

IRON SHIP.

No. 4034 Survey held at West Hartlepool Date, First Survey 8 Feb. 1878 Last Survey 13th July 1878

On the *Low St. "Proctor's Abbey"* Master *Danby*

TONNAGE under
Tonnage Deck 1567.89
Ditto of Third Spar, or Awaiting Deck. 40.00
Ditto of Poop, or Raised Or. Dk. 60.25
Ditto of Houses 5.33
Ditto of Forecastle 14.53
Gross Tonnage 1725.34
Less Crew Space 60.23
1665.11
Less Engine Room 552.11
Register Tonnage as cut on Beam 1113.0

ONE, OR TWO DECKED, THREE DECKED VESSEL.
SPAR, OR AWNING-DECKED VESSEL.
HALF BREADTH (moulded)... 17.2
DEPTH from upper part of Keel to top of Upper Deck Beams 24.10 1/2
GIRTH of Half Midship Frame (as per Rule) 37.4
1st NUMBER 79.42
1st NUMBER, in a THREE-DECKED VESSEL 72.4 1/2
LENGTH 250.3
2nd NUMBER 186.89
PROPORTIONS—Breadths to Length under 8
Depths to Length—Upper Deck to Keel 10 1/2 under 11
Main Deck ditto 12 1/2 under 14

Built at *West Hartlepool*
When built 1878 Launched 15th May
By whom built *W. Gray & Co.*
Owners *Pymon Watson & Co.*
Port belonging to *Cardiff*
Destined Voyage *America*
If Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule 258 3 BREADTH—Moulded... 34 4 DEPTH top of Floors to Upper Deck Beams 23 9 1/2 Power of Engines 180 Horse. N° of Decks with flat laid Two N° of Tiers of Beams Three

Dimensions of Ship per Register, length, breadth, depth, 260-34.9-22.9	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	9 x 2 1/2	9 x 2 1/2	9 x 2 1/2	9 x 2 1/2	9 x 2 1/2	9 x 2 1/2	9 x 2 1/2	9 x 2 1/2
STEM, moulding and thickness	8 1/2 x 2 1/2	8 1/2 x 2 1/2	8 1/2 x 2 1/2	8 1/2 x 2 1/2	8 1/2 x 2 1/2	8 1/2 x 2 1/2	8 1/2 x 2 1/2	8 1/2 x 2 1/2
STERN-POST for Rudder do. do.	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5
" " for Propeller	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5	8 1/2 x 5
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24	24	24	24	24	24	24
FRAMES, Angle Iron, for 1/2 length amidships	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3
Do. for 1/4 at each end	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3
REVERSED FRAMES, Angle Iron	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	22 1/2 x 9 1/6	22 1/2 x 9 1/6	22 1/2 x 9 1/6	22 1/2 x 9 1/6	22 1/2 x 9 1/6	22 1/2 x 9 1/6	22 1/2 x 9 1/6	22 1/2 x 9 1/6
" thickness at the ends of vessel	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6
" depth at 3/4 the half-bdth. as per Rule	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6	22 1/2 x 4 1/6
" height extended at the Bilges	24	24	24	24	24	24	24	24
BEAMS, Upper, Spar, or Awning Deck Single or double Angle Iron, Plate or Tee Bulb Iron	7 x 4 1/6	7 x 4 1/6	7 x 4 1/6	7 x 4 1/6	7 x 4 1/6	7 x 4 1/6	7 x 4 1/6	7 x 4 1/6
Single or double Angle Iron on Upper edge	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
Average space	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft	4 ft
BEAMS, Main, or Middle Deck Single or double Angle Iron, Plate or Tee Bulb Iron	6 x 3	6 x 3	6 x 3	6 x 3	6 x 3	6 x 3	6 x 3	6 x 3
Single or double Angle Iron on Upper Edge	4 x 4	4 x 4	4 x 4	4 x 4	4 x 4	4 x 4	4 x 4	4 x 4
Average space	24	24	24	24	24	24	24	24
BEAMS, Lower Deck, Hold, or Orlop Single or double Angle Iron, Plate or Tee Bulb Iron	9 1/2 x 9 1/6	9 1/2 x 9 1/6	9 1/2 x 9 1/6	9 1/2 x 9 1/6	9 1/2 x 9 1/6	9 1/2 x 9 1/6	9 1/2 x 9 1/6	9 1/2 x 9 1/6
Single or double Angle Iron on Upper Edge	4 x 4	4 x 4	4 x 4	4 x 4	4 x 4	4 x 4	4 x 4	4 x 4
Average space	10 x 12	10 x 12	10 x 12	10 x 12	10 x 12	10 x 12	10 x 12	10 x 12
KEELSONS Centre line, single or double plate, box, or intercostal, Plates	21 x 11 1/6	21 x 11 1/6	21 x 11 1/6	21 x 11 1/6	21 x 11 1/6	21 x 11 1/6	21 x 11 1/6	21 x 11 1/6
" Rider Plate	See list of frames	See list of frames	See list of frames	See list of frames	See list of frames	See list of frames	See list of frames	See list of frames
" Bulb Plate to intercostal Keelson	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4
" Angle Irons	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4
" Double Angle Iron Side Keelson	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4
" Side intercostal Plate	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4
" do. Angle Irons	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4
" Attached to outside plating with angle iron	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4
BILGE Angle Irons	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4
" do. Bulb Iron	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4
" do. Intercostal plates riveted to plating for length	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4
BILGE STRINGER Angle Irons	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4	5 x 4
Intercostal plates riveted to plating for 1/2 length	10 x 8 1/6	10 x 8 1/6	10 x 8 1/6	10 x 8 1/6	10 x 8 1/6	10 x 8 1/6	10 x 8 1/6	10 x 8 1/6
SIDE STRINGER Angle Irons	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
Transoms, material. Knight-heads. Hayse Timbers.	Plates	Plates	Plates	Plates	Plates	Plates	Plates	Plates
Windlass	Emerson & Walker Patent	Emerson & Walker Patent	Emerson & Walker Patent	Emerson & Walker Patent	Emerson & Walker Patent	Emerson & Walker Patent	Emerson & Walker Patent	Emerson & Walker Patent
Pall Bitt	Patent	Patent	Patent	Patent	Patent	Patent	Patent	Patent

