8 3 ... 4131

~~IRON OR~~ STEEL SHIP.

(Received at London O... WED 15 OCT 18..)

No. 413 Survey held at Aberdeen Date of writing Report Oct 13th 1890 Port of Aberdeen Date, First Survey Jan. 21, 1890 Last Survey Oct. 13th 1890

On the S. S. "Inyoni"

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

PLANS CASE

TONNAGE under Tonnage Deck	1865.52
Do. between Tonnage Dk. and 3rd, 4th, Spar or Awning Dk.	
Total under Upper Dk.	
Do. of Poop	
Do. of Raised Qr. Dk. or Break	
Do. of Bridge House	
Do. of Houses on Deck	68.88
Do. of excess of Hatchways	10.55
Do. of Forecastle	
Gross Tonnage	1944.95
Less Crew Space	57.08
(Allow.ce Act 1889)	15.8
Less Engine Room	622.38
Register Tonnage as cut on Beam	1249.69

	Feet.
Half Breadth (Moulded)	18.
Depth from upper part of Keel to top of Upper Deck Beams	19.25
Girth of Half Midship Frame (as per Rule)	33.
1st Number	70.25
1st Number if a 3-Decked Vessel .. deduct 7 feet	
Length	273.5
2nd Number	19213.37
Proportions— Breadths to Length	7.6
Depths to Length—Upper Deck to Keel	10.3
Main Deck ditto	14.2

Rig	Brigantine
Master	C. Stuart
Year of appointment (1) As master in service of owner of present vessel: 18	1881
(2) As master of this vessel 18	1890
Built at	Aberdeen
When built	1890 Launched Sep. 16. 1890.
By whom built	Messrs Hall Russell & co.
Owners	J. T. Rennie & Son
Managers (If desired to be entered in Reg. Book.)	Do
Residence	48 Marischal St. Aberdeen
Port belonging to	Aberdeen
Destined Voyage	London
If Surveyed while Building, Afloat, or in Dry Dock.	While building & afloat

LENGTH on deck as per Rule	Feet. 273	Inches. 6	**BREADTH**— Moulded	Feet. 36	Inches. -	**DEPTH** top of Floors to Upper Deck Beams / Do. do. Main Deck Beams	Feet. 24 / 17	Inches. 8½ / 5½	Power of Engines	Horse. 250	No. of Decks with flat laid 2 / No. of Tiers of Beams 3

Dimensions of Ship per Register, length, 275.6 breadth, 36.35 depth, 24.45 per OK

	Inches in Ship.			Inches per Rule.		
~~**KEEL**, depth and thickness~~						
STEM, moulding and thickness	9½ × 2½			9 × 2½		
STERN-POST for Rudder do. do. / " " for Propeller	9 × 5			9 × 5		
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 or 20ths in Ship	Inches per Rule	Inches per Rule	16ths or 20ths per Rule
FRAMES, Angle Iron, for ⅗ length amidships	4½	3	7	4½	3	7
Do. for ⅕ at each end	"	"	6	"	"	6
REVERSED FRAMES, Angle Iron	3	3	7	3	3	7
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	21½		9	21½		9
" thickness at the ends of vessel	(E. r B. 10 r 11)		7			7
" depth at ¾ the half-bdth. as per Rule	11			10¾		
" height extended at the Bilges	43			43		
BEAMS, ~~Upper~~, Spar, ~~or Awning~~ Deck / Single ~~or d'ble Ang. Iron, Plate or Tee~~ Bulb ~~Iron~~	7		7	7		7
~~Single or~~ double Angle ~~Iron~~ on Upper edge double	3	3	6	3	3	6
Average space	48			48		
BEAMS, Main, ~~or Middle~~ **Deck** / Single ~~or d'ble~~ Ang. ~~Iron, Plate or Tee Bulb Iron~~	6½	3	9	6½	3	9
~~Single, or double Angle Iron, on Upper Edge~~						
Average space	24			24		
~~**BEAMS, Lower Deck**~~ / ~~Single or d'ble Ang. Iron, Plate or Tee Bulb Iron~~						
~~Single or double Angle Iron on Upper Edge~~						
~~Average space~~						
BEAMS, Hold, ~~or Orlop~~ / Single ~~or d'ble Ang. Iron, Plate or Tee~~ Bulb ~~Iron~~	9½		9	9½		9
~~Single or~~ double Angle ~~Iron on~~ Upper Edge	4	4	8	4	4	8
Average space	Every 8th frame			Every 8th frame		
KEELSONS Centre line, single ~~or double~~ plate, ~~box, or Intercostal, Plates~~	18		13	18		13
" Rider Plate	12		13	12		13
" ~~Bulb Plate to Intercostal Keelson~~						
" Angle ~~Irons~~	5½	4	9	5½	4	9
" Double Angle ~~Iron~~ Side Keelson	5½	4	9	5½	4	9
" Side Intercostal Plate			8			8
" do. Angle ~~Irons~~ bulb ½ length	8½		8	8½		8
" Attached to outside plating with angle ~~iron~~	3	3	7	3	3	7
BILGE Angle ~~Irons~~	5½	4	9	5½	4	9
" do. Bulb ~~Iron~~ ⅔rd length	8½		8	8½		8
" do. ~~Intercostal plates riveted~~ to ~~plating for~~ length						
BILGE STRINGER Angle ~~Irons~~	5½	4	9	5½	4	9
Intercostal plates riveted to plating for ½ length			8			8
~~**SIDE STRINGER** Angle Irons~~						

