

# REPORT ON OIL ENGINE MACHINERY.

No. 73393  
24 NOV 1948

Received at London Office

of writing Report 12-11-1948 When handed in at Local Office 19 Port of GLASGOW

Survey held at GLASGOW Date, First Survey 25-10-48 Last Survey 19  
Number of Visits

on the <sup>Single</sup> ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel M.V. "KING ALFRED" Tons Gross 6919 Net 4151

at GREENOCK By whom built GREENOCK DOCKYARD Co. LTD. Yard No. When built 1941

engines made at GLASGOW By whom made BARCLAY CURLE & Co. LTD. Engine No. EW131 When made 1941

Boilers made at GLASGOW By whom made BARCLAY CURLE & Co. LTD. Boiler No. When made 1941

Horse Power 3350 Owners KING LINE LTD. Port belonging to LONDON

Power as per Rule Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES

Service for which vessel is intended GENERAL CARGO OPEN SEA SERVICE

ENGINES, &c. Type of Engines DOXFORD OPPOSED PISTON OIL ENGINE 2 or 4 stroke cycle 2 Single or double acting SINGLE

Maximum pressure in cylinders 640 Diameter of cylinders 6.00 Length of stroke 2320 No. of cylinders 4 No. of cranks 12

Indicated Pressure 88.24 Ahead Firing Order in Cylinders 1, 3, 4, 2 Span of bearings, adjacent to the crank, measured

inner edge to inner edge 1200 SIDE ROD CENTRES Is there a bearing between each crank YES Revolutions per minute 108

Weight of flywheel 11700 Moment of inertia of flywheel 16lbs. in<sup>2</sup> or Kg. cm.<sup>2</sup> Means of ignition COMPRESSION Kind of fuel used DIESEL OIL

Material of journals Solid forged dia. of journals as per Rule 450 Crank pin dia. 450 Crank webs Mid. length breadth 820 Thickness parallel to axis

Material of shafts Semi built dia. of journals as fitted 450 Crank webs Mid. length thickness 192 shrunk Thickness around eyehole

Intermediate Shafts, diameter as per Rule 13 Thrust Shaft, diameter at collars as fitted 450

Screw Shaft, diameter as per Rule 16 Is the tube screw shaft fitted with a continuous liner YES

Thickness of liners as per Rule 13/16 Thickness between bushes as per Rule 5/8 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

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-

compressive. 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 tube shaft No. If so, state type. Length of bearing in Stern Bush next to and supporting propeller 5'3"

Propeller, dia. 16ft. Pitch 12ft. No. of blades 4 Material MANG BRONZE whether moveable No. Total developed surface 86 sq. feet

Moment of inertia of propeller 16lbs. in<sup>2</sup> or Kg. cm.<sup>2</sup> Kind of damper, if fitted

Method of reversing Engines COMP. AIR Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES Means of

operation 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

to the engine. Cooling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

Water Pumps worked from the Main Engines, No. NIL Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and size 2 OF TRANSFER 4 1/2 x 5 x 12 1 BILGE GS 13 x 10 x 24 1 BALLAST 12 1/2 x 14 x 24

How driven STEAM DRIVEN

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. Main Pumps, No. and size ONE 12 1/2 x 14 x 24 Power Driven Lubricating Oil Pumps, including spare pump, No. and size ONE 4 x 8 x 18

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 4-3" 2-2 1/2 OILY BILGE In pump room

Holds, &c. N°1 - 3" P.S. N°2 - 3 1/2 P.S. DEEP TANK 2 1/2 P.S. N°3 4 x 5 3" P.S.

