

REPORT ON MACHINERY.

17943

No. 17943

Received at London Office TUESDAY 23 OCT 1884

No. in Survey held at Newcastle Date, first Survey 19th May Last Survey 16th Sept 1884

Reg. Book on the Screw Steamer "Basie" (Number of Visits 24) Tons 106

Master A. J. Baxby Built at North Shields By whom built J. W. Smith When built 1884

Engines made at N^o Shields By whom made Baird & Bamsley when made 1884

Boiler made at North Shields By whom made J. S. Coltrough when made 1884

Registered Horse Power 30 Owners Sutherland & Lowry 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^o 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 8th 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 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 12 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 stays Superheater or steam chest; how connected to boiler Contracted neck

Report recd 23/10/84 sent to Gen. 28/10/84

Boiler tracing & result of steel keel was forwarded

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.

It is submitted that this vessel is eligible to have the certificate + for reg. 84 recorded.

29/10/84

The amount of Entry Fee .. £ 1 : - : - received by me,
 Special £ 8 : - : -
 Donkey Boiler Fee £ - : - : -
 Certificate (if required) *paid* £ - : - : - *21st Oct 1884*
 (Travelling Expenses, if any, £)

John H. Heck + *Jos. J. Eltringham*
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
Newcastle

Committee's Minute **FRIDAY 31 OCT 1884**