Moulded depth 18. 3

	Inches. In Ship.	16ths or 20ths In Ship.	Inches per Rule	16ths or 20ths per Rule
Flat Keel Plates, breadth and thickness	46½	16	36	16
PLATES in Garboard Strakes, br'dth & thickness	46	12	36	12
" From Garboard to upper part of Bilges		10 r 11		10 r 11
" ~~Of d'bling at Bilge, or increased thickness, and length applied~~	Intercostal on bilge Strs.			
" From up. prt of Bilge to lr. edge of Sh'rstrake		10 r 11		10 r 11
" Main Sheerstrake, breadth and thickness	46	13	40	13
" Of ~~d'bling at~~ Spar Sh'stk. & lng. applied ¾ length Increased 2/20 or an additional 1/20 for scuttles				
" From M'n. to Upr. or Spar Dk. Sh'rstrake		9		9
" ~~Up. or~~ Spar Dk Sh'rstrake, brdth & thickn'ss	40	15	40	15
Butt Straps to outside plating, breadth & thickness	10-19½	8-18	9¾. 19	8-18
Lengths of Plating	Six frame spaces			
Shifts of Plating, and Stringers	Two	"		
Gunwale Plate on ends of ~~Awning~~, Spar, ~~or Upper~~ Deck Beams, breadth and thickness	48	9	48	9
Angle ~~Iron~~ on ditto	4 × 4 ×	9	4 × 4 ×	9
Tie Plates fore and aft, outside Hatchways	13	9	13	9
~~Diagonal Tie Plates on Beams No. of~~ Pairs				
Flat of ~~Up.~~, Spar, ~~or Awning~~ Dk.* Y. P.	3½		3½	
How fastened to Beams	9/16 bolts & nuts			
Stringer Plate on ends of Main ~~or Middle~~ Deck Beams, breadth and thickness	43	10	40	10
Is the Stringer Plate attached to the outside plating?	Yes			
Angle ~~Irons~~ on ditto, No. 2	4 × 4 × 9/20		4 × 4 ×	9
Tie Plates, outside Hatchways				
~~Diagonal Tie Plates on Beams, No.~~ of pairs				
Flat of ~~Middle~~ main Deck* do. do. Steel		6.7.8		6.7.8
How fastened to Beams	riveted			
Stringer Plates on ends of ~~Lower Deck~~, Hold ~~or Orlop~~ Beams	34	9	34	9
Is the Stringer Plate attached to the outside plating?	Yes			
Angle ~~Irons~~ on ditto, No. 4 in machy. space	5½ × 4 × 9/20 & 4 × 4 × 9/20			
~~Stringer or Tie Plates, outside Hatchways~~				
~~Flat of Lower~~ Deck*				
Ceiling betwixt Decks, thickness and material	Red pine 1½		1½	
" in hold do. do.		2½	2½	
Main piece of Rudder, diameter at head	7		7	
do. at heel	3¾		3½	

