

IRON SHIPS.

Run 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 Built at Copenhagen When built 1870 Launched 18th June 1870
 Ditto of quarter deck 288.60 By whom built Bureauister & Wain Owners The Steam Company, Denmark
 Ditto of poop, fore-castle, or other erections on upper deck 1103.35 Port belonging to Copenhagen Destined Voyage Baltic
 Ditto of spar deck 250.46
 Ditto of engine room 793.97
 Gross weight, less 62 & 13516
 Total Register tonnage, as cut on beam
 If Surveyed while Building, Afloat, or in Dry Dock while high on the Slip
 proportions over 12 under 13 depths.

Length aloft	Feet.	Inches.	Extreme Breadth	Feet.	Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet.	Inches.	Power of Engines	Horse.	No. of Decks
28			30			16	4		120		One
(Dimensions of Ship per Register, length breadth depth)											
Keel, if bar iron, depth and thickness	Inches in Ship.		Inches required per Rule.		Inches in Ship.		Inches required per Rule.		Plates in Garboard Strakes, breadth and thickness		
" if plate iron, breadth and thickness	7 1/2 x 3		8 x 2 1/8		7 1/2 x 3		7 1/4 x 2 1/8		Ditto from Garboard to upper part of Bilges		
Stem, if bar iron, moulding and thickness	7 1/2 x 3		7 1/4 x 2 1/8		7 1/2 x 3		7 1/4 x 2 1/8		" from upper part of Bilge to a perpendicular height from upper side of Keel of 1/3 the entire depth of Hold		
" if plate iron, breadth and thickness	7 1/2 x 3		7 1/4 x 2 1/8		7 1/2 x 3		7 1/4 x 2 1/8		" from 1/3 the depth of Hold to lower edge of Sheerstrake		
Stern-post, if bar iron, moulding and thickness	9 x 4 1/4		9 x 4 1/4		9 x 4 1/4		9 x 4 1/4		" Sheerstrake, breadth and thickness		
" if plate iron, breadth and thickness	9 x 4 1/4		9 x 4 1/4		9 x 4 1/4		9 x 4 1/4		Butt Straps to outside plating, breadth and thickness		
Distance of Frames from moulding edge to moulding edge, all fore and aft	21		23		21		23		Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness		
Frames, Size of Angle Iron, single or double	4 1/2 x 3 x 3/16		4 x 3 x 7/16		4 1/2 x 3 x 3/16		4 x 3 x 7/16		Angle Iron on ditto		
" Reversed Iron to every frame or every frame	3 x 3 x 7/16		3 x 3 x 5/16		3 x 3 x 7/16		3 x 3 x 5/16		Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways		
Floors, depth and thickness of Floor Plate at mid line	19 x 3/16		18 x 5/16		19 x 3/16		18 x 5/16		Diagonal Tie Plates on ditto		
" Ditto ditto at Bilge Keelson	12 x 3/16				12 x 3/16				Planksheer, materials and scantlings		
" Size of Reversed Angle Iron, and No. at top of Floor Plate									Waterway ditto ditto		
Beams, Deck (No. 62) double Angle Iron, Plate, Tee, or Bulb Iron	7 1/2 x 7/16		7 1/2 x 7/16		7 1/2 x 7/16		7 1/2 x 7/16		Flat of Upper Deck, thickness and material		
" double or single Angle Iron, on upper edge	3 x 2 1/2 x 7/16		3 x 2 1/2 x 7/16		3 x 2 1/2 x 7/16		3 x 2 1/2 x 7/16		" how fastened to Beams		
" average space between	4 1/2		4 1/2		4 1/2		4 1/2		Ceiling betwixt Decks and in Hold, thickness and material		
" Hold, or Lower Deck (No. 31) double Angle, Tee, Plate, or Bulb Iron	7 1/2 x 7/16		7 1/2 x 7/16		7 1/2 x 7/16		7 1/2 x 7/16		Clamps or Spirketting ditto		
" double or single Angle Iron, on upper edge	3 x 2 1/2 x 7/16		3 x 2 1/2 x 7/16		3 x 2 1/2 x 7/16		3 x 2 1/2 x 7/16		Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness		
" average space between	34 (in Ballast tanks 42)				34 (in Ballast tanks 42)				Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams		
" Paddle, sided and moulded, thickness of Plate size of Angle Iron									Stringers in Hold		
" Engine									Flat of Lower Deck, thickness and material		
Keelson, single or double plate, box, or intercostal	12 1/2 x 7/16		13 x 7/16		12 1/2 x 7/16		13 x 7/16		Main piece of Rudder, diameter at head		
" Size of Plates	5 x 4 x 3/16		5 x 3 1/2 x 7/16		5 x 4 x 3/16		5 x 3 1/2 x 7/16		" at heel		
" Size of Angle Irons	5 x 4 x 3/16		5 x 3 1/2 x 7/16		5 x 4 x 3/16		5 x 3 1/2 x 7/16		(Can the Rudder be unshipped afloat)		
" Side, single or double, plate, box, or intercostal	5 x 4 x 3/16		5 x 3 1/2 x 7/16		5 x 4 x 3/16		5 x 3 1/2 x 7/16		Bulkheads, No. 6 Thickness of		
" Bilge (No. 1) at each Bilge, single, or double, plate, or box	Bulb iron 7/16 thick		Double plating 5 x 3 1/2 x 7/16		Bulb iron 7/16 thick		Double plating 5 x 3 1/2 x 7/16		Height up the aftermost and two forward to Main Deck, the others to Poop Deck beams		
Transoms, material plate or, if none, in what manner compensated for.	plate				plate				how secured to the sides of the ship		
Knight-heads, and Hawse Timbers	plate				plate				size of vertical angle irons and their distance apart		
The Frames extend in one length from	Keel		to Main Deck		Keel		to Main Deck		rivetted through plates with (3/4 in.) rivets, about (3/16) apart.		
The reverse angle irons on the floors extend in one length across the middle line from			to				to				
" " " on the frames			from				to		Hold beams & Main Deck alternately		
Keelson, how are the various lengths of plates or angle irons connected?	(with rivets 1/2 in.)		Butt Straps (double of the vertical plates)		(with rivets 1/2 in.)		Butt Straps (double of the vertical plates)				
Plates, Garboard, double or	rivetted to keel, double		rivetted at upper edge, with rivets (7/8 ins.) diameter, averaging (3/16 in.) apart.		rivetted to keel, double		rivetted at upper edge, with rivets (7/8 ins.) diameter, averaging (3/16 in.) apart.				
" Edges from Garboards to upper part of bilge, worked clencher,	double		single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.		double		single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.				
" Butts from Keel to turn of bilge, worked carvel with butt straps (1 1/2 x 7/16) thick,	double		or single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.		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 1/2 x 7/16) thick, or clencher,	double		or single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.		double		or single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.				
" Edges of Sheerstrake, double or single rivetted? At upper edge	single		At lower edge		double		At lower edge				
" Butts from bilge to planksheers, worked carvel with butt straps (1 1/2 x 7/16) thick,	double		or single rivetted; with rivets (3/4 in.) diameter, averaging (3 3/16 ins.) apart.		double		or single rivetted; with rivets (3/4 in.) diameter, averaging (3 3/16 ins.) apart.				
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted?	double				double						
Planksheer, how secured to the plating of the sides	Explain by sketch				Explain by sketch						
Waterway " " planksheer and to the Beams	if necessary.				if necessary.						
Deck Beams, how secured to the side?	By knee plates				By knee plates						
Hold or Lower Deck ditto	By knee plates				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				Best Staffordshire						
Manufacturer's name or trade mark	Robert Heath				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. Lodding						

