

IRON SHIP.

Dec 28/76 / 6948

No. 1144 Survey held at Sunderland Date, First Survey February 22nd Last Survey 16 August 1876

On the Barque "Kirkloch" Master Smith

TONNAGE under Tonnage Deck } 747.62
 Ditto of Third, Spar, or Awning Deck. }
 Ditto of Pop, or Raised Cr. Dk. } 31.17
 Ditto of Houses on Deck } 6.15
 Ditto of Forecastle }
 Gross Tonnage 784.94
 Less Crew Space 29.61
 Less Engine Room }
 Register Tonnage as cut on Beam } 755.33

ONE, OR TWO DECKED, THREE DECKED VESSEL.
SPAR, OR AWNING DECKED VESSEL.
HALF BREADTH (moulded)... 15.37 Feet.
DEPTH from upper part of Keel to top of Upper Deck Beams 21.20
GIRTH of Half Midship Frame (as per Rule) ... 32.16
1st NUMBER ... 68.73
1st NUMBER, if THREE-DECKED VESSEL [deduct 7 feet] ...
LENGTH ... 181.5
2nd NUMBER ... 12474
PROPORTIONS—Breadths to Length ... 5
 Depths to Length—Upper Deck to Keel ... 8
 Main Deck ditto ...

Built at Sunderland
 When built 1876 Launched 24 June/76
 By whom built Messrs. W. Taylor & Co.
 Owners Joseph Steel Esq. Warrington
 Place Liverpool
 Port belonging to Liverpool
 Destined Voyage Valparaiso
 If Surveyed while Building, Afloat, or in Dry Dock.

LENGTH of deck as per Rule ... 181 Feet. 6 Inches. **BREADTH**—Moulded... 30 Feet. 10 Inches. **DEPTH** top of Floors to Upper Deck Beams ... 19 Feet. 6 Inches. Do. do. Main Deck Beams ...
 Power of Engines ... **Horse.** ... **N^o. of Decks with flat laid** One
N^o. of Tiers of Beams Two

Dimensions of Ship per Register, length, 191.8 breadth, 31. depth, 19.25

	Inches in Ship.		Inches per Rule.		Inches in Ship.		Inches per Rule.	
	In Ship.	In Ship.	Inches	16ths	Inches	16ths	Inches	16ths
KEEL , depth and thickness ...	8	2 3/8	8	2 3/8	8	2 3/8	8	2 3/8
STEM , moulding and thickness ...	7	2 3/8	7	2 3/8	7	2 3/8	7	2 3/8
STERN-POST for Rudder do. do. ...	7	2 3/8	7	2 3/8	7	2 3/8	7	2 3/8
for Propeller ...								
Distance of Frames from moulding edge to moulding edge, all fore and aft ...	22 ins		22 ins		22 ins		22 ins	
FRAMES , Angle Iron, for 2/3 length amidships ...	4 1/2	3	4 1/2	3	4 1/2	3	4 1/2	3
Do. for 1/3 at each end ...	4 1/2	3	4 1/2	3	4 1/2	3	4 1/2	3
REVERSED FRAMES , Angle Iron ...	3	3	3	3	3	3	3	3
FLOORS , depth and thickness of Floor Plate } at mid line for half length amidships ... } thickness at the ends of vessel ... } depth at 2/3 the half-bdth. as per Rule ... } height extended at the Bilges... } <u>fair taper</u>	21	8	21	8	21	8	21	8
BEAMS , Upper, Spar, or Awning Deck } Single or double Angle Iron, Plate or Tee Bulb Iron } Average space... } <u>alternate frames</u>	7	7	7	7	7	7	7	7
BEAMS , Main, or Middle Deck } Single or double Angle Iron, on Upper Edge ... } Average space... } <u>alternate frames</u>	7	7	7	7	7	7	7	7
BEAMS , Lower Deck, Hold, or Orlop } Single or double Angle Iron, Plate or Tee Bulb Iron } Average space... } <u>alternate frames</u>	7 1/2	7	7 1/2	7	7 1/2	7	7 1/2	7
KEELSONS Centre line, single or double plate, } box, or Intercostal, Plates ... } " Rider Plate ... } " Bulb Plate to Intercostal Keelson ... } " Angle Irons ... } <u>4 1/2 3 1/2 7 4 1/2 3 1/2 7</u> " Double Angle Iron Side Keelson ... } <u>3 3 7</u> (not required) " Side Intercostal Plate ... } <u>3 3 7</u> (by rule) " do. Angle Irons ... } " Attached to outside plating with angle iron } <u>3 3 7</u>	13	10	13	10	13	10	13	10
BILGE Angle Irons ... } <u>6 3 7 4 1/2 3 1/2 7</u> " do. Bulb Iron... } " do. Intercostal plates riveted to plating for length }	4 1/2	3 1/2	4 1/2	3 1/2	4 1/2	3 1/2	4 1/2	3 1/2
BILGE STRINGER Angle Irons ... } <u>4 1/2 3 1/2 7 4 1/2 3 1/2 7</u> Intercostal plates riveted to plating for length. }	4 1/2	3 1/2	4 1/2	3 1/2	4 1/2	3 1/2	4 1/2	3 1/2
SIDE STRINGER Angle Irons ... } Intercostal plates riveted to plating for length. }								