Can the Rudder be unshipped afloat? Yes

Bulkheads No. 6 No. per Rule 4

" Thickness of 6/16

" Height up One to hold beam & five to Spar dk

" How secured to sides of ship between dbl frames

" Size of Vertical Angle Irons 4½ × 3 × 7/20 and distance apart 30 ins.

" Are the outside Plates doubled two spaces of Frames in length? Yes

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

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

FRAMES extend in one length from Keel to gunwale Riveted through plates with 7/8 in. Rivets, about 6¼ apart.

REVERSED ANGLE IRONS on floors and frames extend from middle line to Main deck and to Spar deck alternately & to spar dk on every frame in way of bridge

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

PLATING. Garboard, double riveted to 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 3⅜ ins. from centre to centre.

" **Butts from Keel to turn of Bilge,** worked carvel, ~~double~~ treble riveted; with rivets 7/8 in. diameter averaging 3⅜ ins. from centre to centre.

" **Butts** of all Strakes ~~at Bilge~~ for ½ length, treble riveted with Butt Straps 2/20 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 3⅜ ins. from cr. to cr.

" **Butts from Bilge to Main Sheerstrake,** worked carvel, ~~double~~ treble riveted; with rivets 7/8 in. diameter, averaging 3⅜ 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 ½ 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 5½, 6¼ Breadth of laps of plating in single riveting /

State whether Rivets are of Iron or Steel.

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? treb & dbl. No. of Breasthooks, 4 Crutches, deep floors & transoms

What description of ~~Iron~~ Steel is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Good, Siemens Martin

Manufacturer's name or trade mark, Consett, Newton, Mossend.

The above is a correct description

Builder's Signature, Hall Russell & Co

Surveyor's Signature, G. L. Hindmarsh

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

(Form No. 1 for Iron or Steel.)

ABN10-0028

ROBERT EDMUND TAYLOR & SON, ... Printers, 19, Old Street, ...

Are the butts of the plating planed. 4131 Abn

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? Very few

Masts, Bowsprit, Yards, &c., are Steel in good condition, and sufficient in size and length. *If of Iron or Steel give Scantlings of Plating, Angle Iron, &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 For auxiliary purposes, as per enclosed sketch

Number for Equipment 23613

Letter for do. R

Sails	CABLES, &c.	Number of Certificate	Fathoms	Inches	Test per Certificate. Tons.	Fathoms & Inches per Rule	Machine where Tested and Superintendent, also Name of Chain Maker	ANCHORS. Number of Certificate (*State if any and which Anchors are Stockless.*)	Weight. Ex. Stock. c. qr. lb	Test per Certificate T. c. q. lb	W'ght req'd per Rule. cwts	Machine where Tested and Superintendent, also Name of Anchor Maker
No. complete suit		6027	270	$1\frac{12}{16}$	$77\frac{1}{2}$, $55\frac{1}{2}$	270 $1\frac{12}{16}$	Low Walker, Robt. Burrell, Jno. Abbotrea	11964	31.0.0	29.7.2.0	30	Low Walker, Robt. Burrell, Jno. Abbotrea
Fore Sails, Fore Top Sails,		6049						11896	28.2.14	27.11.3.14	30	
Fore Topmast Stay Sails,	Iron Stream Chain or Steel Wire		75	$1\frac{1}{16}$	$30\frac{2}{5}$ $20\frac{3}{10}$	75 $1\frac{1}{16}$		11680	27.0.0	26.7.2.0	$25\frac{1}{2}$	
Main Sails,	or Hempen Str'm Cable		90	$3\frac{1}{2}$	Steel wire	90 $3\frac{1}{2}$		Collective Weights	86.2.14		$85\frac{1}{2}$	
Main Top Sails, and quality	TOWLINE—Hemp or Steel Wire		120	10		90 9		Stream 11965	10.1.0	12.4.1.14	$9\frac{1}{2}$	
	Hawser		90	$4\frac{1}{2}$ 6		90 $4\frac{1}{2}$		Kedge 11966	5.0.0	7.7.2.0	$4\frac{3}{4}$	
	Warp		75	5 4				2nd Kedge 11967	3.0.0	5.10.0.0	$2\frac{1}{2}$	

