

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 1st Sept. 1926 Last Survey 6 April 1927
Number of Visits 62
on the ^{Single} Twin _{Triple} Screw vessels PORT FREMANTLE Tons ^{Gross} _{Net}
Built at Belfast By whom built Workman Clark & Co. 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 Arman By whom made Cochran & Co. Arman Ltd. Boiler No. 9986 When made 1927
& Roke Hitchin Spencer - Broomfield 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
bearing 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}
^{approved} _{as per Rule} 16 3/4" ^{approved} _{as per Rule} 14 1/2" ^{approved} _{as per Rule} 14 3/8"
screw shaft ^{as per Rule} _{as fitted} 15 3/8" ^{approved} _{as per Rule} 16 1/4" 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
are fitted, is the shaft lapped or protected between the liners If without liners, is the shaft arranged to run in oil
ster 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
cylinders fitted with safety valves Means of lubrication Are the exhaust pipes and silencers water cooled or lagged with
insulating 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
pumps 8" centres 5" centres 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. 1-2x4. holds 2-3 1/2" No. of ballast pumps One How driven Electric Sizes of pumps 8" centres
ast pump fitted with a direct suction from the engine room bilges Yes State size 8" Is a separate auxiliary pump suction fitted in
room and size Yes One-5" Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine Room always accessible Yes
pipes 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
pipes, 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
connection between the sea and the bilges Yes Is the screw shaft tunnel watertight Yes Is it fitted with a watertight door Yes
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
auxiliary air compressors Two No. of stages 3 Diameters 3 1/2"-10 1/4"-13 1/2" Stroke 8" Driven by Electric
small auxiliary air compressors One No. of stages 2 Diameters 2 8" x 6" Stroke 4 1/2" Driven by Steam
driving 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 5 1/2"
cubic 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 3/4" 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
faces manhole Is there a drain arrangement fitted at the lowest part of each receiver Yes

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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	<i>75 Feb. 1927.</i>	<i>600 lb</i>	<i>800 lb.</i>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">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 style="border-left: 1px solid black; border-right: 1px solid black; padding-left: 5px;"> FUEL OIL GRAVITY 94.11.2:27 STORAGE 4.2:27 2 RECTIFIED 13.18.31.2:27 </div>	<i>50 lb</i> <i>10 lb</i>	<i>10 LBS</i> <i>20 LBS</i>	R.L.A. R.L.A.	
SEPARATE FUEL TANKS			GRAVITY DIESEL OIL 28.31.1:27	<i>20 lbs.</i>	R.L.A.

PLANS. Are approved plans forwarded herewith for shafting *12.12.26 & 11.3.26* Receivers *Yes* Separate Tanks *Yes*
(If not, state date of approval)

SPARE GEAR

The foregoing is a correct description,

FOR WORKMAN, CLARK & CO. LIMITED.

J. Cunningham Manufacturer.

Manufacturer.

Dates of Survey while building

During progress of work in shops-- During erection on board vessel-- Total No. of visits	}	<i>1926 Sept 1-2-22 Oct 4-5-6-29 Nov 1-16-18-23-26 Dec 6-9-13-14-17 1927 Jan 5-6-7-12-13-16</i>
		<i>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</i>
		<i>23-26-28-29-31 Apr 1-2-3-4-5-6 = 62</i>

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. Material of thrust shaft Identification Mark on Do.

Material of tunnel shafts *S.M. Ingot Steel* Identification Marks on Do. Material of screw shafts *S.M. Ingot Steel* Identification Marks on Do.

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 see see Report No 29360 & Lon. Rpt. No. 90901. It has been efficiently installed on board and 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,
 Special *8/-* ... £ 26 : 8 - } *9-4-1927*
 AIR RESERVOIRS
 Donkey Boiler Fee ... £ 6 : 6 - }
 Travelling Expenses (if any) £ : : *13.4.1927*

R. Lee Ameson.
Engineer Surveyor to Lloyd's Register of

Committee's Minute
Assigned *+ L.M.C. 4.27 C.L. Oil Engines*
TDER. 12 APR 1927
Lloyd's Register Foundation