

## REPORT ON MACHINERY.

No. 14442

Received at London Office

MON. JUL. 1-1912

of writing Report 21 June 1912 When handed in at Local Office 24 June 1912 Port of West Hartlepool  
 in Survey held at West Hartlepool Date First Survey 29 Dec. 1911 Last Survey 22 June 1912  
 eg. Book. on the Steel Steamer Perolver (Number of Visits 97)

Master Built at W Hartlepool By whom built W Hay & Co Ltd Tons { Gross  
 Engines made at W Hartlepool By whom made General Machine & Work when made 1912 Net  
 Boilers made at W Hartlepool By whom made General Machine & Work when made 1912 When built 1912  
 Registered Horse Power Owners R. B. Chellens Port belonging to Salmon  
 m. Horse Power as per Section 28 336 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

GINES, &c.—Description of Engines Single compound No. of Cylinders Three No. of Cranks Three  
 a. of Cylinders 25: 40 1/2: 67 Length of Stroke 45 Revs. per minute 65 Dia. of Screw shaft as per rule Material of Unit  
 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  
 the propeller boss yes If the liner is in more than one length are the joints burned no 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  
 ers are fitted, is the shaft lapped or protected between the liners no Length of stern bush 57  
 ia. of Tunnel shaft as per rule 12.38 Dia. of Crank shaft journals as per rule 12.99 Dia. of Crank pin 18 1/4 Size of Crank webs 18 1/2 x 9 1/2 Dia. of thrust shaft under  
 llars 13 1/2 Dia. of screw 17.6 Pitch of Screw 15.9 No. of Blades 4 State whether moveable no Total surface 94 sq ft  
 o. of Feed pumps Two Diameter of ditto 3 1/2 Stroke 28 Can one be overhauled while the other is at work yes  
 o. of Bilge pumps Two Diameter of ditto 4 Stroke 28 Can one be overhauled while the other is at work yes  
 o. of Donkey Engines Two Sizes of Pumps 4 x 6 & 9 x 9 No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room Three 3 1/2 In Holds, &c. line 3 1/2 Tunnel 3 1/2

o. of Bilge Injections two sizes 6 1/2 Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 3 1/2  
 re 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 no  
 re all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both  
 re 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  
 re 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  
 That pipes are carried through the bunkers no How are they protected no

re all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes  
 re the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes  
 ates of examination of completion of fitting of Sea Connections 15/5/12 of Stern Tube 2/5/12 Screw shaft and Propeller 24/5/12  
 the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top of stokehold

ILERS, &c.—(Letter for record S) Manufacturers of Steel D. White & Sons

otal Heating Surface of Boilers 5303 Is Forced Draft fitted no No. and Description of Boilers Two single ended  
 orking Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 16/5/12 No. of Certificate 3284

in each boiler be worked separately yes Area of fire grate in each boiler 66 sq ft No. and Description of Safety Valves to  
 ch boiler Two lifting Area of each valve 8.29 sq Pressure to which they are adjusted 185 lb Are they fitted with easing gear yes

allest distance between boilers or uptakes and bunkers or woodwork 18 Mean dia. of boilers 16.6 Length 11.0 Material of shell plates Unit

ickness 1 3/8 Range of tensile strength 27-30 Are the shell plates welded or flanged both Descrip. of riveting: cir. seams 3/16 in lap

g. seams all lap 3/16 Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 9 1/2 Lap of plates or width of butt straps 20 1/2

er centages of strength of longitudinal joint 88.4 Working pressure of shell by rules 152 lb Size of manhole in End 16 x 12

se of compensating ring Flanged No. and Description of Furnaces in each boiler 3 single Material Unit Outside diameter 51.5

ngth of plain part top 10 Thickness of plates bottom 10 1/16 Description of longitudinal joint welded No. of strengthening rings four

orking pressure of furnace by the rules 157 lb Combustion chamber plates: Material Unit Thickness: Sides 10 1/16 Back 10 1/16 Top 10 1/16 Bottom 15 1/16

