

IRON SHIPS.

No. 10102 Survey held at Sunderland Date, First Survey Dec. 2. 1870 Last Survey May 2. 1871

On the Screw Steamer "David Burn" Master Essen

To age under Tonnage Deck	ONE OR TWO DECKED, SPAR OR AWNING DECKED VESSELS.	THREE DECKED VESSELS.
690. 31	Half moulded breadth.... 14.3	Half Moulded Breadth....
26. 48	Depth from upper part of Keel to top of Upper Deck Beams..... 18.0	Total Depth if three or more Decks.....
33. 27	Girth of Half Midship Frame (as per Rule)..... 29.3	Total Girth of Half Midship Frame.....
750. 01	1st Number..... 61.6	3rd Number.....
29. 48	Length..... 19.8	Length.....
240. 03	2nd Number.... 12,078	4th Number....
480. 50	Depths to Length..... 12	Breadths to Length..... 7

Built at Sunderland
 When built 1871 Launched Mar 23/71
 By whom built Wm. Saxford & Sons
 Owners Robert Hindhaugh
 Port belonging to London
 Destined Voyage London
 If Surveyed while Building, Afloat, or in Dry Dock. Wm. Saxford

Length on deck as per Rule, 198 Feet. Inches. Moulded Breadth, 28 Feet. Inches. 6 Depths from top of Floors to Upper and Main Deck Beams, as per Rule..... 16 Feet. Inches. 6 Power of Engines, 90 Horse. N° of Decks, one N° of Tiers of Beams two

