

No. 4954 Survey held at Greenock Date 3rd August 1865
on the Composite Ship Ariel Master John Reay
Tonnage under tonnage deck 852.87 Built at Greenock When built 1865 Launched 27th June 1865
Ditto of poop or spar deck By whom built Robert Steele & Co. Owners Phillips, Shaw & Lowther
Total tonnage 852.87 Port belonging to London Destined Voyage Glyde to Liverpool & China
Is Surveyed while Building, Afloat, or in Dry Dock While Building

Length as per section 39 ..	193 70	Feet.	Inches.	Extreme Breadth Outside	33 70	Feet.	Inches.	Depth of Hold	21	Feet.	Inches.	Number of Decks	Five	
Length of Keel	189			IN SHIP. Moulded.	REQUIRED PER RULE. Sided.			(Depth from limber-strakes to under side of lower deck beam	13 feet 2 inches					
Scantlings of Timber.				Middle.	Ends.	Middle.	Ends.	Outside Plank.		INCHES.		Dimensions of Ship per Register,		
TIMBER AND SPACE	18				18			In Ship.	Required Rule.	length 197 70 breadth 33 70 depth 21				
Floors	Plates	22 1/2 x 76			22 70			Garboard Strakes	9					
1st Foothooks	Doubled for half the	4 1/2 x 3 1/2 x 76			4 1/2 x 3 x 76			Garboard to Bilge ..	5 1/2	5 1/2				
2nd Ditto	length of ship amid.							Bilge Planks	5 1/2	5 1/2				
3rd Ditto	Ship and fair parts.							Bilge to Wales	5 1/2	5 1/2				
Top Timbers	length the remainder							Wales	5 1/2	5 1/2				
Deck } N°	Average Space	4 feet 5 inches	8 x 5 x 46		8 x 46			Topsides	5 to 4 1/2	4 1/2				
Beams }								Sheer Strakes	4 1/2	4 1/2				
Deck Beams, length amidships	32 feet							Plank Sheers	4	4				
Hold } N°	Average Space	4 feet 5 inches	9 x 6 x 46		9 x 46			Water Upper Deck	14 1/2	10 x 8 1/2				
Beams }								Ways Lower Deck						
Hold Beams, length amidships	33 feet							Ditto, faying surface against Timbers ..	10	8 1/2				
Keel	Heel plates	15 15 15			15			Upper Deck	4	3 1/2				
Scarp of Ditto	Heel plates	7 feet 16 16			6 feet 3 inches									
Keelsons	plates	16 16												
Scarp of Ditto														
Size of Bolts in Fastenings, distinguishing whether Copper, Yellow Metal, or Iron; also of Treenails.														
Heel-Knee, & Deadw'd abaft	1 3/8	1 3/8		Transoms and throats of Hooks				Hold Beam						
Scarp of Keel, N° 8	1 1/8	1 1/8		Arms of Hooks				Bolts in						
Keelson Bolts through Keel	1 1/2	1 1/2		Thro' Bilge & Limber Strakes	7/8	7/8								
at each Floor				Thickstuff over Double Floors				Deck Beam						
Bolts thro' Heels of Timbers				Butt End Bolts	7/8	7/8	12/16	Bolts in						
against Deadwood				Pintles of the Rudder	3/4	3/4	3 1/2							

Timbering.—The Space between the Floor Timbers and Lower Foothooks is 1 Inches. The Space between the Top-Timbers is 1 Inches.

The Floors consist of Iron plates The First Foothooks of Frames Angle Iron from external from middle line to Gunwale.

The Second Foothooks of Reverse frames to above Hold beams and alternately to Gunwale. The Third Foothooks and Top Timbers of

The Shifts of the First and Second Foothooks are not less than 1 N. B. When less than prescribed by the Rule, state how many.

The rest of the Shifts of the Frame are 1

The Frame is 1 squared from First Foothook Heads upwards, and 1 free from sap, and from thence downwards, the frame is 1

The 1 Frames are 1 bolted together to the Gunwale. N. B. If not, state how bolted.

The Butts of the Timbers are 1 close together; their thickness not less than 1 of the entire moulding at that place.

The Frame is 1 chocked with 1 Butt at each end of the chock. The Main piece of Rudder is British Oak of Windlass is Iron patent.

The Keel is American Rock Elm The Main Keelson is Iron plate & Angle Iron and 1 free from all defects. Yes

The Stem, and Stern Post of East India Teak The Transoms, Knight Heads, Hawse Timbers,

and Aprons of East India Teak Deadwood, of East India Teak and are 1 free from all defects.

The Deck and Hold Beams of 1 The Breasthooks of Iron The Knees of Iron

Planking Outside.—From the Keel to the Height defined in Note to Table A } the Plank is American Rock Elm

or to the First Foothook Heads }

From the above named Height to the Light Water Mark East India Teak

From the Light Water Mark to the Wales East India Teak

The Wales and Black-strakes are East India Teak The Topsides & Sheer-strakes East India Teak

The Spirketting and Plank-sheers East India Teak The Water-ways { Upper Deck East India Teak

The Decks Yellow Pine State of Good Lower Deck

The Shifts of the Planking are not less than Six Feet Inches. N. B. If less than prescribed by the Rule, state whether general

or partial, and if partial, in what part of the Ship. The Planking is wrought Three between, and without step-buttling.

