

## IRON SHIP.

No. 11946 Survey held at Sunderland Date, First Survey 20<sup>th</sup> October/77 Last Survey 28<sup>th</sup> June 1878.On the Iron Screw Steamer "Munmuu" Master J. B. Dacke.

TONNAGE under } 1788.25 ONE, OR TWO-DECKED, THREE DECKED VESSEL.  
Tonnage Deck } 35.27 SPAR, OR AWNING-DECKED VESSEL.  
Ditto of Upper Deck } 1.61  
Ditto of Lower Deck } 62.61  
Ditto of Poop, or } 2.73  
Raised Or Deck } 5.68  
Ditto of House } 38.78  
Ditto of Forecastle } 1940.13  
Gross Tonnage }  
Less Crew Space 72.074 }  
Less Engine Room 620.844 } 692.88  
Register Tonnage } 1247.25  
as out on Beam }

HALF BREADTH (moulded) ... 17.37  
DEPTH from upper part of Keel to top of Upper Deck Beams ... 26.16  
GIRTH of Half Midship Frame (as per Rule) ... 39.37  
1st NUMBER ...  
1st NUMBER, if a THREE-DECKED VESSEL [deduct 7 feet] 75.90  
LENGTH ... 283.54  
2nd NUMBER ... 21.517  
PROPORTIONS—Breadths to Length ... Under 8 1/2  
Depths to Length—Upper Deck to Keel ... 11  
Main Deck ditto ... 15

Built at Sunderland  
When built 1878. Launched 4<sup>th</sup> April 1878  
By whom built 2<sup>nd</sup> Duxford and Sons  
Owners James Enghie and  
33 Leadenhall St. London  
Port belonging to London  
Destined Voyage Hong Kong  
Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule ... 283 6  
BREADTH Moulded ... 34 8 1/2  
DEPTH top of Floors to Upper Deck Beams ... 24 2  
Do. do. Main Deck Beams ... 16 11 1/2  
Power of Engines ... 240  
Horse ... 240  
N<sup>o</sup>. of Decks with flat laid ... 2  
N<sup>o</sup>. of Tiers of Beams ... 3

Dimensions of Ship per Register, length, 283 6 breadth, 34 8 1/2 depth, 24 2

	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	9 1/2 x 2 1/2	9 1/2 x 2 1/2
STEM, moulding and thickness	9 x 2 1/2	9 x 2 1/2
STERN-POST for Rudder do. do.	9 x 5	9 x 5
for Propeller	24	24
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	(Class 100-A)
FRAMES, Angle Iron, for 1/2 length amidships	5 3 8/16	5 3 8/16
Do. for 1/4 at each end	5 3 7/16	5 3 7/16
REVERSED FRAMES, Angle Iron	3 3 7/16	3 3 7/16
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	23 1/2 9/16 and 17/16	23 1/2 9/16 and 17/16
thickness at the ends of vessel	8/16 and 7/16	8/16 and 7/16
depth at 3/4 the half-bdth. as per Rule	11 3/4	11 3/4
height extended at the Bilges	4 7	4 7
BEAMS, Upper, Spar, or Awning Deck Single or double Angle Iron, Plate or Tee Bulb Iron	7 7/16	7 7/16
Single or double Angle Iron on Upper edge	3 3 8/16	3 3 8/16
Average space	48	48
BEAMS, Main, or Middle Deck Single or double Angle Iron, Plate or Tee Bulb Iron	6 3 8/16	6 3 8/16
Single or double Angle Iron, on Upper Edge	3 3 7/16	3 3 7/16
Average space	24	24
BEAMS, Lower Deck, Hold, or Orlop Single or double Angle Iron, Plate or Tee Bulb Iron	7 7/16	7 7/16
Single or double Angle Iron on Upper Edge	4 4 8/16	4 4 8/16
Average space	10 5 spaces	10 5 spaces
KEELSONS Centre line, single or double plate, box, or intercostal plates	18 13/16	18 13/16
" Rider Plate	12 13/16	12 13/16
" Bulb Plate to Intercostal Keelson	5 1/2 4 9/16	5 1/2 4 9/16
" Angle Irons	5 1/2 4 9/16	5 1/2 4 9/16
" Double Angle Iron Side Keelson	5 1/2 4 9/16	5 1/2 4 9/16
" Side Intercostal Plate	5 1/2 4 9/16	5 1/2 4 9/16
" do. Angle Irons	5 1/2 4 9/16	5 1/2 4 9/16
" Attached to outside plating with angle iron	5 1/2 4 9/16	5 1/2 4 9/16
BILGE Angle Irons	5 1/2 4 9/16	5 1/2 4 9/16
" do. Bulb Iron, for 1/2 length	5 1/2 4 9/16	5 1/2 4 9/16
" do. Intercostal plates riveted to plating for 1/2 length	5 1/2 4 9/16	5 1/2 4 9/16
BILGE STRINGER Angle Irons	5 1/2 4 9/16	5 1/2 4 9/16
Intercostal plates riveted to plating for 1/2 length	5 1/2 4 9/16	5 1/2 4 9/16
SIDE STRINGER Angle Irons	5 1/2 4 9/16	5 1/2 4 9/16

