

REPORT ON OIL ENGINE MACHINERY.

No. 91035.

Writing Report 27 JAN 1927

When handed in at Local Office

27 JAN 1927

Port of London (Spowich)

Date, First Survey 2nd March 1926

Last Survey 22nd January 1927

Number of Visits 45

Survey held at Spowich

on the Twin Screw vessels

"Southland"

Tons Gross
Net

at Dublin

By whom built The Dublin Dockyard Co. Ltd.

Yard No. 120 When built

es made at Spowich

By whom made Vickers-Petterson Ltd.

Engine Nos 1058 When made 1927

Boilers made at Annan (Scotland) By whom made Messrs Cochran Ltd.

Boiler No. When made

Horse Power 600 (each engine)

Owners The Bluff Harbour Board. N.Z.

Port belonging to Bluff Harbour N.Z.

Horse Power as per Rule 171 (each eng) Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c. Type of Engines Semi-Diesel. 2 or 4 stroke cycle 2. Single or double acting SINGLE.

in pressure in cylinders 450 LBS/sq. in. No. of cylinders 6-2=12 Diameter of cylinders 16 1/2" No. of cranks 6x2=12 Length of stroke 18 1/2"

bearings, adjacent to the Crank, measured from inner edge to inner edge 18 7/8" Is there a bearing between each crank YES

ions per minute 270 Flywheel dia. 3-6" Weight 3320 LBS Means of ignition ELECTRIC AND HOT SURFACE Kind of fuel used CRUDE OIL

Shaft, dia. of journals as per Rule 8.03" as fitted 8.25" Crank pin dia. 8.25" Crank Webs Mid. length breadth 11 1/2" Mid. length thickness 4.5" Thickness parallel to axis SOLID Thickness around eye-hole FORGING

el Shafts, diameter as per Rule FLYWHEEL ATTACHED TO INTERMEDIATE SHAFTS, diameter as per Rule 5.97" as fitted 6.125" Thrust Shaft, diameter at collars as per Rule 6.27" as fitted 6.5"

Shafts, diameter as per Rule 6.27" as fitted 6.75" Screw Shaft, diameter as per Rule 6.73" as fitted 6.81" Is the tube screw shaft fitted with a continuous liner yes

Liners, thickness in way of bushes as per Rule 1/2" as fitted 1/2" Thickness between bushes as per rule 3/8" as fitted 3/8" Is the after end of the liner made watertight in the boss

boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ONE LENGTH

ner 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

liners are fitted, is the shaft lapped or protected between the liners Between liners protected Is an approved Oil Gland or other appliance fitted at the after

the tube shaft No Length of Bearing in Stern Bush next to and supporting propeller 2-4"

ler, dia. 6-4" Pitch 6-2" No. of blades 3 Material BRONZE whether Moveable No Total Developed Surface 16 sq. feet

of reversing Engines A/R. Is a governor or other arrangement fitted to prevent racing of the engine YES Means of lubrication

Thickness of cylinder liners 5/8" Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or lagged with

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

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

Pumps fitted to the Main Engines, No. EACH ENGINE Diameter 8" Stroke 6" Can one be overhauled while the other is at work YES

connected to the Main Bilge Line No. and Size How driven

SERVICE ONE DOUBLE ACTING 5 1/8" BORE, 6" STROKE Lubricating Oil Pumps, including Spare Pump, No. and size ONE, 1 1/8" BORE x 6" STROKE

Pump, No. and size 5 1/8" BORE, 6" STROKE independent means arranged for circulating water through the Oil Cooler No oil cooler ? Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size:—In Engine and Boiler Room

&c.

ident Power Pump Direct Suctions to the Engine Room Bilges, No. and size ONE, 5 1/2" x 6" SINGLE ACTING

he Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Space

easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

sea Connections fitted direct on the skin of the ship no Are they fitted with Valves or Cocks yes look

ered 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

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 yes

s pass through the bunkers none How are they protected

s pass through the deep tanks Have they been tested as per Rule

pes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

ngement 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

ut to another yes Is the Shaft Tunnel watertight yes A.P.T. Is it fitted with a watertight door no worked from

essel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

r Compressors, No. No. of stages Diameters Stroke Driven by

y Air Compressors, No. ONE (No 19173) No. of stages TWO Diameters 4" AND 8" Stroke 7" Driven by OIL ENGINE

Auxiliary Air Compressors, No. ONE No. of stages ONE Diameters 3" Stroke 4" Driven by HAND OR BELT

ing Air Pumps, No. Diameter Stroke Driven by

y Engines crank shafts, diameter as per Rule 3 5/8" as fitted 4"

ECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule One safety valve, common to the 2 receivers

Internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Manhole door

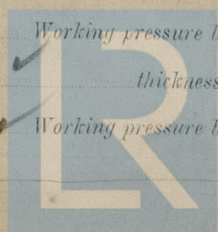
e drain arrangement fitted at the lowest part of each receiver Yes

ping, pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

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

Air Receivers, No. Four Total cubic capacity 120 feet Internal diameter 2-3' thickness 1/2"

lap welded or riveted longitudinal joint Lap riveted Material Steel Range of tensile strength 28 tons Working pressure by Rules 300 lbs



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IS A DONKEY BOILER FITTED? *sent direct to Dublin*

If so, is a report now forwarded? ☒

Rpt. 9.

