

# IRON SHIPS.

No. 8633 Survey held at Newcastle Date March 19<sup>th</sup> 1862  
on the Screw Steamer "Minerva" Master John Mitchell  
Tonnage Gross 664.77 Engine Room 167.28 Register 497.49 Built at Newcastle  
When Built 1862 By whom built Palmer Bros. & Co. Owners Pickernell Bros.  
Launched Jan 7<sup>th</sup> 1862  
Port belonging to London Destined Voyage London  
If Surveyed Afloat or in Dry Dock While building and afloat

Feet.		Inches.		Feet.		Inches.		Feet.		Inches.		Horse No.	
Length aloft		Extreme Breadth		Depth from top of Upper Deck		Beam to top of Floor		Power of Engines					
206		.5		26		.1		17		.25		90	
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft				18		18		Stem, if bar iron, moulding and thickness		7		2 3/4	
Floors, Size of Angle Iron, and No. 1 at bottom of Floor Plate				4		3		Stern-post, if bar iron, moulding and thickness		8 1/2		4 5/8	
" depth and thickness of Floor Plate at mid line				18		1/2		" " if plate iron, breadth and thickness		7		5 1/2	
" depth and thickness of Floor Plate at Bilge Keelson				4		1/2		Keel, if bar iron, depth and thickness		7		2 3/4	
" Size of Reversed Angle Iron, and No. 1 at top of Floor Plate				3		3		" " if plate iron, breadth and thickness		7		2 3/4	
Frames, Size of Angle Iron, single or double				4		3		Garboard Plates, thickness		10 1/6		10 1/6	
" Reversed Iron, to every frame				3		3		From Garboard to upper part of Bilge		9 1/6		9 1/6	
" or every other frame				3		3		From upper part of Bilge to Sheerstrakes		8 1/6		8 1/6	
Beams, Deck (N° 5) double Angle Iron				7		7/16		Sheerstrakes		9 1/6		9 1/6	
" or Bulb Iron with double Angle Iron on top				7		7/16		Breadth & thickness of Butt Straps to outside plating		8 x 9 1/6		7 1/2 x 9 1/6 x 1/2	
" depth & thickness of plate amidships				7		7/16		Material					
" double or single Angle Iron, on lower edge				2 1/2		2 1/2		Plank sheers					
" average space between				3 ft		3 ft		Gunwale Plate or Stringer on ends of Up. Dk Beams		Plate		21 1/2 19 1/2 1/2	
" if wood (N° ) sided & moulded								Angle Iron on ditto		Pitch Pine		5 3 1/2 4 1/2 x 3 1/2 x 1/6	
" Hold, or Lower Deck (N° 3) double Angle Iron or Bulb Iron with double Angle Iron on top				7		7/16		Waterway		Yellow Pine		12 8 3 1/2	
" depth & thickness of plate amidships				7		7/16		Deck		American Elm		2 1/2 3 1/2	
" double or single Angle Iron, on lower edge				2 1/2		2 1/2		Ceiling in Hold					
" average space between				6 ft		6 ft		Ceiling between Decks					
" if wood (N° ) sided & moulded								Beam Clamps					
" Paddle, wood, sided and moulded or if Iron, size of Plate								" Shelf					
" Engine								Stringer Plates on ends of Hold or Lower Dk Beams		Plate		21 x 1/2 19 1/2 1/2	
Keelson, wood, sided & moulded, iron, size of plate, if Box, give sketch & dimensions				Intercoastal plate 22 1/2 x 5 1/2		2 1/2 with angle irons 4 1/2 x 3 1/2 x 7/16		Ceiling between Decks					
" Side or Bilge				4 1/2 x 3 1/2 x 7/16		4 1/2 x 3 1/2 x 7/16		Stringer or Tie Plates outside Hatchways		"		10 1/2 1/2 9 3/4 1/2	
" Number 2								Deck Beam Clamps					
								" Shelf					
								Stringers in Hold		Double angle iron 4 1/2 x 3 1/2 x 7/16		4 1/2 x 3 1/2 x 7/16	
								Deck, Lower		Yellow Pine		3 1/2	
								Deck, Upper, how fastened to Beams		With nuts and screws			

Transoms, material Iron or, if none, in what manner compensated for.

