

## IRON SHIP.

No. 3628 Survey held at Middlesbrough Date, First Survey 1<sup>st</sup> Feb<sup>y</sup> Last Survey 1<sup>st</sup> May 1876.  
On the S. S. "Acklam" Master Hancy

Official Number 43240

|   |  |
|---|--|
| TONNAGE under Tonnage Deck              | <u>403.57</u>                          |
| Ditto of Third, Spar, or Awning Deck    |  |
| Ditto of <del>Deck</del> Raised Qr. Dk. | <u>46.60</u>                           |
| Ditto of Houses on Deck                 | <u>46.10</u>                           |
| Ditto of Forecastle                     | <u>11.72</u>                           |
| Gross Tonnage                           | <u>507.99</u>                          |
| Less Crew Space                         | <u>28.79</u>                           |
| Less Engine Room                        | <u>162.56</u>                          |
| Register Tonnage as cut on Beam         | <u>316 <math>\frac{64}{100}</math></u> |

ONE, OR TWO DECKED, THREE DECKED VESSEL.  
SPAR, OR AWNING DECKED VESSEL.

|  |              |
|--|--------------|
| HALF BREADTH (moulded)                                   | <u>12.23</u> |
| DEPTH from upper part of Keel to top of Upper Deck Beams | <u>15.89</u> |
| GIRTH of Half Midship Frame (as per Rule)                | <u>25.00</u> |
| 1st NUMBER   | <u>5232</u>  |
| 1st NUMBER, if THREE DECKED VESSEL (deduct 7 feet)       |              |
| LENGTH   | <u>164.0</u> |
| 2nd NUMBER   | <u>8580.</u> |
| PROPORTIONS—Breadths to Length                           | <u>6.7</u>   |
| Depths to Length—Upper Deck to Keel                      | <u>10.8</u>  |
| Main Deck ditto  | <u>-</u>     |

Built at Middlesbrough  
When built 1876 Launched 28/8/76  
By whom built R. Dixon & Co.  
Owners Messrs Rayner & Murray  
Port belonging to Middlesbrough  
Destined Voyage Baltic & coasting trade  
If Surveyed while Building, Afloat, or in Dry Dock.  
While Building & Afloat

|                            |                                   |                 |                                      |   |                                   |                  |                  |                             |                            |
|----------------------------|-----------------------------------|-----------------|--------------------------------------|---|-----------------------------------|------------------|------------------|-----------------------------|----------------------------|
| LENGTH on deck as per Rule | Feet. <u>164</u> Inches. <u>0</u> | BREADTH—Moulded | Feet. <u>24</u> Inches. <u>5 1/2</u> | DEPTH top of Floors to Upper Deck Beams | Feet. <u>13</u> Inches. <u>10</u> | Power of Engines | Horse. <u>65</u> | Nº. of Decks with flat laid | <u>one</u>                 |
|                            |                                   |                 |                                      | Do. do. Main Deck Beams                 |                                   |                  |                  | Nº. of Tiers of Beams       | <u>one forward two aft</u> |

