

# IRON SHIP.

No. *14659* Survey held at *Stockton* Date, First Survey *8<sup>th</sup> Oct 1880* Last Survey *Middleham 24<sup>th</sup> June 1881*  
On the Ship *"Relat"* Master *Glover*

TONNAGE under Tonnage Deck *1733.57* ONE, OR TWO DECKED, THREE DECKED VESSEL.  
SPAR, OR AWNING-DECKED VESSEL.  
HALF BREADTH (moulded) *20.4 1/4* Feet.  
DEPTH from upper part of Keel to top of Upper Deck Beams *25.10*  
GIRTH of Half Midship Frame (as per Rule) *40.6 1/2*  
1st NUMBER *86.9*  
1st NUMBER, if a 3-DECKED VESSEL, deduct 7 feet.  
LENGTH *253.4*  
2nd NUMBER *21976*  
PROPORTIONS—Breadths to Length *6.8*  
Depths to Length—Upper Deck to Keel *9.8*  
Main Deck ditto *9.8*

Built at *Stockton*  
When built *1881* Launched *31<sup>st</sup> March 1881*  
By whom built *Richardson Duck & Co*  
Owners *E. Bates & Son*  
Port belonging to *Liverpool*  
Destined Voyage *Sydney*  
If Surveyed while Building, Afloat, or in Dry Dock.  
*Special Survey*

LENGTH on deck as per Rule *253 4* Breadth—Moulded *40 9 1/2* DEPTH top of Floors to Upper Deck Beams *23 9* Power of Engines *—* Horse. *—* No. of Decks with flat laid *Two* No. of Tiers of Beams *Two*

