

IRON SHIPS.

Rev 23/5/77

No. 21 Survey held at Belfast Date, First Survey 15 July 1877 Last Survey 18 May 1878

On the Iron Ship "Star of Germany" Master Hugh Wilson

Tonnage under Tonnage Deck	1250.14	ONE, OR TWO DECKED, SPAR, OR AWNING-DECKED VESSELS.	THREE DECKED VESSELS.	Built at	<u>Belfast</u>
Ditto of Spar Deck, or Awning Deck.	—	Half moulded breadth	Half Moulded Breadth	When built	<u>1873</u>
Ditto of Raised or Dk.	37.85	Depth from upper part of Keel to top of Upper Deck Beams	Total Depth if three or more Decks	Launched at	<u>March 1873</u>
Ditto of Houses on Deck	15.02	Girth of Half Midship Frame (as per Rule)	Total Girth of Half Midship Frame	By whom built	<u>Messrs. Laird and Co.</u>
Ditto Forecastle	33.79	1st Number	3rd Number	Owners	<u>Messrs. Laird & Co.</u>
Gross Tonnage	1336.80	Length	Length	Port belonging to	<u>Do. Belfast</u>
Crew Space, as per Rule	52.57	2nd Number	4th Number	Destined Voyage	<u>plenty in Liverpool</u>
Register Ton. as put on Beam	1284.28	Depths to Length. 9.1	Breadths to Length	Surveyed while Building, Afloat, or in Dry Dock.	<u>and</u>
Engine Room	—				
Register Tonnage as a Steamship, put on Beam	—				

Length on deck as per Rule	Feet.	Inches.	Moulded Breadth	Feet.	Inches.	Depths from top of Floors to Upper and Main Deck Beams, as per Rule	Feet.	Inches.	Power of Engines	Horse.	No. of Decks	No. of Tiers of Beams
228	0	0	35	0	0	22	6	—	—	—	Two	Two

