

REPORT ON OIL ENGINE MACHINERY.

22 NOV 1948

Received at London Office

Date of writing Report 18. 11. 1948. When handed in at Local Office 20. 11. 1948. Port of TORQUAY.

No. in Survey held at APPLIEDORE. Date, First Survey 26. 5. 48. Last Survey 4th. November, 1948. Reg. Book. Number of Visits Nine.

Single on the ~~Deck~~ ~~Deck~~ ~~Deck~~ Screw vessel "ADMIRAL GRENVILLE" ex M.M.S. 1024. Tons Gross 332 Net 256

Built at Sandhaven By whom built J. & G. Forbes & Co. Ltd. Yard No. When built 1942

Engines made at Ashton-under-Lyne By whom made National Gas & Oil Engine Co. Ltd. Engine No. 54046 When made do.

Donkey Boilers made at None By whom made --- Boiler No. --- When made ---

Brake Horse Power 500 Owners Sterling Fishing Co. Port belonging to London

M.N. Power as per Rule 58 84 Is Refrigerating Machinery fitted for cargo purposes to be fitted later Is Electric Light fitted Yes

Trade for which vessel is intended Ocean going.

ENGINES, &c. — Type of Engines Heavy Oil, National. 2 or 4 stroke cycle 4 Single or double acting S.A.

Maximum pressure in cylinders 800 lbs/sq" Diameter of cylinders 10" Length of stroke 13" No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 130 lbs/sq" Ahead Firing Order in Cylinders --- Span of bearings, adjacent to the crank, measured from inner edge to inner edge 12 3/8" Is there a bearing between each crank Yes Revolutions per minute 600/300

Flywheel dia. 37 1/2" Weight 2550 lb. Moment of inertia of flywheel (16 lbs. in² or Kg. cm.²) --- Means of ignition Compn. Kind of fuel used Heavy Oil.

Crank shaft, Solid forged dia. of journals as per Rule 7 1/2" Crank pin dia. 7" Crank webs Mid. length breadth 8 1/2" Thickness parallel to axis --- All built as fitted 7 1/2" Mid. length thickness 2.15/16" Thickness around eyehole ---

Flywheel Shaft, diameter as per Rule On crankshaft Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as fitted 5 3/4" as fitted Coupling as fitted 5.7/16" as per Rule 5 3/4"

Tube Shaft, diameter as per Rule None. Screw Shaft, diameter as per Rule 6" Is the (tube/screw) shaft fitted with a continuous liner No.

Bronze Liners, thickness in way of bushes as per Rule --- Thickness between bushes as per Rule --- Is the after end of the liner made watertight in the propeller boss --- 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 tube shaft. Yes If so, state type Vickers Length of bearing in Stern Bush next to and supporting propeller 27"

Propeller, dia. 68" Pitch 59" No. of blades 4 Material Bronze whether moveable Solid Total developed surface --- sq. feet

Moment of inertia of propeller (16 lbs. in² or Kg. cm.²) --- Kind of damper, if fitted ---

Method of reversing Engines Reversing gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced Thickness of cylinder liners 13/16 Are the cylinders fitted with safety valves Now Fitted Are the exhaust pipes and silencers water cooled lagged with non-conducting material. Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Funnel.

Cooling Water Pumps, No. 2 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. One Diameter 4 1/2" Stroke 3 1/4" Can one be overhauled while the other is at work ---

Pumps connected to the Main Bilge Line (No. and size. One One - 40 tons/hr. One Cent. How driven M.E. ME. through clutch Starbd. Aux Engine

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. ---

Oil Pumps, No. and size The above auxiliaries Power Driven Lubricating Oil Pumps, including spare pump, No. and size One gear wheel & One hand pump

Are two independent means arranged for circulating water through the Oil Cooler. No. cooler Suctions, connected to both main bilge pumps and auxiliary pumps, No. and size:—In machinery spaces 4 @ 2 1/2" In pump room ---

Oil Cooled, &c. F. Peak 1 @ 2 1/2" Hold 2 @ 2 1/2" Centre and aft.

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 2 @ 2 1/2" included above

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. Mud box, bent pipe and strum

Are all Sea Connections fitted direct on the skin of the Ship. Yes Are they fitted with valves or cocks. Yes Are they fixed boards

Are they conveniently high on the ship's side to be seen without lifting the platform. plates. No. 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. No

Do any pipes pass through the bunkers. None How are they protected. ---

Do any 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 (removable floor boards for same)

Are the arrangements 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. None 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. Trays at vital parts.

