

IRON SHIP. 17863

No. 11582 Survey held at Sunderland Date, First Survey May 30th 1876 Last Survey February 21st 1877

On the Iron S.S. "Commonwealth"

Master A. Smith

Built at Sunderland

When built 1876 Launched 2nd Dec^r 76.

By whom built Messrs. Wm. Duxford & Sons

Owners J. Day, Farlam, & Co. of Shields

Port belonging to Newcastle

Destined Voyage India

Surveyed while Building, Afloat, & in Dry Dock.

TONNAGE under Tonnage Deck	1736.79
Under Deck	1.02
Ditto of Poop, or Raised or Dk.	56.52
Ditto of Houses on Deck	32.65
Ditto of Forecastle	34.75
Gross Tonnage	1861.73
Less Crew Space	40.91
Less Engine Room	595.75
Register Tonnage as cut on Beam	1225.07

ONE OR TWO DECKED, THREE DECKED VESSEL.	
SPAR, OR AWNING DECKED VESSEL.	
HALF BREADTH (moulded)	16.91
DEPTH from upper part of Keel to top of Upper Deck Beams	26.16
GIRTH of Half Midship Frame (as per Rule)	39.45
1st NUMBER	82.52
1st NUMBER, if a THREE-DECKED VESSEL	7.00
[deduct 7 feet]	
LENGTH	279.0
2nd NUMBER	21070
PROPORTIONS—Breathths to Length	<u>Under</u> 8 1/2 %
Depths to Length—Upper Deck to Keel	11 1/4
Main Deck ditto	15 1/4

LENGTH on deck as per Rule	279	BREADTH Moulded	33	DEPTH top of Floors to Upper Deck Beams	24 1/2	Power of Engines	160	No. of Decks with flat laid	3
				Do. do. Main Deck Beams	17			No. of Tiers of Beams	Three