Dimensions of Ship per Register, length, 228 ft breadth, 35 ft depth, 22 ft 6 in

	Inches in Slip.	Inches required per Rule.		Inches in Slip.	Inches required per Rule.
Keel, if bar iron, depth and thickness	10 x 2 1/2	9 1/2	Flat Keel Plates, breadth and thickness	36	1 1/2
Do. if centre through plate, depth and thickness	8 x 2 1/2	8 x 2 1/2	Plates in Garboard Strakes, breadth and thickness	36	1 1/2
Stem, if bar iron, moulding and thickness	8 x 2 1/2	8 x 2 1/2	Do. from Garboard to upper part of Bilges	—	1 1/2
Stern-post for Rudder do. do.	8 x 2 1/2	8 x 2 1/2	Do. of doubling at Bilge, or increased thickness, and length applied	11 1/2	1 1/2
Stern-post for Propeller	—	—	Do. from up. part of Bilge to l. edge of Sh'rstrake	36	1 1/2
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	(Class 100-A.)	Do. Main Sheerstrake, breadth and thickness	36	1 1/2
Frames, size of Angle Iron, for 1/2 length amidships	4 1/2	3 1/2	Do. of d'bling at Sh'rstrake, & length applied	—	—
Do. for 1/2 at each end	4 1/2	3 1/2	Do. from Mn. to Up. or Spar Dk. Sh'rstrake	—	—
Reversed Frames, size of Angle Iron	3	3	Do. Up. or Spar Dk Sh'rstrake, brdth & thickness	—	—
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	28	9 1/2	Butt Straps to outside plating, breadth & thickness	46	1 1/2
Do. at the ends	—	—	Lengths of Plating	12 ft	—
Do. do. do. at Bilge Keelson	10	9 1/2	Shifts of Plating, and Stringers	5 ft	—
Do. height extended at the Bilges	50	45	Gunwale Plate on ends of <u>Awning Spar</u> or Upper Deck Beams, breadth and thickness	46	1 1/2
Beams, Upper, Spar, or Awning Deck (No.)	9	8 1/2	Angle Iron on ditto	5 x 4 x 9 1/2	5 x 4 x 9 1/2
Do. or double Angle Iron, Plate or Tee Bulb Iron	—	—	Tie Plates (fore and aft), outside Hatchways	10 1/2	1 1/2
Do. or double Angle Iron on Upper edge	3	3	Diagonal Tie Plates on Beams (No. of Pairs, 3)	10 1/2	1 1/2
Average space	48	48	Planksheer material and scantling	—	—
Beams, Main or Middle Deck (No.) single, or double Angle Iron, Plate or Tee Bulb Iron	—	—	Waterways do. do.	—	—
Do. or double Angle Iron, on Upper Edge	—	—	Flat of Deck do. do.	4	4
Average space	—	—	How fastened to Beams	—	—
Beams, Lower Deck, Hold or Orlop (No.)	9	8 1/2	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	—	—
Do. single or double Ang. Iron, Plate or Tee Bulb Iron	3	3	(Is the Stringer Plate attached to the outside plating?)	—	—
Average space	48	48	Angle Irons on ditto (No.)	—	—
Keelson Centre line, single or double plate, or <u>Intercoastal</u> size of Plates	11	10 1/2	Tie Plates, outside Hatchways	—	—
Do. <u>Intercoastal</u> Plate to <u>Intercoastal</u> Keelson	—	—	Diagonal Tie Plates on Beams (No. of pairs,)	—	—
Do. Size of Angle Irons	5	4	Waterways materials and scantlings	—	—
Do. Side Intercoastal Keelson, size of Plates	—	—	Flat of Deck do. do.	—	—
Do. Angle Irons on tops of Floors	5	4	How fastened to Beams	—	—
Do. Bilge Keelson, Bulb Iron	—	—	Stringer Plates on ends of Lower Deck, <u>Hold</u> or <u>Orlop</u> Beams	28 1/2	9 1/2
Do. do. Intercoastal plates riveted to plating for length	—	—	(Is the Stringer Plate attached to the outside plating?)	—	—
Do. do. Angle Irons	5	4	Angle Irons on ditto (No. <u>Two</u>)	4 x 4 x 9 1/2	4 x 4 x 9 1/2
Side Stringers (No. <u>Two</u>) size of Angle Irons	5	4	Stringer or Tie Plates, outside Hatchways	5 x 3 x 9 1/2	4 x 4 x 9 1/2
Do. Intercoastal plates riveted to plating for length	—	—	Flat of Deck <u>Partially rivet</u>	3	3
			Ceiling betwixt Decks, thickness and material	2 1/2	3 1/2
			Do. in hold do.	—	—
			Main piece of Rudder, diameter at head	5 3/4	5 3/4
			Do. do. at heel	3	3
			(Can the Rudder be unshipped afloat? <u>Yes</u>)	—	—
			Bulkheads No. <u>3</u> Thickness of	—	1 1/2
			Do. Height up, <u>To upper deck</u>	—	—
			Do. How secured to the sides of the ship <u>Between double Frames</u>	—	—
			Do. Size of Vertical Angle Irons <u>3 x 3 1/2</u> and their distance apart, <u>30 in</u>	—	—
			Do. Are the outside Plates doubled two spaces of Frames in length? <u>Yes</u>	—	—
			The Frames extend in one length from <u>the Keel</u> to <u>upper deck Stringer and lower deck Stringer</u>	—	—
			The Reverse Angle Irons on the floors and frames extend <u>from the middle line</u> to <u>upper deck Stringer and lower deck Stringer</u>	—	—
			Keelsons. Are the various lengths of Plates and Angle Irons properly connected? <u>Yes</u> And are their butts properly shifted? <u>Yes</u>	—	—
			Edges, Garboard, double or <u>—</u> Riveted to Keel, double or <u>—</u> at upper edge, with Rivets (<u>7/8</u> in.) diameter, averaging (<u>3 7/8</u> ins.) from centre to centre.	—	—
			Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (<u>7/8</u> in.) diameter, averaging (<u>3 7/8</u> ins.) from centre to centre.	—	—
			Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (<u>5/8</u> in.) thick, double or single Riveted; with Rivets (<u>7/8</u> in.) diameter averaging (<u>3 7/8</u> ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? <u>No!</u>	—	—
			Do. Strakes at Bilge for <u>half</u> length, treble riveted with Butt Straps <u>1 1/2</u> thicker than their plates.	—	—
			Edges from bilge to Main Sheerstrake, worked carvel with a lining piece (<u>—</u>) thick, or clencher, double or single riveted; with rivets (<u>7/8</u> in.) diameter, averaging (<u>3 7/8</u> ins.) from centre to centre.	—	—
			Edges of Sheerstrake, Main, double or single Riveted. Upper, double or single Riveted. At upper edge <u>Single Riveted</u> At lower edge <u>Double riveted</u>	—	—
			Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (<u>5/8</u> in.) thick, double or single Riveted; with Rivets (<u>7/8</u> in.) diameter, averaging (<u>3 7/8</u> ins.) from centre to centre.	—	—
			Do. Butts of Main Sheerstrake, double or single Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double or treble Riveted for <u>half</u> length amidships. Breadth of laps of plating in double Riveting (<u>5/4</u>) Breadth of laps of plating in single Riveting (<u>3/2</u>)	—	—
			Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? <u>Treble and double</u>	—	—
			Planksheer, how secured to the plating of the sides? <u>None fitted</u> Waterway, how secured to the planksheer and to the Beams. (<u>Explain by Sketch, if necessary.</u>)	—	—
			Frames of the various Decks, how secured to the sides? <u>None turned down.</u> No. of Breasthooks, <u>Five</u> Crutches, <u>Five</u>	—	—
			What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? <u>Best Cumberland Hematite Iron</u>	—	—
			Manufacturer's name or trade mark, <u>A. & S. J. Middlesbrough</u> , <u>Hammay & Sons, Glasgow</u> , and <u>A. C. A. S. Co.</u>	—	—
			I certify that the above is a correct description of the several particulars therein given.	—	—
			Signature, <u>William Ritchie</u> Surveyor's Signature, <u>William Ritchie</u>	—	—