Flat Keel Plates, breadth and thickness ...
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied ...
 fm up. part of Bilge to l.r. edge of Sh'rstrake Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Upr. or Spar Dk. Sh'rstrake. Up. or Spar Dk Sh'rstrake, brdth & thickness
 Butt Straps to outside plating, breadth & thickness
 Lengths of Plating ...
 Shifts of Plating, and Stringers ...
 Gunwale Plate on ends of ~~Awning Spar, or~~ Upper Deck Beams, breadth and thickness...
 Angle Iron on ditto ...
 Tie Plates fore and aft, outside Hatchways
 Diagonal Tie Plates on Beams No. of Pairs,
 Planksheer material and scantling ...
 Waterways do. do. ...
 Flat of Upper Deck do. do. ...
 How fastened to Beams Galvanized Iron Screw Bolts
 Stringer Plate on ends of Main or Middle Deck } Beams, breadth and thickness }
 Is the Stringer Plate attached to the outside plating?
 Angle Irons on ditto, No. ...
 Tie Plates, outside Hatchways ...
 Diagonal Tie Plates on Beams, No. of pairs
 Waterways materials and scantlings ...
 Flat of Middle Deck do. do. ...
 How fastened to Beams ...
 Stringer Plates on ends of ~~Lower Deck, Hold~~ } Beams ... }
 Is the Stringer Plate attached to the outside plating? Yes
 Angle Irons on ditto, No. 2 ... 3 1/2 x 3 1/2 x 7 3 1/2 x 3 1/2 x 7 1/2
 Stringer or Tie Plates, outside Hatchways double angle Irons at
 Flat of Lower Deck ... central 3 1/2 x 3 1/2 x 7/16
 Ceiling betwixt Decks, thickness and material ... 2 1/2 isatie pine
 do. do. ...
 Main piece of Rudder, diameter at head ... 4 3/4 - 4 3/4 -
 do. at heel ... 2 3/4 - 2 3/4 -
 Can the Rudder be unshipped afloat? Yes
 Bulkheads No. 1 Thickness of 6 x 7/16
 Height up Upper deck
 How secured to sides of ship between double frames
 Size of Vertical Angle Irons 3 x 3 x 7/16 and distance apart 30 ins.
 Are the outside Plates doubled two spaces of Frames in length? Yes

...nsoms, material. Knights heads. Iron
 Windlass Greenheart Pall Bitt Iron
 The **FRAMES** extend in one length from Keel to gunwale Riveted through plates with 3/4 in. Rivets, about 6 apart.
 The **REVERSED ANGLE IRONS** on floors and frames extend near middle line to Hold Stringer A.I. and to gunwale 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 in. diameter, averaging 5 ins. from centre to centre.
Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 3/4 in. diameter, averaging 3 1/4 ins. from centre to centre.
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 1/4 ins. from centre to centre.
Butts of 2 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 1/16 thicker than the plates they connect.
Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 3/4 in. diameter, averaging 3 1/4 ins. from cr. to cr.
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 in. diameter, averaging 3 1/4 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 length amidships.
Butts of Main Stringer Plate, treble riveted for 1/2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for length.
 Breadth of laps of plating in double riveting 4 1/2 Breadth of laps of plating in single riveting nil
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? double & treble throughout
 Waterway, how secured to Beams Gutter gunwale (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? Turned down ends No. of Breasthooks, 4 Crutches, 3 x 1/2
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Plates by Bolton, Vaughan & Co.
 Manufacturer's name or trade mark Stockton malleable Iron Co.; Angles by Hopkins, Gilks & Co.
 The above is a correct description.
 Surveyor's Signature, James Sibber
 Surveyor to Lloyd's Register of British and Foreign Shipping.

