

REPORT ON OIL ENGINE MACHINERY.

No. 41321.

FRI. AUG. 26 1921

Received at London Office

Date of writing Report 25. 8. 1921 When handed in at Local Office 25. 8. 1921 Port of Glasgow.
 Date, First Survey 3rd Nov 1920 Last Survey 9th Aug 1921
 Number of Visits 30.
 Survey held at Coatbridge
 Date, First Survey 3rd Nov 1920 Last Survey 9th Aug 1921
 Number of Visits 30.
 Single } Screw vessels
 Triple }
 Built at Birkenhead By whom built Cammell Laird Yard No. 460. 2d. When built 1920
 Engines made at Coatbridge By whom made Wm. Beardmore & Co. Ltd. Engine No. 1306 When made 1921.
 Boilers made at Coatbridge By whom made Wm. Beardmore & Co. Ltd. Boiler No. 1306 When made 1921.
 Owners J. F. Brocklebank & Co. Ltd. Port belonging to Liverpool
 Is Refrigerating Machinery fitted for cargo purposes Yes. Is Electric Light fitted Yes.

L ENGINES, &c. Type of Engines Semi-Diesel. Hot Bull. 2 or 4 stroke cycle 2 Single or double acting Single
 Maximum pressure in cylinders 300 No. of cylinders 4 No. of cranks 4 Diameter of cylinders 16 1/2"
 Length of stroke 19" Revolutions per minute 225 Means of ignition Compression Kind of fuel used Oil
 Is there a bearing between each crank Yes. Span of bearings (Page 92, Section 2, par. 7 of Rules) 1' 10 3/8"
 Distance between centres of main bearings 2' 9 3/8" Is a flywheel fitted Yes. Diameter of crank shaft journals 4 3/4" as per Rule Approved
 Diameter of crank pins 4 3/4" Breadth of crank webs 10 3/8" as per Rule Approved Thickness of ditto 4 1/4" as per Rule Approved
 Diameter of flywheel shaft 4 3/4" as per Rule Approved Diameter of tunnel shaft 4 3/4" as per Rule Approved Diameter of thrust shaft 4 3/4" as per Rule Approved
 Diameter of screw shaft 4 3/4" as per Rule Approved Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes.
 Is the after end of the liner made watertight in the propeller boss Yes. If the liner is in more than one length are the joints burned Yes.
 Is 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 Yes.
 If two liners are fitted, is the shaft lapped or protected between the liners Yes. If without liners, is the shaft arranged to run in oil Yes.
 Type of outer gland fitted to stern tube Yes. Length of stern bush Yes. Diameter of propeller Yes.
 Pitch of propeller Yes. No. of blades Yes. Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes. Thickness of cylinder liners Yes.
 Method of reversing Air. Are the cylinders fitted with safety valves Yes. Means of lubrication Forced. Are the exhaust pipes and silencers water cooled or lagged with Yes.
 Non-conducting material Cooled. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Yes.
 No. of cooling water pumps 1 Is the sea suction provided with an efficient strainer which can be cleared Yes.
 No. of bilge pumps fitted to the main engines 1 Diameter of ditto 4 3/4" Stroke 4"
 Can one be overhauled while the other is at work Yes. No. of auxiliary pumps connected to the main bilge lines Yes. How driven Yes.
 No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room Yes.
 No. of ballast pumps Yes. How driven Yes. Sizes of pumps Yes.
 Is the ballast pump fitted with a direct suction from the engine room bilges Yes. State size Yes. Is a separate auxiliary pump suction fitted in Yes.
 Are all the bilge suction pipes fitted with roses Yes. Are the roses in Engine Room always accessible Yes.
 Are the sluices on Engine Room bulkheads always accessible Yes. Are all connections with the sea direct on the skin of the ship Yes.
 Are they valves or cocks Yes. Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates Yes.
 Are the discharge pipes above or below the deep water line Yes. Are they each fitted with a discharge valve always accessible on the plating of the vessel Yes.
 Are all 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 Yes.
 Communication 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 Yes.

RECEIVERS:—No. of high pressure air receivers 3. Internal diameter 3' 0" Cubic capacity of each 135 Cub. ft. (approx.)
 Material Steel. Range of tensile strength 350 No. of starting air receivers 3. Internal diameter 3' 0"
 Working pressure by Rules 350 Thickness 5/8" Seamless, lap welded or riveted longitudinal joint Riveted
 Is each receiver, which can be isolated, Yes. Can the internal surfaces of the receivers be examined Yes. What means are provided for cleaning their Manhole door on end.
 Is there a drain arrangement fitted at the lowest part of each receiver Yes.



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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	31.8.20 4.11.20 26.10.20 14.1.21.	300 lbs.	600 lbs.	J.W. Lloyds.	
COVERS	8.3.21. 12.7.21. 9.8.21.	"	"	"	
JACKETS	25.10.20. 4.11.20. 14.1.21.	"	50 lbs.	"	
PISTON WATER PASSAGES					
MAIN COMPRESSORS—1st STAGE					
2nd					
3rd					
AIR RECEIVERS—STARTING (3)	2.3.21.	350	550	15725 2.3.21. H3	
INJECTION					
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
SILENCER (2)	22.3.21.		50 lbs.		
WATER JACKET	"		"		
SEPARATE FUEL TANKS					

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

Receivers

Separate Tanks

SPARE GEAR

The foregoing is a correct description,

WILLIAM BEARDMORE & CO. LIMITED

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1920 Dec 14-25 (1921) Jan 14-18 28 Feb 13-16 8-9. 17-18 21. 22-23 24-25 Mar 1. 2-4 7-8. 16-22 Apr 14-18 May 27 Jun 27 July 12 Aug 9
During erection on board vessel - - -
Total No. of visits 30.

Dates of Examination of principal parts—Cylinders 14.1.21. Covers 12.7.21. Pistons 14.1.21 Rods ✓ Connecting rods 14.1.

Crank shaft 3.11.20 Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Engine seatings

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

Completion of fitting sea connections Stern tube 5650 AF Screw shaft and propeller

Material of crank shaft M. S Identification Mark on Do. Material of thrust shaft Identification Mark on Do.

Material of tunnel shafts Identification Marks on Do. Material of screw shafts Identification Marks on Do.

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

Is this machinery duplicate of a previous case Yes. If so, state name of vessel "Lady Kinderley". Vancouver.

General Remarks (State quality of workmanship, opinions as to class, &c. This Engine has been built under Special Survey in accordance with the Approved Rules & Rules of the Society the materials and workmanship are good. The Engine has been run on test bench full load & starting & reversing trials were satisfactory. The Engine has been dispatched to Birkenhead to be fitted on board the vessel.

The amount of Entry Fee ... £ 2 : 0
Specimen 2/3 ... £ 18 : 4
Donkey Boiler Fee ... £ 15 :
Travelling Expenses (if any) £ : :
When applied for, 25/8/1921
When received, 29/10/1921

Committee's Minute

Assigned

John Barr.

Engineer Surveyor to Lloyd's Register of Shipping



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