

# IRON SHIPS.

104119

Recd 24/8/92  
1872

No. 5 Survey held at Copenhagen Date 24 August and previous 1872  
on the Iron Screw Steamer Rolf Master J. E. Arboe

Tonnage under tonnage deck 814.75  
Ditto of quarter deck  
Ditto of poop, forecastle, or other erections on upper deck 288.60  
Ditto of spar deck 1103.35  
Ditto of engine room 250.46  
Gross Tonnage, less  
Total Register tonnage, as cut on beam 793.97  
Numbers for scantling 62 & 13576

Built at Copenhagen When built 1870 Launched 18 June 1870  
By whom built Bureauister & Wain Owners The Steam Company, Denmark  
Port belonging to Copenhagen Destined Voyage Baltic

If Surveyed while Building, Afloat, or in Dry Dock while high on the Slip  
proportions over 12 under 13 depths.

Length aloft 218 Feet. Inches. Extreme Breadth 30 Feet. Inches. Depth from top of Upper Deck Beam to top of Floor 16 Feet. Inches. 4 Horse. Power of Engines 120 N<sup>o</sup>. of Decks One

(Dimensions of Ship per Register, length breadth depth)

	Inches in Ship.	Inches required per Rule for tons Scale.	Inches in Ship.	Inches required per Rule.	16ths required per Rule.	Inches in Ship.	16ths in Ship.	Inches required per Rule.	16ths required per Rule.
Keel, if bar iron, depth and thickness	<u>7 1/2 x 5</u>	<u>8 x 2 3/8</u>							
Stem, if bar iron, moulding and thickness	<u>7 1/2 x 3</u>	<u>7 1/4 x 2 3/8</u>							
Stern-post, if bar iron, moulding and thickness	<u>9 x 4 1/4</u>	<u>9 x 4 1/4</u>							
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>21</u>	<u>23</u>							
Frames, Size of Angle Iron, single or double	<u>4 1/2 x 3 x 3/16</u>	<u>4 x 3 x 7/16</u>							
Floors, depth and thickness of Floor Plate at mid line	<u>19 x 3/16</u>	<u>18 x 5/16</u>							
Beams, Deck (N <sup>o</sup> . <u>62</u> ) double Angle Iron, Plate, Tee, or Bulb Iron	<u>7 1/2 x 7/16</u>	<u>7 1/2 x 7/16</u>							
Hold, or Lower Deck (N <sup>o</sup> . <u>31</u> ) double Angle, Tee, Plate, or Bulb Iron	<u>7 1/2 x 7/16</u>	<u>7 1/2 x 7/16</u>							
Keelson, single or double plate, box, or intercostal	<u>12 1/2 x 1 1/16</u>	<u>13 x 1 1/16</u>							

Transoms, material plate or, if none, in what manner compensated for.  
Knight-heads, and Hawse Timbers plate

The Frames extend in one length from Keel to Main Deck rivetted through plates with (3/4 in.) rivets, about (3 1/2) apart.  
The reverse angle irons on the floors extend in one length across the middle line from \_\_\_\_\_ to \_\_\_\_\_

Keelson, how are the various lengths of plates or angle irons connected? Butt Straps (double of the vertical plate)

Plates, Garboard, double or rivetted to keel, double or rivetted at upper edge, with rivets (7/8 ins.) diameter, averaging (3 1/2 in.) apart.

Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.

Edges from bilge to sheerstrake, worked carvel with a lining piece (1 1/16 thick), or clencher, double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 in.) apart.

Edges of Sheerstrake, double or single rivetted? At upper edge single At lower edge double

Butts from bilge to planksheers, worked carvel with butt straps (1 1/16 thick), double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 1/2 ins.) apart.

Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? double

Planksheer, how secured to the plating of the sides Explain by sketch  
Waterway, planksheer and to the Beams if necessary.

