

# IRON SHIP. 22449

No. 24240 Survey held at Newcastle

Date, First Survey 21<sup>st</sup> June 1878 Last Survey 6<sup>th</sup> Feb 1879

On the Iron Screw Steamer "Topaze"

Master W. Corfield

TONNAGE under 1807.37

Deadweight 15.41

Ditto of Third, Spar, or Awning Deck. 58.63

Ditto of Houses on Deck 24.91

Ditto of Forecastle 31.67

Gross Tonnage 1937.99

Less Crew Space 52.70

1885.29

Less Engine Room 620.16

Register Tonnage 1265.13

as out on Beam

ONE, OR TWO DECKED, THREE DECKED VESSEL.

SPAR, OR AWNING DECKED VESSEL.

HALF BREADTH (moulded) 17.25

DEPTH from upper part of Keel to top of Upper Deck Beams 26.46

GIRTH of Half Midship Frame (as per Rule) 39.20

1st NUMBER 82.91

1st NUMBER, if a THREE DECKED VESSEL 7.00

LENGTH 275.5

2nd NUMBER 20913

PROPORTIONS—Breadths to Length 7.98

Depths to Length—Upper Deck to Keel 10.4

Main Deck ditto 14.1

Built at Newcastle

When built 1878 Launched 10<sup>th</sup> Dec 1878

By whom built C. L. Swan & Co

Owners Young & Christie

Port belonging to London

Destined Voyage India

If Surveyed while Building, Afloat, or in Dry Dock. while building.

LENGTH on deck as per Rule 275 6 BREADTH—Moulded 34 6 DEPTH top of Floors to Upper Deck Beams 24 6 Do. do. Main Deck Beams 17 6 Power of Engines 180 Horse. N° of Decks with flat laid 2 N° of Tiers of Beams 3

Dimensions of Ship per Register, length, 277.0 breadth, 34.7 depth, 24.5

	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	9 1/2 x 2 1/2	9 1/2 x 2 1/2
STEM, moulding and thickness	9 x 2 1/2	9 x 2 1/2
STERN-POST for Rudder do. do.	9 x 4 1/2	9 x 4 1/2
" for Propeller	9 x 5	9 x 5
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24
FRAMES, Angle Iron, for 3/4 length amidships	5 3 8	5 3 8
Do. for 1/2 at each end	5 3 7	5 3 7
REVERSED FRAMES, Angle Iron	3 3 7	3 3 7
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	23 1/2	23 1/2
" thickness at the ends of vessel	7	7
" depth at 3/4 the half-bdth. as per Rule	11 3/4	11 3/4
" height extended at the Bilges	47	47
BEAMS, Upper, Spar, or Awning Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	7 7 7	7 7 7
Single or double Angle Iron on Upper edge	3 3 6	3 3 6
Average space	48	48
BEAMS, Main, or Middle Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	6 3 8	6 3 8
Single or double Angle Iron on Upper Edge	24	24
Average space	24	24
BEAMS, Lower Deck, Hold, or Orlop Single or double Ang. Iron, Plate or Tee Bulb Iron	8 1/2 8 1/2 8 1/2	8 1/2 8 1/2 8 1/2
Single or double Angle Iron on Upper Edge	3 3 7	3 3 7
Average space	2 3/4 4 1/2 frame bulk.	2 3/4 4 1/2 frame bulk.
KEELSONS Centre line, single or double plate, box, or intercostal, Plates	19 13 18	19 13 18
" Rider Plate	12 13 11 3/4	12 13 11 3/4
" Bolt Plate to Intercostal Keelson	5 1/2 4 9	5 1/2 4 9
" Angle Irons	5 1/2 4 9	5 1/2 4 9
" Double Angle Iron Side Keelson	5 1/2 4 9	5 1/2 4 9
" Side Intercostal Plate	5 1/2 4 9	5 1/2 4 9
" do. Angle Irons	5 1/2 4 9	5 1/2 4 9
" Attached to outside plating with angle iron	3 3 7	3 3 7
BILGE Angle Irons	8 8 8	8 8 8
" do. Bulb Iron	5 1/2 4 9	5 1/2 4 9
" do. Intercostal plates riveted to plating for length	5 1/2 4 9	5 1/2 4 9
BILGE STRINGER Angle Irons	5 1/2 4 9	5 1/2 4 9
Intercostal plates riveted to plating for 1/2 length.	5 1/2 4 9	5 1/2 4 9
SIDE STRINGER Angle Irons	5 1/2 4 9	5 1/2 4 9

