

Requisition No 284

IRON SHIPS.

3562

Reel 18-4-64

No. 4756 Survey held at Port Glasgow Date 14th April 1864
 on the Paddle Steaming "Tien Cheng" Master Padgham
 Tonnage Gross 198.12 Engine Room 67.81 Register 130.31 Built at Port Glasgow
 When Built 1863 By whom built Robert Duncan & Co Owners China & Japan Coast & River Steam Navigation Company (Limited)
 Launched 18th Sept 1863 Port belonging to London Destined Voyage Clyde to China
 If Surveyed Afloat or in Dry Dock While building

Length aloft	Fect. Inches.	Extreme Breadth	Fect. Inches.	Depth from top of Upper Deck Beam to top of Floor	Fect. Inches.	Power of Engines	Horse No.
.....	<u>130</u>	<u>22</u>	<u>10</u>	<u>90 Two Engines</u>
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	Inches in Ship. <u>20</u>		Inches required per Rule. <u>✓</u>		Stem, <u>✓</u> bar iron, moulding and thickness <u>5 1/2 x 1 1/2</u>		
Floors, Size of Angle Iron, and No. <u>Single</u> at bottom of Floor Plate	Inches. In Ship. <u>2 1/2</u>	Inches. In Ship. <u>2 1/2</u>	16ths In Ship. <u>48</u>	Inches. required per Rule. <u>2 1/2</u>	Inches. required per Rule. <u>2 1/2</u>	16ths required per Rule. <u>48</u>	Stern-post, <u>✓</u> bar iron, moulding and thickness <u>5 1/2 x 2</u>
„ depth and thickness of Floor Plate at mid line	<u>10 1/2</u>	<u>78</u>	<u>10 1/2</u>	<u>78</u>	Keel, <u>✓</u> bar iron, depth and thickness <u>5 1/2 x 1 1/2</u>		
„ depth and thickness of Floor Plate at Bilge Keelson	<u>5</u>	<u>78</u>	<u>✓</u>	<u>78</u>	„ if plate iron, breadth and thickness		
„ Size of Reversed Angle Iron, and No. <u>Single</u> at top of Floor Plate	<u>2 1/4</u>	<u>2 1/4</u>	<u>48</u>	<u>2 1/4</u>	<u>2 1/4</u>	<u>48</u>	Garboard Plates, thickness .. <u>7/8</u>
Frames, Size of Angle Iron, single or double	<u>2 1/2</u>	<u>2 1/2</u>	<u>48</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>48</u>	From Garboard to upper part of Bilge .. <u>48</u>
„ Reversed Angle Iron, <u>alternately</u> in every frame	<u>2 1/4</u>	<u>2 1/4</u>	<u>48</u>	<u>2 1/4</u>	<u>2 1/4</u>	<u>48</u>	From upper part of Bilge to Sheerstrakes .. <u>58</u>
Beams, Deck (No. <u>Double</u> Angle Iron or Bulb Iron with double Angle Iron on top)	<u>4</u>	<u>3</u>	<u>48</u>	<u>4</u>	<u>3</u>	<u>48</u>	Sheerstrakes <u>double</u> about <u>13</u> feet amidships <u>12</u> x <u>48</u> <u>5</u> <u>8</u> <u>78</u> <u>48</u>
„ „ depth & thickness of plate amidships	<u>4</u>	<u>48</u>	<u>5 1/2</u>	<u>48</u>	Breadth & thickness of Butt Straps to outside plating <u>8</u> <u>78</u> <u>48</u>		