IRON 451-0121

Workmanship. Are the butts of plating planed or otherwise fitted? *Hammered* 10155 *Yes*
Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of *Yes*
Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses *Yes*
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? *Yes*
well and sufficiently countersunk in the plate and punched from the faying surfaces? *Yes*
Are there any rivets which either break into or have been put through the seams or butts of the plating? *A few in Butts only*

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

Length and Diameter of Lower Masts and Bowsprit *Fore Mast 83 1/2 ft 30 ins dia; Main 82 1/2 ft 30 ins dia; Mizzen 61 ft 23 1/2 ins dia.*
Mast and Bowsprit formed of three plates and three Angle Irons. Mast plates 7/16 and 7/8. Bowsprit 1/2 plates. Angle Irons 3 1/2 x 3 7/8 and 3 x 3 7/8. Laid single ribbed and Butts ribbed and double ribbed. The built-up plates all on the outside. Fore and Main lower top and yards of lower plates 5/16 and 1/2 in lower yards. and 1/2 to 5/16 in breast yards. Each yard formed of three plates and three Angle Irons 3 x 2 1/2 x 7/16. Laid single ribbed and Butts double and triple ribbed.

Number for equipment 19712		Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test as per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
SAILS.												
CABLES, &c.		150	1 7/8	86 1/2 tons	17 1/8	63 1/2 tons	Bowers	66	3 1/2 x 3 x 26	32.8.0.0	34.0.0	31 1/2 tons
N ^o . Mainly two Sails.	Fore Sails,	Chain	150	1 7/8	86 1/2 tons	17 1/8	(State Machine where Tested, and name of Superintendent.)	29	29.0.18	28.0.0.0	28.3.27	27 tons
	Fore Top Sails,	Hampton Stream	90	1	-	-	Lloyd's Cambrian Machine, Andrew Jackson.	Stream	522 1/2 x 13.2 x 17	-	13.2.0	-
	Fore Topmast Stay Sails	Chain Cable	90	1 1/2	-	-			4508 6 x 3 x 3	Including Stock	3.0	-
	Main Sails,	Hawser	90	9	-	-						-
	Main Top Sails,	Towlines ...	90	7	-	-						-
and good		Warp	90	5	-	-	Kedges	5358	3 x 1 x 1 1/2		3.1.0	-
		All of good quality.	90	5	-	-						-

Her Standing and Running Rigging *Two and a half* sufficient in size and *Good* in quality. She has *one* Long Boat and *three* others.
The present state of the Windlass is *Good* Capstans *Good* and Rudder *Efficient*. Pumps *Efficient*.

Engine Room Skylights. How constructed? How secured in ordinary weather?

What arrangements are there for deadlights in such for bad weather?

Coal Bunker Openings. How constructed? How are lids secured? How high above deck?

Scuppers, &c. What arrangements are there beyond the scuppers on deck, for clearing upper deck of water, in case of a sea coming on board.
She is fitted with five ports on each side in addition to three Scuppers.

Cargo Hatchways. How formed? *Plates and Angle Irons* State size *Fore and after hatches each 7 ft by 7 ft 9 in*

If of extraordinary size, state how framed and secured? *The Main Hatchway has one portable transverse beam.*

What arrangement for shifting beams? *None, excepting the one in Main Hatch above alluded to.*

Hatches, themselves, whether strong and efficient? *Yes.* Main Hatchways. State size *17 ft 3 in long by 10 ft wide.*

Order for Special Survey No. *46* DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought
Date *July 1871* Surveys held 2nd. On the plating during the progress of riveting
Order for Ordinary Survey No. *-* while building 3rd. When the beams were in and fastened, and before the decks were laid
Date *-* as per 4th. When the ship was complete, and before the plating was finally coated or cemented
No. *82* in builder's yard. Section 18. 5th. After the ship was launched and equipped

General Remarks, *She has been built and equipped in accordance with the Scantlings and arrangements shown on the accompanying approved Midship Section. and with the Rules for 100 A. I. Class, under Special Survey, excepting the fitting of a double angle Iron Strap between the Main and Lower deck beams. which part of the Rule the Committee relaxed by the Secretary's letter of the 20th July last. in consideration of the Builder's offering. with the concurrence of the Owners. to treble the Butts of outside strakes of plating. also those of the lower deck Straps. plate for one-fourth the vessels length amidships, which have been carried out. The Main-deck Straps. plate is of the width required. where diagonal tie plates are dispensed with, notwithstanding which she is fitted with a pair of Iron diagonal tie plates on the upper and lower Deck beams abreast of each Mast. She has also extra sized Floor plates Main and Lower Deck beams, Keel, &c.*

The materials and workmanship in this vessel are of a very superior description, and she is well and efficiently cemented in the Bottom. which is carried more than usually high up the Sides.

In what manner are the surfaces preserved from oxidation? Inside *By painting* Outside *By painting*

I am of opinion this Vessel should be Classed *100 A. I.*

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

Special £ 58 : 8 : 0
Certificate *Gratis* : -

(Travelling Expenses)
(if any) £

Committee's Minute *May 23 1872*

Character assigned *100 A. I.*

I concur in the opinion that this vessel should be classed 100 A. I.
R. D. Leach
20th May
1872
100 A. I.

