

# IRON SHIPS.

478

Rec 5/7/66

18 b/w

No. 1859 Survey held at Belfast Date 4<sup>th</sup> June.

on the New Iron Ship "Candahar" Master C. Gossop

Tonnage under tonnage deck 1343.21 Built at Belfast

When built 1866 Launched 1 May

Ditto of poop house or spar deck 44.49

By whom built Harland & Wolff Owners J. & J. Brocksbank

Ditto of engine room -

Total Register tonnage 1418.00

Port belonging to Liverpool

Destined Voyage Liverpool

Gross tonnage

N Surveyed while Building, Afloat, or in Dry Dock Specially Surveyed While Building

Feet. Inches.	Feet. Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet. Inches.	Horse.	Nº. of Decks
Length aloft 234 6	Extreme Breadth 34 2	24 1	Power of Engines —	—	2
(Dimensions of Ship per Register, length 239.4 breadth 34 depth 23.11)					
Keel, N bar iron, depth and thickness.....	Inches in Ship. 12 x 2½	Inches required per Rule. 9 x 3	Plates in Garboard Strakes, breadth and thickness .....	20½	14 7/8 3½ 14 7/8
" if plate iron, breadth and thickness .....			Ditto from Garboard to upper part of Bilges .....	13 7/8	13 7/8
Stem, N bar iron, moulding and thickness .....	12 x 2½	9 x 3	" from upper part of Bilge to a perpendicular height from upper side of Keel of 3ths the entire depth of Hold .....	12 7/8	12 7/8
" if plate iron, breadth and thickness .....	8½ x 2½ at head	9 x 3	" from 3/8ths depth of Hold to lower edge of Sheerstrake .....	11 7/8	11 7/8
Stern-post, N bar iron, moulding and thickness .....	9 x 3	9 x 3	" Sheerstrake, breadth and thickness .....	3½	13 7/8 13 7/8
" " if plate iron, breadth and thickness .....			Butt Straps to outside plating, breadth and thickness .....	10 11/16	4 11/16 13 7/8
Distance of Frames from moulding edge to moulding edge, all fore and aft .....	21	21	Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness .....	32	14 7/8 32 14 7/8
Frames, Size of Angle Iron, single or double .....	5 3/2	9 7/8 15 3/2 9 7/8	Angle Iron on ditto .....	5 1/2 x 4 1/2	9 7/8 5 1/2 x 4 1/2 9 7/8
" Reversed Iron, N to every frame or every frame .....	3 1/2 3	8 7/8 13 1/2 3 8 7/8	Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways .....	13 1/2	11 7/8 13 1/2 11 7/8
Floors, depth and thickness of Floor Plate at mid line .....	25	11 7/8 25 11 7/8	Diagonal Tie Plates on ditto .....	13 1/2	11 7/8 13 1/2 11 7/8
" Ditto ditto at Bilge Keelson	9 7/8	9 7/8	Planksheer, materials and scantlings <i>see sketch</i> .....		
Size of Reversed Angle Iron, and No. 2 at top of Floor Plate .....	3 1/2 3	8 7/8 13 1/2 3 8 7/8	Waterway ditto ditto .....		
Beams, Deck (Nº.) double Angle Iron, Plate, Tee, or Bulb Iron .....	9	9 7/8 9 7/8	Flat of Upper Deck, thickness and material .....	4 1/2	14
" double or single Angle Iron, on Upper edge .....	3 1/2 3	2 1/2 3 2 1/2	<i>Yellow Pine to Gray Green</i> Now fastened to Beams <i>Galvanized Iron</i> <i>seen to</i>		
" average space between .....	41 1/2	10 1/2 10 1/2	Ceiling betwixt Decks and in Hold, thickness and material .....	2 1/2	
" Hold, or Lower Deck (Nº.) double Angle, Tee, Plate, or Bulb Iron .....	9	9 7/8 9 7/8	Clamps or Spirketting <i>Yellow Pine</i> ditto .....	2 1/2	
" double or single Angle Iron on Upper edge .....	3 1/2 3	2 1/2 3 2 1/2	Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness .....	25	11 7/8 25 11 7/8
