

IRON SHIPS.

No. 3681 Survey held at Dundee Date, First Survey 14 May Last Survey 15 Dec 1870

On the Screw Steamer "VIRGO" Master _____

Tonnage under Deck	817.65	ONE, OR TWO DECKED VESSELS.	THREE DECKED VESSELS.	Built at <u>Dundee</u>
to of Spar Deck, or Awning Deck.		Half moulded breadth ... <u>15.042</u>	Half Moulded Breadth ...	When built <u>1870</u> Launched <u>8-11-70</u>
to of Poop, or Raised Or. Dk.	<u>127.96</u>	Depth from upper part of Keel to top of Upper Deck Beams (or as per Rule, Section 11) ... <u>18.480</u>	Total Depth if three or more Decks ...	By whom built <u>Goulay Brothers & Co</u>
Ditto of Houses on Deck ...	<u>15.90</u>	Girth of Half Midship Frame (as per Rule) ... <u>29.208</u>	Total Girth of Half Midship Frame ...	Owners <u>General A. S. & Co</u>
Ditto of Forecastle	<u>45.91</u>	1st Number ... <u>62.730</u>	3rd Number ...	Port belonging to <u>London</u>
Gross Tonnage	<u>1007.42</u>	Length ... <u>249</u>	Length ...	Destined Voyage _____
Crew Space, as per Rule	<u>48.74</u>	2nd Number ... <u>15.619</u>	4th Number ...	If Surveyed while Building, Afloat, or in Dry Dock _____
Register Tonnage, as per Rule	<u>573.52</u>	Depths to Length. <u>14.79</u>	Breadths to Length ... <u>8.28</u>	

Length on deck as per Rule, 249 Feet. Inches. Moulded Breadth, 30 Feet. Inches. Depths from top of Floors to Upper and Main Deck Beams, as per Rule ... 16 Feet. Inches. Power of Engines, 260 Horse. N^o. of Decks, Two N^o. of Tiers of Beams Two

Dimensions of Ship per Register, length, breadth, depth	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	16ths in Ship.	16ths required per Rule.
Keel, if bar iron, depth and thickness	<u>1 1/2 x 3</u>	<u>9 x 2 1/2</u>						
Do. if centre through plate, depth and thickness								
Stem, if bar iron, moulding and thickness	<u>1 1/2 x 3</u>	<u>8 x 2 1/2</u>						
Stern-post do. do. do.	<u>wide & sketch</u>	<u>8 x 5</u>						
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>23</u>							
Frames, size of Angle Iron, for 1/2 length amidships	<u>4" x 3"</u>	<u>7/16</u>	<u>4</u>	<u>3</u>	<u>7/16</u>			
Do. for 1/4 at each end	<u>4" x 3"</u>	<u>5/8</u>	<u>4</u>	<u>3</u>	<u>5/8</u>			
Reversed Frames, size of Angle Iron	<u>3" x 3"</u>	<u>7/16</u>	<u>3</u>	<u>3</u>	<u>7/16</u>			
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	<u>1 1/2"</u>	<u>1 1/2"</u>	<u>1 1/2</u>	<u>1 1/2</u>	<u>1 1/2</u>			
Do. at the ends		<u>7/16</u>	<u>1 1/2</u>	<u>1 1/2</u>	<u>7/16</u>			
Do. do. do. at Bilge Keelson	<u>8 1/2"</u>	<u>1 1/2</u>	<u>1 1/2</u>	<u>1 1/2</u>	<u>1 1/2</u>			
Do. height extended at the Bilges	<u>2 x mid depth</u>							
Beams, Three Decked, Spar, or Awning Decked (No.) single or double Angle Iron, Plate or Tee Bulb Iron								
Single or double Angle Iron on Upper edge								
Average space								
Beams, Upper Middle Deck (No. 46) single, or double Angle Iron, Plate or Tee Bulb Iron	<u>1 1/2"</u>	<u>7/16</u>	<u>1 1/2</u>	<u>1 1/2</u>	<u>7/16</u>			
Single or double Angle Iron, on Upper Edge	<u>3 x 2 1/2"</u>	<u>3/8</u>	<u>3</u>	<u>2 1/2</u>	<u>3/8</u>			
Average space	<u>2 1/4</u>							
Beams, Lower Deck or Orlop (No. 31) single, or double Angle Iron, Plate or Tee Bulb Iron	<u>3.10</u>	<u>7/16</u>	<u>3.10</u>	<u>7/16</u>	<u>7/16</u>			
Single or double Angle Iron on Upper Edge	<u>3</u>	<u>5/8</u>	<u>3</u>	<u>2 1/2</u>	<u>3/8</u>			
Average space	<u>3.10</u>							
Keelson Centre line, single or double plate, or Intercoastal, size of Plates	<u>2 1/2"</u>	<u>9/16</u>	<u>2 1/2</u>	<u>9/16</u>	<u>9/16</u>			
Do. Bulb Plate to Intercoastal Keelson	<u>1 1/2"</u>	<u>1/2</u>	<u>1 1/2</u>	<u>1 1/2</u>	<u>1 1/2</u>			
Do. Size of Angle Irons	<u>5"</u>	<u>3 1/2</u>	<u>5</u>	<u>3 1/2</u>	<u>3 1/2</u>			
Do. Side Intercoastal Keelson, size of Plates	<u>5"</u>	<u>9/16</u>	<u>5</u>	<u>3 1/2</u>	<u>9/16</u>			
Do. Angle Irons on tops of Floors	<u>5"</u>	<u>3 1/2</u>	<u>5</u>	<u>3 1/2</u>	<u>3 1/2</u>			
Do. Bilge Keelson, Bulb Iron	<u>1 1/2"</u>	<u>1/2</u>	<u>1 1/2</u>	<u>1 1/2</u>	<u>1 1/2</u>			
Do. do. Angle Irons	<u>5"</u>	<u>3 1/2</u>	<u>5</u>	<u>3 1/2</u>	<u>3 1/2</u>			
Do. Side Stringers (No. one) size of Angle Irons	<u>5"</u>	<u>3 1/2</u>	<u>5</u>	<u>3 1/2</u>	<u>3 1/2</u>			

