

Survey held at

Hartlepool

Date, First Survey

26 Oct. 1877

Last Survey

26 April

1878

On the

Sew. S^e

"Casdale"

Master

J. Alderson

TONNAGE under

1093.80

Tonnage Deck

141.29

Ditto of Third Spar,

94.77

or Awning Deck.

36.39

Ditto of Houses

37.90

Ditto of Forecastle

1407.61

Gross Tonnage

60.15

Less Crew Space

1347.46

Less Engine Room

450.44

Register Tonnage

897.02

as out on Beam

ONE, OR TWO-DECKED, THREE DECKED VESSEL.

SPAR, OR AWNING DECKED VESSEL.

HALF BREADTH (moulded)... 15-11/2

DEPTH from upper part of Keel to top of Upper Deck Beams 20-2 1/2

GIRTH of Half Midship Frame (as per Rule) 21-9

1st NUMBER 67-11

1st NUMBER, if THREE-DECKED VESSEL

[deduct 7 feet]

LENGTH 242-1

2nd NUMBER 16439

PROPORTIONS—Breadths to Length 7 1/2 to 100

Depths to Length—Upper Deck to Keel within 12 11-9

Main Deck ditto ..

Built at

Hartlepool

When built

1870

Launched 10th March

By whom built

E. W. Wither

Owners

Steel Young & Co

Port belonging to

London

Destined Voyage

India

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

LENGTH

Feet. Inches.

BREADTH—

Feet. Inches.

DEPTH top of Floors to Upper

Feet. Inches.

Power of

Horse.

No. of Decks with flat laid

on deck as

per Rule ... 242 1

Moulded... 31 11

Deck Beams ... 10 5 1/2

Do. do. Main Deck Beams... 10 5 1/2

Engines ... 150

No. of Tiers of Beams

Two

Dimensions of Ship per Register, length, 243-7 breadth, 32 depth, 18-2

KEEL, depth and thickness ...

STEM, moulding and thickness... ..

STERN-POST for Rudder do. do. ...

" " for Propeller

Distance of Frames from moulding edge to

moulding edge, all fore and aft

FRAMES, Angle Iron, for 3/4 length amidships ...

Do. for 1/2 at each end

REVERSED FRAMES, Angle Iron

FLOORS, depth and thickness of Floor Plate

at mid line for half length amidships ...

" thickness at the ends of vessel ...

" depth at 3/4 the half-bdth. as per Rule ...

" height extended at the Bilges... ..

BEAMS, Upper, Spar, or Awning Deck

Single or double Ang. Iron, Plate or Tee Bulb Iron

Single or double Angle Iron on Upper edge ...

Average space... ..

BEAMS, Main, or Middle Deck

Single or double 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 double 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 Intercoastal, Plates ...

" Rider Plate

" Bulb Plate to Intercoastal Keelson... ..

" Angle Irons

" Double Angle Iron Side Keelson

" Side Intercoastal Plate

" do. Angle Irons

" Attached to outside plating with angle iron

BILGE Angle Irons

" do. Bulb Iron... ..

" do. Intercoastal plates riveted to

plating for length

BILGE STRINGER Angle Irons

Intercoastal plates riveted to plating for

length

SIDE STRINGER Angle Irons in upper hold... ..

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

Windlass Rapiers Patent Pall Bitt

The FRAMES extend in one length from Keel to gunwale

The REVERSED ANGLE IRONS on floors and frames extend across middle line to above hold beams and to gunwale

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 1/2 in. diameter, averaging 5 1/2 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 3/4 ins. from centre to centre.

" Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 3/4 ins. from centre to centre.

" Butts of three Strakes at Bilge for half length, treble riveted with Butt Straps 1/2 thicker than the plates they connect.

" Edges from bilge to Main Sheerstrake, worked clencher, double or 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 3/4 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 5/4 x 4 1/4 Breadth of laps of plating in single riveting

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

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

Beams of the various Decks, how secured to the sides? ends turned & lugs welded, Beams No. of Breasthooks, Six Crutches; Two

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c? Horizontal in 160 Hartlepool

Manufacturer's name or trade mark,

The above is a correct description.

Builder's Signature, E. W. Wither & Co.

Surveyor's Signature, S. P. Gladstone

Surveyor to Lloyd's Register of British and Foreign Shipping

Flat Keel Plates, breadth and thickness ...

PLATES in Garboard Strakes, breadth and thick-

ness from Garboard to upper part of Bilges

of doubling at Bilge, or increased thick-

ness, and length applied half

" fm up. part of Bilge to l. edge of Sh'rstrake.

" Main Sheerstrake, breadth and thickness

of d'bling at Sh'rstrake, & length applied

from Mn. to Up. or Spar Dk. Sh'rstrake.

" Up. or Spar Dk. Sh'rstrake, brdth & thicks

Butt Straps to outside plating, breadth & thickness

Lengths of Plating ...

Shifts of Plating, and Stringers... ..

Gunwale Plate on ends of Awning, Spar, or

Upper Deck Beams, breadth and thickness...

Angle Iron on ditto

Tie Plates fore and aft, outside Hatchways

Diagonal Tie Plates on Beams No. of Pairs,

Planksheer material and scantling

Waterways do. do.

Flat of Upper Deck do. do.

How fastened to Beams

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, or

Orlop Beams

Is the Stringer Plate attached to the outside plating?

Angle Irons on ditto, No. 2

Stringer or Tie Plates, outside Hatchways

Flat of Lower Deck

Ceiling betwixt Decks, thickness and material... ..