Standing and Running Rigging Wire & Manila sufficient in size and good in quality. She has two Life Boats and two others

The Windlass is Harfields Capstan — and Rudder good Pumps good

Engine Room Skylights.—How constructed? teak on iron How secured in ordinary weather? Bull's eyes

What arrangements for deadlights in bad weather? Slide rods and pins

Coal Bunker Openings.—How constructed? Iron comings How are lids secured? battens & cleats Height above deck? 12"

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? Open rail

Cargo Hatchways.—How formed? Iron comings **Hatches,** If strong and efficient? 3" Solid

State size **Main Hatch** 24 ft x 14 ft Forehatch 18 ft x 12 ft. Quarterhatch 21.10 x 12 ft. No III 9.10 x 5.7

If of extraordinary size, state how framed and secured.... Ordinary size. Web plates & fore & afters What arrangement for shifting beams? Web plates

Order for Special Survey No. 630 Date Oct. 10. 1889

Order for Ordinary Survey No. Date —

No. 257 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: 1890:— Jan. 21. 27. Feb. 6. 11. 14. 18. 20. 24. 27
- 2nd. On the plating during the process of riveting: Mar. 4. 10. 13. 20. 24. 27. Apr. 2. 5. 7. 11. 16. 21. 24. 28
- 3rd. When the beams were in and fastened, and before the decks were laid....: May 1. 7. 10. 15. 21. 23. 24. June 2. 6. 10. 13. 17. 21. 26. July 1. 4.
- 4th. When the ship was complete, and before the plating was finally coated or cemented..: 9. 10. 15. 18. 24. 30. Aug. 1. 6. 20. 22. 26. 29. Sep. 2. 4. 8. 10. 12
- 5th. After the ship was launched and equipped: Sep. 16. 18. 19. 24. 26. Oct. 1. 3. 7. 9. 11. 13.

Total No. of Visits 67

State dates of letters respecting this case Sept. 1889. Oct. 15. 28. Nov. 29.

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

This is a Spar deck vessel built of steel under Special Survey in accordance with the Rules and the approved tracings.

The material and workmanship are good.

The ballast tanks and peaks have been tested as required by the rules with satisfactory result.

The midship and longitudinal plans were forwarded on the 29th of September and there are now enclosed the plan of masts, midship tank, pumping plan, and one forging certificate.

The vessel is also fitted with the electric light on the double wire system the wires are protected with wrought iron tubing.

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

Particulars for Record in R.B.—Length of Poop — ft., R.Q.D. — ft., Bridge Dk. 58 ft., F'castle — ft.; No. of Dks. (excluding spar, awn., &c.) One

Material of dks. Steel & Y. pine If spar, awn. dk., &c. Steel main dk. Material of spar, awn. dk., &c. Y. pine; No. of tiers of beams (with and without dks. laid) 3;

Official No. 98344 Signal Letters . If double bottom, state particulars on separate form.

I am of opinion this Vessel should be Classed ✠ 100 A1 Spar deck. Steel

The amount of the Entry Fee ......£ 4 : — : — is received by me, G. L. H.

Special ......£ 72 : 3 : Oct. 14 1890

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

(Travelling Expenses, if any. £).

G. L. Hindmarsh

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

TUES 21 OCT 1890

Committee's Minute

It is submitted that this vessel is eligible to be classed 100 A1 Steel Spar Deck as recommended

Character assigned 100 A1 Steel Spar Dk

+ Lmb 10/95 1 Dk Stl Spar Dk 3 Ts B

Larch 7 K

Certificate to be sent to

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

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