

Special Survey No. 3, lengthening
for Class under new rules. **IRON SHIPS.** Regd 28/12/71

No. 2778 Survey held at Whitehaven Date, first Survey 24 July Last Survey 28 December 1871
on the Bk "William Wilson" Master Alfred Ryan
Regd Book 255 Tonnage under 425.75 ONE, OR TWO DECKED THREE DECKED VESSELS.
Built at Bristol
When built 1863 Launched August
By whom built J. M. Hyde & Co
Owners George Wilson & Co
Port belonging to Whitehaven
Destined Voyage Tripoli
If Surveyed while Building, Afloat, or in Dry Dock
While lengthening on the patent ship

Length on deck as per Rule, 152 Feet. 152 Inches. Moulded Breadth, 23 Feet. 9 1/2 Inches. Depth from top of Keel to Deck Beam, as per Rule, 16 Feet. 5 Inches. Power of Engines, One No. of Decks, One No. of Tie Beams, Two

Dimensions of Ship per Register, length, 156. breadth, 23.9 depth, 15.

	Inches in Ship.	Inches required per Rule.
Keel, if bar iron, depth and thickness	<u>See sketch in first entry report</u>	<u>7 1/4 x 1 1/2</u>
Do. if centre through plate, depth and thickness	<u>See sketch in first entry report</u>	<u>6 1/2 x 1 1/8</u>
Stem, if bar iron, moulding and thickness	<u>See sketch in first entry report</u>	<u>6 3/8 x 2 1/2</u>
Stern-post do. do. do.	<u>See sketch in first entry report</u>	<u>6 1/2 x 1 1/8</u>
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>18 inches</u>	<u>21 inches</u>
Frames, size of Angle Iron, for 2/3 length amidships	<u>3 1/2 x 2 1/2</u>	<u>6 x 3 1/2</u>
Do. for 1/3 at each end	<u>3 1/2 x 2 1/2</u>	<u>6 x 3 1/2</u>
Reversed Frames, size of Angle Iron	<u>2 1/2 x 2 1/2</u>	<u>5 x 2 1/2</u>
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	<u>15</u>	<u>14 1/2</u>
Do. at the ends	<u>15</u>	<u>14 1/2</u>
Do. do. do. at Bilge Keelson	<u>15</u>	<u>14 1/2</u>
Do. height extended at the Bilges	<u>upper edge of floor plate</u>	<u>29</u>
Beams, Three Decked, Spar, or Awning Decked (No.) single or double Angle Iron, Plate or Tee Bulb Iron	<u>See sketch in first entry report</u>	<u>without any rise.</u>
Single or double Angle Iron on Upper edge	<u>See sketch in first entry report</u>	<u>6 1/2 deep</u>
Average space	<u>3 1/2</u>	<u>3 feet 6 inches</u>
Beams, Upper or Middle Deck (No. 4) single or double Angle Iron, Plate or Tee Bulb Iron	<u>See sketch in first entry report</u>	<u>6 x 6 1/2</u>
Single or double Angle Iron, on Upper Edge	<u>See sketch in first entry report</u>	<u>2 1/4 x 2 1/4</u>
Average space	<u>3 feet</u>	<u>3 feet 6 inches</u>
Beams, Lower Deck or Orlop (No. 30) single or double Angle Iron, Plate or Tee Bulb Iron	<u>See sketch in first entry report</u>	<u>6 x 6</u>
Single or double Angle Iron on Upper Edge	<u>See sketch in first entry report</u>	<u>2 1/4 x 2 1/4</u>
Average space	<u>on every second frame</u>	<u>3 feet</u>
Keelson Centre line, single or double plate, box, or intercostal, size of Plates	<u>See sketch in first entry report</u>	<u>18</u>
Do. Bulb Plate to Intercostal Keelson	<u>See sketch in first entry report</u>	<u>14</u>
Do. Size of Angle Irons	<u>See sketch in first entry report</u>	<u>3 x 3</u>
Do. Side Intercostal Keelson, size of Plates	<u>See sketch in first entry report</u>	<u>3 x 3</u>
Do. Angle Irons on tops of Floors	<u>See sketch in first entry report</u>	<u>3 x 3</u>
Do. Bilge Keelson, Bulb Iron	<u>See sketch in first entry report</u>	<u>6 x 3</u>
Do. do. Angle Irons	<u>See sketch in first entry report</u>	<u>3 x 3</u>
Do. Side Stringers (No. 1 pair) size of Angle Irons	<u>See sketch in first entry report</u>	<u>6 x 3</u>

