

# IRON SHIPS.

Dec 8/12/64

Date 16<sup>th</sup> November

1864

Ship "Douro"

Master -

Built at Belfast

When built 1864 Launched 5<sup>th</sup> November

By whom built Harland & Wolff

Owners John Ribby Sons & Co.

Port belonging to Liverpool

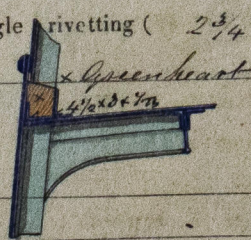
Destined Voyage

While Building, Afloat, or in Dry Dock While Building

Feet.	Inches.	Feet.	Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet.	Inches.	Horse.	N <sup>o</sup> . of Decks
195	8	27	1	15	9			3

of Ship per Register, length 195-8 breadth 27-1 depth 15-6

	Inches in Ship.	Inches required per Rule.		Inches in Ship.	Inches required per Rule.		Inches in Ship.	Inches required per Rule.
Plates in Garboard Strakes, breadth and thickness .....	30	10 7/16	30	10 7/16				
Ditto from Garboard to upper part of Bilges ..	9 7/16		9 7/16					
„ from upper part of Bilge to a perpendicular height from upper side of Keel of 3/4ths the entire depth of Hold .....	8 7/16		8 7/16					
„ from 3/4ths depth of Hold to lower edge of Sheerstrake .....	4 7/16		4 7/16					
„ Sheerstrake, breadth and thickness ....	31 1/2	14 7/16	30	9 7/16				
Butt Straps to outside plating, breadth and thickness .....	8 1/2	2 3/4	8 1/2	2 3/4				
Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness ..	3 1/2	8 7/16	2 3/4	8 7/16				
Angle Iron on ditto .....	4 1/2	4 7/16	4 1/2	4 7/16				
Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways ..	Iron deck							
Diagonal Tie Plates on ditto .....	"	"	"	"				
Planksheer, materials and scantlings ..	4 x 3 1/4							
Waterway ditto ditto .....	Iron							
Flat of Upper Deck, thickness and material ..	5 7/16							
„ „ how fastened to Beams ..	5 7/16							
Ceiling betwixt Decks and in Hold, thickness and material ..	2 1/2							
Clamps or Spirketting ditto .....	-							
Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness ..	20 1/2	8 7/16	21	8 7/16				
Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams ..	4 1/2	4 7/16	4 1/2	4 7/16				
Stringers in Hold .....	4 1/2	4 7/16	4 1/2	4 7/16				
Flat of Lower Deck, thickness and material ..	3 1/2							
Main piece of Rudder, diameter at head ....	4 5/8		4 1/2					
„ „ „ at heel ....	2 3/4		2 3/4					
(Can the Rudder be unshipped afloat?)	Yes							
Bulkheads, N <sup>o</sup> . 4 Thickness of ..	-		6 7/16					
„ Height up Main deck ..	-							
„ how secured to the sides of the ship ..	Riveted between two frames							
„ size of vertical angle irons ..	3 x 2 1/2		30 inches					
„ rivetted through plates with ( 3/4 in.) rivets, about ( 6 in.) apart.								
„ angle irons on the floors extend in one length across the middle line from 2 1/2 to 3 feet on each side alternately, to stringers								
„ „ on the frames „ „ „ from 8 to 8								
„ are the various lengths of plates or angle irons connected?	With butt straps and double rivetted							
Plating, Garboard, double or single rivetted to keel, double or single at upper edge, with rivets ( 1 1/8 x 3/4 ins.) diameter, averaging ( 3 1/2 in.) apart.								
Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted; with rivets ( 3/4 in.) diameter, averaging ( 2 3/4 ins.) apart.								
Butts from Keel to turn of bilge, worked carvel with butt straps ( 10 x 9 ) thick, double or single rivetted; with rivets ( 3/4 in.) diameter, averaging ( 2 1/2 ins.) apart.								
Do the butt straps lap over and rivet through the lands of the strake below? Alternately								
Edges from bilge to sheerstrake, worked carvel with a lining piece ( ) thick, or clencher, double or single rivetted; with rivets ( 3/4 in.) diameter, averaging ( 2 1/2 in.) apart.								
Do the butt straps lap over and rivet through the lands of the strake below? Alternately								
Edges of Sheerstrake, double or single rivetted? At upper edge Single At lower edge Single								
Butts from bilge to planksheers, worked carvel with butt straps ( 8 x 11 ) thick, double or single rivetted; with rivets ( 3/4 in.) diameter, averaging ( 2 1/2 ins.) apart. Breadth of laps in double rivetting ( 4 1/2 ) Breadth of laps in single rivetting ( 2 3/4 )								
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted?								
Planksheer, how secured to the plating of the sides	Explain by sketch							
Waterway „ „ planksheer and to the Beams	if necessary.							
Deck Beams, how secured to the side? Knee plates welded and rivetted to frames								
Hold or Lower Deck ditto The same as above								
Paddle „ „								
No. of breasthooks	Three							
crutches	one							
What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.?	Angle Iron by Messrs Scotland							
Manufacturer's name or trade mark	Plates by Chillingham & Co. Staffordshire							
We certify that the above is a correct description of the several particulars therein given.								
Builder's Signature	Harland & Wolff							
Surveyor's Signature	John Sinton							



IRON 438-0042



the clenchwork in all cases in breadth at least five and a half  
Do the edges of the carvel work and of the butts lay close together throughout their length without requiring  
Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of  
Do the holes for rivetting plate to frames, butt straps, or plate to plate, &c., conform well to each other?  
well and sufficiently countersunk in the outer plate?  
Are there any rivets which either break into or have been put through the seams or butts of the plating?

