IRON SHIP.

(Received at London Office, Rec'd 20th Mar. 188

No. 6442 Survey held at Glasgow Date, First Survey 27 June 1883 Last Survey 19th March 1884

On the Iron Screw Steamer "Ningchow" (Two masts, schooner rig)

TONNAGE under Tonnage Deck	2546·11
Ditto of Third, Spar, or Awning Deck. Hatchways	8·10
Ditto of Poop, or Raised Qr. Dk.	
Ditto of Houses on Deck	87·37
Ditto of Forecastle	66·16
Gross Tonnage	2707·74
Less Crew Space	105·79
	2601·95
Less Engine Room	866·48
Register Tonnage as cut on Beam	1735·47

~~ONE, OR TWO DECKED~~, THREE DECKED VESSEL, ~~SPAR, OR AWNING DECKED VESSEL.~~

	Feet.
Half Breadth (moulded)	20·75
Depth from upper part of Keel to top of Upper Deck Beams	27·50
Girth of Half Midship Frame (as per Rule)	42·56
1st Number	90·81
1st Number, if a 3-Decked Vessel .. deduct 7 feet	7·0
	83·81
Length	348·5
2nd Number	29207
Proportions— Breadths to Length	8·4
Depths to Length—Upper Deck to Keel	12·67
Main Deck ditto	17·2

Master J. Wallace

Built at Glasgow

When built 1884 Launched 26 Feb.

By whom built D. & W. Henderson & Co.

Owners China Shippers Mutual Steam Navigation Co. (Ld.)

Residence 3 Billiter Avenue London E.C.

Port belonging to London

Destined Voyage China

If Surveyed while Building, Afloat, or in Dry Dock.

While building and afloat.

Official Number

PLANS CASE

LENGTH on deck as per Rule	Feet. 348	Inches. 6	BREADTH— Moulded	Feet. 41	Inches. 6	DEPTH top of Floors to Upper Deck Beams / Do. do. Main Deck Beams	Feet. 23 / 16	Inches. 8 / 5	Power of Engines	Horse. 480	No. of Decks with flat laid 2 / No. of Tiers of Beams 3

Dimensions of Ship per Register, length, 350 breadth, 41·8 depth, 23·5 Moulded depth 26'-2".

	Inches in Ship.			Inches per Rule. +as approved		
KEEL, depth and thickness see flat keel	—					
STEM, moulding and thickness	11 × 2¾			11 × 2¾		
STERN-POST for Rudder do. do.	12¼ × 5¾			11 × 6½		
" " for Propeller	12¼ × 5¾			11 × 6½		
Distance of Frames from moulding edge to moulding edge, all fore and aft	24			24		
				(Class 100 A)		
	Inches. In Ship.	Inches. In Ship.	16ths. In Ship	Inches per Rule +as approved	Inches per Rule	16ths per Rule
FRAMES, Angle Iron, for ⅗ length amidships	5	3½	8	5	3½	8
Do. for ⅕ at each end	5	3½	7	5	3½	7
REVERSED FRAMES, Angle Iron	3½	3½	8	3½	3½	8
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	Solid floors 7/16 thick with manholes at every alternate frame + 7/16 thick at every frame under the engines as per appd. sketch					
" thickness at the ends of vessel						
" depth at ¾ the half-bdth. as per Rule						
" height extended at the Bilges						
BEAMS, Upper, ~~Spar, or Awning Deck~~ ~~Single or d'ble Ang. Iron~~, Plate ~~or Tee~~ Bulb Iron		9	9		9	9
~~Single or~~ double Angle Iron on Upper edge	3½	3	7	3½	3	7
Average space		48			48	
BEAMS, Main, or Middle Deck ~~Single or d'ble Ang. Iron~~, Plate ~~or Tee~~ Bulb Iron		10	10		10	10
~~Single, or~~ double Angle Iron, on Upper Edge	3½	3½	7	3½	3½	7
Average space		48			48	
BEAMS, Lower Deck— ~~Single or d'ble Ang. Iron~~, Plate ~~or Tee Bulb~~ Iron		11	11		11	11
~~Single or~~ double Angle Iron on Upper Edge + on lower ditto	5	4	9	5	4	9
Average space	10 frame spaces			ditto.		
BEAMS, Hold, or Orlop— Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	—	—	—	—	—	—
Single or double Angle Iron on Upper Edge	—	—	—	—	—	—
Average space	—	—	—	—	—	—
KEELSONS Centre line, single ~~or double~~ plate, ~~box, or Intercostal, Plates~~		42	11		42	11
" Rider Plate angle iron at upper edge / inner bottom	—	42	7/9	—	42	7/9
" ~~Bulb Plate to Intercostal Keelson~~	5	4	9	5	4	9
" Angle Irons at lower edge	6½	4	9	6½	4	9
" ~~Double Angle Iron Side Keelson~~	—	—	—	—	—	—
" Side ~~Intercostal~~ Plate Girders, 3 No.			7	3 No.		7
" do. Angle Irons at upper edge	3½	3½	7	3½	3½	7
" Attached to outside plating with angle iron	3½	3½	8	3½	3½	8
BILGE Angle Irons at margin plate	3½	3½	8	3½	3½	8
" ~~do. Bulb Iron~~ margin plate			8			8
" ~~do. Intercostal plates riveted to plating for — length~~	—	—	—	—	—	—
BILGE STRINGER Angle Irons	6½	4	9	6½	4	9
Intercostal plates riveted to plating for all length			9			9
~~SIDE STRINGER~~ Angle Irons to outside plating	3½ × 3½ × 8			3½	3½	8

