

IRON SHIPS.

No. 26191 Survey held at London Date August July 28th 1864
 on the Paddle Steamer "Harwich" Master Elbaid
 Tonnage Gross 749 ⁵⁵/₁₀₀ Engine Room 199 ⁹⁰/₁₀₀ Register 549 ⁶⁵/₁₀₀ Built at Cubitts Town
 When Built 1864 By whom built Simpson & Co Owners Gr Eastern Rail & Comp
 Launched June 9th Port belonging to London Destined Voyage Rotterdam
 If Surveyed Afloat or in Dry Dock While building

Length aloft	Feet.	Inches.	Extreme Breadth	Feet.	Inches.	Depth from Beam to top of Floor	Feet.	Inches.	Power of Engines	Horse No.
	215		27	1 1/4		17	9 1/2		220	
Distance between floors amidships			21		21					
" " forward and aft			"		"					
" " Ribs amidships			"		"					
" " forward and aft			"		"					
Floors, Size of Angle Iron, and No. / at	4 1/2	3	8 1/16	4 1/2	3	8 1/16				
bottom of Floor Plate	4	3	8 1/16	4 1/2	3	8 1/16				
" depth & thickness of Plate at mid line	18 1/2	x	9 1/16	18 1/2	9 1/16					
" " " at turn of bilge		7 1/2								
" Size of Reversed Angle Iron, and No. / at top of Floor Plate	3 1/2	3	8 1/16	3	2 3/4	7 1/16				
Ribs, Size of Angle Iron, single or double	4 1/2	3	8 1/16	4 1/2	3	8 1/16				
" " Reversed Iron, if to every frame	3 1/2	3	8 1/16	3	2 3/4	7 1/16				
" " to middle or every alternate frame										
Beams, Deck (N ^o .) double or single	4 x	8 1/16	7	x	6 1/16					
" Bulb Angle Iron	7	x	6 1/16	7	x	6 1/16				
" " depth & thickness of plate amidships										
" " double or single Angle Iron, on lower edge										
" " average space between	4 2 in		4 2 inches							
" " if wood (N ^o .) sided & moulded										
" Hold, (N ^o .) double or single										
" Bulb Angle Iron	7	x	6 1/16	7	6 1/16					
" " depth & thickness of plate amidships										
" " double or single Angle Iron, on lower edge	4	x	6 1/16							
" " average space between	4 2 in		4 2 in							
" " if wood (N ^o .) sided & moulded										
" Paddle, wood, sided and moulded	4 x 3 x	8 1/16								
" " or if Iron, size of Plate		8 1/16								
" Engine										
Keelson, wood, sided & moulded, iron, size of	2 5 1/2	9 1/16		2 5 1/2	9 1/16					
plate, if Box, give sketch & dimensions	2 5 1/2 x	11 1/16		2 5 1/2	11 1/16					
" Side or Bilge	5 x 3 1/2	8 1/16	5	3 1/2	8 1/16					
" Number	one	7	7	7	7 1/16					
Stem, if bar iron, moulding and thickness	7 1/4 x 3	7 1/4 x 3								
" " if plate iron, breadth and thickness										
Stern-post, if bar iron, moulding and thickness	7 1/4 x 3									
" " if plate iron, breadth and thickness										
Keel, if bar iron, depth and thickness	7	1 3/16								
" " if plate iron, breadth and thickness	2 5 1/2	9 1/16								
Garboard Plates, thickness	30	11 1/16	30	11 1/16						
" to bilge		10 1/16		10 1/16						
Bilge		9 1/16		9 1/16						
" to Wales		9 1/16		9 1/16						
Wales										
Topsides		7 1/16		7 1/16						
Sheerstrakes	2 1/2	6 1/16		11 1/16	9 1/16					
Planksheers	7 x 14									
Gunwale Plate or Stringer	31 x 8 1/16	31 x 8 1/16								
Waterway	5 x 3 1/2	11 1/16	5 x 3 1/2	11 1/16						
Deck	3									
Ceiling in flat	3									
Bilge Planks inside										
Ceiling from Bilge to Clamps										
Hold Beam Clamps										
" " Shelf	5	3 1/2 x 1/2								
Lower Stringers	23	9 1/16								
Ceiling between Decks										
Stringers	31	11 1/16								
Deck Beam Clamps	5 x 3 1/2	9 1/16								
" " Shelf										
Stringers in Hold	3 1/2									
Deck, Lower	3									
Deck, Upper, how fastened to Beams										

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

Knight-heads " Eng Oak are they free from defects?

