

Spar, Awning or Part Awning Dk.

IRON OR STEEL STEAMER.

THUR 31 DE 1891
(Received at London Office)

State if Report is also sent on the Machinery of the Vessel *Yes*

Date of completion of Report *30-12-91*

Port of *West Hartlepool*

No. *8682* Survey held at *West Hartlepool* Date, First Survey *June 30th 91* Last Survey *Dec 27th 1891*

On the *Spar Decked Steel Screw Steamer "Spheroid"* Rig *Schooner (Two masts)*

TONNAGE under Tonnage Deck... *1786-83*

between Tonnage Dk. and 3rd, 4th, Spar or Awning Dk.

Total under Upper Dk.

Do. of Poop *20-26*

Do. of Rais d'Or. Dk. or Break

Do. of Bridge House

Do. of Houses on Deck *91-90*

Do. of excess of Hatchways *23-63*

of Forecastle

above Crown of Engine Room *28-44*

Tonnage

of Space *1941-06*

above Crown of Engine Room *69-63*

of Room *28-44*

FOR FEES... *1842-99*

of Engine Room *621-114*

of Navigation Spaces *11-84*

Register Tonnage as cut on Beam... *1238-145*

SPAR, AWNING OR PART AWNING-DECKED VESSEL,
or a Vessel having a continuous Shade Deck.

CLASS 100 A1, Spar Decked

FEET.

Half Breadth (moulded) *17-90*

Depth from upper part of keel to top of Main Deck Beams *17-16*

Girth of Half Midship Frame (as per Rule) *30-90*

1st Number *65-96*

Length *243-58*

2nd Number *18045-33*

Proportions—Breadths to Length *7-64*

Depths to Length—Main Deck to top of Keel *15-94*

Destined Voyage *West India*

Master *Norris*

Year of Appointment *1891*

Built at *West Hartlepool*

When built *1891* Launched *Oct 10th 1891*

By whom built *W. Gray & Co. (Linn)*

Owners *J. Scuttow Sons & Co.*

Managers

Residence *9 Broadchurch St London E.C.*

Port belonging to *London*

LEY	TH on Deck	Feet.	Inches.	BREADTH—	Feet.	Inches.	DEPTH, top of Floors to Spar or Awn. Dk. Beams	Feet.	Inches.	Power of Horse.	No. of Decks with flat laid
as	Rule	273	7	Moulded	35	10	Do. do.	22	8	Engines	220
							Main Deck Beams	14	2		No. of Tiers of Beams

Dimensions of Ship per Register, Length *276-3* breadth *30-05* depth *22-63* Spar or Awn. Dk. Moulded depth, ft. *16* ins. *5* To Main Dk. Round up of Beam, Main Dk. *9* ins.