	Inches. In Ship.	16ths. In Ship.	Inches. per Rule + as approved	16ths. per Rule
Flat Keel Plates, breadth and thickness	36	16	36	16
~~do. do. Doubling for half length~~	—	12	—	12
PLATES in Garboard Strakes, br'dth & thickness	41	12	36	12
" From Garboard to ~~upper~~ lower part of Bilges		10 + 11		10 + 11
" ~~Of d'bling at Bilge, or increased thickness, and length applied~~ to outside	—	—	—	—
" From ~~up.~~ Lr. prt of Bilge to lr. edge of Sh'rstrake		11 + 12		11 + 12
" Main Sheerstrake, breadth and thickness to outside strake	—	13		13
" Of d'blng at Sh'stk. & lng. applied all fore & aft	34	9	34	9
" ~~From M'n. to Upr. or Spar Dk. Sh'rstrake~~	—	—	—	—
" ~~Up. or Spar Dk Sh'rstrake, brdth & thickn'ss~~	—	—	—	—
Butt Straps to outside plating, breadth & thickness	19 × 14/16	to 10 × 9/16	19 × 14/16	to 9¾ × 9/16
Lengths of Plating	14 feet		10 feet	
Shifts of Plating, and Stringers	2 frame spaces			
Gunwale Plate on ends of ~~Awning, Spar, or~~ Upper Deck Beams, breadth and thickness	50	11	50	11
Angle Iron on ditto	4 × 4	× 9	4 × 4	× 9
~~Tie Plates fore and aft, outside Hatchways~~ complete				
~~Diagonal Tie Plates on Beams No. of Pairs~~ iron deck	7 to 6			7 to 6
Flat of Up., ~~Spar, or Awning~~ Dk.* Teak		3 ins.		3 ins.
How fastened to ~~Beams~~ deck	Galvanised iron bolts 4 ins.			
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	50	9	50	9
Is the Stringer Plate attached to the outside plating?	Yes			
Angle Irons on ditto, No. 2	4 × 4	× 9	4 × 4	× 9
~~Tie Plates, outside Hatchways~~ complete				
~~Diagonal Tie Plates on Beams, No. of pairs~~ iron deck	7 to 6	—	—	7 to 6
~~Flat of Middle Deck* do. do.~~	—	—	—	—
~~How fastened to Beams~~	—	—	—	—
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	44	9	44	9
Is the Stringer Plate attached to the outside plating?	Yes			
Angle Irons on ditto, No. 4 outside / inside	4 × 4	× 9	4 × 4	× 9
Stringer or Tie Plates, outside Hatchways	3½ × 3½	× 7	3½ × 3½	× 7
Flat of Lower Deck* Face plate		7		7
Ceiling betwixt Decks, thickness and material	pine sparring			
" in hold do. do.	2½ pine		2½	
Main piece of Rudder, diameter at head	9"		8½	
do. at heel	4"		4	
Can the Rudder be unshipped afloat? Yes				
Bulkheads No. 7 No. per Rule 6				
" Thickness of 7 to 6/16				
" Height up all to upper deck				
" How secured to sides of ship double frames				
" Size of Vertical Angle Irons 3½ × 3½ × 8/16 and distance apart 30 ins.				
" Are the outside Plates doubled two spaces of Frames in length? Yes				

* If Iron Deck, state if whole or part, and if wood deck is laid thereon.