Flat Keel Plates, breadth and thickness	Inches in Ship.	16ths in Ship.	Inches per Rule.	16ths per Rule.
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	36	11/16	36	11/16
" of doubling at Bilge, or increased thickness, and length applied	10/16	10/16	10/16	10/16
" fm up. part of Bilge to l. edge of Sh'rstrake.	10/16	10/16	10/16	10/16
" Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	40	12/16	40	12/16
" Up. or Spar Dk. Sh'rstrake, breadth & thickness	40	12/16	40	12/16
Butt Straps to outside plating, breadth & thickness	9 3/4	10 1/2	9 3/4	10 1/2
Lengths of Plating	11 1/2	10 1/2	11 1/2	10 1/2
Shifts of Plating, and Stringers	40	10/16	40	10/16
Gunwale Plate on ends of Awaiting, Spar, or Upper Deck Beams, breadth and thickness	54	9/16	54	9/16
Angle Iron on ditto	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16
Tie Plates fore and aft, outside Hatchways	13 x 26 x 9/16	13 x 26 x 9/16	13 x 26 x 9/16	13 x 26 x 9/16
Diagonal Tie Plates on Beams No. of Pairs,	13 x 26 x 9/16	13 x 26 x 9/16	13 x 26 x 9/16	13 x 26 x 9/16
Planksheer material and scantling	4 ft	4 ft	4 ft	4 ft
Waterways do. do.	4 ft	4 ft	4 ft	4 ft
Flat of Upper Deck do. do.	4 ft	4 ft	4 ft	4 ft
How fastened to Beams	4 ft	4 ft	4 ft	4 ft
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	37	10/16	37	10/16
Is the Stringer Plate attached to the outside plating?	Yes	Yes	Yes	Yes
Angle Irons on ditto, No. 2	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16
Tie Plates, outside Hatchways	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16
Diagonal Tie Plates on Beams, No. of pairs	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16
Waterways materials and scantlings	4 ft	4 ft	4 ft	4 ft
Flat of Middle Deck do. do.	4 ft	4 ft	4 ft	4 ft
How fastened to Beams	4 ft	4 ft	4 ft	4 ft
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	33	9/16	33	9/16
Is the Stringer Plate attached to the outside plating?	Yes	Yes	Yes	Yes
Angle Irons on ditto, No. 2	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16
Stringer or Tie Plates, outside Hatchways	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16	4 x 4 x 9/16
Flat of Lower Deck	4 ft	4 ft	4 ft	4 ft
Ceiling between Decks, thickness and material	2 1/2	2 1/2	2 1/2	2 1/2
" in hold do. do.	2 1/2	2 1/2	2 1/2	2 1/2
Main piece of Rudder, diameter at head	6 1/4	6 1/4	6 1/4	6 1/4
" do. at heel	3 1/4	3 1/4	3 1/4	3 1/4
Can the Rudder be unshipped afloat?	Yes	Yes	Yes	Yes
Bulkheads No. 4 Thickness of	6 1/6 x 5 1/6	6 1/6 x 5 1/6	6 1/6 x 5 1/6	6 1/6 x 5 1/6
" Height up Main Deck knee line to upper Deck	6 1/6 x 5 1/6	6 1/6 x 5 1/6	6 1/6 x 5 1/6	6 1/6 x 5 1/6
" How secured to sides of ship	6 1/6 x 5 1/6	6 1/6 x 5 1/6	6 1/6 x 5 1/6	6 1/6 x 5 1/6
" Size of Vertical Angle Irons	3 x 3 x 7/16	3 x 3 x 7/16	3 x 3 x 7/16	3 x 3 x 7/16
" Are the outside Plates doubled two spaces of Frames in length?	Yes	Yes	Yes	Yes