FORGINGS AND CASTINGS.		Inches in Ship.			Inches per Rule.		
		Inches in Ship.	20ths in Ship.	Inches per Rule.	20ths per Rule.	Inches per Rule.	20ths per Rule.
KEEL, Bar or Side Plates, depth and thickness	Flat plate	8 1/2	2 1/2	8 1/2	2 1/2		
STEM, moulding and thickness		8 1/2	5	8 1/2	5		
STERN-POST for Rudder do. do.		8 1/2	5	8 1/2	5		
for Propeller		4 1/2		4 1/2			
MAIN PIECE of Rudder, diameter at head		3 1/2		3 1/2			
do. at heel		3 1/2		3 1/2			
RUDDER, how constructed	Forged iron frame & plate						
Can Rudder be unshipped afloat?	Yes						
FRAMING.		Inches in Ship.			Inches per Rule.		
		Inches in Ship.	20ths in Ship.	Inches per Rule.	20ths per Rule.	Inches per Rule.	20ths per Rule.
ME Angles, or Bars for 1/2 length amidships		4	3	4	3		
for 1/2 at each end		4	3	4	3		
Do. in way of Double Bottoms		3	3	3	3		
Distance of Frames from moulding edge to moulding edge, all fore and aft		23		23			
REVERSED FRAME Angles		3	3	3	3		
BOARDS, depth and thickness of Floor Plate at mid-line for 1/2 length amidships							
in way of Engines and Boilers							
Thickness at the ends of vessel							
depth at 1/2 the half-bdth. as per Rule							
height extended at the Bilges							
STRIPS & BRACKETS, in Cell Dble Bottoms		36	7	36	7		
Distance apart		23		23			
CENTRE GIRDER, in Double bottom, depth and thickness		36	9	36	9		
Angles, Top		5 1/2	4	5 1/2	4		
Bottom		7		7			
DECK GIRDERS, number and thickness		3	3	3	3		
Angles		3	3	3	3		
MARGIN PLATE, depth (exclusive of flange) and thickness		22	8	22	8		
Angle		3 1/2	3 1/2	3 1/2	3 1/2		
DECK BOTTLING PLATING, breadth and thickness of Middle Line Strake		36	8	36	8		
Thickness in Engine and Boiler space	Iron	9/16		9/16			
Remainder in Holds	Steel	7		7			
SPAR OR AWNING DECK, Single Angle, Bulb Angle, Plate or Tee Bulb		5 1/2	3	5 1/2	3		
Angles on upper edge							
Average space		23		23			
BEAMS, Main Deck, Single Angle, Bulb Angle, Plate or Tee Bulb		6	3	6	3		
Angles on upper edge							
Average space		23		23			
BEAMS, Lower Deck, Single Angle, Bulb Angle, Plate or Tee Bulb							
Angles on upper edge							
Average space							
BEAMS, Hold, or Orlop, Plate or Tee Bulb							
Angles on upper edge							
Average space							
BEAMS, Poop Deck, Angle, Bulb Angle, Plate or Tee Bulb							
Angles on upper edge							
Average space							
BEAMS, Bridge Deck, Angle, Bulb Angle, Plate, or Tee Bulb		6 1/2	3	6 1/2	3		
Angles on upper edge							
Average space		46		46			
BEAMS, Forecastle Deck, Angle, Bulb Angle, Plate or Tee Bulb		6 1/2	3	6 1/2	3		
Angles on upper edge		3	5	3	5		
Average space		46		46			
PILLARS, in 'tween Decks, Size and Spacing		2 1/2	46	2 1/2	46		
Hold		3 3/8	46	3 3/8	46		
WEB FRAMES, in Fore Body, No. and spacing br'dth and thickness		15	15	15	15		
No. of Side Stringers		Two		Two			
WEB FRAMES, in After Body, No. and spacing br'dth and thickness		15	15	15	15		
No. of Side Stringers		Two		Two			
Size of Angles or Tee Bars to Web Frames		3	3	3	3		
BRACKET PLATES, to Stringers between Web Frames, depth and thickness							

KEELSONS AND STRINGERS.		Inches in Ship.		Inches per Rule.	
		Inches in Ship.	20ths in Ship.	Inches per Rule.	20ths per Rule.
CENTRE LINE KEELSON, Vertical Plate above floors, Through Plate, or Intercoastal Plate					
Rider Plate					
Bulb Plate to Intercoastal Keelson					
Horizontal Plates on Floors					
Angles					
SIDE KEELSON, Angles					
Bulb or Plate above floors, for length					
Intercoastal Plate, for length					
Attached to outside Plating with Angle					
BILGE KEELSON, Angles					
Bulb or Plate above floors, for length					
Intercoastal Plate, for length					
Attached to outside Plating with Angle					
BILGE STRINGER Angles					
Bulb Plate, for length					
Intercoastal Plate, for length					
Attached to outside Plating with Angle					
SIDE STRINGER Angles					
Bulb or Intercoastal Plate, for length					
SPAR, or Awning Deck Stringer Plates, on ends of Beams, breadth and thickness		39	9	39	9
Angle on ditto		4 x 4	9	4 x 4	9
Tie Plates, fore and aft, outside Hatchways					
Diagonal Tie Plates on Bms., No. of prs.					
Flat of Deck * Iron or Steel, for whole len.					
Wood					
Material and thickness					
How fastened to Beams					
Main Deck Stringer Plate, breadth & thickness		39	10	39	10
Angles on ditto, No.		4 x 4	9	4 x 4	9
Tie Plates, outside Hatchways					
Diagonal Tie Plates on Bms., No. of prs.					
Flat of Deck * Iron or Steel, for whole len.					
Wood					
Material and thickness					
How fastened to Beams					
Lower Deck Stringer Plates, br'dth & thck'n's					
Angles on ditto, No.					
Tie Plates, outside Hatchways					
Flat of Deck * Material and thickness					
How fastened to Beams					
Hold, or Orlop Stringer Plate, br'dth & thck'n's					
Angles on ditto, No.					
Tie Plates, outside Hatchways					
Flat of Deck. Material and thickness					
How fastened to Beams					
Poop Deck Stringer Plate, breadth & thickness					
Angles on ditto					
Tie Plates					
Flat of Deck. Material and thickness					
Bridge Deck Stringer Plate, br'dth & thickness		30	7	30	7
Angle on ditto		Flanged			
Tie Plates					
Flat of Deck. Material and thickness					
Forecastle Deck Stringer Plate, br'dth & th'k'n's		30	6	30	6
Angle on ditto		3 x 3	7	3 x 3	7
Tie Plates					
Flat of Deck. Material and thickness					
PLATING.		Inches in Ship.		Inches per Rule.	
		Inches in Ship.	20ths in Ship.	Inches per Rule.	20ths per Rule.
FLAT PLATE KEEL, breadth and thickness		36	16	36	16
Dblng or inersd thck'n's & len. appl.					
PLATES in Garboard Strakes, breadth & thck'n's		12		12	
from Garboard to lower part of Bilges		10		10	
State Thickness of Plating in way of Double Bottom					
Bilges, No. of Strakes and thickness		Two		Two	
Of doubling at Bilge, or increased thickness, and length applied					
from up. part of Bilge to lr. edge of Sh'rstrake		10		10	
Main Sheerstrake, breadth and thickness		42	14	42	14
Of doubling at Sh'rstk. & lng. applied					
from Main to Spar Dk. or Awn. Dk. Sh'rstk.		10		10	
Spar or Awn. Dk. Sh'rstk., br'dth & thck'n's		42	13	42	13
Poop sides					
Bridge sides					
Forecastle sides					
Lengths of Plating					