State clearly where plating is of alternate thicknesses—as distinguished from diminished thickness at ends of vessel.

The **FRAMES** extend in one length from Keel to gunwale Riveted through plates with 7/8 in. Rivets, about 7" apart.

The **REVERSED ANGLE IRONS** on floors and frames extend from middle line to bilge & thence to upper deck and to middle decks alternately in the engine and boiler space all are extended to the upper deck and are doubled to the upper part of the bilges.

KEELSONS. Are the various lengths of Plates and Angle Irons properly connected? Yes And butts properly shifted? Yes.

PLATING. Garboard, double riveted to flat Keel, with rivets 1 in. diameter, averaging 4 ins. from centre to centre.

" **Edges of Garboards** and to upper part of Bilge, worked clencher, double riveted; with rivets 7/8 in. diameter, averaging 3¾ ins. from centre to centre.

" **Butts from Keel to turn of Bilge,** worked carvel, ~~double~~ treble riveted for ½ length; with rivets 7/8 in. diameter averaging 3½ ins. from centre to centre.

" **Butts** of all Strakes ~~at Bilge~~ for half length, treble riveted with Butt Straps 1/16 in. thicker than the plates they connect.

" **Edges from Bilge to Main Sheerstrake,** worked clencher, double ~~or single~~ riveted; with rivets 7/8 in. diameter, averaging 3¾ ins. from cr. to cr.

" **Butts from Bilge to Main Sheerstrake,** worked carvel, ~~double~~ treble riveted for ½ length; with rivets 7/8 in. diameter, averaging 3½ 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 ½ length amidships. ~~Butts of Upper or Spar Sheerstrake, treble riveted — length amidships.~~

" **Butts of Main Stringer Plate,** treble riveted for ½ length amidships. **Butts of Upper ~~or Spar~~ Stringer Plate,** treble riveted for ½ length.

" Breadth of laps of plating in double riveting 5¼ + 6 ins. ~~Breadth of laps of plating in single riveting.~~

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double ~~or single~~ Riveted? — No. of Breasthooks, 5 Crutches, deep floors

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

Manufacturer's name or trade mark, Outside plating, Moors & Bowerfield; frames, beams, S. Stockton; deck plating, Consett; inner bottom & bulkheads, Clyde.

The above is a correct description.

Builder's Signature, David & W. Henderson & Co. Surveyor's Signature, G. Stanley

Surveyor to Lloyd's Register of British and Foreign Shipping.

(Form No. 1 for Iron Ships—4000—16/11/82.)

ROBERT EDMUND TAYLOR & SON Commercial and General Steam Printers, 19, Old Street, Goswell Road, E.C., London.

GL5149-0090
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Workmanship. Are the butts of plating planed or otherwise fitted? Planed 6472 lds

Do the edges of the carvel work and of the butts fay 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? A few

Masts, Bowsprit, Yards, &c., are new in good condition, and sufficient in size and length. *If of Iron or Steel give 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 This vessel has two masts of steel with square yards of steel on the fore mast; these have been constructed in accordance with the accompanying approved tracing of the scantlings and arrangements, and the steel used has been tested at the manufacturers (Mossend) in accordance with the Committee's circulars.

NUMBER for EQUIPMENT 34812

SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate. Tons.	Inches per Rule. fms	ins	Machine where Tested & Suprntdt.
N°.	Chain ..... (State Machine where Tested, Date, or No. of Certificate, & Name of Superintendant.)	150	2	100.8+72	300	2	No. 574
Fore Sails,		150	2	100.8+72			No. 580
Fore Top Sails,	Iron Stream Chain	300	Tested at Glasgow, sgd. W. Fraser.				
	or Steel Wire ..	90½	1 3/16	38+25 3/8	90	1 3/16	No. 581.
Fore Topmast Stay Sails,	or Hempen Strm Cable	Certificates of test of steel wire produced.					
	Towline, Hemp.	120 fms	5	steel wire	120	4	steel wire
Main Sails,	or Steel Wire ..	120 fms	5"	do.	90	10"	hemp
	Hawser	120 fms	4"	do.	90	8½	do.
Main Top Sails, and	Warp	4 coils, 90 fms.		3" do.			
	quality good	90 fms. of 8"; 90 of 6"; 90 of 5" hemp &c. &c.					

