

# 3532 IRON SHIPS.

Rev 4/4/64

No. 929 Survey held at Newcastle Date 5<sup>th</sup> Dec 63 to 30<sup>th</sup> Mar 1864  
 on the Sea Collier "Thomas Lea" Master Geo Potts  
 Tonnage Gross 629.98 Engine Room 143.10 Register 486.88 Built at Newcastle  
 When Built 1864 Launched 15<sup>th</sup> Mar 1864 By whom built Palmer Bros & Co  
 Owners Cory & Co Port belonging to London Destined Voyage London  
 Surveyed Afloat or in Dry Dock Special 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.		
.....	<u>119.1</u>	.....	<u>28.1</u>	.....	<u>17.25</u>	.....	<u>80</u>		
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	Inches in Ships. <u>21</u>		Inches required per Rule. <u>21</u>		Stem, if bar iron, moulding and thickness ....			Inches. 16ths. Inches. 16ths. required required per Rule per Rule. <u>7 2 1/2</u> <u>7 2 3/4</u>	
Floors, Size of Angle Iron, and No. / at bottom of Floor Plate	Inches. In Ship. <u>4</u>	Inches. In Ship. <u>3</u>	16ths. required per Rule. <u>7/16</u>	Inches. In Ship. <u>4</u>	Inches. In Ship. <u>3</u>	16ths. required per Rule. <u>7/16</u>	Stern-post, if bar iron, moulding and thickness	<u>9 4 1/2</u> <u>7 5 1/2</u>	
" depth and thickness of Floor Plate at mid line	<u>18</u>	<u>7/16</u>	<u>1 1/4</u>	<u>7/16</u>	Keel, if bar iron, depth and thickness			<u>7 2 3/4</u> <u>7 2 3/4</u>	
" depth and thickness of Floor Plate at Bilge Keelson	<u>nil, see sketch</u>						Garboard Plates, Breadth and thickness		<u>36 9/16</u> <u>30 x 9/16</u>
" Size of Reversed Angle Iron, and No. / at top of Floor Plate	<u>3</u>	<u>2 1/2</u>	<u>6/16</u>	<u>3</u>	<u>2 3/4</u>	<u>6/16</u>	From Garboard to upper part of Bilge	<u>8/16</u> <u>8/16</u>	
Frames, Size of Angle Iron, single or double	<u>4</u>	<u>3</u>	<u>7/16</u>	<u>4</u>	<u>3</u>	<u>7/16</u>	From upper part of Bilge to Sheerstrakes	<u>7/16</u> <u>7/16</u>	
" Reversed Iron, to every frame or every frame	<u>3</u>	<u>2 1/2</u>	<u>6/16</u>	<u>3</u>	<u>2 3/4</u>	<u>6/16</u>	Sheerstrakes, Breadth and thickness	<u>44 8/16</u> <u>30 8/16</u>	
Beams, Deck (No. <u>45</u> ) double Angle Iron, Plate, or Bulb Iron	<u>4</u>	<u>3</u>	<u>7/16</u>	<u>4</u>	<u>3</u>	<u>7/16</u>	Butt Straps to outside plating, Breadth and thickness	<u>9 x 7/16</u> <u>9/16</u> <u>8 1/2 x 7/16</u> <u>9/16</u>	
" double or single Angle Iron, on upper edge	<u>3</u>	<u>2 1/2</u>	<u>5/16</u>	<u>3</u>	<u>2 3/4</u>	<u>5/16</u>	Planksheers	<u>none</u>	
" average space between	<u>3 ft 6 ins</u>						Gunwale Plate or Stringer on ends of Up. Dk Beams	<u>21 7/16</u> <u>21 7/16</u>	
" if wood (No. ) sided & moulded	<u>3 ft 6 ins</u>						Angle Iron on ditto	<u>4 1/2 3 1/2</u> <u>7/16</u> <u>4 1/2 x 3 1/2</u> <u>7/16</u>	
" Hold, or Lower Deck (No. <u>19</u> ) double Angle Iron, Plate, or Bulb Iron	<u>8</u>	<u>4</u>	<u>7/16</u>	<u>7</u>	<u>7/16</u>		Diagonal Tie Plates on Beams	<u>2 pairs 10 1/2</u> <u>7/16</u> <u>4 pairs 10 1/2</u> <u>7/16</u>	
" double or single Angle Iron on edge	<u>4</u>	<u>3</u>	<u>7/16</u>	<u>4</u>	<u>3</u>	<u>7/16</u>	Waterway	<u>12 6 1/2</u>	
" average space between	<u>3 ft 6 ins</u>						Deck	<u>Yellow Pine 3 1/2 3 1/2</u>	
" if wood (No. ) sided & moulded	<u>3 ft 6 ins</u>						Ceiling in Hold	<u>none</u>	
" Paddle, wood, sided and moulded, or if Iron, size of Plate	<u>3 ft 6 ins</u>						Ceiling betwixt Decks	<u>none</u>	
" Engine	<u>3 ft 6 ins</u>						Beam Clamps or Spircketting	<u>none</u>	
Keelson, single plate, box, or intercostal	<u>4 1/2</u>	<u>3 1/2</u>	<u>7/16</u>	<u>4 1/2</u>	<u>3 1/2</u>	<u>7/16</u>	Shelf	<u>none</u>	
" Size of Plates	<u>8/16</u>						Stringer Plates on ends of Hold or Lower Dk Beams	<u>2 1/2 7/16</u> <u>21 7/16</u>	
" Size of Angle Irons	<u>4 1/2</u>	<u>3 1/2</u>	<u>7/16</u>	<u>4 1/2</u>	<u>3 1/2</u>	<u>7/16</u>	Ceiling between Decks	<u>4 1/2 3 1/2</u> <u>7/16</u> <u>4 1/2 x 3 1/2</u> <u>7/16</u>	
