

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
 No. in Survey held at Coatbridge Date, First Survey 3rd Nov 1920 Last Survey 9th Aug 1921
 No. of Visits 30.
 Name of vessel "Fullagar." Tons ^{Gross} _{Net}
 Type of vessel Screw vessels
 Name of Master Cammell Laird
 Built at Birkenhead By whom built H.C. Ltd Yard No. When built 1920
 Engines made at Coatbridge By whom made Wm Beardmore H.C. Ltd Engine No. 1306 When made 1921.
 Boilers made at By whom made Boiler No. When made
 Brake Horse Power Owners H.J. Rocklebank Ltd Port belonging to Liverpool
 Indicated Horse Power as per Rule 91. Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

2. 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
 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 as per Rule Approved
4 3/4" as fitted 4 3/4" as fitted
 Diameter of crank pins 4 3/4" Breadth of crank webs as per Rule Approved Thickness of ditto as per Rule Approved
10 5/8" as fitted 4 1/4" as fitted
 Diameter of flywheel shaft as per Rule Approved Diameter of tunnel shaft as per Rule Diameter of thrust shaft as per Rule
4 3/4" as fitted 4 3/4" as fitted
 Diameter of screw shaft as per Rule Is the screw shaft fitted with a continuous liner the whole length of the stern tube
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 joints burned
 Does the liner do 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
 If two liners are fitted, is the shaft lapped or protected between the liners If without liners, is the shaft arranged to run in oil
 Type of outer gland fitted to stern tube Length of stern bush Diameter of propeller
 Pitch of propeller No. of blades state whether moveable Total surface square feet
 Method of reversing Air. Is a governor or other arrangement fitted to prevent racing of the engine when declutched Thickness of cylinder liners
 Are the cylinders fitted with safety valves No Means of lubrication Forced. Are the exhaust pipes and silencers water cooled or lagged with
 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
 No. of cooling water pumps 1 Is the sea suction provided with an efficient strainer which can be cleared
 How often the vessel 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 No. of auxiliary pumps connected to the main bilge lines How driven
 Types of pumps No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room
 Used in holds, etc. No. of ballast pumps How driven Sizes of pumps
 Is the ballast pump fitted with a direct suction from the engine room bilges State size Is a separate auxiliary pump suction fitted in
 engine room and size Are all the bilge suction pipes fitted with roses Are the roses in Engine Room always accessible
 Are the sluices on Engine Room bulkheads always accessible Are all connections with the sea direct on the skin of the ship
 Are they valves or cocks Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates
 Are the discharge pipes above or below the deep water line Are they each fitted with a discharge valve always accessible on the plating of the vessel
 Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times Are the bilge suction pipes, cocks and valves arranged so as to prevent any
 communication between the sea and the bilges Is the screw 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
 No. of main air compressors No. of stages Diameters Stroke Driven by
 No. of auxiliary air compressors No. of stages Diameters Stroke Driven by
 No. of small auxiliary air compressors No. of stages Diameters Stroke Driven by
 No. of scavenging air pumps Diameter Stroke Driven by
 Diameter of auxiliary Diesel Engine crank shafts as per Rule Are the air compressors and their coolers made so as to be easy of access
as fitted

3. RECEIVERS:—No. of high pressure air receivers Internal diameter Cubic capacity of each
 Material Seamless, lap welded or riveted longitudinal joint Range of tensile strength
 Working pressure by Rules No. of starting air receivers 3. Internal diameter 3' 0"
 Total cubic capacity 135 Cub. ft. (approx) Material Steel. Seamless, lap welded or riveted longitudinal joint Riveted
 Working pressure by rules 350 Is each receiver, which can be isolated,
 thickness 28/32 TONS thickness 5/8" Working pressure by rules 350 Is each receiver, which can be isolated,
 fitted with a safety valve as per Rule Yes. Can the internal surfaces of the receivers be examined Yes. What means are provided for cleaning their
 internal surfaces Manhole door on end. Is there a drain arrangement fitted at the lowest part of each receiver Yes.

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 14 8 9 17 18 21 22 23 24 25 Mar 1 2 4 4 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, 9-8-21. Pistons 14-1-21 Rods ✓ Connecting rods 14-1-21
 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 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
 Special Fee ... £ 18 : 4
 Donkey Boiler Fee ... £ 15 :
 Travelling Expenses (if any) £ : :
 When applied for, 25/8/1921
 When received, 29/10/1921

John Barr,
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned