

IRON SHIPS.

No. 10418 Survey held at Sunderland Date, First Survey 2nd January Last Survey 22nd August 1872

On the Screw Steamer "Benton" Master W. Lovett

Tonnage under Tonnage Deck } <u>662.81</u>	ONE, OR TWO DECKED, SPAR OR AWNING-DECKED VESSELS.	THREE DECKED VESSELS.	Built at <u>Sunderland</u>
Ditto of Third Spar, or Awning Deck. } <u>24.54</u>			When built <u>1842</u> Launched <u>20 July 1872</u>
Ditto of <u>Raised Or. Dk.</u> } <u>69.66</u>	Half moulded breadth <u>14.25</u>	Total Depth if three or more Decks	By whom built <u>Wells, Doy & Co. Hull</u>
Ditto of <u>Houses on Deck</u> } <u>2.13</u>	Depth from upper part of Keel to top of Upper Deck Beams <u>18.0</u>	Total Girth of Half Mid-ship Frame	Owners <u>Hindhaugh & Co.</u>
Ditto of <u>Forecastle</u> } <u>759.14</u>	Girth of Half Midship Frame (as per Rule) <u>28.5</u>	3rd Number	Port belonging to <u>London</u>
Gross Tonnage } <u>27.19</u>	1st Number <u>60.49</u>	Length	Destined Voyage <u>Coasting</u>
Crew Space, as per Rule } <u>37.38</u>	Length <u>149</u>		If Surveyed while Building, Afloat, or in Dry Dock.
Register Tonnage, out on Beam	2nd Number <u>12.094</u>	4th Number	
Register Tonnage, as a Steamer, out on Beam } <u>489.09</u>	Depths to Length. <u>11.2</u>	Breadths to Length <u>6.6</u>	
Register Tonnage, as a Steamer, out on Beam } <u>484.84</u>			

Length on deck as per Rule, 199 Feet. Inches. Moulded Breadth, 28.4 Feet. Inches. Depths from top of Floors to Upper and Main Deck Beams, as per Rule 18 Feet. Inches. Horse. 90 N^o. of Decks with flat laid one N^o. of Tiers of Beams two

