

Received at London Office FRI. MAY 30 1913

Date of writing Report 26 May 1913 When handed in at Local Office 26 May 1913 Port of West HartlepoolNo. in Survey held at West Hartlepool
Reg. Book.Date, First Survey 25th Sept, 1912 Last Survey 24 May 1913
(Number of Visits 106)

on the

Steel Steamer PensilvaGross 4316.33

Tons

Net

When built 1913

Master

Built at West Hartlepool By whom built W. Hay & Co. Ltd.Engines made at West Hartlepool By whom made Central Marine & Wks. when made 1913Boilers made at West Hartlepool By whom made Central Marine & Wks. when made 1913

Registered Horse Power

Owners Pensilva & Co. Ltd.Port belonging to FalmouthNom. Horse Power as per Section 28 371Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted NoENGINES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks ThreeDia. of Cylinders 25" 41" 68" Length of Stroke 48" Revs. per minute 65 Dia. of Screw shaft as per rule 14.47 Material of Steel
as fitted 14 1/4" screw shaftIs 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 tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If twoliners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 59"Dia. of Tunnel shaft as per rule 12.69 Dia. of Crank shaft journals as per rule 13.32 Dia. of Crank pin 13 1/2" Size of Crank webs 18 1/2" x 8" Dia. of thrust shaft undercollars 13 1/2" Dia. of screw 18" 0' Pitch of Screw 16:9 No. of Blades 4 State whether moveable No Total surface 102 sq ftNo. of Feed pumps Two Diameter of ditto 3 1/4" Stroke 28" Can one be overhauled while the other is at work YesNo. of Bilge pumps Two Diameter of ditto 4" Stroke 28" Can one be overhauled while the other is at work YesNo. of Donkey Engines Two Sizes of Pumps 5" 6" 9" 9" No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room Three 3 1/2" In Holds, &c. One 3 1/2" Tunnel 3 1/2"No. 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"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 NoAre all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks BothAre 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 BelowAre 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 YesWhat pipes are carried through the bunkers None How are they protected NoneAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YesDates of examination of completion of fitting of Sea Connections 6/3/13 of Stern Tube 25/4/13 Screw shaft and Propeller 7/5/13Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Up the mainBOILERS, &c.—(Letter for record S) Manufacturers of Steel J. & C. ThompsonTotal Heating Surface of Boilers 6039 sq ft Is Forced Draft fitted No No. and Description of Boilers Two single endedWorking Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 29/4/13 No. of Certificate 3323Can each boiler be worked separately Yes Area of fire grate in each boiler 75 1/2 sq ft No. and Description of Safety Valves toeach boiler Two spring Area of each valve 9.62 sq in Pressure to which they are adjusted 185 lb Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 17' 0" Length 11' 6" Material of shell plates SteelThickness 1 3/8" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 3/16 in laplong. seams all lap 3/16 in Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 1/4" Lap of plates or width of butt straps 20 1/4"Per centages of strength of longitudinal joint 86.8 Working pressure of shell by rules 183 lb Size of manhole in END 16" x 12"Size of compensating ring Flanged No. and Description of Furnaces in each boiler 4 single Material Steel Outside diameter 46 1/8"Length of plain part top 10 Thickness of plates crown 7/16 Description of longitudinal joint welded No. of strengthening rings fourWorking pressure of furnace by the rules 182 lb Combustion chamber plates: Material Steel Thickness: Sides 10/16 Back 10/16 Top 10/16 Bottom 10/16Pitch of stays to ditto: Sides 8 5/8" Back 9 1/2" x 8" Top 9" x 8" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 180 lbMaterial of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 9 1/2" x 8" Working pressure by rules 190 lb End plates in steam space:Material Steel Thickness 1 1/8" Pitch of stays 24" x 19" How are stays secured all nuts Working pressure by rules 181 lb Material of stays SteelDiameter at smallest part 3 286 Area supported by each stay 24" x 19" Working pressure by rules 193 lb Material of Front plates at bottom SteelThickness 1 1/16" Material of Lower back plate Steel Thickness 3 1/32" Greatest pitch of stays 16" Working pressure of plate by rules 180 lbDiameter of tubes 3 1/2" Pitch of tubes 4 1/4" Material of tube plates Steel Thickness: Front 1" Back 1 1/4" Mean pitch of stays 9 1/2"Pitch across wide water spaces 14 1/2" Working pressures by rules 182 lb Girders to Chamber tops: Material Steel Depth andthickness of girder at centre 8 1/2" x 1 1/4" Length as per rule 29 7/8" Distance apart 8" Number and pitch of stays in each two 9"Working pressure by rules 182 lb Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler workedseparately Yes Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivetholes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates ThicknessIf stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed Lloyd's RegisterWorking pressure of end plates Area of safety valves to superheater Are they fitted with easing gear Foundation