Dimensions of Ship per Register, length, *261.0* breadth, *41.0* depth, *23.55*

	Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	<i>10 x 2 3/4</i>	<i>10 x 2 3/4</i>	FLAT KEEL PLATES, breadth and thickness	<i>36</i>	<i>12</i>	<i>36</i>	<i>12</i>	<i>36</i>	<i>12</i>	<i>36</i>	<i>12</i>
STEM, moulding and thickness	<i>10 x 2 3/4</i>	<i>10 x 2 3/4</i>	PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	<i>11 x 12</i>	<i>11 x 12</i>	<i>11 x 12</i>	<i>11 x 12</i>	<i>11 x 12</i>	<i>11 x 12</i>	<i>11 x 12</i>	<i>11 x 12</i>
STERN POST for Rudder do. do.	<i>10 x 3</i>	<i>10 x 3</i>	" of doubling at Bilge, or increased thickness, and length applied <i>3 Strakes 1/2 length</i>								
" " for Rudder	<i>34</i>	<i>24</i>	" fm up. part of Bilge to l. edge of Sh'rstrake.	<i>40</i>	<i>13</i>	<i>40</i>	<i>13</i>	<i>40</i>	<i>13</i>	<i>40</i>	<i>13</i>
Distance of Frames from moulding edge to moulding edge, all fore and aft			" Main Sheerstrake, breadth and thickness of doubling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.								
FRAMES, Angle Iron, for 1/2 length amidships	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>	" Up. or Spar Dk. Sh'rstrake, breadth & thickness								
Do. for 1/4 at each end	<i>5 1/2 x 3 1/2</i>	<i>5 1/2 x 3 1/2</i>	Butt Straps to outside plating, breadth & thickness	<i>13 1/2 x 1 1/2</i>	<i>14 x 1 1/2</i>	<i>14 1/2 x 1 1/2</i>	<i>15 1/2 x 1 1/2</i>	<i>16 1/2 x 1 1/2</i>	<i>17 1/2 x 1 1/2</i>	<i>18 1/2 x 1 1/2</i>	<i>19 1/2 x 1 1/2</i>
REVERSED FRAMES, Angle Iron	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	Lengths of Plating	<i>48</i>	<i>48</i>	<i>48</i>	<i>48</i>	<i>48</i>	<i>48</i>	<i>48</i>	<i>48</i>
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	<i>25 x 10</i>	<i>25 x 10</i>	Shifts of Plating, and Stringers	<i>48</i>	<i>48</i>	<i>48</i>	<i>48</i>	<i>48</i>	<i>48</i>	<i>48</i>	<i>48</i>
" thickness at the ends of vessel	<i>8</i>	<i>8</i>	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	<i>52</i>	<i>10</i>	<i>45</i>	<i>10</i>	<i>45</i>	<i>10</i>	<i>45</i>	<i>10</i>
" depth at 1/2 the half-bdth. as per Rule	<i>12 1/2</i>	<i>14</i>	Angle Iron on ditto	<i>6 x 4</i>	<i>9</i>	<i>6 x 4</i>	<i>9</i>	<i>6 x 4</i>	<i>9</i>	<i>6 x 4</i>	<i>9</i>
" height extended at the Bilges	<i>50</i>	<i>50</i>	Tie Plates fore and aft, outside Hatchways	<i>14</i>	<i>10</i>	<i>14</i>	<i>10</i>	<i>14</i>	<i>10</i>	<i>14</i>	<i>10</i>
BEAMS, Upper, Spar, or Awning Deck	<i>9 1/2 x 9</i>	<i>9 1/2 x 9</i>	Diagonal Tie Plates on Beams No. of Pairs <i>Two</i>	<i>14</i>	<i>10</i>	<i>14</i>	<i>10</i>	<i>14</i>	<i>10</i>	<i>14</i>	<i>10</i>
Angle or double Angle Iron, Plate or Tee Bulb Iron	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	Planksheer material and scantling								
Angle or double Angle Iron on Upper edge	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	Waterways do. do.								
Average space	<i>48</i>	<i>48</i>	Flat of Upper Deck do. do.	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>	<i>4</i>
BEAMS, Main, or Middle Deck	<i>10 x 10</i>	<i>10 x 10</i>	How fastened to Beams <i>Both ends to same bulk</i>	<i>7</i>	<i>7</i>	<i>7</i>	<i>7</i>	<i>7</i>	<i>7</i>	<i>7</i>	<i>7</i>
Angle or double Angle Iron, Plate or Tee Bulb Iron	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	Stringer Plate on ends of Main or Middle Deck	<i>37</i>	<i>9</i>	<i>37</i>	<i>9</i>	<i>37</i>	<i>9</i>	<i>37</i>	<i>9</i>
Angle or double Angle Iron on Upper Edge	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	Beams, breadth and thickness	<i>4 x 4</i>	<i>9</i>	<i>4 x 4</i>	<i>9</i>	<i>4 x 4</i>	<i>9</i>	<i>4 x 4</i>	<i>9</i>
Average space	<i>48</i>	<i>48</i>	Is the Stringer Plate attached to the outside plating?	<i>4 x 4</i>	<i>9</i>	<i>4 x 4</i>	<i>9</i>	<i>4 x 4</i>	<i>9</i>	<i>4 x 4</i>	<i>9</i>
BEAMS, Lower Deck, Hold, or Orlop			Angle Irons on ditto, No. <i>3</i>	<i>4 x 4</i>	<i>9</i>	<i>4 x 4</i>	<i>9</i>	<i>4 x 4</i>	<i>9</i>	<i>4 x 4</i>	<i>9</i>
Angle or double Angle Iron, Plate or Tee Bulb Iron			Tie Plates, outside Hatchways	<i>14</i>	<i>9</i>	<i>14</i>	<i>9</i>	<i>14</i>	<i>9</i>	<i>14</i>	<i>9</i>
Angle or double Angle Iron on Upper Edge			Diagonal Tie Plates on Beams, No. of pairs <i>2</i>	<i>14</i>	<i>9</i>	<i>14</i>	<i>9</i>	<i>14</i>	<i>9</i>	<i>14</i>	<i>9</i>
Average space			Waterways materials and scantlings	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>
KEELSONS Centre line, single or double plate, box or intercostal, Plates	<i>19 x 13</i>	<i>19 x 13</i>	Flat of Middle Deck do. do.								
Rider Plate	<i>13 x 13</i>	<i>13 x 13</i>	How fastened to Beams								
Bulb Plate to Intercostal Keelson			Stringer Plates on ends of Lower Deck, Hold or Orlop Beams								
Angle Irons	<i>26 x 9</i>	<i>26 x 9</i>	Is the Stringer Plate attached to the outside plating?								
Double Angle Iron Side Keelson	<i>6 x 4</i>	<i>6 x 4</i>	Angle Irons on ditto, No.								
Side Intercostal Plate	<i>6 x 4</i>	<i>6 x 4</i>	Stringer or Tie Plates, outside Hatchways								
do. Angle Irons	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	Flat of Lower Deck								
Attached to outside plating with angle iron	<i>3 1/2 x 3 1/2</i>	<i>3 1/2 x 3 1/2</i>	Ceiling between Decks, thickness and material	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>
EDGE Angle Irons	<i>6 x 4</i>	<i>6 x 4</i>	" in hold do. do.	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>2 1/2</i>
do. Bulb Iron	<i>6 x 4</i>	<i>6 x 4</i>	Main piece of Rudder, diameter at head	<i>6 3/4</i>	<i>6 3/4</i>	<i>6 3/4</i>	<i>6 3/4</i>	<i>6 3/4</i>	<i>6 3/4</i>	<i>6 3/4</i>	<i>6 3/4</i>
do. Intercostal plates riveted to plating for length	<i>6 x 4</i>	<i>6 x 4</i>	do. at heel	<i>3 1/2</i>	<i>3 1/2</i>	<i>3 1/2</i>	<i>3 1/2</i>	<i>3 1/2</i>	<i>3 1/2</i>	<i>3 1/2</i>	<i>3 1/2</i>
EDGE STRINGER Angle Irons	<i>6 x 4</i>	<i>6 x 4</i>	Can the Rudder be unshipped afloat?	<i>Yes</i>							
Intercostal plates riveted to plating for length	<i>6 x 4</i>	<i>6 x 4</i>	Bulkheads No. <i>One</i> Thickness of plating	<i>7 x 6</i>	<i>7 x 6</i>	<i>7 x 6</i>	<i>7 x 6</i>	<i>7 x 6</i>	<i>7 x 6</i>	<i>7 x 6</i>	<i>7 x 6</i>
EDGE STRINGER Angle Irons	<i>6 x 4</i>	<i>6 x 4</i>	" Height up <i>Deck</i>								
			" How secured to sides of ship <i>Double frame</i>								
			" Size of Vertical Angle Irons <i>3 1/2 x 3 1/2 x 8</i> and distance apart <i>30</i> ins.								
			" Are the outside Plates doubled two spaces of Frames in length?	<i>Yes</i>							