Planking Inside.—The Limber-strakes and Bilge-strakes are Greenheart

The Ceiling, Lower Hold, and between Decks Greenheart, Red Pine battens Shelf Pieces and Clamps

Hatches fitted under the main hatchway on flat of American Rock Elm

Fastenings.—To Hold Beams Riveted to frames and stringer 2 1/2 x 3/4 inch on top connected to the side by Angle Iron 5 x 4 x 3/8 inch

rivetted to the reverse frames.

Deck Beams Rivetted to frames and stringer 2 1/2 x 3/4 inch & sheerstrakes bolting plate with Angle Iron 5 x 4 x 3/8 inch, and diagonal

and longitudinal tie plates all fore and aft.

Number of Breasthooks Four Pointers Crutches Four

Butt End Bolts are of Yellow in the Bottom. Two Bolts in each Butt End through and 1

Bilge and Limber Strakes bolted through and clenched. Treenails of Yellow Metal How Made 2019

Thickstuff over Double Floors bolted through and clenched. General Quality of Workmanship Very Good

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

Builder's Signature Robert Steele & Co Surveyor's Signature W. B. Reed

Green 295-0131

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

N ^o .	She has SAILS.	CABLES, &c.	Fathoms.	Size.	Tested to as per Certificate.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Tested to as per Certificate.
	Fore Sails,	Chain	300	1 1/2	47 1/2 tons	Bower,	1	25.3.14	25.10.1
	Fore Top Sails,	" Stream	90	8			1	25.2.3	25.3.3
	Fore Topmast Stay Sails,	Hempen Stream Cable ..	75	8			1	22.0.21	22.10.1
	Main Sails,	Hawser	90	7		Stream,	1	8.2.16	10.15.0
	Main Top Sails,	Towlines	90	5 1/2		Kedge,	1	5.0.0	
		Warp	90	4			1	3.0.0	
		All of <u>Good</u> quality.							

Her Standing ^{rigging is wire} and Running Rigging Hemp sufficient in size and Good in quality.

She has One Long Boat and Two others

The present state of the Windlass is Good Capstan Good Rudder Good with patent steering gear Pumps Two lead, Good

Order for Special Survey,

No. 346 Date 7th Decr 1864

DATES of Surveys

held while building,

Order for Ordinary Survey,

No. _____ Date _____

as per Section 35.

1st. When the Frame is completed

2nd. When the Beams are put in, &c.

3rd. { When completed, and before the plank be painted or payed }

Specially surveyed while building from 21st Decr 1864

to 3rd August 1865 in all 5 visits.

General Remarks

This vessel has been built under special survey as per Order N^o 346. Is ship rigged and has a flush deck, with a small house on deck for galley & forward. Is a composite ship iron frames and wood planking; and fastened entirely with Yellow Metal screw bolts and nuts throughout; with the exceptions allowed as per Rule section 46: viz. fastened with galvanized iron for one fifth the depth of Hold below the upper deck. The keel is fastened with 1/2 inch galvanized iron wood screw bolts, as shown in sketch, herewith, 18 inches apart. The frames are doubled in the bottom for one half the length of the ship amidships from the keel upwards to the upper part of the bilges. Has a sheet belting plate at the gunwale 30 inches broad by 1/2 inch thick and another at the turn of the bilges all fore and aft 20 inches broad, the same being connected by double diagonals laid across each other 10 inches broad by 1/2 inch thick and spaced 8 feet apart on a square all fore and aft; has thick garboard strakes, the same being Yellow Metal bolted athwart ship through the keel as shown in sketch; is fitted with sister keelsons and a bulb iron to ditto 8x9 inch with double angle irons to ditto 5x4x3/8 inch. Has longitudinal tie plates fitted on each side of hatchways to each deck, and diagonals very efficiently fitted all fore and aft on upper deck beams; with a substantial iron pillar fitted to every beam to each tier of beams.

The Testing certificates of Bower Anchors are dated 11th January 18th + 30th June 1865, and of stream anchor 30th June 1865 of chain cables 20th + 29th June 1865, and all signed by David Logan, Superintendent, "Lloyd's" Tipton Proving House. Fifteen fathoms of each Bower Chain have been subjected to a strain equal to 5 1/2 tons 5 cwt.

Captain R Maxton, of Messrs Phillips, Shaw, & Lother, informed us that he had been in communication with our Office in London regarding the sizes of chain cables &c. as now supplied.

Masts &c.	Thickness of Plating	Rivetting of Butts	Rivetting of Edges	Angle Irons	Diameter
Fore Mast	8 1/2 x 7/8	Treble	Double	"	30 inches
Main Mast	8 1/2 x 7/8	"	"	"	30 inches
Mizen Mast	8 1/2 x 7/8	"	"	"	28 1/2 inches
Bowsprit	8 1/2 x 7/8	"	"	4x3x7/8	30 inches



Present condition of Caulking of Bottom, New and Good Deck, New and Good and Waterways New and Good

If Sheathed, Doubled, Felted, or Coppered Yellow Metal

When last done July 1865

We are of opinion this Vessel should be Classed 14 A 1.

The Amount of the Fee.....£. 5 : " : " is received by me,

Special£ 42 : 13 : "

X Certificate£ " : " : "

Committee's Minute 18th August 1865

Character assigned 1 for 14 Year

for frame-planked

Exp B S

W.D.



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