Transoms, material plate iron or, if none, in what manner compensated for.

Knight-heads none Hawse Timbers none

Windlass Harfield's patent Pall Bitt none

The Frames extend in one length from Center line to Main deck & 1st deck

The Reverse Angle Irons on the floors extend from the middle line to lower part of Poop & Awning Deck

On all the Frames and to Main deck Stringer on alternate frames above that except 29 in 1st deck space which are all continuous to deck stringer

Keelsons. Are the various lengths of Plates and Angle Irons properly connected? well connected And are their butts properly shifted? well shifted

Plates, Garboard, double or single Riveted to Keel, double or single Riveted at upper edge, with Rivets (3/4 in.) diameter, averaging (3 1/4 ins.) from centre to centre.

Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (3/4 in.) diameter, averaging (3 1/4 ins.) from centre to centre.

Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to Three strakes (3/4) thick, treble, double or single Riveted; with Rivets (3/4 in.) diameter averaging (3 3/4 ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? on inside plates

Do. Edges from bilge to sheerstrake, worked carvel with a lining piece (1/2) thick, or clencher, double or single riveted; with rivets (3/4 in.) diameter, averaging (3 1/4 ins.) from centre to centre.

Do. Edges of Sheerstrake, double or single Riveted. At upper edge Single to Bulwark At lower edge double Chain

Butts from Bilge to Planksheers, worked Carvel with Butt Straps (1/2) thick, double or single Riveted; with Rivets (5/8 in.) diameter, averaging (3 3/4 ins.) from centre to centre. Breadth of laps in double Riveting (4 1/2) Breadth of laps in single Riveting (4)

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

Planksheer, how secured to the plating of the sides, { Explain by Sketch, } screw pointed bolts & nuts to beams and plain bolts horizontally

Waterway " " planksheer and to the Beams, { if necessary. }

Beams of the various Decks, how secured to the sides? Brackets riveted to beams No. of Breasthooks, 5 Crutches, 3

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

Manufacturer's name or trade mark, Clydes & Beams Messrs Robert & Co plates Palmer & Jarrow For Head & Co & Northpool

We certify that the above is a correct description of the several particulars therein given.

Builder's Signature, Goulay Brothers Surveyor's Signature, Thomas Alexander

IRON 447-0344

Workmanship. Are the butts of plating planed or otherwise fitted? planed 8539 Iron
 Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? lay close
 Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? solid pieces
 Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? Conform fairly and are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? well countersunk & punched per rule
 Are there any rivets which either break into or have been put through the seams or butts of the plating? in a few cases at Butts

Her Masts, Bowsprit, Yards, &c., are in _____ condition, and sufficient in size and length. If they are of Iron or Steel give the 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

Fore Mast Lx 70 ft by 18" dia 13 1/2" at top in 2 Segs 3/8" x 5/16" platy double riveted laps & double triple riv Butts
 Main Mast Lx 64 1/2 ft by 17" dia 10" at top in 2 Segs 3/8" x 5/16" platy double riveted laps & double triple riv Butts