	Inches. In Ship.	16ths. In Ship.	Inches. per Rule.	16ths. per Rule.
Flat Keel Plates, breadth and thickness	36	12	36	12
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	10 8 11		10 8 11	
" of doubling at Bilge, or increased thickness, and length applied				
" fin up part of Bilge to l. edge of Sh'rstrake.	10 8 11		10 8 11	
" Main Sheerstrake, breadth and thickness of doubling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	40	13	40	13
" Up. or Spar Dk. Sh'rstrake, breadth & thickness	40	13	40	13
Butt Straps to outside plating, breadth & thickness	16 1/2 - 11 1/4	14 1/2 - 10 1/4	16 1/2 - 11 1/4	14 1/2 - 10 1/4
Lengths of Plating	120		120	
Shifts of Plating, and Stringers	48		48	
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	52	10	58	9
Angle Iron on ditto	4 x 4 x 9		4 x 4 x 9	
Tie Plates fore and aft, outside Hatchways	14	9	14	9
Diagonal Tie Plates on Beams No. of Pairs				
Planksheer material and scantling				
Waterways do. Boundary Plank	teak		teak	
Flat of Upper Deck do. do.	4" y. p.		4	
How fastened to Beams	1/2" g. i. n. b.		1/2" g. i. n. b.	
Stringer Plate on ends of Main or Middle Deck	50	9	39	10
Beams, breadth and thickness	50	9	39	10
Is the Stringer Plate attached to the outside plating?	yes		yes	
Angle Irons on ditto, No. 2	4 x 4 x 9		4 x 4 x 9	
Tie Plates, outside Hatchways				
Diagonal Tie Plates on Beams, No. of pairs				
Waterways materials and scantlings				
Flat of Middle Deck do. do.	6" i. n. deck		6" i. n. deck	
How fastened to Beams	riveted		riveted	
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	35	9	35	9
Is the Stringer Plate attached to the outside plating?	yes		yes	
Angle Irons on ditto, No. 2	4 x 4 x 9		4 x 4 x 9	
Stringer or Tie Plates, outside Hatchways				
Flat of Lower Deck				
Ceiling betwixt Decks, thickness and material	Iron battens 3" x 1/2"			
" in hold do. do.	2 1/2" pine		2 1/2	
Main piece of Rudder, diameter at head	6 3/4		6 3/4	
" do. at heel	3 1/2		3 1/2	
Can the Rudder be unshipped afloat?	yes			
Bulkheads No. 5 Thickness of	6 1/16"		6 1/16 - 4 in h	
" Height up Collision bulk. to Upper Deck, rem <sup>t</sup> to middle deck.				
" How secured to sides of ship between double frames.				
" Size of Vertical Angle Irons 3 x 3 x 7/8 and distance apart	30		ins.	
" Are the outside Plates doubled two spaces of Frames in length?	yes			

Transoms, material. Knight-heads. Hawse Timbers. iron

Windlass iron Pall Bitt iron

The FRAMES extend in one length from keel to gunwale Riveted through plates with 7/8 in. Rivets, about 7" apart.

The REVERSED ANGLE IRONS on floors and frames extend across middle line to Middle Deck and to Upper Deck 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 1/8 in. diameter, averaging 5 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 7/8 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 to 3 3/4 ins. from centre to centre.

" Butts of 3 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 7/8 in. diameter, averaging 3 1/2 to 3 3/4 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.

Lower 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 1/2 length.

" Breadth of laps of plating in double riveting 5 1/4" Breadth of laps of plating in single riveting

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble and double

Waterway, how secured to Beams Iron - riveted. (Explain by Sketch, if necessary.)

Beams of the various Decks, how secured to the sides? Ends turned - knees welded No. of Breasthooks, 5 Crutches, 4

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

Manufacturer's name or trade mark, Plates from Palmer's

The above is a correct description.

Builder's Signature, P. C. S. Swan & Co

Surveyor's Signature, L. H. Lloyd

Surveyor to Lloyd's Register of British and Foreign Shipping

IRON 482-0512



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*

22779 Iron

Masts, Bowsprit, Yards, &c., are *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 *Length of fore mast 24 feet - diameter 24". Length of main mast 24 feet - diameter 22". Plates  $\frac{7}{16}$ ,  $\frac{6}{16}$ ,  $\frac{5}{16}$  - two plates in the round - edges double riveted - butts triple riveted and double riveted - plating doubled at wedging. Manufacturer of iron Palmer & Co.*

