

REPORT ON MACHINERY.

Received at London Office

WED. MAR. 24. 1915

Date of writing Report 13. 3. 15 *When handed in at Lloyd's Office* 13. 3. 15 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 21/11/11 Last Survey 12. 3. 1915
 Reg. Book. S/S "FAIRMUIR" (Number of Visits) 580
 Master Murchie Built at Ardrossan By whom built Ardrossan S. & S.R. Co. (1863) Tons } Gross 580
 Engines made at Glasgow By whom made Lidgerwood L^d (E 447) when made 1915 Net }
 Boilers made at Glasgow By whom made Dunsmuir & Jackson L^d (1836) when made 1915
 Registered Horse Power 101 Owners James Inglis & Co. Port belonging to Glasgow
 Nom. Horse Power as per Section 28 100.50 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 14, 23, & 38" Length of Stroke 27" Revs. per minute 106 Dia. of Screw shaft 8.08" Material of Hot Iron
 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 water tight in the propeller boss Yes If the liner is in more than one length are the joints burned Yes 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 Yes If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 3'-0"
 Dia. of Tunnel shaft 7.11" Dia. of Crank shaft journals 7.47" Dia. of Crank pin 7.58" Size of Crank webs 28 1/2 x 15" Dia. of thrust shaft under collars 7.58" Dia. of screw 10'-0" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable No Total surface 33.5 sq ft
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps (6 x 4 1/2 x 6 Duplex) (6 x 8 x 8") Duplex No. and size of Suctions connected to both Bilge and Donkey pumps in Engine Room Three - 2 bore In Holds, &c. Two - 2 Bore
 No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes - 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 Yes
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves & Cocks Yes
 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 Yes
 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 None How are they protected Yes
 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
 Dates of examination of completion of fitting of Sea Connections 4. 1. 15 of Stern Tube 4. 1. 15 Screw shaft and Propeller 4. 1. 15
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers 1814 Is Forced Draft fitted Yes No. and Description of Boilers see Report No. 34703
 Working Pressure 150 lbs Tested by hydraulic pressure Yes Date of test 12. 3. 15 No. of Certificate 111
 Can each boiler be worked separately Yes Area of fire grate in each boiler 100 sq ft No. and Description of Safety Valves to each boiler 2 Area of each valve 10 sq in Pressure at which they are adjusted 150 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 36" Length 12' Material of shell plates Hot Iron
 Thickness 3/8" Range of tensile strength 45,000 lbs Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams Yes
 long. seams Yes Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 4" Lap of plates or width of butt straps 1 1/2"
 Per centages of strength of longitudinal joint 85% Working pressure of shell by rules 150 lbs Size of manhole in shell 18"
 Size of compensating ring 18" No. and Description of Furnaces in each boiler 1 Material Hot Iron Outside diameter 36"
 Length of plain part 12' Thickness of plates 3/8" Description of longitudinal joint Butt No. of strengthening rings 1
 Working pressure of furnace by the rules 150 lbs Combustion chamber plates: Material Hot Iron Thickness: Sides 3/8" Back 3/8" Top 3/8" Bottom 3/8"
 Pitch of stays to ditto: Sides 12" Back 12" Top 12" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 150 lbs
 Material of stays Hot Iron Diameter at smallest part 1 1/2" Area supported by each stay 100 sq in Working pressure by rules 150 lbs End plates in steam space Yes
 Material Hot Iron Thickness 3/8" Pitch of stays 12" How are stays secured With nuts Working pressure by rules 150 lbs Material of stays Hot Iron
 Diameter at smallest part 1 1/2" Area supported by each stay 100 sq in Working pressure by rules 150 lbs Material of Front plates at bottom Hot Iron
 Thickness 3/8" Material of Lower back plate Hot Iron Thickness 3/8" Greatest pitch of stays 12" Working pressure of plate by rules 150 lbs
 Diameter of tubes 2" Pitch of tubes 12" Material of tube plates Hot Iron Thickness: Front 3/8" Back 3/8" Mean pitch of stays 12"
 Pitch across wide water spaces 12" Working pressures by rules 150 lbs Girders to Chamber tops: Material Hot Iron Depth and thickness of girder at centre 12" Length as per rule 12' Distance apart 12" Number and pitch of stays in each 1
 Working pressure by rules 150 lbs Superheater or Steam chest; how connected to boiler Direct Can the superheater be shut off and the boiler worked separately Yes
 Diameter 12" Length 12' Thickness of shell plates 3/8" Material Hot Iron Description of longitudinal joint Butt Diam. of rivet holes 1 1/8" Pitch of rivets 4" Working pressure of shell by rules 150 lbs Diameter of flue 12" Material of flue plates Hot Iron Thickness 3/8"
 If stiffened with rings Yes Distance between rings 12" Working pressure by rules 150 lbs End plates: Thickness 3/8" How stayed With stays
 Working pressure of end plates 150 lbs Area of safety valves to superheater 100 sq in Are they fitted with easing gear Yes