Dimensions of Ship per Register, length, 165.8 breadth, 24.7 depth, 13.55

|  | Inches in Ship.      | Inches per Rule.     |                          |                   |                   |                          |
|--|----------------------|----------------------|--------------------------|-------------------|-------------------|--------------------------|
| KEEL, depth and thickness  | <u>7 1/4 x 1 1/8</u> | <u>7 1/4 x 1 1/8</u> |                          |                   |                   |                          |
| STEM, moulding and thickness   | <u>6 3/4 x 2</u>     | <u>6 3/4 x 1 1/8</u> |                          |                   |                   |                          |
| TERN-POST for Rudder do. do.   | <u>8 x 3 1/4</u>     | <u>8 x 3 1/8</u>     |                          |                   |                   |                          |
| for Propeller  | <u>8 x 3 1/4</u>     | <u>8 x 3 1/16</u>    |                          |                   |                   |                          |
| tance of Frames from moulding edge to moulding edge, all fore and aft                | <u>21</u>            | <u>21</u>            |                          |                   |                   |                          |
|  | (Class <u>90A</u> )  |                      |                          |                   |                   |                          |
|  | Inches. In Ship.     | Inches. In Ship.     | 16ths. required per Rule | Inches. In Ship.  | Inches. In Ship.  | 16ths. required per Rule |
| FRAMES, Angle Iron, for 2/3 length amidships   | <u>3 1/2</u>         | <u>3</u>             | <u>6</u>                 | <u>3 1/2</u>      | <u>3</u>          | <u>6</u>                 |
| Do. for 1/3 at each end  | <u>3</u>             | <u>2 1/2</u>         | <u>6</u>                 | <u>3 1/2</u>      | <u>3</u>          | <u>5</u>                 |
| REVERSED FRAMES, Angle Iron  | <u>3</u>             | <u>2 1/2</u>         | <u>5</u>                 | <u>3 1/2</u>      | <u>2 1/2</u>      | <u>5</u>                 |
| FLOORS, depth and thickness of Floor Plate at mid line for half length amidships     | <u>15</u>            | <u>6</u>             | <u>6</u>                 | <u>15</u>         | <u>6</u>          | <u>6</u>                 |
| thickness at the ends of vessel  | <u>10 3/4</u>        | <u>5</u>             | <u>5</u>                 | <u>10 1/2</u>     | <u>4</u>          | <u>5</u>                 |
| depth at 2/3 the half-bdth. as per Rule  | <u>10 3/4</u>        | <u>5</u>             | <u>5</u>                 | <u>10 1/2</u>     | <u>4</u>          | <u>5</u>                 |
| height extended at the Bilges  | <u>3 ft 6 ins</u>    | <u>3 ft 6 ins</u>    |                          | <u>3 ft 6 ins</u> | <u>3 ft 6 ins</u> |                          |
| BEAMS, Upper, Spar, or Awning Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron | <u>5 1/2</u>         | <u>3</u>             | <u>8</u>                 | <u>5 1/2</u>      | <u>3</u>          | <u>8</u>                 |
| Single or double Angle Iron on Upper edge  | <u>3 ft 6 ins</u>    | <u>3 ft 6 ins</u>    |                          | <u>3 ft 6 ins</u> | <u>3 ft 6 ins</u> |                          |
| Average space  | <u>3 ft 6 ins</u>    | <u>3 ft 6 ins</u>    |                          | <u>3 ft 6 ins</u> | <u>3 ft 6 ins</u> |                          |
| BEAMS, Main, or Middle Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron        | <u>6</u>             | <u>x</u>             | <u>6 1/6</u>             | <u>6</u>          | <u>x</u>          | <u>6</u>                 |
| Single, or double Angle Iron, on Upper Edge  | <u>2 1/2</u>         | <u>2 1/2</u>         | <u>5 1/6</u>             | <u>2 1/2</u>      | <u>2 1/2</u>      | <u>5 1/6</u>             |
| Average space  | <u>2 1/2</u>         | <u>2 1/2</u>         | <u>5 1/6</u>             | <u>2 1/2</u>      | <u>2 1/2</u>      | <u>5 1/6</u>             |
| BEAMS, Lower Deck, Hold, or Orlop Single or d'ble Ang. Iron, Plate or Tee Bulb Iron  | <u>6</u>             | <u>x</u>             | <u>6 1/6</u>             | <u>6</u>          | <u>x</u>          | <u>6</u>                 |
| Single or double Angle Iron on Upper Edge  | <u>2 1/2</u>         | <u>2 1/2</u>         | <u>5 1/6</u>             | <u>2 1/2</u>      | <u>2 1/2</u>      | <u>5 1/6</u>             |
| Average space  | <u>2 1/2</u>         | <u>2 1/2</u>         | <u>5 1/6</u>             | <u>2 1/2</u>      | <u>2 1/2</u>      | <u>5 1/6</u>             |
| KEELSONS Centre line, single or double plate, box, or intercostal, Plates            | <u>11</u>            | <u>x</u>             | <u>9</u>                 | <u>11</u>         | <u>x</u>          | <u>9</u>                 |
| " Rider Plate  | <u>7 1/2</u>         | <u>x</u>             | <u>9</u>                 | <u>7 1/2</u>      | <u>x</u>          | <u>9</u>                 |
| " Bulb Plate to Intercostal Keelson  | <u>3 1/2</u>         | <u>3</u>             | <u>6</u>                 | <u>3 1/2</u>      | <u>3</u>          | <u>6</u>                 |
| " Angle Irons  | <u>3 1/2</u>         | <u>3</u>             | <u>6</u>                 | <u>3 1/2</u>      | <u>3</u>          | <u>6</u>                 |
| " Double Angle Iron Side Keelson   |                      |                      |                          |                   |                   |                          |
| " Side Intercostal Plate   |                      |                      |                          |                   |                   |                          |
| " do. Angle Irons  |                      |                      |                          |                   |                   |                          |
| " Attached to outside plating with angle iron  | <u>2 1/2</u>         | <u>2 1/2</u>         | <u>5 1/6</u>             | <u>2 1/2</u>      | <u>2 1/2</u>      | <u>5 1/6</u>             |
| BILGE Angle Irons  | <u>3 1/2</u>         | <u>3</u>             | <u>6</u>                 | <u>3 1/2</u>      | <u>3</u>          | <u>6</u>                 |
| " do. Bulb Iron  | <u>6</u>             | <u>x</u>             | <u>6</u>                 | <u>6</u>          | <u>x</u>          | <u>6</u>                 |
| " do. Intercostal plates riveted to plating for length                               |                      |                      |                          |                   |                   |                          |
| BILGE STRINGER Angle Irons   | <u>2 1/2</u>         | <u>2 1/2</u>         | <u>5 1/6</u>             | <u>2 1/2</u>      | <u>2 1/2</u>      | <u>5 1/6</u>             |
| Intercostal plates riveted to plating for length                                     | <u>2 1/2</u>         | <u>2 1/2</u>         | <u>5 1/6</u>             | <u>2 1/2</u>      | <u>2 1/2</u>      | <u>5 1/6</u>             |
| SIDE STRINGER Angle Irons  | <u>3 1/2</u>         | <u>3</u>             | <u>6</u>                 | <u>3 1/2</u>      | <u>3</u>          | <u>6</u>                 |

