6176

IRON SHIPS.

Rec 23/4/68

No. 9302 Survey held at Sunderland Date April 14th 1868

Name of Vessel New Steamer "Richard Cobden" Master Jones

Tonnage under tonnage deck 699.59 Built at Sunderland When built 1868 Launched 11th March 1868

Ditto of poop ~~or spar deck~~ 66.54 By whom built William Pile & Co. Owners Messrs. Ryde & Co.

Ditto of engine room 253.11

Total Register tonnage 509.35

Gross Tonnage 790.00 Port belonging to London Destined Voyage London

Space for crew – 28.52.

Surveyed while Building, Afloat, or in Dry Dock Whilst Building

Length aloft	Feet. 205	Inches. –	Extreme Breadth	Feet. 30	Inches. 0¾	Depth from top of Upper Deck Beam to top of Floor	Feet. 17	Inches. 4	Power of Engines	Horse. 120	N°. of Decks Two

Dimensions of Ship per Register, length 206.1 breadth 30.1 depth 17.2

	Inches in Ship.			Inches required per Rule. for 600 tons Scale.		
Keel, if bar iron, depth and thickness	8 × 2⅜ full			7 × 2¾		
,, ~~if plate iron, breadth and thickness~~						
Stem, if bar iron, moulding and thickness	8 × 2⅜ full			7 × 2¾		
~~if plate iron, breadth and thickness~~						
Main-post, if bar iron, moulding and thickness	8 × 5			8 × 5		
,, ~~if plate iron, breadth and thickness~~						
Space of Frames from moulding edge to moulding edge, all fore and aft	23 in.			23 in.		
	Inches. In Ship.	Inches. In Ship.	16ths. In Ship.	Inches. required per Rule.	Inches. required per Rule.	16ths required per Rule.
Angles, Size of Angle Iron, single ~~or~~ double	4	3	7	4	3	7
,, ,, Reversed Iron, if to every frame ~~or~~ every alternate frame	To hold beam & Stringer angle iron					
	To upper deck Stringer					
Floors, depth and thickness of Floor Plate at mid line	–	19½	8	–	19	8
,, Ditto ditto at Bilge Keelson	–	9½	8	–	–	8
,, Size of Reversed Angle Iron, and No. 1 & 2 at top of Floor Plate	3	2¾	6	3	2¾	6
Beams, Deck (N°. 53) ~~double Angle Iron~~, ~~Plate, Tee, or~~ Bulb Iron	–	7¼	7	–	7¼	7
,, ,, double ~~or single~~ Angle Iron, on upper edge	2¾	2¾	5	2½	2½	5
,, ,, average space between	on alternate frames					
,, Hold, or Lower Deck (N°. 33) ~~double Angle, Tee, Plate, or~~ Bulb Iron	–	7¼	7	–	7¼	7
,, ,, double ~~or single~~ Angle Iron	2¾	2¾	6	2¾	2¾	6
,, ,, average space between	2nd & 4th frames alternately except in waste of Hatches					
,, ~~Paddle, sided and moulded, ——— thickness of Plate ——— size of Angle Iron~~	–	–	–	–	–	–
,, ~~Engine~~ ,,	–	–	–	–	–	–
Keelson, single ~~or double~~ plate, ~~box, or~~ intercostal	–	22	9	–	22¼	9
,, Size of Plates	9 ft 6 ins long					
,, Size of Angle Irons Double	3½	5	8	4¾	3¾	8
,, Side, ~~single, or double, plate, box, or intercostal~~ Bulb plate between D°	–	7¼	7	–	7¼	7
,, Bilge (No. one) at each Bilge, ~~single, or~~ double, ~~plate, or box~~ Double Angle Iron A.I.	3½	5	8	not required by rule		
	3½	5	8	4¾	3¾	8
		7¼	7	not required by rule		