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Now

SPARE GEAR. State the articles supplied:-

2 Corn Rod Bottom End Bolts & Nuts 2 Top End Bolts & Nuts 2 Main Bearing Bolts & Nuts 1 Set of Coupling Bolts, 1 set of Feed Pump Valves, 1 set of Bilge Pump Valves, Assorted Bolts & Nuts, Iron of various sizes

The foregoing is a correct description,

for

LIDGERWOOD LIMITED

Manufacturer.

W. S. Wilson.

Dates of Survey while building

During progress of work in shops - - -
During erection on board vessel - - -
Total No. of visits

1914 Nov. 24. Dec. 4. 16. 17. 22. 24. 29. 1915 Jan. 6. 7. 11. 22. 27. 29. Feb. 1. 5. 6. 10. 12. 15. 17. 26. 27. Mar. 2. 5. 9. 12.

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Is the approved plan of main boiler forwarded herewith

No

Dates of Examination of principal parts - Cylinders 6/1. 27/1/15. Slides 22/1. 10/2/15. Covers 27/1. 10/2/15. Pistons 5/2/15. Rods 6/1. 5/2/15

Connecting rods 29/1/14. 5/2/15. Crank shaft 6/1. 22/1/15. Thrust shaft 1/2/15. Tunnel shafts ✓. Screw shaft 22/12. 29/12/14. Propeller 24/12/14

Stern tube 14. 22. 24/2/14. Steam pipes tested 24. 2. 15. Engine and boiler seatings 4. 1. 15. Engines holding down bolts 2. 3. 15

Completion of pumping arrangements 15. 2. 15. Boilers fixed 24. 2. 15. Engines tried under steam 12. 3. 15

Main boiler safety valves adjusted 9. 3. 15. Thickness of adjusting washers both 11/32

Material of Crank shaft S.M. Steel. Identification Mark on Do. 1314. W.D.H. Material of Thrust shaft S.M. Steel. Identification Mark on Do. 1314. W.D.H.

Material of Tunnel shafts ✓. Identification Marks on Do. ✓. Material of Screw shafts Iron. Identification Marks on Do. 1315. W.R.A.

Material of Steam Pipes Copper. Test pressure 400 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.) The materials and workmanship are good. The machinery of this vessel has been built under special survey in accordance with the Rules and approved plans, securely fitted aboard and tried with satisfactory results under steam and is, in our opinion suitable for classification with Record + L.M.C. 3. 15.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 3. 15.

J.W.D. J.P.R.

The amount of Entry Fee ... £ 2 : : :
Special ... £ 15 : 3 : :
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : 16-0 : 7/5/1915 8/5/15

When applied for, 19/3/1915

When received, 7/5/1915

W. Dennis Peck P. J. B.M.M.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute GLASGOW 23 MAR. 1915

Assigned + L.M.C. 3. 15.

MACHINERY CERTIFICATE
24/3/15

