

## REPORT ON MACHINERY.

Port of NEWCASTLE-ON-TYNE

Received at London Office

MON. 13 FEB 1893

Survey held at NewcastleDate, first Survey 7 April 92 Last Survey 11 July 1892

(Number of Visits)

on the S.S. "Baker Standard"Gross 3708Net 2375Built at Newcastle By whom built Libby & Co. Ltd. When built 1893made at Newcastle By whom made W. & A. R. & Co. Ltd. when made 1893made at do By whom made do when made 1893Horse Power 300 Owners Anapa Co. Ltd. Port belonging to LondonHorse Power as per Section 28 292

**VES, &c.**— Description of Engines Triple expansion Surface condensing No. of Cylinders 3  
 No. of Cylinders 24 Length of Stroke 48 Revolutions per minute 70 Diameter of Screw shaft 11.88  
 Diameter of Tunnell shaft 11.4 Diameter of Crank shaft journals 12.5 Diameter of Crank pin 12.5 Size of Crank webs 8.5 x 17.5  
 Pitch of screw 16.0 Pitch of screw 19.0 No. of blades 4 State whether moveable yes Total surface 80 sq  
 Bilge pumps 2 Diameter of ditto 3.5 Stroke 24 Can one be overhauled while the other is at work yes  
 Donkey Engines 2 Sizes of Pumps 6 x 5.5 x 6.5 No. and size of Sections connected to both Bilge and Donkey pumps  
 Suction in Engine space, each 3 in. Hold, &c. 1 Suction 3 in. diam. in well forward  
 bilge injections 1 sizes 4.5 Connected to condenser, or to circulating pump yes Are the roses in Engine room always accessible yes  
 Are the roses on Engine room bulkheads always accessible none  
 Are they Valves or Cocks Both  
 Are the discharge pipes above or below the deep water line Below  
 Are the blow off cocks fitted with a spigot and brass covering plate yes  
 Are they protected none  
 Are the pipes in connection with the machinery and all boiler mountings accessible at all times yes  
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes  
 Are the stern tube, propeller, screw shaft, and all connections examined in dry dock yes Is the screw shaft tunnel watertight none  
 Is the screw shaft tunnel watertight none  
 Is the screw shaft tunnel watertight none

**BOILERS, &c.**— (Letter for record) Total Heating Surface of Boilers 4540  
 and Description of Boilers Two double ended Steel Working Pressure 160 Tested by hydraulic pressure to 320  
 Can each boiler be worked separately yes Area of fire grate in each boiler 68 sq No. and Description of safety valves to  
 boiler 2 Spring Area of each valve 9.62 Pressure to which they are adjusted 163 lb Are they fitted  
 with casing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 14 Mean diameter of boiler 12.6  
 Material of shell plates Steel Thickness 1.5 Description of riveting: circum. seams Butt long. seams Butt  
 Pitch of rivets 8.5 Lap of plates or width of butt straps 17.5  
 Working pressure of shell by rules 144.7 Size of manhole in shell 16 x 12  
 No. and Description of Furnaces in each boiler 4 Material Steel Outside diameter 3.9  
 Thickness of plates 1.5 Description of longitudinal joint Welded No. of strengthening rings 1  
 Working pressure of furnace by the rules 167 Combustion chamber plates: Material Steel Thickness 5.5 Back 5.5 Top 5.5 Bottom 5.5  
 Material of stays Steel Diameter at smallest part 1.5 Area supported by each stay 81 Working pressure by rules 225 End plates in steam space:  
 Material Steel Thickness 1 Pitch of stays 16.5 How are stays secured By nuts Working pressure by rules 160 Material of stays Steel  
 Diameter at smallest part 2.5 Area supported by each stay 288 Working pressure by rules 164 Material of Front plates at bottom Steel  
 Thickness 1.5 Material of Lower back plate Steel Thickness 1.5 Greatest pitch of stays 16.5 Working pressure of plate by rules 166  
 Material of tube plates Steel Thickness: Front 1 Back 1 Mean pitch of stays 9  
 Pitch across wide water spaces 14.5 Working pressures by rules 170 Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 11.5 x 1.5 Length as per rule 3.4 Distance apart 8.5 Number and pitch of Stays in each 3 x 9  
 Working pressure by rules 149 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked  
 separately yes Diameter 1 Length 1 Thickness of shell plates 1 Material Steel Description of longitudinal joint Welded Diam. of rivet  
 holes 1 Pitch of rivets 1 Working pressure of shell by rules 1 Diameter of flue 1 Material of flue plates 1 Thickness 1  
 If stayed with rings yes Distance between rings 1 Working pressure by rules 1 End plates: Thickness 1 How stayed 1  
 Working pressure of end plates 1 Area of safety valves to superheater 1 Are they fitted with casing gear 1