Isoms, material. Knight-heads. Hawse Timbers. *Iron*

Class *Harfield's* Pall Bitt *Iron*

FRAMES extend in one length from *Keel* to *Gunwale* Riveted through plates with *7/8* in. Rivets, about *7* apart.  
REVERSED ANGLE IRONS on floors and frames extend across middle line to *Gunwale* and to *alternately*

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

PLATING. Garboard, double riveted to Keel, with rivets *1 1/16* in. diameter, averaging *5 1/2* ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets *7/8* in. diameter, averaging *3 1/2* ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *7/8* in. diameter averaging *3 1/2* ins. from centre to centre.

Butts of *3* Strakes at Bilge for *1/2* length, treble riveted with Butt Straps *1/16* thicker than the plates they connect.

Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets *7/8* in. diameter, averaging *3 1/8* ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *7/8* in. diameter, averaging *3 1/2* 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 *1/2* length amidships. Butts of Upper or Spar Sheerstrake, treble riveted *length* amidships.

Butts of Main Stringer Plate, treble riveted for *1/2* length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for *length*.

Breadth of laps of plating in double riveting *5 1/4* Breadth of laps of plating in single riveting

Straps of Keelsons, Stringer and Tie Plates, treble double or single Riveted? *Angle iron properly fitted & strapped & riveted*

way, how secured to Beams (Explain by Sketch, if necessary.)

of the various Decks, how secured to the sides? *Welded lines riveted to frames* No. of Breasthooks, *Two* Crutches, *Iron*

description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Dorman Long & Co*

acturer's name or trade mark, *Bowfield and Consett*

The above is a correct description.