" average space between .....	41 1/2	10 1/2 10 1/2	Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams .....	13 1/2	11 7/8
Paddle, sided and moulded, thickness of Plate size of Angle Iron .....	1 1/2	1 1/2 1 1/2	Stringers in Hold .....	5 1/2 x 4 1/2	9 7/8 5 1/2 x 4 1/2 9 7/8
Engine .....			Flat of Lower Deck, thickness and material .....	3 1/2	4 1/2 9 7/8
Keelson, single or double plate, box, or intercostal			Main piece of Rudder, diameter at head .....	b	b
" Size of Plates .....			" " " " " at heel .....	3 1/4	3 1/4
" Size of Angle Irons .....			(Can the Rudder be unshipped afloat <i>Yes</i> )		
" Side, single or double, plate, box, or intercostal			Bulkheads, N°. one Thickness of .....	7/8	7/8
" Bilge (No. 2) at each Bilge, single, or double, plate, or box .....			" Height up <i>Main deck</i> .....		
Transoms, material <i>Iron</i> or, if none, in what manner compensated for.			" how secured to the sides of the ship <i>Riveted between two frames</i> .....		
Knight-heads, and Hawse Timbers <i>Iron</i>			" size of vertical angle irons <i>3 1/2 x 8</i> and their distance apart <i>30 in</i> .....		
The Frames extend in one length from Keel to Quincale			" riveted through plates with ( <i>1/8 in.</i> ) rivets, about ( <i>4 in.</i> ) apart.		
The reverse angle irons on the floors extend in one length across the middle line from <i>2 1/2 to 5 feet on each side alternately to hold beam stanchions</i>					
" " " on the frames .....					
Keelson, how are the various lengths of plates or angle irons connected? <i>With butt straps</i>					
Plates, Garboard, double or riveted to keel, double or at upper edge, with rivets ( <i>1 1/4 x 1 ins.</i> ) diameter, averaging ( <i>3 1/2 in.</i> ) apart.					
" Edges from Garboards to upper part of bilge, worked <i>out in alternately</i> , double or single riveted; with rivets ( <i>1/8 in.</i> ) diameter, averaging ( <i>.3 in.</i> ) apart.					
" Butts from Keel to turn of bilge, worked carvel with butt straps ( <i>14 x 13</i> ) thick, double or single riveted; with rivets ( <i>1 1/4 in.</i> ) diameter, averaging ( <i>.3 in.</i> ) apart.			Do the butt straps lap over and rivet through the lands of the stave below? <i>Alternately</i>		
" Edges from bilge to sheerstrake, worked <i>out in alternately</i> with a lining piece ( <i>1/4 in.</i> ) thick, or clencher, double or single riveted; with rivets ( <i>1/8 in.</i> ) diameter, averaging ( <i>2 1/4 in.</i> ) apart.					
" Edges of Sheerstrake, double or single riveted? At upper edge <i>Liaze</i> At lower edge <i>Double</i>					
" Buttons to planksheer, worked carvel with butt straps ( <i>11 1/2 x 13</i> ) thick, double or single riveted; with rivets ( <i>1/8 in.</i> ) diameter, averaging ( <i>2 1/4 ins.</i> ) apart. Breadth of laps in double rivetting ( <i>.5 in.</i> ) Breadth of laps in single rivetting ( <i>)</i>					
Butt Straps of Keelsons, Stringer and Tie Plates, double or single riveted?					
Planksheer, how secured to the plating of the sides					
Waterway planksheer and to the Beams					
Deck Beams, how secured to the side? <i>Knee plates welded &amp; riveted to frame</i>					
Hold or Lower Deck ditto					
Paddle .....					

