

REPORT ON MACHINERY.

No. 10922

Port of WEST HARTLEPOOL

MUN 10 JUL 1899

No. in Survey held at West Hartlepool Date, first Survey 17th March Last Survey 5th July 1899
Reg. Book. 339 on the S.S. "Doris" (Number of Visits 24)
Master O. Amundsen Built at Lindeland By whom built Bartram & Co. Newcastle Tons { Gross 1399
Engines made at Lindeland By whom made J. Dickenson When built 1894
Boilers made at West Hartlepool By whom made Central Marine Engine Works when made 1894
Registered Horse Power 162 Owners Acties Doris (Blow & Co.) when made 1899
Nom. Horse Power as per Section 28 162 Port belonging to Edwards
Is Electric Light fitted No

ENGINES, &c.—Description of Engines

Diameter of Cylinders		Length of Stroke	Revolutions per minute	No. of Cylinders	No. of Cranks
Diameter of Tunnel shaft as per rule	Diameter of Crank shaft journals	Diameter of Crank pin	Diameter of Screw shaft as per rule		
Diameter of screw	Pitch of screw	No. of blades	State whether moveable	Size of Crank webs	
No. of Feed pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	Total surface	
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 the discharge pipes above or below the deep water line			
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates	Are the blow off cocks fitted with a spigot and brass covering plate	How are they protected			
Are they each fitted with a discharge valve always accessible on the plating of the vessel					
Are the pipes carried through the bunkers					
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 it fitted with a watertight door	worked from	Is the screw shaft tunnel watertight			

BOILERS, &c.—

(Letter for record)

Total Heating Surface of Boilers

23265 Is forced draft fitted No

and Description of Boilers Two Single ended Sub Working Pressure 80 lb Tested by hydraulic pressure to 160 lb
Date of test 8.6.99 Can each boiler be worked separately Yes Area of fire grate in each boiler 338 No. and Description of safety valves to boiler Two Spring Area of each valve 7.07 Pressure to which they are adjusted 82 lb Are they fitted with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean diameter of boilers 12.3
Date 9.2 Material of shell plates Steel Thickness 3/4" Description of riveting: circum. seams None long. seams 8/16 double
Diameter of rivet holes in long. seams 3/8" Pitch of rivets 3 3/8" Lap of plates or width of butt straps 9 1/2"
Percentages of strength of longitudinal joint 70.6 Working pressure of shell by rules 96 Size of manhole in shell 16 x 12"
Description of compensating ring Flanged No. and Description of Furnaces in each boiler 2 Plain Material Steel Outside diameter 3.6"
Thickness of plain part 5.74 Thickness of plates 1 1/2" Description of longitudinal joint 8/16 Strap No. of strengthening rings 1/2
Working pressure of furnace by the rules 84 Combustion chamber plates: Material Steel Thickness: Sides 3/2" Back 3/2" Top 3/2" Bottom 1 1/2"
Working pressure of stays to ditto: Sides 8 Back 10 1/2" Top 11 x 8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 82 lb
Material of stays Steel Diameter at smallest part 1.25 Area supported by each stay 92 Working pressure by rules 93 lb End plates in steam space: Material Steel Thickness 3/4" Pitch of stays 17 x 18 How are stays secured By nuts Working pressure by rules 82 lb Material of stays Steel
Diameter at smallest part 1.78 Area supported by each stay 306 Working pressure by rules 81.7 Material of Front plates at bottom Steel
Material of Lower back plate Steel Thickness 5/8" Greatest pitch of stays 13" Working pressure of plate by rules 108
Diameter of tubes 3" Pitch of tubes 4 1/4" Material of tube plates Steel Thickness: Front 3/32 Back 5/8" Mean pitch of stays 12 3/4"
Working pressures by rules 84 lb Girders to Chamber tops: Material Steel Depth and width of girder at centre 7 x 1 1/4" Length as per rule 2.3 Distance apart 11" Number and pitch of Stays in each Two 8 pitch
Working pressure by rules 98 lb Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked independently Yes
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 -
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 -

HPL385-0184(112)

DONKEY BOILER—

Description *Old donkey boiler*

Made at _____ By whom made _____ When made *8.88* Where fixed *Lothburgh*
 Working pressure *70 lb* tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves *Two Spring*
 No. of safety valves *2* Area of each *5.94* Pressure to which they are adjusted *70 lb* If fitted with easing gear *Yes* 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:—

The foregoing is a correct description,

Manufacturer.

William B. Pommerehne
 MANAGER.

Dates { During progress of work in shops— *18.9.88, 17.10.88, 17.11.88, 2.12.88, 16.12.88, 25.12.88, 30.12.88, 6.1.89, 7.1.89, 8.1.89, 5.2.89*
 { During erection on board vessel— *Apr. 27, May 11, 15, June 2, 19, 27, 30, July 4, 5.*
 building { Total No. of visits *24*

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

ENGINES—Length of stern bush _____ Diameter of crank shaft journals _____ as per rule _____ Diameter of thrust shaft under collars _____
BOILERS—Range of tensile strength _____ Are they welded or flanged _____ **DONKEY BOILERS**—No. _____ Range of tensile strength _____
 Is the approved plan of main boiler forwarded herewith *Yes* Is the approved plan of donkey boiler forwarded herewith _____

Machinery. *Bottoms Lighted fastenings good, new wood in stern
 hook, propeller shaft good, Stern flange hooked
 all shafting lined throughout new rings in their
 casings, crank shaft turned in lathe new main
 bearings fitted. Condenser tubes drawn clean
 refitted & tested. Pumps overhauled new feed pump
 plunger fitted to fore engine, Cylinders, S.P. cylinder
 bored & lined up to 29" new piston, rods turned
 & flanges hooked, new end on S.P. slide spindle
 hooked, S.P. piston adapted. Donkey engine kept
Main boilers. *Two new main boilers have been specially built
 during construction the material & workmanship
 good & when finished were tested to twice the
 pressure & found tight & satisfactory at that pressure
 and have been efficiently fitted in the ship,
 main stop & safety valves fitted, all the main
 overhauled, two new main steam pipes fitted
 branch steam pipes repaired all tested to 16
 per square inch, safety valves adapted under**

The amount of Entry Fee. £ : : When applied for, _____
 Special .. £ 8 : 2 : 7.7.18.99
 Donkey Boiler Fee *1.4.8* £ : : When received, *26.7.89*
 Travelling Expenses (if any) £ : : *105. 11 JUL 1899*

Committee's Minute

Assigned

Richard Higgs
 Engineer Surveyor to Lloyd's Register of British & Foreign Ships

Lloyd's Register
 Foundation

+ W.B.T. 99 subject

Certificate (if required) to be sent to _____

S. S. "Doris"

Main boilers. And set to 82 ^{lb.}
Donkey boiler. Examined the donkey boiler inside & outside
found it in good condition, new Safety valves
& Seals have been fitted and adjusted under
Steam to 40 lb.

The machinery of this vessel is now in good
and safe working condition & eligible in ^{my}
opinion to remain as classed to have the
Record + 7.12.99 in the Register Book of the
Society. Provided the donkey boiler be
Annually Surveyed.

Richard Hines

Wmish.

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