Signature, *Richardson Duck & Co*

Surveyor's Signature, *Wm Davidson*

Surveyor to Lloyd's Register of British and Foreign Shipping



Workmanship. Are the butts of plating planed or otherwise fitted? *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*  
Are the fillings between the ribs and plates solid single pieces? *Yes*  
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? *Yes*  
Are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? *Yes*  
Do any rivets break into or through the seams or butts of the plating? *Yes Several in Butts at seam riveting*

Masts, Bowsprit, Yards, &c., are *Iron of pine in good* 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  
*For Mast Length extreme 88' 3" Bowsprit Iron tested Cold, constructed in accordance with approved plans enclosed*  
*Main " " 89' 5"*  
*Mizen " " 88' 1"*

NUMBER for EQUIPMENT 23441		Fathoms	Inches	Test per Certificate	Inches per Rule	Machine where Tested & Supplied	ANCHORS.	N <sup>o</sup> .	Weight Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	Machine where Tested & Supplied	
SAILS.		CABLES, &c.											
N <sup>o</sup> .	Chain	300	2	72.0.0.0	72.0-2	72.0.0.0	Bower Anchors (State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	1	40.0.2	35.16.3.14	38.0.0	34.10.0.0	
Fore Sails,	(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	Pettibon 25/26/2/81			D G Lewis			1	34.0.8	33.16.3.14	38.0.0	34.10.0.0	
Fore Top Sails,	Iron Str'm Chain	80	1 1/8	20.6.0.0	75-1 1/8	20.6.0.0		1	32.1.14	30.8.0.14	32.1.6	30.7.0.0	
	Ditto do.						Pettibon 26/2/81	D G Lewis					
Fore Topmast Stay Sails,	Hmpn Strm Cbl	90	1 1/8		90-1 1/8		Stream	...	1	11.2.16	13.12.2.0	11.2.0	13.7.0.0
	Hawser ...	90	1 1/8		90-7		Kedge	...	1	5.3.23	8.5.0.0	5.3.0	8.0.0.0
Main Sails,	Towlines	90	1 1/8		90-12		Ditto	...	1	2.3.4	5.4.0.0	2.3.0	5.5.0.0
Main Top Sails,	Warp ...	90	6										
and other as by?	quality	foot											

Standing and Running Rigging *Winchamps Moulds* sufficient in size and *good* in quality. She has *Two* Long Boats and *three* others  
The Windlass is *Harfield's* Capstan *Iron* and Rudder *Iron* Pumps *Iron* & *good*

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? *Five ports mooring pipes and*  
*Scuppers on each side*

Cargo Hatchways. — How formed? *Iron*  
State size Main Hatch *16' x 10'* Forehatch *8' x 6'* Quarterhatch *8' x 6'*

If of extraordinary size, state how framed and secured? *Main Hatch dup lock plate*

What arrangement for shifting beams? *Yes 3" thick Line*

Order for Special Survey No. *224* *First Survey 8th October 1880*  
Date *5th October 1880*  
Order for Ordinary Survey No. *274* *Last Survey 24th June 1881*  
Date *24th June 1881*  
No. *274* in builder's yard. 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 process 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 quality of workmanship, &c.) *Good*  
*So finished with Poop and Topgallant Forecastle in accordance with submitted and approved plans herewith enclosed*  
*Davidson*

*Richardson Dock Co*

State *if one, two, or three* decked vessel, or *if open, or running decked*; and the lengths of poop, fore-castle, *44' 3"* raised quarter deck, and the length of double, or part double bottom.  
How are the surfaces preserved from oxidation? Inside *With Cement & Paint* Outside *With Paint*

I am of opinion this Vessel should be Classed *100 A 1*

The amount of the Entry Fee ... £ 5 : 4 : is received by me, *20th May 1881*  
Special ... £ 70 : 11 :  
Certificate ... : :  
(Travelling Expenses, if any, £ )

Committee's Minute *Tuesday, June 28th 1881*

Character assigned *100 A 1*  
*STK 903/20*  
*17.3.11*

*Mr Davidson*  
Surveyor to Lloyd's Register of British and Foreign Shipping.