

# IRON SHIPS.

No. 2460 Survey held at West Hartlepool Date 23<sup>rd</sup> Aug to 30<sup>th</sup> August 1865  
 on the ship "Indian Empire" Master Deuchars No. 318/15  
 Tonnage under tonnage deck 1439.46 Built at W. Hartlepool When built 1863 Launched 13<sup>th</sup> July  
 Ditto of poop or spar deck 60.90 By whom built Pile Spence & Co. Owners Gen. Duncan & Co.  
 Date of entering room 14.12 Port belonging to London Destined Voyage India  
 Gross tonnage 1514.56  
 Surveyed while Building, Afloat, or in Dry Dock While Building

Length aloft	Feet.	Inches.	Extreme Breadth	Feet.	Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet.	Inches.	Power of Engines	Horse.	No. of Decks
(Dimensions of Ship per Register, length <u>230</u> - breadth <u>30</u> - depth <u>23.5</u> )	<u>230</u>	<u>3</u>	<u>30</u>	<u>5</u>			<u>23</u>	<u>5</u>			<u>Two</u>
Keel, if bar iron, depth and thickness.....	Inches in Ship.	Inches required per Rule.									
„ if plate iron, breadth and thickness ....	<u>10 3/4 x 2 1/2</u>	<u>9 x 3</u>									
Stem, if bar iron, moulding and thickness ....	<u>10 3/4 x 2 1/2</u>	<u>9 x 3</u>									
„ if plate iron, breadth and thickness ....	<u>10 3/4 x 2 1/2</u>	<u>9 x 3</u>									
Stern-post, if bar iron, moulding and thickness	<u>10 3/4 x 2 1/2</u>	<u>9 x 3</u>									
„ if plate iron, breadth and thickness	<u>21</u>	<u>21</u>									
Distance of Frames from moulding edge to moulding edge, all fore and aft .....											
Double cross keel 4 ft											
Frames, Size of Angle Iron, single or double ..	<u>5 3/2</u>	<u>9 1/2</u>	<u>5 3/2</u>	<u>9 1/2</u>	<u>5 3/2</u>	<u>9 1/2</u>	<u>5 3/2</u>	<u>9 1/2</u>			
„ „ Reversed Iron, if to every frame or every other frame.....	<u>3 1/2</u>	<u>3</u>	<u>3 1/2</u>	<u>3</u>	<u>3 1/2</u>	<u>3</u>	<u>3 1/2</u>	<u>3</u>			
Floors, depth and thickness of Floor Plate at mid line .....	<u>26</u>	<u>x</u>	<u>11 1/6</u>	<u>25 1/2</u>	<u>x</u>	<u>11 1/6</u>	<u>25 1/2</u>	<u>x</u>			
„ Ditto ditto at Bilge Keelson	<u>12</u>	<u>x</u>	<u>11 1/6</u>	<u>12</u>	<u>x</u>	<u>11 1/6</u>	<u>12</u>	<u>x</u>			
„ Size of Reversed Angle Iron, and No. <u>one</u> at top of Floor Plate	<u>3 1/2</u>	<u>3</u>	<u>3 1/2</u>	<u>3</u>	<u>3 1/2</u>	<u>3</u>	<u>3 1/2</u>	<u>3</u>			
Beams, Deck (No. <u>62</u> ) double Angle Iron, Plate, Tee, or Bulb Iron .....	<u>9 1/2</u>	<u>x</u>	<u>9 1/6</u>	<u>9 1/2</u>	<u>x</u>	<u>9 1/6</u>	<u>9 1/2</u>	<u>x</u>			
„ „ double or single Angle Iron, on <u>10 1/2</u> edge.....	<u>4</u>	<u>3</u>	<u>7 1/6</u>	<u>4</u>	<u>3</u>	<u>7 1/6</u>	<u>4</u>	<u>3</u>			
„ „ average space between .....	<u>3 1/2</u>	<u>6</u>	<u>3 1/2</u>	<u>6</u>	<u>3 1/2</u>	<u>6</u>	<u>3 1/2</u>	<u>6</u>			
„ Hold, or Lower Deck (No. <u>62</u> ) double Angle, Tee, Plate, or Bulb Iron	<u>9 1/2</u>	<u>x</u>	<u>9 1/6</u>	<u>9 1/2</u>	<u>x</u>	<u>9 1/6</u>	<u>9 1/2</u>	<u>x</u>			
„ „ double or single Angle Iron on <u>10 1/2</u> edge.....	<u>4</u>	<u>3</u>	<u>7 1/6</u>	<u>4</u>	<u>3</u>	<u>7 1/6</u>	<u>4</u>	<u>3</u>			
„ „ average space between .....	<u>3 1/2</u>	<u>6</u>	<u>3 1/2</u>	<u>6</u>	<u>3 1/2</u>	<u>6</u>	<u>3 1/2</u>	<u>6</u>			