Ceiling betwixt Decks, thickness and material	BULKHEADS.			No. in Vessel			No. Reqd. by Rule		
	Thickness	Angles	Spacing	Height up	Sngl. or Dbl. Frames				
in hold do. do. 2 1/2	W. T. BULKHEADS	1/2	Vrtcl. 4x2 1/2 30 Hrzncl. 4x2 1/2 48	30	48	30	48	30	48
Number of Breasthooks Seven	PARTITIONS								
Crutches Four and deep floor	LONGITUDINAL								

Are the outside Plates doubled two spaces of Frames in length? *Yes*
 The FRAMES extend in one length from Centre to Tankside & Tankside to Spar Bridge Riveted through Plates with 7/8 in. Rivets, about 6 apart
 The REVERSED ANGLE on floors and frames extend from Centre to Tankside & Tankside to Spar deck in way of Bridge, the Main and Spar deck alternately and the Spar and fore-and-aft deck alternately

RIVETING OF EDGES AND BUTTS OF SHELL PLATING AND BUTTS OF STRINGER PLATES, TIE PLATES, KEELSONS, &c.

Garboard, double riveted to **Base Keel** or Flat Plate 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, treble or double riveted; treble for 1/2 length, with rivets 7/8 in. dia., averaging 3 1/4 ins. from cr. to cr.
 " " " " overlapped for 3/4 length, treble riveted for 1/2 length; with rivets 7/8 in. dia., averaging 3 1/4 ins. from cr. to cr.
Butts of Spar Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 2 1/2 thicker than the plates they connect, except when overlapped.
Edges from Bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 1 1/4 in. diameter, averaging 4 1/2 ins. from centre to centre.
Butts from Bilge to Main Sheerstrake, worked carvel, treble or double riveted; treble for 1/2 length, with rivets 7/8 in. dia., averaging 3 1/4 ins. from cr. to cr.
 " " " " overlapped for 3/4 length, treble riveted for 1/2 length; with rivets 7/8 in. dia., averaging 3 1/4 ins. from cr. to cr.
Edges of Main Sheerstrake, double or single riveted. **Spar or Main Sheerstrake**, double or single riveted.
Butts of Main Sheerstrake, treble riveted for 1/2 length amidships. **Butts of Spar or Main Sheerstrake**, treble riveted 1/2 length amidships.
Butts of Main Stringer Plate, treble riveted for 1/2 length. **Butts of Spar or Main Stringer Plate**, treble riveted for 1/2 length.
 " " " " overlapped for 3/4 length amidships. " " " " Single or Double Straps for *1/2* length amidships. " " " " Single or Double Straps for *1/2* length amidships.
Butts of Inner Bottom Plating Double riveted for 1/2 length. **Butts of Centre Girder** Treble riveted.
Breadth of edge laps of Shell Plating in double riveting 5 1/4 6 **Breadth of edge laps of Shell Plating** in single riveting 4
Butt Straps of Shell Plating, breadth and thickness 1 1/2 x 1 1/2 (10, 12, 13, 14, 15, 16 x 3/4) **Butts, if Lapped**, breadth of laps 9
Butt Straps of Keelsons, Stringer and Tie Plates, treble or double, riveted