Transoms, material. Knight-heads. Hawse Timbers. plates & angles  
Windlass Patent Conover & Co. Roll Bitt & 2 Steam Winches

The FRAMES extend in one length from Keel to Gunwale Riveted through plates with 3/4 in. Rivets, about 6 apart.  
The REVERSED ANGLE IRONS on floors and frames extend across middle line to R. & D. of Upper & Lower 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 in. diameter, averaging 5 ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 3/4 in. diameter, averaging 3 1/2 ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 1/4 ins. from centre to centre.  
Butts of one Strakes at Bilge for whole length, double riveted with Butt Straps 7/16 thicker than the plates they connect.

Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 3/4 in. diameter, averaging 3 1/4 ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 in. diameter, averaging 3 1/4 ins. from cr. to cr.  
Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted. Double Lower edge.

Butts of Main Sheerstrake, treble riveted for 1 length amidships. Butts of Upper or Spar Sheerstrake, double riveted mid length amidships.

Butts of Main Stringer Plate, treble riveted for 1 length amidships. Butts of Upper or Spar Stringer Plate, double riveted for whole length.  
Breadth of laps of plating in double riveting 5 ins. Breadth of laps of plating in single riveting 2 7/8 ins.

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble or double riveted.

Waterway, how secured to Beams Butter (Explain by Sketch, if necessary.)

Beams of the various Decks, how secured to the sides? Knees turned & Solid Welded. No. of Breasthooks, 4 Crutches, 3

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

Manufacturer's name or trade mark, Frames West March Iron Co., Plating &c. Thos Vaughan & Co.

The above is a correct description.

Builder's Signature, Robert Dixon Surveyor's Signature, J. Sennett

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



Workmanship. Are the butts of plating planed or otherwise fitted? Planed. 163479 am  
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 in the butts.

Masts, Bowsprit, Yards, &c., are wood 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 Foremast 56ft. 16" dia. Mainmast 53ft. 16" dia. Pitch Pine

| NUMBER for EQUIPMENT 2438 |                         | Bathoms.                | Inches. | Test per Certificate. | Length & Size req'd per Rule. | Test req'd per Rule. | ANCHORS.               | No. | Weight. Ex. Stock. | Test per Certificate. | W'ght req'd per Rule. | Test req'd per Rule. |
|---------------------------|-------------------------|-------------------------|---------|-----------------------|-------------------------------|----------------------|------------------------|-----|--------------------|-----------------------|-----------------------|----------------------|
| N <sup>o</sup> .          | SAILS.                  | CABLES, &c.             | 195     | 1 1/8                 | 22 3/4                        | 195-1 1/8 22 3/4     | 3. Bowers              | 1   | 10.0.6             | 12.0.0.0              | 10.0.0.0              | 12.0.0.0             |
| 1                         | Fore Sails,             | Chain                   | 90      | 1 1/8                 | 22 3/4                        | 90-1 1/8 22 3/4      | Tested at Lloyds Green | 1   | 10.0.0             | 12.0.0.0              | 10.0.0                | 12.0.0.0             |
| 1                         | Fore Top Sails,         | The Old Mill Co. Ludley | 12 1/2  | 1 1/8                 | 22 3/4                        | 12 1/2-1 1/8 22 3/4  | Tested at Lloyds Green | 1   | 10.0.0             | 12.0.0.0              | 10.0.0                | 12.0.0.0             |
| 1                         | Fore Topmast Stay Sails | Hamn Strm Cbl           | 90      | 1 1/8                 | 22 3/4                        | 90-1 1/8 22 3/4      | Stream                 | 1   | 8.3.0              | 10.17.2.0             | 8.2.0                 | 10.7.0.0             |
| 1                         | Main Sails,             | Hawser                  | 90      | 1 1/8                 | 22 3/4                        | 90-1 1/8 22 3/4      | Kedges                 | 1   | 3.3.23             | 6.7.2.0               | 4.3.0                 | Incl. Stock          |
| 1                         | Main Top Sails,         | Towlines                | 90      | 1 1/8                 | 22 3/4                        | 90-1 1/8 22 3/4      |                        | 1   | 1.3.0              | 4.4.1.14              | 2.1.0                 |                      |
| and                       | Spare                   | Warp                    | 90      | 1 1/8                 | 22 3/4                        | 90-1 1/8 22 3/4      |                        | 1   | 1.3.0              | 4.4.1.14              | 2.1.0                 |                      |
|                           |                         | quality                 | good    |                       |                               |                      |                        |     |                    |                       |                       |                      |

