

IRON SHIPS.

No. *Survey held at Newcastle* Date, first Survey *2nd January* Last Survey *28 June 1870*

on the *S.S. "Mid-Sun"* Master *E. Harvey*

Tonnage under Tonnage Deck *805-40* ONE, OR TWO DECKED THREE DECKED VESSELS.

Ditto of Spar Deck, or Awning Deck. *46-90* Half moulded breadth *14-6* Total Depth if three or more Decks *19-0*

Ditto of ~~Deck~~ Raised Qr. Dk. *50-76* Depth from upper part of Keel to top of Upper Deck Beams *19-0* Total Girth of Half Midship Frame *30-0*

Ditto of Houses on Deck *50-76* Girth of Half Midship Frame *30-0* 3rd Number *63-5* Length *220*

Ditto of Forecastle *50-76* 1st Number *63-5* Length *220*

Gross Tonnage *854-55* 2nd Number *132700* 4th Number *1270*

Crew Space, as per Rule *288-90* 2nd Number *132700* 4th Number *1270*

Register Tonnage, as per Rule *288-90* 2nd Number *132700* 4th Number *1270*

Engine Room *565-57* Depths to Length *12-4* Breadths to Length *12-4*

Register Tonnage, as per Rule *565-57* Depths to Length *12-4* Breadths to Length *12-4*

Feet. Inches. Moulded Breadth, *29 0* Depth from top of Keel to Deck Beam, as per Rule *19 0* Power of Engines, *99* No. of Decks, *one* No. of Tiers of Beams, *two*

Dimensions of Ship per Register, length *222-1* breadth, *29* depth, *19-5*

Keel, ~~bar~~ iron, depth and thickness *9 x 2 1/2* Inches in Ship. Inches required per Rule. *8 x 2 1/2*

Don't centre through plate, depth and thickness *7 1/2 x 3* Inches in Ship. Inches required per Rule. *7 1/4 x 2 3/8*

Stem, ~~bar~~ iron, moulding and thickness *7 1/2 x 3* Inches in Ship. Inches required per Rule. *7 1/4 x 2 3/8*

Stern-post do. do. do. *7 1/2 x 3* Inches in Ship. Inches required per Rule. *7 1/4 x 2 3/8*

Distance of Frames from moulding edge to moulding edge, all fore and aft *21* Inches in Ship. Inches required per Rule. *23*

Frames, size of Angle Iron, for $\frac{1}{2}$ length amidships *4 3 7* Inches in Ship. Inches required per Rule. *4 3 7*

Do. for $\frac{1}{4}$ at each end *4 3 7* Inches in Ship. Inches required per Rule. *4 3 6*

Reversed Frames, size of Angle Iron *3 3 6* Inches in Ship. Inches required per Rule. *3 3 7*

Floors, depth and thickness of Floor Plate at mid line for half the length amidships *18 1/2 x 7* Inches in Ship. Inches required per Rule. *19 x 8*

Do. at the ends *18 1/2 x 7* Inches in Ship. Inches required per Rule. *19 x 8*

Do. do. do. at Bilge Keelson *18 1/2 x 7* Inches in Ship. Inches required per Rule. *19 x 8*

Do. height extended at the Bilges *18 1/2 x 7* Inches in Ship. Inches required per Rule. *19 x 8*

Beams, Three Decked, Spar, or Awning Deck (No. *32*) single or double Angle Iron, Plate or Tee Bulb Iron *4 x 7* Inches in Ship. Inches required per Rule. *4 x 7*

Single or double Angle Iron on Upper edge *4 x 7* Inches in Ship. Inches required per Rule. *4 x 7*

Average space *6 1/2* Average space *6 1/2*

Beams, Upper or Middle Deck (No. *32*) single or double Angle Iron, Plate or Tee Bulb Iron *4 x 7* Inches in Ship. Inches required per Rule. *4 x 7*

Single or double Angle Iron on Upper Edge *4 x 7* Inches in Ship. Inches required per Rule. *4 x 7*

Average space *6 1/2* Average space *6 1/2*

Beams, Lower Deck or Orlop (No. *32*) single or double Angle Iron, Plate or Tee Bulb Iron *4 x 7* Inches in Ship. Inches required per Rule. *4 x 7*

Single or double Angle Iron on Upper Edge *4 x 7* Inches in Ship. Inches required per Rule. *4 x 7*

Average space *6 1/2* Average space *6 1/2*

Keelson Centre line, single or double plate, and ~~iron~~ Intercoastal, size of Plates *26 x 8* Inches in Ship. Inches required per Rule. *13 1/2 x 11*

Do. Bulb Plate to Intercoastal Keelson *26 x 8* Inches in Ship. Inches required per Rule. *13 1/2 x 11*

Do. Size of Angle Irons *5 3 8* Inches in Ship. Inches required per Rule. *5 3 1/2 7*

Do. Side Intercoastal Keelson, size of Plates *5 3 8* Inches in Ship. Inches required per Rule. *5 3 1/2 7*

Do. Angle Iron on top of Floors *5 3 8* Inches in Ship. Inches required per Rule. *5 3 1/2 7*

Do. Bilge Keelson, Bulb Iron *5 3 8* Inches in Ship. Inches required per Rule. *5 3 1/2 7*

Do. do. Angle Irons *5 3 8* Inches in Ship. Inches required per Rule. *5 3 1/2 7*

Do. Side Stringers (No. *two*) size of Angle Irons *5 3 8* Inches in Ship. Inches required per Rule. *5 3 1/2 7*

Transoms, material *iron* or, if none, in what manner compensated for.