Her Masts, Bowsprit, Yards, &c., are in condition, and sufficient in size and length. (If they are  
Scantlings of Plating, Angle Irons, &c., and further explain by a Sketch showing how the lower Masts and Bowsprit are  
the number of Plates and Angle Irons, mode of rivetting, quality of Materials, and if stamped with Maker's name.

Length of fore Mast over Iron 42 feet 6" x 14 in. Plates Dundee Iron Glasg  
Main " " 42 " x 14 in.  
Plates 5/16" to within about 9 feet of top, which is 1/4. Rivetted 5/8" rivets, butt straps 3 feet broad at dis  
1 foot 6 in at top.  
Bowsprit Red Pine 24 feet long 16" diameter.

She has SAILS.

CABLES, &c.

ANCHORS, and their weights.

N <sup>o</sup> .		Fathoms.	Inches.	Tested to. Tons.		N <sup>o</sup> .	Weight. End of 18.	
	Fore Sails,	Chain .....	240	1 5/16	31	Bowers, <i>Footmans Patent</i>	1	18.3.19
	Fore Top Sails,	<del>Hempen</del> Stream Cable .....	90	3/4	—	<i>Ordinary</i>	1	18.1.8
	Fore Topmast Stay Sails,	Hawser .....	—	—	—	<i>2"</i>	1	14.0.19
	Main Sails,	Towlines .....	—	—	—	Stream,	1	6.2.4
	Main Top Sails,	Warp .....	—	—	—	Kedges,	1	3.2.11
and		All of _____ quality.					1	1.3.26

Her Standing and Running Rigging sufficient in size and in quality.

She has 2 Life Boats 24 1/2 feet long Boat and 2 others 22 feet

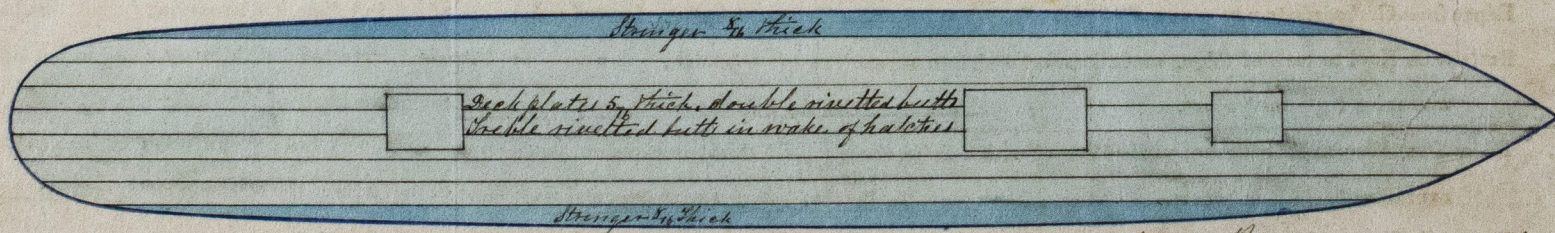
The present state of the Windlass is Good Capstan 2 Good and Rudder Good Pumps 4 Good, with Compression Chamber

Order for Special Survey	DATES of	1st.	On the several parts of the frame, when in place, and before the plating was wrought	May 13 <sup>th</sup> 18
No.	Surveys held	2nd.	On the plating during the progress of rivetting	July 5 <sup>th</sup>
Date	while building	3rd.	When the beams were in and fastened, and before the decks were laid	May 18 <sup>th</sup>
Order for Ordinary Survey	as per	4th.	When the ship was complete, and before the plating was finally coated	October 4 <sup>th</sup>
No.	Section 18.	5th.	After the ship was launched	November 16 <sup>th</sup>
Date 13 <sup>th</sup> May 1864				

State if she has a Spar Deck No Poop No or Forecastle 4 feet high

General Remarks, Middle line keelson 14 1/2 x 10 1/2 Amidships tapering to 8 x 10 1/2 at ends of vessel. Ridge keelson  
bulb Iron b x 7/16" rivetted between two bars of angle Iron 4 1/2 x 3 1/2 in for about 100 feet on each side  
amidships. Quarter deck rises gradually about 5 1/2 inches higher than main deck, and is  
planked over with yellow Pine 2 1/2" fastened with 1/2" bolts, tapped into cast Iron sockets  
rivetted to lower side of Iron deck, and made watertight.

This Vessel is not exactly built in accordance with the Rules. There are three  
plates 1/4" thin on each side in the second strake below the Rudder Trunk, which  
have been stiffened inside on the frames, by two bars of angle Iron 3 x 2 1/2 x 1/2 in  
28 feet long on each side, rivetted back to back, and to reverse bars, and connected  
to knee plate on each side, rivetted to stern post. Upper deck stringer plates, see  
drawing below.



In what manner are the surfaces preserved from oxidation? Inside

Ditto

ditto

Flat of bottom to top of bilge Portland Cemented  
above this twice coated with Red & White Lead mixed.  
Outside four coats of Red & White Lead mixed, topsides coated over  
with black paint

I am of opinion this Vessel should be Classed A

The amount of the Fee £ 5 : : is received by me, R. L. Linton

Dec 11/15 Special £ 10 : 10 :

Certificate (if required) £ 5 : 5 :

Committee's Minute 9<sup>th</sup> December 1864

Character assigned B

Same of opinion the hull of this vessel  
is in light of the Rules, as recommended,  
and has to suggest that she be marked  
in Register Book "Deck of Iron" & be  
"left Belfast and Liverpool to get machinery  
& cargo out" &c.  
Dec 10/15