Dimensions of Ship per Register, length, 200.5 breadth, 28.75 depth, 16.25

	Inches in Ship.	Inches required per Rule.		Inches in Ship.	Inches required per Rule.
Keel, if bar iron, depth and thickness.....	$7\frac{1}{2} \times 2\frac{1}{2}$	$8 \times 2\frac{1}{8}$	Flat Keel Plates, breadth and thickness.....	—	—
Do. if centre through plate, depth and thickness.....	$7 \times 2\frac{1}{2}$	$7 \times 2\frac{1}{8}$	Plates in Garboard Strakes, breadth and thickness.....	<u>30</u>	<u>9</u>
tern-post for Rudder do. do.	$7\frac{1}{2} \times 4\frac{1}{2}$	$7 \times 4\frac{3}{4}$	Do. from Garboard to upper part of Bilges ..	—	<u>8</u>
stern-post for Propeller.....	$7\frac{1}{2} \times 4\frac{1}{2}$	$7 \times 4\frac{3}{4}$	Do. of doubling at Bilge, or increased thickness, and length applied.....	—	—
Distance of Frames from moulding edge to moulding edge, all fore and aft.....	<u>22</u>	(Class <u>90A</u>)	Do. fm up. part of Bilge to lr. edge of Sh'rstrake.....	—	<u>7</u>
Frames, size of Angle Iron, for $\frac{1}{2}$ length amidships.....	<u>4</u> <u>3</u> <u>7</u>	<u>4</u> <u>3</u> <u>7</u>	Do. Main Sheerstrake, breadth and thickness.....	—	—
Do. for $\frac{1}{2}$ at each end.....	<u>4</u> <u>3</u> <u>6</u>	<u>4</u> <u>3</u> <u>6</u>	Do. of d'bling at Sh'rstrake, & length applied.....	—	—
Reversed Frames, size of Angle Iron.....	<u>3</u> <u>3</u> <u>7</u>	<u>3</u> <u>3</u> <u>7</u>	Do. from Mn. to Up. or Spar Dk. Sh'rstrake.....	—	—
Floors, depth and thickness of Floor Plate at mid line for half the length amidships.....	<u>18\frac{1}{2}</u> — <u>8</u>	<u>18</u> — <u>8</u>	Do. Up. or Spar Dk Sh'rstrake, brdth & thickness.....	<u>30\frac{1}{2}</u>	<u>10 full</u> <u>30</u> <u>10</u>
Do. at the ends.....	<u>4</u> — <u>7</u>	— — <u>7</u>	Butt Straps to outside plating, breadth & thickness.....	<u>10\frac{1}{2}</u> <u>14\frac{1}{2}</u> <u>8\frac{1}{2}</u>	<u>2\frac{1}{2}</u> <u>8\frac{1}{2}</u> <u>11</u>
Do. do. do. at Bilge Keelson.....	<u>10\frac{1}{2}</u> — —	— — —	Lengths of Plating.....	<u>5</u> <u>Shave</u>	—
Do. height extended at the Bilges.....	<u>Twice height of middle</u>	— — —	Shifts of Plating, and Stringers.....	<u>2</u> <u>Shave</u>	—
Beams, Upper, Spar, or Awning Deck (No. 55).....	<u>7</u> — <u>7</u>	<u>7</u> — <u>7</u>	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness.....	<u>2\frac{1}{2}</u>	<u>8 full</u> <u>28</u> <u>8</u>
Single or double Angle Iron, Plate or Tee Bulb Iron.....	<u>2\frac{1}{2}</u> <u>2\frac{1}{2}</u> <u>5</u>	<u>2\frac{1}{2}</u> <u>2\frac{1}{2}</u> <u>5</u>	Angle Iron on ditto.....	<u>4\frac{1}{2}</u> <u>7</u> <u>7</u>	<u>4\frac{1}{2}</u> <u>8\frac{1}{2}</u> <u>7</u>
Single or double Angle Iron on Upper edge.....	<u>44</u> — —	<u>44</u> — —	Tie Plates (fore and aft), outside Hatchways.....	<u>9</u>	<u>8</u> <u>9</u> <u>8</u>
Average space.....	<u>44</u> — —	<u>44</u> — —	Diagonal Tie Plates on Beams (No. of Pairs, 10).....	<u>9\frac{1}{2}</u>	<u>8</u> <u>9</u> <u>8</u>
Beams, Main or Middle Deck (No.) single, or double Angle Iron, Plate or Tee Bulb Iron.....	— — —	— — —	Planksheer material and scantling.....	<u>Gutter Gunwale</u>	—
Single, or double Angle Iron, on Upper Edge.....	— — —	— — —	Waterways do. do.	<u>3\frac{3}{4}</u> <u>Yellow & Pitch Pine</u>	—
Average space.....	— — —	— — —	Flat of Deck do. do.	<u>Screw bolts with nuts</u>	—
Beams, Lower Deck, Hold or Orlop (No. 26).....	<u>7</u> — <u>7</u>	<u>7</u> — <u>7</u>	How fastened to Beams.....	— — —	—
Single or double Ang. Iron, Plate or Tee Bulb Iron.....	<u>2\frac{1}{2}</u> <u>2\frac{1}{2}</u> <u>5</u>	<u>2\frac{1}{2}</u> <u>2\frac{1}{2}</u> <u>5</u>	Stringer Plate on ends of Main or Middle Deck.....	— — —	—
Single or double Angle Iron on Upper Edge.....	<u>44</u> <u>88</u>	<u>44</u> <u>88</u>	Beams, breadth and thickness.....	— — —	—
Average space.....	<u>44</u> <u>88</u>	<u>44</u> <u>88</u>	(Is the Stringer Plate attached to the outside plating?).....	— — —	—
Keelson Centre line, single or double plate, box, or intercostal, size of Plates.....	<u>13</u> — <u>10</u>	<u>13</u> — <u>10</u>	Angle Irons on ditto (No.).....	— — —	—
Do. Bulb Plate to Intercostal Keelson.....	<u>7</u> — <u>7</u>	<u>7\frac{1}{8}</u> — <u>7</u>	Tie Plates, outside Hatchways.....	— — —	—
Do. Size of Angle Irons.....	<u>5</u> <u>3</u> <u>8</u>	<u>4\frac{1}{2}</u> <u>3\frac{1}{2}</u> <u>7</u>	Diagonal Tie Plates on Beams (No. of pairs,).....	— — —	—
Do. Side Intercostal Keelson, size of Plates.....	— — —	— — —	Waterways materials and scantlings.....	— — —	—
Do. Angle Irons on tops of Floors.....	— — —	— — —	Flat of Deck do. do.	— — —	—
Do. Bilge Keelson, Bulb Iron.....	— — —	— — —	How fastened to Beams.....	— — —	—
Do. do. Intercostal plates riveted to plating for length.....	— — —	— — —	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams.....	<u>24\frac{1}{2}</u>	<u>7</u> <u>25</u> <u>7</u>
Do. do. Angle Irons.....	<u>4\frac{1}{2}</u> <u>3\frac{1}{2}</u> <u>8</u>	<u>4\frac{1}{2}</u> <u>3\frac{1}{2}</u> <u>7</u>	(Is the Stringer Plate attached to the outside plating?).....	<u>Yes</u>	—
Side Stringers (No. /) size of Angle Irons.....	<u>4\frac{1}{2}</u> <u>3\frac{1}{2}</u> <u>7</u>	<u>4\frac{1}{2}</u> <u>3\frac{1}{2}</u> <u>7</u>	Angle Irons on ditto (No. 2).....	<u>3\frac{1}{2}</u> <u>3\frac{1}{2}</u> <u>7</u>	<u>3\frac{1}{2}</u> <u>3\frac{1}{2}</u> <u>7</u>
Do. Intercostal plates riveted to plating for length.....	— — —	— — —	Stringer or Tie Plates, outside Hatchways.....	<u>2\frac{1}{2}</u>	<u>2\frac{1}{2}</u> <u>5</u> <u>Double Angle Iron</u>