Bulb plate between for ½ vessels length

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

Knight-heads, and Hawse Timbers Iron

	Inches. In Ship.	16ths. In Ship.	Inches. required per Rule.	16ths required per Rule.
Plates in Garboard Strakes, breadth and thickness	33	10	30	10
Ditto from Garboard to upper part of Bilges	–	9	–	9
,, from upper part of Bilge to a perpendicular height from upper side of Keel of ⅗ths the entire depth of Hold	–	8	–	8
,, from ⅗ths depth of Hold to lower edge of Sheerstrake	–	7	–	7
,, Sheerstrake, breadth and thickness	31	11	30	11
Butt Straps to outside plating, breadth and thickness	9 to 10¼	7.8.9 & 10/16	8½	7.8.9 & 10/16
Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness	31	10	29	8
Angle Iron on ditto	4½ × 3½ × 7		4½ × 3½ × 7	
Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways	11¼	8	11¼	8
Diagonal Tie Plates on ditto	11¼	8	11¼	8
Planksheer, materials and scantlings	Gutter Gunwale			
Waterway ditto ditto				
Flat of Upper Deck, thickness and material	3½ Yellow-pine			
,, ,, how fastened to Beams	Screw Bolts with nuts			
Ceiling betwixt Decks and in Hold, thickness and material	2¼ × 2½ red-pine			
Clamps or Spirketting ditto	–	–	–	–
Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness	24	8	21¾	8
Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams	11	8	11¼	8
Stringers in Hold Double Angle Iron	4½ × 3½ × 7		4½ × 3½ ×	
Flat of Lower Deck, thickness and material	2½ Yellow pine			
Main piece of Rudder, diameter at head	5	–	5	–
,, ,, ,, at heel	3	–	3	–
(Can the Rudder be unshipped afloat Yes)				
Bulkheads, N°. 5 Thickness of 6/16				
,, Height up Upper Deck				
,, how secured to the sides of the ship Between double frames				
,, size of vertical angle irons 2¾ × 2¾ × 6/16 and their distance apart 30 ins				

The Frames extend in one length from Middle line to Gunwale rivetted through plates with (¾ in.) rivets, about (6 in) apart.

The reverse angle irons on the floors extend in one length ~~across~~ near the middle line ~~from~~ to hold beam ~~to~~ Stringer angle iron on every frame

,, ,, ,, ~~on the frames~~ ,, ,, ,, ~~from~~ and to Gunwale on alternate frames

Keelson, how are the various lengths of plates or angle irons connected? with Butt straps

Plates, Garboard, double ~~or~~ rivetted to keel, with 1⅛ rivets double ~~or~~ at upper edge, with rivets (¾ ins.) diameter, averaging (3 in.) apart.

,, Edges from Garboards to upper part of bilge, worked clencher, double ~~or single~~ rivetted; with rivets (¾ in.) diameter, averaging (3 ins.) apart.

,, Butts from Keel to turn of bilge, worked carvel with butt straps (9 & 10/16) thick, double ~~or single~~ rivetted; with rivets (¾ in.) diameter, averaging (2¾ ins.) apart. Do the butt straps lap over and rivet through the lands of the strake below? Yes on alternate strakes

,, Edges from bilge to sheerstrake, worked ~~carvel with a lining piece (——) thick, or~~ clencher, double ~~or single~~ rivetted; with rivets (¾ in.) diameter. averaging (3 in.) apart. Do the butt straps lap over and rivet through the lands of the strake below? Yes on alternate strakes

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

,, Butts from bilge to planksheers, worked carvel with butt straps (7.8 & 9/16) thick, double ~~or single~~ rivetted; with rivets (¾ in.) diameter, averaging (3 ins.) apart. Breadth of laps in double rivetting (4¼ to 4½) Breadth of laps in single rivetting (——)

Butt Straps of Keelsons, Stringer and Tie Plates, double ~~or single~~ rivetted? Double throughout

Planksheer, how secured to the plating of the sides } Explain by sketch if necessary. } Gutter Gunwale

Waterway ,, ,, planksheer and to the Beams

Deck Beams, how secured to the side? Turned down ends, & rivetted to frames & Stringer plates

Hold or Lower Deck ditto Turned down ends, & rivetted to frames & Stringer plates

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.? Plating from the Stockton Malleable

Manufactu[illegible] mark Iron Comp[illegible], Beams, & Angles from Hopkins, Jilks & Co.