NUMBER for EQUIPMENT 25125

N <sup>o</sup> .	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	W't req'd per Rule.	Test req'd per Rule.
one	Fore Sails,	Chain	270	1 $\frac{13}{16}$	59 $\frac{3}{4}$	270-1 $\frac{13}{16}$	59 $\frac{3}{4}$	Bowers	3	32-3-0	30-13-3-0	32	30 $\frac{2}{3}$
one	Fore Top Sails,	J. Hartness Sunderland	13 $\frac{1}{2}$	Sept 1878	13 $\frac{1}{2}$	Sept 1878	13 $\frac{1}{2}$			32-0-7	30-4-1-14	32	30 $\frac{2}{3}$
one	Fore Topmast Stay Sails	Impa Strm Cbl	75	1 $\frac{1}{8}$	15 $\frac{1}{2}$ Tons	75-1 $\frac{1}{8}$	15 $\frac{1}{2}$ Tons			27-2-14	26-16-3-14	27 $\frac{1}{4}$	26 $\frac{10}{16}$
good	Main Sails,	Hawser ...	90	11	90-12"	90-12"	90-12"						
and	Main Top Sails,	Towlines ...	90	7 $\frac{1}{2}$	90-11"	90-11"	90-11"	Stream	1	13-3-7	13-0-0-0	13	
		Warp ...	90	4 $\frac{1}{2}$	90-7"	90-7"	90-7"	Kedges	2	6-3-0	7-18-1-21	6 $\frac{1}{2}$	
		quality <i>good</i>	60	4 $\frac{3}{4}$						3-1-0	5-5-0-0	3 $\frac{1}{4}$	

Standing and Running Rigging *wire & hemp* sufficient in size and *good* in quality. She has *2* life Long-Boats and *2* others.

The Windlass is *good* Capstan *good* and Rudder *good* Pumps *good*

Engine Room Skylights.—How constructed? *teak* How secured in ordinary weather? *bolted down.*

What arrangements for deadlights in bad weather? *bull's eyes in solid shutters.*

Coal Bunker Openings.—How constructed? *Iron castings* How are lids secured? *by bars* Height above deck? *18".*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *Side ports and scuppers.*

Cargo Hatchways.—How formed? *Plates and angles.*

State size Main Hatch *20' x 10'* Forehatch *14' x 8'* Quarterhatch *20' x 10'.*

If of extraordinary size, state how framed and secured? *Ordinary size.*

What arrangement for shifting beams? *2 shifting web plates also one shifting ball at Main Hatch; d<sup>o</sup> at Quarter Hatch; one deep stiff web plate at fore hatch.*

Hatches, If strong and efficient? *strong and efficient*

Order for Special Survey No. *251*

Date *17 May 1878*

Order for Ordinary Survey No. —

Date —

No. *39* in builder's yard.

1st.	On the several parts of the frame, when in place, and before the plating was wrought	1878. June 21. July 1, 4, 16, 23. Aug 1, 8, 15, 19, 23, 26.
2nd.	On the plating during the process of riveting	Sept 4, 12, 17, 19, 25. Oct 5, 14, 25.
3rd.	When the beams were in and fastened, and before the decks were laid....	29, 31. Nov 7, 14, 18, 22, 30. Dec 3, 4, 12.
4th.	When the ship was complete, and before the plating was finally coated or cemented...	23, 31. 1879 Jan 6, 10, 17, 20, 28, 31.
5th.	After the ship was launched and equipped	Feb 1, 4, 5, 6.

General Remarks (State quality of workmanship, &c.)

*This is a vessel having two decks and three tiers of beams and has been built in accordance with the Rules.*

*She has a forecastle 36 feet in length and a poop 26 feet in length.*

*She is fitted with ballast tanks in the Engine Space and in the After Hold of the united lengths of 102 feet.*

*There is a deep ballast tank in the after part of the Main Hold. It is 30 feet in length and extends to the height of the Hold Beams and has been constructed in accordance with the accompanying approved small tracing and with the profile.*

*The tanks have been tested by a head of water to the height of the load line.*

*The stroke of plating in way of the middle deck is doubled for  $\frac{1}{2}$  length with plates  $\frac{10}{16}$  thick. The quality of the workmanship is good throughout.*

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 *cement & paint.*

Outside *paint.*

I am of opinion this Vessel should be Classed *100 A. 1 - three decks*

The amount of the Entry Fee ... £ *5* : : : is received by me, *J. H. Truscott.*

Special *paid* £ *72* : *2* : *6* 21 Feb 1879

Certificate ... : : : -

(Travelling Expenses, if any, £ —).

Committee's Minute 25th February, 1879.

Character assigned

*100 A. 1*

*Lloyd's M.C.*

*2 Dks 3th B Iron Dk*

*double bottom 102 ft*

Surveyor to Lloyd's Register of British and Foreign Shipping.

*This vessel appears to comply to be classed 100 A as required.*

*2 Dks 3th B Iron Dk*

*double bottom 102 ft*

Lloyd's Register Foundation