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.)

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.
One only of good Sails and	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				Kedges	2	5 x 2 1/2 lb			
		Warp	120	4									
		All of _____ quality.											
Her Standing and Running Rigging <u>Wire & hemp</u> sufficient in size and <u>very good</u> in quality.													
She has <u>four</u> Long Boat and <u>good</u> Boats													
The present state of the Windlass is <u>good</u> Capstan <u>good</u> and Rudder <u>good</u> Pumps <u>good (of iron)</u>													

Order for Special Survey No. _____ Date _____ DATES of Surveys held while building as per 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 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 7/16 Deck 2 3/4 p price.
Ballast tank is fitted in forehold between two Bulk heads.
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 9/16

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, cemented with Portland Cement. Other parts with red lead
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,
Surveyors 3 Special £ 3 : 3
Certificate (if required) £ 5 : : Eight Pounds. Eight Shillings.

Gen Committee's Minute August 29th 1872

J. A. S. P. J. S. P. J. S. P.
Surveyor to Lloyd's
Register Captain

Character assigned 90 A. 1 M.S.

IRON SHIP.

No. 5 - Survey held at Copenhagen Date, First Survey Re 4/2/72 Last Survey 18

On the Screw Steamer Polp Yard Number Arboe Master Arboe

TONNAGE under Deck 814. 75
 Ditto of Third, Spar, or Awning Deck. 246 87
 Ditto of Poop, or Raised Or. Dk. 5. 32
 Ditto of Houses on Deck 36. 41
 Ditto of Forecastle 1103 35
 Gross Tonnage 1103 35
 Less Crew Space 250. 46
 Less Engine Room 293. 97
 Register Tonnage as out on Beam 293. 97

ONE, OR TWO DECKED, THREE DECKED VESSEL.
 SPAR, OR AWNING-DECKED VESSEL.
 HALF BREADTH (moulded) 24. 87
 DEPTH from upper part of Keel to top of Upper Deck Beams 24. 87
 GIRTH of Half Midship Frame (as per Rule) 24. 87
 1st NUMBER 24. 87
 1st NUMBER, if a THREE-DECKED VESSEL deduct 7 feet 24. 87
 LENGTH 24. 87
 2nd NUMBER 24. 87
 PROPORTIONS—Breadths to Length 24. 87
 Depths to Length—Upper Deck to Keel 24. 87
 Main Deck ditto 24. 87

