

# IRON SHIP.

No. *145* Survey held at *West Hartlepool* Date, First Survey *23 Mar 86* Last Survey *7 Aug 1886*  
On the *Screw Steamer "Bakuin" - Schooner Rig - 3 Masts* (57 masts)

TONNAGE under *1312.67* ~~ONE OR TWO DECKED, THREE DECKED VESSEL,~~  
Tonnage Deck *6.46* ~~SPR. OR ANNING DECKED VESSEL~~  
Ditto of Third, Spar, *153.10* Half Breadth (moulded) *17.89* Built at *West Hartlepool*  
Ditto of Poop, or *3.68* Depth from upper part of Keel to top of Upper Deck Beams *20.58* When built *1886* Launched *17 June 85*  
Ditto of House, Bridge *32.03* Girth of Half Midship Frame (as per Rule) *35.50* By whom built *W. Gray & Co.*  
Ditto of Forecastle *23.12* 1st Number *78.97* Owners *W. Gray*  
Gross Tonnage *1531.06* 2nd Number *19121* Residence *West Hartlepool*  
Less Crew Space *41.88* Length *258.5* Port belonging to *London*  
Less Engine Room *489.94* 2nd Number *19121* Destined Voyage *Black Sea*  
Register Tonnage *999.24* Proportions - Breadths to Length *7.22* & Surveyed while Building, Afloat, or in Dry Dock  
as cut on Beams *999.24* Depths to Length - Upper Deck to Keel *12.56*

