

4b.

REPORT ON OIL ENGINE MACHINERY.

No. 56900

22 APR 1936

Received at London Office

Writing Report

19

When handed in at Local Office

18. 4. 1936 Port of *Glasgow*

Survey held at *Glasgow*

Date, First Survey

8th Nov 1935

Last Survey

1st April 1936

Number of Visits *18*

on the *Single* Screw vessel

Double

Iron keel and S.B. & Engineering Co. Yard No. 356.
M/V "PLOVER"

Tons: Gross *352*
Net *166*

at *Glasgow*

By whom built

Yard No. *356* When built *1936*

Engines made at *Glasgow*

By whom made

British Auxiliaries Ltd.

Engine No. *225* When made *1936*

Boilers made at

By whom made

Boiler No. When made

Horse Power *500*

Owners

Port belonging to

569 Horse Power as per Rule *125*

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

for which vessel is intended

ENGINES, &c.

Type of Engines

*British Polar Diesel (M447 Type) 2 or 4 stroke cycle 2 Single or double acting *Single**

Maximum pressure in cylinders

780 lbs/sq. in.

Diameter of cylinders

34 1/2"

Length of stroke

57 1/2"

No. of cylinders

4

No. of cranks *4*

Indicated Pressure

95

bearings, adjacent to the Crank, measured from inner edge to inner edge

48 1/2"

Is there a bearing between each crank

Yp.

Revolutions per minute

220

Flywheel dia.

155 1/2"

Weight

1.99

Means of ignition

Comp.

Kind of fuel used

Diesel oil.

Shaft, dia. of journals

as per Rule *211 1/2"*
as fitted *220*

Crank pin dia.

220 1/2"

Crank Webs

Mid. length breadth *308 1/2"*
Mid. length thickness *122 1/2"*

shrunk

Thickness parallel to axis

Thickness around eye-hole

Propeller Shaft, diameter

as per Rule *211 1/2"*
as fitted *260*

Intermediate Shafts, diameter

as per Rule

as fitted *5 3/8"*

Thrust Shaft, diameter at collars

as per Rule *145 1/2"*
as fitted *260*

Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the { tube } shaft fitted with a continuous liner {

screw }

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

boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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

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 the tube

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. *60 1/2"* Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet

Means of reversing Engines

Direct

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Yp.

Means of lubrication

Thickness of cylinder liners

25 1/2"

Are the cylinders fitted with safety valves

Yp.

Are the exhaust pipes and silencers ~~water cooled~~ or lagged with

insulating material *Yp.* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Water Pumps, No. *10 12 1/2" x 14 1/2" Park DA* Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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

connected to the Main Bilge Line { No. and Size }
{ How driven }

Boating water led to the bilges If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

Pumps, No. and size Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

independent means arranged for circulating water through the Oil Cooler

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size:—In Machinery Spaces

In Pump Room

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Are the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Are the Bilge Suctions in the Machinery Spaces

easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

Are they fitted sufficiently high on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line

Are each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

How are they protected

Have they been tested as per Rule

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

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

vent to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

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

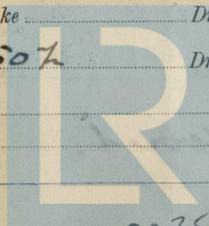
Air Compressors, No. *one* No. of stages *2* Diameters *7 1/2" 14 1/2"* Stroke *350 1/2"* Driven by *Main Eng.*

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Working Air Pumps, No. *one* Diameter *7 1/2"* Stroke *350 1/2"* Driven by *Main Eng.*

Propeller Engines crank shafts, diameter as per Rule as fitted

No. Position



Lloyd's Register Foundation

003503 003512-0251

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule. *y/o*
 Can the internal surfaces of the receivers be examined and cleaned. *y/o* Is a drain fitted at the lowest part of each receiver. *y/o*
High Pressure Air Receivers, No. *1* Cubic capacity of each *10* Internal diameter *14 1/2* thickness *1/4*

