4856

IRON SHIPS.

Rec 12/7/66

No. 8779 Survey held at Sunderland Date July 11th 1866

on the Iron Ship "Durham" Master C. Faux

(Yard "No 52")

Tonnage under tonnage deck 895.04 Built at Sunderland When built 1866 Launched 14th June

Ditto of poop ~~or spar deck~~ 103.43 By whom built J. P. Oswald & Co Owners Temperley, Carter, Darke & Co

~~Ditto of engine room~~

Total Register tonnage 998.47 Port belonging to London Destined Voyage Calcutta

Gross tonnage

If Surveyed while Building, Afloat, or in Dry Dock whilst Building

Length aloft	Feet. 197	Inches. "	Extreme Breadth	Feet. 34	Inches. 4	Depth from top of Upper Deck Beam to top of Floor	Feet. 20	Inches. 4	~~Power of Engines~~	Horse. —	N°. of Decks Two

(*Dimensions of Ship per Register*, length 198.6 breadth 34.3 depth 20.35)

	Inches in Ship.			Inches required per Rule.		
Keel, if bar iron, depth and thickness	10 × 2¼			7½ × 3		
,, ~~if plate iron, breadth and thickness~~						
Stem, if bar iron, moulding and thickness	10 × 2¼			7½ × 3		
,, ~~if plate iron, breadth and thickness~~						
Stern-post, if bar iron, moulding and thickness	10 × 2¼			7½ × 3		
,, ,, if plate iron, breadth and thickness						
Distance of Frames from moulding edge to moulding edge, all fore and aft	21			21		
	Inches. In Ship.	Inches. In Ship.	16ths. In Ship.	Inches. required per Rule.	Inches. required per Rule.	16ths required per Rule.
Frames, Size of Angle Iron, single ~~or~~ and double (for 4 feet at midship line)	4¼	3¼	8	4½	3	8
,, Reversed Iron, ~~if~~ to every frame (to above Hold Beam Stringer angle irons) ~~and or~~ every alternate frame (to Gunwale plate)						
Floors, depth and thickness of Floor Plate at mid line	"	24	9	"	23	9
,, Ditto ditto at Bilge Keelson	"	9	9	"	"	9
,, Size of Reversed Angle Iron, and No. (Single and double in way of bulkheads) at top of Floor Plate	3	3	7	3	3	7
Beams, Deck (N°. 48) ~~double Angle Iron~~, (Patent ~~Plate~~, Tee, ~~or~~ Bulb Iron	8	5½	9	"	8½	8
,, ,, ~~double or single Angle Iron, on edge~~						
,, ,, average space between	on every alternate frame					
,, Hold, or Lower Deck (N°. 44) ~~double Angle, Tee, Plate, or~~ Bulb Iron	"	8½	8	"	8½	8
,, ,, double ~~or single~~ Angle Iron on upper edge	3	3	6	3	3	6
,, ,, average space between	on every alternate frame					
,, ~~Paddle, sided and moulded~~, ~~thickness of Plate~~ ~~size of Angle Iron~~						
,, ~~Engine~~ ,, ,, ,, ,,						
Keelson, single ~~or double~~ plate, ~~box, or~~ intercostal	rivetted to bulb iron bars			9⅛ × 2/16		
,, Size of Plates	"	30	10	"	30	10
,, Size of Angle Irons	6	4	8	5	4¼	9
,, Side, single ~~or double~~, plate, ~~box, or~~ intercostal	"	"	9	Not required by the Rules		
,, Bilge (No. One) at each Bilge, ~~single, or~~ double, ~~plate, or box~~ Angle iron	6	4	8	5	4¼	9

	Inches. In Ship.	16ths. In Ship.	Inches. required per Rule.	16ths. required per Rule.
Plates in Garboard Strakes, breadth and thickness	36	12	30	12
Ditto from Garboard to upper part of Bilges	"	11	"	11
,, from upper part of Bilge to a perpendicular height from upper side of Keel of ⅗ths the entire depth of Hold	"	10	"	10
,, from ⅗ths depth of Hold to lower edge of Sheerstrake	"	9	"	9
,, Sheerstrake, breadth and thickness	36	11	30	11
Butt Straps to outside plating, breadth and thickness	10	12×11×10×9 / 16	9 5/10	12×11×10×9 / 16
Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness	31	9	28	9
Angle Iron on ditto	5×4×8/16	–	5×4	8
~~Stringer or~~ Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways	12	9	12¾	9
Diagonal Tie Plates on ditto ~~5 pairs~~	12	9	12¾	9
~~Planksheer, materials and scantlings~~				
Waterway ditto ditto Gutter				
Flat of Upper Deck, thickness and material	4 Yellow Pine		3½	–
,, ,, how fastened to Beams	with Nuts & Screw Bolts			
Ceiling betwixt Decks and in Hold, thickness and material	Battens			
~~Clamps or Spirketting~~ ~~ditto~~				
Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness	23	9	21	9
~~Stringer or~~ Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams ~~8 5 pairs of diagonal do~~	12	9	12¾	9
Stringers in Hold	5×4	8	5×4	8
Flat of Lower Deck, thickness and material	3 Yellow Pine			
Main piece of Rudder, diameter at head	5½	5½		
,, ,, ,, at heel	3	3		
(*Can the Rudder be unshipped afloat* Yes)				
Bulkheads, N°. 2 Thickness of 7/16				
,, Height up To Main Deck				
,, how secured to the sides of the ship between double frames,				
,, size of vertical angle irons 3×3×7/16 and their distance apart 30 in.				