Transoms, material. Knight-heads. Hawse Timbers. Iron  
Windlass Harfield's Patent Pall Bitt None required

The FRAMES extend in one length from Keel to Gunnwale Riveted through plates with 7/8 in. Rivets, about 7' apart.  
The REVERSED ANGLE IRONS on floors and frames extend from near middle line to middle of Starboard and to Gunnwale alternately  
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 3/16 in. diameter, averaging 5 1/2 ins. from centre to centre.  
Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 1 3/16 in. diameter, averaging 4 ins. from centre to centre.  
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 1 3/16 in. diameter averaging 11 ins. from centre to centre.  
Butts of three Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 1 1/16" thicker than the plates they connect.  
Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 1 3/16 in. diameter, averaging 4 ins. from cr. to cr.  
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 1 3/16 in. diameter, averaging 4 ins. from cr. to cr.  
Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted.  
Butts of Main Sheerstrake, treble riveted for 1/2 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted 1/2 length amidships.  
Butts of Main Stringer Plate, treble riveted for 1/2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 1/2 length.  
Breadth of laps of plating in double riveting 5 1/4 Breadth of laps of plating in single riveting  
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double and treble riveted per rule  
Waterway, how secured to Beams (Explain by Sketch, if necessary)  
Beams of the various Decks, how secured to the sides? Knees turned down and riveted No. of Breasthooks, Six Crutches, Six  
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Angles and bulbs: Dorman  
Manufacturer's name or trade mark, Long and Co. and Stockton Castable Iron (Dorman) Plates: Stanton Mather  
The above is a correct description.  
Builder's Signature, William Duxford Surveyor's Signature, William Duxford  
Surveyor to Lloyd's Register of British and Foreign Shipping.



Workmanship. Are the butts of plating planed or otherwise fitted? *Planed*  
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? *A few in the butts only.*

Masts, Bowsprit, Yards, &c., are *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 Materials, and if stamped with Maker's name.  
State also Length and Diameter of Lower Masts and Bowsprit *See enclosed Tracing -*

*Samples of the Iron from which the Fore and Main Masts were made were tested and the results were fully up to or in excess of the Committee's requirements in their suggestions.*

NUMBER for EQUIPMENT 25.852		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd pr Rule.	Test req'd per Rule.	ANCHORS.	N <sup>o</sup> .	Weight.	Test per Certificate.	Weight req'd per Rule.	Test req'd per Rule.
SAILS.							Bowers	5021	33.7.26	31.5.9.0	32.0.0	30% Load
N <sup>o</sup> . Fore Sails, Fore Top Sails, Fore Topmast Stay Sails, Main Sails, Main Top Sails, and	CABLES &c.	270	1 13/16	59 1/8 Tons	270	59 1/8 Tons		5420	30.0.0	29.0.0.0	32.0.0	30% Load
	213 Chain							5448	27.0.0	26.7.2.0	27.1.0	26 1/2
	2296 Chain	90	1 1/8	20 3/4 tons	90 of 1 1/8			5307	10.0.0	12.13.0.14	13.0.0	12.13.0.14
	Hawser ...	90	1 1/8	30 1/4 tons	90 of 1 1/8			5392	5.0.0	8.2.3.7	6.2.0	8.2.3.7
	Towlines ...	180	8		90 of 1 1/8			5787	2.0.14	5.2.2.0	3.1.0	5.2.2.0
	Warp ...	180	6 1/2		90 of 1 1/8							
quality		240	8		90 of 1 1/8							

