

# REPORT ON MACHINERY.

No. 861

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Writing Report *17<sup>th</sup> July* 1916 When handed in at Local Office *17 July* 1916 Port of *Boston Mass.*  
 Survey held at *Boston* Date, First Survey *14<sup>th</sup> July* Last Survey, *14<sup>th</sup> July* 1916  
 Name of the vessel *Steel Screw Steamer "Bristol"* (Number of Visits)  
 Name of the owner *Walker M. Hart* Built at *Camden N.J.* By whom built *New York Shipbuilding Co.* Tons Gross *3971* Net *3556*  
 Names made at *Camden N.J.* By whom made *New York Shipbuilding Co.* When built *1916*  
 Names made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_  
 Rated Horse Power *275* Owners *Coastwise Transportation Co.* Port belonging to *Boston*  
 Horse Power as per Section 28 *275* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

**ENGINES, &c.**—Description of Engines  No. of Cylinders  No. of Cranks   
 Length of Stroke  Revs. per minute  Dia. of Screw shaft  Material of screw shaft   
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube  Is the after end of the liner made water tight   
 If the liner is in more than one length are the joints burned  If the liner does not fit tightly at the part   
 Is the space between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive  If two   
 Is the shaft lapped or protected between the liners  Length of stern bush   
 Dia. of Crank shaft journals  Dia. of Crank pin  Size of Crank webs  Dia. of thrust shaft under   
 Dia. of screw  Pitch of Screw  No. of Blades  State whether moveable  Total surface   
 Diameter of ditto  Stroke  Can one be overhauled while the other is at work   
 Diameter of ditto  Stroke  Can one be overhauled while the other is at work   
 Sizes of Pumps  No. and size of Suctions connected to both Bilge and Donkey pumps   
 In Holds, &c.   
 Connected to condenser, or to circulating pump  Is a separate Donkey Suction fitted in Engine room & size   
 Are the roses in Engine room always accessible  Are the sluices on Engine room bulkheads always accessible   
 Are they Valves or Cocks   
 Are the Discharge Pipes above or below the deep water line   
 Are the Blow Off Cocks fitted with a spigot and brass covering plate   
 How are they protected   
 All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times   
 The Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges   
 Examination of completion of fitting of Sea Connections  of Stern Tube  Screw shaft and Propeller   
 Is it fitted with a watertight door  worked from

**BOILERS, &c.**—(Letter for record ) Manufacturers of Steel   
 Is Forced Draft fitted  No. and Description of Boilers   
 Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate   
 Area of fire grate in each boiler \_\_\_\_\_ No. and Description of Safety Valves to   
 Pressure to which they are adjusted *190* Are they fitted with easing gear *Yes*  
 Mean dia. of boilers \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates   
 Are the shell plates welded or flanged  Descrip. of riveting: cir. seams   
 Diameter of rivet holes in long. seams \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plates or width of butt straps   
 Working pressure of shell by rules \_\_\_\_\_ Size of manhole in shell   
 No. and Description of Furnaces in each boiler \_\_\_\_\_ Material \_\_\_\_\_ Outside diameter \_\_\_\_\_  
 Thickness of plates \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ No. of strengthening rings \_\_\_\_\_  
 Combustion chamber plates: Material \_\_\_\_\_ Thickness: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Bottom \_\_\_\_\_  
 If stays are fitted with nuts or riveted heads  Working pressure by rules \_\_\_\_\_  
 Diameter at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates in steam space \_\_\_\_\_  
 How are stays secured \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of stays \_\_\_\_\_  
 Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of Front plates at bottom \_\_\_\_\_  
 Thickness \_\_\_\_\_ Greatest pitch of stays \_\_\_\_\_ Working pressure of plate by rules \_\_\_\_\_  
 Material of tube plates \_\_\_\_\_ Thickness: Front \_\_\_\_\_ Back \_\_\_\_\_ Mean pitch of stays \_\_\_\_\_  
 Working pressures by rules \_\_\_\_\_ Girders to Chamber tops: Material \_\_\_\_\_ Depth and \_\_\_\_\_  
 Length as per rule \_\_\_\_\_ Distance apart \_\_\_\_\_ Number and pitch of stays in each \_\_\_\_\_  
 Superheater or Steam chest; how connected to boiler \_\_\_\_\_ Can the superheater be shut off and the boiler worked \_\_\_\_\_  
 Diameter \_\_\_\_\_ Length \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet \_\_\_\_\_  
 Working pressure of shell by rules \_\_\_\_\_ Diameter of flue \_\_\_\_\_ Material of flue plates \_\_\_\_\_ Thickness \_\_\_\_\_  
 End plates: Thickness \_\_\_\_\_ How stayed \_\_\_\_\_  
 Area of safety valves to superheater \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_

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**VERTICAL DONKEY BOILER—** Manufacturers of Steel ✓

No. ✓ Description ✓  
 Made at ✓ By whom made ✓ When made ✓ Where fixed ✓  
 Working pressure ✓ tested by hydraulic pressure to ✓ Date of test ✓ No. of Certificate ✓ Fire grate area ✓ Description of Safety Valves ✓  
 No. of Safety Valves ✓ Area of each ✓ Pressure to which they are adjusted ✓ Date of adjustment ✓  
 If fitted with casing gear ✓ If steam from main boilers can enter the donkey boiler ✓ Dia. of donkey boiler ✓ Length ✓  
 Material of shell plates ✓ Thickness ✓ Range of tensile strength ✓ Descrip. of riveting long. seams ✓  
 Dia. of rivet holes ✓ Whether punched or drilled ✓ Pitch of rivets ✓ Lap of plating ✓ Per centage of strength of joint ✓  
 Working pressure of shell by rules ✓ 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 ✓  
 Working pressure of furnace by rules ✓ Thickness of furnace crown plates ✓ Radius of do. ✓ Stayed by ✓  
 Diameter of uptake ✓ Thickness of uptake plates ✓ Thickness of water tubes ✓ Dates of survey ✓

**SPARE GEAR.** State the articles supplied:— ✓

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } ✓  
 { During erection on board vessel - - - } ✓  
 Total No. of visits ✓  
 Is the approved plan of main boiler forwarded herewith ✓  
 " " " donkey " " " ✓  
**Dates of Examination of principal parts—** Cylinders ✓ Slides ✓ Covers ✓ Pistons ✓ Rods ✓  
 Connecting rods ✓ Crank shaft ✓ Thrust shaft ✓ Tunnel shafts ✓ Screw shaft ✓ Propeller ✓  
 Stern tube ✓ Steam pipes tested ✓ Engine and boiler seatings ✓ Engines holding down bolts ✓  
 Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam ✓  
 Main boiler safety valves adjusted 14<sup>th</sup> July 1916 Thickness of adjusting washers Star. Blr.; Top Valve 21" Aff. Valve 48" ✓  
 Material of Crank shaft ✓ Identification Mark on Do. ✓ Material of Thrust shaft ✓ Identification Mark on Do. ✓  
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts ✓ Identification Marks on Do. ✓  
 Material of Steam Pipes ✓ Test pressure ✓

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
 The safety valves of this vessel have now been adjusted under steam to 190 lbs. as per advice from the Chief Surveyor New York of date 7<sup>th</sup> July 1916.  
 The machinery & boilers of this vessel are now in good & safe working condition, eligible in my opinion to be classed as recommended by the Surveyors at Philadelphia

Certificate (if required) to be sent to  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

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

A. J. Walker  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute  
 Assigned  
 TUE. JUN. 18. 1918