Deck Beams, how secured to the side? By knee plates  
Hold or Lower Deck ditto By knee plates

Paddle, No. of breasthooks 3 crutches 3

What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.? Best Staffordshire  
Manufacturer's name or trade mark Robert Heath

We certify that the above is a correct description of the several particulars therein given.  
Builder's Signature \_\_\_\_\_ Surveyor's Signature J. J. Lodring

**Workmanship.** Are the lands or laps of the clenchwork in all cases in breadth at least five and a half times the diameter of the rivets in double rivetted edges and butts, and at least three and a quarter 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 in one length

Do the holes for rivetting plate to frames, butt straps, 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, Bowsprit, Yards, &c., are in good condition, and sufficient in size and length. (If they are of Iron or Steel give the Scantlings of Plating, Angle Irons, &c. and further explain by a Sketch showing how the lower Masts and Bowsprit are constructed, showing the number of Plates and Angle Irons, mode of rivetting, quality of Materials, and if stamped with Maker's name.

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No.	She has SAILS.	CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	No.	Weight. Ex. Stock.	Test as per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.		
	Fore Sails,	Chain .....	270	1 1/2	Certificate not at hand but it is due that such a one from any ship with the chains & anchors -	1 1/2		Bowers .....	2	23 1/2 lb	Certificate not at hand				
	Fore Top Sails,									1		22			
	Fore Topmast Stay Sails	Hempen Stream Cable	120	8					Stream .....	1		2			
	Main Sails,	Hawser .....	120	6 1/4											
	Main Top Sails,	Towlines .....	120	5											
		Warp .....	120	4											
		All of _____ quality.						Kedges .....	2	5 x 2 1/2 lb					

Her Standing and Running Rigging Wire & hemp sufficient in size and very good in quality.

She has four Long Boat and good Boats

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

*Musicians present*

Order for Special Survey No. \_\_\_\_\_ Date \_\_\_\_\_

Order for Ordinary Survey No. \_\_\_\_\_ Date \_\_\_\_\_

Section 18. DATES of Surveys held while building as per \_\_\_\_\_

- 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

State if she has a Spar Deck \_\_\_\_\_ Poop \_\_\_\_\_ or Forecastle \_\_\_\_\_

**General Remarks,** *She has Poop and Forecastle.*

*Frames 4 1/2 x 3 x 7/16*

*Beams in Poop: single angle iron 6 x 3 x 7/16*

*& in Forecastle Bulb iron 6 x 3*

*Double angle iron 2 1/2 x 2 1/2 x 7/16*

*Stringer plates on ends of Beams 20 x 7/16 angle iron 4 x 3 x 7/16*

*Triplates 10 x 3/4 Deck 2 3/4 p price.*

*Ballast tank is fitted in forehold between two Bulkheads.*

*Beams to every second frame. Bulb iron 7 1/2 x 7/16*

*Double angle iron 3 x 2 1/2 x 7/16*

*Plating 7/16*

*secured to the sides by Angle plates.*

*The ship Rolf was built under special survey by the Surveyors of French Veritas and classed \*2. 3/3. II. 1870. Nothing spared on Materials and workmanship as well as on general outfit, and has since been kept in excellent Order. This vessel generally employed in Baltic trade on England made a trip to New York last winter and answered well in every respects for Atlantic Service.*

In what manner are the surfaces preserved from oxidation? Inside : The Bottom, coated with Portland Cement. Other parts with lead paint

Ditto ditto Outside with red lead paint and black Varnish.

I am of opinion this Vessel should be Classed 95 A.

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

Surveys & Special ..... £ 3 : 3

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

Gen Committee's Minute August 29<sup>th</sup> 1872

*J. J. ...*  
*Surveyor to ...*  
*Register ...*

Character assigned 90 A. M.S.