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1-8" PORT 1-5" STARBOARD

Are all 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 VALVES & COCKS 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 BELOW

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

Do pipes pass through the bunkers How are they protected

Do pipes pass through the deep tanks BILGE SUCTIONS N°1 & 2 HOLDS 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 Is the shaft tunnel watertight Is it fitted with a watertight door worked from

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

Air Compressors, No. No. of stages diameters stroke driven by

Auxiliary Air Compressors, No. TWO No. of stages THREE diameters stroke driven by

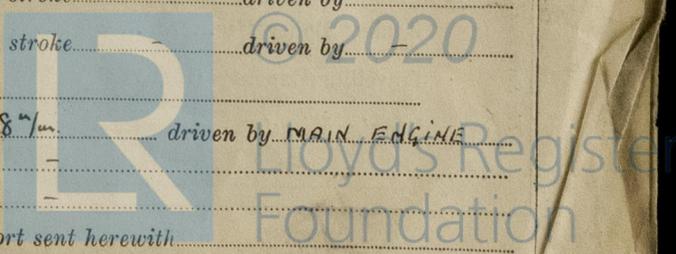
Are all Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

Is provision made for first charging the air receivers STEAM DRIVEN COMPRESSORS

Engining Air Pumps, No. ONE diameter 1960 stroke 608 driven by MAIN ENGINE

Auxiliary Engines crank shafts, diameter as per Rule as fitted Position

Have the auxiliary engines been constructed under special survey Is a report sent herewith



AIR RECEIVERS:—Have they been made under survey. State No. of report or certificate.

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, welded or riveted longitudinal joint. Material. Range of tensile strength. Working pressure by Rules. Actual.

Starting Air Receivers, No. TWO Total cubic capacity. Internal diameter. thickness.

Seamless, welded or riveted longitudinal joint. RIVETED Material. STEEL Range of tensile strength. Working pressure by Rules. Actual. 600 lb

IS A DONKEY BOILER FITTED TWO If so, is a report now forwarded.

Is the donkey boiler intended to be used for domestic purposes only. No. AUXILIARY MACHINERY

PLANS. Are approved plans forwarded herewith for shafting. Receivers. Separate fuel tanks.

Donkey boilers. General pumping arrangements. Pumping arrangements in machinery space.

Oil fuel burning arrangements.

Have Torsional Vibration characteristics been approved. Date of approval.

SPARE GEAR.

Has the spare gear required by the Rules been supplied. YES

State the principal additional spare gear supplied.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building. During progress of work in shops. During erection on board vessel. Total No. of visits.

Dates of examination of principal parts—Cylinders. Covers. Pistons. Rods. Connecting rods.

Crank shaft. Flywheel shaft. Thrust shaft. Intermediate shafts. Tube shaft.

Screw shaft. Propeller. Stern tube. Engine seatings. Engine holding down bolts.

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

Crank shaft, material. Identification mark. Flywheel shaft, material. Identification mark.

Thrust shaft, material. Identification mark. Intermediate shafts, material. Identification marks.

Tube shaft, material. Identification mark. Screw shaft, material. Identification mark.

Identification marks on air receivers.

Welded receivers, state Makers' Name.

Is the flash point of the oil to be used over 150°F.

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. 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.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The amount of Entry Fee ... £ : : When applied for ... 19

Special ... £ : : When received ... 19

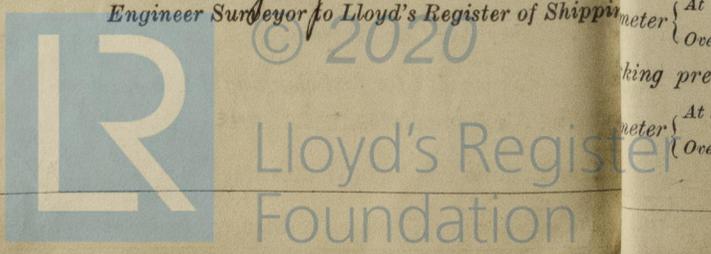
Donkey Boiler Fee... £ : :

Travelling Expenses (if any) £ : :

Committee's Minute

Assigned

J.B. Gray Engineer Surveyor for Lloyd's Register of Shipping



ML2 Certificate (if required) to be sent to

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

23 NOV 1948 SEE ACCOMPANYING MACHINERY REPORT