

# IRON SHIP.

No. 13342 Survey held at *Newcastle* Date, First Survey *11<sup>th</sup> February* Last Survey *11<sup>th</sup> October* 18*76*

On the *Iron* *Sr. Rigged* *Screw Steamer* "*Ossian*"

Master *Butchard*

TONNAGE under Tonnage Deck *1792.49*  
 Ditto of Third, Spar, or Awaiting Deck.  
 Ditto of Poop, or Raised Or. Dk.  
 Ditto of Houses on Deck *76.32*  
 Ditto of *Iron* *castles*  
 Gross Tonnage *1868.81*  
 Less Crew Space *59.42*  
 Less Engine Room *598.02*  
 Register Tonnage as cut on Beam *1211.37*

ONE, OR TWO DECKED, THREE DECKED VESSEL.  
 STAR, OR AWNING DECKED VESSEL.  
 HALF BREADTH (moulded)... *17.0*  
 DEPTH from upper part of Keel to top of Upper Deck Beams *26.66*  
 GIRTH of Half Midship Frame (as per Rule) *39.08*  
 1st NUMBER *82.74*  
 1st NUMBER, if a THREE-DECKED VESSEL *7*  
 [deduct 7 feet *75.74*]  
 LENGTH *283.5*  
 2nd NUMBER *214.72*  
 PROPORTIONS—Breadths to Length *8.33*  
 Depths to Length—Upper Deck to Keel *10.63*  
 Main Deck ditto *14.64*

Built at *Newcastle*  
 When built *1876* Launched *6<sup>th</sup> Sept 76*  
 By whom built *C. S. Swanwick*  
 Owners *Glover Brothers*  
 Port belonging to *London*  
 Destined Voyage *Aden*  
 If Surveyed while Building, Afloat, or in Dry Dock. *While building*

LENGTH on deck as per Rule *283* Feet. *6* Inches. BREADTH—Moulded... *34* Feet. *0* Inches. DEPTH top of Floors to Upper Deck Beams *24* Feet. *8* Inches. Do. do. Main Deck Beams... *17* Feet. *8* Inches. Power of Engines *180* Horse. N° of Decks with flat laid *Two* N° of Tiers of Beams *Three*