Hawse Timbers " Eng Oak are they free from defects?

The Ribs extend in one length from middle line to Gunwale rivetted through plates with (3/16 in.) rivets, about (6) apart.

The reverse angle irons on the floors extend in one length across the middle line from to middle to upper deck stringer alternately

" " " on the ribs " " " from " to " " double rivetted butt straps

Keelson, if wood, length of scarp if iron, how are the various lengths connected?

Plates, Garboard, double or single rivetted to keel, with rivets (1/2 ins.) diameter averaging (4 1/2 in.) from centre to centre of rivet.

" edges from Garboards to turn of bilge, worked carvel with a lining piece (1/16 in.) thick, or clencher, double or single rivetted; rivets (3/4 in.) diameter, averaging (3 ins.) from centre to centre of rivets.

" butts from Garboards to turn of bilge, worked carvel with a lining piece (1/16) thick, double or single rivetted; rivets (1/4 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? no

" edges from bilge to wales, worked carvel with a lining piece (1/16) thick, or clencher, double or single rivetted; rivets (1/4 in.) diameter, averaging (3 ins.) from centre to centre of rivets.

" butts from bilge to wales, worked carvel with a lining piece (1/16) thick, double or single rivetted; rivets (1/4 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? no

" edges of wales and to planksheers, worked carvel with a lining piece (1/16) thick, or clencher, double or single rivetted; rivets (1/4 in.) diameter averaging (2 1/2 ins.) from centre to centre of rivets.

Planksheer, how secured to the plating of the sides { Explain by sketch, } screw bolts with nuts

Waterway " " planksheer and to the Beams { if necessary. }

Side trussing " " breadth and thickness of plates how secured

Deck trussing " " diagonal tie plates on upper & middle Deck

Deck Beams, how secured to the side Knee plates rivetted to ribs & welded to beams

Hold " " Rivetted to double frames

Paddle " " how are pointers compensated?

No. of breasthooks 3 crutches

What description of iron is used for the angle iron and bar iron in the vessel? Blainavon best

Builder's Signature for Simpson & Co

IRON 437A - 0120

3691 Iron

Workmanship. Are the lands or laps of the clenchwork in all cases sufficiently wide to take the rivets and support the strain on them? *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 all solid with sliver pieces, or are they in short lengths? *in solid pieces*
Do the holes for rivetting plate to lining piece, or plate to plate, &c., answer 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*
Was the plating caulked internally in the wake of the frames or ribs? *no*

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

She has SAILS.	CABLES, &c.			ANCHORS, and their weights.		
		Fathoms.	Inches.		No.	Weight.
Fore Sails,	Chain <i>Proved to 3 3/4</i>	270	1 7/16	Bower, <i>Proved strain 23.1.</i>	3	11.1.15
Fore Top Sails,	Hempen Stream Cable	90	7	<i>23.2.</i>		18.1.15
Fore Topmast Stay Sails,	Hawser	90	7/8	Stream,		22.18 - 18.6.26
Main Sails,	Towlines	90	5			
Main Top Sails,	Warp	90	4	Kedge,		
and <i>one full width</i>	All of <i>best</i> quality.					

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

She has *one* Long Boat and *four others*

The present state of the Windlass is *Harfield* Capstan and Rudder *good* Pumps *4 & Engine Pumps*

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 *Feby 22nd*
2nd. On the plating during the progress of rivetting *to*
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 *July 28th*
5th. After the ship was launched

This vessel has been built specially for the conveyance of Cattle as a three deck ship, on a specification submitted to the Committee and examined by Mr Martin. The only deviations from the same are the lower strakes of topsides which was found 1/32 in thin and has been compensated for by a doubling plate worked inside twelve inches wide by 1/16 as recommended by Mr Martin and myself and shown by the midship section

In what manner are the surfaces preserved from oxidation?

Red Lead & Portland Cement

I am of opinion this Vessel should be classed

B

The amount of the Fee £ 3 : - : - is received by me,

Special *attended* 5 : 5 : -

Certificate (if required) £ : 5 : -

Committee's Minute *9th August 1864*

Character assigned

B

Thos M. Wawn

I concur in the above decision

8 Aug 1864 J.M.R.
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