

STEEL IRON SHIP.

(Received at London Office,)

No. 14658 Survey held at Sunderland Date, First Survey July 3rd 85 Last Survey June 27th 1888

On the Steel Screw Steamer "KATHLEEN" No. 75 in Builders Yard.

TONNAGE under Tonnage Deck	1328.51
CHART HOUSE	3.19
Ditto of Third, Spar, or Awning Deck.	26.88
Ditto of Poop, or Raised Qr. Dk.	68.92
Ditto of Houses on Deck	80.96
Ditto of Forecastle	146.06
Gross Tonnage	1699.51
Less Crew Space	69.23
Less Engine Room	1630.28
Register Tonnage as cut on Beam	543.84
	1086.44

ONE, THREE DECKED, THREE DECKED VESSEL.	
Half Breadth (moulded)	18.42
Depth from upper part of Keel to top of Upper Deck Beams	19.95
Girth of Half Midship Frame (as per Rule)	34.42
1st Number	72.79
1st Number, if a 3-Decked Vessel .. deduct 7 feet	
Length	256.5
2nd Number	186.73
Proportions— Breadths to Length ..	
Depths to Length—Upper Deck to Keel ..	6.9
Main Deck ditto ..	12.8

Master J Carter 83-88
 Built at Sunderland
 When built 1888 Launched 26th May.
 By whom built Osbourne Graham & Co.
 Owner Thomas Bell
 Residence Newcastle
 Port belonging to Newcastle
 Destined Voyage Blyth
 If Surveyed while Building, Afloat, or in Dry Dock. While building & afloat

LENGTH on deck as per Rule	Feet.	Inches.	BREADTH—Moulded	Feet.	Inches.	DEPTH top of Floors to Upper Deck Beams	Feet.	Inches.	Power of Engines	Horse.	Nº. of Decks with flat laid	Nº. of Tiers of Beams
256	0		36	10		18	1		160		One	Two

KEEL, depth and thickness	8 1/2 x 2 1/2	8 1/2 x 2 1/2
STEM, moulding and thickness	8 1/2 x 5	8 1/2 x 5
STERN-POST for Rudder do. do.	8 1/2 x 5	8 1/2 x 5
" " for Propeller	8 1/2 x 5	8 1/2 x 5
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24

FRAMES, Angle Iron, for 1/2 length amidships	4 1/2 x 3	13	4 1/2 x 3	13
Do. for 1/2 at each end	4 1/2 x 3	12	4 1/2 x 3	12
REVERSED FRAMES, Angle Iron	3 x 3	12	3 x 3	12
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	1/2		1/2	
" thickness at the ends of vessel	1/2		1/2	
" depth at 1/2 the half-bdth. as per Rule	1/2		1/2	
" height extended at the Bilges	1/2		1/2	

BEAMS, Upper, Spar, or Awning Deck	6 x 3	13	6 x 3	13
Single or double Ang. Iron, Plate or Tee Bulb Iron	6 x 3	13	6 x 3	13
Single or double Angle Iron on Upper edge	6 x 3	13	6 x 3	13
Average space	24		24	
BEAMS, Main, or Middle Deck	6 x 3	13	6 x 3	13
Single or double Ang. Iron, Plate or Tee Bulb Iron	6 x 3	13	6 x 3	13
Single or double Angle Iron on Upper Edge	6 x 3	13	6 x 3	13
Average space	24		24	

Average space... ..						Tie Plates, outside Hatchways					
BEAMS, Lower Deck —						Diagonal Tie Plates on Beams, No. of pairs					
Single or double Ang. Iron, Plate or Tee Bulb Iron						Flat of Middle Deck* do. do.					
Single or double Angle Iron on Upper Edge ...						How fastened to Beams					
Average space... ..						Stringer Plates on ends of Lower Deck, Hold or Orlop Beams		33	15	33	15
BEAMS, Hold, or Orlop —		10	16	10	16	Is the Stringer Plate attached to the outside plating?		yes			
Single or double Ang. Iron, Plate or Tee Bulb Iron						Angle Irons on ditto No.		5 x 4 x 1/2	16	5 x 4 x 1/2	16
Single or double Angle Iron on Upper Edge ...		4	4	15	4	4	15				