Transoms, material or, if none, in what manner compensated for.
Knight-heads Eug. Oak Hawse Timbers Eug. Oak
Windlass Eug. Oak Pall Bitt Eug. Oak

The Frames extend in one length from Keel to Gunnwale Riveted through plates with (3/4 in.) Rivets, about 6 apart.
The Reverse Angle Irons on the floors extend across the middle line up to the height of 1 1/4 below the hold beam stringer
On all the Frames and to above the hold beam stringer in new work, and on every alternate frame to Gunnwale
Keelsons. Are the various lengths of Plates and Angle Irons properly connected? yes And are their butts properly shifted? yes
Plates, Garboard, double or Riveted to Keel, double or at upper edge, with Rivets (3/4 in.) diameter, averaging (3 ins.) from centre to centre.
Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (3/4 in.) diameter, averaging (3 ins.) from centre to centre.
Do. Butts from Keel to turn of Bilge, worked carvel with butt straps (9/16) thick, treble, double or single Riveted; with Rivets (3/4 in.) diameter averaging (3 ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? yes
Do. Edges of Sheerstrake, double or single Riveted. At upper edge single At lower edge double rivetted
Do. Butts from Bilge to Planksheers, worked Carvel with Butt Straps (9/16) thick, double or single Riveted; with Rivets (3/4 in.) diameter, averaging (3 ins.) from centre to centre. Breadth of laps in double Riveting (4 1/4) Breadth of laps in single Riveting (2 1/2)
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? double rivetted
Planksheer, how secured to the plating of the sides, { Explain by Sketch, } Iron Gutter Waterway Cemented
Waterway " " planksheer and to the Beams, { if necessary. }
Beams of the various Decks, how secured to the sides? the new beams with welded bracket knees riveted to frames No. of Breasthooks, 4 Crutches, 3
What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? The beams, frames and other angle iron used in the new work on this vessel, from the Stockton Malleable Iron Company
Manufacturer's name or trade mark, and the plating, from the West Cumberland Cemented Iron Company, Workington.

We certify that the above is a correct description of the several particulars therein given.
Joint Surveyor's Signature, John Pearson Surveyor's Signature, J. W. Miles

1210-50-0124

*copy of these sketches 1/16 thickness, also the bilge keelsons and side stringers. Angles iron, which larger than required in cables, 3/16 & 3/8 in 100 A, the dimensions referred to are in my opinion fully complied with. I have tested the Bower Anchor, and find it to be a good one, and have been produced from the Harbey, Rockel and Co. Boston. Board the vessel at 11 AM on 2nd Jan. 1871. Public Testing Company signed by Mr. B. B. B.

Workmanship. Are the butts of plating planed or otherwise fitted? all closely fitted
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
Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? solid pieces
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? yes and are the rivet holes well, and sufficiently countersunk in the plate and punched from the faying surfaces? yes where seen
Are there any rivets which either break into or have been put through the seams or butts of the plating? few

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.
State also Length and Diameter of Lower Masts and Bowsprit

9677 *Len*

Number for equipment		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.												
Fore Sails,	Chain	240	1 1/4	28 2/20	1 1/4	28 2/20	Bowers	3	14.3.8	16.7.0.0	13.2.0	15.3.0.0
Fore Top Sails,	(State Machine where Tested, and name of Superintendent).						(State Machine where Tested, and name of Superintendent).					
Fore Topmast Stay Sails	Hempen Stream Cable	90	1 1/2	new	1 1/2		Stream	1	6.3.13		6.0.0	
Main Sails,	Hawser chain	60	13/16				Kedges	2	5.0.0		3.0.0	
Main Top Sails,	Towlines ...	80	5 1/2	new	5 1/2							
and spare sails	Warp	90	5 1/2									
	All of good quality.	110	5									