Main Air Compressors, No. Hamworthy No. of stages 2 diameters 18 cub ft. stroke from centre driven by Std. Auxiliary

Auxiliary Air Compressors, No. One No. of stages 2 diameters 3" & 1" stroke 3" driven by Hand

Small Auxiliary Air Compressors, No. One No. of stages 2 diameters 3" & 1" stroke 3" driven by Hand

What provision is made for first charging the air receivers. Hand Air Compressor

Scavenging Air Pumps, No. None diameter --- stroke --- driven by ---

Auxiliary Engines crank shafts, diameter as per Rule 1-6 Cyl. Standard Lister 57 H.P. No. 71-54032 Starbd. Position Port.

Have the auxiliary engines been constructed under special survey. No. Is a report sent herewith. ---



Vertical text on the left margin: Survey, Registered, etc.

Vertical handwritten number: 5900-51610-786110



AIR RECEIVERS: —Have they been made under survey No. Yes State No. of report or certificate. ---
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule. Yes No
 Can the internal surfaces of the receivers be examined and cleaned. Yes No Is a drain fitted at the lowest part of each receiver. Yes No
 Large Starting Air Receivers, No. 2 Cubic capacity of each 11 cub ft. Internal diameter 19" thickness Shell 1/2" Ends 3/4"
 Seamless, welded or riveted longitudinal joint rivetted Material steel Range of tensile strength 28/35 Working pressure by Rules 430 Actual 350
 Small Starting Air Receivers, No. One Total cubic capacity 2 cub/ft. App. Internal diameter 10 1/2" app. thickness 1/4" approximat by Rules --- Actual ---
 Seamless, welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength --- Working pressure Actual ---

IS A DONKEY BOILER FITTED No. --- If so, is a report now forwarded ---
 Is the donkey boiler intended to be used for domestic purposes only. ---
PLANS. Are approved plans forwarded herewith for shafting. Yes No Large Receivers Yes No Separate fuel tanks Yes No
 (If not, state date of approval) Small sketch herewith Yes No Pumping arrangements in machinery space Yes No
 Donkey boilers. None. General pumping arrangements. Yes No
 Oil fuel burning arrangements. Yes No Date of approval ---
 Have Torsional Vibration characteristics been approved. No Yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied. Yes No
 State the principal additional spare gear supplied. In addition to the Air Compressor coupled to the Starbd. Auxiliary Engine
 there is one complete Air Compressor ready for fitting placed on board.

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 26.5.48. Covers 26.5.48. Pistons 26.5.48. Rods --- Connecting rods 26.5.48.
 Crank shaft 26.5.48. Flywheel shaft --- Thrust shaft 26.5.48. Intermediate shafts 26.5.48. Tube shaft ---
 Screw shaft 26.5.48. Propeller 26.5.48. Stern tube 26.5.48. Engine seatings 9.6.48. Engine holding down bolts 9.6.48.
 Completion of fitting sea connections 2.7.48. Completion of pumping arrangements 4.11.48. Engines tried under working conditions 29.10.48
 Crank shaft, material Steel Identification mark --- Flywheel shaft, material --- Identification mark ---
 Thrust shaft, material Steel Identification mark --- Intermediate shafts, material Steel Identification marks ---
 Tube shaft, material --- Identification mark --- Screw shaft, material Steel Identification mark ---
 Identification marks on air receivers. None visible. Large Air Receiver tested to 600 lbs/sq" Small " " " " 700 lbs/sq"

Welded receivers, state Makers' Name ---
 Is the flash point of the oil to be used over 150°F Yes No
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes No
 Description of fire extinguishing apparatus fitted 5 Pyrene - 2 gallons.
 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. No.
 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 Machinery of this vessel, has been opened out, overhauled and examined and found to be in good condition and in accordance with the approved plans and the Secretary's letters. The Machinery when tried under working conditions was satisfactory in every respect and is eligible in my opinion to have the record of L.M.C. 11,48 without the distinguishing mark + and the notation of O.G. 5,48.

The small air receiver has been checked as far as practicable but no plan was available neither were any marks visible. It is understood that Messrs. Phillips Anderson are obtaining a plan of this Air Receiver from Listers and submitting it direct to the London Office.

The amount of Entry Fee ... £ : :
 Special Ins. Screw shaft. 26 : 0 :
 Rep. Alterations. 5 : 5 :
 Donkey Boiler Fee... £ : :
 Travelling Expenses (if any) £ 12 : 3/4 :
 When applied for 20. 11.19.48.
 When received 19.

[Signature]
 Engineer Surveyor to Lloyd's Register of Shipping

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

Committee's Minute
 Assigned