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

LENGTH on deck as per Rule 24. 87 Breadth—Moulded 24. 87 DEPTH top of Floors to Upper Deck Beams 24. 87 Do. do. Main Deck Beams 24. 87 Power of Engines 24. 87 Horse. 24. 87 N°. of Decks with flat laid 24. 87 N°. of Tiers of Beams 24. 87

Dimensions of Ship per Register, length, breadth, depth, 24. 87

KEEL, depth and thickness 24. 87
 TEM, moulding and thickness 24. 87
 TERN-POST for Rudder do. do. 24. 87
 for Propeller 24. 87
 stance of Frames from moulding edge to moulding edge, all fore and aft 24. 87
 RAMES, Angle Iron, for $\frac{1}{2}$ length amidships 24. 87
 Do. for $\frac{1}{2}$ at each end 24. 87
 EVERSED FRAMES, Angle Iron 24. 87
 LOORS, depth and thickness of Floor Plate at mid line for half length amidships 24. 87
 thickness at the ends of vessel 24. 87
 depth at $\frac{1}{2}$ the half-bdth. as per Rule 24. 87
 height extended at the Bilges 24. 87
 BEAMS, Upper, Spar, or Awning Deck 24. 87
 Single or d'ble Ang. Iron, Plate or Tee Bulb Iron 24. 87
 Single or double Angle Iron on Upper edge 24. 87
 Average space 24. 87
 BEAMS, Main or Middle Deck 24. 87
 Single or d'ble Ang. Iron, Plate or Tee Bulb Iron 24. 87
 Single or double Angle Iron, on Upper Edge 24. 87
 Average space 24. 87
 BEAMS, Lower Deck, Hold or Orlop 24. 87
 Single or d'ble Ang. Iron, Plate or Tee Bulb Iron 24. 87
 Single or double Angle Iron on Upper Edge 24. 87
 Average space 24. 87
 KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates 24. 87
 Rider Plate 24. 87
 Bulb Plate to Intercoastal Keelson 24. 87
 Angle Irons 24. 87
 Double Angle Iron Side Keelson 24. 87
 Side Intercoastal Plate 24. 87
 do. Angle Irons 24. 87
 Attached to outside plating with angle iron 24. 87
 GE Angle Irons 24. 87
 do. Bulb Iron 24. 87
 do. Intercoastal plates riveted to plating for length 24. 87
 GE STRINGER Angle Irons 24. 87
 Intercoastal plates riveted to plating for length 24. 87
 DE STRINGER Angle Irons 24. 87
 nsoms, material. Knight-heads. Hawse Timbers. 24. 87
 adlass 24. 87 Pall Bitt 24. 87

FRAMES extend in one length from 24. 87 to 24. 87 Riveted through plates with 24. 87 in. Rivets, about 24. 87 apart.
 REVERSED ANGLE IRONS on floors and frames extend 24. 87 middle line to 24. 87 and to 24. 87 alternately
 KEELSONS. Are the various lengths of Plates and Angle Irons properly connected? 24. 87 And butts properly shifted? 24. 87
 LATING. Garboard, double riveted to Keel, with rivets 24. 87 in. diameter, averaging 24. 87 ins. from centre to centre.
 Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 24. 87 in. diameter, averaging 24. 87 ins. from centre to centre.
 Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 24. 87 in. diameter averaging 24. 87 ins. from centre to centre.
 Butts of 24. 87 Strakes at Bilge for 24. 87 length, treble riveted with Butt Straps 24. 87 thicker than the plates they connect.
 Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 24. 87 in. diameter, averaging 24. 87 ins. from cr. to cr.
 Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 24. 87 in. diameter, averaging 24. 87 ins. from cr. to cr.
 Edges of Main Sheerstrake, double or single riveted. 24. 87 Upper Sheerstrake, double or single riveted.
 Butts of Main Sheerstrake, treble riveted for 24. 87 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted 24. 87 length amidships.
 Butts of Main Stringer Plate, treble riveted for 24. 87 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 24. 87 length.
 Breadth of laps of plating in double riveting 24. 87 Breadth of laps of plating in single riveting 24. 87
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? 24. 87
 Waterway, how secured to Beams 24. 87 (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? 24. 87 No. of Breasthooks, 24. 87 Crutches, 24. 87
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? 24. 87
 Manufacturer's name or trade mark, 24. 87

The above is a correct description.

Builder's Signature, 24. 87

Surveyor's Signature, 24. 87

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

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

N ^o .	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
	Fore Sails,	Chain ...						Bowers ...					
	Fore Top Sails,	(Machine where Tested, date, and name of Superintendent.)						(Machine where Tested, date, and name of Superintendent.)					
	Fore Topmast Stay Sails	Hempen Stream Cable						Stream ...					
	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 { 1st. On the several parts of the frame, when in place, and before the plating was wrought
Order for Ordinary Survey No. _____ while building { 2nd. On the plating during the progress of riveting
Date _____ as per { 3rd. When the beams were in and fastened, and before the decks were laid
No. _____ in builder's yard. Section 18. { 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 bot.

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 _____