

REPORT ON MACHINERY.

No. 11442

Received at London Office

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

Built at W Hartlepool By whom built W Gray & Co
 Engines made at W Hartlepool By whom made Central Marine & Work when made 1912
 Boilers made at W Hartlepool By whom made Central Marine & Work when made 1912
 Registered Horse Power _____ Owners R. B. Chelley Port belonging to Salisbury
 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 Triple compound No. of Cylinders Three No. of Cranks Three
 Dia. of Cylinders 25" 40 1/2" 67" Length of Stroke 45" Revs. per minute 65 Dia. of Screw shaft as per rule Material of Steel
 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
 liners are fitted, is the shaft lapped or protected between the liners _____ Length of stern bush 57"
 Dia. 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 7 1/2" Dia. of thrust shaft under
 bars 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
 No. of Feed pumps Two Diameter of ditto 3 1/4" Stroke 28" Can one be overhauled while the other is at work yes
 No. of Bilge pumps Two Diameter of ditto 4" Stroke 28" Can one be overhauled while the other is at work yes
 No. 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"
 No. of Bilge Injections two sizes 6 1/2" Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size yes 3 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 no
 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
 That pipes are carried through the bunkers _____ 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 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 Station

BOILERS, &C.—(Letter for record S) Manufacturers of Steel D Colville Sons
 Total Heating Surface of Boilers 5303 Is Forced Draft fitted no No. and Description of Boilers Two single ended
 Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 16/5/12 No. of Certificate 3284
 Can each boiler be worked separately yes Area of fire grate in each boiler 66 sq ft No. and Description of Safety Valves to
 each boiler Two opening Area of each valve 8.29 sq Pressure to which they are adjusted 185 lb Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 16.6" Length 11.0" Material of shell plates Steel
 Thickness 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 with
 long. seams all ship 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"
 Percentages of strength of longitudinal joint: rivets 88.4 plate 85.19 Working pressure of shell by rules 182 lb Size of manhole in steel 16" x 12"
 Use of compensating ring Flanged No. and Description of Furnaces in each boiler 3 high Material Steel Outside diameter 51.5"
 Length of plain part: top 10" bottom 10" Thickness of plates: crown 10 1/16" bottom 10 1/16" Description of longitudinal joint welded No. of strengthening rings none
 Working pressure of furnace by the rules 187 lb Combustion chamber plates: Material Steel Thickness: Sides 10 1/16" Back 10 1/16" Top 10 1/16" Bottom 15 1/16"
 Pitch of stays to ditto: Sides 8" x 9" Back 9" x 5" Top 9" x 8 1/2" If stays are fitted with nuts or riveted heads no Working pressure by rules 181 lb
 Material of stays Steel 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:
 Material Steel Thickness 1 3/8" Pitch of stays 22" x 20 1/2" How are stays secured all nut Working pressure by rules 182 lb Material of stays Steel
 Diameter at smallest part 3.296" Area supported by each stay 22" x 20 1/2" Working pressure by rules 191 lb Material of Front plates at bottom Steel
 Thickness 1" Material of Lower back plate Steel Thickness 1 7/16" 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 Steel Thickness: Front 1" Back 1 1/4" Mean pitch of stays 9"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 189 lb Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9 1/2" x 14" Length as per rule 31 7/8" Distance apart 8 1/4" Number and pitch of stays in each line 9"
 Working pressure by rules 186 lb 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
 plates _____ 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 _____

Made at _____ By whom made _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ When made _____ Where fixed _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ No. of Certificate _____ Fire grate area _____ Description of Safety Valves _____

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 _____ Length _____

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. _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ No. of stays to do. _____ Dia. of stays _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Description of joint _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Stayed by _____ 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. Pistons. And Piston rings.

FOR THE CENTRAL MARINE ENGINE WORKS,

(22, Gray St. St.)

The foregoing is a correct description,

Manufacturer.

Manuel S. Gibb

MANAGER.

Dates of Survey while building	During progress of work in shops	1911 Dec. 29	1912 Jan 5, 10, 16, 17, 18, 19, 22, 23, 24, 25, 26, 29, 30, 31	Feb. 1, 2, 6, 7, 8, 9, 12, 13, 14, 15, 16, 17, 19, 21, 22, 23, 26, 27, 28, 29	Mar. 1, 4, 5, 6, 7, 8, 11, 12, 13, 14, 15, 19	Jun. 7, 10, 13, 14, 19, 21, 22
	During erection on board vessel	22, 25, 26, 27, 29	Apr. 1, 2, 3, 4, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 29	May 1, 3, 6, 7, 8, 9, 10, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 28, 31	Jun. 7, 10, 13, 14, 19, 21, 22	
	Total No. of visits	97				

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders	8/5/12	Slides	8/5/12	Covers	8/5/12	Pistons	8/5/12	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	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 certification + L.M.C. 6. 12 in the Register Book.

This case is similar in all respects to the Penhale type 11 2795 of dated 8 Nov 1911 No 14298.

The amount of Entry Fee	£ 3 : 0	When applied for,	
Special	£ 26 : 16	28.6.12	
Donkey Boiler Fee	£		
Travelling Expenses (if any)	£	6.7.12	

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

James Jones
17/7/12

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

Committee's Minute

TUE. JUL. 2 - 1912

Assigned

+ L.M.C. 6. 12



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Assigned