

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
No. in Survey held at GLASGOW Date, First Survey 26th Nov 1948 Last Survey 28th Feb 1950
Reg. Book. Number of Visits 57

on the Single Screw vessel MV. "WAZIRISTAN" Tons Gross 1051 Net 757
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
Monkey Boilers made at GLASGOW By whom made D. ROWAN & CO L^{td} Boiler No. 1214 When made 1950
Brake Horse Power 4500 Owners COMMON BROS L^{td} Port belonging to SUNDERLAND
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

MAIN ENGINES, &c. — Type of Engines 5-cyl. 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 57.0 lb/sq. in. Ahead Firing Order in Cylinders 1-3-4-2 Span of bearings, adjacent to the crank, measured in inches 1300
Flywheel dia. 24 9/16 in. Weight 37 cwt. Moment of inertia of flywheel (in in² or Kg. cm²) 10.75 lb ft² Is there a bearing between each crank no Revolutions per minute 116
Crankshaft, dia. of journals 5 1/2 in. Crank pin dia. 5 1/2 in. Crank webs 150 Mid. length breadth 7 1/2 in. Kind of fuel used Diesel
Flywheel Shaft, diameter 5 1/2 in. Intermediate Shafts, diameter 3 1/2 in. Thrust Shaft, diameter at collars 5 1/2 in.
Stern Tube Shaft, diameter 5 1/2 in. Screw Shaft, diameter 5 1/2 in. Is the screw shaft fitted with a continuous liner yes

PROPELLER — Material BRONZE whether moveable fixed Total developed surface 100 sq. feet
Diameter 16'-9" Pitch 12'-3" No. of blades 4 Length of bearing in Stern Bush next to and supporting propeller 5'-9"
Moment of inertia of propeller 136 lb ft² Kind of damper, if fitted Ribby set-up
Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes
Lubrication forced Thickness of cylinder liners 257 Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled yes
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 4 in. Stroke 4 in. Can one be overhauled while the other is at work yes
Pumps connected to the Main Bilge Line (No. and size) 1 4 in. How driven main engine
Is 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 no

WATER TIGHTNESS — Are the bilge suction pipes in holds and tunnel well fitted with strum-boxes yes Are the bilge suction pipes 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 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
How are they protected 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 shaft tunnel watertight yes Is it fitted with a watertight door yes worked from yes
If the vessel is a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes

AIR COMPRESSORS — Main Air Compressors, No. 1 No. of stages 1 diameters 4 in. stroke 4 in. driven by main engine
Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 4 in. stroke 4 in. driven by main engine
All Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 4 in. stroke 4 in. driven by main engine
Is provision made for first charging the air receivers yes
Ventilating Air Pumps, No. 1 diameter 1500 stroke 1200 driven by main engine
Auxiliary Engines crank shafts, diameter 4 in. No. 1 Position yes
Are the auxiliary engines been constructed under special survey yes Is a report sent herewith yes

95
4/4/50



AIR RECEIVERS:—Have they been made under survey... *yes.* State No. of report or certificate... *Cl 74954.*
 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... *—*
 Starting Air Receivers, No. *2* Total cubic capacity... *250 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... *—*

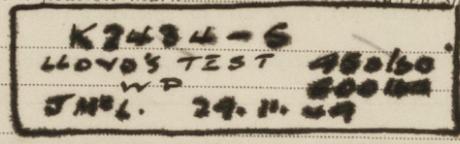
IS A DONKEY BOILER FITTED? *Yes.* If so, is a report now forwarded... *yes.*
 Is the donkey boiler intended to be used for domestic purposes only... *no.*
PLANS. Are approved plans forwarded herewith for shafting... *yes. 14/4/48.* Receivers... *yes. 26/10/49.* Separate fuel tanks... *yes.*
 Donkey boilers... *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. *Special Speed 116 RPM PROVIDED*
 Has the spare gear required by the Rules been supplied... *yes.*
 State the principal additional spare gear supplied... *As per Rule requirements and attached list.*

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

Dates of Survey while building
 During progress of work in shops - - *1948 Nov 26 - 1949 Feb 17, 18, 28 May 6 23-26-31 Jun 3-24 Jul 5 Sept 8 Oct 7, 14, 28 Nov 4, 7, 8, 9, 17, 29, 30 Dec 2, 12, 13, 20, 25, 28, 30 - 1950 Jan 9-10, 11-13, 16, 17, 30, 23-27, 25 Feb 3, 6, 7, 8, 10, 14, 7, 24, 27, 28*
 During erection on board vessel - -
 Total No. of visits *52.*

Dates of examination of principal parts—Cylinders *26-1-49* Covers... *10-5-49* 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... *14045* Flywheel shaft, material... *—* Identification mark... *—*
 Thrust shaft, material... *—* Identification mark... *—* Intermediate shafts, material... *Steel.* Identification marks... *17384, 14370-1, 14378, 17385, 17386, 17387*
 Tube shaft, material... *—* Identification mark... *—* Screw shaft, material... *Steel* Identification mark... *—*
 Identification marks on air receivers... *17385.*



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. Dis 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 Log Book of L.M.C with date and notation T.S.C. 2 38 180160 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 job of.*

The amount of Entry Fee... *254 -*
 Special... *—*
 Donkey Boiler Fee... *66: 15*
 Travelling Expenses (if any) £... *—*
 When applied for... *15 MAR 1950*
 When received... *19*

L. Shaw
 Engineer Surveyor to Lloyd's Register of Shipping

The Surveyors are requested not to write on or below the space for Committee's Minutes.

(Committee's Minute) *GLASGOW 15 MAR 1950*
 Assigned... *Deferred for completion*

