Steel

~~IRON~~ SHIP.

7720

(Received at London Office) FRIDAY 25 OCT 1889

No. 7720 Survey held at West Hartlepool Date, First Survey 4 June 89 Last Survey 21 Oct 1889

On the Steel Screw Steamer "Blackheath" 2 Masts Schooner Rig.

TONNAGE under Tonnage Deck	2041·60
Ditto of Third, Spar, or Awning Deck.	Bridge 261·96
Ditto of Poop, or Raised Qr. Dk.	52·96
Ditto of Houses on Deck	172·84
Ditto of Forecastle Houses & Ccss of Hatchways	4·81
Gross Tonnage	8·16
Less Crew Space	28·52
	2570·85
	73·41
	2497·44
Less Engine Room	822·67
Register Tonnage as cut on Beam	1674·77

~~ONE, OR~~ TWO DECKED, ~~THREE DECKED~~ VESSEL, ~~SPAR, OR AWNING DECKED VESSEL.~~

	Feet.
Half Breadth (moulded)	20·64
Depth from upper part of Keel to top of Upper Deck Beams	23·90
Girth of Half Midship Frame (as per Rule)	39·66
1st Number	84·20
~~**1st Number, if a 3 Decked Vessel** .. deduct 7 feet~~	
Length	298·33
2nd Number	25719
Proportions— Breadths to Length	7·22
Depths to Length— Upper Deck to Keel	12·94
Main Deck ditto	

Master Holl.

Built at West Hartlepool

When built 1889. Launched 12 Sep. 89.

By whom built W. Gray & Co. Ld.

Owners Britain Steamship Co. Ld. Residence Whittington Avenue London

Port belonging to London.

Destined Voyage Mediterranean and

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

LENGTH on deck as per Rule ... Feet. 298 Inches. 4 | **BREADTH**— Moulded ... Feet. 40 Inches. 3½ | **DEPTH** top of Floors to Upper Deck Beams ..... / ~~Do. do. Main Deck Beams~~ ..... Feet. 19 Inches. 6 | Power of Engines ... ... Horse. 250 | N°. of Decks with flat laid One. N°. of Tiers of Beams One tier of frames.

Dimensions of Ship per Register, length, 300·0 breadth, 41·6 depth, 19·6 Depth Moulded 23·0½

	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness ~~2 Slabs~~	10 × 1⅛	10 × 1⅛
STEM, moulding and thickness	10 × 2¾	10 × 2¾
STERN-POST for Rudder do. do.	10 × 6	10 × 6
" " for Propeller	10 × 6	10 × 6
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24

	Inches. In Ship.	Inches. In Ship	20ths. In Ship	Inches per Rule	Inches per Rule	20ths per Rule
				(Class 100 A 20)		
FRAMES, Angle ~~Iron~~ 5, for ⅗ length amidships	5	3½	8	5	3½	8.
Do. for ⅕ at each end	5	3½	7	5	3½	7
REVERSED FRAMES, Angle ~~Iron~~ 5	3½	3½	8	3½	3½	8.
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	Cellular bottom			See Sections.		
" thickness at the ends of vessel						
" depth at ¾ the half-bdth. as per Rule						
" height extended at the Bilges						
BEAMS, Upper, ~~Spar, or Awning~~ Deck Single ~~or d'ble~~ Ang. ~~Iron, Plate or Tee~~ Bulb ~~Iron~~ 5	7½	3	10	7½	3	10
~~Single or double Angle Iron on Upper edge~~						
Average space	24			24		
~~**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— aft.	10	-	10	10	-	10
Single ~~or d'ble Ang. Iron, Plate or Tee~~ Bulb ~~Iron~~ 5						
Single or double Angle Iron on Upper Edge	3½	3½	7	3½	3½	7
Average space	48			48.		
~~**BEAMS, Hold, or Orlop**~~						
~~Single or d'ble Ang. Iron, Plate or Tee Bulb Iron~~						
~~Single or double Angle Iron on Upper Edge~~						
Average space						
KEELSONS Centre line, single or double plate, box, or Intercostal, Plates	Cellular bottom			See Sections.		
" Rider Plate						
" Bulb Plate to Intercostal Keelson						
" Angle ~~Irons~~ 5						
" Double Angle ~~Iron~~ 5 Side Keelson						
" Side Intercostal Plate						
" do. Angle ~~Irons~~ 5						
" Attached to outside plating with angle ~~iron~~ 5						
BILGE Angle ~~Irons~~ 5	Webframes and Intercostals			See Sections.		
" do. Bulb ~~Iron~~ 5						
" do. Intercostal plates riveted to plating for ... length						
BILGE STRINGER Angle ~~Irons~~ 5						
Intercostal plates riveted to plating for ... length						
SIDE STRINGER Angle ~~Irons~~ 5						

