

# IRON OR STEEL SHIP.

(Received at London Office, ...)

No. 361-91 Survey held at LONDON Date of writing Report LONDON Port of LONDON  
Date, First Survey Aug 27/88 Last Survey 25 February 1889  
On the Iron & Steel Passenger Steamer Duncan Rig ...

TONNAGE under Tonnage Deck }  
between Tonnage Dk. and 3rd, 4th, Spar or Awning Dk. }  
Total under Upper Dk. }  
Do. of Poop }  
Do. of Raised Or. Dk. or Break }  
Do. of Bridge House }  
Do. of Houses on Deck }  
Do. of excess of Hatchways }  
Do. of Forecastle }  
Gross Tonnage }  
Less Crew Space }  
Net Tonnage }  
Do. of Engine Room }  
Less Tonnage as out on Beams }

ONE, OR TWO DECKED, THREE DECKED VESSEL, SPAR, OR AWNING-DECKED VESSEL.  
Half breadth (moulded) ... .. 21-0  
Depth from upper part of Keel to top of Upper Deck Beams ... .. 7-6  
Girth of Half Midship Frame (as per Rule) ... .. 27-0  
1st Number ... .. 55-5  
1st Number, if a 3-Decked Vessel .. deduct 7 feet ... .. 48-5  
Length ... .. 163  
2nd Number ... .. 9046  
Proportions— Breadths to Length ... .. 3-9  
Depths to Length— Upper Deck to Keel ... .. 21-7  
Main Deck ditto ... .. -

Master not yet appointed  
Year of appointment (1) As master in service of owner of present vessel—18...  
(2) As master of this vessel—18...  
Built at Blackwall  
When built 1889 Launched 203 1888  
By whom built R. H. Green  
Owners Metropolitan Board of Works  
Managers Spring Gardens  
Residence Spring Gardens  
Port belonging to LONDON  
Destined Voyage Woolwich N. S. Fry  
If Surveyed while Building, Afloat, or in Dry Dock. Surveyed while building afloat.

LENGTH on deck as per Rule 164-6 Breadth—Moulded... 42 DEPTH top of Floors to Upper Deck Beams ... .. 6 Inches 6 Power of Engines ... .. 1 Horse. N<sup>o</sup>. of Decks with flat laid one N<sup>o</sup>. of Tiers of Beams one

	Inches in Ship.	Inches per Rule.								
KEEL, depth and thickness	5	2	5	2	5	2	5	2	5	2
STEM, moulding and thickness	5	2	5	2	5	2	5	2	5	2
TERN-POST for Rudder do. do.	5	2	5	2	5	2	5	2	5	2
" for Propeller	5	2	5	2	5	2	5	2	5	2
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24	24	24	24	24	24	24	24	24
FRAMES, Angle Iron, for length amidships	3	3	3	3	3	3	3	3	3	3
Do. for at each end	3	3	3	3	3	3	3	3	3	3
REVERSED FRAMES, Angle Iron	2	2	2	2	2	2	2	2	2	2
FLOORS, depth and thickness of Floor Plate at mid line for length amidships	12	12	12	12	12	12	12	12	12	12
Thickness at the ends of vessel	10	10	10	10	10	10	10	10	10	10
depth at 3/4 the half-bdth. as per Rule	as per approved Mid. Sect.									
height extended at the Bilges	as per approved Mid. Sect.									
BEAMS, Upper, Spar, or Awning Deck	8	8	8	8	8	8	8	8	8	8
Single or double Angle Iron on Upper edge	3	3	3	3	3	3	3	3	3	3
Average space	48	48	48	48	48	48	48	48	48	48
BEAMS, Main, or Middle Deck	8	8	8	8	8	8	8	8	8	8
Single or double Angle Iron, Plate or Tee Bulb Iron	3	3	3	3	3	3	3	3	3	3
Single or double Angle Iron on Upper Edge	3	3	3	3	3	3	3	3	3	3
Average space	48	48	48	48	48	48	48	48	48	48
BEAMS, Hold, or Orlop	8	8	8	8	8	8	8	8	8	8
Single or double Angle Iron, Plate or Tee Bulb Iron	3	3	3	3	3	3	3	3	3	3
Single or double Angle Iron on Upper Edge	3	3	3	3	3	3	3	3	3	3
Average space	48	48	48	48	48	48	48	48	48	48
KEELSONS Centre line, single or double plate, box, or intercostal, Plates	16	16	16	16	16	16	16	16	16	16
Inter Plate to Intercostal Keelson angle	3	3	3	3	3	3	3	3	3	3
Angle Irons	2	2	2	2	2	2	2	2	2	2
Double Angle Iron Side Keelson	5	5	5	5	5	5	5	5	5	5
Side Intercostal Plate	5	5	5	5	5	5	5	5	5	5
do. Angle Irons	5	5	5	5	5	5	5	5	5	5
Attached to outside plating with angle iron	5	5	5	5	5	5	5	5	5	5
BILGE Angle Irons	3	3	3	3	3	3	3	3	3	3
do. Bulb Iron	3	3	3	3	3	3	3	3	3	3
do. Intercostal plates riveted to plating for length	3	3	3	3	3	3	3	3	3	3
SIDE STRINGER Angle Irons	3	3	3	3	3	3	3	3	3	3
Intercostal plates riveted to plating for length	3	3	3	3	3	3	3	3	3	3