W262-0028

VERTICAL DONKEY BOILER—

Manufacturers of Steel

As per Report attached.

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	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 bell. The bottom end bell. The main bearing bell. One set coupling bell. One set feed pump valve. One set bridge pump valve. One set 100 lb feed on springs. Pressure Artil. nut-re

FOR THE CENTRAL MARINE ENGINE WORKS,
(Ld. Eng. & Co. Ltd.)

The foregoing is a correct description,

Manufacturer.

Maurice S. Ellis
MANAGER.

Dates of Survey while building	During progress of work in shops	1912 Sept 25-26-27-30 Oct 2-3-4-21-22-29-31 Nov 1-26-29 Dec 2-9-10-11-20-23-24-27-31	1913 Jan 3-5-7-8-9-10-13-14-15-17-20-22-23-24-25-29-30-31 Feb 3-4-6-7-10-11-13
	During erection on board vessel	17-18-19-30-31-2-4-25-26-27 Mar 4-5-6-7-10-11-12-13-14-17-18-20-25-27-28-31 Apr 1-2-3-4-7-8-9-10-14-15-16-17-21-22-23-24-25-28-29-30 May 1-5-6-7-9-15-19-20-21-22-23	
	Total No. of visits	106.	

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders	27/3/13	Slides	27/3/13	Covers	27/3/13	Pistons	27/3/13	Rods	18/1/13
Connecting rods	18/1/13	Crank shaft	10/3/13	Thrust shaft	10/3/13	Tunnel shafts	30/4/13	Screw shaft	27/2/13
Stern tube	13/3/13	Steam pipes tested	7/5/13 19/5/13	Engine and boiler seatings	25/4/13	Engines holding down bolts	9/5/13		
Completion of pumping arrangements	2/5/13	Boilers fixed	29/5/13	Engines tried under steam	2/5/13				
Main boiler safety valves adjusted	2/5/13	Thickness of adjusting washers	Port Piston 5 23/32 Valve Piston 5 19/32						
Material of Crank shaft	Steel	Identification Mark on Do.	5389	Material of Thrust shaft	Steel	Identification Mark on Do.	5389		
Material of Tunnel shafts	Steel	Identification Marks on Do.	5389	Material of Screw shafts	Steel	Identification Marks on Do.	5389		
Material of Steam Pipes	Lap welded steel	Test pressure	600 lb						

General Remarks (State quality of workmanship, opinions as to class, &c. Workmanship good.)

Propeller only tested to 400 lb and only to 50 lb.

The Machinery and Boilers of this Steamer have been constructed under special survey and placed on board in accordance with the British Rules. They are now in my opinion in safe working condition and the case is respectfully submitted for the notification + LMC 5-12 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 5.13.

The amount of Entry Fee	£ 3 : 0	When applied for	29.5.13
Special	£ 38 : 11	When received	30/5/13
Donkey Boiler Fee	£ :		
Travelling Expenses (if any)	£ :		

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

Committee's Minute TUE JUN -3 1913

Assigned

thurs 5.13

MACHINERY CERTIFICATE
WRITTEN.



Lloyd's Register
Foundation