

IRON SHIPS.

No. 8546 Survey held at Sunderland Date October 18th 1885
 the Steam Steamer "City of Durham" Master J Phillips
 Tonnage under tonnage deck 696.57 Built at Sunderland When built 1865 Launched August 5/65
 Ditto of poop or spar deck
 Ditto of engine room 158.15 By whom built Mr James Leung Owners W Inman
 Total Register tonnage 538.42 Port belonging to Liverpool Destined Voyage Liverpool
 Gross tonnage 696.57
 Surveyed while Building, Afloat, or in Dry Dock Whilst building

Length aloft 200 0 Extreme Breadth 28 9 Depth from top of Upper Deck Beam to top of Floor 16 9 Power of Engines 120 No. of Decks One
 Dimensions of Ship per Register, length 201.1 breadth 28.8 depth 16.6

	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	16ths required per Rule.
Keel, if bar iron, depth and thickness.....	7 x 2 3/4	7 x 2 3/4			
„ if plate iron, breadth and thickness	7 x 2 3/4	7 x 2 3/4			
Stem, if bar iron, moulding and thickness	7 x 2 3/4	7 x 2 3/4			
„ if plate iron, breadth and thickness	7 x 2 3/4	7 x 2 3/4			
Stern-post, if bar iron, moulding and thickness	9 x 4	9 x 4			
„ if plate iron, breadth and thickness	9 x 4	9 x 4			
Distance of Frames from moulding edge to moulding edge, all fore and aft	21	21			
Frames, Size of Angle Iron, single or double..	3	3	6	6	6
„ Reversed Iron, if to every frame	3	3	6	6	6
Floors, depth and thickness of Floor Plate at mid line	10 1/2	10 1/2	8	8	8
„ Ditto ditto at Bilge Keelson	11	11	8	8	8
„ Size of Reversed Angle Iron, and No. single at top of Floor Plate	3	3	6	6	6
Beams, Deck (No. 33) double Angle Iron, Plate, Tee, or Bulb Iron	7	7	7	7	7
„ „ double or single Angle Iron, on upper edge....	2 3/4	2 3/4	5	5	5
„ „ average space between	on every alternate frame				
„ Hold, or Lower Deck (No. 20) double Angle, Tee, Plate, or Bulb Iron	7	7	7	7	7
„ „ double or single Angle Iron on upper edge....	2 3/4	2 3/4	5	5	5
„ „ average space between	on every 2 nd frame				
„ Paddle, sided and moulded, thick-ness of Plate size of Angle Iron					
„ Engine „ „ „ „					
Keelson, single or double plate, box, or intercostal					
„ Size of Plates (Double).....	each 13	8 1/2	12 1/4	10	10
„ Size of Angle Irons (Double).....	4 1/2	3 1/2	7	4 1/2	3 1/2
„ Side, single or double plate, box, or intercostal	4 1/2	3 1/2	7	4 1/2	3 1/2
„ Bilge (No. Single) at each Bilge, single, or double, plate, or box	4 1/2	3 1/2	7	4 1/2	3 1/2

Transoms, material None or, if none, in what manner compensated for?
 Knight-heads, and Hawse Timbers None

The Frames extend in one length from Keel to Gunwale rivetted through plates with (3/4 in.) rivets, about (6) apart.

The reverse angle irons on the floors extend in one length across the middle line from Keel to the upper part of Bilge on every
 „ „ „ on the frames „ „ „ from Keel and to the Deck Beam Stringers on alternate frames

Keelson, how are the various lengths of plates or angle irons connected? With Double angle iron properly shifted

Plates, Garboard, double or rivetted to keel, double or at upper edge, with rivets (1/2 ins.) diameter, averaging (4 x 2 1/2 in.) apart.

„ Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted; with rivets (1/2 in.) diameter, averaging (2 3/4 ins.) apart.

