

IRON SHIPS.

No. 8662 Survey held at Newcastle Date April 15th 1862
on the Screw Steamer "Europa" Master Bowen
Tonnage Gross 665.68 Engine Room 167.28 Register 498.40 Built at Newcastle
When Built 1862 By whom built Palmer Bros. & Co. Owners Pickernell Bros.
Launched March 3rd
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	206	5	Extreme Breadth	26	1	Depth from top of Upper Deck	17	25	Power of Engines	90			
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft				Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.
				18	✓	18	✓			7	2 3/4	7	2 3/4
Floors, Size of Angle Iron, and No. / at bottom of Floor Plate				Inches in Ship.	Inches in Ship.	16ths in Ship.	Inches required per Rule.	Inches required per Rule.	16ths required per Rule.				
				4	3	7/16	4	3	7/16				
,, depth and thickness of Floor Plate at mid line				18	1/2		14	1/2					
,, depth and thickness of Floor Plate at Bilge Keelson				14	1/2		4	1/2					
,, Size of Reversed Angle Iron, and No. / at top of Floor Plate				3	3	3/8	3	2 3/4	3/8				
Frames, Size of Angle Iron, single or double				4	3	7/16	4	3	7/16				
,, Reversed Iron, if to every frame				3	3	3/8	3	2 3/4	3/8				
,, Bilge or every other frame				3	3	3/8	3	2 3/4	3/8				
Beams, Deck (N° 50) double Angle Iron				7	7/16		6 1/2	7/16					
,, Bulb Iron with double Angle Iron on top													
,, depth & thickness of plate amidships				7	7/16		6 1/2	7/16					
,, double or single Angle Iron, on lower edge				2 1/2	2 1/2	3/8	2 1/2	2 1/2	3/16				
,, average space between				3 ft			3 ft						
,, if wood (N°) sided & moulded													
,, Hold, or Lower Deck (N° 34) double Angle Iron or Bulb Iron with double Angle Iron on top				7	7/16		6 1/2	7/16					
,, depth & thickness of plate amidships				7	7/16		6 1/2	7/16					
,, double or single Angle Iron, on lower edge				2 1/2	2 1/2	3/8	2 1/2	2 1/2	3/16				
,, average space between				6 ft	2 3 ft		6 ft	2 3 ft					
,, if wood (N°) sided & moulded													
,, Paddle, wood, sided and moulded or if Iron, size of Plate													
,, Engine													
Keelson, wood, sided & moulded, iron, size of plate, if Box, give sketch & dimensions				Intercastral plate 2 1/2 x 5/8 with angle irons 4 1/2 x 3 1/2									
,, Side or Bilge				Double angle iron 4 1/2 x 3 1/2 x 7/16									
,, Number				2									
Stem, if bar iron, moulding and thickness				7 2 3/4 7 2 3/4									
,, if plate iron, breadth and thickness													
Stern-post, if bar iron, moulding and thickness				8 1/2 4 5/8 7 5 1/2									
,, if plate iron, breadth and thickness													
Keel, if bar iron, depth and thickness				7 2 3/4 7 2 3/4									
,, if plate iron, breadth and thickness													
Garboard Plates, thickness..				Description of Iron.									
From Garboard to upper part of Bilge				Best plate 5/8 5/8									
From upper part of Bilge to Sheerstrakes				9/16 9/16									
Sheerstrakes				1/2 1/2									
Breadth & thickness of Butt Straps to outside plating				9/16 9/16									
Planksheers				Material.									
Gunwale Plate or Stringer on ends of Up. Dk Beams				Plate 21 x 1/2 19 1/2 1/2									
Angle Iron on ditto				5 x 3 1/2 4 1/2 3 1/2 x 7/16									
Waterway				Pitch Pine 12 8									
Deck				Yellow 3 1/2 3 1/2									
Ceiling in Hold													
Ceiling between Decks													
Beam Clamps													
,, Shelf													
,, Stringer Plates on ends of Hold or Lower Dk Beams				Plates 21 x 1/2 19 1/2 1/2									
Ceiling between Decks													
Stringer or Tie Plates outside Hatchways				10 1/2 1/2 9 3/4 1/2									
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 & 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°. 4 Thickness of 3/8" with angle irons 3x3x3/8 30ins apart
 „ how secured to the sides of the ship with double frames

The Frames or Ribs extend in one length from Keel to Gunnwale rivetted through plates with ($\frac{1}{4}$ in.) rivets, about (6) apart.

The reverse angle irons on the floors extend in one length across the middle line from Deck Stringer to Deck Stringer
 „ „ „ on the frames „ „ „ from above Bille to above Bille

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

Plates, Garboard, double ~~or single~~ rivetted to keel & at upper edge, with rivets (1 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 in.) thick, or~~ clencher, double ~~or single~~ rivetted ; rivets ($\frac{3}{4}$ in.) diameter, averaging (1 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 ($\frac{1}{4}$ in.) diameter.

averaging (7 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~~ ^{clinker} with a lining piece () thick, double ^(average 1/4 in.) of single rivetted; rivets (3/4 in.) diameter, averaging (1 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 cloncher~~, double ~~or single~~ rivetted; rivets ($\frac{3}{4}$ in.) diameter averaging ($\frac{5}{8}$ ins.) from centre to centre of rivets. Breadth of laps in double rivetting ($\frac{11}{4}$) Breadth of laps in single rivetting ($2\frac{1}{2}$)

Planksheer, how secured to the plating of the sides (Explain by sketch,)

Waterway	„	„	planksheer and to the Beams	{ if necessary	{ Bolted to Stringer & plating	✓
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Side trussing _____ breadth and thickness of plates _____ how secured? _____

Deck trussing	"	"	10 1/2 x 1/2	"	"	2	Welded to angle iron on beams	✓
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Deck Beams, how secured to the side? With welded knee riveted to Ribs ✓

Hold or Lower Deck „

Paddle „ „

No. of breasthooks 4 crutches ✓ how are pointers compensated? With plate and angle iron

What description of iron is used for the angle iron and plate iron in the vessel? Best Ship ✓

Plates from Florida and Alabama (uncovering) 1891 } For - Palmers Bros & Co. N. H.

for the ...

IRON 435-0586

IRON 435-0386

2764 *Len*

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 ^o .			Fathoms. Inches.	N ^o .	Weight.
/	Fore Sails,	Chain	240 1 1/2	Bower,	3 21-2-7
/	Fore Top Sails,	Hempen Stream Cable	90 8	Stream,	1 16-1-7
✓/	Fore Topmast Stay Sails,	Hawser <u>Chain</u>	90 15/16	Kedge,	1 7-0-0
/	Main Sails,	Towlines	90 6		
/	Main Top Sails,	Warp	90 5		
and other requisite sails		All of <u>good</u> quality.			

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 333.

Has a doubling plate to sheerstrake 18ins x 1/2 carried up sufficiently high to receive the rivetting through angle iron 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 & 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 : 5 : 0

Certificate (if required) £ : : "

Committee's Minute 29th April 18 62.

Character assigned 1 for 9 years

I concur in the above recommendation
28th April 1862 J. H. R.