Transoms, material Iron or, if none, in what manner compensated for.
 Knight-heads Iron Hawse Timbers Iron
 Windlass Greenheart Pall Bitt Greenheart
 The Frames extend in one length from Keel to Gunnwale Riveted through plates with ($\frac{3}{4}$ in.) Rivets, about 6 apart.
 The Reverse Angle Irons on the floors and frames extend across the middle line to above angle iron on Hold beam and to Gunnwale on alternately frames
 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 ($\frac{3}{4}$ 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 ($\frac{3}{4}$ in.) diameter, averaging (3 ins.) from centre to centre.
 Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes ($19\frac{1}{2} \times 9\frac{1}{2}$) thick, double or single Riveted; with Rivets ($\frac{3}{4}$ 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? Alternate Strakes
 Do. of 2 Strakes at Bilge for $\frac{1}{2}$ length, treble riveted with Butt Straps $\frac{1}{16}$ thicker than their plates. 8
 Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single riveted; with rivets ($\frac{3}{4}$ in.) diameter, averaging (3 ins.) from centre to centre.
 Do. Edges of Sheerstrake, Main, double or single Riveted. Upper, double or single Riveted. At upper edge to Gunnwale At lower edge Double
 Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps ($15\frac{1}{2} \times 8\frac{1}{2}$) thick, double or single Riveted; with Rivets ($\frac{3}{4}$ in.) diameter, averaging (3 ins.) from centre to centre.
 Do. Butts of Main Sheerstrake, double or treble Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double or treble Riveted for $\frac{1}{2}$ length amidships. Breadth of laps of plating in double Riveting ($4\frac{3}{4}$) Breadth of laps of plating in single Riveting (3)
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted?
 Planksheer, how secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.) Gutter Gunwale
 Beams of the various Decks, how secured to the sides? Riveted to frames & Stringer Plate No. of Breasthooks, 4 Crutches, 3
 What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Angles & Bulbs - Stephen Malleable Iron Co
 Manufacturer's name or trade mark, Plate Hartlepool Malleable Iron Co

We certify that the above is a correct description of the several particulars therein given.

Builder's Signature, William Saxford & Sons

Surveyor's Signature, Samuel Martindale

Lloyd's Register
 Foundation

IRON 48-0351

Workmanship. Are the butts of plating planed or otherwise fitted? Planed 89 79 100
Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? well fitted
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 generally 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 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.