Ditto Bilge (No. <u>1</u> )	<u>4 1/2</u>	<u>3 1/2</u>	<u>7/16</u>	<u>4 1/2</u>	<u>3 1/2</u>	<u>7/16</u>	Stringer or Tie Plates outside Hatchways	<u>10 1/2 7/16</u> <u>10 1/2 7/16</u>	
Transoms, material <u>Iron</u> or, if none, in what manner compensated for.	<u>3 ft 6 ins</u>						Deck Beam Clamps or Spircketting	<u>none</u>	
Knight-heads, and Hawse Timbers	<u>3 ft 6 ins</u>						Shelf	<u>none</u>	
The Frames or Ribs extend in one length from <u>Tank side to Tank side &amp; from keelson in other lengths to the Gunwale</u>	<u>3 ft 6 ins</u>						Stringers in Hold	<u>Double A.I. 4 1/2 3 1/2</u> <u>7/16</u> <u>4 1/2 3 1/2</u> <u>7/16</u>	
The reverse angle irons on the floors extend in one length across the middle line from <u>Tank side to Tank side</u>	<u>3 ft 6 ins</u>						Deck, Lower	<u>none</u>	
" on the frames	<u>3 ft 6 ins</u>						Deck, Upper, how fastened to Beams	<u>by screw bolts &amp; nuts</u>	
Keelson, how are the various lengths of plates or angle irons connected?	<u>by butt straps</u>						Bulkheads, No. <u>4</u> Thickness of <u>6/16 - 8/16</u>	<u>how secured to the sides of the ship by single frames &amp; brackets knee</u>	
Plates, Garboard, double or single rivetted to keel & at upper edge, with rivets ( <u>1 1/4</u> ins.) diameter averaging ( <u>4 1/2</u> ins.) from centre to centre of rivet.	<u>3 ft 6 ins</u>						" size of vertical angle iron and their distance apart	<u>3 x 2 1/2</u> <u>7/16</u> <u>- 30 ins</u>	
" Edges from Garboards to upper part of bilge, worked carvel with a lining piece ( <u>1/2</u> in.) thick, or clencher, double or single rivetted; rivets ( <u>3/4</u> in.) diameter, averaging ( <u>3</u> ins.) from centre to centre of rivets.	<u>3 ft 6 ins</u>						" rivetted through plates with ( <u>3/4</u> in.) rivets, about ( <u>6</u> ) apart.	<u>3 x 2 1/2</u> <u>7/16</u> <u>- 30 ins</u>	
" Butts from Keel to turn of bilge, worked carvel with a lining piece ( <u>1/2</u> in.) thick, double or single rivetted; rivets ( <u>3/4</u> in.) diameter, averaging ( <u>3</u> ins.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below?	<u>3 ft 6 ins</u>						" on alternate courses	<u>on alternate courses</u>	
" Edges from bilge to sheerstrake, worked carvel with a lining piece ( <u>1/2</u> in.) thick, or clencher, double or single rivetted; rivets ( <u>3/4</u> in.) diameter, averaging ( <u>3</u> in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below?	<u>3 ft 6 ins</u>						" on alternate courses	<u>on alternate courses</u>	
" Edge of Sheerstrake, double or single rivetted?	<u>3 ft 6 ins</u>						" double rivetted	<u>double rivetted</u>	
" Butts from bilge to planksheers, worked carvel with a lining piece ( <u>1/2</u> in.) thick, double or single rivetted; rivets ( <u>3/4</u> in.) diameter averaging ( <u>3</u> ins.) from centre to centre of rivets. Breadth of laps in double rivetting ( <u>4</u> ) Breadth of laps in single rivetting ( <u>2 1/2</u> )	<u>3 ft 6 ins</u>						" double rivetted	<u>double rivetted</u>	
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted?	<u>3 ft 6 ins</u>						" double rivetted	<u>double rivetted</u>	
Planksheer, how secured to the plating of the sides	<u>3 ft 6 ins</u>						" Explain by sketch	<u>Explain by sketch</u>	
Waterway	<u>3 ft 6 ins</u>						" if necessary.	<u>by nut &amp; screw bolts to stringer plate and through clencher bolts to side</u>	
Deck Beams, how secured to the side?	<u>3 ft 6 ins</u>						" by Plate knees	<u>by Plate knees</u>	
Hold or Lower Deck	<u>3 ft 6 ins</u>						" by Plate knees	<u>by Plate knees</u>	
Paddle	<u>3 ft 6 ins</u>						" by Plate knees	<u>by Plate knees</u>	
No. of breasthooks <u>3</u> crutches <u>3</u> how are pointers compensated?	<u>3 ft 6 ins</u>						" by Plate knees	<u>by Plate knees</u>	
What description of iron is used for the angle iron and plate iron in the vessel?	<u>3 ft 6 ins</u>						Builder's Signature	<u>Palmer Bros &amp; Co</u>	