	Inches in Ship	Inches per Rule		Inches in Ship	Inches per Rule
KEEL, depth and thickness	9 x 2 1/2	9 1/2 x 2 1/2	FLAT KEEL PLATES, breadth and thickness	36	12
STEM, moulding and thickness	8 1/2 x 2 1/2	9 x 2 1/2	PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	36	12
STERN-POST for Rudder do. do.	9 x 5	9 x 5	of doubling at Bilge, or increased thickness, and length applied	alternately	alternately
for Propeller	24 in	24 in	fm up. part of Bilge to lr. edge of Sh'rstrake	119 10	119 10
Distance of Frames from moulding edge to moulding edge, all fore and aft	24 in	(Class 100 A)	Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	40	13
FRAMES, Angle Iron, for 3/4 length amidships	5 x 3	5 x 3	Up. or Spar Dk Sh'rstrake, brdth & thckns	—	—
Do. for 1/2 at each end	5 x 3	5 x 3	Butt Straps to outside plating, breadth & thickness	10 1/2	8 1/4
REVERSED FRAMES, Angle Iron	3 x 3	3 x 3	Lengths of Plating	10 feet	—
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	23 1/2	23 1/2	Shifts of Plating, and Stringers	2 spaces	5 frames
thickness at the ends of vessel	—	—	Gunwale Plate on ends of Awning Spar or Upper Deck Beams, breadth and thickness	60	9
depth at 3/4 the half-bdth. as per Rule	12 1/2	11 3/4	Angle Iron on ditto	4 x 4 x 9	4 x 4 x 9
height extended at the Bilges	a fair taper	—	Tie Plates fore and aft, outside Hatchways	14	9
BEAMS, Upper, Spar, or Awning Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	2 1/2	2 1/2	Diagonal Tie Plates on Beams No. of Pairs	—	—
Single or double Angle Iron on Upper edge	2 1/2	2 1/2	Planksheer material and scantling	—	—
Average space	alternate frames	—	Waterways do. do.	—	—
BEAMS, Main, or Middle Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	5 1/2	3	Flat of Upper Deck do. do.	4 1/2	4
Single, or double Angle Iron, on Upper Edge	—	—	How fastened to Beams	Iron nut and screw bolts	—
Average space	on every frame	—	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	40	10
BEAMS, Lower Deck, Hold, or Orlop Single or double Ang. Iron, Plate or Tee Bulb Iron	8	8	Is the Stringer Plate attached to the outside plating?	Yes	—
Single or double Angle Iron on Upper Edge	8	8	Angle Irons on ditto, No. 2	4 x 4 x 9	4 x 4 x 9
Average space	as profile approved see sketch on sketch from 6 to 10 frames apart	—	Tie Plates, outside Hatchways	Iron deck	—
KEELSONS Centre line, single or double plate, box, or intercostal, Plates	18	13	Diagonal Tie Plates on Beams, No. of pairs	Iron Deck	—
" Rider Plate	12	13	Waterways materials and scantlings	6/16 Iron deck	—
" Bulb Plate to Intercostal Keelson	—	—	Flat of Middle Deck do. do.	Riveted	—
" Angle Irons	5 1/2	4	How fastened to Beams	—	—
" Double Angle Iron Side Keelson	—	—	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	37	9
" Side Intercostal Plate	—	—	Is the Stringer Plate attached to the outside plating?	Yes	—
" do. Angle Irons	5 1/2	4	Angle Irons on ditto, No. three	4.4.9	4.4.9
" Attached to outside plating with angle iron	3	3	Stringer or Tie Plates, outside Hatchways	5 1/2	4.9
BILGE Angle Irons	5 1/2	4	Flat of Lower Deck	—	—
" do. Bulb Iron	—	—	Ceiling betwixt Decks, thickness and material in hold	2 in battens in space	—
" do. Intercostal plates riveted to plating for length	—	—	do. do. do.	2 1/2 in edg to bilge	—
BILGE STRINGER Angle Irons	5 1/2	4	Main piece of Rudder, diameter at head	6 3/4	6 3/4
Intercostal plates riveted to plating for 3/8 length.	3	3	do. at heel	3 1/2	3 1/2
SIDE STRINGER Angle Irons	—	—	Can the Rudder be unshipped afloat?	Yes	—

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

Windlass Emerson & Walker's Patent Secured to plates

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 near middle line to Main deck stringer A.T. 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 1/8 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 7/8 in. diameter, averaging 3 3/4 ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 7/8 in. diameter averaging 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 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 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 1/2 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 —

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

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

Beams of the various Decks, how secured to the sides? Main Deck Brackets, pins, remainder ends turned down & rivets to sides No. of Breasthooks, 5 Crutches, four

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

Manufacturer's name or trade mark, all plates & Stockton Mal. & Co., Crack and Co. also Stockton Mal Iron Co.

The above is a correct description.

Builder's Signature, William Duxford & Sons Surveyor's Signature, James Adams

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

Official Number 76202

IRON 470-0285

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 very well*
 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*

17863 Iron

Masts, Bowsprit, Yards, &c., are *Iron & 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
This Vessel's masts are the same as the "Peer of the Realm" See Report No. 11395. being a sister ship.

Masters of Iron, Bowesfield Iron Comp^y, submitted to both hot & cold tests and proved *Satisfactory*

N ^o	SAILS.	CABLES, &c. <small>(State Machine where Tested, Date, & name of Superintendent.)</small>	Fathoms.	Inches.	Test per Certificate	Length & Size req'd per Rule	Test req'd per Rule	ANCHORS. N ^o .	Weight. Ex. Stock.	Test per Certificate	Weight req'd per Rule.	Test per Rule.
		Chain Breaking Chain	270	1 13/16	59 3/8	270. 1 13/16	59 3/8	Bowers	1, 31.2.0	29.15.0.0	32.0.0.0	30 1/10
		Tested R.H.C.P.S. by J. Hattingh Nov 13 th 76.			82 3/4		82 3/4		1, 32.0.0	30.2.2.0	32.0.0.0	30 1/10
		Chain	90	1 1/16					28.1.14	27.8.2.14	27.1.0	26 1/20
		Hamp Strm Cbl	90	1 1/2					Tested R.H.C.P.S. by J. Hattingh Nov 13 th 76. respectively Nov 13 th and 11 th 76.			
		Hawser Roper.	90	1 1/2				Stream	13.1.7		13.0.0	
		Towlines	180	7/2				Kedges	6.2.0		6.2.0	
		Warp	180	5					3.1.7		3.1.0	