Standing and Running Rigging *Good* and *Mailla* sufficient in size and *Good* in quality. She has *two* Long Boats and *four* others.  
The Windlass is *Barfield's Patent* Capstang *Efficient* and Rudder *Efficient* Pumps *5* *red pumps* in addition to the *black pumps* *Efficiently*.

Engine Room Skylights. How constructed? *Back and Iron* How secured in ordinary weather? *Efficiently*  
What arrangements for deadlights in bad weather? *Teak solid shutters with glass bulls-eye lights.*

Coal Bunker Openings. How constructed? *Iron plates and frames* How are lids secured? *Efficiently* Height above deck? *6 and 9 inches*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *Eight ports, six scuppers, and four mooring pipes on each side of vessel.*

Cargo Hatchways. How formed? *Iron plates and angles in the usual manner.*

State size Main Hatch *22 ft by 12 feet* *Fore hatch* each *8 ft by 8 ft* *Quarter hatch* *12 feet by 11 ft*

If of extraordinary size, state how framed and secured? *Portable web-plate and bulk iron beams in the larger hatchways*

What arrangement for shifting beams? *Yes - being braced thick.*

Hatches, If strong and efficient? *Yes - being braced thick.*

Order for Special Survey No. <i>2430</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>Built under S.P. and Surveyed 1844 Oct 20 Nov 12 15 19 23</i>
Date <i>5 October 1848</i>		2nd. On the plating during the process of riveting	<i>24 29 Dec 3 5 8 11 13 21 24 1/98 Jan. 3 11 17 21 24 27 Feb. 15 29 13 15 20 24 Mar.</i>
Order for Ordinary Survey No. <i>1</i>		3rd. When the beams were in and fastened, and before the decks were laid...	<i>14 17 11 13 15 20 25 26 28 30 Apr. 4 31 05 16 25 May 16 9 14 15 20 23 25 29 31</i>
Date <i>10 October 1848</i>		4th. When the ship was complete, and before the plating was finally coated or cemented...	<i>June 10 12 14 18 19</i>
No. <i>102</i> in builder's yard.		5th. After the ship was launched and equipped	

General Remarks (State quality of workmanship, &c.) *Very Good*

*She has been built under Special Survey in accordance with the scantlings and arrangements shown on the accompanying tracings of Midship section. Profile and Section of ballast tank, and the requirements set forth in the Secretary's letters dated the 3<sup>rd</sup> of October and 11<sup>th</sup> of December 1847.*

*Is schooner rigged; has a Topgallant Forecastle 33 feet long, a Bridge-house enclosure 36 feet long, a poop 32 feet long, a double bottom aft 66 feet long and a deep tank forward 36 feet long - both of which have been tested by a head of water equal to the height of the upper deck and found to be quite watertight.*

State if one, two, or three, decked vessel, or if spar, or awning decked; and the lengths of poop, forecandle, or raised quarter deck, and the length of double, or part double bottom.

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

I am of opinion this Vessel should be Classed *100 A. I. (200 3 Tons Buns) (A.S.C.P.)*

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

Special ... £ 71 : 14 : 0 *27 June 1848*

Certificate ... *frates*

(Travelling Expenses, if any, £ *No charge made.*)

Committee's Minute *2nd July 18 78.*

Character assigned *100 A*

*2 Dks*

*Del wt 66 ft 3 1/2 Tons Buns*

*Iron Deck*

*double bottom 66 ft*

*2 Dks*