

REPORT ON MACHINERY.

Port of WEST HARTLEPOOL Received at London Office \_\_\_\_\_ 18  
No. in Survey held at West Hartlepool Date, first Survey \_\_\_\_\_ Last Survey 26<sup>th</sup> April, 1897  
boilers reg. Book. 76 on the Steel S.S. "Annie." (Number of Visits \_\_\_\_\_)  
No. 2 Master Richard Grahl Built at West Hartlepool By whom built Furness & Co. Ltd. Tons { Gross 3443.24  
Net 2445.41  
Engines made at Sunderland By whom made H. Allan & Co. Ltd. when made 1897  
Boilers made at Sunderland By whom made H. Allan & Co. Ltd. when made 1897  
Registered Horse Power \_\_\_\_\_ Owners J. & G. Grahl & Co. Port belonging to W. Hartlepool  
Horse Power as per Section 28 299 Is Electric Light fitted No

**BOILERS, &c.—Description of Engines**

No. of Cylinders		No. of Cranks	
Diameter of Cylinders	Length of Stroke	Revolutions per minute	Diameter of Screw shaft as per rule as fitted
Diameter of Tunnel shaft as per rule as fitted	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
No. of Feed pumps	Diameter of ditto	Stroke	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	
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		
Are the pipes 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 \_\_\_\_\_) **Total Heating Surface of Boilers** \_\_\_\_\_ Is forced draft fitted \_\_\_\_\_

**Working Pressure** \_\_\_\_\_ Tested by hydraulic pressure to \_\_\_\_\_

**Description of Boilers**

Date of test	Can each boiler be worked separately	Area of fire grate in each boiler	No. and Description of safety valves to
No. of boiler	Area of each valve	Pressure to which they are adjusted	Are they fitted
Working easing gear	Smallest distance between boilers or uptakes and bunkers or woodwork	Mean diameter of boilers	
Length	Material of shell plates	Thickness	Description of riveting: circum. seams long. seams
Diameter of rivet holes in long. seams	Pitch of rivets	Gap of plates or width of butt straps	
Percentages of strength of longitudinal joint	Working pressure of shell by rules	Size of manhole in shell	
Size of compensating ring	No. and Description of Furnaces in each boiler	Material	Outside diameter
Length of plain part top bottom	Thickness of plates crown bottom	Description of longitudinal joint	No. of strengthening rings
Working pressure of furnace by the rules	Combustion chamber plates: Material	Thickness: Sides	Back Top Bottom
Pitch of stays to ditto: Sides	Back Top	If stays are fitted with nuts or riveted heads	Working pressure by rules
Material of stays	Diameter at smallest part	Area supported by each stay	Working pressure by rules
Material	Thickness	Pitch of stays	How are stays secured
Diameter at smallest part	Area supported by each stay	Working pressure by rules	Material of Front plates at bottom
Thickness	Material of Lower back plate	Thickness	Greatest pitch of stays
Diameter of tubes	Pitch of tubes	Material of tube plates	Thickness: Front Back
Pitch across wide water spaces	Working pressures by rules	Girders to Chamber tops: Material	Depth and
Thickness of girder at centre	Length as per rule	Distance apart	Number and pitch of Stays in each
Working pressure by rules	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	
Pitch of rivets	Working pressure of shell by rules	Diameter of flue	Material of flue plates
Thickened with rings	Distance between rings	Working pressure by rules	End plates: Thickness
Working pressure of end plates	Area of safety valves to superheater	Are they fitted with easing gear	

DONKEY BOILER— Description *Vertical with four cross tubes.*  
Made at *Shepton* By whom made *Swan & Co* When made *12/3/94* Where fixed *Stokehold*  
Working pressure *80 lb.* tested by hydraulic pressure to *160 lb.* No. of Certificate *1450* Fire grate area *29 sq ft* Description of safety valves *Spring driven*  
No. of safety valves *2* Area of each *80 sq in* Pressure to which they are adjusted *85 lb.* If fitted with easing gear *Yes* If steam from main boilers enter the donkey boiler *no* Diameter of donkey boiler *7'-0"* Length *14'-0"* Material of shell plates *steel* Thickness *1 1/32"*  
Description of riveting long. seams *Lap double riveted* Diameter of rivet holes *1 3/16"* Whether punched or drilled *drilled* Pitch of rivets *2"*  
Lap of plating *4 1/2"* Per centage of strength of joint *68.5* Rivets *70.4* Thickness of shell crown plates *9/16"* Radius of do. *5'-9"* No. of Stays to do. *7*  
Dia. of stays *1 1/4" off.* Diameter of furnace Top *5'-3"* Bottom *6'-4 1/2"* Length of furnace *6'-3"* Thickness of furnace plates *2 1/32"* Description of joint *lap* Thickness of furnace crown plates *5/8"* Stayed by *same as shell.* Working pressure of shell by rules *83*  
Working pressure of furnace by rules *83 lb.* Diameter of uptake *14 1/2"* Thickness of uptake plates *7/16"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,  
Manufacturer.

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

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

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

Committee's Minute

TUES 4 MAY 1897

Assigned



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Foundation