Knight-heads *iron* Hawse Timbers *iron*

~~Iron~~ *iron* Patent Pall Bitt *not required*

The Frames extend in one length from *Keel* to *gunwale* Riveted through plates with (*3/4* in.) Rivets, about *6* apart.

The Reverse Angle Irons on the floors extend across the middle line *from hold beam stringer to hold beam stringer*

All the Frames and to *the gunwale on alternate frames.*

Are the various lengths of Plates and Angle Irons properly connected? *yes* And are their butts properly shifted? *yes*

Edges from Garboards, double *yes* Riveted to Keel, double *yes* at upper edge, with Rivets (*1/2 x 7/8* in.) diameter, averaging (*5 3/4* ins.) from centre to centre.

Edges from Garboards to upper part of Bilge, worked Clencher, double *yes* 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 with butt straps (*9 x 10/16*) thick, *treble*, double or single Riveted; with Rivets (*3/4* in.) diameter averaging (*3 1/4* ins.) from centre to centre.

Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? *no*

Edges of Sheerstrake, double or single Riveted. At upper edge *single* At lower edge *double*

Butts from Bilge to Planksheers, worked Carvel with Butt Straps (*7 1/4* in.) thick, double or single Riveted; with Rivets (*3/4* in.) diameter, averaging (*3 1/4* ins.) from centre to centre.

Breadth of laps in double Riveting (*4 1/4*) Breadth of laps in single Riveting (*2 3/4*)

of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *double riveted*

secured to the plating of the sides, *Explain by Sketch,*

planksheer and to the Beams, *if necessary.*

how secured to the sides? *Welded bars riveted* No. of Breasthooks, *4* Crutches, *4*

used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Palmer & Co. iron*

or trade mark, *Palmer & Co. iron*

correct description of the several particulars therein

Signature, *E. Harvey*

Lloyd's Foundry

Workmanship. Are the butts of plating planed or otherwise fitted? *Some are planed and some filed*
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 in pieces*
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? *fairly so* and are the rivet holes 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*

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 *wood*

8157 *Ln*

Number for equipment		15367	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't req'd per Rule.	Test req'd per Rule.
N ^o . <i>15367</i>	SAILS.	CABLES, &c.											
	Fore Sails,	Chain	270	1 7/16	34.4.0.0	1 7/16	34 2/10	Bowers	3	10.3.10	19.15.1.4	10.0.0	19.0.0
	Fore Top Sails,	(State Machine where Tested, and name of Superintendent).	Lloyd's Type P. H.			R. Russell	slight	(State Machine where Tested, and name of Superintendent).		10.1.0	19.4.1.14	10.0.0	19.0.0
	Fore Topmast Stay Sails	Hempen Stream Cable	90	1 1/8 in		7/8		with <i>Stk</i>		16.0.0	17.7.2.0	15.1.6	16.1.0
	Main Sails,	Hawser	90	9 1/2		<i>Stk</i>		Stream <i>Stk</i>	1				
	Main Top Sails,	Towlines ...	90	6		5				8.1.4			
	and <i>one</i>	Warp	140	4				with <i>Stk</i>					
		All of <i>good</i> quality.						Kedges	1-2	4.0.14		4.0.0	
										2.0.3		2.0.0	

Her Standing and Running Rigging *hemp* sufficient in size and *good* in quality. She has *one* Life Long Boat and *two* others
The present state of the *Windlass* is *Capstan* *good* and Rudder *good* Pumps *good & sufficient*
Engine Room Skylights. How constructed? *Iron* How secured in ordinary weather? *by nuts & screw bolts & heads*
What arrangements are there for deadlights in such for bad weather? *Carpanulins &c*
Coal Bunker Openings. How constructed? *Cast iron coverings* How are lids secured? *by studs & bolts* How high above deck? *5 1/2*
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? *Six ports and three mowing pipes on each side*
Cargo Hatchways. How formed? *iron coverings riveted to beams* State size *17 feet by 9 feet*
If of extraordinary size, state how framed and secured? *ordinary*
What arrangement for shifting beams? *strong bulb beam with double suspensions*
Hatches, themselves, whether strong and efficient? *yes* Main Hatchways. State size *11 1/2 x 9 feet*

Order for Special Survey No. *49* DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought } *built*
Date *29 Jan 1870* Surveys held 2nd. On the plating during the progress of riveting } *under*
Order for Ordinary Survey No. *—* while building 3rd. When the beams were in and fastened, and before the decks were laid } *special*
— as per 4th. When the ship was complete, and before the plating was finally coated or cemented } *survey*
No. *207* in builder's yard. Section 18. 5th. After the ship was launched and equipped }

General Remarks, *This vessel is built in accordance with the midship section attached hereto, and as per Secretary's letter of the 15th January 1870; excepting that a side plate has been added on to the deck stringers at sides 15 x 7/16 for about two-thirds the vessel's length; and she has a water ballast tank (top plating 5/16) extending for a length of 132 feet amidships.*

In what manner are the surfaces preserved from oxidation? Inside *Caustic & paint* Outside *paint & composition*

I am of opinion this Vessel should be Classed *90 A.I.*
The amount of the Entry Fee£ *5* is received by me, *R. Reed*
Travelling Expenses (if any)£ *—*

Special£ *42.10*
Certificate
Committee's Minute *28 July 1870*

Character assigned *90 A.I.*
A.S.C.P.