Manufacturer's name or trade mark of the Iron or Steel (state process of manufacture of Steel) used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *All Steel by Siemens-Martin process. See Book of Steel, Messrs. Dorman Long & Co. Iron Works & Co.*

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed*
 Is the riveted work properly closed? *Yes*
 Are the liners between the frames 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 plating? *A few through butts only.*
 Are the butts of Plating, Stringers, &c., properly shifted and strapped? *Yes*

LOWER MASTS...	Material.	Total length.	DIAMETER AND THICKNESS.				No. of Plates in round.	ANGLES.		RIVETING.	
			At Partners.	Heel.	Round.	Head.		Number.	Size.	Seams.	Butts.
Fore	Iron	75.0	22 x 3/4	17 x 3/4	17 x 3/4	2			Double	Treble	
Main	"	68.0	20 x 3/4	16 x 3/4	17 x 3/4	2					
Minor	"										

MASTS, SPARS, &c.
 Topmasts, Yards and Remainder of Spars *See Book of Steel, Messrs. Dorman Long & Co. Iron Works & Co.*
 Rigging, Material and Size, Shrouds *See Book of Steel, Messrs. Dorman Long & Co. Iron Works & Co.*
 Sails. *one* Suit of Sails and the following spars: *See Book of Steel, Messrs. Dorman Long & Co. Iron Works & Co.*

Number of Certificate.	Weight, Ex Stock	Test, per Certificate	WEIGHT REQ. BY RULE			Description of Anchor.	Makers.	Where and when tested and Superintendent.			
			Cwts. qrs. lbs.	Cwts. qrs. lbs.	Cwts. qrs. lbs.						
22788	39 1 0	35	5	2	14	37	2	0	Hutchinson	Rio de Janeiro	
22787	36 1 0	33	5	2	14	37	2	0	Hutchinson	Rio de Janeiro	
22789	32 2 0	30	10	0	0	31	3	0	Hutchinson	Rio de Janeiro	
22748	108 0 0	106	3	0	0						
22747	9 3 0	9	2	1	7	11	5	2	4	Rogers	Oct 27 91
22747	4 3 7	4	2	1	7	5	0	0	4	Rogers	Oct 27 91
22657	2 2 0	3	0	0	0	2	2	0			

Number of Certificate.	Fathoms.	Size.	Test, per Certificate		Description.	Makers of Cables.	Where and when tested, and Superintendent.	Material.	Fathoms.	Size.	Fathoms & Size. Per Rule.
			Per Rule.	Per Rule.							
9387	270	1 1/2	53 1/2	42	3-6	270 x 1 1/2	Steel	Hutchinson	Rio de Janeiro	Oct 27 91	
Iron Steam Chain	75	1 1/2	20 1/2	13	3-5	75 x 1 1/2	"	"	"	"	"
Towline (steel wire)	90	3/2	26			90 x 3/2	Seal line	"	"	"	"

CHAIN CABLES. **HAWSERS AND WARPS.**
 Boats *2 life boats + 2 others*
 Pumps, Number *Five hand pumps* Diameter of Barrel and Tail Pipe *5" Barrel and 2 1/2" Tail pipe*
 The Windlass is *See Book of Steel, Messrs. Dorman Long & Co. Iron Works & Co.* Capstan *See Book of Steel, Messrs. Dorman Long & Co. Iron Works & Co.*