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

Knight-heads, and Hawse Timbers Iron

The Frames extend in one length from Keel to Gunwale rivetted through plates with (7/10 in.) rivets, about (7 in.) apart.

The reverse angle irons on the floors and frames extend ~~in one length~~ across the middle line ~~from~~ _____ to above Hold Beam Stringer angle irons

,, ,, ,, on ~~the~~ every frame ,, ,, ,, ~~from~~ and to Main Deck Gunwale plate on alternate frames

Keelson, how are the various lengths of plates or angle irons connected? Butts & bulb bars & angle irons well shifted

Plates, Garboard, double ~~or~~ rivetted to keel and double ~~or~~ at upper edge, with rivets (7/10 × 7/10 ins.) diameter, averaging (4.3¼ in.) apart.

,, Edges from Garboards to upper part of bilge, worked clencher, double ~~or single~~ rivetted; with rivets (7/10 in.) diameter, averaging (3¼ ins.) apart.

,, Butts from Keel to turn of bilge, worked carvel with butt straps (12×11/16) thick, double ~~or single~~ rivetted; with rivets (7/10 in.) diameter, averaging (3¼ ins) apart. Do the butt straps lap over and rivet through the lands of the strake below? No

,, Edges from bilge to sheerstrake, worked ~~carvel with a lining piece~~ ( ) ~~thick, or~~ clencher, double ~~or single~~ rivetted; with rivets (7/10 in.) diameter, averaging (3¼ in.) apart. Do the butt straps lap over and rivet through the lands of the strake below? No

,, Edges of Sheerstrake, double ~~or single~~ rivetted? At upper edge and At lower edge

,, Butts from bilge to planksheers, worked carvel with butt straps (10×9/16) thick, double ~~or single~~ rivetted; with rivets (7/10 in.) diameter, averaging (3¼ ins.) apart. Breadth of laps in double rivetting (5) Breadth of laps in single rivetting (all double rivetted)

Butt Straps of Keelsons, Stringer and Tie Plates, double ~~or single~~ rivetted? Sheerstrake & Deck Stringers treble rivetted in Midships

~~Planksheer~~, how secured to the plating of the sides } *Explain by sketch if necessary.* } Rivetted through sheerstrake, and patent Beams

Waterway ,, ,, planksheer and to the Beams

Deck Beams, how secured to the side? The ends turned down and rivetted to the frames,

Hold or Lower Deck ditto The same as above

~~Paddle~~ ,, ,, No. of breasthooks Four crutches Four

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

Manufacturer's name or trade mark Bolkow, Vaughan & Co & Butterley Co

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

Builder's Signature J P Oswald *Surveyor's Signature* Thomas Lawrence

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IRON439-0429

4806 Iron

Workmanship. Are the lands or laps of the clenchwork in all cases in breadth at least five and a half times the diameter of the rivets in double rivetted edges and butts, and at least three and a quarter times the diameter of the rivets where single rivetting is admitted? Yes

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 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 with single pieces

Do the holes for rivetting 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 outer plate? They are

Are there any rivets which either break into or have been put through the seams or butts of the plating? Very few

Iron & chain lower are Iron & Steel See Sketch appended

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 rivetting, quality of Materials, and if stamped with Maker's name.*

Doubledit

She has SAILS.	CABLES, &c.	Fathoms.	Inches.	Tested to. Tons.	ANCHORS, and their weights.	No.	Weight. Ex. Stock	Tested to. Tons.
Fore Sails,	Chain	300	1 1/16	51 1/4	Bowers,	3	29.1.8	28.3.0.14
Fore Top Sails,	Hempen Stream Cable	90	9				27.3.7	26.19.2.21
Fore Topmast Stay Sails,	Hawser Chain	60	1				23.2.0	23.10.0.0
Main Sails,	Towlines	90	10		Stream,	1	11.0.17	
Main Top Sails,	Warp	90	4 1/2					
and	All of good quality.	30	6 3/4		Kedges,	2	5.1.10	
							2.3.0	

Her Standing and Running Rigging Wire & Hemp sufficient in size and good in quality.

She has 2 Life ~~Long~~ Boat and 2 others

The present state of the Windlass is firm Capstan Winches and Rudder & Pumps 2 Metal good

Order for Special Survey No. 1812 Date Feb. 12/66

Order for Ordinary Survey No. — Date —

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
2nd. On the plating during the progress of rivetting
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
5th. After the ship was launched

Built under Special Survey from 12th Oct 1865 to this date

State if she has a Spar Deck No Poop Yes or Forecastle Yes

General Remarks,

It will be perceived that the Tie & Diagonal Plates are 3/4" less in width than the rules require, but the stringers on the end of Beams are broader. There is also Side Keelsons, in addition to the requirements of the Rules. and is Chain rivetted throughout.

The testing certificates of Anchors & Chain Cables, have been produced, issued from the Sunderland public testing Machine, and Signed by Mr. Jno. Thompson

James Shan

In what manner are the surfaces preserved from oxidation? Inside By Cement to Bilges, and Painted above,
Ditto ditto Outside Has three coats of Paint

I am of opinion this Vessel should be Classed + A. 1.

Thomas Lawrence

The amount of the Fee .....£ 5 : " : " is received by me,
Special .....£ 49 : 18 : "
Certificate (if required) .....£ " : " : "

This Vessel appears eligible for the Class ✠ A 1 12 July 1866

Committee's Minute 13th July 1866

Character assigned A 1 (A & R)

Contract

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