| LENGTH  | BREADTH   | DEPTH  | Power of Engines | No. of Decks with flat laid | No. of Tiers of Beams |
|---|---|--|------------------|-----------------------------|-----------------------|
| on deck as per Rule <i>258.5</i>  | Moulded <i>35.9 1/2</i>   | top of Floors to Upper Deck Beams <i>17.5</i><br>Do. do. Main Deck Beams <i>17.5</i> | <i>200</i>       | <i>2</i>                    | <i>2</i>              |
| Dimensions of Ship per Register, length, <i>260.4</i> breadth, <i>36.0</i> depth, <i>17.5</i>                 |   |  |                  |                             |                       |
| KEEL, depth and thickness   | Inches in Ship  | Inches per Rule  |                  |                             |                       |
| STEM, moulding and thickness  | <i>9 x 2 1/2</i>  | <i>9 x 2 1/2</i>   |                  |                             |                       |
| STERN-POST for Rudder do. do.   | <i>9 x 5 1/2</i>  | <i>9 x 5 1/2</i>   |                  |                             |                       |
| for Propeller   | <i>9 x 5 1/2</i>  | <i>9 x 5 1/2</i>   |                  |                             |                       |
| Distance of Frames from moulding edge to moulding edge, all fore and aft                                      | <i>24</i>   | <i>24</i>  |                  |                             |                       |
| FRAMES, Angle Iron, for 1/2 length amidships  | <i>5 3 8</i>  | <i>5 3 8</i>   |                  |                             |                       |
| Do. for 1/2 at each end   | <i>5 3 7</i>  | <i>5 3 7</i>   |                  |                             |                       |
| REVERSED FRAMES, Angle Iron   | <i>3 3 7</i>  | <i>3 3 7</i>   |                  |                             |                       |
| FLOORS, depth and thickness of Floor Plate at mid line for half length amidships                              | <i>cellular</i>   | <i>see Section</i>   |                  |                             |                       |
| thickness at the ends of vessel   | <i>double</i>   | <i>Section</i>   |                  |                             |                       |
| depth at 1/2 the half-bdth. as per Rule   | <i>bottom</i>   |  |                  |                             |                       |
| height extended at the Bilges   |   |  |                  |                             |                       |
| BEAMS, Upper, Spar, or Anning Deck  | <i>8 1/2 8</i>  | <i>8 1/2 8</i>   |                  |                             |                       |
| Single or double Angle Iron on Upper edge   | <i>3 3 7</i>  | <i>3 3 7</i>   |                  |                             |                       |
| Average space   | <i>48</i>   | <i>48</i>  |                  |                             |                       |
| BEAMS, Main, or Middle Deck   | <i>6 3 8</i>  | <i>6 3 8</i>   |                  |                             |                       |
| Single or double Angle Iron, Plate or Tee Bulb Iron   | <i>24</i>   | <i>34</i>  |                  |                             |                       |
| Single or double Angle Iron on Upper edge   |   |  |                  |                             |                       |
| Average space   |   |  |                  |                             |                       |
| BEAMS, Lower Deck   | <i>6 3 8</i>  | <i>6 3 8</i>   |                  |                             |                       |
| Single or double Angle Iron, Plate or Tee Bulb Iron   |   |  |                  |                             |                       |
| Single or double Angle Iron on Upper edge   |   |  |                  |                             |                       |
| Average space   |   |  |                  |                             |                       |
| BEAMS, Hold, or Orlop   |   |  |                  |                             |                       |
| Single or double Angle Iron, Plate or Tee Bulb Iron   |   |  |                  |                             |                       |
| Single or double Angle Iron on Upper edge   |   |  |                  |                             |                       |
| Average space   |   |  |                  |                             |                       |
| KEELSONS Centre line, single or double plate, box, or Intercoastal Plates                                     | <i>cellular</i>   | <i>see Section</i>   |                  |                             |                       |
| Rider Plate   |   |  |                  |                             |                       |
| Bulb Plate to Intercoastal Keelson  | <i>double</i>   | <i>see Section</i>   |                  |                             |                       |
| Angle Irons   |   |  |                  |                             |                       |
| Double Angle Iron Side Keelson  |   |  |                  |                             |                       |
| Side Intercoastal Plate   | <i>bottom</i>   |  |                  |                             |                       |
| do. Angle Irons   |   |  |                  |                             |                       |
| Attached to outside plating with angle iron   |   |  |                  |                             |                       |
| BILGE Angle Irons   |   |  |                  |                             |                       |
| do. Bulb Iron   |   |  |                  |                             |                       |
| do. Intercoastal plates riveted to plating for length   |   |  |                  |                             |                       |
| BILGE STRINGER Angle Irons  |   |  |                  |                             |                       |
| Intercoastal plates riveted to plating for length   |   |  |                  |                             |                       |
| SIDE STRINGER Angle Irons   | <i>5 1/2 4 9</i>  | <i>5 1/2 4 9</i>   |                  |                             |                       |
| The FRAMES extend in length from  | <i>Centre line to Upper Deck, and cut at tank top and lower deck</i>      | <i>cellular double bottom to Lower Deck, Upper Deck and Tank</i>                     |                  |                             |                       |
| The REVERSED ANGLE IRONS on floors and frames extend  | <i>from middle line to</i>  |  |                  |                             |                       |
| KEELSONS. Are the various lengths of Plates and Angle Irons properly connected?                               | <i>yes</i>  | <i>And butts properly shifted? yes</i>   |                  |                             |                       |
| PLATING. Garboard, double riveted to Keel, with rivets  | <i>1 in diameter, averaging 4 ins. from centre to centre</i>              |  |                  |                             |                       |
| Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets                   | <i>7/8 in diameter, averaging 3 1/2 ins. from centre to edge</i>          |  |                  |                             |                       |
| Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets                                  | <i>7/8 in diameter averaging 3 1/2 ins. from centre to edge</i>           |  |                  |                             |                       |
| Butts of 4 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps                                   | <i>7/8 in diameter averaging 3 1/2 ins. from centre to edge</i>           |  |                  |                             |                       |
| Edges from Bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets                  | <i>7/8 in diameter, averaging 2 1/2 to 2 3/4 ins. from centre to edge</i> |  |                  |                             |                       |
| Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets                              | <i>7/8 in diameter, averaging 2 1/2 to 3 ins. from centre to edge</i>     |  |                  |                             |                       |
| Edges of Main Sheerstrake, double or single riveted   |   |  |                  |                             |                       |
| Butts of Main Sheerstrake, treble riveted for length amidships  |   |  |                  |                             |                       |
| Butts of Main Stringer Plate, treble riveted for length amidships   |   |  |                  |                             |                       |
| Breadth of laps of plating in double riveting   | <i>5 1/4 to 4 1/2</i>   | <i>Breadth of laps of plating in single riveting</i>                                 |                  |                             |                       |
| Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted?                           | <i>yes</i>  | <i>No. of Breasthooks</i>  |                  |                             |                       |
| What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? | <i>Best ship iron</i>   | <i>Crutches</i>  |                  |                             |                       |
| Manufacturer's name or trade mark   | <i>West Hartlepool Iron Co., Dorman Long &amp; Co., Middlesbrough and</i> | <i>Shut listed as per List of the Coast Iron Co.</i>                                 |                  |                             |                       |
| Is above a correct description of the Specimens available for inspection?                                     | <i>yes</i>  |  |                  |                             |                       |
| Signature, <i>W. Gray</i>   |   |  |                  |                             |                       |
| Surveyor's Signature, <i>W. H. Bullard</i>  |   |  |                  |                             |                       |

**Workmanship.** Are the butts of plating planed or otherwise fitted? *Planed, where practicable*  
 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, generally*  
 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. A few in the butts only*