We certify tha[illegible] rrect description of the several particulars therein given.

Builder's Signature [illegible] *Surveyor's Signature* [illegible]

IRON 4442-0147

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6176 Lion

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 d 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? Yes

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? a very few

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Her Masts, Bowsprit, Yards, &c., are in wood 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.*

The testing certificates of Anchors & Chain cables have been produced, issued from the Sunderland public testing machine and signed by Mr. John Thompson

She has SAILS.	CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c	No.	Weight. Ex. Stock.	Test as per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
No. 1 doubt complete	Chain	270	1½	40½	1 7/16	40½	Trotmans	1	15.3.7	17.5.1.7	15.1.6	17.5.1.7
Fore Sails,							Bowers	1	18.0.10	19.2.0.21	18.0.0	19.2.0.21
Fore Top Sails,							Rodgers	1	18.2.14	19.10.3.21	18.0.0	19.10.3.21
Fore Topmast Stay Sails	Hempen Stream Cable	75	7½									
Main Sails,	Hawser Chain...	75	1 in				Stream	1	7.3.21			
Main Top Sails,	Towlines	—	—									
	Warp	75	7									
and	All of good quality.	75	5½				Kedges	2	4.1.21 2.0.20			

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

She has Two ~~Long~~ Lifeboats and Two Quarter Boats, & one Dingey

The present state of the Windlass is fine ~~Capstan~~ Winches and Rudder & Pumps 4 No. good

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Order for Special Survey	DATES of		
No. 2010	Surveys held	1st.	On the several parts of the frame, when in place, and before the plating was wrought Built under
Date Sept 30/67	while building	2nd.	On the plating during the progress of rivetting Special Survey
Order for Ordinary Survey		3rd.	When the beams were in and fastened, and before the decks were laid from Octob. 3/67
No. —	as per	4th.	When the ship was complete, and before the plating was finally coated to the present date
Date —	Section 18.	5th.	After the ship was launched

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

General Remarks,

This Vessel has a Ballast Tank at the after end, about 54 ft long, & one at the fore end about 27 ft long, constructed in the usual manner of double bottoms, made water-tight round the frame angles, with angle iron collars, & in order to compensate for the reverse bars being cut through, at the upper side of Tanks, Brackets are fitted between the frames, formed of angle iron, & rivetted to the outside plating, & to the top of Tanks.

The main Sheer-Strake is increased in thickness 2/16 of an inch, amidships for ¾ the length of the Ship, in accordance with the rules Section 16, for Vessels exceeding eleven times their depth in length; the Sheer-Strake is an outside Strake, & the Butts of do., from the fore-castle to the Poop are fitted with lining pieces extending in one length from the fore side of the frame next afore the Butts, to the aft side of the frame next abaft do., as recommended in Section 8, they are double rivetted, and a space equal to twice the diameter of the rivets, between each row.

A Bilge Keel is fitted at the upper turn of bilges about 90 feet long, amidships, formed of Bulb plate 7¼ in x 7/16 in thick, between double angle irons 3 in x 3 in x 6/16 in; it will be observed that the Vessel has a Side Keelson, of double angle iron, & a Bulb plate at the Bilges, in addition to the requirements of the rules the Stringer plates on upper deck beams are increased in thickness 2/16 of an inch, & she is double rivetted

In what manner are the surfaces preserved from oxidation? Inside Portland cement to upper turn of Bilges, & red-lead ab

Ditto ditto Outside 2 Coats red-lead, & 1 of patt. composition "Lewis & Co."

I am of opinion this Vessel should be Classed ✝ A I

The amount of the Fee .....£ 5 : " : " is received by me,

Special .....£ 38 : 1 : "

Certificate (if required) .....£ " : " : " *

James Sibun

Committee's Minute 24th April 18 68

Character assigned A I

* I recommend forward Certificate to Mr Co

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