

REPORT ON MACHINERY.

Port of WEST HARTLEPOOL

Received at London Office MUN 24 OCT 1898

No. in Survey held at West Hartlepool

Date, first Survey 5th April 1897 Last Survey 21st October 1898

Reg. Book. 574 on the Screw Steamer "Chicago"

(Number of Visits 156)

Master Marshall Built at West Hartlepool By whom built Furness Withy & Co Ltd.

Tons { Gross 6408-18
Net 4125-97
When built 1898

Engines made at West Hartlepool By whom made The Central Marine Engine Works

when made 1898

Boilers made at West Hartlepool By whom made The Central Marine Engine Works

when made 1898

Registered Horse Power 830 Owners Thos. Wilson Son & Coy Ltd.

Port belonging to Hull

Nom. Horse Power as per Section 28 842

Is Electric Light fitted yes

ENGINES, &c. — Description of Engines See report attached.

Diameter of Cylinders _____ Length of Stroke _____ Revolutions per minute _____ Diameter of Screw shaft _____

Diameter of Tunnel shaft _____ Diameter of Crank shaft journals _____ Diameter of Crank pin _____ Size of Crank webs _____

Diameter of screw _____ Pitch of screw _____ No. of blades _____ State whether moveable _____ Total surface _____

No. of Feed pumps _____ Diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____

No. of Bilge pumps _____ Diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____

No. of Donkey Engines _____ Sizes of Pumps _____ No. and size of Suctions connected to both Bilge and Donkey pumps _____

In Engine Room _____ In Holds, &c. _____

No. of bilge injections _____ sizes _____ Connected to condenser, or to circulating pump _____ Is a separate donkey suction fitted in Engine room & size _____

Are all the bilge suction pipes fitted with roses _____ Are the roses in Engine room always accessible _____ Are the sluices on Engine room bulkheads always accessible _____

Are all connections with the sea direct on the skin of the ship _____ Are they Valves or Cocks _____

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates _____ Are the discharge pipes above or below the deep water line _____

Are they each fitted with a discharge valve always accessible on the plating of the vessel _____ Are the blow off cocks fitted with a spigot and brass covering plate _____

What 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 _____

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges _____

When were stern tube, propeller, screw shaft, and all connections examined in dry dock _____ Is the screw shaft tunnel watertight _____

Is it fitted with a watertight door _____ worked from _____

BOILERS, &c. — (Letter for record B.) Total Heating Surface of Boilers 14110 Sq Ft. Is forced draft fitted No

No. and Description of Boilers Two single ended. Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs.

Date of test 29-3-98. Can each boiler be worked separately yes. Area of fire grate in each boiler 54 1/2 S.F.B. No. and Description of safety valves to _____

Each boiler Two spring direct Area of each valve 12.56 Pressure to which they are adjusted 205 lbs. Are they fitted _____

With easing gear yes. Smallest distance between boilers or uptakes and bunkers or woodwork 19" Mean diameter of boilers 15-3

Length 11-0" Material of shell plates Steel Thickness 1 9/16" Description of riveting: circum. seams Treble long. seams Treble

Diameter of rivet holes in long. seams 1 9/16" Pitch of rivets 10" Lap of plates or width of butt straps 22 5/8"

Percentages of strength of longitudinal joint _____ Working pressure of shell by rules 222 lbs. Size of manhole in _____ 16 x 12"

Kind of compensating ring Flanged No. and Description of Furnaces in each boiler Three ribbed Material Steel Outside diameter 45"

Length of plain part _____ Thickness of plates _____ Description of longitudinal joint Weld No. of strengthening rings _____

Working pressure of furnace by the rules 219 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 1 1/16"

Number of stays to ditto: Sides 8-2 Back 2 3/4 x 2 3/4 Top 5 3/4 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 213 lbs.

Material of stays Steel Diameter at smallest part 1 5/8 Area supported by each stay 71 sq in Working pressure by rules 201 lbs. End plates in steam space: _____

Material Steel Thickness 1 5/16" Pitch of stays 19 x 16 1/2" How are stays secured to A.T.W. Working pressure by rules 266 lbs. Material of stays Steel

Diameter at smallest part 3-08 Area supported by each stay 306 Working pressure by rules 207 lbs. Material of Front plates at bottom Steel

Thickness 1 1/32. Material of Lower back plate Steel Thickness 1 3/32" Greatest pitch of stays 14 1/4" Working pressure of plate by rules 203 lbs.

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2 x 4 3/8" Material of tube plates Steel Thickness: Front 1 1/32" Back 1 1/16" Mean pitch of stays 9" x 8 3/4"

Distance across wide water spaces 14 1/4" Working pressures by rules 201 to 200 lbs. Girders to Chamber tops: Material Steel Depth and _____

Thickness of girder at centre 8 1/2" x 1 1/2" Length as per rule 28" Distance apart 8 5/8" Number and pitch of Stays in each Two 8 1/4"

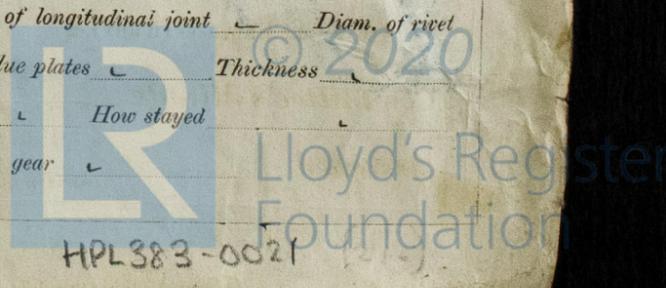
Working pressure by rules 204 lbs. Superheater or Steam chest; how connected to boiler _____ Can the superheater be shut off and the boiler worked _____

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

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

Are they fitted 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 _____



DONKEY BOILER— Description *No Donkey Boiler*
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety 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 _____
 Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____
 Description of riveting long. seams _____ Diameter of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____
 Lap of plating _____ Per centage of strength of joint _____ Rivets _____ 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 _____ Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____
 Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:—

FOR THE CENTRAL MARINE ENGINE WORKS.

The foregoing is a correct description,
 Manufacturer. *William Borrowman*

Dates _____
 of Survey _____
 while _____
 building _____
 During progress of work in shops - -
 During erection on board vessel - -
 Total No. of visits _____

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

ENGINES—Length of stern bush *6-3* Diameter of crank shaft journals *as per rule 17.37* Diameter of thrust shaft under collars *18 1/2"*

BOILERS—Range of tensile strength *27/30 tons* Are they welded or flanged *Both* **DONKEY BOILERS**—No. *1* Range of tensile strength _____

Is the approved plan of main boiler forwarded herewith *Yes* Is the approved plan of donkey boiler forwarded herewith _____

Certificate (if required) to be sent to _____

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

John Pillock & Richard Hird
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **TUES. 25 OCT 1898**
 Assigned _____