The FRAMES extend in one length from *Keel* to *gunwale*
The REVERSED ANGLE IRONS on floors and frames extend *across* middle line to *above main deck stringers* 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 1/8* in. diameter, averaging *5 1/2* 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 3/4* ins. from centre to centre.
" Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *3/4* in. diameter averaging *3 3/4* ins. from centre to centre.
" Butts of *hwa* Strakes at Bilge for *half* length, treble riveted with Butt Straps *7/16* thicker than the plates they connect. *4. 1/2* plates capped.
" Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets *7/8* in. diameter, averaging *3 3/4* ins. from cr. to cr.
" Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *7/8* in. diameter, averaging *3 3/4* ins. from cr. to cr.
" Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted.
" Butts of Main Sheerstrake, treble riveted for *half* length amidships. Butts of Upper or Spar Sheerstrake, treble riveted — length amidships.
" Butts of Main Stringer Plate, treble riveted for *half* length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for *half* length.
" Breadth of laps of plating in double riveting *5 1/4* x *2 3/4* Breadth of laps of plating in single riveting *none*

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *Double & Treble*
Waterway, how secured to Beams *gunwale* (Explain by Sketch, if necessary.) *pieces to angle beams*
Beams of the various Decks, how secured to the sides? *Ends secured to sides by double plates* No. of Breasthooks, *Seven* Crutches, *Two*
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Good*
Manufacturer's name or trade mark, *West Hartlepool Iron Works & Shipbuilding Co. Ltd.*
The above is a correct description.
Builder's Signature, *Wm Gray & Co* Surveyor's Signature, *S. J. Gladstone*
Surveyor to Lloyd's Register of British and Foreign Shipping.

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed*

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? *Solid pieces*

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 butts*

21429 *Sm*

Masts, Bowsprit, Yards, &c., are *Ritch Pine* 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 *Main Mast 71 ft 6 in Diameter 22 inches Bowsprit 77 ft 6 in Dia 22 inches*

NUMBER for EQUIPMENT *22547*

SAILS.

CABLES, &c.

Fathoms.

Inches.

Test per Certificate.

Length & Size req'd per Rule.

Test req'd per Rule.

ANCHORS.

No.

Weight.

Ex. Stock.

Test per Certificate.

Wght req'd per Rule.

Test req'd per Rule.