Dimensions of Ship per Register, length 199.4 breadth, 28.55 depth, 16.1

	Inches in Ship.	Inches required per Rule.		Inches in Ship.	Inches required per Rule.
Keel, if bar iron, depth and thickness	8 x 2 3/8	8 x 2 3/8	Flat Keel Plates, breadth and thickness	50	30
Do. if centre through plate, depth and thickness	8 x 3 3/8	7 x 2 3/8	Plates in Garboard Strakes, breadth and thickness	50	30
Stem, if bar iron, moulding and thickness	8 x 3 3/8	7 x 2 3/8	Do. from Garboard to upper part of Bilges	50	30
Stern-post for Rudder do. do.	4 x 4 3/4	7 x 4 3/4	Do. of doubling at Bilge, or increased thickness, and length applied		
Stern-post for Propeller	4 x 4 3/4	7 x 4 3/4	Do. fm up. part of Bilge to lr. edge of Sh'rstrake	4	7
Distance of Frames from moulding edge to moulding edge, all fore and aft	90.1	(Class 90A)	Do. Main Sheerstrake, breadth and thickness		
Frames, size of Angle Iron, for 1/2 length amidships	3 1/2 x 3 1/2	3 1/2 x 3 1/2	Do. of d'bling at Sh'rstrake, & length applied		
Do. for 1/2 at each end	3 1/2 x 3 1/2	3 1/2 x 3 1/2	Do. from Mn. to Up. or Spar Dk. Sh'rstrake		
Reversed Frames, size of Angle Iron	3 1/2 x 3 1/2	3 1/2 x 3 1/2	Do. Up. or Spar Dk Sh'rstrake, brdth & thckns	30	10
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	1 1/2 x 4	1 1/2 x 4	Butt Straps to outside plating, breadth & thickness	1 1/2 x 9	1 1/2 x 9
Do. at the ends	1 1/2 x 4	1 1/2 x 4	Lengths of Plating	6 spaces	6 spaces
Do. do. do. at Bilge Keelson	1 1/2 x 4	1 1/2 x 4	Shifts of Plating, and Stringers	3 spaces	2 spaces
Do. height extended at the Bilges	double	9	Gunwale Plate on ends of Awning Spar, or Upper Deck Beams, breadth and thickness	40	40
Beams, Upper, Spar, or Awning Deck (No. <u>12</u>) single or double Angle Iron, Plate or Tee Bulb Iron	4 x 4	7 x 7	Angle Iron on ditto	4 x 4 x 7	4 x 4 x 7
Single or double Angle Iron on Upper edge	2 1/2 x 5	2 1/2 x 5	Tie Plates (fore and aft), outside Hatchways	9	9
Average space	3 1/2	3 1/2	Diagonal Tie Plates on Beams (No. of Pairs)		
Beams, Main or Middle Deck (No.) single, or double Angle Iron, Plate or Tee Bulb Iron			Planksheer material and scantling		
Single, or double Angle Iron, on Upper Edge			Waterways do. do.		
Average space			Flat of Upper Deck do. do.	3 1/2	3 1/2
Beams, Lower Deck, Hold or Orlop (No.) single or double Ang Iron, Plate or Tee Bulb Iron			How fastened to Beams <u>Galvanised iron screw bolts and nuts</u>		
Single or double Angle Iron on Upper Edge			Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness		
Average space			(Is the Stringer Plate attached to the outside plating?)		
Keelson Centre line, single or double plate, box or intercostal, size of Plates	13 x 10	13 x 10	Angle Irons on ditto (No.)		
Do. Bulb Plate to Intercostal Keelson	5 1/2 x 8	5 1/2 x 8	Tie Plates, outside Hatchways		
Do. Size of Angle Irons	5 x 3	5 x 3	Diagonal Tie Plates on Beams (No. of pairs)		
Do. Side Intercostal Keelson, size of Plates			Waterways materials and scantlings		
Do. Angle Irons on tops of Floors			Flat of Middle Deck do. do.		
Do. Bilge Keelson, Bulb Iron			How fastened to Beams		
Do. do. Intercostal plates riveted to plating for length			Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	24	24
Do. do. Angle Irons	5 x 4	4 1/2 x 3 1/2	(Is the Stringer Plate attached to the outside plating?)		
Side Stringers (No. <u>one</u>) size of Angle Irons	5 x 3	4 1/2 x 3 1/2	Angle Irons on ditto (No. <u>293</u>)	3 1/2 x 3 1/2 x 7	3 1/2 x 3 1/2 x 7
Do. Intercostal plates riveted to plating for length			Stringer or Tie Plates, outside Hatchways		
Transoms, material <u>Plate</u> or, if none, in what manner compensated for.			Flat of Lower Deck		
ht-heads <u>Plate</u> Hawse Timbers <u>Plate</u>			Ceiling betwixt Decks, thickness and material	2 1/2	2 1/2
Class <u>Greenheart</u> Pall Bit <u>Greenheart</u>			Do. in hold do. do.	2 1/2	2 1/2
The Frames extend in one length from <u>Keel</u> to <u>gunwale</u> Riveted through plates with (3/4 in.) Rivets, about 6 apart.			Main piece of Rudder, diameter at head	5	5
The Reverse Angle Irons on the floors and frames extend <u>from</u> the middle line <u>to upper part of bilge</u> and to <u>gunwale</u> alternately			Do. do. at heel	3	3
Keelsons. Are the various lengths of Plates and Angle Irons properly connected? <u>Yes</u> And are their butts properly shifted? <u>Yes</u>			(Can the Rudder be unshipped afloat? <u>Yes</u>)		
Plates, Garboard, double or Riveted to Keel, double or at upper edge, with Rivets (1/2 in.) diameter, averaging (5 1/2 ins.) from centre to centre.			Bulkheads No. <u>4</u> Thickness of <u>6.5-4</u>		
Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (3/4 in.) diameter, averaging (3 ins.) from centre to centre.			Do. Height up <u>to deck</u> <u>11</u>		
Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (9/16) thick, double or single Riveted; with Rivets (3/4 in.) diameter averaging (3 ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? <u>No</u>			Do. How secured to the sides of the ship <u>to double frames</u>		
Do. of <u>2</u> Strakes at Bilge for <u>1/2</u> length, treble riveted with Butt Straps <u>1/16</u> thicker than their plates. <u>2</u> lants			Do. Size of Vertical Angle Irons, <u>3 x 2 1/2</u> and their distance apart, <u>2 1/2</u> <u>6</u>		
Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single riveted; with rivets (3/4 in.) diameter, averaging (3 ins.) from centre to centre.			Do. Are the outside Plates doubled two spaces of Frames in length? <u>Yes</u>		
Do. Edges of Sheerstrake, <u>Main</u> double or single Riveted. Upper, double or single Riveted. At upper edge <u>Single</u> At lower edge <u>Double</u>					
Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (1/16) thick, double or single Riveted; with Rivets (3/4 in) diameter, averaging (3 ins) from centre to centre.					
Do. Butts of Main Sheerstrake, double or treble Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double or treble Riveted for <u>1/2</u> length amidships. Breadth of laps of plating in double Riveting (<u>4 3/4</u>) Breadth of laps of plating in single Riveting (<u>3 1/4</u>)					
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? <u>double & treble</u>					
Planksheer, how secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.)					
Beams of the various Decks, how secured to the sides? <u>Moulded butts riveted</u> No. of Breasthooks, <u>4</u> Crutches, <u>39</u> Transoms					
What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? <u>Plate by Corbett, Pease, Hutchinson & Co. and Dolchou, Wray & Co.</u>					
Manufacturer's name or trade mark, <u>Wm. Corbett & Co.</u>					
We certify that the above is a correct description of the several particulars therein given.					
Builder's Signature, <u>Wm. Corbett & Co.</u> Surveyor's Signature, <u>Wm. Corbett & Co.</u>					