Number for equipment		Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test as per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
SAILS.		CABLES, &c.										
N ^o 1	Fore Sails,	240	1 1/2	40-10-0-0	270	17 3/4	Bowers	3	18. 6. 18	19. 8. 3. 0	18. 0. 0	19. 0. 0
	Fore Top Sails,	Type Public Test R Russell					(State Machine where Tested, and name of Superintendent).		18. 2. 20	19. 13. 0. 11 1/2	18. 0. 0	19. 0. 0
	Fore Topmast Stay Sails	Hempen Stream Cable	15 1/16		15 1/16	90 fathoms	Type - R Russell		4. 0. 0		15. 1. 6	16. 14. 0. 0
	Main Sails,	Hawser	10		10	each	Stream		21. 0. 0	21. 12. 2. 0		
	Main Top Sails,	Towlines	10		10		Stream with		4. 2. 0	22. 0. 0. 0		
	and other in all	Warp	180		180		Kedges		8. 3. 4		8. 0. 0	
		All of G ^d quality.							4. 2. 8		4. 0. 0	

Her Standing and Running Rigging Good sufficient in size and _____ in quality. She has Four Long Boats and 2 x 24. 9 & 2 of 22 1/2 ft

The present state of the Windlass is Good 2 Capstans 1 5th Munch and Rudder Good Pumps 4 deck & 4 dingy of 18 ft

Engine Room Skylights.—How constructed? 21" plate combined with 10" wood How secured in ordinary weather? erected in top of Bridge House deck

What arrangements are there for deadlights in such for bad weather? at such heights as are customary & tarpaulings

Coal Bunker Openings.—How constructed? flush deck Castings How are lids secured? _____ How high above deck? flush

Scuppers, &c.—What arrangements are there beyond the scuppers on deck, for clearing upper deck of water, in case of a sea coming on board? fine pure large ports between front of poop & top Gallant forecastle

Cargo Hatchways.—How formed? 4 1/2" iron plate combined with Bulb Lugs State size 11 ft 4" x 8 ft & 11 ft 4" by 7 ft

If of extraordinary size, state how framed and secured? ordinary size

What arrangement for shifting beams? None

Hatches, themselves, whether strong and efficient? efficient Main Hatchways.—State size as above

Order for Special Survey No.	DATES of	1st.	2nd.	3rd.	4th.	5th.
258	30-3-90	On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the progress 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
		May & June	July August & Sept ^r	put up with framing	October	9 11 16 18 19 22 23 24 29 13 5 7 10 13 15

General Remarks, This vessel is round sterned with full poop rounded at corners & plated outside with 5/16 plates Beams 5 x 3 1/2 x 9 1/16 A Waterways Red Pine 10 x 3 1/2 Decks GP 5 1/2 x 3 Has also a Bridge House deck same outline as poop enclosing Engine & Boiler runways Copter other Central range of deck Houses
 Has full Top Gallant forecastle 5/16 plated, Beams 5 x 3 1/2 x 9 1/16 A Stringer plate 2 1/2 x 7 1/2
 Waterways Teak 10 x 3 1/2 Deck GP 4 1/2 x 3
 Length of Poop to aft ft Stern post = 74 1/2 ft Bridge deck ext = 69 ft 3 1/2 ft Fore deck 61 1/2 ft in center
 Colling plates 12 x 1/2 have been applied in each Bilge for 11 1/2 ft in length secured to double angle irons 4 x 4 x 1/2 fastened thro skin plating
 Builders submit and section tracing Secretary reply 4/4/70 stipulates plates to be made 12/16" for 3/5" also vertical A.F. on floors for keelsons to be carried down to depth of floors as shown in section dotted
 2/4/70 Builders submit plan of Rudder desired Secretary reply 8/4/70 proposal disapproved except as regards the band above water on the principle proposed
 28/4/70 Builders apply to be allowed to dispense with one out of the three strakes of Bilge plates required to have Butt straps table riveted & 1/16 thickness than plates & Secretary reply 4/5/70 affirms the rule as stipulated
 25/5/70 Builders submit a plan showing Compensation for L.D. Stinger in way of Coal Bunkers & 5th Space &c Secretary reply 28/5/70 "Committee will not object to proposal provided it be carried out satisfactorily"

In what manner are the surfaces preserved from oxidation? Inside 3 Coats Red Lead & other Colors Outside 4 Coats Red Lead & outside of Iron

I am of opinion this Vessel should be Classed 100 A Bottom Cemented out to mid Bilge & 2 Black Varnish

The amount of the Entry Fee £ 5 : - : - is received by me, Thomas Alexander

Travelling Expenses Special 95 9/3 £ 47 : 19 : -

(if any). Dec 1900 Certificate £ 52 : 19 : -

Committee's Minute 20th Dec 18 90

Character assigned 100 A

This vessel steamer has been built under Special Survey in accordance with the rules, and meets the rules previously submitted and appears eligible for 100 A class as recommended above.