

REPORT ON MACHINERY.

No. 25038.

Received at London Office

TUE. OCT. 31. 1911

Date of writing Report 30. 10. 1911. When handed in at Local Office 30. 10. 1911. Port of **SUNDERLAND.**

No. in Survey held at **SUNDERLAND.** Date, First Survey **25th Nov. 1910** Last Survey **16th Oct. 1911**
Reg. Book. on the **S/S Paignton** (Number of Visits **46**) Tons { Gross **2009.16** Net **1164.48**

Master Built at **Sunderland** By whom built **E. Pauster & Sons Ltd** When built **1911**

Engines made at **Sunderland** By whom made **J. Dickinson & Sons Ltd** (c.713) when made **1911**

Boilers made at " By whom made " when made **1911**

Registered Horse Power Owners **Thomas Wilton** Port belonging to **Dartmouth.**

Nom. Horse Power as per Section 28 **218** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**

ENGINES, &c.—Description of Engines **Twin C.P.D.** No. of Cylinders **3** No. of Cranks **3**

Dia. of Cylinders **21 34 56** Length of Stroke **39** Revs. per minute **70** Dia. of Screw shaft **12.1** Material of **Steel**

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 **4 3/4**

Dia. of Tunnel shaft **10.4** Dia. of Crank shaft journals **11.5** Dia. of Crank pin **11.8** Size of Crank webs **4x20 1/2** Dia. of thrust shaft under

collars **11 1/2** Dia. of screw **15 3/8** Pitch of Screw **15 ft** No. of Blades **4** State whether moceable **f** Total surface **694**

No. of Feed pumps **2** Diameter of ditto **3** Stroke **19 1/2** Can one be overhauled while the other is at work **yes**

No. of Bilge pumps **2** Diameter of ditto **4** Stroke **19 1/2** Can one be overhauled while the other is at work **yes**

No. of Donkey Engines **3** Sizes of Pumps **two 10" x 10 feet 3 1/2 x 5** No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room **four of 3" tunnel 2 1/2** In Holds, &c. **two 3" in each**

No. of Bilge Injections **1** sizes **4** 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 **yes**

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 **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 **29. 8. 11** of Stern Tube **29. 8. 11** Screw shaft and Propeller **29. 8. 11**

Is the Screw Shaft Tunnel watertight **yes** Is it fitted with a watertight door **yes** worked from **top platform**

BOILERS, &c.—(Letter for record **S**) Manufacturers of Steel **J. Spencer & Sons Ltd**

Total Heating Surface of Boilers **3446 1/2** Is Forced Draft fitted **no** No. and Description of Boilers **2 S.E. Multitubular**

Working Pressure **180 lbs** Tested by hydraulic pressure to **360 lbs** Date of test **7. 7. 1911** No. of Certificate **2930**

Can each boiler be worked separately **yes** Area of fire grate in each boiler **49 1/2** No. and Description of Safety Valves to

each boiler **2 Spring** Area of each valve **5.9** Pressure to which they are adjusted **185** Are they fitted with easing gear **yes**

Smallest distance between boilers or uptakes and bunkers or woodwork **1 1/2** Mean dia. of boilers **13 1/2** Length **10 9/16** Material of shell plates **S**

Thickness **1 1/16** Range of tensile strength **28 3/4 - 32** Are the shell plates welded or flanged ends **no** Descrip. of riveting: cir. seams **a. r. lap**

long. seams **a. butt** Diameter of rivet holes in long. seams **1 3/16** Pitch of rivets **8** Lap of plates or width of butt straps **1 5/8**

Per centages of strength of longitudinal joint **96.9** Working pressure of shell by rules **181 1/2** Size of manhole in shell **16 x 12**

Size of compensating ring **8 3/4 x 1 1/2** No. and Description of Furnaces in each boiler **3 plain** Material **S** Outside diameter **3 3/8**

Length of plain part **6 8/16** Thickness of plates **49** Description of longitudinal joint **Weld** No. of strengthening rings **yes**

Working pressure of furnace by the rules **184** Combustion chamber plates: Material **S** Thickness: Sides **1/16** Back **1/16** Top **1/16** Bottom **1/16**