120N468-0109

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed* 169482rn
 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 very well*
 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*

Masts, Bowsprit, Yards, &c., are *Of Iron &* in *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 sketch attached.*

NUMBER for EQUIPMENT 13200		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.	
SAILS.	CABLES, &c.	270	15	47 1/2	270-1 1/2	47 1/2	Bowers	1	25.2.0	25.3.3.0	25.2.0	25 3/10	
	Chain	<i>Breaking strain applied to 3 links of each 15 fathoms - 6.6 1/2 tons tested at R.W.C.P. by J. Hartness June 6 - 1876</i>							1	25.0.0	24.15.0.0	25.2.0	25 3/10
	Fore Sails,	Hmpn Strm Cbl	80	6				1	22.2.24	22.18.3.0	21.3.0	22 2/10	
	Fore Top Sails,	Hawser chain	80					<i>Tested at R.W.C.P. by J. Hartness May 22, June 8th and Feb. 4 - 1876</i>					
	Fore Topmast Stay Sails	Towlines	80	10			Stream	1	10.1.14		10.2.0		
	Main Sails,	Warp	80	5			Kedges	1	5.1.7		5.1.0		
Main Top Sails,	quality	<i>good</i>							1	2.3.14		2.3.0	

Standing and Running Rigging *Wire & hemp* sufficient in size and *good* in quality. She has *One* Long Boat and *2* others
 The Windlass is *good* Capstan *good* and Rudder *good* Pumps *Metal & good*
Engine Room Skylights.—How constructed? ————— How secured in ordinary weather? —————

What arrangements for deadlights in bad weather? —————
Coal Bunker Openings.—How constructed? ————— How are lids secured? ————— Height above deck? —————
Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *4 Ports & 4 Scuppers on each side*
Cargo Hatchways.—How formed? *Iron plate comings and Headstages*
 State size Main Hatch *4.0 x 9.6 x 14 high* Forehatch *6.0 x 5.0 x 19 high* Quarterhatch *4.9 x 4.9 x 16 high*
 If of extraordinary size, state how framed and secured? —————
 What arrangement for shifting beams? —————
Hatches, If strong and efficient? *Yes*

Order for Special Survey No.	Date	1st.	2nd.	3rd.	4th.	5th.
2616	8 th January 1876	On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the process of riveting	When the beams were in and fastened, and before the decks were laid...	When the ship was complete, and before the plating was finally coated or cemented..	After the ship was launched and equipped
		<i>Built under J.P. and surveyed 1876 Feb. 22 23 March 6 9 13 15 20 22 24 25 26 27 28 29 30 April 3 6 11 19 24 26 27 28 29 30 May 13 15 16 17 20 23 26 30 June 12 13 14 16 20 24</i>				
		<i>24 July 4 8 21 Aug. 10 16</i>				

General Remarks (State quality of workmanship, &c.) *This vessel is constructed with a raised quarter deck about 40 feet in length, and a short Monkey Forecastle about 18 feet in length, with a House on deck about 18ft x 10ft for the accommodation of the crew. Diagonal tie-plates are fitted upon the Hold Beams in wake of the Fore and Main mast partners, and where the masts are wedged, in all respects the vessel is built in accordance with the rules and tracing of midship section attached. The plating of masts and bowsprit have been tested in accordance with the Committee's circular N^o. 350 and proved satisfactory. The workmanship and materials being of a good description*

State if one, two, or three, decked vessel, or if spar, or running decked; and the lengths of poop, forecabin, or raised quarter deck, and the length of double, or part double bottom.
 How are the surfaces preserved from oxidation? Inside *Portland cement to upper turn* Outside *3 coats of paint of kilges and paint above*
 I am of opinion this Vessel should be Classed *100 A 1*

The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me, *H.W.*
 Special ... £ 37 : 15 : 0 *16th August 1876*
 Certificate ... : : :
 (Travelling Expenses, if any, £ ...)

Committee's Minute *18th August 1876*
 Character assigned *100 A 1*

