

IRON SHIP.

(Received at London Office, 24th May 1884)

No. 3083 Survey held at *Belfast* Date, First Survey *May 11th 83* Last Survey *May 21st 1884*

On the *Iron Screw Steamer "Horn Head"*

TONNAGE under Tonnage Deck *2324.45* ONE, OR TWO-DECKED, THREE-DECKED VESSEL.
SPAR, OR AWNING-DECKED VESSEL.
Ditto of Third, Spar, or Awning Deck *162.78* Half Breadth (moulded) *18.5*
Ditto of *Raised Or. Dk.* *3.52* Depth from upper part of Keel to top of Upper Deck Beams *21.45*
Ditto of Houses *5.11* Girth of Half Midship Frame (as per Rule) *36.66*
Ditto of *Special Hatchways* *5.11* 1st Number *76.61*
Gross Tonnage *2495.26* 1st Number, if a 3-Decked Vessel .. deduct 7 feet *320*
Less Crew Space *50.24* Length *320*
Less Engine Room *798.68* 2nd Number *24515*
Register Tonnage *1046.91* Proportions— Breadths to Length.. *8.64*
as cut on Beam *1046.91* Depths to Length—Upper Deck to Keel.. *14.9*
Main Deck ditto

Master *M. Thompson*
Built at *Belfast*
When built *1883-4* Launched *March 1.84*
By whom built *Harland & Wolff*
Owners *Ulster Steam Ship Co. (Q. Reyn & Son)*
Residence *Belfast*
Port belonging to *Belfast*
Destined Voyage *Port Said via Cardiff*
If Surveyed while Building, Afloat, or in Dry Dock.
Specially surveyed while Building

LENGTH on deck as per Rule *320* Feet. Inches. BREADTH—Moulded... *37* Feet. Inches. DEPTH top of Deck to Upper Deck Beams *25* Feet. Inches. Power of Engines *275* Horse. N° of Decks with flat laid *Two*
N° of Tiers of Beams *Three*
Dimensions of Ship per Register, length *321.8* breadth, *37.3* depth, *25* to top of tank. Depth moulded *21.45*

KEEL, depth and thickness *Center this plate* *56 x 10* Inches in Ship. Inches per Rule. *56 x 10*
STEM, moulding and thickness... *10 x 1 1/2* *10 x 1 1/2*
STERN-POST for Rudder do. do. *10 x 2 1/2* *10 x 2 1/2*
" for Propeller *10 1/4 x 6 1/4* *10 x 6*
Distance of Frames from moulding edge to moulding edge, all fore and aft *24* *24*

BEAMS, Angle Iron, for 1/2 length amidships *5* *3* *8* *5* *3* *8*
Do. for 1/4 at each end *5* *3* *7* *5* *3* *7*
EVERSED FRAMES, Angle Iron *3 1/2* *3* *8* *3 1/2* *3* *8*
FLOOR PLATES, depth and thickness of Floor Plate at mid line for half length amidships *C.B. bottom* *6* *6*
thickness at the ends of vessel *frames* *4* *3* *8* *4* *3* *8*
depth at 1/2 the half-bath. as per Rule *attenuately* *attenuately*
height extended at the Bilges... *attenuately* *attenuately*

BEAMS, Upper, Spar, or Awning Deck *6* *3* *8* *6* *3* *8*
single or double Angle Iron, Plate or Tee Bulb Iron *Bulb angle* *Bulb angle*
single or double Angle Iron on Upper edge *24* *24*
Average space... *6 1/2* *3* *9* *6 1/2* *3* *9*
BEAMS, Main, or Middle Deck *6 1/2* *3* *9* *6 1/2* *3* *9*
single or double Angle Iron, Plate or Tee Bulb Iron *Bulb angle* *Bulb angle*
single or double Angle Iron on Upper Edge *24* *24*
Average space... *13 x 9 1/2*

BEAMS, Lower Deck—single or double Angle Iron, Plate or Tee Bulb Iron *As per Section* *13 x 9 1/2*
single or double Angle Iron on Upper Edge *every 10 frames* *every 10 frames*
Average space... *56* *10* *56* *10*
KEELSONS Centre line, single or double plate, *56* *10* *56* *10*
Rider Plate Centre Line Irons *10* *10*
Bulb Plate to Intercoastal Keelson... *4* *4* *9* *4* *4* *9*
Angle Irons *6* *6*
Double Angle Iron Side Keelson *3* *3* *6* *3* *3* *6*
Side Intercoastal Plates *3* *3* *6* *3* *3* *6*
do. Angle Irons *3* *3* *6* *3* *3* *6*
Attached to outside plating with angle iron *3 1/2* *3 1/2* *9* *3 1/2* *3 1/2* *9*

