

IRON SHIPS.

8153

3638 Survey held at Dundee Date 20th July Recd 22/1/90
 on the Steamer Jose A. Moreno Master G. Tod 1890
 Tonnage upper tonnage deck 456.21 Built at Dundee When built 1890 Launched 30/5/90
 Ditto of 2nd deck 31.20 2nd deck 25.62 By whom Goulay Brothers & Co Owners A Balfour
 Ditto of engine room 5 frames 187.81 Belonging to Liverpool Destined Voyage Valparaiso
 Total Register tonnage 344.55
 Gross Tonnage 535.36
 Surveyed while Building, Afloat, or in Dry Dock Building & afloat

Length aloft	Feet. Inches.	Extreme Breadth	Feet. Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet. Inches.	Horse.	N ^o . of Decks
186		28	1 1/4	13	8 1/2	95	11
(Dimensions of Ship per Register, length 185 breadth 28.15 depth 13.65)							
Keel, if bar iron, depth and thickness	Inches in Ship.			Inches required per Rule for 4 th conditions Scale, 500		Plates in Garboard Strakes, breadth and thickness	
if plate iron, breadth and thickness	6	2 3/4		6 3/4	2 1/2	26 1/2	37 3/8
Stem, if bar iron, moulding and thickness	6	2 3/4		6 3/4	2 1/2		42
if plate iron, breadth and thickness							
Stern-post, if bar iron, moulding and thickness	as per Sketch			6 3/4	3		
if plate iron, breadth and thickness							
Distance of Frames from moulding edge to moulding edge, all fore and aft	23			23			
Frames, Size of Angle Iron, single or double	3 1/2	3	7/16	3 1/2	2 1/4	7/16	
Reversed Iron, No. at every frame	3	2 1/2	3/8	2 3/4	2 1/2	3/8	
Floors, depth and thickness of Floor Plate at	26 1/2		3/8	17		7/16	
Ditto ditto at Bilge Keelson	22						
Size of Reversed Angle Iron, and No. one at top of Floor Plate	3	2 1/2	3/8	2 3/4	2 1/2	3/8	
Beams, Deck (No. 28 including of Bulkheads)	7		7/16	7		7/16	
Plate, or Bulb Iron	2 1/2	2 1/2	5/16	2 1/2	2 1/2	5/16	
average space between	3.10			3.10			
Hold, or Lower Deck (No. 5 Bulb)	7		7/16	7		7/16	
Cabin sole, double Angle, Tee, Plate, or Bulb Iron	4	3	3/8	4	3	3/8	
double or single Angle Iron	2 1/2	2 1/2	5/16	2 1/2	2 1/2	5/16	
average space between							
Paddle, sided and moulded, thickness of Plate							
Engine							
Keelson, single or double plate, box, or intercostal	12 1/4		9/16	11 3/4		9/16	
Size of Plates (No. 7, 8, 9, 10, 11, 12)	4	3	3/8	4	3	3/8	
Size of Angle Irons							
Side, single or double, plate, box, or intercostal							
Bilge (No. one) at each Bilge, single, or double, plate, or box Bulb							
Transoms, material, or, if none, in what manner compensated for.							
Knight-heads, and Hawse Timbers							
The Frames extend in one length from	Center line to Stringer Plate rivetted through plates with (3/16 in.) rivets, about () apart C & C						
The reverse angle irons on the floors	extend in one length across the middle line from Center line to 6 inches above Stringer at 1/2 depth						
on the frames	19 in. Engine, from alternate frames at 1/2 depth						
Keelson, how are the various lengths of plates or angle irons connected?	Double butt straps equal to plates over Butts of plates & 2 1/2" from inner edge						
Plates, Garboard, double or single rivetted to keel	double Chain at upper edge, with rivets (1 in.) diameter, averaging (5 in.) apart. C & C						
Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted	with rivets (3/4 in.) diameter, averaging (3 1/4 ins.) apart. C & C						
Butts from Keel to turn of bilge, worked carvel with butt straps	(equal to plates) thick, double Chain rivetted; with rivets (5/4 in.) diameter, averaging (3 1/4 ins.) apart. C & C						
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 (3 1/4 in.) apart. C & C						
Edges of Sheerstrake, double or single rivetted?	At upper edge equal to double Chain rivetted; At lower edge double Chain rivetted						
Butts from bilge to planksheers, worked carvel with butt straps	(equal to plates) thick, double Chain rivetted; with rivets (3/4 in.) diameter, averaging (3 1/4 ins.) apart. Breadth of laps in double rivetting (4 1/2) Breadth of laps in single rivetting (3) C & C						
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted?	double Chain						
Planksheer, how secured to the plating of the sides	Explain by sketch } fastened vertically with Gal. bolts & nuts						
waterway	if necessary. } Horizontally with clenched bolts from outside of Sheer strake						
Deck Beams, how secured to the side?	Bracket ends on Beams. deep & 5 rivets thro' rib also stringer plate rivetted to Beams & stringer plate with AT & Sheer strake						
or Lower Deck ditto	Bulb Beams 5 th same as deck Beams						

Paddle " " No. of breasthooks 4 crutches 2

What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.?
 Manufacturer's name or trade mark Angles & Bulb, Palmers best, narrow & Monong Iron Co
 We certify that the above is a correct description of the several particulars therein given.
 Builder's Signature Goulay Brothers & Co Surveyor's Signature Thomas Alexander

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Workmanship. Are the lands or laps of the clenwork in all cases in breadth at least five and a half times the diameter of rivetted edges and butts, and at least three and a quarter times the diameter of the rivets where single rivetting is admitted? Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? Do the holes for rivetting plate to frames, butt straps, or plate to plate, &c., conform well to each other? and are the rivet holes 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 Good 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 rivetting, quality of Materials, and if stamped with Maker's name.)

