

REPORT ON OIL ENGINE MACHINERY.

No. 33361
LUE. APR. 25 1922

Report 19 When handed in at Local Office 19/4/22 Port of Hull.
 Survey held at Hull Date, First Survey 21.3.22 Last Survey 18/4/1922
 Number of Visits 8
 Single the Twin Triple Screw vessels LIZZIE & ANNIE.
 Built at North Shields By whom built J. L. Thompson Yard No. When built 1877
 at Newbury By whom made Blunt & Sons Ltd. Engine No. When made 1913
 Makers made at By whom made Boiler No. When made
 Power 95 Owners G. F. Birch & Son (1919) Ltd. Port belonging to Hull
 Power as per Rule 27. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

Types, &c. Type of Engines Kromhout hot bulb. 2 or 4 stroke cycle 2 Single or double acting Single
 No. in cylinders 200 250 No. of cylinders 2 No. of cranks 2 Diameter of cylinders 13 3/8"
 13 3/8" 13 3/4" Revolutions per minute 275 Means of ignition Hot bulb Kind of fuel used gas oil
 Distance between each crank 14" Span of bearings (Page 92, Section 2, par. 7 of Rules) 14"
 Distance between centres of main bearings 2'-0" Is a flywheel fitted Yes Diameter of crank shaft journals as per Rule as fitted 4 3/4"
 Crank pins 4 3/4" Breadth of crank webs as per Rule as fitted 6 1/4" Thickness of ditto as per Rule as fitted 2 3/4"
 Crank wheel shaft as per Rule as fitted 4 3/4" Diameter of tunnel shaft as fitted 3 3/8" Diameter of thrust shaft as per Rule as fitted 4 3/4"
 New shaft as per Rule as fitted 3 1/2" TOP OF CONE Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner
 of the liner made water tight in the propeller boss NOTE DIA TAIL END. If the liner is in more than one length are the joints burned
 Is 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 No
 Stand fitted to stern tube None Length of stern bush 1'-3" Diameter of propeller 3'-10"
 Diameter 4'-6" No. of blades 4 state whether moveable No Total surface square feet
 Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Thickness of cylinder liners 1 1/4"
 Are fitted with safety valves No Means of lubrication forced feed. Are the exhaust pipes and silencers water cooled or lagged with
 material Water. C. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine
 Is exhaust. 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 one Diameter of ditto 2 1/2" Stroke 2"
 How driven Hand pump
 No. of auxiliary pumps connected to the main bilge lines None
 No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 1 @ 1 1/2"
 Hand pumps & thimble No. of ballast pumps None How driven Sizes of pumps
 Pump fitted with a direct suction from the engine room bilges State size Is a separate auxiliary pump suction fitted in
 and size Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine Room always accessible Yes
 on Engine Room bulkheads always accessible Yes Are all connections with the sea direct on the skin of the ship Yes
 or cocks Both Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates Yes
 Are they each fitted with a discharge valve always accessible on the plating of the vessel Yes
 Are the bilge suction pipes, cocks and valves arranged so as to prevent any
 between the sea and the bilges Yes Is the screw shaft tunnel watertight None Is it fitted with a watertight door
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
 Air compressors No. of stages Diameters Stroke Driven by
 Air compressors No. of stages Diameters Stroke Driven by
 Auxiliary air compressors 1 No. of stages 2 Diameters 3" & 2" Stroke 4" Driven by Hand.
 Air pumps Crank case scavenging diameter Stroke Driven by
 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
 STARTING
 EIVERS:—No. of high pressure air receivers Two Internal diameter 9" Cubic capacity of each 2.2 ft
 Seamless, lap welded or riveted longitudinal joint Welded Range of tensile strength
 Working pressure by Rules No. of starting air receivers Internal diameter
 Material Seamless, lap welded or riveted longitudinal joint
 strength thickness Working pressure by rules Is each receiver, which can be isolated,
 Is valve as per Rule Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their
 Flange doors Is there a drain arrangement fitted at the lowest part of each receiver



IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded?

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					
" INJECTION					
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
SILENCER					
" WATER JACKET					
SEPARATE FUEL TANKS					

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

See Report No. 3/3/22.
Receivers

Separate Tanks.

SPARE GEAR

Two hot bulbs & covers, one set spare valves for jets, 1 set piston & spare fuel pump, 1 set valves for circulating & bilge pumps, spare lengths of pipe & couplings. A quantity of engine bolts & nuts.

*Not on board & not produced. 2 connecting rod top & bottom end bolts & nuts
2 main bearing & 1 set coupling bolts & nuts*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops - -
During erection on board vessel - -
Total No. of visits

Dates of Examination of principal parts—Cylinders *21/3/22* Covers *21/3/22* Pistons *21/3/22* Rods *12/4/22* Connecting rods *12/4/22*
Crank shaft *12/4/22* Thrust shaft *12/4/22* Tunnel shafts *✓* Screw shaft *11/4/22* Propeller *11/4/22* Stern tube *11/4/22* Engine seatings *12/4/22*
Engines holding down bolts *12/4/22* Completion of pumping arrangements *12/4/22* Engines tried under working conditions
Completion of fitting sea connections *11/4/22* Stern tube *11/4/22* Screw shaft and propeller *11/4/22*
Material of crank shaft *Steel* Identification Mark on Do. *✓* Material of thrust shaft *Steel* Identification Mark on Do. *✓*
Material of tunnel shafts *✓* Identification Marks on Do. *✓* Material of screw shafts *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 *No* If so, state name of vessel *✓*

General Remarks

(State quality of workmanship, opinions as to class, &c.)

The tail end shaft is of steel with no liners (running in a cast iron bush with no outer glands) and it is stated was fitted new in 1920. The rest of the machinery was fitted new in 1913 and it is stated the engines have been running since then with satisfactory results. The machinery is in a good & efficient condition; it was not built under special order but the workmanship & materials appear good and eligible in my opinion for the favourable consideration of the Committee. The notation L.M.C. with date for coasting between Hull & Kings Lynn & subject to the spare gear being completed.

The amount of Entry Fee ... £ : : When applied for,
Special ... £ : : 19
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : 19

Committee's Minute

TUE. JUN. 5 1923

Assigned



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Foundation