

# REPORT ON OIL ENGINE MACHINERY.

No. 9717

Received at London Office 11 April 1927  
 When handed in at Local Office 9-4-1927 Port of *Belfast*  
 Survey held at *Belfast* Date, First Survey *1<sup>st</sup> Sept. 1926* Last Survey *6<sup>th</sup> April 1927*  
 Number of Visits *62*  
 on the *Single* Screw vessels *PORT FREMANTLE* Tons *Gross*  
*Triple* *Net*  
 Built at *Belfast* By whom built *Workman Clark & Co. Ltd.* Yard No. *489* When built *1927*  
 made at *Sunderland* By whom made *Wm. Doxford & Sons Ltd.* Engine No. *154* When made *1927*  
 Boilers made at *Armstrong & Co. Ltd.* By whom made *Bochran & Co. Ltd.* Boiler No. *9986* When made *1927*  
*Hitchin* *Spencer - Binecourt Ltd.* *6004*  
 Horse Power *6000* Owners *Commonwealth Dominion Line Ltd.* Port belonging to *London*  
 Horse Power as per Rule *1281* Is Refrigerating Machinery fitted for cargo purposes *Yes* Is Electric Light fitted *Yes*

ENGINES, &c.—Type of Engines *Double opposed piston* 2 or 4 stroke cycle *Z* Single or double acting *Single*

pressure in cylinders No. of cylinders No. of cranks Diameter of cylinders

stroke Revolutions per minute *making 95* Means of ignition Kind of fuel used

earing between each crank Span of bearings (Page 92, Section 2, par. 7 of Rules)

between centres of main bearings Is a flywheel fitted Diameter of crank shaft journals as per Rule as fitted

crank pins Breadth of crank webs as per Rule as fitted Thickness of ditto as per Rule as fitted

flywheel shaft as per Rule as fitted Diameter of tunnel shaft as per Rule as fitted Diameter of thrust shaft as per Rule as fitted

screw shaft as per Rule as fitted Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes*

end of the liner made watertight in the propeller boss *Yes* If the liner is in more than one length are the joints burned

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

rs are fitted, is the shaft lapped or protected between the liners If without liners, is the shaft arranged to run in oil

ter gland fitted to stern tube *None* Length of stern bush *65"* Diameter of propeller *16'-3"*

propeller *16'-6"* No. of blades *Four* state whether moveable *Yes* Total surface *81* square feet

reversing Is a governor or other arrangement fitted to prevent racing of the engine when declutched Thickness of cylinder liners

inders fitted with safety valves Means of lubrication Are the exhaust pipes and silencers water cooled or lagged with

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

to Tunnel No. of cooling water pumps *3* Is the sea suction provided with an efficient strainer which can be cleared

vessel *Yes* No. of bilge pumps fitted to the main engines Diameter of ditto Stroke

overhauled while the other is at work No. of auxiliary pumps connected to the main bilge lines *Two* How driven *Electric*

umps *8" Centric 5" Centric* No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room *3-3 1/2"*

ds, etc. *No. 1. 2 x 4. holds 2-3 1/2"* No. of ballast pumps *One* How driven *Electric* Sizes of pumps *8" Centric*

ast pump fitted with a direct suction from the engine room bilges *Yes* State size *8"* Is a separate auxiliary pump suction fitted in

om and size *Yes One - 5"* Are all the bilge suction pipes fitted with roses *Yes* Are the roses in Engine Room always accessible *Yes*

nces on Engine Room bulkheads always accessible *None* Are all connections with the sea direct on the skin of the ship *Yes*

valves or cocks *Valves* Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates *Yes*

discharge pipes 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*

es, cocks, valves and pumps in connection with the machinery accessible at all times *Yes* Are the bilge suction pipes, cocks and valves arranged so as to prevent any

tion between the sea and the bilges *Yes* Is the screw shaft tunnel watertight *Yes* Is it fitted with a watertight door *Yes*

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

in air compressors No. of stages Diameters Stroke Driven by

iliary air compressors *Two* No. of stages *3* Diameters *3 1/2"-10 3/4"-13 1/2"* Stroke *8"* Driven by *Electric*

all auxiliary air compressors *One* No. of stages *2* Diameters *2 8" x 6"* Stroke *4 1/2"* Driven by *Steam*

venting air pumps Diameter Stroke Driven by

of auxiliary Diesel Engine crank shafts as per Rule as fitted Are the air compressors and their coolers made so as to be easy of access *Yes*

RECEIVERS:—No of high pressure air receivers Internal diameter Cubic capacity of each

Seamless, lap welded or riveted longitudinal joint Range of tensile strength

working pressure by Rules No. of starting air receivers *Three* Internal diameter *51"*

ic capacity *480* Material *Steel* Seamless, lap welded or riveted longitudinal joint *Riveted longitudinal joint*

tensile strength *28 1/2 to 32 1/2* thickness *1 1/2"* Working pressure by rules *608 lbs* Is each receiver, which can be isolated,

a safety valve as per Rule *Yes* Can the internal surfaces of the receivers be examined *Yes* What means are provided for cleaning their

aces *manhole* Is there a drain arrangement fitted at the lowest part of each receiver *Yes*

603549-003555-0127



IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....					
"    "    COVERS .....					
"    "    JACKETS.....					
"    PISTON WATER PASSAGES.....					
MAIN COMPRESSORS—1st STAGE.....					
"    2nd " .....					
"    3rd " .....					
AIR RECEIVERS—STARTING .....	25 Feb. 1927.	600 lb	800 lb.	<div>No 41. LLOYD'S TEST 800 LBS. W.P. 600 LBS. R.L.A. 25.2.27.</div>	
"    INJECTION .....					
AIR PIPES .....					
FUEL PIPES .....					
FUEL PUMPS .....					
SILENCER .....					
"    WATER JACKET .....	<div>FUEL OIL GRAVITY 94.11.2:27 STORAGE 4.2:27 (2 RECTIFIED 134.184.31.2:27)</div>	<div>5 lb 10 lb</div>	<div>10 LBS 20 LBS</div>	<div>R.L.A. R.L.A.</div>	
SEPARATE FUEL TANKS .....	GRAVITY DIESEL OIL 28+31.1:27		20 LBS.	R.L.A.	

PLANS. Are approved plans forwarded herewith for shafting 12.12.26 & 11.3.26 Receivers Yes Separate Tanks Yes

SPARE GEAR

The foregoing is a correct description,

FOR WORKMAN, CLARK & CO. LIMITED.

J. Cunningham

Manufacturer.

Dates of Survey while building  
During progress of work in shops-- 19<sup>th</sup> Sept 1-2-22 Oct 4-5-6-29 Nov 1-16-18-23-26 Dec 6-9-13-14-17-19-22-25-28 Jan 5-6-7-12-13-16  
During erection on board vessel-- 24-25-27-28-31 Feb. 1-2-4-7-9-11-15-17-22-25-28 Mar 1-3-4-7-10-11-14-16  
Total No. of visits 23-26-28-29-31 Apr 1-2-3-4-5-6 = 62

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

Crank shaft Thrust shaft Tunnel shafts 29.10.26 Screw shaft 6.12.26 Propellers 5.10.26 Stern tube 6.10.26 Engine seating

Engines holding down bolts 4.3.27 Completion of pumping arrangements 4.4.27 Engines tried under working conditions 5.4.27

Completion of fitting sea connections 5.1.27 Stern tube 14.12.26 Screw shaft and propeller 5.1.27

Material of crank shaft Identification Mark on Do. 1343 J.L. 1507 J.L. 1508 J.L. 1509 J.L. 7040 M.B. 7401 M.B. 6986 M.B.

Material of tunnel shafts S.M. Ingot Steel Identification Marks on Do. 1757 J.Q. 1757 J.Q. 1758 J.Q. 6969 M.B. 6984 M.B. 6985 M.B.

Is the flash point of the oil to be used over 150° F. Yes

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 constructed under special survey at Sunderland & has been efficiently installed on board & tried out at mooring and sea trials with satisfactory results.

In my opinion the vessel is now eligible for notation L.M.C. 4.27 C.L. (fitted fuel F.P. above 150° F) No.

The amount of Entry Fee ... £ : : When applied for, 9-4-1927  
Special ... £ 26 : 8 :  
AIR RESERVOIRS  
Donkey Boiler Fee ... £ 6 : 6 :  
Travelling Expenses (if any) £ : : When received, 13.4.1927

Committee's Minute

Assigned + L.M.C. 4.27 C.L. Oil Engines

R. Lee Ameson.

Engineer Surveyor to Lloyd's Register of

CERTIFICATE WRITTEN:

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