The FRAMES extend in one length from Middle line to Gunwale Riveted through plates with 3/8 in. Rivets, about 5 apart.  
The REVERSED ANGLE IRONS on floors and frames extend from middle line to Gunwale amidships and to Side 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 3/4 in. diameter, averaging 3 1/2 ins. from centre to centre.  
Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 3/8 in. diameter, averaging 2 1/2 ins. from centre to centre.  
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/8 in. diameter averaging 2 1/2 ins. from centre to centre.  
Butts of 2 Strakes at Bilge for 2 length, treble riveted with Butt Straps 2 thicker than the plates they connect.  
Edges from Bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 3/8 in. diameter, averaging 2 1/2 ins. from cr. to cr.  
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/8 in. diameter, averaging 2 1/2 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 3/5 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted 2 length amidships.  
Butts of Main Stringer Plate, treble riveted for 2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 2 length.  
Breadth of laps of plating in double riveting 4 1/2 Breadth of laps of plating in single riveting 2 1/2  
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? double No. of Breasthooks, 2 Crutches, 2  
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Good  
Manufacturer's name or trade mark, Coyette Son Yerkes & Norman Low  
The above is a correct description.  
Builder's Signature, Richard Henry Green Surveyor's Signature, Edward Thomas  
Surveyor to Lloyd's Register of British and Foreign Shipping.

State whether Rivets are of Iron or Steel. State clearly where riveting is of alternate thickness— as distinguished from diminished thickness at ends of vessel.

**Workmanship.** Are the butts of plating planed or otherwise fitted? *Yes 49282 Jan*  
 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? *No*

Masts, Bowsprit, Yards, &c., are in condition, and sufficient in size and length. If of Iron or Steel give Scantlings of *Painting, 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

Number for Equipment	CABLES, &c.			Test per Certificate, Tons.	Fathoms & Inches per Rule.	Machine where Tested and Superintendent, also Name of Chain Maker.	ANCHORS.		Weight, Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested and Superintendent, also Name of Anchor Maker.
	Number of Certificate.	Fathoms.	Inches.				Number of Certificate (State if any and which Anchors are Stockless.)	Weight.				
Letter for do.	9917	90	1"	27 Tons		Superior 5 <sup>th</sup> Dec 88 Machine No 4-5-88 Maker T Baker Capt R R Litt	11267 one	6-0-0 1-0-14 each	8-5-0-0			Superior 14 Nov 88 Machine No 6-88 Maker T Baker Capt R R Litt
N. SAILS.												
Fore Sails,												
Fore Top Sails,												
Fore Topmast Stay Sails,												
Main Sails,												
Main Top Sails, and quality												
Hawser	20	2 1/2										
Warp	90	4 1/2										

Standing and Running Rigging sufficient in size and in quality. She has Long Boat and  
 The Windlass is Capstan and Rudder Pumps 4  
**Engine Room Skylights.**—How constructed? *covered by bridge* How secured in ordinary weather?  
 What arrangements for deadlights in bad weather?  
**Coal Bunker Openings.**—How constructed? *flush deck* How are lids secured? *keys on side* Height above deck?  
**Scuppers, &c.**—What arrangements for clearing upper deck of water, in case of shipping a sea? *4 each side mooring pipe*  
**Cargo Hatchways.**—How formed? *now* Hatches, If strong and efficient?  
 State size Main Hatch Forehatch Quarterhatch  
 If of extraordinary size, state how framed and secured... What arrangement for shifting beams?

Order for Special Survey No.	Date	Order for Ordinary Survey No.	Date	1st.	2nd.	3rd.	4th.	5th.
	<i>April 26/88</i>			On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the process of riveting	When the beams were in and fastened, and before the decks were laid...	When the ship was complete, and before the plating was finally coated or cemented...	After the ship was launched and equipped
No. 226								

State dates of letters respecting this case *April 26/88 July 12/88 July 13/88 July 19/88 Sept 20/88*  
**General Remarks** (State quality of workmanship, &c.)

*This paddle wheel steamer is built for use as Ferry steamer between North and South Woolwich in accordance with the approved midship section and drawings. All the angles & bars & beams are of iron, but all plates used in the construction are of steel. The steel has been tested at the works in compliance with the requirements of the Committee. The workmanship and material are of good quality and the vessel appears worthy of the contemplated class A1 Ferry Purposes. Frames, beams & angles iron - Plating steel being recorded in the Register Book.*

How are the surfaces preserved from oxidation? Inside *Paint & Cement* Outside *Paint*

**Particulars for Record in R.B.**—Length of Poop ft., R.Q.D. ft., Bridge Dk., ft., F'castle ft.; No. of Dks. (excluding spar, awn., &c.)  
 Material of dks. *Iron* If spar, awn. dk., &c. Material of spar, awn. dk., &c. No. of tiers of beams (with and without dks. laid)  
 Official No. ; Signal Letters *for Woolwich* If double bottom, state particulars on separate form.

I am of opinion this Vessel should be Classed *A1. Ferry Purposes*  
 The amount of the Entry Fee £ 2 : 0 : 0 is received by me, *Edwards*  
 Special Certificate £ 24 : 13 : 0 15. 3. 1889

*(To be sent as per margin.) Certificate (Travelling Expenses, if any, £)*  
 Committee's Minute **FRIDAY 15 MARCH 1889**  
 Character assigned *A1 for Woolwich Ferry Purposes*  
 Hull Certificate *Steel Plating Iron Framing*  
 Surveyor to Lloyd's Register of British and Foreign Shipping. *Edwards*  
 It is submitted that this vessel appears eligible to be classed A1. For Woolwich Ferry Purposes as recommended with the notation Steel Plating Iron Framing.