„ Butts from Keel to turn of bilge, worked carvel with butt straps (2 x 10) thick, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 3/4 ins.) apart. Do the butt straps lap over and rivet through the lands of the strake below? No

„ Edges from bilge to sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 3/4 in.) apart. Do the butt straps lap over and rivet through the lands of the strake below? No

„ Edges of Sheerstrake, double or single rivetted? At upper edge Single to angle iron At lower edge Double rivetted

„ Butts from bilge to planksheers, worked carvel with butt straps (7/16) thick, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 3/4 ins.) apart. Breadth of laps in double rivetting (4 1/2) Breadth of laps in single rivetting (2 3/4)

Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? Double rivetted

Planksheer, how secured to the plating of the sides Explain by sketch

Waterway „ „ planksheer and to the Beams if necessary.

Deck Beams, how secured to the side? Turned down and rivetted to frames

Hold or Lower Deck ditto As above

Paddle „ „ No. of breasthooks Five crutches Four

What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.?

Manufacturer's name or trade mark (See other side)

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

Builder's Signature James Leung Surveyor's Signature James Lawrence

James Lawrence

4334 *Pen*

Workmanship. Are the lands or laps of the clenwork 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 with single

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? Very few.

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, made of rivetting, quality of Materials, and if stamped with Maker's name.

She has SAILS.			CABLES, &c.			ANCHORS, and their weights.		
No.				Fathoms.	Inches.	Tested to Tons.	No.	Weight. Ex. Stock
<i>The full suit</i>	Fore Sails,	Chain		270	1 3/8	34	Bowers, <i>Knappe's</i>	1 17.0.0
	Fore Top Sails,	Hempen Stream Cable		80	8		<i>do</i>	1 16.1.12
	Fore Topmast Stay Sails,	Hawser <i>Chain</i>		90	3 1/4		<i>do</i>	1 14.0.24
	Main Sails,	Towlines		90	6		Stream,	1 7.0.16
	Main Top Sails,	Warp		90	5 1/2		Kedges,	1 3.2.0
and		All of <u>good</u> quality.		90	4			1 1.3.0
Her Standing and Running Rigging <u>off the ship</u> sufficient in size and <u>good</u> in quality.								
She has <u>The</u> Long Boat and <u>two others</u>								
The present state of the <u>Windlass</u> <u>Capstan</u> <u>good</u> and Rudder <u>good</u> Pumps <u>good</u>								

Order for Special Survey	DATES of	1st.	On the several parts of the frame, when in place, and before the plating was wrought	<u>April 6th 1875</u>
No. <u> </u>	Surveys held	2nd.	On the plating during the progress of rivetting	<u>29th "</u>
Date <u> </u>	while building	3rd.	When the beams were in and fastened, and before the decks were laid	<u>June 12th "</u>
Order for Ordinary Survey	as per	4th.	When the ship was complete, and before the plating was finally coated	<u>July 31st "</u>
No. <u> </u>	Section 18.	5th.	After the ship was launched	<u>Oct. 13th "</u>
Date <u> </u>				

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

General Remarks, *This vessel has a double bottom in Iron and after hatches. Length of tank in fore hold 17 feet, and in after hold 64 feet. The inner angle iron is separated as usual in way of inner bottom. Plating 3/16 thick and flange plates 7/16.*

Testing certificates of the Chain cables and Anchors, issued from the Sunderland Public Chain & Anchors Testing House and signed by Mr John Thompson, have been produced.

The iron has been supplied by the undermentioned Firms

<i>Frames, keelsons &c.</i>	<i>Beams</i>	<i>Lock Wilson & Bell</i>
<i>and angle iron &c</i>		
<i>Outside plating</i>		<i>Shotley Bridge Iron Coy.</i>
<i>Stringer plates</i>		<i>Bolchorn & Langham</i>
<i>Keelsons, Angle iron.</i>		<i>Hopkins & Co. Middleboro.</i>

We respectfully leave the claims of this vessel to be closed &c. to the consideration of the Committee,

In what manner are the surfaces preserved from oxidation? Inside Portland Cement in flat of bottom, above and below

Ditto ditto Outside Thin coats of red lead

I am of opinion this Vessel should be Classed _____

The amount of the Fee£ 5 : : : is received by me, Oct 1875

Special£ : : : : 20/5

Certificate (if required)£ : : : : 5 : :

Committee's Minute 20th October 1875

Character assigned A 1

I am of opinion this vessel is eligible for the A 1 class

14 Oct 75