„ Paddle, sided and moulded, thickness of Plate <u>size of Angle Iron</u>											
„ Engine <u>founder plate</u>	<u>24</u>	<u>x</u>	<u>11 1/6</u>	<u>19</u>	<u>x</u>	<u>11 1/6</u>	<u>19</u>	<u>x</u>			
Keelson, single or double plate, box, or intercostal	<u>17</u>	<u>x</u>	<u>11 1/6</u>	<u>17</u>	<u>x</u>	<u>11 1/6</u>	<u>17</u>	<u>x</u>			
„ Size of Plates <u>top plate</u>	<u>22</u>	<u>x</u>	<u>11 1/6</u>	<u>10</u>	<u>x</u>	<u>11 1/6</u>	<u>10</u>	<u>x</u>			
„ Size of Angle Irons .....	<u>4</u>	<u>3 1/2</u>	<u>9 1/6</u>	<u>14</u>	<u>3 1/2</u>	<u>9 1/6</u>	<u>14</u>	<u>3 1/2</u>			
„ Side, single or double, plate, box, or intercostal											
„ Bilge (No. <u>one</u> ) at each Bilge, single, or double, plate, or box .....	<u>5</u>	<u>4</u>	<u>10 1/6</u>	<u>6</u>	<u>5</u>	<u>9 1/6</u>	<u>6</u>	<u>5</u>			
Transoms, material <u>Plate</u> or, if none, in what manner compensated for.											
Knight-heads, and Hawse Timber <u>Blocks 9 Oak</u>											
The Frames extend in one length from <u>Keel</u> to <u>Gunnwale</u>											
The reverse angle irons on the floors extend in one length across the middle line from <u>bilge</u> to <u>bilge</u>											
„ „ „ on the frames „ „ „ from <u>bilge</u> to <u>above hold beam</u>											
Keelson, how are the various lengths of plates or angle irons connected? <u>butts shifted &amp; strapped &amp; rivetted</u>											
Plates, Garboard, double or rivetted to keel, double or at upper edge, with rivets (1 1/4 ins.) diameter, averaging (3 1/4 in.) apart.											
„ Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted; with rivets (7/8 in.) diameter, averaging (2 3/4 ins.) apart.											
„ Butts from Keel to turn of bilge, worked carvel with butt straps (11 x 1 3/16) thick, double or single rivetted; with rivets (7/8 in.) diameter, averaging (3 ins.) apart.											
„ Edges from bilge to sheerstrake, worked carvel with a lining piece ( ) thick, or clencher, double or single rivetted; with rivets (7/8 in.) diameter, averaging (2 3/4 in.) apart.											
„ Edges of Sheerstrake, double or single rivetted? At upper edge <u>Single to bulwark</u> At lower edge <u>Double</u>											
„ Butts from bilge to planksheers, worked carvel with butt straps (10 x 1 1/16) thick, double or single rivetted; with rivets (7/8 in.) diameter, averaging (2 3/4 ins.) apart.											
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? <u>Double</u>											
Planksheer, how secured to the plating of the sides											
Waterway „ „ planksheer and to the Beams											
Deck Beams, how secured to the side? <u>Beam ends turned &amp; pieces welded</u>											
Hold or Lower Deck ditto <u>Same as Deck</u>											
Paddle „ „											
No. of breasthooks <u>Five</u> crutches <u>Three</u>											
What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.? <u>Good</u>											
Manufacturer's name or trade mark <u>Bolehai &amp; Co. Ltd.</u>											
We certify that the above is a correct description of the several particulars therein given.											
Builder's Signature <u>W. Spence &amp; Co. Limited</u>											
Surveyor's Signature <u>S. P. Gladstone</u>											
<u>measuring direct</u>											