Standing and Running Rigging *Iron and Rope* sufficient in size and *good* in quality. She has *Two Life Long Boats* and *two others*. The Windlass is *Cameron & Walker's Iron* Capstans *2 & 5 inches* and Rudder *good* Pumps *good as per Sketch*.

Engine Room Skylights.—How constructed? *Iron Coamings 6 1/2 ft high and Wood Coamings* How secured in ordinary weather? *Thumb Screws*

What arrangements for deadlights in bad weather? *Solid Shutter fitted with Bulls Eyes*

Coal Bunker Openings.—How constructed? *Iron Coamings and leading plates* How are lids secured? *6 1/2 Ser. 6 ft thick* Height above deck? *9 1/2 and 5 1/2*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *Pots in the Bulwarks and Scuppers*

Cargo Hatchways.—How formed? *Iron Coamings fitted in the usual manner*

State size Main Hatch *20 ft x 11 ft.* Forehatch *10 ft x 8 feet* Quarterhatch *8 x 8 ft. 6* Two others *11 1/2 x 8 ft 8 x 8 ft*

If of extraordinary size, state how framed and secured? *Main Hatch has one Webb Shifting Beam*

What arrangement for shifting beams? *the whole have a Wood fore and aft Carling*

Hatches, If strong and efficient? *Solid and efficient. In addition Main Hatch has double width tie plates.*

Order for Special Survey No.	Date	Order for Ordinary Survey No.	Date	No. 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	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
2636	20 th June 1876			84		Built under S.D. and Surveyed 1876 May 30 June 12 8 12 14 20 26	July 4 8 14 18 21 25 28 31 August 4 8 14 28 31 Sep 4 7 9 13 18 21 25 28 October 6 10 14 18	20 24 26 Nov 6 9 15 17 21 24 30 Dec 14 18 23 27 31 Jan 4 8 14 18 21 25 28 31 Feb 1 5 8 9 12	14 16 17 21	

General Remarks (State quality of workmanship, &c.) *Good: See letters. 9th June 76. & 26th Jan 77.*

She has Top Gallant Forecastle 29 ft, wings to 25 6 feet; Bridge House 24 feet; Full Poop 30 feet from Pooh.

She has two Water Ballast Tanks, the one in the Fore Hold is 40 feet long, and extends up to the Hold Beams as to height, the foremost Engine Room Bulkhead forms one end of it, this and the fore end of the Tank has been efficiently strengthened with angles and Bulbs and the crown is strengthened in a similar manner by fore and aft angles attached to the athwartship angle Beams

The Tank in the after Hold is constructed in the usual manner and is 70 feet long both Tanks have been tested to a head of water above the Load Line and proved Satisfactory.

N.B. Four tracings attached (See above)

State if one, two, or three, decked vessel, or if spar, 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 to bilges painted ab²* Outside *Composition paint or Bottom paint above*

I am of opinion this Vessel should be Classed *100 A. 1. Three decked.*

The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me, Special ... £ 70 : 10 : 6 21st Feb 1877 Certificate ...

(Travelling Expenses, if any, £ ...)

Committee's Minute *23rd February 1877*

Character assigned *100 A. 1. Lloyd's M.C. 2 Dps 3 Stretches double bottom 110 ft*

Joseph Keen.
 James Sibson
 Lloyd's Register Foundation
 22/2/77