

# REPORT ON MACHINERY.

No. 17943

No. in Survey held at  
Reg. Book.

New castle

Date, first Survey 19<sup>th</sup> May

Last Survey 16<sup>th</sup> Sept 1884

Received at London Office

TUESDAY 23 OCT 1884

(Number of Visits 24)

169  
Tons 106

on the

Screw Steamer "Basie"

Master *A. J. Barker* Built at *North Shields* By whom built *T. W. Smith* When built *1882*

Engines made at *N<sup>o</sup> Shields* By whom made *Baird & Bamsley* when made *1884*

Boilers made at *North Shields* By whom made *J. T. & L. Thompson* when made *1884*

Registered Horse Power *30* Owners *Luthevan & Co. Crawford & Co.* Port belonging to *Grangemouth*

## ENGINES, &c.—

Description of Engines *Compound Inverted Surface Condensing*

Diameter of Cylinders *14 x 27* Length of Stroke *20* No. of Rev. per minute *100* Point of Cut off, High Pressure *5* Low Pressure *5*

Diameter of Screw shaft *5 1/2* Diam. of Tunnel shaft *none* Diam. of Crank shaft journals *5 1/2* Diam. of Crank pin *5 1/2* size of Crank webs *4 x 4*

Diameter of screw *7-9* Pitch of screw *9-6* No. of blades *3* state whether moveable *no* total surface *14 sq ft*

No. of Feed pumps *1* diameter of ditto *3* Stroke *10* Can one be overhauled while the other is at work *✓*

No. of Bilge pumps *1* diameter of ditto *3* Stroke *10* Can one be overhauled while the other is at work *✓*

Where do they pump from *Engine room*

No. of Donkey Engines *1* Size of Pumps *3 1/4 D<sup>2</sup> x 7 1/2* Where do they pump from *Engine room, fore*

*peak, Main hold, & sea*

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

No. of bilge injections *1* and sizes *2 1/2* Are they connected to condenser, or to circulating pump *Circ. pump*

How are the pumps worked *lever over condenser*

Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *both*

Are 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 *above*

Are 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 *yes*

What pipes are carried through the bunkers *none* How are they protected *✓*

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times *yes*

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *yes*

When were stern tube, propeller, screw shaft, and all connections examined in dry dock *while building*

Is the screw shaft tunnel watertight *no tunnel* and fitted with a sluice door *Engines aft worked from*

## BOILERS, &c.—

Number of Boilers *one* Description *cylindrical* Whether Steel or Iron *Steel*

Working Pressure *80 lbs* Tested by hydraulic pressure to *160 lbs* Date of test *August 8<sup>th</sup> 1884 No 1/31*

Description of superheating apparatus or steam chest *vertical dome*

Can each boiler be worked separately *✓* Can the superheater be shut off and the boiler worked separately *no*

No. of square feet of fire grate surface in each boiler *28* Description of safety valves *Spring* No. to each boiler *2*

Area of each valve *8.3 sq* Are they fitted with easing gear *yes* No. of safety valves to superheater *✓* area of each valve *✓*

Are they fitted with easing gear *✓* Smallest distance between boilers and bunkers or woodwork *about 11* Diameter of boiler *9.0*

Length of boilers *8.9* description of riveting of shell long. seams *triple lap* circum. seams *double lap* Thickness of shell plates *3/16*

Diameter of rivet holes *1* whether punched or drilled *drilled* pitch of rivets *4* Lap of plating *75*

Per centage of strength of longitudinal joint *73.2* working pressure of shell by rules *82* size of manholes in shell *12 x 16*

Size of compensating rings *6 x 5* No. of Furnaces in each boiler *2*

Outside diameter *35* length, top *6.0* bottom *8.0* thickness of plates *7/16 x 1/2* description of joint *single lap* if rings are fitted *no*

Greatest length between rings *8.0* working pressure of furnace by the rules *80* combustion chamber plating, thickness, sides *1/2* back *1/2* top *1/2*

Pitch of stays to ditto, sides *9 3/4* back *9 3/4* top *2nd* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by

rules *80* Diameter of stays at smallest part *1 5/16* working pressure of ditto by rules *85* end plates in steam space, thickness *13/16*

Pitch of stays to ditto *17* how stays are secured *d u r w* working pressure by rules *81* diameter of stays at

smallest part *2 1/4* working pressure by rules *82* Front plates at bottom, thickness *1/2* Back plates, thickness *3/16*

Greatest pitch of stays *10* working pressure by rules *✓* Diameter of tubes *3 1/2* pitch of tubes *4 5/8 x 4 1/2* thickness of tube

plates, front *13/16* back *11/16* how stayed *tubes* pitch of stays *13 1/2* width of water spaces *4*

Diameter of Superheater or Steam chest *3.0* length *4.0* thickness of plates *3/8* description of longitudinal joint *d e* diam. of rivet holes *3/4*

Pitch of rivets *2 3/4* working pressure of shell by rules *120* diameter of flue *✓* thickness of plates *2* If stiffened with rings *✓*

Distance between rings *✓* working pressure by rules *✓* end plates of superheater, or steam chest; thickness *1/2* how stayed *stayed*

Superheater or steam chest; how connected to boiler *Contracted neck*



DONKEY BOILER— Description *No donkey boiler fitted*  
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 \_\_\_\_\_ if fitted with easing gear \_\_\_\_\_ if steam from main boilers can  
enter the donkey boiler \_\_\_\_\_ diameter of donkey boiler \_\_\_\_\_ length \_\_\_\_\_ description of riveting \_\_\_\_\_  
Thickness of shell plates \_\_\_\_\_ diameter of rivet holes \_\_\_\_\_ whether punched or drilled \_\_\_\_\_ pitch of rivets \_\_\_\_\_ lap of plating \_\_\_\_\_  
per centage of strength of joint \_\_\_\_\_ thickness of crown plates \_\_\_\_\_ stayed by \_\_\_\_\_  
Diameter of furnace, top \_\_\_\_\_ bottom \_\_\_\_\_ length of furnace \_\_\_\_\_ thickness of 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 plates \_\_\_\_\_ thickness of water tubes \_\_\_\_\_

SPARE GEAR. State the articles supplied:— *Two top, two bottom end, two main bearing  
& one set coupling bolts, one set feed & bilge pump valves  
assorted bolts & nuts & a few bars of iron.*

The foregoing is a correct description,

*Baird & Barnsley* Manufacturers of Engines

*Jos. J. Eltringham*  
Manufacturer of Boilers

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

*The machinery of this vessel has been constructed  
under special survey.*

*The material & workmanship is good & the vessel  
is eligible in our opinion to have + I.M.C. 7-84-  
recorded.*

The amount of Entry Fee .. £ 1 : - : - received by me,

Special .. .. £ 8 : - : -

Donkey Boiler Fee .. .. £ - : - : -

Certificate (if required) *frad* .. .. £ - : - : - 21<sup>st</sup> Oct 1884

To be sent as per margin.

(Travelling Expenses, if any, £ .. ..)

Committee's Minute

FRIDAY 31 OCT 1884

*John H. Heck & Jos. H. Walliker*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

*Newcastle*

Lloyd's Register  
Foundation