Fore Sails,

Chain

270

1 1/2

55 1/2

270 1/2

55 1/2

Bowers

3

30-2-0

29-0-0-0

30-0-0

29-12-0-0

29-12-0-0

Fore Top Sails,

27-1-30

27-1-30

1 1/2

55 1/2

270 1/2

55 1/2

Stream

1

12-0-0

11-15-2-14

12-0-0

12-0-0

12-0-0

Fore Topmast Stay Sails

7-5

1 1/2

20 3/10

20 3/10

20 3/10

20 3/10

Kedges

2

6-2-21

7-6-1-0

6-0-0

6-0-0

6-0-0

Main Sails,

Hawser

90

1 1/2

20 3/10

20 3/10

20 3/10

Stream

1

12-0-0

11-15-2-14

12-0-0

12-0-0

12-0-0

Main Top Sails,

Warp

90

1 1/2

20 3/10

20 3/10

20 3/10

Kedges

2

6-2-21

7-6-1-0

6-0-0

6-0-0

6-0-0

Standing and Running Rigging

Wire & Ropes

sufficient in size and *Good* in quality.

She has *Four*

Long Boats

and *Good*

The Windlass is

Good

Capstan

Good

Rudder

Good

Pumps

4 of 6 inch

Cast

Engine Room Skylights.—How constructed?

3 in KAR 1/4 casing to top of

How secured in ordinary weather?

Bullheads

What arrangements for deadlights in bad weather?

Bullheads

Coal Bunker Openings.—How constructed?

Iron laming

How are lids secured?

Bars

Height above deck?

30 inches

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea?

Ports & Scuppers

Cargo Hatchways.—How formed?

4/16 plates

State size Main Hatch

19 ft 11 in x 12 ft 6 in

Fore hatch

14 x 12 ft

Quarter hatch

20 x 12 ft

After

20 x 12 ft

hatch

20 ft

If of extraordinary size, state how framed and secured?

What arrangement for shifting beams?

One shifting web beam in each hatchway

Hatches, If strong and efficient?

Strong & efficient

Order for Special Survey No.

669

Date

4 June 1870

Order for Ordinary Survey No.

Date

186

No.

186

in builder's yard.

DATES of Surveys held while building as per Section 18.

- 1st. On the several parts of the frame, when in place, and before the plating was wrought
- 2nd. On the plating during the process of riveting
- 3rd. When the beams were in and fastened, and before the decks were laid...
- 4th. When the ship was complete, and before the plating was finally coated or cemented...
- 5th. After the ship was launched and equipped

Special Survey Date of Survey *1870*
Feb. 11-15-18-22-27 March 14-6-8-11-14-19-22-27
April 1-2-9-15-25-29-30 May 3-6-8-9-14-17-29
June 7-19-20 July 11-15

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

Workmanship & material good

Is fitted with a Poop & Forecastle frames all to the 1/2 height. Poop beams angles 6 x 3 + 8/16. Rounded gunwale Plated outside with 6/16 plates. Deck 3 in 1/4 Pine. Forecastle beams of bulk 6 1/2 x 6/16 angles 3 x 3 + 6/16. Stringer plates 2 1/2 x 6/16 angles on so. 3 1/2 x 3 1/2 x 7/16. Plating outside 6/16. Deck 3 in 1/4 Pine. Water ballast tanks fitted for 2 1/6 ft. frames cut connection made with three plates. Side plates 7/16 angles on so. 3 1/2 x 3 1/2 x 7/16. Web plates 6/16 angles on so. 3 x 3 + 6/16. Port plating 6/16 under Engine & Boiler space 7/16. Tested by a head of water to the height of load line.

John Gray & Co

State if one, two, or three decked vessel, or if spar, or evening decked; and the lengths of poop, forecastle, or raised quarter deck, and the length of double, or part double bottom.

How are the surfaces preserved from oxidation? Inside *Cemented with Portland Cement* Outside *Paint*

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

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

Special ... £ *66* : 12 : 6 *23 July 1870*

Certificate ... : : : *S. R. Gladstone*

(Travelling Expenses, if any, £ ...)

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

This vessel appears eligible to be classed 100 A.1. as recommended

Committee's Minute *26th July 1878*

Character assigned

100 A1

Lloyd's Register

W. W. Brown & Co

216 ft

23 July 1878