

# IRON SHIPS.

No. 3131 Survey held at 2

Date \_\_\_\_\_

186

on the Screw Steamer "Union"

*Master*

Richard D. Doughty

Tonnage <sup>814.84</sup> Gross 900.18 Engine Room 131.09 Register 768.99 Built at Hull Launched 13. July

When Built, 1861 By whom built Mrs. Martin Samuelson & Co Owners Martin Samuelson & Co

Launched 13<sup>th</sup> February Hull Destined Voyage Hull Baltic  
 Port belonging to Hull

*While Building*

Feet. Inches.		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	
220		29		16		9 1/10		120	
Inches. In Ship.		Inches. In Ship.		Inches. In Ship.		Inches. In Ship.		Inches. In Ship.	
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft		18		18		18		18	
Floors, Size of Angle Iron, and No. 150 at bottom of Floor Plate		4 1/2 3		8/16		4 1/2 3		8/16	
depth and thickness of Floor Plate at mid line		17		9/16		17		9/16	
depth and thickness of Floor Plate at Bilge Keelson		11		"		"		"	
Size of Reversed Angle Iron, and No. 150 at top of Floor Plate		3 2 5/8		7/16		3 3		7/16	
Frames, Size of Angle Iron, single or double		4 1/2 3		8/16		4 1/2 3		8/16	
Reversed Iron, if to every frame		3 2 5/8		7/16		3 3		7/16	
Beams, Deck (N° 60) double Angle Iron or Bulb Iron with double Angle Iron on top		3 2 1/2		7/16		3 2 1/2		6/16	
depth & thickness of plate amidships		7		8/16 full		7		8/16	
double or single Angle Iron, on lower edge		3 feet		3		3		3	
average space between		3 feet		3		3		3	
if wood (N°) sided & moulded		3 2 1/2		7/16		3 2 1/2		6/16	
Hold, or Lower Deck (N° 30) double Angle Iron or Bulb Iron with double Angle Iron on top		3 2 1/2		7/16		3 2 1/2		6/16	
depth & thickness of plate amidships		7		8/16 full		7		8/16	
double or single Angle Iron, on lower edge		3 feet 6 inches		3		3		3	
average space between		3 feet 6 inches		3		3		3	
if wood (N°) sided & moulded		3 2 1/2		7/16		3 2 1/2		6/16	
Paddle, wood, sided and moulded or if Iron, size of Plate		3 2 1/2		7/16		3 2 1/2		6/16	
Engine		5 3 1/2		8/16		5 4		8/16	
Keelson, wood, sided & moulded, iron, size of plate, if Box, give sketch & dimensions		12		9/16		12		9/16	
Side or Bilge		5 3 1/2		8/16		5 4		8/16	
Number		5		3 1/2		8/16		5 4 8/16	
Stem, if bar iron, moulding and thickness		7 1/2		2 1/4		7 1/2		3	
if plate iron, breadth and thickness		8		4		8		4	
Stern-post, if bar iron, moulding and thickness		8		4		8		4	
if plate iron, breadth and thickness		8		4		8		4	
Keel, if bar iron, depth and thickness		7 1/2		2 3/4		7 1/2		3	
if plate iron, breadth and thickness		7 1/2		2 3/4		7 1/2		3	
Garboard Plates, thickness..		11/16		11/16		11/16		11/16	
From Garboard to upper part of Bilge		10/16		10/16		10/16		10/16	
From upper part of Bilge to Sheerstrakes		9/16		9/16		9/16		9/16	
Sheerstrakes		10/16		10/16		10/16		10/16	
Breadth & thickness of Butt Straps to outside plating		9 x 10/16 x 9/16		9 x 10/16 x 9/16		9 x 10/16 x 9/16		9 x 10/16 x 9/16	
Planksheers		22		9/16		22		9/16	
Gunwale Plate or Stringer on ends of Up. Dk Beams		5 x 3 1/2 x 5/16 full		4 8/16		5 x 3 1/2 x 5/16 full		4 8/16	
Angle Iron on ditto		13		9 1/2		13		9 1/2	
Waterway		3 1/2		3 1/2		3 1/2		3 1/2	
Deck		2 1/2		2 1/2		2 1/2		2 1/2	
Ceiling in Hold		11		9/16		11		9/16	
Ceiling betwixt Decks		11		9/16		11		9/16	
Beam Clamps		22		9/16		22		9/16	
Shelf		22		9/16		22		9/16	
Stringer Plates on ends of Hold or Lower Dk Beams		5 x 3 1/2 x 5/16		5 x 4 x 5/16		5 x 3 1/2 x 5/16		5 x 4 x 5/16	
Ceiling between Decks		11		9/16		11		9/16	
Stringer or Tie Plates outside Hatchways		11		9/16		11		9/16	
Deck Beam Clamps		22		9/16		22		9/16	
Shelf		22		9/16		22		9/16	
Stringers in Hold		5 x 3 1/2 x 5/16		5 x 4 x 5/16		5 x 3 1/2 x 5/16		5 x 4 x 5/16	
Deck, Lower		5 x 3 1/2 x 5/16		5 x 4 x 5/16		5 x 3 1/2 x 5/16		5 x 4 x 5/16	
Deck, Upper, how fastened to Beams		11		9/16		11		9/16	

Transoms, material \_\_\_\_\_ or, if none, in what manner compensated for. *State with receipts received & no.*

Knight-heads " 2 2 } are they free from defects? how secured to the sides of the ship rivetted between double bulkheads

Hawse Timbers " Angle iron " now secured to the sides of the ship with three or four cross timbers  
size of vertical angle iron and their distance apart 3x2 1/2 x 7/8. 2 feet apart

The Frames or Ribs extend in one length from bulk to gunwale rivetted through plates with ( $\frac{3}{4}$  in.) rivets, about (7) apart.

