

REPORT ON MACHINERY

No. 25876

THU. OCT. 16. 1913

Received at London Office

Date of writing Report 19 When handed in at Local Office 15. 10. 13 Port of Sunderland.

No. in Survey held at Sunderland Date, First Survey 8 May Last Survey 8th October 1913
 Reg. Book. on the Steel S.S. Merionethshire Number of Visits 32
 Master W. Lanson Built at S'land By whom built Bartram & Sons L^d Tons } Gross 4308
 Engines made at S'land By whom made J. Dickinson & Sons L^d when made 1913 } Net 2686
 Boilers made at " By whom made " when made 1913
 Registered Horse Power " Owners Royal Mail Steam Pk. Co. Port belonging to London
 Nom. Horse Power as per Section 28 401 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Tre C.P. 10 No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 26" 43" 41" Length of Stroke 48" Revs. per minute 40 Dia. of Screw shaft as per rule 4.51 Material of screw shaft W.I.
 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 ✓ 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 5ft
 Dia. of Tunnel shaft as per rule 13.03 Dia. of Crank shaft journals as per rule 13.68 Dia. of Crank pin 13 3/4 Size of Crank webs 25" x 8 1/2 Dia. of thrust shaft under collars 13 3/4 Dia. of screw 14" 6" Pitch of Screw 17ft No. of Blades 4 State whether moveable no Total surface 86 1/2 sq
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 25 1/2" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 25 1/2" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 3 Sizes of Pumps 2 feed 25" x 6" 4 9" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 of 3 1/2" In Holds, &c. two of 3 1/2" in each
 No. of Bilge Injections 1 sizes 5 1/2" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size yes 4"
 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 ✓
 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 none How are they protected ✓
 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 7.8.13 of Stern Tube 22.9.13 Screw shaft and Propeller 23.9.13
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record B) Manufacturers of Steel J. Spencer & Sons L^d
 Total Heating Surface of Boilers 6483 sq Is Forced Draft fitted no No. and Description of Boilers 3 Ordinary type
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 26.9.13 No. of Certificate 3150
 Can each boiler be worked separately yes Area of fire grate in each boiler 60 sq No. and Description of Safety Valves to each boiler two Spring Area of each valve 8.3" Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork about 5ft dia. of boilers 15ft Length 11'3" Material of shell plates S
 Thickness 1 1/2" Range of tensile strength 28 1/2 - 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d.r. lap long. seams d. butt IR Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 8 15/16" Lap of plates or width of butt straps 1 1/4"
 Per centages of strength of longitudinal joint rivets 92.4 Working pressure of shell by rules 183 Size of manhole in shell 16" x 12" plate 85.3
 Size of compensating ring 8 5/8" x 13 1/2" No. and Description of Furnaces in each boiler 3 Corrugated Material S Outside diameter 3'10"
 Length of plain part top 7'9" Thickness of plates bottom 3 3/8" Description of longitudinal joint weld No. of strengthening rings ✓
 Working pressure of furnace by the rules 185 Combustion chamber plates: Material S Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"
 Pitch of stays to ditto: Sides 8" x 8" Back 8" x 8" Top 8" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 211
 Material of stays S Diameter at smallest part 1.357" Area supported by each stay 64 Working pressure by rules 181 End plates in steam space: Material S Thickness 1 1/2" Pitch of stays 17" x 20 1/2" How are stays secured d. nuts Working pressure by rules 209 Material of stays S
 Diameter at smallest part 3.16 Area supported by each stay 348.5 Working pressure by rules 185 Material of Front plates at bottom S
 Thickness 1 5/16" Material of Lower back plate S Thickness 5/8" Greatest pitch of stays 14 3/4" x 8" Working pressure of plate by rules 188
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates S Thickness: Front 1 5/16" Back 5/8" Mean pitch of stays 9" x 11"
 Pitch across wide water spaces 13 1/4" Working pressures by rules 181 Girders to Chamber tops: Material S Depth and thickness of girder at centre 4 3/8" x 1 1/2" Length as per rule 2.7 3/8" Distance apart 8" Number and pitch of stays in each 3 @ 8"
 Working pressure by rules 198 Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked separately
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description		When made	Where fixed
Made at	By whom made			
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams	
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint
Working pressure of furnace by rules	Thickness of furnace crown plates	Radius of do.	Stayed by	
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey	

SPARE GEAR. State the articles supplied:— Propeller & propeller shaft, top & bottom end bolts & nuts; two main bearing bolts & nuts; set of coupling bolts & nuts; feed & bilge pump valves; set of Air & Oil pump valves; 2 Feed & 2 ballast pump valves & 2 safety valve springs; nuts bolts and assorted iron.

The foregoing is a correct description,
John Lubliner & Sons, Limited.
W. Lubliner Manufacturer.

Dates of Survey while building	During progress of work in shops	During erection on board vessel	Total No. of visits
	1913 May 8, Jul 24, 31, Aug 5, 6, 7, 8, 13, 14, 21, 22, 27, 29	Sept 1, 2, 5, 9, 15, 17, 18, 19	21
		21, 23, 25, 26, 29, 30, Oct 1, 3, 4, 7, 8	(32)

Is the approved plan of main boiler forwarded herewith Yes.
 " " " donkey " " "

Dates of Examination of principal parts	Cylinders	Slides	Covers	Pistons	Rods
	8. 8. 13	5. 8. 13	5. 8. 13	8. 8. 13	14. 8. 13
Connecting rods	14. 8. 13	Crank shaft	18. 9. 13	Thrust shaft	18. 9. 13
Stern tube	18. 9. 13	Tunnel shafts	18. 9. 13	Screw shaft	18. 9. 13
Completion of pumping arrangements	8. 10. 13	Engines and boiler seatings	5 & 23. 9. 13	Engines holding down bolts	1. 10. 13
Main boiler safety valves adjusted	8 ¹⁴ October.	Engines tried under steam	8 th Oct	Boilers fixed	4. 10. 13
Material of Crank shaft	S	Material of Thrust shaft	S	Material of Tunnel shafts	S
Material of Tunnel shafts	S	Material of Screw shafts	W. I.	Material of Steam Pipes	Copper.
Material of Steam Pipes	Copper.	Test pressure	400 lbs	Thickness of adjusting washers	P.B. f 3/32, Oil 3/8, C.B. 1/2, S.B. f 3/32, Oil 3/32

General Remarks (State quality of workmanship, opinions as to class, &c. Machinery and boilers built under special survey: materials and workmanship good. Engines and boilers examined under full working conditions & found satisfactory. It is submitted that this vessel's machinery is eligible for the Record in the Register Book of L.M.C. 10.1913.

It is submitted that this vessel is eligible for THE RECORD. + LMC 10.13.

J. Y. Findlay
 17/10/13

The amount of Entry Fee	When applied for.
Special .. £ 30	15. 10. 13
Donkey Boiler Fee .. £ 40	21/10/13
Travelling Expenses (if any) £	

When received. *J. Y. Findlay*

Committee's Minute ERI. OCT. 17. 1913
 Assigned + LMC 10.13

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Certificate (if required) to be sent to R.L.

The Surveys are requested not to write on or below the space for Committee's Minute.

MACHINERY CERTIFICATE WRITTEN



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