

# IRON SHIPS.

Rec. 11/1/67

No. 334 Survey held at Dundee Date 10 January 1867  
on the Screw Steam Ship "MONTON" Master Butchart

Tonnage Gross 937.19 Engine Room 299.9 Register 637.29 Built at Dundee  
under deck 815.67

When Built 1866 By whom built Gourlay Brothers & Co. Owners General & Nav. Co.  
Launch'd 24/10/66 Port belonging to London Destined Voyage Grimsby & London

Surveyed Afloat or in Dry Dock Building afloat

Length aloft	Feet. Inches.	Extreme Breadth	Feet. Inches.	Depth from top of Upper Deck	Feet. Inches.	Power of Engines	Horse No.
Reg 235 1/10	Reg 30-15	Inches in Ship.	Inches required per Rule.	Beam to top of Floor	Reg 16.85		
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	21"	21"	21"	Stem, if bar iron, moulding and thickness	7 1/2	3	7 1/2 x 3
Floors, Size of Angle Iron, and No. one at bottom of Floor Plate	4 1/2 3	12	4 1/2 3	" if plate iron, breadth and thickness	7 1/2	6	10" x 4 1/2
depth and thickness of Floor Plate at mid line	19 1/2	9 1/16	19 1/2	Stern-post, if bar iron, moulding and thickness	7 1/2	6	7 1/2 x 6
depth and thickness of Floor Plate at Bilge Keelson	10	15	9 1/16	Keel, if bar iron, depth and thickness	7 1/2	3	7 1/2 x 3 1/2
Size of Reversed Angle Iron, and No. one at top of Floor Plate	3 3	7 1/16	3 3	" if plate iron, breadth and thickness	7 1/2	3	6 10" x 4 1/2
Frames, Size of Angle Iron, single & double	4 1/2 3	12	4 1/2 3	Garboard Plates, thickness	3 1/4		3 1/4
Reversed Iron, if to every frame or every frame	3 3	7 1/16	3 3	From Garboard to upper part of Bilge	11/16		11/16
Beams, Deck (No. 478) double Angle Iron	3 3	7 1/16	3 3	From upper part of Bilge to 3/5 depth	5/8		5/8
Bulb Iron with double Angle Iron on top	3 2 1/2	3 1/8	3 2 1/2	Sheerstrakes	9 1/16		9 1/16
depth & thickness of plate amidships	7 1/2	15 1/32	7 1/2	Breadth & thickness of Butt Straps to outside plating	13/16		13/16
double or single Angle Iron, on lower edge	Bulb Iron	3.6	7 1/2	Bulb straps in Sheer Strake	10 2/3 equal		10 2/3 equal
average space between				thickness to plates	17 1/2 17 1/2 broad triple riveted		17 1/2 17 1/2 broad triple riveted
if wood (N.) sided & moulded				Material.			
Hold, or Lower Deck (No. 318) double Angle Iron or Bulb Iron with double Angle Iron on top	3 2 1/2	3 1/8	3	Plankshears			
depth & thickness of plate amidships	7 1/2	11 1/16 full	7 1/2	Gunwale Plate or Stringer on ends of Up. Dk Beams	36"	3 1/4	3 1/4
double or single Angle Iron, on lower edge	Bulb Iron			Bull Nails 1 3/4 to 1 1/2 broad triple riveted	26	9 1/16	11/16
average space between	3 1/2 5 7/16 alternately	3 1/2 7/16 alternately		Angle Iron on ditto.	3 1/2 x 3 1/2 x 3/8 outer 4 1/2 x 4 1/2 x 3/8		4 1/2 x 4 1/2 x 3/8
if wood (N.) sided & moulded				Waterway	10 x 4 1/2		3 1/2 x 3 1/2 x 5/8
Paddle, wood, sided and moulded				Deck	Red Pine 7 x 3 1/2		3 1/2
or if Iron, size of Plate				Ceiling in Hold	out to Bely		
Keelson, wood, sided & moulded, iron, size of plate, if iron, give sketch & dimensions	5	4 1/2	5	Ceiling	Red Pine 7 x 3 1/2		
Bulb plate for 12 1/2 ft	7 1/2 full	7 1/2	7 1/2	Decks	batten & space		
Number one each side	7 1/2 full	7 1/2	7 1/2	Beam Clamps	Lower Batten & space Red Pine		
Transoms, material with Brackets plates to stem timbers				Shelf			
Knight-heads				Stringer Plates on ends of Hold or Lower Dk Beams	2 1/2	9 1/16	2 1/2 9 1/16
Hawse Timbers	1 fm			Ceiling between Decks	Red Pine 2"		
are they free from defects?				Stringer or Tie Plates outside Hatchways	11/2	9 1/16	11/2 9 1/16
The Frames or Ribs extend in one length from				Deck Beam Clamps			
in prop to bottom of round in fore and to stern							
the reverse angle irons on the floors extend in one length across the middle line from							
on alternate frames to extends to upper deck stinger on the intermediate frames							
Keelson, how are the various lengths of plates or angle irons connected?							
each end							
Bulb bar with double							
Plates, Garboard, double							
Edges from Carboards to upper part of bilge, worked carvel with a lining piece							
Butts from Keel to turn of bilge, worked carvel with a lining piece							
Edges from bilge to plankshears worked carvel with a lining piece							
Planksheer, how secured to the plating of the sides							
Waterway							
Side trussing							
Deck trussing							
Deck Beams, how secured to the side?							
Hold or Lower Deck							
Paddle							
No. of breasthooks							
What description of iron is used for the angle iron and plate iron in the vessel?							

