

# IRON SHIPS.

Rev 1/5/18

Survey held at Newcastle Date 13<sup>th</sup> Dec 1864 to 15<sup>th</sup> April 1865  
 the S.S. "Bella" Master Robt. Penner  
 Tonnage Gross 741.44 Engine Room 157.15 Register 504.29 Built at Newcastle  
 When Built 1865 Launched 4<sup>th</sup> March By whom built Messrs Palmer Bros & Co  
 Owners James Dixon Port belonging to London Destined Voyage London  
 Surveyed Afloat or in Dry Dock While building

Length aloft	Feet. Inches.	Extreme Breadth	Feet. Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet. Inches.	Power of Engines	Horse.
201		20.1		17.5		95	
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	Inches in Ships.	Inches required per Rule.				Inches. 16ths. Inches. 16ths. Inches. 16ths. required required per Rule. per Rule.	
Floors, Size of Angle Iron, and No. <u>12</u> at bottom of Floor Plate	Inches. In Ship.	Inches. In Ship.	16ths. In Ship.	Inches. In Ship.	16ths. In Ship.		
depth and thickness of Floor Plate at mid line	17	17 1/2	3	3/16			
depth and thickness of Floor Plate at Bilge Keelson	17	17 1/2	3	3/16			
Size of Reversed Angle Iron, and No. <u>12</u> at top of Floor Plate	3	3	3	3	3		
Frames, Size of Angle Iron, single or double	3	3	3	3	3		
Reversed Iron, N to every frame	3	3	3	3	3		
Beams, Deck (No. <u>42</u> ) double Angle Iron, Plate, or Bulb Iron	7	7	7	7	7		
double Angle Iron, on top edge	2 1/2	2 1/2	5	2 1/2	2 1/2	3/16	
average space between	3 feet 6 in						
if wood (No. ) sided & moulded							
Hold, or Lower Deck (No. <u>37</u> ) double Angle Iron Plate or Bulb Iron	7	7	7	7	7		
double or single Angle Iron on top edge	2 1/2	2 1/2	5	2 1/2	2 1/2	3/16	
average space between	3 feet 6 in						
if wood (No. ) sided & moulded							
Paddle, wood, sided and moulded, or if Iron, size of Plate							
Engine							
Keelson, single plate, or intercostal	2 1/2	2 1/2	5	2 1/2	2 1/2	3/16	
Size of Plates	2 1/2	2 1/2	5	2 1/2	2 1/2	3/16	
Size of Angle Irons	2 1/2	2 1/2	5	2 1/2	2 1/2	3/16	
Ditto Bilge (No. <u>4</u> )	4	4	4	4	4		

Transoms, material Plate or, if none, in what manner compensated for. how secured to the sides of the ship  
 Knight-heads, and Hawse Timbers how secured to the sides of the ship  
 The Frames or Ribs extend in one length from Keel to Gunnwale rivetted through plates with ( 3/4 in.) rivets, about ( 1 ) apart.  
 The reverse angle irons on the floors extend in one length across the middle line from Keel to Gunnwale  
 " " " on the frames " " " from Keel to Gunnwale  
 Keelson, how are the various lengths of plates or angle irons connected? by double straps in alternate frames to upper deck  
 Plates, Garboard, double single rivetted to keel & at upper edge, with rivets ( 3/4 in.) diameter averaging ( 4 in.) from centre to centre of rivet.  
 Edges from Garboards to upper part of bilge, worked carvel with a lining piece ( 1/2 in.) thick, or clench, double single rivetted; rivets ( 3/4 in.) diameter, averaging ( 3 ins.) from centre to centre of rivets.  
 Butts from Keel to turn of bilge, worked carvel with a lining piece ( 1/2 in.) thick, double single rivetted; rivets ( 3/4 in.) diameter, averaging ( 3 ins.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below?  
 Edges from bilge to sheerstrake, worked carvel with a lining piece ( 1/2 in.) thick, or clench, double or single rivetted; rivets ( 3/4 in.) diameter, averaging ( 3 in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below?  
 Edge of Sheerstrake, double single rivetted?  
 Butts from bilge to planksheers, worked carvel with a lining piece ( 1/2 in.) thick, double single rivetted; rivets ( 3/4 in.) diameter averaging ( 3 ins.) from centre to centre of rivets. Breadth of laps in double rivetting ( 4 1/2 in.) Breadth of laps in single rivetting ( 4 1/2 in.)  
 Butt Straps of Keelsons, Stringer and Tie Plates, double single rivetted?  
 Planksheer, how secured to the plating of the sides { Explain by sketch } bolted to stringer & outside plating  
 Waterway " " planksheer and to the Beams { if necessary. }  
 Deck Beams, how secured to the side? Molded knees rivetted to frames  
 Hold or Lower Deck " do  
 Paddle " do  
 No. of breasthooks crutches how are pointers compensated?  
 What description of iron is used for the angle iron and plate iron in the vessel? Angle irons stamped H.C. & Co. & Portman's Port  
Plates stamped "Palmer's Best" various  
 Builder's Signature Lor Palmer Bros & Co  
William Blum

