

# REPORT ON OIL ENGINE MACHINERY.

No. 41445

Received at London Office 13 DEC 1930

Date of writing Report 10:17:30 When handed in at Local Office 10 Dec. 1930 Port of **HULL**  
No. in Survey held at **Knottingley** Date, First Survey 17 Sept Last Survey 1 Dec 1930  
Reg. Book. Number of Visits 8

89943 on the <sup>Single</sup> ~~Triple~~ ~~Quadruple~~ <sup>Twin</sup> Screw vessel "CONSTANCE" H Tons { Gross 155.31 Net 57.04  
Built at **Knottingley** By whom built **Messrs John Harker Ltd** Yard No. 28 When built 1930  
Engines made at **Keighley** By whom made **Messrs H. Widdop & Co. Ltd** Engine No. 2954 When made 1930  
Donkey Boilers made at  By whom made  Boiler No.  When made   
Brake Horse Power 150 Owners **John Harker Ltd** Port belonging to **Hull**  
Nom. Horse Power as per Rule 43 Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**  
Trade for which vessel is intended

**OIL ENGINES, &c.**—Type of Engines 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 3 Thickness parallel to axis shrunk  
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 } shaft fitted with a continuous liner { screw }  
Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes 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 on 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 <sup>attached</sup> ~~projected~~ between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft  
If so, state type **see** Length of Bearing in Stern Bush next to and supporting propeller  
Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface 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  
If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine  
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. **one** Diameter **3 1/2"** Stroke **3"** Can one be overhauled while the other is at work  
Pumps connected to the Main Bilge Line { No. and Size **one 3 1/2" x 3"** & auxiliary centrifugal pump. How driven **off main engine & off auxiliary engine**  
Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size  
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 **2 @ 2"**  
In Holds, &c. **2" dia fore peak & staves** **2" to each cofferdam**  
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **yes**  
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 **yes**  
Are all Sea Connections fitted direct on the skin of the ship **yes** Are they fitted with Valves or Cocks **Both**  
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates **yes** Are the Overboard Discharges above or below the deep water line **above**  
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  
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 bilge suction pipes~~ accessible at all times **yes**  
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  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  
Main Air Compressors, No. No. of stages Diameters Stroke Driven by  
Auxiliary Air Compressors, No. No. of stages Diameters Stroke 3 Driven by  
Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke 4 Driven by  
Scavenging Air Pumps, No. Diameter Stroke Driven by  
Auxiliary Engines crank shafts, diameter as per Rule as fitted

**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 What means are provided for cleaning their inner surfaces  
Is there a drain arrangement 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  
Starting Air Receivers, No. Total cubic capacity Internal diameter thickness  
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting   
(If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements *yes*

Oil Fuel Burning Arrangements

SPARE GEAR

- Please see attached manchester Report 7143 -

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

*1930. Sept 14. Oct 1-13-29. Nov 5-21-26. Dec 1.*

*8.*

Dates of Examination of principal parts—Cylinders	<input checked="" type="checkbox"/>	Covers	<input checked="" type="checkbox"/>	Pistons	<input checked="" type="checkbox"/>	Rods	<input checked="" type="checkbox"/>	Connecting rods	<input checked="" type="checkbox"/>
Crank shaft	<input checked="" type="checkbox"/>	Flywheel shaft	<input checked="" type="checkbox"/>	Thrust shaft	<input checked="" type="checkbox"/>	Intermediate shafts	<input checked="" type="checkbox"/>	Tube shaft	<input checked="" type="checkbox"/>
Screw shaft	<input checked="" type="checkbox"/>	Propeller	<input checked="" type="checkbox"/>	Stern tube	<input checked="" type="checkbox"/>	Engine seatings	<i>29. 10. 30</i>	Engines holding down bolts	<i>29. 10. 30</i>
Completion of fitting sea connections	<i>17. 9. 30</i>	Completion of pumping arrangements	<i>26. 11. 30</i>	Engines tried under working conditions	<i>26. 11. 30</i>				
Crank shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>	Flywheel shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>		
Thrust shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>	Intermediate shafts, Material	<input checked="" type="checkbox"/>	Identification Marks	<input checked="" type="checkbox"/>		
Tube shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>	Screw shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>		

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

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *J. Harker No. 34*

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

- please see manchester Report No 7143 -

This engine has been satisfactorily fitted on board, tried under full working conditions all found in good order. It is eligible in my opinion to have record of + L.M.C. 12. 30.

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

The amount of Entry Fee ... £	:	:	When applied for,
Special <i>to Hall = 1/5</i> £	3	8	0 11 Dec 1930 <i>amp</i>
<i>45th AB: 12.0 charged on Nch 44 7143</i>			
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	<i>24 1. 31</i> <i>ell</i>

*W. H. Waggott*  
Engineer-Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 19 DEC 1930

Assigned

*+ L.M.C. 12. 30*

CERTIFICATE WRITTEN



Lloyd's Register Foundation