

IRON SHIP.

16583

Rev 26/6/76

11445 Survey held at *Sunderland*

Date, First Survey *January 11th*

Last Survey *June 21st*

1876

the *Barque "Scottish Knight"*

Master *Mr. Farlane*

TONNAGE under Tonnage Deck *801.84*
 Ditto of Third, Spar, or Awning Deck. *74.77*
 Ditto of Poop, &c. *12.10*
 Ditto of Houses on Deck *27.59*
 Ditto of Forecastle *916.30*
 Gross Tonnage *41.30*
 Less Crew Space
 Less Engine Room
 Register Tonnage as cut on Beam *875.00*

ONE OR TWO DECKED, ~~THREE DECKED~~ VESSEL.
~~SPAR, OR AWNING-DECKED VESSEL.~~
 HALF BREADTH (moulded) *16.37*
 DEPTH from upper part of Keel to top of Upper Deck Beams *20.95*
 GIRTH of Half Midship Frame (as per Rule) *32.5*
 1st NUMBER *69.82*
 1st NUMBER, if a **THREE-DECKED VESSEL** [deduct 7 feet]
 LENGTH *186.0*
 2nd NUMBER *12086*
 PROPORTIONS—Breadths to Length *5*
 Depths to Length—Upper Deck to Keel *8*
 Main Deck ditto *✓*

Built at *Sunderland*
 When built *1876* Launched *8 June 76*
 By whom built *Wm. Torford & Sons*
 Owners *Wm. Shraith, Wm. Lachman & Co.*
34 Leadenhall Street London
 Port belonging to *London*
 Destined Voyage *London &*
 If Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule *186* Feet. Inches. *—*
 BREADTH—Moulded *32* Feet. Inches. *7*
 DEPTH top of Floors to Upper Deck Beams *19* Feet. Inches. *—*
 Do. do. Main Deck Beams *—*
 Power of Engines *—* Horse.
 N° of Decks with flat laid *Two*
 N° of Tiers of Beams *Two*

Dimensions of Ship per Register, length, *196.0* breadth, *32.95* depth, *19.3*

	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	<i>8 x 2 3/8</i>	<i>8 x 2 3/8</i>		
STEM, moulding and thickness	<i>7 x 2 3/8</i>	<i>7 x 2 3/8</i>		
STERN-POST for Rudder do. do.	<i>7 x 2 3/8</i>	<i>7 x 2 3/8</i>		
for Propeller				
Distance of Frames from moulding edge to moulding edge, all fore and aft	<i>22 ins</i>	<i>22 ins</i>		
FRAMES, Angle Iron, for 1/2 length amidships	<i>4 1/2 x 3</i>	<i>4 1/2 x 3</i>		
Do. for 1/2 at each end	<i>4 1/2 x 3</i>	<i>4 1/2 x 3</i>		
REVERSED FRAMES, Angle Iron	<i>3 x 3</i>	<i>3 x 3</i>		
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	<i>21</i>	<i>21</i>		
thickness at the ends of vessel	<i>7</i>	<i>7</i>		
depth at 3/4 the half-bdth. as per Rule	<i>11</i>	<i>11</i>		
height extended at the Bilges	<i>a fair taper</i>	<i>a fair taper</i>		
BEAMS, Upper, Spar, or Awning Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	<i>7 1/2 x 7</i>	<i>7 1/2 x 7</i>		
Single or double Angle Iron on Upper edge	<i>3 x 3</i>	<i>3 x 3</i>		
Average space	<i>alternate frames</i>	<i>alternate frames</i>		
BEAMS, Main, or Middle Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron				
Single, or double Angle Iron, on Upper Edge				
Average space				
BEAMS, Lower Deck, Hold, or Orlop Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	<i>8 x 8</i>	<i>8 x 8</i>		
Single or double Angle Iron on Upper Edge	<i>3 x 3</i>	<i>3 x 3</i>		
Average space	<i>alternate frames</i>	<i>alternate frames</i>		
KEELSONS Centre line, single or double plate, box or intercostal, Plates	<i>13 x 10</i>	<i>13 x 10</i>		
" Rider Plate	<i>10 x 10</i>	<i>10 x 10</i>		
" Bulb Plate to Intercostal Keelson				
" Angle Irons	<i>4 1/2 x 3 1/2</i>	<i>4 1/2 x 3 1/2</i>		
" Double Angle Iron Side Keelson				
" Side Intercostal Plate	<i>width plate</i>	<i>width plate</i>		
" do. Angle Irons				
" Attached to outside plating with angle iron				
BILGE Angle Irons	<i>4 1/2 x 3 1/2</i>	<i>4 1/2 x 3 1/2</i>		
" do. Bulb Iron				
" do. Intercostal plates riveted to plating for length				
BILGE STRINGER Angle Irons	<i>4 1/2 x 3 1/2</i>	<i>4 1/2 x 3 1/2</i>		
Intercostal plates riveted to plating for length				
SIDE STRINGER Angle Irons				