Seamless, lap welded or riveted longitudinal joint *Welded* Material *IS* Range of tensile strength *28-32 tons* Working pressure *35*
Starting Air Receivers, No. *2* Total cubic capacity *56 ft.* Internal diameter *650* thickness *14 1/2*
 Seamless, lap welded or riveted longitudinal joint *Welded* Material *IS* Range of tensile strength *28-32 tons* Working pressure *35*

IS A DONKEY BOILER FITTED? 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. *25.6.34.* Receivers *25.6.34.* Separate Fuel Tanks
 (If not, state date of approval)
 Donkey Boilers *General Pumping Arrangements* Pumping Arrangements in Machinery Space
 Oil Fuel Burning Arrangements *SPARE GEAR.*

Has the spare gear required by the Rules been supplied. *y/o*
 State the principal additional spare gear supplied
As per list attached.

The foregoing is a correct description,
John Rogers/Morgan Manufacturer.

Dates of Survey while building
 During progress of work in shops-- *1935 Nov. 8. 13. 20 Dec. 2. 18. 26 (1936) Jan. 13. 17. 29. 31 Feb. 4. 7. 14. 26 Mar.*
 During erection on board vessel-- *20 Apr. 1*
 Total No. of visits *19*

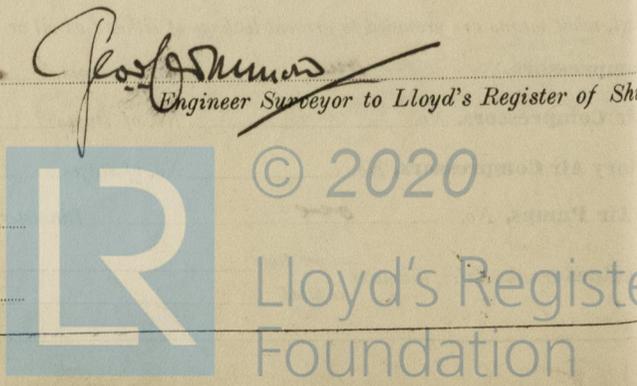
Dates of Examination of principal parts—Cylinders *26.2.36.* Covers *30.1.36.* Pistons *26.2.36.* Rods *-* Connecting rods *26.2.36.*
 Crank shaft *10.1.36(FR)* Flywheel shaft *a* Thrust shaft *26.2.36.* Intermediate shafts *-* Tube shaft *-*
 Screw shaft *-* Propeller *-* Stern tube *-* Engine seatings *-* Engines holding down bolts *-*
 Completion of fitting sea connections *-* Completion of pumping arrangements *-* Engines tried under working conditions *-*
 Crank shaft, Material *SA. Ingot steel* Identification Mark *PK 94 82* Flywheel shaft, Material *-* Identification Mark *-*
 Thrust shaft, Material *do* Identification Mark *335-54-29.11.35* Intermediate shafts, Material *-* Identification Marks *-*
 Tube shaft, Material *do* Identification Mark *6129. Sub. 11.35* Screw shaft, Material *-* Identification Mark *-*

Is the flash point of the oil to be used over 150° F. *y/o*
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with
 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 *y/o* If so, state name of vessel *M.V. Arkwright. y/o Report 70.50*

General Remarks (State quality of workmanship, opinions as to class, &c.)
*This machinery has been built under special survey and in accordance with the Rules. The materials and workmanship are good. On completion it has tried on the bench at full power with satisfactory results.
 This machinery is eligible, in my opinion, to be classed in the Register with notation of +L.R.C. with date when it has been efficiently tested in position on board and tried under working conditions.*

The amount of Entry Fee .. £ 3 : - :
 No y/o Special *25* ... £ 31 : 5 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, **21 APR 1936**
 When received, **27/4/1936**

Committee's Minute **GLASGOW 21 APR 1936**
 Assigned *Deferred.*



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