Average space... ..	See profile						Angle Irons on dnto, No. <i>Three</i>	$4 \times 4 \times \frac{15}{32}$	$4 \times 4 \times \frac{15}{32}$
KEELSONS Centre line, single or double plate,) box, or Intercoastal, Plates	Longitudinal girders as per approved section						Stringer or Tie Plates, outside Hatchways	$4 \times 4 \times \frac{15}{32}$	$4 \times 4 \times \frac{15}{32}$
" Rider Plate							Flat of Lower Deck *	—	—
" Bulb Plate to Intercoastal Keelson	36 15 36 15								
" Angle ^{Steel} Irons	4 4 15 4 4 15								
" Double Angle Iron Side Keelson	Ride girders as per approved section $\frac{10}{32}$						Ceiling betwixt Decks, thickness and material	2" pine	
" Side Intercoastal Plates							" in hold do. do.	2 1/2" —	
" do. Angle Irons	3 3 12 3 3 12						Main piece of Rudder, diameter at head	6 1/4	6 1/4
" Attached to outside plating with angle iron	3 3 12 3 3 12						do. at heel	3 1/4	3 1/4
							Can the Rudder be unshipped afloat? <i>Yes.</i>		

BILGE Angle Irons	5	4	15	5	4	15
" do. Bulb Iron	5	4	15	5	4	15
" do. Intercoastal plates riveted to plating for length	5	4	15	5	4	15
BILGE STRINGER Angle Irons	5	4	15	5	4	15
Bulb Intercoastal plates riveted to plating for 3/4 length	5	4	15	5	4	15
SIDE STRINGER Angle Irons	5	4	15	5	4	15

The FRAMES extend in one length from flange plate to flange plate to gunwale
 The REVERSED ANGLE IRONS on floors and frames extend from middle line to lower deck 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 4 ins. from centre to centre.
 " Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 7/8 in. diameter, averaging 3 1/2 ins. from centre to centre.
 " Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 7/8 in. diameter averaging 3 1/2 ins. from centre to centre.
 " Butts of four Strakes at Bilge for half length, treble riveted with Butt Straps 3/2 thicker than the plates they connect.
 " Edges from Bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 7/8 in. diameter, averaging 3 1/2 ins. from cr. to cr.
 " Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 7/8 in. diameter, averaging 3 1/2 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 half length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.
 " Butts of Main Stringer Plate, treble riveted for half length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for length.
 " Breadth of laps of plating in double riveting 5 1/4 Breadth of laps of plating in single riveting 5 1/4

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble & double No. of Breasthooks, three Crutches, two
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Hot bars, Bolchaw Daugham & Co.
 Manufacturer's name or trade mark, Dorman Long & Co. and Mossend Iron Co. plates, Corbett & Co. Iron angles, By Tynack & Co. plates, Hotchkin & Co. plates
 The above is a correct description.
 Builder's Signature, Osbourne Graham & Co. Surveyor's Signature, William Johnston, Geo. Harris
 Surveyor to Lloyd's Register of British and Foreign Shipping

Workmanship. Are the butts of plating planed, or otherwise fitted? *planed*
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.*
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 only.*

Masts, Bowsprit, Yards, &c., are *Steel & Wood* 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
*Fore Mast 40' 0" in length, 21" in dia.
Main Mast 63' 0" in length, 30" in dia.*

The scantlings and arrangements as per approved sketch accompanying this Report, *Steel plates supplied by the Consett Iron Co. tested and marked as per circular No 436.*