# IRON SHIP.

No. 5 - Survey held at Copenhagen Date, First Survey \_\_\_\_\_ Last Survey \_\_\_\_\_ 18\_\_

On the Screw Steamer Polp Yard Number \_\_\_\_\_ Master Arboe

**TONNAGE** under } 814. 75 ONE, OR TWO DECKED, THREE DECKED VESSEL.  
 Tonnage Deck }  
 Ditto of Third, Spar, }  
 or Awning Deck. }  
 Ditto of Poop, or } 246 87 **DEPTH** from upper part of Keel to top of Upper Deck Beams  
 Raised Or. Dk. }  
 Ditto of Houses } 5. 32 **GIRTH** of Half Midship Frames (as per Rule) . . . . .  
 on Deck . . . . }  
 Ditto of Forecastle } 36. 41 **1st NUMBER** . . . . .  
 Gross Tonnage } 1103 35 **1st NUMBER, if a THREE-DECKED VESSEL**  
 Less Crew Space } 58 92 deduct 7 feet . . . . .  
 Less Engine Room } 250. 46 **LENGTH** . . . . .  
 Register Tonnage } 793. 97 **2nd NUMBER** . . . . .  
 as out on Beam } 100 **PROPORTIONS**—Breadths to Length . . . . .  
 Depths to Length—Upper Deck to Keel . . . . .  
 Main Deck ditto . . . . .

Built at Copenhagen  
 When built 1870 Launched 18 June 1870  
 By whom built Mrs. Burmester Hain  
 Owners Steam Comp. Denmark  
 Port belonging to Copenhagen  
 Destined Voyage Baltic  
 If Surveyed while Building, Afloat, or in Dry Dock.  
while high on Slip

Official Number

**LENGTH** on deck as per Rule . . . . . Feet. Inches. **BREADTH**—Moulded . . . . . Feet. Inches. **DEPTH** top of Floors to Upper Deck Beams . . . . . Feet. Inches. Do. do. Main Deck Beams . . . . . Feet. Inches. Power of Engines . . . . . Horse. N<sup>o</sup>. of Decks with flat laid . . . . . N<sup>o</sup>. of Tiers of Beams . . . . .

Dimensions of Ship per Register, length, breadth, depth,	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches in Ship.	16ths required	Inches in Ship.	Inches in Ship.	16ths required	16ths required
<b>KEEL</b> , depth and thickness . . . . .									
<b>STEM</b> , moulding and thickness . . . . .									
<b>STERN-POST</b> for Rudder do. do. . . . . for Propeller . . . . .									
Distance of Frames from moulding edge to moulding edge, all fore and aft . . . . .									
<b>FRAMES</b> , Angle Iron, for $\frac{1}{2}$ length amidships Do. for $\frac{1}{4}$ at each end . . . . .									
<b>EVERSED FRAMES</b> , Angle Iron . . . . .									
<b>DECK BEAMS</b> , depth and thickness of Floor Plate at mid line for half length amidships . . . . . thickness at the ends of vessel . . . . . depth at $\frac{1}{2}$ the half-bdth. as per Rule . . . . . height extended at the Bilges . . . . .									
<b>DECK BEAMS</b> , Upper, Spar, or Awning Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron Single or double Angle Iron on Upper edge . . . . . Average space . . . . .									
<b>DECK BEAMS</b> , Main or Middle Deck . . . . . Single or d'ble Ang. Iron, Plate or Tee Bulb Iron Single or double Angle Iron, on Upper Edge . . . . . Average space . . . . .									
<b>DECK BEAMS</b> , Lower Deck, Hold or Orlop . . . . . Single or d'ble Ang. Iron, Plate or Tee Bulb Iron Single or double Angle Iron on Upper Edge . . . . . Average space . . . . .									
<b>KEELSONS</b> Centre line, single or double plate, box, or Intercostal, Plates . . . . . Rider Plate . . . . . Bulb Plate to Intercostal Keelson . . . . . Angle Irons . . . . . Double Angle Iron Side Keelson . . . . . Side Intercostal Plate . . . . . do. Angle Irons . . . . . Attached to outside plating with angle iron									
<b>UPPER DECK</b> Angle Irons . . . . . do. Bulb Iron . . . . . do. Intercostal plates riveted to plating for length									
<b>LOWER DECK</b> STRINGER Angle Irons . . . . . Intercostal plates riveted to plating for length.									
<b>LOWER DECK</b> STRINGER Angle Irons . . . . .									
Dimensions, material. Knight-heads. Hawse Timbers.									
Dimensions, material. Pall Bitt									

Flat Keel Plates, breadth and thickness . . . . .