„ „ double or single Angle Iron, on lower edge	<u>20 inches</u>		<u>✓</u>	Planksheers .. <u>Material</u>			
„ „ average space between	<u>20 inches</u>		<u>✓</u>	Gunwale Plate or Stringer on ends of Up. Dk Beams <u>2 1/4</u> <u>78</u> <u>10 1/2</u> <u>48</u>			
„ „ if wood (No.) sided & moulded	<u>20 inches</u>		<u>✓</u>	Angle Iron on ditto .. <u>3 x 3 x</u> <u>48</u> <u>2 1/2</u> <u>2 1/2</u> <u>48</u>			
„ Hold, or Lower Deck (No.) double Angle Iron or Bulb Iron with double Angle Iron on top	<u>20 inches</u>		<u>✓</u>	Waterway .. <u>Red Pine</u> <u>5 1/2</u> <u>78</u> <u>10 1/2</u> <u>48</u>			
„ „ depth & thickness of plate amidships	<u>20 inches</u>		<u>✓</u>	Deck .. <u>Yellow Pine</u> <u>2 1/2</u> <u>78</u> <u>10 1/2</u> <u>48</u>			
„ „ double or single Angle Iron, on lower edge	<u>20 inches</u>		<u>✓</u>	Ceiling in Hold .. <u>Red Pine</u> <u>2</u> <u>78</u> <u>10 1/2</u> <u>48</u>			
„ „ average space between	<u>20 inches</u>		<u>✓</u>	Ceiling betwixt Decks .. <u>8</u> <u>78</u> <u>10 1/2</u> <u>48</u>			
„ „ if wood (No.) sided & moulded	<u>20 inches</u>		<u>✓</u>	Beam Clamps .. <u>8</u> <u>78</u> <u>10 1/2</u> <u>48</u>			
„ Paddle, wood, sided and moulded or if Iron, size of Plate	<u>20 inches</u>		<u>✓</u>	„ Shelf .. <u>8</u> <u>78</u> <u>10 1/2</u> <u>48</u>			
„ Engine <u>Cast Iron Plate</u> .. <u>8</u> <u>78</u> <u>10 1/2</u> <u>48</u>	<u>20 inches</u>		<u>✓</u>	„ Stringer Plates on ends of Hold or Lower Dk Beams			
Keelson, wood, sided & moulded, iron, size of plate, if Box, give sketch & dimensions	<u>12</u>	<u>48</u>	<u>5 1/2</u>	<u>48</u>	Ceiling between Decks .. <u>8</u> <u>78</u> <u>10 1/2</u> <u>48</u>		
„ Side or Bilge .. <u>4</u> <u>3</u> <u>48</u> <u>2 1/2</u> <u>2 1/2</u> <u>48</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>48</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>48</u>	Stringer or Tie Plates outside Hatchways .. <u>8</u> <u>78</u> <u>10 1/2</u> <u>48</u>
„ Number .. <u>Three</u> .. <u>2 1/2</u> <u>2 1/2</u> <u>48</u> <u>2 1/2</u> <u>2 1/2</u> <u>48</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>48</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>48</u>	Deck Beam Clamps .. <u>8</u> <u>78</u> <u>10 1/2</u> <u>48</u>
							„ „ Shelf .. <u>8</u> <u>78</u> <u>10 1/2</u> <u>48</u>
							Stringers in Hold .. <u>8</u> <u>78</u> <u>10 1/2</u> <u>48</u>
							Deck, Lower .. <u>8</u> <u>78</u> <u>10 1/2</u> <u>48</u>
							Deck, Upper, how fastened to Beams <u>By screw bolts from above</u>