" in hold do. do.

Main piece of Rudder, diameter at head

do. at heel

Can the Rudder be unshipped afloat? Yes

Bulkheads No. 4 Thickness of 6 1/2 x 5 1/2 6 1/2 x 5 1/2

" Height up Main Deck, after one to cabin deck.

" How secured to sides of ship to double frames

" Size of Vertical Angle Irons 3 x 3 x 7/16 and distance apart 30 ins.

" Are the outside Plates doubled two spaces of Frames in length? Yes

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? *Solid*
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 in butts* 20857 *Sm*

Masts, Bowsprit, Yards, &c., are *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 *In Mast 71 feet Diameter 19 in Fore Mast 73 ft 6 in Dia 20 inches*

NUMBER for EQUIPMENT <i>10002</i>		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.
SAILS.	CABLES, &c.	270	19/16	43 7/10	27 fathoms	43 7/10	Bowers	3	23-3-14	23-15-2-14	23-2-0	23-10-0-0
	Chain								23-1-0	23-6-1-0	23-2-0	23-10-0-0
	Fore Sails,								20-2-0	21-3-3-0	19-3-2-5	20-14-0-0
	Fore Top Sails,											
	Fore Topmast Stay Sails											
	Main Sails,											
Main Top Sails,	Hawser ...	75	1	10-1-10	75 fms	10-1-10	Stream	1	10-1-7	10-12-2-0	10-0-0	
	Towlines ...	00	2						4-3-14	6-5-1-7	15-0-0	
	Warp ...	00	5				Kedges	2	2-2-12	4-11-1-0	2-2-0	

Standing and Running Rigging *Wire & Hemp* sufficient in size and *Good* in quality. She has *Four* Long Boats and *Good* The Windlass is *Good* Capstan *Good* and Rudder *Good* Pumps *Four* of 6 in Metal Engine Room Skylights.—How constructed? *3 in teak & casing to top* How secured in ordinary weather? *Bullrogs*
What arrangements for deadlights in bad weather? *Bullrogs*
Coal Bunker Openings.—How constructed? *Iron coverings* How are lids secured? *Bars* Height above deck? *12 inches*
Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *Ports & Scuppers*

Cargo Hatchways.—How formed? *6/16 Plated*
State size Main Hatch *19 ft 4 in x 11 ft 3 in* Fore hatch *9 ft 8 in x 9 ft 3 in* Quarter hatch *23 ft 3 in x 11 ft 3 in* Barring 30 inches
If of extraordinary size, state how framed and secured?
What arrangement for shifting beams? *Two shifting web beams in after hatch & one in main do.*
Hatches, If strong and efficient? *Strong & efficient*

Order for Special Survey No. *660* Date *31 Oct. 1874*
Order for Ordinary Survey No. *12* 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 *Special Survey Date of Survey 1874 & 80*
2nd. On the plating during the process of riveting *Oct. 26. Nov. 13. 20. 22. 27. 28 Dec 4-11-14*
3rd. When the beams were in and fastened, and before the decks were laid.... *Jan. 10-15-18-23-25-30 Feb. 5-13-19-26*
4th. When the ship was complete, and before the plating was finally coated or cemented... *March 5-12-18 April 4-8-26*
5th. After the ship was launched and equipped

General Remarks (State quality of workmanship, &c.) *Workmanship & material good*
Is fitted with long raised quarter deck frames all to the top height beams of bulk 4 1/2 x 7/16 Double angles on top edges 3 x 3 x 6/16. Stringer plates on do. 3 1/2 x 10/16. Angles on do. 5 x 3/2 x 9/16 tie plates 12 x 10/16. Plating outside 9/16-9/16-7/16. beams plated over for about 40 ft in length from break thence aft with 6/16 x 7/16. plate decked over with 3 1/2 x 14 in. G. Pine. Forecastle frames all to the top height beams of 6 1/2 x 6/16 bulk. Double angles on top edge 2 3/4 x 2 1/2 x 5/16. Stringer plates on end 20 x 6/16. Angles 3 x 3 x 6/16. tie plates 8 x 6/16. Plating on side 6/16. Deck 3 in G. Pine
Water ballast tanks fitted for 202 ft. frames with connection made with three plates side plates 7/16 angles on do. 4 x 3 x 7/16 web plates 6/16 angles on do. 3 x 3 x 6/16. top plating 6/16
Additional strengthening at break of raised deck main deck beam stringer plates aft of 7 frame space abash break. Raised do. 4 spaces before sheerstrake doubled for 20 ft. Hold beam stringers overlap 16 ft. 34 ft. 14 ft. 4 in. 202 feet

State if one, two, or three decked vessel, or if spar, or cunnage decked; and the lengths of poop, forecabin, or raised quarter deck, and the length of double, or part double bottom.
How are the surfaces preserved from oxidation? Inside *Flat cemented with Portland cement* Outside *& other parts with paint*

I am of opinion this Vessel should be Classed *100 A 1*
The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me, *S.P. Gladstone*
Special ... £ 50 : 13 : 6 - 6 May 1874
Certificate ... : : :
(Travelling Expenses, if any, £)

Committee's Minute *10th, May. 1878.*
Character assigned *100 A 1*
Lloyd's Register of British and Foreign Shipping.
This vessel appears eligible to be classed as recommended by 100 A. 1.
18th. 2nd. 1878.
Double bottom 202 feet