BILGE Angle Irons *3 1/2* *3 1/2* *9* *3 1/2* *3 1/2* *9*
do. Bulb Iron... *6* *4* *9* *6* *4* *9*
do. Intercoastal plates riveted to plating for *1/2* length *9*
BILGE STRINGER Angle Irons *6* *4* *9* *6* *4* *9*
Intercoastal plates riveted to plating for *1/2* length *9*
SIDE STRINGER Angle Irons *6* *4* *9* *6* *4* *9*

FRAMES extend in one length from *flange plate to flange plate* *flange plate to flange plate*
The REVERSED ANGLE IRONS on floors and frames extend *from middle line to main deck* *from middle line to main deck*
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 1/4* in. diameter, averaging *4 3/4* ins. from centre to centre.
Edges of Garboards and to upper part of Bilge, worked clench, double riveted; with rivets *7/8* in. diameter, averaging *3 3/8* ins. from centre to centre.
Butts from Keel to turn of Bilge, worked carvel, *double* riveted; with rivets *7/8* in. diameter averaging *3 3/4* ins. from centre to centre.
Butts of all Strakes at Bilge for *3/4* length, treble riveted with Butt Straps *1 1/2* *2 1/2* thicker than the plates they connect, for outside & inside side plates respect.

Edges from Bilge to Main Sheerstrake, worked clench, double *single* riveted; with rivets *7/8* in. diameter, averaging *3 3/8* 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 *single* riveted. Upper Sheerstrake, double *single* riveted.
Butts of Main Sheerstrake, treble riveted for *3/4* length amidships. Butts of Upper or Spar Sheerstrake, treble riveted *3/4* length amidships.
Butts of Main Stringer Plate, treble riveted for *3/4* length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for *3/4* length.

Breadth of laps of plating in double riveting *6 1/2* *1 1/2* Breadth of laps of plating in single riveting *6 1/2* *1 1/2*
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *Double & Treble* No. of Breasthooks, *4* Crutches, *4* *deep*
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Best*
Manufacturer's name or trade mark, *Frames & Beams, Stockton Mill, J.C.; Riv bars, Dorman Long & Co.; Decks, Connell Iron Co.; Outside plating, Stringers, Floors, and Bulkheads, "Dolphin" Vaughan & Co. Ld.*
The above is a correct description.
Builder's Signature, *Harland & Wolff* Surveyor's Signature, *James Curpin*
Surveyor to Lloyd's Register of British and Foreign Shipping.

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

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? *Very few.*

Masts, Bowsprit, Yards, &c., are *all* 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 Material and if stamped with Maker's name.

State also Length and Diameter of Lower Masts and Bowsprit *Schooner rigged as Auxiliary to steam power*
Fore & Main masts of steel 110.3 extreme by 24 diam constructed with the plates in the round 10/32 to 5/32, and three angle irons 3 x 3 x 5/16. plates tested at the manufactory.

NUMBER for EQUIPMENT		Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested & Suprntd.
SAILS.		CABLES, &c.										
N ^o .	Chain	135.3	1 1/2	88.10.0.0	10 x 1 1/2	26 Jan. 84	Bower Anchors	1	34.2.7	32.1.3.14	34	26 Jan. 84
Fore Sails,	(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	134 1/2	1 1/2	88.10.0.0	10 x 1 1/2	26 Jan. 84	(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	1	33.1.29	31.5.0.0	34	26 Jan. 84
Fore Top Sails,	Iron Stream Chain	90	5/8	34.2.2.0	4 1/2 x 1 1/2	31 Jan. 84	Stream Anchor	1	29.1.23	28.5.0.0	29	26 Feb. 84
Fore Topmast Stay Sails,	or Steel Wire ..	90	5/8	34.2.2.0	4 1/2 x 1 1/2	31 Jan. 84	Kedge	1	10.3.13	12.15.1.7	12	12 Feb. 84
Fore Topmast Stay Sails,	or Hempen Strm Cable.....	150	3	18.0.0.0	150 x 3	29 Mar. 84	2nd Kedge	1	2.1.14			
Main Sails,	Towline, Hemp.	90	10	100 x 10					5.2.12	7.10.1.21	10 3/4	12 - 11
Main Sails,	or Steel Wire ..	90	2	100 x 8					1.7.14		5 1/2	No. of
Main Top Sails,	Hawser	90	4	100 x 4					3.3.5	5.0.0.0	2 1/2	12 - 11
and Space of	Warp	240	4 1/2	225 x 6								
Standing and Running Riggings	quality good	240	4 1/2	225 x 6								
Standing and Running Riggings	Wire & hemp	240	4 1/2	225 x 6								
sufficient in size and good in quality. She has One Life Boat and three other												