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

Knight-heads „ Iron Bulkheads, No. Four Thickness of 7/8 48

Hawse Timbers „ Iron are they free from defects? Yes „ how secured to the sides of the ship Between double frames

The Frames or Ribs extend in one length from Keel to Gunwale rivetted through plates with (5/8 in.) rivets, about (6 inches) apart.

The reverse angle irons on the floors extend in one length across the middle line from Bilge to Bilge on every frame.

„ „ „ on the frames „ „ „ from Bilge to Gunwale on alternate frames in Engine Room only.

Keelson, how are the various lengths of plates or angle irons connected? By Angle Iron Butt Straps

Plates, Garboard, double or single rivetted to keel & at upper edge, with rivets (7/8 x 5/8 ins.) diameter averaging (3 1/2 in.) from centre to centre of rivet.

„ Edges from Garboards to upper part of bilge, worked carvel with a lining piece (1/2 in.) thick, or clencher, double or single rivetted; rivets (5/8 in.) diameter, averaging (2 1/2 ins.) from centre to centre of rivets.

„ Butts from Keel to turn of bilge, worked carvel with a lining piece (1/2) thick, double or single rivetted; rivets (5/8 in.) diameter, averaging (2 1/2 ins.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? No

„ Edges from bilge to planksheer, worked carvel with a lining piece (1/2) thick, double or single rivetted; rivets (5/8 in.) diameter, averaging (2 1/2 in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? No

„ Butts from bilge to planksheers, worked carvel with a lining piece (1/2) thick, or clencher, double or single rivetted; rivets (5/8 in.) diameter averaging (2 1/2 ins.) from centre to centre of rivets. Breadth of laps in double rivetting (3 1/2) Breadth of laps in single rivetting (2 1/4)

Planksheer, how secured to the plating of the sides { Explain by sketch, }

Waterway „ „ planksheer and to the Beams { if necessary. }

Side trussing „ „ breadth and thickness of plates „ how secured?

Deck trussing By plates all forward aft on each side of Hatchways? 8 x 1/2 inch and diagonal plates where practicable

Deck Beams, how secured to the side? By plate knees

Hold or Lower Deck „ „

Paddle „ „

No. of breasthooks Two crutches „ how are pointers compensated?

What description of iron is used for the angle iron and plate iron in the vessel? Warrington Iron Co

Builder's Signature Robert Duncan & Co

3549. Iron

Workmanship. Are the lands or laps of the clenchwork in all cases in breadth at least five times the diameter of the rivets in double rivetted edges and butts, and at least three times the diameter of the rivets where single rivetting is admitted? Yes

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

Do the fillings between the ribs and plates fill in solid with single pieces, or are they in short lengths of various thicknesses? Solid

Do the holes for rivetting plate to frames, lining pieces, or plate to plate, &c., conform well to each other? Yes and are the rivet holes well and sufficiently countersunk in the outer plate? Yes

Are there any rivets which either break into or have been put through the seams or butts of the plating? A few

Her Masts, Yards, &c., are in Good condition, and sufficient in size and length.

She has SAILS.		CABLES, &c.		ANCHORS, and their weights.	
N ^o .			Fathoms. Inches.	N ^o .	Weight.
	Fore Sails,	Chain <u>Admiralty test</u> ^{long coils} 13" 15" ..	180 7/8	Bower, <u>Admiralty test</u> 8 tons	1 7.1-
<u>one</u>	Fore Top Sails,	Hempen Stream Cable	90 5 1/2	Stream, <u>Common</u>	1 7.1-
<u>two</u>	Fore Topmast Stay Sails,	Hawser	90 3 1/2	Kedge, <u>Common</u>	1 2.1-
<u>two</u>	Main Sails,	Towlines			
<u>one</u>	Main Top Sails,	Warp			
	and <u>Spare sails</u>	All of <u>Good</u> quality.			

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

She has one Long Boat and one other

The present state of the Windlass is Good Capstan and Rudder Good Pumps Four lead Good

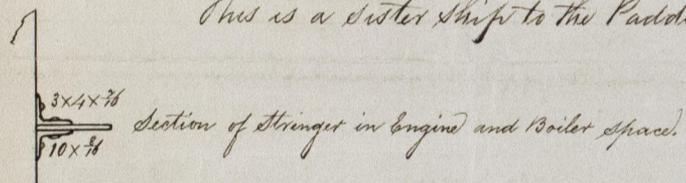
General Remarks, Statement and Date of Repairs, extent of corrosion (if any) both internally and externally, and condition of rivets.

- DATES of Surveys held while building, as per Section 17.
- 1st. On the several parts of the frame, when in place, and before the plating was wrought
 - 2nd. On the plating during the progress of rivetting
 - 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
 - 5th. After the ship was launched

Specially surveyed while building from 22nd April 1863 to 14th April 1864 in all details. From 13th Oct 1863 to 14th April 1864 detained fitting engines.

This vessel has been built under special survey as per order N^o 284. She has a raised quarter deck three feet high. Her deck beams are all of single angle iron fitted to every frame which is 20 inches apart, see Committee's letter dated 5th May 1863 relating thereto.

This is a sister ship to the Paddle steamer "Vulcan"



In what manner are the surfaces preserved from oxidation? By three coats of Zinc paint inside and outside and bottom coated with green paint

I am of opinion this Vessel should be classed A 1

The amount of the Fee£ 2 : " : " is received by me,

Special£ 9 : 18 : "

Certificate (if required)£ " : " : "

Committee's Minute 19th April 1864

Character assigned A 1 for 9 Years

[Large handwritten signature]

This vessel appears eligible for the Class recommended then

18th April 1864 J.M.L.