	Inches in Ship.	16ths in Ship.	Inches per Rule.	16ths per Rule.
Flat Keel Plates, breadth and thickness	<i>32</i>	<i>10</i>	<i>32</i>	<i>10</i>
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied	<i>alternately</i>	<i>alternately</i>	<i>alternately</i>	<i>alternately</i>
fm up. part of Bilge to lr. edge of Sh'rstrake	<i>alternately</i>	<i>alternately</i>	<i>alternately</i>	<i>alternately</i>
Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	<i>36</i>	<i>10</i>	<i>36</i>	<i>10</i>
Up. or Spar Dk Sh'rstrake, brdth & thickness				
Butt Straps to outside plating, breadth & thickness	<i>10 1/2 x 7 1/2</i>	<i>7 1/2</i>	<i>9 1/2 x 7 1/2</i>	<i>7 1/2</i>
Lengths of Plating	<i>11 feet</i>			
Shifts of Plating, and Stringers	<i>2 spaces of frames</i>			
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	<i>36 x 8</i>		<i>36 x 8</i>	
Angle Iron on ditto	<i>4 1/2 x 3 1/2 x 7</i>		<i>4 1/2 x 3 1/2 x 7</i>	
Tie Plates fore and aft, outside Hatchways	<i>10 x 8</i>		<i>10 x 8</i>	
Diagonal Tie Plates on Beams No. of Pairs				
Planksheer material and scantling	<i>gutter gunwale</i>			
Waterways do. do.				
Flat of Upper Deck do. do.	<i>3 1/2 x 9.8</i>		<i>3 1/2</i>	
How fastened to Beams	<i>galvanized screw bolts and nuts</i>			
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 & Orlop Beams	<i>27 x 7</i>		<i>27 x 7</i>	
Is the Stringer Plate attached to the outside plating?	<i>Yes</i>			
Angle Irons on ditto, No. 2	<i>3 1/2 x 3 1/2 x 7</i>		<i>3 1/2 x 3 1/2 x 7</i>	
Stringer or Tie Plates, outside Hatchways	<i>A.T.S. 3 1/2 x 3 1/2 x 7</i>		<i>3 1/2 x 3 1/2 x 7</i>	
Flat of Lower Deck	<i>3 Baltic fir</i>			
Ceiling betwixt Decks, thickness and material in hold do. do.	<i>3 1/2 Baltic fir</i>			
Main piece of Rudder, diameter at head do. at heel	<i>4 3/4 — 4 3/4</i>		<i>4 3/4 — 4 3/4</i>	
Can the Rudder be unshipped afloat?	<i>Yes</i>			
Bulkheads No. 1 Thickness of	<i>6 1/2</i>			
Height up	<i>Upper deck</i>			
How secured to sides of ship	<i>Between double frames</i>			
Size of Vertical Angle Irons	<i>3 x 3 x 7/16</i>			
and distance apart	<i>30 ins.</i>			
Are the outside Plates doubled two spaces of Frames in length?	<i>Yes</i>			

Transoms, material. *Knight heads. Hawse Timbers. Iron*
 Windlass *Emmerson & Walker's Patent* 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 & Orlop Stringer* 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 *1/16* 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 & 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 1/2* ins. from cr. to cr.
 Edges of Main Sheerstrake, double & 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 3/4* Breadth of laps of plating in single riveting *4 1/2*