What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c. *Single iron made by the Wreckers*

Manufacturer's name or trade mark *John Company, Glasgow, Plates made by Messrs. Steel & Sons, Liverpool, & Ballantyne & Co.*

We certify that the above is a correct description of the several particulars therein given.

Builder's Signature *Harland & Wolff*

Surveyor's Signature *W. Smith*

Lloyd's Register Foundation  
IRON439-0422

Are the lands laps of the clenchwork in all cases five and a half times the diameter of the rivets? Yes  
 Do the edges of the carvel work and of the butts fay 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? Filled in solid  
 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? A few

Her Masts, Bow-sprit, 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 Bow-sprit are constructed, showing the number of Plates and Angle Irons, mode of rivetting, quality of Materials, and if stamped with Maker's name.)

Bowsprit The lower masts, Bow-sprit, lower yards, & main & fore lower topsail Yds. are made of Iron, fore & main masts plates  $\frac{3}{8}$  thick, 3 angle irons in each  $3\frac{1}{2} \times 3\frac{1}{2}$  in 42 feet long, mizen mast plates  $\frac{5}{16}$  thick 3 angle irons 36 feet long.  
Yards Bow-sprit plates  $\frac{3}{8}$  thick 3 angle irons  $3 \times 3 \frac{1}{2}$  in entire length 43 pieces of angle iron riveted back to back 16 feet at 8 feet long 12x58. on each fore & main lower Yd. plates  $\frac{5}{16} \times \frac{4}{16}$  at ends, 3 bars Convex iron  $2\frac{1}{2} \times 2\frac{1}{2} \times 42 \frac{1}{4}$  44 feet long, 3 doubling plates at stings as above 3 feet long 3 doubling plates at stings  $\frac{1}{4}$  feet long  $9 \frac{1}{2}$  feet long  $9 \frac{1}{2}$  feet long. Butts in masts & Yds. are treble & four-fold riveted where stings are most required. She has SAILS.

N°.		Fathoms.	Inches.	Tested to.	N°.	Weight.	Tested to.
1.	Fore Sails,	Chain .....	300	17/8	Tons.	Ex. Stock	Tons.
one double	Fore Top Sails,	Hemp Stream Cable .....	90	17/8	15.5	137.0	1033.16.3.14
✓	Fore Topmast Stay Sails,	Hawser .....	2..	90	4	128.0	024.2.2.0
one double	Main Sails,	Towlines .....	90	12 1/2	J. S. Ordinary	132.2	1430.11.3.14
and	Main Top Sails,	Warp .....	All of <u>good</u> quality.		Stream, Cravans .....	110.0	1412.17.2.0
					Kedges, .....	12.2.11	52.2.0

Her Standing and Running Rigging Found to be sufficient in size and good in quality.

She has one Long Boat and three others

The present state of the Windlass is good Capstan  $\frac{1}{3}$  good and Rudder good Pumps 2 Cast Metal & one Lead good

Order for Special Survey	DATES of Surveys held while building	1st. On the several parts of the frame, when in place, and before the plating was wrought	December 6. 1865
No. 30 Date 9 <sup>th</sup> Dec 1865		2nd. On the plating during the progress of rivetting	January 26. 1866
Order for Ordinary Survey	as per Section 18.	3rd. When the beams were in and fastened, and before the decks were laid	February 15. 1866
No. _____ Date _____		4th. When the ship was complete, and before the plating was finally coated	April 9. 1866
		5th. After the ship was launched	June 4. 1866

State if she has a Spar Deck No Poop No or Forecastle Yes

General Remarks. Centre line 100x Keelson. plates  $14 \times 14\frac{1}{16}$  deep amidships tapering to  $12\frac{1}{2} \times 11\frac{1}{16}$  at ends of vessel. butt straps on top and sides 24x26 in broad four-fold riveted. for about 95 feet amidships. Treble & double riveted from thence to ends. Ridge keelsons bulb iron  $9 \times 8\frac{1}{16}$  riveted between two bars of angle iron  $5\frac{1}{2} \times 4\frac{1}{2} \times 9\frac{1}{16}$  for 128 feet amidships. and from thence angle irons riveted back to back to ends. An additional strainer on upper deck 160 feet  $28 \times 14\frac{1}{16}$  broad amidships tapering to 9 in at ends. Sheerstrakes table riveted for about 140 feet on each side amidships. Angle irons on lower deck strainer, riveted to double reverse bars. for 80 feet on each side.

I am of opinion that this vessel (when the sails on board are complete as per letter herewith) should be Classed A.

In what manner are the surfaces preserved from oxidation? Inside above this is coated twice with a mixture of Red & White outside four coats of Red & White lead mixed, on bottom, coppered, and partly white.

I am of opinion this Vessel should be Classed

The amount of the Fee £ 5: - : - is received by me Alet Linton

June 11<sup>th</sup> Special £ 40:18:

Certificate (X required) £ - : -

Committee's Minute 6<sup>th</sup> July 1866

Character assigned A

Our Com. a. July 12<sup>th</sup> 1866  
To have the form a