	Inches. In Ship.	16ths. In Ship.	Inches. per Rule	16ths. per Rule
~~**Flat Keel Plates**, breadth and thickness~~				
PLATES in Garboard Strakes, br'dth & thickness	36	12	36	12
" From Garboard to upper part of Bilges		11		11
" ~~Of d'bling at Bilge, or increased thickness and length applied~~	Reduced 1/20 in way of Cellular bottom for ½ length			
" From up. prt of Bilge to lr. edge of Sh'rstrake		11		11
" Main Sheerstrake, breadth and thickness	40	13	40	13
" Of d'blng at Sh'stk. & lng. applied	For arrangement of Bridge ends see Sections.			
" ~~From M'n. to Upr. or Spar Dk. Sh'rstrake~~				
" ~~Up. or Spar Dk. Sh'rstrake, brdth & thickn'ss~~				
Butt Straps to outside plating, breadth & thickness	19	17	19	17
Lengths of Plating 12·11·10 spaces.	16¾	15	16¾	15
Shifts of Plating, and Stringers 2 spaces.			5 2 spaces.	
Gunwale Plate on ends of ~~Awning, Spar, or~~ Upper Deck Beams, breadth and thickness	42½	10	42½	10
Angle ~~Iron~~ 5 on ditto	6×4×9.		6×4×9.	
~~Tie Plates fore and aft, outside Hatchways~~				
~~Diagonal Tie Plates on Beams No. of Pairs~~				
Flat of Up., ~~Spar, or Awning~~ Dk.* Iron.	6/16		6/16	
How fastened to Beams with Iron Rivets	5/8		5/8	
~~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~~				
~~Flat of Middle Deck* do. do.~~				
~~How fastened to Beams~~				
Stringer Plates on ends of Lower Deck, ~~Hold or Orlop~~ Beams	41	9	41	9
Is the Stringer Plate attached to the outside plating?	Yes.			
Angle ~~Irons~~ 5 on ditto, No. 2	4×4×9.		4×4×9.	
~~Stringer or~~ Tie ~~Plates, outside Hatchways~~ at centre	4×4×9.		4×4×9.	
Flat of Lower Deck*	✓			
Ceiling betwixt Decks, thickness and material	2½	Red Pine	2½	
" in hold do. do.	2½	- -	2½	
Main piece of Rudder, diameter at head	7¾		7¾	
do. at heel	3¾		3¾	
Can the Rudder be unshipped afloat? Yes.				
Bulkheads No. 5 No. per Rule 5				766/20
" Thickness of 7/16 to 6/16.				
" Height up to Upper Deck.				
" How secured to sides of ship between double pawls.				
" Size of Vertical Angle ~~Irons~~ 5 5×3½×8/20 and distance apart 30 ins.				
" Are the outside Plates doubled two spaces of Frames in length? Yes				

* If Iron Decks, state if whole or part, and if wood deck is laid thereon.

State clearly where plating is of alternate thicknesses—as distinguished from diminished thickness at ends of vessel.

The **FRAMES** extend in one length from Centre line to gunsale Riveted through plates with 7/8 in. Rivets, about 7" apart.

The **REVERSED ANGLE ~~IRONS~~** 5 on floors and frames extend from middle line to tank side and to gunsale (Main Deck) and to Forecastle and Upper Intercostal alternately

KEELSONS. Are the various lengths of Plates and Angle ~~Irons~~ 5 properly connected? Yes. And butts properly shifted? Yes.

PLATING. Garboard, double riveted to Keel, with rivets 1⅛ in. diameter, averaging 5⅞ ins. from centre to centre.

" **Edges of Garboards** and to upper part of Bilge, worked clencher, double riveted; with rivets ⅞ in. diameter, averaging 3½ ins. from centre to centre.

" **Butts from Keel to turn of Bilge,** worked carvel, ~~double~~ treble riveted; with rivets ⅞ in. diameter averaging 3 1/16 ins. from centre to centre.