**PLATES** in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied . . . . .

fin up. part of Bilge to lr. edge of Sh'rstrake

Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Upr. or Spar Dk. Sh'rstrake. Up. or Spar Dk Sh'rstrake, brdth & thickness

Butt Straps to outside plating, breadth & thickness

Lengths of Plating . . . . .

Shifts of Plating, and Stringers . . . . .

Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness . . . . .

Angle Iron on ditto . . . . .

Tie Plates fore and aft, outside Hatchways . . . . .

Diagonal Tie Plates on Beams No. of Pairs, Planksheer material and scantling . . . . .

Waterways do. do. . . . .

Flat of Upper Deck do. do. . . . .

How fastened to Beams . . . . .

Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness . . . . .

Is the Stringer Plate attached to the outside plating?

Angle Irons on ditto, No. . . . .

Tie Plates, outside Hatchways . . . . .

Diagonal Tie Plates on Beams, No. of pairs

Waterways materials and scantlings . . . . .

Flat of Middle Deck do. do. . . . .

How fastened to Beams . . . . .

Stringer Plates on ends of Lower Deck, Hold or Orlop Beams . . . . .

Is the Stringer Plate attached to the outside plating?

Angle Irons on ditto, No. . . . .

Stringer or Tie Plates, outside Hatchways . . . . .

Flat of Lower Deck . . . . .

Ceiling betwixt Decks, thickness and material . . . . .  
in hold do. do. . . . .

Main piece of Rudder, diameter at head . . . . .  
do. at heel . . . . .

Can the Rudder be unshipped afloat?

Bulkheads No. Thickness of  
Height up  
How secured to sides of ship  
Size of Vertical Angle Irons and distance apart ins.  
Are the outside Plates doubled two spaces of Frames in length?

**FRAMES** extend in one length from \_\_\_\_\_ to \_\_\_\_\_ Riveted through plates with \_\_\_\_\_ in. Rivets, about \_\_\_\_\_ apart.

**REVERSED ANGLE IRONS** on floors and frames extend \_\_\_\_\_ middle line to \_\_\_\_\_ and to \_\_\_\_\_ alternately

**KEELSONS**. Are the various lengths of Plates and Angle Irons properly connected? \_\_\_\_\_ And butts properly shifted? \_\_\_\_\_

**PLATING**. Garboard, double riveted to Keel, with rivets \_\_\_\_\_ in. diameter, averaging \_\_\_\_\_ ins. from centre to centre.  
 Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets \_\_\_\_\_ in. diameter, averaging \_\_\_\_\_ ins. from centre to centre.  
 Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets \_\_\_\_\_ in. diameter averaging \_\_\_\_\_ ins. from centre to centre.  
 Butts of \_\_\_\_\_ Strakes at Bilge for \_\_\_\_\_ length, treble riveted with Butt Straps \_\_\_\_\_ thicker than the plates they connect.  
 Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets \_\_\_\_\_ in. diameter, averaging \_\_\_\_\_ ins. from cr. to cr.  
 Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets \_\_\_\_\_ in. diameter, averaging \_\_\_\_\_ ins. from cr. to cr.  
 Edges of Main Sheerstrake, double or single riveted. **Upper Sheerstrake**, double or single riveted.  
 Butts of Main Sheerstrake, treble riveted for \_\_\_\_\_ length amidships. Butts of Upper or Spar Sheerstrake, treble riveted \_\_\_\_\_ length amidships.  
 Butts of Main Stringer Plate, treble riveted for \_\_\_\_\_ length amidships. **Butts of Upper or Spar Stringer Plate**, treble riveted for \_\_\_\_\_ length.  
 Breadth of laps of plating in double riveting \_\_\_\_\_ Breadth of laps of plating in single riveting \_\_\_\_\_

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? \_\_\_\_\_

Waterway, how secured to Beams \_\_\_\_\_ (Explain by Sketch, if necessary.)