The Windlass is *Patent and good* Capstan and Rudder *Good* Pumps *Good*

Engine Room Skylights.—How constructed? *of Oak on Iron Cornings* How secured in ordinary weather? *Bolts and nuts*

What arrangements for deadlights in bad weather? *Solid top with bulls eyes*

Coal Bunker Openings.—How constructed? *of Oak on bridge* How are lids secured? *with bars* Height above deck? *6 and 11"*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *3 Scuppers before and 3 abaft the bridge each side, and open railings before and abaft bridge.*

Cargo Hatchways.—How formed? *of plates and angles, Cornings 24 above deck*

State size Main Hatch *21.6 x 12.0* Forehatch *19.6 x 10.6* Quarterhatches *21.6 x 11.0 and 19.6 x 10.6*

If of extraordinary size, state how framed and secured? *Two deep web plates in each of the two large hatchways.*

What arrangement for shifting beams? *One web plate in each of the others, and fore & afters in all.*

Hatches, If strong and efficient? *Yes, solid.*

Order for Special Survey No. <i>137</i>	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	<i>May 11, 26, 31; June 6, 12, 18, 21, 24; July 3, 9</i>
Date <i>May 7, 83</i>		2nd. On the plating during the process of riveting	<i>16, 21, 24; Aug. 1, 6, 10, 14, 23, 29; Sep. 4, 11, 19, 25</i>
Order for Ordinary Survey No. <i>138</i>		3rd. When the beams were in and fastened, and before the decks were laid...	<i>20; Oct. 4, 11, 14, 22, 26; Nov. 2, 7, 13, 20, 27; Dec. 4, 12, 19</i>
Date <i>May 12, 83</i>		4th. When the ship was complete, and before the plating was finally coated or cemented...	<i>Jan. 2, 5, 10, 12, 14, 17, 22, 29; Feb. 5, 14</i>
No. <i>165</i> in builder's yard.		5th. After the ship was launched and equipped	<i>21, 24, 29; Mar. 7, 10, 20; Apr. 10, 21, 25, 30; May 4, 13, 15</i>

State dates of letters respecting this case *April 9th & 21st; May 9th & 15th; Oct. 6th and July 14th 1883.*

General Remarks (State quality of workmanship, &c.) *This vessel has been built in accordance with the accompanying approved tracings, viz. Midship section, 2 Longitudinal sections, pumping plan; Section of Stiffeners to Fore & Aft bulkhead, and Mast plan; The section showing Compensation for web frames in Engine and Boiler space has not been carried out, but web frames have been fitted as required by the Rules; the Secretary's letter dated as above, and the Rules generally have been complied with.*

She is a Spar decked vessel having a Bridge over Engines and Boilers 72 long upon which stands the Engine room skylight, and Chart room; she has a double bottom, constructed on the cellular system 232 feet long and water capacity in tons 495; and a trimming tank aft against after peak bulkhead, water capacity in tons 90. Tested as required by the Rules.

The materials used in her construction and the workmanship are very good.

State if *one, two, or three decked vessel, or if spar, or running decked*; and the lengths of *poop, bridge, forecastle, or raised quarter deck*. (If double bottom, state particulars on separate form.)

How are the surfaces preserved from oxidation? Inside *Cement and paint* Outside *paint*

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

The amount of the Entry Fee£ *5* is received by me, *James Surpin*

Special£ *24* : *21.5.1884*

(to be sent as per margin). Certificate *Gratis* :

(Travelling Expenses, if any, £).

Committee's Minute

Character assigned

TUESDAY 27 MAY 1884 18

LR/PUN/Bel52A/106R

Surveyor to Lloyd's Register of British and Foreign Shipping

It is submitted that this vessel

appears eligible to be classed

+100 A1 Spar deck, a recommended

one deck (iron) & spar deck iron

3 tiers of beams

cellular & blue painted

equipment later (E)

26/5/84