Dimensions of Ship per Register, length, *284.4* breadth, *34.2* depth, *26.5*

	Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	$9\frac{1}{2} \times 2\frac{1}{2}$	$9\frac{1}{2} \times 2\frac{1}{2}$	PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of <i>Strakes</i> at Bilge, of increased thickness, and length applied $\frac{1}{2}$ length	<i>36</i>	<i>12</i>
STEM, moulding and thickness	$9 \times 2\frac{1}{2}$	$9 \times 2\frac{1}{2}$	fm up. part of Bilge to l. edge of Sh'rstrake	<i>104/11</i>	<i>36</i>
STERN-POST for Rudder do. do.	$9 \times 4\frac{1}{2}$	$9 \times 5$	Main Sheerstrake, breadth and thickness of <i>d'bling</i> at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	<i>70</i>	<i>70</i>
for Propeller	$9 \times 5$	$9 \times 5$	Up. <i>Spar</i> Dk Sh'rstrake, brdth & thickness	<i>40</i>	<i>13</i>
Distance of Frames from moulding edge to moulding edge, all fore and aft	$24\frac{1}{2}$	$24\frac{1}{2}$	Butt Straps to outside plating, breadth & thickness	<i>10 1/2</i>	<i>10 1/2</i>
FRAMES, Angle Iron, for $\frac{3}{4}$ length amidships	$5 \times 3 \times 8$	$5 \times 3 \times 8$	Lengths of Plating	<i>10 feet</i>	<i>10 feet</i>
Do. for $\frac{1}{2}$ at each end	$5 \times 3 \times 7$	$5 \times 3 \times 7$	Shifts of Plating, and Stringers	<i>4</i>	<i>4</i>
REVERSED FRAMES, Angle Iron	$3 \times 3 \times 7$	$3 \times 3 \times 7$	Gunwale Plate on ends of <i>Awaiting, Spar, or</i>	<i>52</i>	<i>10</i>
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	$23\frac{1}{2} \times 9$	$23\frac{1}{2} \times 9$	Upper Deck Beams, breadth and thickness	<i>4 \times 4 \times 9</i>	<i>4 \times 4 \times 9</i>
thickness at the ends of vessel	$11\frac{1}{2}$	$11\frac{1}{2}$	Tie Plates fore and aft, outside Hatchways	<i>14</i>	<i>9</i>
depth at $\frac{3}{4}$ the half-bdth. as per Rule	$47$	$47$	Diagonal Tie Plates on Beams No. of Pairs,		
height extended at the Bilges	$7 \times 7 \times 7$	$7 \times 7 \times 7$	Planksheer material and scantling		
BEAMS, Upper, <i>Spar, or Awaiting</i> Deck Single or <i>d'ble</i> Ang. Iron, Plate or Tee Bulb Iron	$3 \times 3 \times 6$	$3 \times 3 \times 6$	Waterways do. do.	<i>Iron Gutter</i>	
Single or double Angle Iron on Upper edge	$48$	$48$	Flat of Upper Deck do. do.	<i>Yellow Pine</i>	<i>4</i>
Average space	$5\frac{1}{2} \times 3 \times 8$	$5\frac{1}{2} \times 3 \times 8$	How fastened to Beams	<i>Screw bolts and nuts</i>	
BEAMS, <i>Main</i> or Middle Deck Single or <i>d'ble</i> Ang. Iron, Plate or Tee Bulb Iron	$24$	$24$	Stringer Plate on ends of <i>Main</i> or Middle Deck Beams, breadth and thickness	<i>50</i>	<i>9</i>
Single or double Angle Iron, on Upper Edge	$56$	$56$	Is the Stringer Plate attached to the outside plating?	<i>Yes</i>	
Average space	$8\frac{1}{2} \times 8$	$8\frac{1}{2} \times 8$	Angle Irons on ditto, No. <i>Two</i>	$4 \times 4 \times 9$	$4 \times 4 \times 9$
BEAMS, <i>Lower</i> Deck, Hold, or Orlop Single or <i>d'ble</i> Ang. Iron, Plate or Tee Bulb Iron	$3 \times 3 \times 7$	$3 \times 3 \times 7$	Tie Plates, outside Hatchways		
Single or double Angle Iron on Upper Edge	$12 \times 13$	$12 \times 13$	Diagonal Tie Plates on Beams, No. of pairs		
Average space	$12 \times 13$	$11\frac{1}{4} \times 13$	Waterways materials and scantlings	<i>Common twist frames</i>	
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	$5\frac{1}{2} \times 4 \times 9$	$5\frac{1}{2} \times 4 \times 9$	Flat of Middle Deck do. do.	<i>Iron</i>	<i>6</i>
" Rider Plate	$5\frac{1}{2} \times 4 \times 9$	$5\frac{1}{2} \times 4 \times 9$	How fastened to Beams	<i>Riveted</i>	
" Bulb Plate to Intercoastal Keelson	$22\frac{1}{2} \times 8$	$22\frac{1}{2} \times 8$	Stringer Plates on ends of <i>Lower</i> Deck, Hold or Orlop Beams	$35 \times 9$	$35 \times 9$
" Angle Irons	$5\frac{1}{2} \times 4 \times 9$	$5\frac{1}{2} \times 4 \times 9$	Is the Stringer Plate attached to the outside plating?	<i>Yes</i>	
" Double Angle Iron Side Keelson	$3 \times 3 \times 7$	$3 \times 3 \times 7$	Angle Irons on ditto, No. <i>Two</i>	$4 \times 4 \times 9$	$4 \times 4 \times 9$
" Side Intercoastal Plate	$5\frac{1}{2} \times 4 \times 9$	$5\frac{1}{2} \times 4 \times 9$	Stringer or Tie Plates, outside Hatchways		
" do. Angle Irons	$5\frac{1}{2} \times 4 \times 9$	$5\frac{1}{2} \times 4 \times 9$	Flat of <i>Lower</i> Deck		
" Attached to outside plating with angle iron	$8 \times 8$	$8 \times 8$	Ceiling between Decks, thickness and material	$9\frac{1}{2}$	$2\frac{1}{2}$
BILGE Angle Irons			in hold do. <i>Red Pine</i> do.	$6\frac{3}{4}$	$6\frac{3}{4}$
" do. <i>Bulb Iron</i> <i>Tank Girders</i>			Main piece of Rudder, diameter at head	$3\frac{1}{2}$	$3\frac{1}{2}$
" do. <i>Intercoastal</i> plates riveted to plating for <i>length</i>			do. at heel		
BILGE STRINGER Angle Irons			Can the Rudder be unshipped afloat?	<i>Yes</i>	
Intercoastal plates riveted to plating for <i>length</i> <i>Bulb Iron</i>			Bulkheads No. <i>Five</i> Thickness of	<i>6</i>	<i>6</i>
SIDE STRINGER Angle Irons			Height up <i>Collinson</i> to <i>upper</i> <i>d'ble</i> <i>Orlop</i> to <i>middle</i> <i>deck</i>		