IRON 438-0228



4075 Lm

**Workmanship.** Are the lands or laps of the clenchwork in all cases in breadth at least five times the diameter of the rivets in double rivetted edges and butts, and at least three times the diameter of the rivets where single rivetting is admitted? Yes  
 Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? Yes  
 Do the fillings between the ribs and plates fill in solid with single pieces, or are they in short lengths of various thicknesses? long lengths  
 Do the holes for rivetting plate to frames, lining pieces, or plate to plate, &c., conform well to each other? generally so and are the rivet holes well and sufficiently countersunk in the outer plate? generally so  
 Are there any rivets which either break into or have been put through the seams or butts of the plating? a few

Her Masts, Yards, &c., are in good condition, and sufficient in size and length.

She has <u>SAILS</u> .		CABLES, &c.		ANCHORS, and their weights.	
N <sup>o</sup> .		Mar/Mod Lloyd's Type	Fathoms.	Inches.	Mar/Mod Lloyd's Type
<u>one</u> <u>full</u> <u>first</u> and	Fore Sails,	Chain <u>R 24, 2.65</u> <u>proved to 3 1/4 4.0.0</u>	270	1 7/16	Bower, <u>12 1/2 24, 2.65</u>
	Fore Top Sails,	<u>Chain</u> <u>Rempen</u> Stream Cable	90	7/8	<u>12 1/2 24, 2.65</u>
	Fore Topmast Stay Sails,	Hawser	-	8	Stream, <u>0. 1. 5</u>
	Main Sails,	Towlines	-	6	
	Main Top Sails,	Warp	-	5	Kedge, <u>3. 3. 10</u>
		All of <u>good</u> quality.	-	4 1/4	<u>2. 0. 7</u>

Her Standing and Running Rigging is sufficient in size and good in quality.

She has one Long Boat and two others

The present state of the Windlass is Good Capstan Good and Rudder Good Pumps two deck Pump & Engine Pump

**General Remarks, Statement and Date of Repairs, extent of corrosion (if any) both internally and externally, and condition of rivets.**

DATES of Surveys held while building, as per Section 17. {  
 1st. On the several parts of the frame, when in place, and before the plating was wrought  
 2nd. On the plating during the progress of rivetting  
 3rd. When the beams were in and fastened, and before the decks were laid  
 4th. When the ship was complete, and before the plating was finally coated  
 5th. After the ship was launched  
 } Special Survey  
per Order no 490.

This vessel has a double bottom, about 116 feet long, and is constructed in all respects similar to other vessels built by Messrs Palmer Bros & Co, and classed A1.

In what manner are the surfaces preserved from oxidation? Red Lead & Asphaltum in bottom,

I am of opinion this Vessel should be classed A1

The amount of the Fee .....£ 5: 0: 0 is received by me,

Special .....£ 37: 2: 0

Certificate (if required) .....£ 4: 0: 0

Committee's Minute 2<sup>nd</sup> May 18 65

Character assigned A1

(A.C.P.)

MT

W. Luke  
J. H. Liltman  
 Lloyd's Register  
 Foundation

Messrs. Green & Carter, Boat Exchange, E.C.