Center line to up D' Shelly riveted through plates with (1/8 in.) rivets, about (7") apart. C b C. Vertical plate transom at front of Stern Post. Connected to the other timbers before this plate across as bracing arms. Bulkheads, N°. 4 Water lights. Thickness of 3/8" plate. 2 Beams 1/8" thick. How secured to the sides of the ship double AT frames to make a tight

size of vertical angle iron and their distance apart 3x3x9 1/16 av 30 apt

6 Gal Iron Wood Screws for double fastening nuts

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**Workmanship.** Are the lands or laps of the clenchwork in all cases in breadth at least five times the diameter of the rivets in double riveted edges and butts, and at least three times the diameter of the rivets where single rivetting is admitted? *they are* (+40)

Do the edges of the carvel work and of the butts fay close together throughout their length without requiring any making good of deficiencies? *they close*

Do the fillings between the ribs and plates fill in solid with single pieces, or are they in short lengths of various thicknesses? *filled in solid*

Do the holes for rivetting plate to frames, lining pieces, or plate to plate, &c., conform well to each other? *well* and are the rivet holes well and sufficiently countersunk in the outer plate? *sufficiently Countersunk*

Are there any rivets which either break into or have been put through the seams or butts of the plating? *No*

Her Masts, Yards, &c., are in *Good*  
Fore • Main Masts *Iron* She has SAILS.

N°.	Fore Sails,
1	Fore Top Sails,
1	Fore Topmast Stay Sails,
1	Main Sail,
1	Main Top Sails,
	and others in all species

condition, and sufficient in size and length. 5267 Ircm.

CABLES, &c.	
Mt' Rade	22 ft 3 1/8 in
Chain	22 ft 8 in
Stream	private test
Hawser	90
Towlines	90
Warp	180
All of	Good quality.

ANCHORS, and their weights.	
Mt' Rade	18 ft 2 in
Bower	18 ft 2 in
Stream	18 ft 2 in
Kedge	2 ft 0 in

Her Standing and Running Rigging *Wire or Hemp* sufficient in size and — in quality.

She has *2 Hawsers* — Long Boats *3 of 25 Feet in length* 1 of 23 ft 8 in of 15 ft 5 in

The present state of the Windlass is *Good* Pumps *4* Pick  
*Brown & Harfield Patent Capstan* *2 Capstans 2 Scams and Rudder* *2 S. mms*

General Remarks, Statement and Date of Repairs, extent of corrosion (if any) both internally and externally, and condition of rivets.

- DATES of Surveys held while building, as per Section 17. {
- 1st. On the several parts of the frame, when in place, and before the plating was wrought *March & April 1866*
  - 2nd. On the plating during the progress of rivetting *May June July & August*
  - 3rd. When the beams were in and fastened, and before the decks were laid *Beams put up with frames*
  - 4th. When the ship was complete, and before the plating was finally coated *September*
  - 5th. After the ship was launched *October to 10 January 1867*

This is a very superior vessel in materials & workmanship. No 30 in Builders Yard 7.79 Breadths to 13.9. depths in length rounded sterned with full poops & Top Gallant forecastle. Poop about 6 ft in length from front to after part stem post. Rounded at corners along the side. Beams formed of A.I. same as ribs, 15 in. whole & 8 in half. Beams Post & Forecastle sides plated with 3/16 in. Iron. Top Gallant Forecastle is about 38 ft in length along center line. Stringer plate 19 x 7 1/16 in. Beams 7 of 5 x 4 x 7 1/16 A.I. & 4 of 6 1/2 x 7 1/16 Bull Iron with 3 1/2 x 2 1/2 x 3 1/8 A.I. along top edge.

Has fin plates applied outside along each bilge for about 118 ft in length formed of 12 x 7 1/2 plates tapering in breadth towards the ends connected to the outside plating by double course of 4 x 4 x 7 1/16 angle irons all riveted together & the outside plating of hull.

Along the waist of the vessel the alternate ribs have been carried up & across forming a hurricane deck same height as poop and about 63 ft in length rounded. Same as poop at upper corners & plated in sides with 3/16 plates in like manner. 12 feet in breadth along the center of this space is bulkheaded fore & aft having 24 x 3 1/8 in plate. Combings riveted all round to deck framing. 20 ft of this in length enclosing Boiler space & Galley. 4 sides to ends plated with 3/16 in. Iron. Afore & ab aft this formed of wood strongly framed. A considerable portion of the deck frame on each side & across in way of Boiler & engine space is wholly covered with 3/8 plating closely jointed & all riveted together.

The Compensation in this vessel proposed by Builders 26/1/66 approved by Secretary letter 30/1/66 with addition of stronger plate butts to be triple riveted have been carried out. Changes in way of poop Builders submitted 23/2/66 to be allowed to terminate at lower part of round t'le partitioned 28/2/66 but stronger plate to be 18" broad. Special Survey order No 170 dated 20/2/66 & up.

In what manner are the surfaces preserved from oxidation? 4 Coats, Red Lead & other Color Paints inside & outside — except along the bottom inside when coated with peatland Camens

I am of opinion this Vessel should be classed *A 1*.

The amount of the Fee £ 5 : 11 : 4 is received by me,

*Jan 1867* Special £ 46 : 17 : 0

Certificate (if required) £ 57. 17 . 0

Committee's Minute 15<sup>th</sup> January 1867

Character assigned *A 1* rec'd M.D.

*Thomas Alexander*

This New Steamer built of iron appears to be No 1 in my Report to Committee of Vessels seen building at Dundee Jan 1/66 to which I refer for a more detailed opinion which is available for the Lloyd's Register of Shipping.

*Lloyd's Register of Shipping*