Transoms, material. Knight-heads. Hawse Timbers. *Iron*  
 Windlass *Harfield's Patent* *Pat. Bitt*

The FRAMES extend in one length from *Keel* to *Gunwale* Riveted through plates with  $\frac{1}{8}$  in. Rivets, about  $6\frac{1}{2}$  apart.  
 The REVERSED ANGLE IRONS on floors and frames extend *from* *middle* line to *M. Dk. S. A. D.* and to *Gunwale* 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  $1\frac{1}{2}$  in. diameter, averaging *5* ins. from centre to centre.  
 Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets  $\frac{1}{8}$  in. diameter, averaging *4* ins. from centre to centre.  
 Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets  $\frac{1}{8}$  in. diameter averaging  $3\frac{3}{4}$  ins. from centre to centre.  
 Butts of *Three* *Strakes* at Bilge for *half* length, treble riveted with Butt Straps *70* thicker than the plates they connect.  
 Edges from bilge to *Main* Sheerstrake, worked clencher, double or single riveted; with rivets  $\frac{1}{8}$  in. diameter, averaging *4* ins. from cr. to cr.  
 Butts from Bilge to *Main* Sheerstrake, worked carvel, double riveted; with rivets  $\frac{1}{8}$  in. diameter, averaging  $3\frac{3}{4}$  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 *half* length amidships.  
 Butts of *Main* Stringer Plate, treble riveted for *half* length amidships. Butts of Upper or *Spar* Stringer Plate, treble riveted for *half* length.  
 Breadth of laps of plating in double riveting  $5\frac{1}{4}$  Breadth of laps of plating in single riveting  $5\frac{1}{4}$

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *Treble and double riveted*  
 Waterway, how secured to Beams *Iron Gutter* (Explain by Sketch, if necessary.)  
 Beams of the various Decks, how secured to the sides? *Welded knees riveted to frames*. No. of Breasthooks, *Five* Crutches, *Four*  
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Angles and Bulbs from*  
 Manufacturer's name or trade mark, *Appkins Gilkes & Co. Middlesbro' and Plates from Conssett Iron Co*

The above is a correct description.  
 Builder's Signature, *C. S. Swanwick* Surveyor's Signature, *J. H. Cooke*  
 Surveyor to Lloyd's Register of British and Foreign Shipping.

IRON 468-0382



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*

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? *A few.*

17157 Iron

Masts, Bowsprit, Yards, &c., are *Shewn* 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 *Fore mast length extreme 49 1/2 feet, diameter 23 inches. Main mast 73 feet, diameter 21 1/2. Masts formed with two plates in the round 6 1/16 to 5 1/16 in thicknness, edges double riveted, and butts treble and double riveted. Makers of Iron Conssett Iron Co.*