Pitch of stays to ditto: Sides **10 x 9** Back **10 x 9** Top **10 x 8 1/2** If stays are fitted with nuts or riveted heads **nuts** Working pressure by rules **187 1/2**

Material of stays **S** Diameter at smallest part **1 1/8** Area supported by each stay **90** Working pressure by rules **182** End plates in steam space:

Material **S** Thickness **1 1/8** Pitch of stays **18 3/8 x 18** How are stays secured **a nuts** Working pressure by rules **181 1/2** Material of stays **S**

Diameter at smallest part **2 7/8** Area supported by each stay **331** Working pressure by rules **192** Material of Front plates at bottom **S**

Thickness **7/8** Material of Lower back plate **S** Thickness **13/16** Greatest pitch of stays **12 1/2 x 9 3/8** Working pressure of plate by rules **187**

Diameter of tubes **3 1/4** Pitch of tubes **4 1/2 x 4 1/2** Material of tube plates **S** Thickness: Front **7/8** Back **7/8** Mean pitch of stays **9 x 9**

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description				
Made at	By whom made	When made	Where fixed		
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
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	Rivets Plates
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	Stayed by			
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— *two connecting rod top and bottom end bolts nuts for main bearing bolts, one set coupling bolts, one set feed and bilge pump valves, propeller, one main and one donkey chest valve, piston bolts boiler tubes and bilge pump valves, Assorted iron nuts & bolts*

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

Dates of Survey while building	During progress of work in shops—	1910. Nov. 25. Dec. 8. 21. 1911 Jan. 19. Feb. 6. 15. Mar. 9. 16. 28 Apr. 10. 11. 21. 27 May 9. 11. 17. 19	Is the approved plan of main boiler forwarded herewith	Yes
	During erection on board vessel—	25. 26. 29. Jun. 8. 10. 12. 14. 29 Jul. 4. 7. 13. Aug. 22. 29. 30 Sep. 11. 12. 14. 16. 18. 21. 22. 23. 26. Oct. 2. 3. 11. 16. 18. 21		Yes
	Total No. of visits	46		Yes

Dates of Examination of principal parts—	Cylinders	17. 5. 11	Slides	17. 5. 11	Covers	17. 5. 11	Pistons	29. 5. 11	Rods	29. 5. 11	
Connecting rods	19. 5. 11	Crank shaft	25. 5. 11	Thrust shaft	25. 5. 11	Tunnel shafts	25. 5. 11	Screw shaft	18. 9. 11	Propeller	18. 9. 11
Stern tube	16. 9. 11	Steam pipes tested	21. 9. 11	Engine and boiler seatings	8. 6. 11	Engines holding down bolts	8. 6. 11				
Completion of pumping arrangements	18. 10. 11		Boilers fixed	18. 9. 11		Engines tried under steam	23. 9. 11				
Main boiler safety valves adjusted	23. 9. 11		Thickness of adjusting washers	PB 7/6. A 2. 5 f 7/6 A 2							

Material of Crank shaft *S* Identification Mark on Do. *R J T F* Material of Thrust shaft *S* Identification Mark on Do. *R J T F*
 Material of Tunnel shafts *S* Identification Marks on Do. *R J T F* Material of Screw shafts *S* Identification Marks on Do. *R J T F*
 Material of Steam Pipes *Copper* Test pressure *360 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *Machinery and boilers built under Special Survey in accordance with approved plans. Engines and boilers examined under steam and working conditions. I found satisfactory. It is submitted that this vessel has the record of L.M.C. in the register book. 10/1911*

It is submitted that this vessel is eligible for THE RECORD + LMC 10.11

J.W.D.
1/11/11

The amount of Entry Fee .. £	2 :	When applied for,	30. 11. 19. 11
Special	£ 30. 18 :	When received,	1. 11. 11
Donkey Boiler Fee	£ :		
Travelling Expenses (if any) £	:		

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

Committee's Minute
 Assigned
 FRI. NOV. 3 - 1911
 + LMB 10.11