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**DONKEY BOILER**— Description *Cylindrical Single ended Steel*  
 Made at *Newcastle* By whom made *Halleud Shipway Co Ltd.* When made *13.8.92* Where fixed *On deck*  
 Working pressure *100* tested by hydraulic pressure to *200* No. of Certificate *2951* Fire grate area *26.5* Description of safety valves *Spring*  
 No. of safety valves *2* Area of each *4.91* Pressure to which they are adjusted *100 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Diameter of donkey boiler *8.6"* Length *8.6"* Material of shell plates *Steel* Thickness *5/8"*  
 Description of riveting long. seams *Lap treble* Diameter of rivet holes *15/16"* Whether punched or drilled *Drilled* Pitch of rivets *4"*  
 Lap of plating *7"* Per centage of strength of joint *79%* Thickness of shell plates *5/8"* Radius of do. *—* No. of stays to do. *4*  
 Dia. of stays *2"* Diameter of furnace Top *2.9"* Bottom *2.7"* Length of furnace *5.6"* Thickness of furnace plate *1/2"* Description of joint *Welded* Thickness of furnace plates *3/16"* Stayed by *18.1 1/2 Laced stays* Working pressure of shell by rules *114*  
 Working pressure of furnace by rules *121* Diameter of tubes *3"* Thickness of tubes *3/16"* Thickness of water tubes *—*

**SPARE GEAR.** State the articles supplied:— *2 Top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set of shaft coupling bolts & nuts, propeller shaft & four propeller blades, 1 slide spindle complete, 1 pair of top end & 1 pair of bottom end traps, air pump bucket & rod, circulating pump bucket & rod, 1 eccentric sheave, 1 set of feed valves, 1 set of bilge valves, piston ring & springs, nuts & bolts & iron assorted.*  
 The foregoing is a correct description, *1 set of bilge valves, piston ring & springs, nuts & bolts & iron assorted.*

Feb 8/93 *W. Noyd* Director

**General Remarks** (State quality of workmanship, opinions as to class, &c.) *The machinery has been specially surveyed during construction the material & workmanship good and renders the vessel eligible in my opinion to have the Record + L M C 2.93 in the Register Book of the Society.*

*After the completion of the trial of the machinery at the Moorings it was found that the condenser was cracked each end. It has now been repaired as per encl. & tested by water to a height of 4.0" above the condenser on a trial at sea the repairs were found satisfactory. This does not in my opinion at all impair the efficiency of the machinery.*

*This vessel is fitted with the electric light & Report was made which will be forwarded when complete.*

Certificate (if required) to be sent to *Newcastle office*

The amount of Entry Fee... £ 2 : 10 : 0 When applied for,  
 Special ... £ 2 : 1 : 10 : 11 : 18 : 0  
 Donkey Boiler Fee ... £ 2 : 2 : 9 When received,  
 Travelling Expenses (if any) £ 16 : 2 : 43

Committee's Minute **TUES. 14 FEB 1893**

Assigned

*+ L M C 2.93*

*Richard Sturt*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.  
*Newcastle*



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