NUMBER for EQUIPMENT 23156

N <sup>o</sup> .	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Length & Size req'd pr Rule.	Test req'd per Rule.	ANCHORS.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	Wght req'd per Rule.	Test req'd per Rule.
		Chain	270	1 1/2	55 1/2	270-1 1/2	55 1/2	Bowers	1	30.2.0	29.0.0.0	30.0.0	28 1/2
		making strain			77 1/2		77 1/2		1	30.1.26	29.0.0.0	30.0.0	28 1/2
		River Wear P. H. J. Hartness Sept.							1	25.0.4	24.17.0.24	25.2.0	25 3/4
		Date of certificate 3 <sup>rd</sup> August 1876											
		Hemp Strm Cbl	90	1 1/2		90-1 1/2							
		Hawser	90	1 1/2		90-1 1/2							
		Towlines	90	1 1/2		90-1 1/2							
		Warp	90	1 1/2		90-1 1/2							
		quality Good	150	2 1/2									

Standing and Running Rigging *Hemp* sufficient in size and *Good* in quality. She has *2 Life* Long Boats and *Two* others

The Windlass is *Good* Capstan *Good* and Rudder *Good* Pumps *Good*

Engine Room Skylights.—How constructed? *Iron Casing 6 1/16 & Wood Tops* How secured in ordinary weather? *Bolted 6 angles*

What arrangements for deadlights in bad weather? *Solid shutters & bulls eyes.*

Coal Bunker Openings.—How constructed? *Cast Iron Comings* How are lids secured? *By hitch bars* Height above deck? *9 in.*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *4 Ports each side besides mowing pipes*

Cargo Hatchways.—How formed? *Iron Comings and headledges riveted together.*

State size Main Hatch *20 ft x 11 ft.* Fore hatch *8 ft x 8 ft* Quarter hatch *20 ft x 11 ft & 8 ft x 8 ft.*

If of extraordinary size, state how framed and secured? *Ordinary size.*

What arrangement for shifting beams? *Web plate in centre of large hatchways & wood fore & afters in each hatch.*

Hatches, If strong and efficient? *Yes.*

Order for Special Survey No. *1110*

Date *8 April 1876*

Order for Ordinary Survey No. *1110*

Date *—*

No. *24* 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 *10.7.6 May 11.17.22.20. March 2.4.7.9.14.21.23.27.*
- 2nd. On the plating during the process of riveting *April 5.7.11.12.21.24.27. May 1.4.8.10.12.15.17.22.*
- 3rd. When the beams were in and fastened, and before the decks were laid *26.31. June 2.9.14.16.21.23. July 4.7.11.18.23.27.*
- 4th. When the ship was complete, and before the plating was finally coated or cemented *Aug 3.9.10.15.22.25.31. Sep 2.5.8.13.18.21.20.*
- 5th. After the ship was launched and equipped *20. Oct 2.6.11.*

General Remarks (State quality of workmanship, &c.)

*This is a three decked vessel, built in accordance with approved tracings attached and the Secretary's letter (N<sup>o</sup> 1) of the 15<sup>th</sup> March 1876 and in accordance with the Rules. She has a complete iron middle deck. Is fitted with water ballast tanks before and abaft the engine and boiler space, the fore tank being 68 feet and the after tank 82 feet in length, top plating 6 1/16 and flange plates 7 1/16 in thicknness. Tanks tested to load water line and found satisfactory. The general quality of the workmanship is good.*

State if one, two, or three, decked vessel, or if spar, or arwing decked; and the lengths of poop, forecastle, or raised quarter deck, and the length of double, or part double bottom.

How are the surfaces preserved from oxidation? Inside *Cement & Paint* Outside *Paint*

I am of opinion this Vessel should be Classed *100 A1 Two decks and Three tiers of beams.*

The amount of the Entry Fee ... £ 5 : : is received by me, *A. Young*

Special ... £ 40 : 5 : 13 Oct 1876

Certificate ...

(Travelling Expenses, if any, £ —).

Committee's Minute *17<sup>th</sup> October 1876*

Character assigned *100 A1*

*double bottom 150 ft Lloyd's M.L.*

*100 deck 22 ft 3 in beams*

*part double bottom 150 ft*

*H. H. Cooke*

*This vessel has been built in accordance with approved plans and appears eligible to be classed 100 A1.*

*Recommended*

*16/10/76*