" **Butts** of ~~all~~ C. C. & I strakes for ¾ length Strakes ~~at Bilge~~ for ¾ length, treble riveted with Butt Straps 4/20 thicker than the plates they connect. ~~double~~ overlapped.

" **Edges from Bilge to Main Sheerstrake,** worked clencher, double or single riveted; with rivets ⅞ in. diameter, averaging 3½ ins. from cr. to cr.

" **Butts from Bilge to Main Sheerstrake,** worked carvel, ~~double~~ treble riveted; with rivets ⅞ in. diameter, averaging 3 1/16 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 ¾ length amidships. ~~**Butts of Upper or Spar Sheerstrake,** treble riveted ... length amidships.~~

" **Butts of Main Stringer Plate,** treble riveted for ¾ length amidships. ~~**Butts of Upper or Spar Stringer Plate,** treble riveted for ... length.~~

" Breadth of laps of plating in double riveting 6" 5/8 and 4½" Breadth of laps of plating in single riveting ✓

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double ~~or single~~ Riveted? ... No. of Breasthooks, 8. Crutches, 4.

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Siemens Martin Steel.

Manufacturer's name or trade mark, Steel from Dorman Long & Co. Middlesbro Moor Iron Co. Stockton, and West Hpl Iron Co. Iron from Dorman Long & Co. & West Hpl Iron Co.

The above is a correct description.

Builder's Signature, For William Gray & Co. Limited. M Gray Managing Director.

Surveyor's Signature. Thos Gilliat

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

(Form No. 1 for Iron Ships—

ROBERT EDMUND TAYLOR & SON, Commercial and General Steam Printers, 19, Old Street, Goswell Road, London, E.C.

ST4922-0129

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Workmanship. Are the butts of plating planed or otherwise fitted? Planed, where practicable

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.

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, generally.

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? Yes. A few.

Masts, Bowsprit, Yards, &c., are Iron & Pine 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 The Iron lower masts are of the sizes &c as approved in the Secretary's letter of the 9 July 87, for the S.S. "Twickenham" West Hpl 1st Entry Report No 6766.

The iron in these masts has been tested as prescribed by the Rules, and found satisfactory.

NUMBER & LETTER for EQUIPMENT 27923

SAILS.	CABLES, &c.	Fathoms	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested and Superintendant, also Number of Certificate.
N°.	Chain Studlink (State Machine where Tested, Date, or No. of Certificate, & Name of Superintendant.)	135	1 1/8	63 1/4 Tons	270 - 1 1/8	10132 · 13/4/89 ·
Fore Sails,		135	1 1/8	63 1/4 - -		10133 · 20/4/89
Are	Iron Stream Chain or Steel Wire ..	Tipton Machine		E.R. Isitt Supt.		
Fore Top Sails,	or Hempen Strm Cable	75	1 1/8	22 3/4 - -	75 - 1 1/8	7725 · 16/4/89 ·
Fore Topmast Stay Sails,		South Dock Machine		Sunderland J. Hartness Supt.		
Complete	Towline, Hemp. or Steel Wire ..	Cable calipered & found satisfactory				
Main Sails,		100	4	33 - -	100 - 4"	Steel bars
Lint	Hawser	90	3 1/4	22 - -	90 - 3 1/4	
Main Top Sails, and	Warp	90	8		90 - 8	
	quality 2.10	90	7 4/12			

ANCHORS.	N°.	Weight. Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	Machine where Tested and Superintendant. also Number of Certificate.
		cwt qr lb	cwt	cwt	
Bower Anchors	✓ 1	34 - 3 - 0	32 - 3 - 3 - 0	34 - 0 - 0	11486 · 19/4/89 ·
	✓ 1	32 - 3 - 7	30 - 15 - 2 - 14	34 - 0 - 0	11620 · 27/4/89 ·
(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendant.)	✓ 1	30 - 0 - 7	28 - 14 - 1 - 14	29 - 0 - 0	11621 · 29/4/89 ·
	✓	97 - 2 - 14	Total	97 - 0 - 0	
	✓ Tipton	Machine	E.R. Isitt Supt.		
	× Sunderland		J. Hartness		
Stream Anchor	× 1	10 - 3 - 21	12 - 17 - 2 - 0	10 - 3 - 0	15/12/88 · 1806.
Kedge	× 1	5 - 1 - 7	7 - 14 - 0	7 - 5 - 2 - 0	7/12/88 · 1807
2nd Kedge.	× 1	2 - 3 - 0	3 - 5 - 0	2 - 2 - 0	23/4/89 · 1864

Standing and Running Rigging Wire & Manila sufficient in size and good in quality. She has Two Long Boats and Two others

The Windlass is Good ~~Capstan~~ 2 Winches Good and Rudder Good Pumps Good

Engine Room Skylights.—How constructed? of Iron & Steel How secured in ordinary weather? by slide bars.

