

REPORT ON OIL ENGINE MACHINERY.

No. 7908

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. Reg. Book.

Date, First Survey 26. 5. 48.

Last Survey 4th November, 1948.

Number of Visits Nine.

Single
on the ~~Tank~~
~~Deck~~
~~Quadruple~~

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

I.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.

L 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
Semi built
All built

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 ---

Mid. length thickness 2.15/16"

Thickness around eyehole ---

Flywheel Shaft, diameter as per Rule

On crankshaft

Intermediate Shafts, diameter as per Rule

as fitted 5.7/16"

Thrust Shaft, diameter at collars as fitted

as per Rule 5 3/4"

Tube Shaft, diameter as per Rule

None.

Screw Shaft, diameter as per Rule

as fitted 6"

Is the { tube
screw } shaft fitted with a continuous liner { No. }

Bronze Liners, thickness in way of bushes as per Rule

as fitted --- Thickness between bushes as per Rule

as fitted ---

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 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

Up 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. M.E. 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. ---

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

Are there 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 ---

Holds, &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 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 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

sufficiently high on the ship's side to be seen without lifting the platform boards 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)

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. 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. from centre

stroke 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.

as fitted 1-3 Cyl.

No. 71-54032

Position

Starbd.

Port.

Have the auxiliary engines been constructed under special survey

No.

Is a report sent herewith ---

71/54140-3

AIR RECEIVERS:—Have they been made under survey No. ☒ 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 ☒
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 ☒ Large Receivers Yes ☒ Separate fuel tanks. Yes ☒
(If not, state date of approval) Small sketch herewith
Donkey boilers. None. General pumping arrangements. Yes ☒ Pumping arrangements in machinery space. Yes ☒
Oil fuel burning arrangements. Yes ☒ No. --- Date of approval. ---
Have Torsional Vibration characteristics been approved. ---

SPARE GEAR.

Has the spare gear required by the Rules been supplied. Yes ☒
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 ☒
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with. Yes ☒
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. Screwshaft. 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.

Committee's Minute

Assigned



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