Standing and Running Rigging Wire & Hemp sufficient in size and good in quality. She has one 20ft. Life Boat and an 18ft. boat, one 15ft. dingy.  
The Windlass is good Capstan good and Rudder good Pumps 5ft. 4 1/2 inch

Engine Room Skylights. How constructed? Seal How secured in ordinary weather? Secured to iron coamings inside

What arrangements for deadlights in bad weather? Bullseye

Coal Bunker Openings. How constructed? circular iron How are lids secured? Iron bar Height above deck? 6 1/2"

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? 4 Freecing scuttles 2' 10" x 1' 1" and 4 scuppers on each side of ship

Cargo Hatchways. How formed? 7/16 plates

State size Main Hatch 16' 0" x 8' 2" Fore hatch 17' 4" x 8' 9" Quarter hatch 3' 6" x 3' 6"

If of extraordinary size, state how framed and secured? —

What arrangement for shifting beams? Web beam 2' 7" deep 7/16 fitted between double angles and four T iron fore and afters.

Hatches, If strong and efficient? Strong and efficient

er for Special Survey No. 540 Date 7th Sept 1875 1st. On the several parts of the frame, when in place, and before the plating was wrought Specially surveyed Feb. 1, 3, 4, 8, 10, 16, 21, 25, March 1, 4, 8, 13, 15, 21, 22, 24, 27, 29, April 5, 6, 12, May 1st, 1876.

for Ordinary Survey No. — Date — 2nd. On the plating during the process of riveting —

No. 127 in builder's yard. 3rd. When the beams were in and fastened, and before the decks were laid... —

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

This vessel has been built in accordance with accompany-

-ing Tracings submitted and approved. See Sects Letters 21 January

1876 and 29th Jan. Has a raised quarter deck, frames to top height,

beams 5 1/2 x 3 x 7/16, stringers 3 1/2 x 7/16 angles on de 3 x 3 1/2 x 4 1/6 x 2 1/2 x 5/16, tie plates 8 x 7/16,

plating 7/16, Deck 3 1/2 fir sec 2 with 8/16 gal. & S.B., strengthened in way of break by three

strakes of plating increased in thickness 7/16 for 20ft and butt straps 16 thicker

& treble riveted, and Main deck stringers extend 7 frame spaces abaft break

and raised deck 4 spaces before. Bridge deck frames to stringer, beams

4 1/2 x 3 x 7/16, stringer 20 x 5/16 angle 2 1/2 x 2 1/2 x 7/16, tie plates 6 x 7/16, plating 7/16, deck fir 2 3/8.

Forecastle (break) frames to top height; beams 5 x 7/16 angle 2 1/2 x 2 1/2 x 7/16, stringer 26 x 7/16, angle 3 1/2 x 3 x 7/16

tie plate 6 x 7/16, plating 7/16, deck 3" fir. Water ballast tanks in fore & after holds side

plates 7/16 angles on de 3 x 3 x 7/16, knee plates 7/16, web plates 7/16, angles to de 2 1/4 x 2 1/4 x 7/16

top of tanks 5/16.

State if one, two, or three, decked vessel, or if spar, or running decked; and the lengths of poop, forecabin, or raised quarter deck, and the length of double, or part double bottom. 20ft 38ft 59ft

How are the surfaces preserved from oxidation? Inside Cement in tanks, paint elsewhere Outside Paint

How of opinion this Vessel should be Classed 90 A1

The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me, S.M.

Special ... £ 23 : 19 : 0 16th May 1876

Certificate ... : : : J. M. Clark

(Travelling Expenses, if any, £ —). Committee's Minute 23rd May 1876

Character assigned 90 A1