Main Mast is of Pitch Pine 5.8 1/2 x Diam 18 1/2 at Head
Fore Mast of Ash 59.6 x 5 1/2 at Deck 18" at Cap 13 1/2 in 2 segs 3/8 x 5/16 plates double rivetted
Laps & Butts a few of latter triple

Lloyds Type Public Test R Bunnell sup

No.	She has SAILS.	CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	No.	Weight. Ex. Stock.	Test as per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
1	Fore Sails,	Chain <u>Lloyds Type</u> no 3801 I 30-3-70	210	1 3/16 stud	25.10.0.0	210 x 1 3/16	25.10.0.0	8579 Lloyds Type 17 A	12	1.20	14.6.1.0	2.0	
2	Fore Top Sails,	<u>Anchor</u>	70	5/8 stud				Bowers 30-3-70	+	2.3.10			13.18.9.0
2	Fore Topmast Stay Sails	Hempen Stream Cable	90	8 1/2		90 x 8 1/2		8578 17 A 30-3-70	+	3.0.4			12.4.0.7
1	Main Sails, fore & aft	Hawser	90	6 1/2		90 x 6 1/2		Stream with Stock	+	10.1.7	12.6.2.7	10.0.2.3	12.4.0.0
1	Main Top Sails,	Towlines	90	5 1/2					+	1.3.8			
	and others in all 16 pieces	Warp	180	4				Kedges		5.0.17		5.0.0	
		All of <u>Good</u> quality.								2.2.15		2.2.9	
										1.1.7		1.1.0	

Her Standing and Running Rigging Mixed Hemp sufficient in size and Good in quality.
She has Four Boats Long Boat and Two of 22 ft one 23 & one 18 ft
The present state of the Windlass is Good Capstan one and Rudder Good Pumps 3 deck
Harfield's patent & 2 Steam Winches

Order for Special Survey No. 256 DATES of Surveys held 1st. On the several parts of the frame, when in place, and before the plating was wrought February & March
Date 25-12-69 while building 2nd. On the plating during the progress of rivetting April & May
Order for Ordinary Survey No. 45 as per 3rd. When the beams were in and fastened, and before the decks were laid Being put up with fore
Date 25-12-69 Section 18. 4th. When the ship was complete, and before the plating was finally coated May
No. 45 in Builders Yard 5th. After the ship was launched 3. 4. 9. 13. 17 20. 23. 25 June 4. 8. 13. 15. 20 July
State if she has a Spar Deck 2 Deck 30 feet 3 Forecastle 29 ft
Break 1/2 after p'sp

General Remarks,

This vessel No 45 in Builders Yard has been built with a view to Class A. Complete plans being submitted by Builders & proposals dated 13/1/70 for approval with alterations they wished. By Secretarys letter of 17/1/70 enclosing Surveyors remarks and stating Committee approval thereof the following alterations in the plans were suggested & have now been carried out:
"Kelson way of Ballast Tank 8/16 and 9/16 before & abaft
Floor plates allowed to be made 3/8" on Act of Depth & 3/8" Wash plates fitted as proper
Sheer strake increased to 30" deep
Trenses doubled in bottom for 1/2 length as per rule
In addition to the above the following alterations have been since made & applied in the part of the Owners & Builders
the 3/8" strakes of shell plating under sheer strake have been made 7/16
and a stringer of double A.F. 4 1/2 x 3 x 3/8 rivetted to a 12 x 3/8 Clump plate between
Reverse A.F. has been continued forward to stem in line & connected to Cabin
sole Beam Stringer - Garboard Strakes have been made 5/8 instead of 7/16
Has Belge fins or Balling plates applied for 69 ft along each Belge forward of
double A.F. 3 1/2 x 3 x 3/8 rivetted thro shell plating & with 8 1/2 x 5/16 plate below
the A.F.

In what manner are the surfaces preserved from oxidation? Inside in bottom ord to Balge Portland Cement and 3 Coats Oxide
Ditto ditto Outside in bottom 4 Coats Red Lead 2 of Oxide 1 Red & White Lead mixed
also 4 in all 1 oxide 2 of Grey & 1 of Black & one of Yellow

I am of opinion this Vessel should be Classed A1 or 100 A1
The amount of the Fee 5 : 0 : 0 is received by me, Thomas Alexander
for 500 Tons Special 25 : 0 : 0
Certificate (if required) £30 0 0

Committee's Minute 22 July 1870

Character assigned A1

Owner's Boiler spaces with Cook House - included in range of deck House shown in plan at 5/16 Deck plating above Iron plate Embay which are checked all round the whole range about 5/16 in length of which about 35 ft is Curved deck

This vessel under the conditions of Circular No 248 appears to be Classed A1
Lloyds Register
22 July 1870
Foundation