Are entirely spare

ANCHORS.	N°.	Weight. Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	Machine where Tested & Suprntdt.
Bower Anchors (State Machine where Tested, Date, or No. of Certificate, & Name of Superintendant.)	1	38.2.4	34.17.3.7	38	No. 16996
		Tested at Netherton sgd. D. G. Lewis.			
	2	38.1.25	34.16.1.0	38	No. 16995
	3	32.2.13	30.11.3.14	32¼	No. 10553
		Tested at Glasgow, sgd. W. Fraser			
Stream Anchor	4	11.3.10	13.15.0.0	11½	No. 10554
Kedge ...	5	6.0.20	8.8.3.0	5¾	No. 10555
2nd Kedge ...	6	2.3.3	5.5.0.0	2¾	No. 10556

Standing and Running Rigging galvanised iron wire sufficient in size and good in quality. She has 4 ~~Long~~ Life Boats and 2 others

The Windlass is Hartfield's Capstan Hartfield's and Rudder good Pumps good

Engine Room Skylights.—How constructed? teak hood How secured in ordinary weather? glass bull's eyes

What arrangements for deadlights in bad weather? tarpaulins

Coal Bunker Openings.—How constructed? sq. hatchways (4 ft.) How are lids secured? tarpaulins Height above deck? 18 inches.

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? 13 wash ports, 5 scuppers and 4 mooring pipes on each side.

Cargo Hatchways.—How formed? Iron plate coamings.

State size **Main Hatch** 20 ft. × 13 ft. Forehatch 12 ft. × 9 ft. Quarterhatches 16' × 13' and 12' × 9'

If of extraordinary size, state how framed and secured? One iron web plate beam in the main hatchway

What arrangement for shifting beams? and one shifting beam in No. 3. (after) hatchway

Hatches, If strong and efficient? Yes, solid 3 ms.

Reference should be made to any correspondence connected with the case.

Order for Special Survey No. 1834

Date 9th Mar. 1883

Order for Ordinary Survey No.

Date

No. 263 in builder's yard.

DATES of Surveys held while building as per Section 18.

1st. On the several parts of the frame, when in place, and before the plating was wrought } 1883, 27 June; July 5, 9, 11, 25, 31; Aug. 3, 6, 11, 17, 22, 24, 29;

2nd. On the plating during the process of riveting } Sept. 3, 10, 17, 19; Oct. 3, 15, 22, 29, 31; Nov. 7, 8, 10, 23, 26,

3rd. When the beams were in and fastened, and before the decks were laid.... } 28; Dec. 4, 6, 11, 17, 20, 27; 1884, Jan. 7, 9, 11, 15, 21, 31; Feb.

4th. When the ship was complete, and before the plating was finally coated or cemented.. } 4, 8, 13, 15, 20, 21, 22, 25, 26; Mar. 4, 7, 10, 12, 14, 17, & 19.

5th. After the ship was launched and equipped

State dates of letters respecting this case

General Remarks (State quality of workmanship, &c.)

This a sister vessel to the SS. "Copack" (No. 262) by the same builders (see Glasgow Report No. 6435); she has been built in accordance with the rules and with the accompanying approved sketches (5 in No.). See also Secretary's letters dated 20th Feb., 24th Feb., 12th Mar., 19th April, 11th Aug., and 2d October, 1883. The workmanship and material are good throughout. The water ballast tanks, the capacities of which are stated on the accompanying form, have all been tested as required by the rules; the fore peak bulkhead tested with hose and the after peak has been filled with water and both found watertight. The flat of the shaft tunnel and the tunnel recess have also been tested with water, 5 inches deep on the tunnel floor, and found watertight. This test was carried out at the Owner's request.

~~State if one, two, or~~ three decked vessel, ~~or if spar, or awning decked~~; and the lengths of poop, bridge, forecastle ~~or raised quarter deck~~. (~~If~~ double bottom, ~~state~~ particulars on separate form.) 12 ft. 64 ft. 42 ft.

How are the surfaces preserved from oxidation? Inside Cement and paint Outside paint.

I am of opinion this Vessel should be Classed ✠ 100 A.1. Two iron decks, three tiers of beams.

The amount of the Entry Fee ..... £ 5 : 0 : 0 is received by me, 18/3/ 1884

Special ..... £ 90 : 1 : 0

(to be sent as per margin). Certificate ... 0 : 0 : 0

(Travelling Expenses, if any, £).

J. Stanbury.

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRIDAY 21 MARCH 1884 18

Character assigned ✠ 100 A 1

Surveyors are requested not to write on or below the space for Committee's Minute.

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