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *Double and 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 and riveted to frames & stringers.* No. of Breasthooks, *4* Crutches, *3 1/2*
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Plates by Bolckow, Vaughan & Co. & Angles & Bulbs by Hopkin's, Giers & Co. and Merton malleable*
 Manufacturer's name or trade mark *The Merton Malleable Iron Co.*

The above is a correct description. *Iron Co.*
 Builder's Signature, *William Crawford & Sons* Surveyor's Signature, *James Sibson*
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed* 16583. Iron. *Yes*
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 *please see sketch attached to Report 11425.*

NUMBER for EQUIPMENT 13200		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd pr 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.
N ^o .	SAILS.	CABLES, &c.	270	1 5/8	4 1/2	270 = 1 5/8 - 4 1/2	Bowers	1	25.3.20	25.12.20	25.2.0	25 3/4 0
2	Fore Sails,	Chain	Three links in each length tested					1	24.3.0	24.10.2	25.2.0	25 3/4 0
2	Fore Top Sails,	to breaking chain	66 1/2 tons, tested at					1	22.2.24	22.18.3	0 21.3.0	22 3/4 0
2	Fore Topmast Stay Sails	Hmpn Strm Cbl	80	6								
2	Main Sails,	Hawser Chain	60	10								
2	Main Top Sails,	Towlines	90	6								
	and others as usual	Warp	80	5								
		quality good	80	5								

Standing and Running Rigging *wire & hemp* sufficient in size and *good* in quality. She has 1 *Long* Boat and 3 *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? *How are lids secured?*

Coal Bunker Openings.—How constructed? *Height above deck?*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *5 Ports and 4 Scuppers on each side*

Cargo Hatchways.—How formed? *Iron plate coverings and Headledges*

State size Main Hatch *14' 10" x 10' 0"* Forehatch *7' 4" x 6' 0"* Quarterhatch *7' 4" x 5' 0"*

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. <i>2615</i>	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	<i>Built under S.P. and surveyed 1876 Jan 14 20 Feb 15 21 22 23 March</i>
Date <i>8 January 1876</i>		2nd. On the plating during the process of riveting	<i>16 17 18 20 22 24 25 26 April 26 11 13 19 24 26 May 13 5 10 15 17 20 23 26 30 June 1 8 12 14 16 20 24</i>
Order for Ordinary Survey No. <i>2615</i>		3rd. When the beams were in and fastened, and before the decks were laid....	
Date <i>8 January 1876</i>		4th. When the ship was complete, and before the plating was finally coated or cemented...	
No. <i>80</i> in builder's yard.		5th. After the ship was launched and equipped	

General Remarks (State quality of workmanship, &c.) *This is a duster vessel to the "Scottish Hero" Report No. 11425, and has been constructed in accordance with the rules, and tracing of midship section submitted and approved by the Committee; She has a full Poop about 40' 6" in length and a Top-gallant Forecastle about 26ft in length. She is fitted with Emerson & McKers patent windlass, and the ceiling in the flat is laid in Hatches, where practicable*

The Iron used in the construction of the lower masts, yards, and Bowsprit, has been subjected to both hot & cold tests and the quality further ascertained by sheering and breaking a piece across the fibre of the Iron, which proved to be very satisfactory. The quality of materials and workmanship are also of a good description

State if one, two, or three, decked vessel, or if open, or awning decked; and the lengths of poop, forecastle, 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*

I am of opinion this Vessel should be Classed *100 A.I.* of Ridges & paint above

The amount of the Entry Fee ... £ 5 : - : - is received by me, *W.H.*
Special ... £ 43 : 15 : - *23rd June 1876*
Certificate ... : : : -

(Travelling Expenses, if any, £ - - -)

Committee's Minute *27th June 1876*

Character assigned *100 A.I.*

when the outfit is completed it is submitted that the vessel will be eligible to be classed 100 A.I. as per Register
Lloyd's Register Foundation