Masts, Bowsprit, Yards, &c., are *Pitch Pine* in *good* condition, and sufficient in size and length. *If of Iron or Steel give Description of Plates, Angle Iron, and further explain by a sketch showing how the Mast and Bowsprit are constructed, showing the number of Plates and Angle Iron, mode of riveting, quality of Materials, and also Length and Diameter of Lower Masts and Bowsprit.*

| NUMBER & LETTER for EQUIPMENT 20008 |                          | CABLES, &c. |        | Test per Certificate | Length per Rule | Machine where Tested and Number of Certificate | ANCHORS, N°. | Weight, Ex. Stock | Test per Certificate | W'ght req'd per Rule. | Machine where Tested and Number of Certificate |
|-------------------------------------|--------------------------|-------------|--------|----------------------|-----------------|--|--------------|-------------------|----------------------|-----------------------|--|
| N°.                                 | SAILS.                   | Fathoms     | Inches |                      |                 |  |              |                   |                      |                       |  |
|                                     | Chain                    | 270         | 1 1/2  | 5 1/2 Tons           | 270-1 1/2       | 6286 South Dock Machine                        | Bow Anchor   | 1                 | 28-2-0               | 27-10-0-0             | 27-3-0 15308                                   |
|                                     | Fore Sails,              |             |        |                      |                 |  | Sunderland   | 1                 | 28-1-14              | 27-8-0-14             | 27-3-0 15311                                   |
|                                     | Fore Top Sails,          |             |        |                      |                 |  | 2 1/2        | 1                 | 23-2-21              | 23-13-3-0             | 24-0-0 15298                                   |
|                                     | Fore Topmast Stay Sails, |             |        |                      |                 |  |              |                   |                      |                       |  |
|                                     | Main Sails,              |             |        |                      |                 |  |              |                   |                      |                       |  |
|                                     | Main Top Sails, and      |             |        |                      |                 |  |              |                   |                      |                       |  |

Standing and Running Rigging *well* sufficient in size and *good* in quality. She has *3* Long Boats and *1* Life Boat.  
 The Windlass is *Iron* *Good* and Rudder *Good*. Pumps *Good*.

Engine Room Skylights. How constructed? *of iron* How secured in ordinary weather? *By slide bars.*

What arrangements for deadlights in bad weather? *Strong shutters, with bull's eyes.*

Coal Bunker Openings. How constructed? *of steel plates & angles* How are lids secured? *By latches* Height above deck? *part of after*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *On each side, six scuppers, and five scuppers.*

Cargo Hatchways. How formed? *of plates & angles. (See sections)*

State size Main Hatch *40'0" x 18'0"* Fore hatch *16'0" x 18'0" (wide)* Quarter hatch *34'6" x 18'0"*

If of extraordinary size, state how framed and secured? *For arrangement of deep web plates, see Section*

What arrangement for shifting beams? *Three feet aft cuttings in all the hatchways.*

Hatches. If strong and efficient? *Yes. 3" thick.*

Special Survey No. 1167

Date *6 Feb 86*

On the ordinary Survey No. *998*

Date *19 Feb 86*

No. *214* in builder's yard

State dates of letters respecting this case *14/1/86 12/2/86 17/2/86 15/3/86 26/3/86 30/4/86 18/5/86 13/7/86*

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

*This vessel has been constructed for the carrying of Petroleum in bulk, and with a view to obtain oil tightness, the riveting in the oil compartments has been arranged as follows viz: In Frames 6" to 6 1/2" Pitch - 7/8 Rivets, in Plate landings - 7/8 Rivets, 2 1/2 to 3" Pitch, and 3/4 Rivets 2 1/2 to 3" Pitch, Butts of shell riveting, 7/8 Rivets 2 1/4 to 3" Pitch, 3/4 Rivets 2 1/2 to 2 3/4 Pitch. Ballast tank top 3/4 Rivets 2 1/4 Pitch in Butts & Hinges, Margin Plates of Tank double riveted 3/4 Rivets - 2 1/2 Pitch.*

*The workmanship throughout is of a first class description, and the whole of the oil compartments have been filled with water, and tested by water pressure, with a head of water not less than the height of the Upper Deck, and were found very satisfactory.*

*The water ballast tanks formed by the cellular bottom tested by water pressure to the height of the load line, & the peak tanks tested by water pressure to the height of the Upper Deck & were found satisfactory.*

*2-6 20'0" 30'6"*  
 State if one, two, or three-decked vessel, and if so, the length of poop, bridge, fore-castle, or raised quarter-deck. (If double bottom, state particulars on separate form.)

How are the surfaces preserved from oxidation? Inside by *Says' patent Cement & paint* Outside by *paint*

I am of opinion this Vessel should be Classed *100A1*

The amount of the Entry Fee .....£ *4* is received by me, *14-5-1886*

Special .....£ *6* 4: *1*

(to be sent as per margin). Certificate ...

(Travelling Expenses, if any, &c.)

Committee's Minute

Character assigned *100A1*

*Carrying Petroleum in bulk*

*Classified as 100A1*

*Classified as 100A1*

*Classified as 100A1*

*Classified as 100A1*

*Classified as 100A1*

*Classified as 100A1*

*Classified as 100A1*

*Built under Special Survey*

Date 1<sup>st</sup> Survey *23 Mar 86*

Last Survey *7 Aug 86*

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

*It is submitted that this vessel appears*

*worthy to be classed 100A1 with a*

*note of "Petroleum in bulk"*

*and a note of "Classified as 100A1"*

*and a note of "Classified as 100A1"*

*and a note of "Classified as 100A1"*

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