Her Standing and Running Rigging Wire & Hemp sufficient in size and good in quality. She has one Long Boat and two others
The present state of the Windlass is good Capstan Winch and Rudder good Pumps goods

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?
ports cut in bulwarks hung with hinges
Cargo Hatchways.—How formed? Plate Iron Coverings & Wood hatches State size Fore hatchway 4' 3" x 4' 5"
If of extraordinary size, state how framed and secured? After hatchway 5' 8" x 5' 0"

What arrangement for shifting beams?
Hatches, themselves, whether strong and efficient? they are, 2 Main Hatchways.—State size Old 12' 0" x 8' 0" New 8' 6" x 8' 0"

Order for Special Survey No. _____ DATES of _____
Date _____ Surveys held _____
Order for Ordinary Survey No. _____ while building _____
Date _____ as per _____
No. _____ in builder's yard. Section 18. _____
1st. On the several parts of the frame, when in place, and before the plating was wrought Special Surveyed
2nd. On the plating during the progress of riveting in 1863 while building under a Roof
3rd. When the beams were in and fastened, and before the decks were laid and now Special
4th. When the ship was complete, and before the plating was finally coated or cemented Surveyed while
5th. After the ship was launched and equipped lengthening, & in conformity with N^o 3 Survey

General Remarks, This vessel has now been lengthened thirty six feet amidships, proper stages made, the hold, cleared, all the Ceiling removed, the whole of the frames, stringers, hocks, floor plates, keelsons, ends of beams, bulkheads, rivets, and inner surface of the plating exposed, all oxidation removed by being cut or beveled off the several parts above named, also from the outside plating, rivets, keel, stem, stern post & rudder; the thickness of the plating ascertained by drilling at such parts as were considered necessary, and on examination found no perceptible reduction. The Cement in the bottom found to be sound & adhering satisfactorily to the Iron, has only been removed where considered necessary for examination, and in way of new work. The Windlass unpeeling wood lining, stripped off, the Windlass examined and found good; and the Anchors, Cables and general equipment attended to. One bulkhead has been taken out; the fore and main masts and top gallant masts, and the fore & main yards, Mizzen topmast and fibboom, most of the rigging, 1 suit of sails, 2 hawsers 90 fathoms each of 7/8 & 5/8, 1 best Bower Anchor, 1 Stream & 1 Kedge, also 340 fathoms of 1 1/4 Chain Cable, and 1 boat, all new. The bottom floor and frames cemented in upper part of bilges amidships in way of new work, the Cement made good at all other parts where required, and the whole of ironwork inside and outside, coated with Paint, the Ceiling replaced and made good with part new. The deck renewed amidships with 3/4 Pitch Pine and the shifts extending for 3/5 of the vessel's length diminishing at ends to 3/4 the thickness of the old portion of the deck. The Owners have requested that this vessel may now be classed 100 A under the new rules, if deemed entitled thereto. It will be seen that the top of the floors are level instead of extending up the bilge to twice the depth amidships, and the frame Angle iron amidships 3 1/2 x 12 1/2 x 5/16 instead of 3 1/2 x 3 x 5/16, also the garboard strakes & sheer strakes 2 1/2 instead of 3 1/2 inches in breadth, but as the frames are 3 inches closer, the floors 10 & the outside plating from the garboard strakes to the lower

In what manner are the surfaces preserved from oxidation? Inside Portland Cement to bilges Paint Outside Oxide of Iron & other Paint

I am of opinion this Vessel should be Classed 100 A 1

The amount of the Entry Fee£ 5 : : is received by me, from W. J. Nelson
Travelling Expenses (if any)£ : :
Special£ 8 : 8 :
Certificate : 5 :
13. 13. 0
1. 1. 0
12. 2. 0
Paid Joint Surveyor

Committee's Minute 2nd January 1871

Character assigned 100 A 1

record lengthened
J. W.

I concur in the opinion that this vessel should be classed 100 A 1.

Lloyd's Register
Classification