State also Length and Diameter of Lower Masts and Bowsprit all of Wood

Midship Section & Owners letter attached

Number for equipment <u>12078</u>		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.	Wt. req'd per Rule.	Test req'd per Rule.
N ^o .	SAILS.	CABLES, &c.	240	1 5/16	31 1/2 tons	1 1/16	28 1/2	3	15.2.0	16.18.3.0	13.2.0	15.3.0.0
	Fore Sails,	Chain	<u>Sunderland</u>									
	Fore Top Sails,	(State Machine where Tested, and name of Superintendent).	<u>signed John Hartnup</u>									
	Fore Topmast Stay Sails	Hempen Stream Cable	90	8 1/2								
	Main Sails,	Hawser	90	7 1/8								
	Main Top Sails,	Towlines ...	90	5								
and		Warp										
		All of <u>new</u> quality.										

Her Standing and Running Rigging Complete sufficient in size and good in quality. She has one Life Long Boat and two others

The present state of the Windlass is Good (2 Capstans 1500 lb and Rudder Good Pumps Good

Engine Room Skylights. How constructed? Strong Wood Laminated & Painted How secured in ordinary weather? Shutter secured by rings

What arrangements are there for deadlights in such for bad weather? Strong Wood Shutter on hinges & secured with bolts

Coal Bunker Openings. How constructed? Metal pipes How are lids secured? Iron Stacks How high above deck? 6 in

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? Side ports.

Cargo Hatchways. How formed? Strong Plates and angle Irons State size 2 1/2 feet by 10 ft with 2 beams & 2 pairs of
If of extraordinary size, state how framed and secured? 4 x 2 strong Wood Good & often.

What arrangement for shifting beams? Yes

Hatches, themselves, whether strong and efficient? Yes Main Hatchways. State size 17 1/2 ft by 9 ft with 1 beam & 2 pairs of
strong Wood Good & often.

Order for Special Survey No. 2280 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought Built under 6.08.
Date 17th December 1910 Surveys held 2nd. On the plating during the progress of riveting Surveyed 1910 Dec 28 1911 Jan 19 1912 Jan 24 1913 Jan 29 1914 Jan 31 1915 Jan 31 1916
Order for Ordinary Survey No. — while building 3rd. When the beams were in and fastened, and before the decks were laid Dec 25 1910 Jan 30 1911 Feb 13 1911 Mar 16 1911 Apr 22 1911 May 22 1911
Date — as per 4th. When the ship was complete, and before the plating was finally coated or cemented Feb 13 1911 Mar 16 1911 Apr 22 1911 May 22 1911
No. 42 in builder's yard. Section 18. 5th. After the ship was launched and equipped 22.27 May 2.

General Remarks,

After the Midship Section was submitted the owner had 9 feet added to her length which altered some of the Scantlings a little, and most of the Iron was in the yard at the time. The small deficiency in the keel is more than made up by the increased thickness of the 4 keelson angle Irons. The flange plates of double bottom being a little thin (1/4 in) the Committee allowed them to remain if the owner did not object, and his letter sanctioning the same is attached.

Length of after double bottom 48 feet fore with 45.3

The Engine Room Skylight is fitted on the Bridge Deck House, the coming being about 8 ft above the Main Deck which makes it safe in heavy weather. The edges of the outside plating are all double rivetted, except three edges below the sheerstake which are single. The Butts of upper & lower stringer plate, sheerstake, and two stake at bilges are treble rivetted in the midship body of the vessel for 1/2 her length, butt strap to thicker than the plating.

In what manner are the surfaces preserved from oxidation? Inside Red paint & Cement Outside Red paint

I am of opinion this Vessel should be Classed 90 A1 and Marked part Double Bottom.

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

Special £ 36 : : :
Certificate : : :
May 1911

(Travelling Expenses)
(if any) £

Committee's Minute 5th May 1911

Character assigned 90 A1

(A 1 & 2 M 6)
pt double bottom

I concur in the opinion that this vessel should be classed 90 A1. Part double bottom.
4/5/11



Lloyd's Register
Foundation