

## REPORT ON OIL ENGINE MACHINERY.

No. 3985

Date of writing Report Feb. 16<sup>th</sup> 1935 When handed in at Local Office 10 Port of Stockholm  
 No. in Survey held at Eskilstuna Date, First Survey and Last Survey 18-12-1934  
 Reg. Book. Single on the Twin Triple Quadruple Screw vessel Tons Gross Net  
 Number of Visits 1

Built at London By whom built Humphrey & Gray Ltd Yard No. 40 When built  
 Engines made at Eskilstuna By whom made A.B. Bolinder-Hunkeler Engine No. 28511 When made 1934  
 Donkey Boilers made at By whom made Boiler No. When made  
 Brake Horse Power 25 Owners Humphrey & Gray Ltd Port belonging to London  
 Nom. Horse Power as per Rule 9 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted  
 Trade for which vessel is intended

**ENGINES, &c.**—Type of Engines Stationary Bolinder Oil Engine, type W 7 2 — 4 stroke cycle 2 Single or double acting single  
 Maximum pressure in cylinders 21 kg/cm<sup>2</sup> Diameter of cylinders 180 mm Length of stroke 180 mm No. of cylinders 1 No. of cranks 1  
 Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 186 mm Is there a bearing between each crank -  
 Revolutions per minute 800 Flywheel dia. 700 mm Weight 316 kg Means of ignition Hot bulb Kind of fuel used Crude oil

Crank Shaft, dia. of journals as per Rule 95 Crank pin dia. 120 mm Crank Webs Mid. length breadth 149.5 mm 5 Thrust Thickness parallel to axis as fitted Thickness around eyehole as fitted  
 Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted  
 Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the tube screw shaft fitted with a continuous liner -

Brass 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 -

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  
 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 the tube  
 If so, state type - Length of Bearing in Stern Bush next to and supporting propeller -

Propeller, dia. - Pitch - No. of blades - Material - whether Movable - Total Developed Surface - sq. feet  
 Method of reversing Engines - Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication -

Thrusts Thickness of cylinder liners None fitted Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with  
 conducting material - If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine -

Drinking Water Pumps, No. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel -  
 Fire Pumps worked from the Main Engines, No. 1 Diameter - Stroke - Can one be overhauled while the other is at work -

Pumps connected to the Main Bilge Line - No. and Size - How driven -  
 Lubricating Oil Pumps, including Spare Pump, No. and size -

Two independent means arranged for circulating water through the Oil Cooler - Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
 Pumps, No. and size:—In Machinery Spaces - In Pump Room -

Holds, &c. -  
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size -

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes - Are the Bilge Suctions in the Machinery Spaces  
 from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges -

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

Do pipes pass through the bunkers - Have they been tested as per Rule -  
 Do pipes pass through the deep tanks -

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times -  
 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 -  
 On wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -

Air Compressors, No. None fitted No. of stages - Diameters - Stroke - Driven by -  
 Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

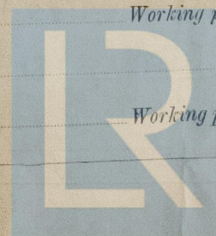
Small Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -  
 Ventilating Air Pumps, No. - Diameter - Stroke - Driven by -

Auxiliary Engines crank shafts, diameter as per Rule as fitted Position -  
**RECEIVERS:**—Is each receiver, which can be isolated, fitted with a safety valve as per Rule -

Are the internal surfaces of the receivers be examined and cleaned - Is a drain fitted at the lowest part of each receiver -  
 High Pressure Air Receivers, No. None fitted Cubic capacity of each - Internal diameter - thickness -

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

Working Air Receivers, No. None ordered Total cubic capacity - Internal diameter - thickness - Working pressure - by Rules - Actual -  
 Unless, lap welded or riveted longitudinal joint - Material - Range of tensile strength -



© 2021

Lloyd's Register  
Foundation



## 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.

See Surveyor's letter.  
Are approved plans forwarded herewith for Shafting E 10 18 34.  
(If not, state date of approval 12 12)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

## SPARE GEAR.

Has the spare gear required by the Rules been supplied

See attached spare list.

State the principal additional spare gear supplied

## NOTE.

The spare gear to be supplied and inspected when machinery is being fitted in ship.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building

{	During progress of work in shops - -	18 34
	During erection on board vessel - -	12
	Total No. of visits	

Dates of Examination of principal parts—Cylinders 18 34 Covers 18 34 Pistons 18 34 Rods - Connecting rods 18 34

Crank shaft 18 34 Flywheel shaft Thrust shaft 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 18 34

Crank shaft, Material S. H. Steel Identification Mark LLOYD'S No 3933

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

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

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 No If so, state name of vessel

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

I am of opinion that this engine is of superior material and workmanship, and as it has been designed and constructed under Special Survey, I have respectfully to submit that it be approved as auxiliary to the main engine.

Certificate (if required) to be sent to

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

Special *in shop* £ 218:40:19

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ 29:25:19

Committee's Minute FRI. 6 SEP 1935

Assigned *see down* 101896

K. J. Anderson  
Engineer Surveyor to Lloyd's Register of Shipping.



© 2021

Lloyd's Register  
Foundation