The reverse angle irons on the floors extend in one length across the middle line from Billy to Billy

„extend on all the frames up to 10th from knuckle plates and to the gurneels on the alternate ribs

Keelson, how are the various lengths of plates or angle irons connected? By wedge iron

Plates, Garboard, double ~~or single~~ rivetted to keel & at upper edge, with rivets ( $\frac{7}{8}$  in.) diameter averaging ( )

Edges from Garboards to upper part of bilge, worked ~~continuous~~  
diameter averaging ( ~~2.5~~ ins ) from centre to centre of rivets.

Butts from Keel to turn of bilge, worked carvel with a lining piece  $(9 \times \frac{10}{16})$  thick, double ~~or single~~ rivetted; rivets ( $\frac{1}{2}$  in.) diameter.

averaging ( $2\frac{1}{2}$  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 <sup>2 ft above</sup> bilge to planksheer, worked ~~carvel~~ with a lining piece ( ) thick, double or single rivetted; rivets (1/4 in.) diameter, ~~driving~~  
over and rivet through the lands of the strake below? Yes

(2½ in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lining and the shell with a lining piece 10 x 2½ in. thick, or clencher, double or single rivetted; rivets (¾ in.) diameter.

Butts from bilge to planksheers, worked ~~as per~~ <sup>as per</sup> ~~and~~ <sup>and</sup> ~~existing~~ <sup>existing</sup> ~~plans~~ <sup>plans</sup> ~~7-10~~ <sup>7-10</sup>  
averaging (3 1/2 ins) from centre to centre of rivets. Breadth of laps in double rivetting (4 1/2) Breadth of laps in single rivetting (2 1/2)

Planksheer, how secured to the plating of the sides

Waterway <sup>X</sup> *m, one,* planksheer and to the Beams *if necessary.*

Side trussing \_\_\_\_\_ breadth and thickness of plates \_\_\_\_\_ how secured? None

Deck trussing Plate iron " 11 by 7 1/8 " " " " " " " " " "

Deck Beams, how secured to the side *109 1/2 ft. from side*  
 Upper Deck *By three plates do do*

Hold or Lower Deck	"		<i>[Signature]</i>
Paddle	"	"	<i>[Signature]</i>

No. of breasthooks \_\_\_\_\_ crutches \_\_\_\_\_ how are pointers compensated? By plate iron across wheels to hold  
in 2 4 6 8 10 12 Builder's Signature \_\_\_\_\_

What description of iron is used for the angle iron and plate iron in the vessel? Cast steel, wrought

10

IRON435-0028

2416 Iron

**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? No

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 <u>(Admiralty proof)</u> ...	270	1½	Bower, <u>Patent Patent</u> .....	<u>Three</u>	22.2.6 21.2.2 21.1.1
<u>One</u>	Fore Top Sails,	Hempen Stream Cable .....					
<u>Suit</u>	Fore Topmast Stay Sails,	Hawser .....	90	8	Stream, .....	<u>One</u>	9.3.14
<u>4</u>	Main Sails,	Towlines .....	90	6			
<u>Sails</u>	Main Top Sails,	Warp .....	100	5	Kedge,.....	<u>One</u>	5.0.14
and		All of <u>good</u> quality.	100	3½			

Her Standing and Running Rigging \_\_\_\_\_ sufficient in size and \_\_\_\_\_ in quality.

She has Five Long Boat and \_\_\_\_\_

The present state of the Windlass is good Capstan good and Rudder good Pumps Four 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	<u>1<sup>st</sup> Nov - 1860</u>
	2nd.	On the plating during the progress of rivetting	<u>29<sup>th</sup> Dec "</u>
	3rd.	When the beams were in and fastened, and before the decks were laid	<u>" " "</u>
	4th.	When the ship was complete, and before the plating was finally coated	<u>31 December "</u>
	5th.	After the ship was launched	<u>April 1861</u>

In what manner are the surfaces preserved from oxidation? By red paint

I am of opinion this Vessel should be classed \_\_\_\_\_

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

May 1861 Special .....£ 10 : 10 : -

Certificate (if required) .....£ - : 5 : -

£ 15 : 15 : -

Committee's Minute 7<sup>th</sup> May 1861

Character assigned Δ 1 for 9 Years

Subject is another Clamp plate, of similar dimensions to that already in use, fitted all four sides to the satisfaction of the Surveyors by Mr Martin's remarks dated 13 May



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