Knight-heads    „    Iron } are they free from defects?  
Hawse Timbers   „    Iron }

Bulkheads, N<sup>o</sup>. 4 Thickness of 3/8" ✓  
 „ how secured to the sides of the ship with double frames  
 „ size of vertical angle iron and their distance apart 3" apart 3 + 3 + 3"

The Frames or Ribs extend in one length from Keel to gunwale rivetted through plates with ( $\frac{3}{4}$  in.) rivets, about (6 in.) apart.

The reverse angle irons on the floors extend in one length across the middle line from deck stringer to deck stringer  
from above Bilge to above Bilge ←

Keelson, how are the various lengths of plates or angle irons connected? Shifted

Plates, Garboard, double ~~or single~~ rivetted to keel & at upper edge, with rivets (  $1\frac{1}{16}$  ins.) 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~~ clenchers, ~~double or 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 ( $\frac{9}{16}$ ) thick, ~~double or single~~ rivetted; rivets ( $\frac{3}{4}$  in.) diameter, averaging (1 ins.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? Yes

Edges from bilge to planksheer, worked ~~carvel with a lining piece~~ <sup>clencher</sup> ~~( ) thick, double or single rivetted~~ <sup>\* (there are no rivets)</sup>; rivets ( $\frac{3}{4}$  in.) diameter, averaging ( $\frac{3}{4}$  in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? Yes

Butts from bilge to planksheers, worked carvel with a lining piece ( $\frac{9}{16}$ ) thick, ~~or clencher~~, double ~~or single~~ rivetted; rivets ( $\frac{3}{4}$  in.) diameter averaging ( $\frac{3}{4}$  ins.) from centre to centre of rivets. Breadth of laps in double rivetting ( $\frac{4}{4}$ ) Breadth of laps in single rivetting ( $2\frac{1}{2}$ )

Planksheer, how secured to the plating of the sides  
Waterway planksheer and to the Beams { Explain by sketch,  
if necessary. } Bolted to Stringer and Plating

Waterway " " planksheer and to the beams (if necessary).

Side trussing breadth and thickness of plates how secured?

Deck trussing " " ? Rivetted to angle irons on beams  
" " welded knees rivetted to ribs

Deck Beams, how secured to the side? With welded knees riveted to hull

Hold or Lower Deck,,

Paddle " " ✓  
 No. of breasthooks 3 crutches — how are pointers compensated? with plate and angle iron  
 Builder's Signature

No. of breasthooks 2

What description of iron is used for the angle iron and plate iron in the vessel? Best ship  
lonsell iron company for plates and Hawks Crawshays for  
of Gateshead for angle irons.

Builder's Signature Wm Palmer Bm  
Wm Palmer

IRON 435-0375



2755 L<sub>a</sub>

**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? 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? Some 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.		N <sup>o</sup> .	Weight.
/	Fore Sails,	Chain .....	240	1 1/2	Bower, .....	3	21-2-15
/	Fore Top Sails,	Hempen Stream Cable .....	90	8			16-0-0
/	Fore Topmast Stay Sails,	Hawser <u>Chain</u> .....	90	15 1/2	Stream, .....	1	16-0-10
/	Main Sails,	Towlines .....	90	6			5-2-25
/	Main Top Sails,	Warp .....	90	5	Kedge, .....	1	2-2-9
	and other requisite sails	All of <u>good</u> quality.	90	4			

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

She has one Long Boat and three others

The present state of the Windlass is good Capstan good and Rudder good Pumps good

**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 At various times while building under special survey
- 2nd. On the plating during the progress of rivetting building under special survey
- 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

Has been built under Special Survey as per order No. 332

Has a doubling plate to Sheerstrake 18 <sup>ins.</sup> x 1/2 <sup>ins.</sup> carried up sufficiently high to receive rivetting through angle irons on upper deck stringer which plan when submitted was approved of by the Committee.

Testing certificates of Chain cables produced.

In what manner are the surfaces preserved from oxidation? Red lead and oil and Peacocks paint

I am of opinion this Vessel should be classed 9 A1

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

Special .....£ 33 : 4 : 0

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

Committee's Minute 11<sup>th</sup> April 1862

Character assigned A 1 for 9 years

I concur in the above recommendation.

10<sup>th</sup> April 1862 J. R.



Lloyd's Register  
Foundation