Beams of the various Decks, how secured to the sides? \_\_\_\_\_ No. of Breasthooks, \_\_\_\_\_ Crutches, \_\_\_\_\_

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? \_\_\_\_\_

Manufacturer's name or trade mark, \_\_\_\_\_

The above is a correct description.

Builder's Signature, \_\_\_\_\_ Surveyor's Signature, W. J. Spring

**Workmanship.** Are the butts of plating planed or otherwise fitted? 10469 Lm

Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? \_\_\_\_\_

Are the fillings between the ribs and plates solid single pieces? \_\_\_\_\_

Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? \_\_\_\_\_

Are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? \_\_\_\_\_

Do any rivets break into or through the seams or butts of the plating? \_\_\_\_\_

Masts, Bowsprit, Yards, &c., are \_\_\_\_\_ in \_\_\_\_\_ condition, and sufficient in size and length. *If of Iron or Steel give Scantlings of Plating, Angle Irons, &c., and further explain by a Sketch showing how the lower Masts and Bowsprit are constructed, showing the number of Plates and Angle Irons, mode of riveting, quality of Materials, and if stamped with Maker's name.*

State also Length and Diameter of Lower Masts and Bowsprit \_\_\_\_\_

NUMBER for EQUIPMENT			Fathoms.	Inches.	Test per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
N <sup>o</sup> .	SAILS.	CABLES, &c.						Bowers ...					
	Fore Sails,	Chain ...						(Machine where Tested, date, and name of Superintendent.)					
	Fore Top Sails,	Hempen Stream						Stream ...					
	Fore Topmast Stay Sails	Cable											
	Main Sails,	Hawser ...											
	Main Top Sails,	Towlines ...											
and		Warp ...						Kedges ...					
		quality _____											

Standing and Running Rigging \_\_\_\_\_ sufficient in size and \_\_\_\_\_ in quality. She has \_\_\_\_\_ Long Boat and \_\_\_\_\_

The Windlass is \_\_\_\_\_ Capstan \_\_\_\_\_ and Rudder \_\_\_\_\_ Pumps \_\_\_\_\_

**Engine Room Skylights.**—How constructed? \_\_\_\_\_ How secured in ordinary weather? \_\_\_\_\_

What arrangements for deadlights in bad weather? \_\_\_\_\_

**Coal Bunker Openings.**—How constructed? \_\_\_\_\_ How are lids secured? \_\_\_\_\_ Height above deck? \_\_\_\_\_

**Scuppers, &c.**—What arrangements for clearing upper deck of water, in case of shipping a sea? \_\_\_\_\_

**Cargo Hatchways.**—How formed? \_\_\_\_\_

State size **Main Hatch** \_\_\_\_\_ **Forehatch** \_\_\_\_\_ **Quarterhatch** \_\_\_\_\_

If of extraordinary size, state how framed and secured? \_\_\_\_\_

What arrangement for shifting beams? \_\_\_\_\_

**Hatches,** If strong and efficient? \_\_\_\_\_

Order for Special Survey No. \_\_\_\_\_ DATES of \_\_\_\_\_

Date \_\_\_\_\_ Surveys held \_\_\_\_\_

Order for Ordinary Survey No. \_\_\_\_\_ while building \_\_\_\_\_

Date \_\_\_\_\_ as per \_\_\_\_\_

No. \_\_\_\_\_ in builder's yard. Section 18. \_\_\_\_\_

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 riveting \_\_\_\_\_

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 or cemented \_\_\_\_\_

5th. After the ship was launched and equipped \_\_\_\_\_

**General Remarks,**

State if one, two or three decked vessel, or if spar or awning decked, and lengths of poop, forecassle or raised quarter deck, or of double or part double bottom.

How are the surfaces preserved from oxidation? Inside \_\_\_\_\_ Outside \_\_\_\_\_

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

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

Special ... £ : :

Certificate ... : :

(Travelling Expenses)

(if any) £ \_\_\_\_\_

**Committee's Minute** \_\_\_\_\_ 18 \_\_\_\_\_

**Character assigned** \_\_\_\_\_