What arrangements for deadlights in bad weather? Strong steel shutters.

Coal Bunker Openings.—How constructed? of plate & angles How are lids secured? 2 1/2" hatches Height above deck? 15/2 and 37

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? On each side: Forward, 3 Port Each 31"x19 - 13/4 up, and Aft, 4 Ports Each 22 1/2 x 10".

Cargo Hatchways.—How formed? of Iron plates & angles.

State size **Main Hatch** 25 - 10 x 15 - 0 x 21/2" Forehatch 19 - 10 x 15 - 0 x 35 1/2" Quarterhatches 25 - 10 x 15 - 0 x 29" 25 - 9 x 14 - 10 x 29.

If of extraordinary size, state how framed and secured?

What arrangement for shifting beams? As required by the Rules, and as per Drawings.

Hatches, If strong and efficient? Yes. 3" & 2 1/2" thick.

Order for Special Survey No. 1346

Date Feb 14 89.

~~Order for Ordinary Survey No.~~

~~Date~~

No. 371. in builder's yard.

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	Built under Special Survey
2nd. On the plating during the process of riveting	Date 1st Survey 4 June 88
3rd. When the beams were in and fastened, and before the decks were laid....	— Last — 21 Oct 8
4th. When the ship was complete, and before the plating was finally coated or cemented..	
5th. After the ship was launched and equipped	

State dates of letters respecting this case 30/8/88 M. 18/9/88 M. 5/10/88 M. 21/12/88 P. and 2/2/89 M.

General Remarks (State quality of workmanship, &c.) This vessel has been built in accordance with the approved tracings now in the London office, and as required by the Rules. The requirements of Secretary's letter of the 30/8/88, and 18/9/88 have been complied with viz:—The strength of Main & Quarter Deck plating in way of large openings 8/16 thick, and one tier of Bridge Deck plating at Main Hatchway 7/16 thick, the deck plating at corners of large openings doubled: the web frames in way of hatchways extended upwards & strong beams fitted in after hold as per Plans.

The whole of the steel used in the hull has been tested as prescribed by the Rules.

The workmanship throughout the vessel is of good quality.

The freeboards assigned by the Committee in the Secretary's letter of the 30 Aug 88, for the Sister Vessel "Isleworth" West Hpl Report No. 7494, have been marked on the vessel's side viz:—S. 2·2 1/2 W 2·6 For fresh water 4 1/2"; Freeboards to be recorded in the Register Book

See also Freeboard Report on this Vessel No. 26·9" 112ft - 29·3" 98ft.

State if one, two, or three decked vessel, or if spar, or awning decked; and the lengths of poop, bridge, forecastle, or raised quarter deck. (If double bottom, state particulars on separate form.)

How are the surfaces preserved from oxidation? Inside by paint & Portland Cement Outside by paint.

I am of opinion this Vessel should be Classed ✠ 100 A 1

The amount of the Entry Fee .....£ 5 : : is received by me, 24 · 10 · 1889

Special .....£ 84 : 8 : 6

(to be sent as per margin). Certificate ... : :

(Travelling Expenses, if any, £

For William Gray & Co Limited
Managing

W. Gray

Surveyor to Lloyd's Register of British and Foreign Shipping

It is submitted that this Vessel appears eligible to be classed 100 A 1 (Steel) as recommended by the Committee's Minute

"1 Dk Iron & Steel Web Frames"

"Cell D. B." particulars approved

"Well Dk."

25/10/89

Committee's Minute

Character assigned 100 A 1 Steel 1 Dk Iron & Steel Web Frames Well Dk Record Freeboard

A1 CP + Dk 6/10/89

TUES 29 OCT 1889

Reference should be made to any correspondence connected with the case.

Certificate to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

A1 Class with Recess No 7021

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