Engine Room Skylights.—How constructed? *Plate top + flaps with thick round glass lights*
 What arrangements for deadlights in bad weather? *See Book of Steel, Messrs. Dorman Long & Co. Iron Works & Co.*
Coal Bunker Openings.—How constructed? *Plate craming.* How are lids secured? *cleats + latches* Height above deck? *On Spar at 12"*
Number of Scuppers, and number and dimensions of Freeing Ports, &c. *Open rails, Forward 3 scuppers + aft 4 scuppers on each side.*
Cargo Hatchways.—How formed? *Plate craming 36" high* Hatches.—If strong and efficient? *3 scuppers*
 State size No. 1 Hatch (Forward) *15' 0" x 11' 0"* No. 2 Hatch *14' 9" x 14' 2"* No. 3 Hatch *5' 8" x 8' 0"* No. 4 Hatch *24' 7" x 14' 1"*
 Number of Web Plates, Shifting Beams, and Fore and Afters to each Hatch *No. 1 web + 3 fore afters. No. 2 web + 3 fore afters. No. 3 1 fore taper. No. 4 3 fore afters.*
Bulwarks, height above deck and description *2-5. See* Main Rail, material and size *Bulle angle 6 + 2 + 2/3*

The above is a correct description. *William Gray & Co. Limited.*
 Builder's Signature (here only) *William Gray & Co. Limited.* Surveyor's Signature *Allison B. Wilson.*
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Order for Special Survey No. *1507*
 Date *June 10th 1891*
 Order for Ordinary Survey No. *430*
 Date *See above*
 No. *430* in builder's yard.
 DATES OF SURVEYS held while building as per Section 15.
 1st. On the several parts of the frame, when in place, and before the plating was wrought }
 2nd. On the plating during the process of riveting }
 3rd. When the beams were in and fastened, and before the decks were laid }
 4th. When the ship was complete, and before the plating was finally coated or cemented ... }
 5th. After the ship was launched and equipped }
 Total No. of Visits *65*

State dates and initials of letters respecting this case *June 9th - 27th July 16th - 24th Aug 19th Sept 2nd 91 Oct 14th 91 E Sept 18th 91*

General Remarks (State quality of workmanship, &c.) *This vessel has been built in accordance with the Rules and the plans submitted to the Committee. The whole of the material used in the hull is of good malleable quality and the workmanship has been well executed throughout.*

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop *5.5* ft., R.Q.D. or Break *✓* ft., Bridge Dk. *64* ft., F'castle *27* ft., (in feet and tenths) where the Poop is on top of the R.Q.D., or when the Poop or R.Q.D. is joined to the B.D., this should be distinctly stated *✓*
 No. and Material of Decks (if Iron or Steel) and whether wholly or partially covered with wood, and No. of tiers of Beams (this information is to be given as it should appear in the Register Book) *2 dks (Iron steel) 2 tiers beam web frames*
 Official No. *99026*; Signal Letters *See Book of Steel, Messrs. Dorman Long & Co. Iron Works & Co.*
PARTICULARS OF WATER BALLAST—
 Double bottom, aft, length *✓* and water capacity in tons *✓* Double bottom, forward, length *✓* and water capacity in tons *✓*
 Double bottom, under engines and boilers, length *✓* and water capacity in tons *✓* If under Engines only, or Boilers only, state which *both*
 Double bottom, constructed on the cellular system, length *226 ft* and water capacity in tons *372*
 Fore peak tank, water capacity in tons *✓* After peak tank, water capacity in tons *39*
 Midship deep tank, length *✓* and water capacity in tons *✓* Other tanks, if fitted, length *✓* and water capacity in tons *✓*
 The above have *all* been tested as required by the Rules.
 (If necessary, furnish further information by sketch.)
 How are the surfaces preserved from oxidation? Inside *Portland Cement and paint.* Outside *Paint.*

FREEBOARD assigned by the Committee, as per Secretary's Letter, dated *✓*
 State if marked on Vessel's sides in accordance with Notice No. 572 *✓*
 The amount of Entry Fee £ *4* is received by me, *30-12-1891*
 Special... £ *11: 15: 6*
 Certificate... £ *7: 0: 0*
 Travelling Expenses, if any £ *0: 0: 0*

I am of opinion this Vessel should be Classed *+100 A1 Spars & Steel.*
 Committee's Minute *JAN 1892*
 Character assigned *100 A1 (steel) Spar & Steel*
 It is submitted that this vessel appears eligible to be classed 100 A1 (steel) Spar & Steel as recommended, 100 A1 (steel) Spar & Steel (Iron) + web frames, all D.B. (particulars above) F.K.

Allison B. Wilson.
H. M. Williams.
 Surveyor to Lloyd's Register of British & Foreign Shipping.

See Verification Report

See Book of Steel, Messrs. Dorman Long & Co. Iron Works & Co.

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