

REPORT ON MACHINERY.

No. 81767

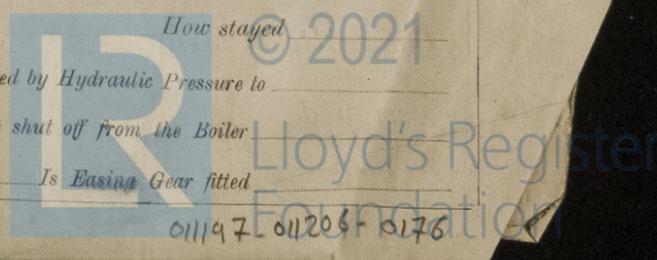
Date of writing Report 10 When handed in at Local Office 21 JAN 1921 Port of LIVERPOOL SAT. 22 JAN. 1921
Date, First Survey July 25th 1919 Last Survey Jan 12th 1921
(Number of Visits 23)

No. in Survey held at Reg. Book. 82450 on the Screw Steamer "Dearside".
Master Built at Bonmahs Quay By whom built J. Crichton & Co. Ltd.
Engines made at Saltney, Chert. By whom made J. Crichton & Co. Ltd. (see over) when made 1921
Boilers made at Birkenhead By whom made Hammell Laird & Co. Ltd. when made 1920.
Registered Horse Power Owners West Steam Shipping Co. (1917) Ltd. Port belonging to Sunderland.
Nom. Horse Power as per Section 28 77. Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted no.

ENGINES, &c.—Description of Engines Compound. No. of Cylinders 2. No. of Cranks 2.
Dia. of Cylinders 17" 3/16 Length of Stroke 24 Revs. per minute 105 Dia. of Screw shaft as per rule 7 7/8 as fitted 8 1/2 Material of screw shaft steel
Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners. Is the after end of the liner made water tight in the propeller boss — If the liner is in more than one length are the joints burned — If 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 — If two liners are fitted, is the shaft lapped or protected between the liners. Length of stern bush 3'-3".
Dia. of Tunnel shaft as per rule 6.96 as fitted none Dia. of Crank shaft journals as per rule 7 1/2 as fitted 7 1/2 Dia. of Crank pin 7 1/2 Size of Crank webs 13 x 5 1/2 Dia. of thrust shaft under collars 7 1/2 Dia. of screw 8'-6" Pitch of Screw 10'-9" No. of Blades 4 State whether moveable no Total surface 24 sq ft
No. of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 12" Can one be overhauled while the other is at work yes.
No. of Bilge pumps 1 Diameter of ditto 3 1/2 Stroke 12" Can one be overhauled while the other is at work yes.
No. of Donkey Engines two Sizes of Pumps 6.8" 5 1/2, 3 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room one - 2" 5" In Holds, &c. 3 - 2" 7 P.P. 1 - 3" A.P. 2 - 3".
No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump Ciopp. Is a separate Donkey Suction fitted in Engine room & size 1-2".
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 none.
Are all connections with the sea direct on the skin of the ship yes. Are they Valves or Cocks both.
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes. Are the 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. Are the Blow Off Cocks fitted with a spigot and brass covering plate, yes.
What pipes are carried through the bunkers bilge & F.P.D. suction pipes. How are they protected Wood casing.
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes.
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes.
Is the Screw Shaft Tunnel watertight none. Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record) Manufacturers of Steel
Total Heating Surface of Boilers 1490 sq ft Is Forced Draft fitted no No. and Description of Boilers 1 S.E. Multitubular.
Working Pressure 130 lbs. Tested by hydraulic pressure to 260 lbs. Date of test 7.5.20. No. of Certificate 2123.
Can each boiler be worked separately? Yes. Area of fire grate in each boiler 48 sq ft No. and Description of Safety Valves to each boiler 2 Direct Spring Area of each valve 7.07 sq in Pressure to which they are adjusted 135 lbs. Are they fitted with easing gear yes.
Smallest distance between boilers or uptakes and bunkers or woodwork 2'-0" Mean dia. of boilers Length Material of shell plates
Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
Pitch of rivets Lap of plates or width of butt straps
Percentage of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell
No. and Description of Furnaces in each boiler Material Outside diameter
Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
Length of plain part bottom Thickness of plates bottom
Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
Material of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
Thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
Working pressure by rules Steam dome: description of joint to shell % of strength of joint
Material Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Pressure to which each is adjusted Is Easing Gear fitted



IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 top & 2 bottom end bolts. 2 main bearing bolts. 1 set of coupling bolts, one set of helges & feed pump valves. 1 set of piston rings. 1 pair of top & bottom end brasses. link brasses. studs. 6 condensed tubes ferrules & packing. 6 boiler tubes 2 boiler stay tubes. 1/2 set of firebars, iron of various sizes. bolts & nuts &c.

The foregoing is a correct description,

C. J. H. Critchton, Ltd.
24/6 Henderson

Manufacturer.

Dates of Survey while building: During progress of work in shops - July 28, Aug 27, Nov 4, 18, Dec 22, 1919. Managing Director. 1920. Jan 5, Mar 11, 12, Apr 19, May 17, 26, June 8, 25, July 2, 12, 30, Sept 7, 8, 20, Oct 5. During erection on board vessel - Nov 9, 24, Jan 6, 12. Total No. of visits 25. Is the approved plan of main boiler forwarded herewith? *Yes*

Dates of Examination of principal parts: Cylinders 27/8/19, 4/11/19. Slides 27/8/19, 4/11/19. Covers 27/8/19, 4/11/19. Pistons 27/8/19, 4/11/19. Rods 27/8/19, 4/11/19. Connecting rods 7/9/20. Crank shaft 15/11/16. Thrust shaft 11/3/20. Tunnel shafts none. Screw shaft 11/3/20. Propeller 2/7/20. Stern tube 17/5/20. Steam pipes tested *Sheffield*. Engine and boiler seatings 5/10/20. Engines holding down bolts 9/11/20. Completion of pumping arrangements 12/1/21. Boilers fixed 6/1/21. Engines tried under steam 12/1/21. Completion of fitting sea connections 5/10/20. Stern tube 5/10/20. Screw shaft and propeller 5/10/20. Main boiler safety valves adjusted 6/1/21. Thickness of adjusting washers $P \frac{3}{8}$, $S \frac{5}{16}$.

Material of Crank shaft *steel*. Identification Mark on Do. *LLOYDS 4367 G. B. H.* Material of Thrust shaft *steel*. Identification Mark on Do. *LLOYDS 1353 J. H. S.* Material of Tunnel shafts — Identification Marks on Do. — Material of Screw shafts *steel*. Identification Marks on Do. — Material of Steam Pipes *copper*. Test pressure *39 lbs.*

Is an installation fitted for burning oil fuel? *No.* Is the flash point of the oil to be used over 150°F. — Have the requirements of Section 49 of the Rules been complied with? 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. This machinery has been constructed in accordance with the Rules & approved plans the materials & workmanship is good. (Boiler - Liverpool Report herewith.) on completion it was securely fitted on board and tried at sea with satisfactory results. In my opinion this machinery is eligible to be classed with this Society with record of \boxplus Club 1. 21.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 1. 21.

Roll
26/1/21
A.R.S.

MACHINERY DEPT.
WRITTEN 23. 2. 21
dated 22. 1. 21

The amount of Entry Fee ... £ 2 : 0 : When applied for. Special ... $\frac{3}{16}$... £ 11 : 11 : 21 JAN 1921 Donkey Boiler Fee ... £ : : When received. Travelling Expenses (if any) £ 4 : 7/7. 16. 2 21 FEB 21 JAN 1921

Committee's Minute *LIVERPOOL* Assigned \boxplus *L M C 1 : 21.* *When fee is paid*