*[Handwritten signature]*

*Compensated by Old Palmer 6K*

Lloyd's Register  
 © 2019  
 Builder's Signature  
Palmer Bros & Co  
 1204637-0203

**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? solid

Do the holes for rivetting plate to frames, lining pieces, or plate to plate, &c., conform well to each other? Yes and are the rivet holes well and sufficiently countersunk in the outer plate? Yes

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 SAILS.		CABLES, &c.		ANCHORS, and their weights.	
N <sup>o</sup> .			Fathoms.	Inches.	
<u>one</u>	Fore Sails,	Chain	<u>240</u>	<u>1 5/16</u>	Bower, <u>19 1/2 ton</u>
	Fore Top Sails,	<u>in stream</u> Hempen Stream Cable	<u>90</u>	<u>1 1/2</u>	<u>24</u>
<u>suit</u>	Fore Topmast Stay Sails,	Hawser	<u>90</u>	<u>5</u>	Stream, <u>1</u>
	Main Sails,	Towlines	<u>90</u>	<u>9</u>	Kedge, <u>2</u>
	Main Top Sails,	Warp			
	and	All of <u>Good</u> quality.			

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

She has a Long Boat and a pinnace Life boat

The present state of the Windlass is good Capstan Good and Rudder Good Pumps Two & Monkey

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

- 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 4338*

This vessel is built in accordance with the accompanying sketch. The stee beams are of iron and vary in thickness. The stern ones are at the fore end. The number of stee beams is in excess of that required by rule.

Certificates of Testing Anchors and Chains have been produced and examined.

In what manner are the surfaces preserved from oxidation? Red lead & Lay's cement in tank.

I am of opinion this Vessel should be classed A 1

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

Special .....£ 31 : 10 : -

Certificate (if required) .....£ - : - : -

Committee's Minute 5 April 1844

Character assigned A 1

*Wm. C. Barry*

The comparison for thickness of plating he appears to be by the Old Rules for the class of plating from 1/8 inch to 1/2 inch thick and single rivetted.

I am of opinion she should be classed A 1, as recommended.

April 5/64

\* House of the Surveyors for 44<sup>th</sup> Bond Street, London, E.C.

*[Signature]*

*[Signatures]*

Lloyd's Register  
Foundation