

IRON SHIPS.

Rev 20/2/71

No. 2910 Survey held at West Hartlepool Date, First Survey 7th Sept 1870 Last Survey 10th Feb 1871

On the Screw Steamer "Mellie" Master

Tonnage under Tonnage Deck	542.50	ONE, OR TWO DECKED, SPAR, OR AWNING-DECKED VESSELS.	Half Moulded Breadth....	Built at	West Hartlepool
of Spar Deck, or Awning Deck.		Half moulded breadth.... 14-"	Total Depth if three or more Decks.....	When built	1870-71
Ditto of Poop, or Raised Qr. Dk.	68.44	Depth from upper part of Keel to top of Upper Deck Beams.....	Total Girth of Half Mid-ship Frame.....	By whom built	Deakin Gray & Co.
Ditto of Houses on Deck....	9.08	Girth of Half Midship Frame (as per Rule).....	3rd Number.....	Owners	J. Pymble
Ditto of Forecastle		1st Number..... 56-2	Length.....	Port belonging to	West Hartlepool
Gross Tonnage	615.77	Length..... 170-7	4th Number.....	Destined Voyage	Mediterranean
Crew Space, as per Rule	23.61	2nd Number.... 10.020	Breadths to Length	If Surveyed while Building, Afloat, or in Dry Dock.	
Register Tonnage, cut on Beam..	197.05	Depths to Length. Over 12.			
Engine Room	328.11				
Register Tonnage, as a Steamer, cut on Beam					

Length on deck as per Rule, 170 Feet, 9 Inches. Moulded Breadth, 24 Feet, 10 Inches. Depths from top of Floors to Upper and Main Deck Beams, as per Rule, 14 Feet, 6 Inches. Power of Engines, 00 Horse. N° of Decks, One. N° of Tiers of Beams, One.

Dimensions of Ship per Register, length, 179-7 breadth, 20-3 depth, 14-2

	Inches in Ship	Inches required per Rule	Inches in Ship	Inches required per Rule	Inches in Ship	Inches required per Rule	Inches in Ship	Inches required per Rule
Keel, if bar iron, depth and thickness	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4
Do. if centre through plate, depth and thickness	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4	7 1/2 x 2 1/4
Stem, if bar iron, moulding and thickness	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2
Stern-post for Rudder do. do.	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2
Stern-post for Propeller	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2	7 1/2 x 3 1/2
Distance of Frames from moulding edge to moulding edge, all fore and aft	22	22	22	22	22	22	22	22
Frames, size of Angle Iron, for 1/2 length amidships	3 1/2 x 3	3 1/2 x 3	3 1/2 x 3	3 1/2 x 3	3 1/2 x 3	3 1/2 x 3	3 1/2 x 3	3 1/2 x 3
Do. for 1/4 at each end	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
Reversed Frames, size of Angle Iron	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16
Do. at the ends	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16	17 1/2 x 7/16
Do. do. do. at Bilge Keelson	14	14	14	14	14	14	14	14
Do. height extended at the Bilges	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2
Beams, Upper, Spar, or Awning Deck (No. 4)	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16
single or double Angle Iron, Plate or Tee Bulb Iron	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16
Single or double Angle Iron on Upper edge	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2
Average space	44	44	44	44	44	44	44	44
Beams, Main or Middle Deck (No.) single, or double Angle Iron, Plate or Tee Bulb Iron								
Single, or double Angle Iron, on Upper Edge								
Average space								
Beams, Lower Deck, Hold or Orlop (No. 6)	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16
single or double Angle Iron, Plate or Tee Bulb Iron	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16	6 1/2 x 7/16
Single or double Angle Iron on Upper Edge	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
Average space	44	44	44	44	44	44	44	44
Keelson Centre line, single or double plate, box, or Intercostal, size of Plates	11 1/2 x 9/16	11 1/2 x 9/16	11 1/2 x 9/16	11 1/2 x 9/16	11 1/2 x 9/16	11 1/2 x 9/16	11 1/2 x 9/16	11 1/2 x 9/16
Do. Bulb Plate to Intercostal Keelson	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
Do. Size of Angle Irons	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
Do. Side Intercostal Keelson, size of Plates	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
Do. Angle Irons on tops of Floors	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
Do. Bilge Keelson, Bulb Iron	7 x 7/16	7 x 7/16						
Do. do. Intercostal plates riveted to plating for length	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
Do. do. Angle Irons	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
Side Stringers (No. one) size of Angle Irons	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
Do. Intercostal plates riveted to plating for length								

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

Knight-heads Iron Hawse Timbers Iron

Windlass English Oak Pall Butt English Oak

The Frames extend in one length from Keel to gunwale Riveted through plates with (1/8 in.) Rivets, about 5 in. apart.

The Reverse Angle Irons on the floors and frames extend across the middle line to above hold to Beam Stringers and to gunwale alternately

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 (1/2 in.) diameter, averaging (5 ins.) from centre to centre.

Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (1/2 in.) diameter, averaging (3 ins.) from centre to centre.

Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (1/2 x 7/16) thick, double or single Riveted; with Rivets (1/2 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? no

Do. of One Strakes at Bilge for half length, double riveted with Butt Straps 1/16 thicker than their plates.

Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece (1/2) thick, or clencher, double or single riveted; with rivets (1/2 in.) diameter, averaging (2 3/4 ins.) from centre to centre.

Do. Edges of Sheerstrake, Main, double or single Riveted. Upper, double or single Riveted. At upper edge single to below At lower edge Double

Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (1/2 x 7/16) thick, double or single Riveted; with Rivets (1/2 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 half length amidships. Breadth of laps of plating in double Riveting (4 1/2) Breadth of laps of plating in single Riveting (2 1/2)

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double

Planksheer, how secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.)

Beams of the various Decks, how secured to the sides? Beam ends turned + pieces welded No. of Breasthooks, Four Crutches, Two

What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Good

Manufacturer's name or trade mark, Stockton Iron Works, Hartlepool

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

Builder's Signature, Deakin Gray & Co. Surveyor's Signature, J. Pymble

IRON 448-0074

Workmanship. Are the butts of plating planed or otherwise fitted? Planed 8724 Tras
 Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? They do
 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 due length
 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
 Are there any rivets which either break into or have been put through the seams or butts of the plating? A few in butts

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 Main Mast 54 ft Diameter 18 in Fore Mast 59 ft - Diam 18 in

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.				1-3/16	25-7-11	Bowers	3	13.3-0	13.0-0-14	12-0-0	13-17-0-0
Fore Sails,	210	1 1/4	20-2-11-11			(State Machine where Tested, and name of Superintendent.)		13.2-7	13.5-0-0	12-0-0	13-17-0-0
Fore Top Sails,						With Stock		12.0-21	14.0-3-21	10.0-23	12-0-0-0
Fore Topmast Stay Sails	60	7/8				Stream		6.0-14		6.0-0	
Main Sails,	90	6 1/4				Kedges	2	3.0-0		2.2-0	
Main Top Sails,	90	8 1/2						1-2-3		1-5-0	
and	90	5 1/2									
	100	4 1/2									

Her Standing and Running Rigging Wire & Hemp sufficient in size and good in quality. She has Three Long Boat and good
 The present state of the Windlass is good Capstan Iron and Rudder good Pumps 2 of Metal
 Engine Room Skylights.—How constructed? 3 in Pine & Plate casing How secured in ordinary weather? Wrap gratings
 What arrangements are there for deadlights in such for bad weather? Pine & Deadlights
 Coal Bunker Openings.—How constructed? Iron Pipes How are lids secured? Bars How high above deck? 11 inches
 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?
 Cargo Hatchways.—How formed? 7/16 Plate riveted to beams length 27 ft State size 10-0 x 10 ft + 14-7 x 11 ft
 If of extraordinary size, state how framed and secured? none
 What arrangement for shifting beams? 7/16 Plate in centre the whole depth of Casings, Double Angles on top edges 3 x 3 1/2
 Hatches, themselves, whether strong and efficient? good & efficient Main Hatchways.—State size 10 ft x 10 ft

Order for Special Survey No. 353 DATES of
 Date 24 Sept 1870 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
 2nd. On the plating during the progress of riveting
 3rd. When the beams were in and fastened, and before the decks were laid
 4th. When the ship was complete, and before the plating was finally coated or cemented
 5th. After the ship was launched and equipped

General Remarks, Has a Raised Quarter Deck, frames all to the top height; beams of
bulb 6 1/2 x 7/16. Double angles on top edges 2 x 2 x 3/16. Stringer plates at end of beams 3 1/2 x 6/16.
Angles on so. 3 1/2 x 3 x 7/16. Side plates 12 x 7/16. Plating outside 5/16. Deck 3 in. P. Pine. Gutter
waterways.

Water ballast tanks fitted in fore after hold, frames cut off, connection made
with knee plates to top & bottom of sides, side plates 7/16. Angles on so. 3 1/2 x 3 x 7/16. Web
plates 5/16. Angles on so. 2 1/2 x 2 1/2 x 5/16. Top plating 5/16.
Iron Deck fitted over Engine & boiler space, 6/16 plate riveted to beams, length
41 ft
Five butts of shell plating at bilges lap butted & treble riveted, in each side
Denton Gray & Co

In what manner are the surfaces preserved from oxidation? Inside Plat cemented with Outside with Paint & Black Lead

I am of opinion this Vessel should be Classed 90 A 1
 The amount of the Entry Fee £ 5 : 0 : 0 is received by me,
 Special £ 29 : 12 : 0
 Certificate : :
 (Travelling Expenses)
 (if any) £ _____

Committee's Minute 21st February 1871
 Character assigned 90 A 1
part double bottom
LP MC

Portland Cement
S. N. Gladstone
 This Green Steamer built under
 "Special Survey" appears eligible for
 Classification as recommended above
 to 90 A and to be marked part double
 bottom, as by Dealer's plan in margin
 is 43 ft and that left 5 1/2 ft, total 90 ft.
 They are both clear of the engine room
 It will be observed that in Classification is not
 mentioned, but this is in accordance with Rule 17, 18 & 20

See Secretaries letter dated 13 August 1870
 after letter for Messrs Denton Gray & Co. dated 16th Aug. 1870