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE. (Maximum)	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDER <i>Lines</i>	24-4-26 + 5-5-26.	450 lb	800 lb	<i>Lloyd 800 lb. A.S.F.</i>	
" " <i>Heads</i>	12-6-26, 19-7-26 + 21-7-26.	450 lb	800 lb	" " <i>A.S.F.</i>	
" " <i>Covers</i>	18-6-26 - 1-7-26 + 10-7-26.	—	50 lb	" 50 lb <i>A.S.F.</i>	
" " JACKETS.....	5-5-26 + 4-6-26.	—	50 lb	" " <i>A.S.F.</i>	
Bedplate Water WATER PASSAGES.....					
MAIN COMPRESSORS—1st STAGE.....					
" 2nd " <input checked="" type="checkbox"/>					
" 3rd " <input checked="" type="checkbox"/>					
AIR RECEIVERS—STARTING <i>valves</i>	17-11-26 + 4-1-27	300 lb	600 lb	<i>Lloyd 600 lb. A.S.F.</i>	
" INJECTION <input checked="" type="checkbox"/>					
AIR PIPES	11-11-26 + 5-1-27	300 lb	600 lb	<i>Lloyd 600 lb. A.S.F.</i>	
FUEL PIPES					
FUEL PUMPS + <i>bypass valves</i>	10-8-26 + 18-8-26		2000 lb	<i>Lloyd 2000 lb. A.S.F.</i>	
SILENCERS.....	<i>(19-8-26, 21-8-26, 25-10-26 + 14-12-26)</i> <i>(28-1-27)</i>		50 lb	" 50 lb <i>A.S.F.</i>	
" WATER JACKET	<i>4-8-26, 21-8-26, 25-10-26 + 14-12-26</i>		50 lb	" 50 lb <i>A.S.F.</i>	
SEPARATE FUEL TANKS	<i>supplied by ship builders</i>				

PLANS. Are approved plans forwarded herewith for Shafting *Yes*

Receivers *Yes*

Separate Tanks *Not supplied by engine builders*

Donkey Boilers *No*

General Pumping Arrangements *No*

Oil Fuel Burning Arrangements ☒

SPARE GEAR

not yet completed. list will be sent later

The foregoing is a correct description,

VICKERS-PETTERS LTD.

Gawcott

Manufacturer.

Dates of Survey while building
During progress of work in shops:— 1926 MAR 2-4-16-23. APR 7-10-12-17-24. MAY 5-29 JUNE 4-12-14-15-23. JULY 1-10-19-21-24. AUG 10-12-18-19-21
During erection on board vessel:— SEP 4-11-16-23 OCT 5-20-25 NOV 8-11-16-17-29 DEC 1-8-14-22. (1927) JAN 5-22
Total No. of visits *45 (in shops)*

Dates of Examination of principal parts—Cylinders *4-3-26 + 16-8-26* Heads *23-8-26* Pistons *5-5-26* *bpl. lines* *4-3-26 + 16-8-26* Connecting rods *4-3-26 + 16-8-26*

Crank shaft *10-4-26, 24-6-26, 10-7-26* Bedplate *16-3-26* Thrust shaft *12-8-26* Intermediate shafts ☒ Tube shaft

Screw shaft *See Hull Report 37444* Propeller *See Hull Rpt 37444* Stern tube *Detto* Engine seatings ☒ Engines holding down bolts ☒

Completion of fitting sea connections ☒ Completion of pumping arrangements ☒ Engines tried under working conditions ☒

Crank shafts Material *Steel* Identification Mark *1049 Lloyd A.L.* Flywheel shaft, Material ☒ Identification Mark ☒

Thrust shafts Material *Steel* Identification Mark *1058 " A.L.* Intermediate shafts, Material *See Hull Rpt 37444* Identification Marks ☒

Tube shaft, Material ☒ Identification Mark ☒ Screw shaft, Material *See Hull Rpt 37444* Identification Mark ☒

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.) *These engines have been constructed under special*

Survey in accordance with the approved plans + the Society's Rules, the material + workmanship are good. The cylinders, water jackets, heads, air starting receivers + connections, silencers, fuel pumps etc, have been hydraulically tested, with satisfactory results. The engines have been run on a full power shop trial, when starting, many 4 governor trials were witnessed, all of which proved satisfactory.

The engines have been despatched to Dublin to be fitted in the vessel, + will in my opinion be able to be classed + L.M.C. with date, after a satisfactory trial.

The amount of Entry Fee *£5.0.0* : : When applied for, *127 JAN 1927*
Special *£16.6.0* : :
Donkey Boiler Fee *£65.0.10* : :
Travelling Expenses (if any) *NIL* : : When received, *20.6.27 J.S.W.*

Committee's Minute

Assigned

WED. 8 JUN 1927

See Dub. Rpt. No 4539

A.C. Farminer

Engineer Surveyor to Lloyd's Register of Shipping



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