 15 1/2 in as fitted 19 1/2 in Is the screw shaft fitted with a continuous liner yes
 Bronze Liners, thickness in way of bushes as per Rule 3/16 in as fitted 3/16 in Thickness between bushes as per Rule 3/16 in as fitted 3/16 in 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 tube shaft no If so, state type yes Length of bearing in Stern Bush next to and supporting propeller 5'-9"
 Propeller, dia. 16'-9" Pitch 12'-3" No. of blades 4 Material BRONZE whether moveable fixed Total developed surface 100 sq. feet
 Moment of inertia of propeller (lb. in² or Kg. cm²) 136 lb ft² Kind of damper, if fitted Bilby setune
 Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of
 lubrication forced Thickness of cylinder liners 25% Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled
 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. 3 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. 1 Diameter 1 1/2 in Stroke 1 1/2 in Can one be overhauled while the other is at work yes
 Pumps connected to the Main Bilge Line (No. and size 1 1/2 in How driven by engine
 the cooling water led to the bilges yes If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
 arrangements yes
 Blast Pumps, No. and size 1 1/2 in Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 1/2 in
 Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary
 pumps, No. and size:—In machinery spaces 1 1/2 in In pump room 1 1/2 in
 holds, &c. 1 1/2 in
 Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1 1/2 in
 Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes yes Are the bilge suction 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 yes Are they fixed
 efficiently 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 yes
 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
 Are pipes pass through the bunkers yes How are they protected yes
 Are pipes pass through the deep tanks yes 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
 In wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes
 In Air Compressors, No. 1 No. of stages 1 diameters 1 1/2 in stroke 1 1/2 in driven by yes
 Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 1 1/2 in stroke 1 1/2 in driven by yes
 All Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 1 1/2 in stroke 1 1/2 in driven by yes
 Is provision is made for first charging the air receivers yes
 Ventilating Air Pumps, No. 1 diameter 15 1/2 in stroke 12 1/2 in driven by main engine
 Auxiliary Engines crank shafts, diameter as per Rule 15 1/2 in as fitted 15 1/2 in No. 1 Position yes
 Are 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 *GL C74954.*

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..... *—*

Seams, welded..... *—* longitudinal joint..... *—* Material..... *—* Range of tensile strength..... *—* Working pressure..... *—* by Rules..... *—* Actual..... *—*

Starting Air Receivers, No..... *2* Total cubic capacity..... *2500 cu ft* Internal diameter..... *4'-6"* thickness..... *1 1/2"*

Seams, welded..... *—* longitudinal joint..... *Class I* Material..... *Steel.* Range of tensile strength..... *29-33 1/2* Working pressure..... *—* by Rules..... *—* Actual..... *—*

IS A DONKEY BOILER 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.* 14/4/48. Receivers..... *yes.* 26/10/49. Separate fuel tanks..... *yes.*

Donkey boilers..... *yes.* 12/5/49. General pumping arrangements..... *—* Pumping arrangements in machinery space..... *21.1.50*

Oil fuel burning arrangements..... *21.1.50.*

Have Torsional Vibration characteristics been approved..... *yes.* Date of approval..... *8/4/48.*

SPARE GEAR. *SPARE GEAR.* *Service Speed 116 RPM*

Has the spare gear required by the Rules been supplied..... *yes.* *PROVIDED*

State the principal additional spare gear supplied..... *As per Rule requirements and attached list.*

The foregoing is a correct description..... *For David Royan & Co Ltd*

Manufacturer..... *—*

Dates of Survey while building..... *1948 Nov 26 - 1949 Feb 17, 18, 25 May 6, 23, 26, 31 Jun 3, 24 Jul 8 Sept 8 Oct 7, 14, 28 Nov 4, 2, 7, 8, 9, 11, 17, 29, 30 Dec 2, 12, 13, 20, 25, 28, 30 - 1950 Jan 9, 10, 11, 13, 16, 17, 20, 23, 27, 28 Feb 3, 6, 7, 8, 10, 14, 17, 24, 27, 28*

During erection on board vessel..... *—*

Total No. of visits..... *52.*

Dates of examination of principal parts—Cylinders..... *26.1.49* Covers..... *—* Pistons..... *28.12.49* Rods..... *28.12.49* Connecting rods..... *6.3.50*

Crank shaft..... *30.11.49.* Flywheel shaft..... *—* Thrust shaft..... *—* Intermediate shafts..... *27.2.50.* Tube shaft..... *—*

Screw shaft..... *10.1.50.* Propeller..... *10.1.50* Stern tube..... *28.12.49* Engine seatings..... *10.2.50.* Engine holding down bolts..... *—*

Completion of fitting sea connections..... *—* Completion of pumping arrangements..... *—* Engines tried under working conditions..... *—*

Crank shaft, material..... *Steel.* Identification mark..... *—* Flywheel shaft, material..... *—* Identification mark..... *—*

Thrust shaft, material..... *—* Identification mark..... *—* Intermediate shafts, material..... *Steel.* Identification marks..... *17384 14370-1*

Tube shaft, material..... *—* Identification mark..... *—* Screw shaft, material..... *Steel* Identification marks..... *17378 17385 17386 17387*

Identification marks on air receivers..... *—*

Welded receivers, state Makers' Name..... *Cochran & Co Dundee Ltd.*

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..... *—*

Description of fire extinguishing apparatus fitted..... *—*

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo..... *Tanker* 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..... *yes.* If so, state name of vessel..... *ALTHEA. GLS Rpt. 74388.*

General Remarks (State quality of workmanship, opinions as to class, &c..... *This machinery has been constructed under special survey in accordance with the Society's Rules and the Approved plans. Materials and workmanship are good.*

The machinery has been placed on board the vessel which has been taken to Port Glasgow for completion.

After installing on board the machinery will in my opinion be eligible for record in the Register Book of L.M.C with date and notation T.S.C. 2 38 180/60 oil engine.

A notice has been placed at the control platform stating the engine speed should not exceed 128 RPM. The tachometer has been marked accordingly.

This machinery has been efficiently installed in the vessel. Please see G.R. 74388.

The amount of Entry Fee..... *£ 254 -*

Special..... *£ 66: 15*

Donkey Boiler Fee..... *£ 66: 15*

Travelling Expenses (if any)..... *£ —*

Assigned..... *Deferred for completion*

Committee's Minute..... *GLASGOW 15 MAR 1950*

Assigned..... *Deferred for completion*

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