

# REPORT ON OIL ENGINE MACHINERY.

No. 10750

Received at London Office 28 DEC 1931

Date of writing Report 19... When handed in at Local Office 24 Dec 31 Port of Belfast Date, First Survey 3<sup>rd</sup> Oct. 1930 Last Survey 1931 Number of Visits 2

No. in Survey held at Reg. Book. Belfast Date, First Survey 3<sup>rd</sup> Oct. 1930 Last Survey 1931 Number of Visits 2

on the <sup>Single</sup> ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel "CONUS." Tons } Gross 8132 Net

Built at Belfast By whom built Workman, Lark (1928) Ltd. Yard No. 518. When built 1931

Engines made at Wallsend By whom made North Eastern Marine Eng Co Ltd. Engine No. 471-2 When made 1931

Donkey Boilers made at Belfast By whom made Workman, Lark (1928) Ltd. Boiler No. 518. When made 1931

Brake Horse Power 4000 Owners Anglo Saxon Petroleum Co. Port belonging to London.

Nom. Horse Power as per Rule 714 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

Trade for which vessel is intended

IL ENGINES, &c.—Type of Engines Woodsport, supercharged. 2 or 4 stroke cycle  Single or double acting

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank

Revolutions per minute Flywheel dia. Weight Means of ignition Kind of fuel used

Crank Shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank Webs Mid. length breadth Mid. length thickness Thickness parallel to axis Thickness around eyehole

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 after end of the liner made watertight in the propeller boss

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per rule as fitted

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 the tube

Propeller, dia. 13'-3 1/2" Pitch 10'-4" No. of blades 4 Material Bronze whether Moveable No. Total Developed Surface 53 sq. feet

Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication

Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

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

Bilge Pumps worked from the Main Engines, No. 4 Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size 2 @ 8"x8"x10" Duplex Steam. How driven Steam

Ballast Pumps, No. and size 2 @ 8"x8"x10" Duplex Steam. Lubricating Oil Pumps, including Spare Pump, No. and size 1-6 1/2" x 10" duplex steam

Are 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 3-3 1/2"

In Holds, &c. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-6 1/2" 1-6" 1-3"

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

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

What pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks 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

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

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

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

Auxiliary Air Compressors, No. One. No. of stages 3 Diameters Stroke Driven by Steam

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

Scavenging Air Pumps, No. Diameter Stroke Driven by

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

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can 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. Cubic capacity of each Internal diameter thickness

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

Starting Air Receivers, No. 4 Total cubic capacity 1439 cu ft. Internal diameter 5' thickness 7"

Seamless, lap welded or riveted longitudinal joint Material steel Range of tensile strength 28/32 tons Working pressure by Rules 376 lbs 0" Actual 350 lbs 0"

**IS A DONKEY BOILER FITTED?**

*Yes* If so, is a report now forwarded? *Yes*

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

**PLANS.** Are approved plans forwarded herewith for Shafting *✓* Receivers *6/9/30* Separate Tanks *✓*  
 (If not, state date of approval)  
 Donkey Boilers *11/7/30* General Pumping Arrangements *1/12/30* Oil Fuel Burning Arrangements *✓*

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied *Yes.*

State the principal additional spare gear supplied *As per list enclosed with Newcastle report.*

The foregoing is a correct description.

**pro WORKMAN CLARK (1928) LIMITED,**

*Birmingham.*

*Secretary.*

*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 *27/4/31* Tube shaft *✓*  
 Screw shafts *23/3/31* *13/4/31* Propeller *15/4/31* Stern tube *29/4/31* Engine seatings *4/8/31* Engines holding down bolts *4/8/31*  
 Completion of fitting sea connections *17/12/31* Completion of pumping arrangements *10/9/31* Engines tried under working conditions *22/12/31*  
 Crank shaft, Material *✓* Identification Mark *✓* Flywheel shaft, Material *✓* Identification Mark *✓*  
 Thrust shaft, Material *✓* Identification Mark *✓* Intermediate shafts, Material *Steel* Identification Marks *4223, 4245, 4246, 4251* *J.K.W. 27/4/31*  
 Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *P. 4218, S. 4225, 4226, 4227* *J.K.W. 12/4/31*

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.*

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 *Yes.* If so, state name of vessel *"Corbis"*

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

*The machinery of this vessel has been efficiently installed in the vessel. The main and auxiliary machinery was tried out under working conditions with satisfactory results. The air relief valves have been adjusted and the donkey boiler safety valves adjusted under steam to 150 lbs. In my opinion the vessel is now eligible for notation in the Society's Register Book of + LMC 12.31. CL. Donkey boiler pressure 150 lbs. Fitted for oil fuel 12.31. FP above 150° F.*

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

*Air Reservoir.*  
 The amount of Entry Fee .. £ 16 : 16 :  
 1/8<sup>th</sup> Special ... .. £ 22 : 3 :  
 Donkey Boiler Fee ... .. £ 16 : 12 :  
 Travelling Expenses (if any) £ : :  
 When applied for, *2nd Dec 1931.*  
 When received, *Jan 9 1932*

*John K. Williams.*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI 1 JAN 1932*  
 Assigned *+ Lmc. 12.31 oil fuel CL. 2 SB-150 lb*