4240 Lm

**Workmanship.** Are the lands or laps of the clenchwork 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 in one length

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? All through

Are there any rivets which either break into or have been put through the seams or butts of the plating? A few in butts

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

Fore & Main Masts of 8 1/2" at wedging tapered to 7 1/2" at heads & heels made with 3 plates. Double rivetted at edges & butts 3/4 inch spaced 2 3/4 apart. length of mast 80 & 90 ft. 3" of plates 9 ft. Diameter at deck 22. Main mast at wedging tapered to head & heels 6 1/2" in two plates with double rivetted edges & butts. This has inside 4 1/2 x 3 x 7/16 length 81 ft. Diameter 21 in at deck length of plates 9 ft.

She has **SAILS.**

**CABLES, &c.**

**ANCHORS, and their weights.**

No.		Fathoms.	Inches.	Tested to Tons.	No.	Weight Ex. Stock	Tested to Tons.
Fore Sails,	Chain .....	300	1 7/8	63 1/4	Bowers, <u>Trotmans</u>	3	35.2.0
Fore Top Sails,	Heaven Stream Cable .....	90	1				34.0.6
Fore Topmast Stay Sails,	Hawser .....	90	1 1/2				29.8.6
Main Sails,	Towlines .....	90	9		Stream, <u>Including Stock</u>	1	14.1.10
Main Top Sails,	Warp .....	90	7 1/2		Kedges, .....	2	7.2.0
and	All of <u>Good</u> quality.	90	7 1/2				3.2.0

Her Standing and Running Rigging Mr. Ainslie & Son sufficient in size and Good in quality.

She has Two life Long Boat and two butters Home his

The present state of the Windlass is Seals Capstan of iron and Rudder Good Pumps 3 of 7 in bucket & 2 of 5 in bucket

Order for Special Survey	DATES of	1st.	2nd.	3rd.	4th.	5th.
No. <u>220</u>	Surveys held	On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the progress of rivetting	When the beams were in and fastened, and before the decks were laid	When the ship was complete, and before the plating was finally coated	After the ship was launched
Date <u>26th May 1865</u>	while building					
Order for Ordinary Survey	as per					
No. _____	Section 18.					
Date _____						

State if she has a Spar Deck \_\_\_\_\_ Poop \_\_\_\_\_ or Forecastle & Deck houses

**General Remarks,** Bowsprit of 7 1/2" plate, made in two plates, double rivetted at edges & butts, three angle bars inside 3 1/2 x 3 x 8/16. Lower yard 6 1/2" plate at slings tapered to 4 1/2" at ends, three angle bars inside 3 x 3 x 6/16

Has an Intercoastal Keelson fitted on each side between bilge & middle line do. plates 22 x 11/16. Double angle iron 5 x 4 x 11/16.

Forecastle & Deck house aft. 2 in midships. Forecastle frames all to the top height beams 8 x 8/16 built. Double angle irons on top 3 x 3 x 7/16. Plating 6/16 single rivetted at edges double at butts. 3/4 inch spaced 2 3/4. Water 6 x 11 Deck. Plating of deck 3/4 Pine.

Thirty-one half floors 16 thin the same strengthened with an angle iron on the lower part 5 x 3 1/2 x 9/16 forming double frame bilge crossing keel 2 ft. These plates being distributed over the flat. See Secretary's letter dated 6th March 1865. 9 1/2" built plates fitted between bilge keelson & hold stinger angle bars on both sides fore & aft. Additional stinger fitted to the reverse bar about 4 ft. below hold beams. Double angle iron 5 x 4 x 10/16 with built plate between 9 1/2 x 9/16 for 3/5 of the length. Double angle iron 5 x 4 x 10/16 from the after bulkhead stinger forward.

In what manner are the surfaces preserved from oxidation? Inside Flat cemented with Portland cement

Ditto ditto Outside other parts with three coats of paint.

Bottom coated over with Mr. Jones's Patent Composition

I am of opinion this Vessel should be Classed A 1

The amount of the Fee £ 5 : 0 : 0 is received by me,

Special £ 75 : 14 : 0

Certificate (if required) £ : : :

Committee's Minute 1st September 1865.

Character assigned A 1

A 7 C 2

Decided in the above  
Recommendation  
31 Aug 1865  
Lloyd's Register  
Foundation

duplicates (see letter 13/10/65)