IRON 452-001



10458 2m

Workmanship. Are the butts of plating planed or otherwise fitted? Planed
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 with single pieces
Do the holes for riveting 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 plate and punched from the faying surfaces? Yes
Are there any rivets which either break into or have been put through the seams or butts of the plating? A few

Her Masts, Bowsprit, Yards, &c., are in of wood & 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 riveting, quality of Materials, and if stamped with Maker's name.
State also Length and Diameter of Lower Masts and Bowsprit

No.	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	34	270 1/2 - 34	34	marked W.T.C. Bowers P.H.S.	1	16.3.7	18.2.3.7	16 3/4	18
	Fore Top Sails,	(State Machine where Tested, and name of Superintendent).	<u>One sample tested to breaking strain approved to 50% over technical proof for 1 1/2 chain: marked P.H.S. & signed J. Hartness</u>										
	Fore Topmast Stay Sails	Stream Cable	90	1 1/2				(State Machine where Tested, and name of Superintendent).	1	14.1.7	15.19.0.7	14.0.27	15 1/2
	Main Sails,	Hawser	80	8 1/2				Stream	1	7.1.14	7.0.0		
	Main Top Sails,	Towlines	80	5 1/2				Kedges	1	3.2.0	3.2.0		
	and	Warp	80	5 1/2					1	1.3.14	1.3.0		
		All of <u>good</u> quality.											

Her Standing and Running Rigging wire & hemp sufficient in size and good in quality. She has one Life Boat and 2 others
The present state of the Windlass is good Capstan — and Rudder good Pumps Metal & good
Engine Room Skylights.—How constructed? Wood on Ruddy House How secured in ordinary weather? With screw bolts
What arrangements are there for deadlights in such for bad weather? Solid wood shutters with thick circular glass
Coal Bunker Openings.—How constructed? Iron framing on Ruddy House How are lids secured? Iron bar How high above deck? 2 feet
Scuppers, &c.—What arrangements are there beyond the scuppers on deck, for clearing upper deck of water, in case of a sea coming on board? 5 Ports on each side
Cargo Hatchways.—How formed? Iron plate coming of Leadings State size Fore Hatch 22 ft X 10 ft X 34 ins high
If of extraordinary size, state how framed and secured?
What arrangement for shifting beams? One strong shifting ceiling in Fore & Main Hatchways
Hatches, themselves, whether strong and efficient? Yes Main Hatchways.—State size 18 ft 6 ins X 9 ft X 34 ins high

Order for Special Survey No. 2332 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought Build under 10' and
Date 25th Sep 71 Surveys held 2nd. On the plating during the progress of riveting Surveyed 1072 Jan 2-19-31 Feb 2-7-12-15-14-22-28 March 2
Order for Ordinary Survey No. — while building 3rd. When the beams were in and fastened, and before the decks were laid 24-13-15-14-25-28-29-30-31-1-2-3-26-30
Date — as per 4th. When the ship was complete, and before the plating was finally coated or cemented May 3-8-10-14-17-22-24-27-29-31
No. 52 in builder's yard. Section 18. 5th. After the ship was launched and equipped June 1-11-14-19-22-26 July 2-9-12-17-19-22 August 2-9-10-12-17-22

General Remarks, This vessel has been constructed with a raised Quarter deck about 36 feet in length for Cabin accommodation for the Captain and Chief officer; She has a ballast tank fitted in the after hold about 47 feet in length, & one in the fore hold about 49 feet in length, fitted in the usual manner with longitudinal girders, & the flange plates secured with knees above & below.

State if one, two or three decked vessel, or if span on awning decked, and lengths of poop fore-castle or raised quarter deck, or of double or part double bottom.
In what manner are the surfaces preserved from oxidation? Inside Bootham cement to upper Outside 3 coats of paint
I am of opinion this Vessel should be Classed GOAT turn of Ridges & paint above

The amount of the Entry Fee£ 5 : : : is received by me,
Am. M.B. Special£ 36 : 11 : "
Certificate " : : : "
(Travelling Expenses)
(if any) £

Committee's Minute 27th August 1872
Character assigned GOAT
A.C.P.
M.B.

