

REPORT ON MACHINERY.

No. 12382

Port of WEST HARTLEPOOL

THUR. 27 OCT 1904

No. in Survey held at Reg. Book. WEST HARTLEPOOL Date, first Survey 1904 Last Survey 19

on the S.S. "Pursuer" / YGOMAR (Number of Visits 1) Tons 1904 (Gross / Net)

Master Selby Built at Selby By whom built Went-Cochran & Sons When built 1904

Engines made at W. Hartlepool By whom made Central Marine Eng. Wks. when made 1904

Boilers made at W. Hartlepool By whom made Central Marine Eng. Wks. when made 1904

Registered Horse Power 66.4 Owners W. Hartlepool Port belonging to W. Hartlepool

Nom. Horse Power as per Section 28 66.4 Is Refrigerating Machinery fitted Is Electric Light fitted

ENGINES, &c.—Description of Engines

Dia. of Cylinders Length of Stroke Revs. per minute No. of Cylinders No. of Cranks

Dia. of Screw shaft as per rule as fitted Material of screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight

in the propeller boss If the liner is in more than one length are the joints burned 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 If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush

Dia. of Tunnel shaft as per rule as fitted Dia. of Crank shaft journals as per rule as fitted Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under collars Dia. 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 S) Total Heating Surface of Boilers 1140 Is forced draft fitted

No. and Description of Boilers one single ended cylindrical tank Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 10/6/04 Can each boiler be worked separately Area of fire grate in each boiler 30.7 No. and Description of safety valves to each boiler 2 Spring loaded Area of each valve 3.98 Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 82 Mean dia. of boilers 141.06 Length 9.6 Material of shell plates Steel

Thickness 1 1/2 Range of tensile strength 27/20 Are they welded or flanged both Descrip. of riveting: cir. seams long. seams d.b. trade riv.

Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 7 3/8 Lap of plates or width of butt straps 16 1/2

Per centages of strength of longitudinal joint 86.6 Working pressure of shell by rules 183.8 lbs Size of manhole in shell 16 x 12

Size of compensating ring 8 x 1 1/2 No. and Description of Furnaces in each boiler 2 - plain Material steel Outside diameter 40

Length of plain part 5.11 Thickness of plates 3/8 Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 180.6 lbs combustion chamber plates: Material steel Thickness: Sides 5/8 Back 5/8 Top 5/8 Bottom 3/4

Pitch of stays to ditto: Sides 8 1/2 x 9 Back 8 x 9 1/2 Top 8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180.5 lbs

Material of stays steel Diameter at smallest part 1.5 Area supported by each stay 74 Working pressure by rules 193 lbs End plates in steam space: Material steel Thickness 1 1/2 Pitch of stays 16 x 16 1/2 How are stays secured double nut Working pressure by rules 183.2 lbs Material of stays steel

Diameter at smallest part 2.53 Area supported by each stay 260 Working pressure by rules 194.2 lbs Material of Front plates at bottom steel

Thickness 1 Material of Lower back plate steel Thickness 7/8 Greatest pitch of stays 15 x 8 Working pressure of plate by rules 183 lbs

Diameter of tubes 3 1/2 Pitch of tubes 4 1/4 Material of tube plates steel Thickness: Front 1 Back 1/2 Mean pitch of stays 9 1/2

Pitch across wide water spaces 7 1/2 Working pressures by rules 182.6 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 7 1/2 x 1 1/2 Length as per rule 26 Distance apart 8 Number and pitch of Stays in each 2 - 16

Working pressure by rules 180.5 lbs 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 holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If 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

DONKEY BOILER— No. _____ Description _____

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 _____

Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tensile strength _____

Descrip. of riveting _____ Dia. 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:—

The foregoing is a correct description,

H. B. Borrowman Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1904 April 12-15-29 May 4-6-10-12-17-20-26-30 June 2-7-10
 { During erection on board vessel - - }
 Total No. of visits 14

Is the approved plan of main boiler forwarded herewith yes
 " " " donkey " " "

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

The Boiler for this vessel has been constructed under special survey, the workmanship and materials used are both of good quality. The Boiler has been sent to Grimsby for placing on board.

This boiler has been securely fastened on board the vessel and the Safety valves adjusted under steam.

B. Ritchie
Eng.

The amount of Entry Fee. . . £ :
 Special £ : 6 :
 Donkey Boiler Fee £ :
 Travelling Expenses (if any) £ :
 When applied for, 18. 6. 04
 When received, 18. 6. 04

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

Committee's Minute

TUES. 1 NOV 1904

Assigned



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Certificate (if required) to be sent to Committee's Minute.