NUMBER & LETTER	EQUIPMENT	Fathoms	Inches	Test per Certificate	Inches per Rule	Machine where Tested and Number of Certificate	ANCHORS	No.	Weight Ex. Stock	Test per Certificate	Weight req'd per Rule	Machine where Tested and Number of Certificate
SAILS.	CABLES, &c.						Bower					
Chain	270	1 1/2	71 1/4 x 5 1/4	270-1 1/2	23 May 88.	Anchors	17302	27-3-21	27-2-2-0	27-3-0	23 May 1888
Fore Sails,	75	1 1/2	30 1/2 x 20 1/2	75-1 1/2	Tested at R.W.C.P.T. by J. Hartness	(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	17298	27-3-15	27-2-2-0	27-3-0	23 May 88.
Fore Top Sails,							16477	23-2-14	23-11-3-14	23-2-0	16 Aug. 87.
Fore Topmast Stay Sails,	90	3 1/2	Steel Certified by Craven Spinning	26 tons	90-11"	Stream	17292	8-3-26	11-2-2-0	8-3-0	18 May 88.
Main Sails,	90	3	Pro. to withstand the prescribed tests	18 tons	90-9	Anchor	17132	4-2-14	7-0-0-0	4-2-0	10 April 88
Main Top Sails, and quality	90	3 1/2	9 1/2 tons	90-7	Kedge	17289	2-1-14	4-17-2-0	2-1-0	17 May 88.

Standing and Running Rigging *Galv. wire* sufficient in size and *good* in quality. She has *2* Boats and *2* others
The Windlass is *Harfield & Co. patent* Capstan *Windlass* and Rudder *good* Pumps *good*
How secured in ordinary weather? *handscrews*

Engine Room Skylights. How constructed? *Iron*
What arrangements for deadlights in bad weather? *Iron shutters and bullseyes.*

Coal Bunker Openings. How constructed? *Iron Comings* How are lids secured? *Solid hatches 2 1/2" Height above deck? 16"*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *Scuppers, moving pipes and freeing ports.*

Cargo Hatchways. How formed? *Iron comings usual construction*
State size Main Hatch *29' 9" x 15' 0"* Fore hatch *12' 0" x 13' 2"* Quarterhatches *20' 0" x 15' 0" x 15' 11" x 15' 1"*

If of extraordinary size, state how framed and secured? *Deep comings, and web plates, shifting beams, three fore and aft.*
What arrangement for shifting beams? *in each hatchway Deck plating increased in thickness, & web frames as per plans.*

Hatches, If strong and efficient? *yes. Solid 2 1/2" thick*

Order for Special Survey No. *333*
Date *23 Sept. 85.*
Order for Ordinary Survey No. *477*
Date *7/11/85*
No. *45* in builder's yard.
State dates of letters respecting this case *14th May. 19th Dec. 85. 21st Jan. 2nd Mar. 88.*

General Remarks (State quality of workmanship, &c.)
This is a steel screw steamer built in accordance with the approved plans forwarded on the 28th instant, the Secretary's letters as above stated and in other respects as required by the Rules. Iron rivets have been used throughout. The workmanship is good throughout. The particulars relating to decks and double bottom are given on the prescribed forms attached. The vessel is schooner rigged, and is fitted with Poop 32' 9" long. Raised Quarter Deck 62 ft. Bridge House 62 ft. Iron (C) and Forecastle 35' 9" long.

A freeboard was assigned in accordance with the Secretary's letter dated 24th May 88. Report No 14613 and has been accepted by the owner and is marked on the vessel's sides in accordance with Notice No 542 as follows viz: Winter 2' 1", Summer 1' 10 1/2" and should be recorded in the Register Book.

State if one, two, or three decked vessel, or if spar, or ironing decked; and the lengths of poop, bridge, forecabin, or raised quarter deck. (If double bottom, state particulars on separate form.)
How are the surfaces preserved from oxidation? Inside *Wails' Enamel Cement & Paint* Outside *Paint.*
I am of opinion this Vessel should be Classed *100A.1. Steel* with the notation *A & C. P.*

The amount of the Entry Fee £ 4 : 0 : 0 is received by me, *George Harrison*
Special £ 65 : 15 : 0 *4 July 1888.*
(to be sent as per margin). Certificate ...
(Travelling Expenses, if any, £ ...)
Committee's Minute
Character assigned
*+ Lmb 6188
A & C P*
*100A.1 Steel
10k Iron
2krs B*
FRIDAY 6 JULY 1888
It is submitted that the vessel appears eligible to be classed *100A.1. Steel* as recommended
Lloyd's Register
Foundation