ch of stays to ditto: Sides 8 x 9 Back 9 x 5 Top 9 x 1 1/2 If stays are fitted with nuts or riveted heads no Working pressure by rules 181 lb

aterial of stays Unit Diameter at smallest part 1 1/2 Area supported by each stay 9 1/2 x 5 Working pressure by rules 193 lb End plates in steam space:

aterial Unit Thickness 1 3/8 Pitch of stays 22 1/2 x 20 1/2 How are stays secured all nut Working pressure by rules 152 lb Material of stays Unit

diameter at smallest part 3.296 Area supported by each stay 22 1/2 x 20 1/2 Working pressure by rules 191 lb Material of Front plates at bottom Unit

ickness 1 Material of Lower back plate Unit Thickness 17 1/16 Greatest pitch of stays 15 1/2 Working pressure of plate by rules 180 lb

diameter of tubes 3 1/2 Pitch of tubes 4 1/2 Material of tube plates Unit Thickness: Front 1 Back 14 1/16 Mean pitch of stays 9

itch across wide water spaces 14 1/2 Working pressures by rules 189 lb Girders to Chamber tops: Material Unit Depth and

ickness of girder at centre 9 1/2 x 14 1/2 Length as per rule 31 1/8 Distance apart 8 1/4 Number and pitch of stays in each line 9

orking pressure by rules 186 lb Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

arately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

les Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

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

W256-0061



# VERTICAL DONKEY BOILER—

Manufacturers of Steel

As per Report attached hereto.

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

The top end bolts. The bottom end bolts. Two main bearing bolts. One set coupling bolts. One set dead pump valves. One set pump valves. One set of piston springs. Spindles. And nuts etc.

FOR THE CENTRAL MARINE ENGINE WORKS.

(See page 4 to 7.)

Manufacturer.

MANAGER.

The foregoing is a correct description,

Dates of Survey while building	During progress of work in shops	During erection on board vessel	Total No. of visits
1911 Dec 29	1912 Jan 5	1912 Apr 1	97

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders	9/5/12	Slides	9/5/12	Covers	9/5/12	Pistons	9/5/12	Rods	9/5/12
Connecting rods	9/5/12	Crank shaft	3/5/12	Thrust shaft	3/5/12	Tunnel shafts	22/5/12	Screw shaft	3/5/12
Stern tube	2/5/12	Steam pipes tested	22/5/12	Engine and boiler seatings	20/5/12	Engines holding down bolts	30/5/12	Propeller	15/5/12
Completion of pumping arrangements	13/6/12	Boilers fixed	13/6/12	Engines tried under steam	13/6/12	Engines holding down bolts	30/5/12	Propeller	15/5/12
Main boiler safety valves adjusted	13/6/12	Thickness of adjusting washers	13/6/12	Engines holding down bolts	30/5/12	Engines holding down bolts	30/5/12	Propeller	15/5/12
Material of Crank shaft	Steel	Identification Mark on Do.	5189	Material of Thrust shaft	Steel	Identification Mark on Do.	5189	Material of Tunnel shafts	Steel
Material of Tunnel shafts	Steel	Identification Marks on Do.	5189	Material of Screw shafts	Steel	Identification Marks on Do.	5189	Material of Steam Pipes	Steel
Material of Steam Pipes	Steel	Identification Marks on Do.	5189	Test pressure	600 lb				

## General Remarks

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

Workmanship good.

Exhaust valve tested to 400 lb and body to 50 lb.

The machinery and Boiler of this steamer have been constructed under special survey, and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition, and the case is respectfully submitted for the notification + L.M.C. 6. in the Register Book.

This case is similar in all respects to the Penhale's case of 18795 Reg. dated 8 Nov 1911 No 14298.

The amount of Entry Fee	£ 3 : 0 :	When applied for,
Special	£ 36 : 16 :	22.5.12
Donkey Boiler Fee	£ :	When received,
Travelling Expenses (if any)	£ :	6.7.12

Committee's Minute

Assigned

TUE. JUL. 2—1912

+ L.M.C. 6. 12

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 6. 12.

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



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Committee Assigned