

No. 0241 Survey held at Sunderland Date September 19th 1854
 on the Barque "Rachel" Master Mr Peter Kay
 Tonnage Old Built at Sunderland When built 1854 Launched Sept 7th 54
 By whom built Messrs Penhall & Co Owners Messrs J. Brodie & Co
 Port belonging to London Destined Voyage East Indies
 If Surveyed while Building, Afloat, or in Dry Dock While Building

Length aloft	Feet.		Inches.		Extreme Breadth Outside	Feet.		Inches.		Depth of Hold	Feet.		Inches.	
	14	8	0	0		30	4	0	18		4	9	0	9
Scantlings of Timber.														
TIMBER AND SPACE	28 1/2	"	"	30 1/2	"	"	Garboard Strakes	4	4	Limber Strakes	4 3/4	4 1/4		
Floors	13 1/4	13 1/4	11 1/2	13 1/4	13 1/4	11 1/2	Garboard to Bilge	4	4	Bilge Planks	4 1/2	4 1/4		
1st Foothooks	11 1/2	11 1/2	"	11 1/2	11 1/2	"	Bilge Planks	4 1/2	4	Ceiling in Flat	3 1/4	3 1/4		
2nd Ditto	10 1/2	10 1/2	"	10 1/2	10 1/2	"	Bilge to Wales	4	4	Ditto Bilge to Clamp	3 1/4	3 1/4		
3rd Ditto	10	9 1/4	6 1/2	9 1/2	9 1/2	6 1/4	Wales	5 1/4	5	Hold Beam Clamps	1 1/2	1 1/2		
Top Timbers	10	9 1/4	6 1/2	9 1/2	9 1/2	6 1/4	Topsides	4 1/2	4	Deck Beam Ditto	5 1/2	4		
Deck Beams	28	28	28	28	28	28	Sheer Strakes	4 1/2	4	Ceiling 'twixt Decks	2 3/4	2 1/2		
Hold Beams	28	28	28	28	28	28	Plank Sheers	4 1/2	4	Hold Beam Shelves	1 1/2	1 1/2		
Keel	14 1/2	10	"	14 1/2	14 1/2	"	Water-Upper Deck	12 1/2	8	Deck Beam Ditto	5	4 3/4		
Scarphs of Ditto	6	6	6	6	6	6	Water-Lower Deck	"	"					
Keelsons	15 1/2	16	"	15 1/2	15 1/2	"	Ditto, faying surface against Timbers	8	8					
Scarphs of Ditto	4	4	4	4	4	4	Upper Deck	3 1/2	3 1/2					

Heel-Knee, and Deadwood abaft Scarphs of Keel	Copper or Iron		Transoms and throats of Hooks	Copper or Iron		Hold Beam Bolts in	Waterway	Knees	Shelf or Clamp
	Inches in Ship	Inches required per Rule		Inches in Ship	Inches required per Rule				
N° 8	1	1	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
Keelson Bolts through Keel at each Floor	1 1/2	1 1/2	1	1	1	1	1	1	1
Bolts through Heels of Timbers against Deadwood	4/3	4/3	4/3	4/3	4/3	4/3	4/3	4/3	4/3

Timbering.—The Space between the Floor Timbers and Lower Foothooks is 2 Inches. The Space between the Top-Timbers is 1 1/4 Inches.
 The Floors consist of German Oak 9 The First Foothooks of German & English Oak
 The Second Foothooks of English Oak 12 The Third Foothooks and Top Timbers of English Oak 12
 The Shifts of the First and Second Foothooks are not less than 1/4 of breadth N. B. When less than prescribed by the Rule, state how many.
 The rest of the Shifts of the Frame are sufficient
 The Frame is well squared from the First Foothook Heads upwards, and tolerably free from sap, and from thence downwards, the frame is well squared.

The alternate Frames are all bolted together to the Gunwale. N. B. If not, state how bolted.
 The Butts of the Timbers are all close together; their thickness not less than 1/3 of the entire moulding at that place.
 The Frame is cross chocked with square Butt at each end of the chock. The Main piece of Rudder is English Oak
 The Main Keelson is East India Teak and is free from all defects. The Main piece of Windlass is English Oak
 The Stem, and Stern Post, consist of English Oak & Teak 12 The Transoms, Aprons, Knight Heads, and Hawse Timbers of English Oak 12 Deadwood, of American Elm 18 feet and are apparently free from all defects.

The Deck and Hold Beams consist of German Oak 9 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 Elm
 or to the First Foothook Heads
 From the above named Height to the Light Water Mark American Elm
 From the Light Water Mark to the Wales Pitch Pine & German Oak 9
 The Wales and Black-strakes are Pitch Pine & German Oak 9 The Topsides Pitch Pine & German Oak 9
 The Sheer-strakes and Plank-sheers German Oak 9 The Water-ways { Upper Deck Pitch Pine 9 Lower Deck "

The Decks Yellow Pine State of good
 The Shifts of the Planking are not less than 5 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-butting.
Planking Inside.—The Limber-strakes and Bilge-strakes are German Oak 10
 The Ceiling, Lower Hold, and between Decks Pitch Pine & German Oak 9 1/2 Shelf Pieces and Clamps German Oak & Pine

Fastenings.—To Hold Beams Iron Lodging Nuts, 10 pairs of Iron Hanging Nuts Riders and 2 pairs of Iron Hanging Nuts.
 Deck Beams Iron Lodging Nuts, 18 pairs of Iron Hanging Nuts, 11 pairs being wrought as staple standards.
 Number of Breasthooks 4 of Iron Pointers one pair Iron Crutches 2 Iron Transom Nuts 3 pairs Iron
 Butts End Bolts are of Y. Metal in the Bottom, and one Bolt in each Butt End through and clenched.
 Bilge and Limber Strakes are bolted through and clenched. Treenails of English Oak How Made Circular
 Thickstuff over Double Floors are bolted through and clenched. General Quality of Workmanship good

We certify that the above is a correct description of the several particulars therein given
 Builder's Signature Penhall & Co Surveyor's Signature Thos. J. Smey
 2000 Zouche St. London

50933-0249

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.		
A double suit.	Fore Sails,	Chain (certificates made)	270	1 1/2	Bower,	3	28-1-16
	Fore Top Sails,	Hempen Stream Cable	80	8 3/4	Stream,	1	26-2-0
	Fore Topmast Stay Sails,	Hawser chain	60	1			25-2-0
	Main Sails,	Towlines	45	6			
	Main Top Sails,	Warp	45	5	Kedge,	1	2-2-0
and others as usual		All of <u>good</u> quality.					

Her Standing and Running Rigging is Hemp sufficient in size and good in quality.

She has one Long Boat and two others

The present state of the Windlass is new Capstan new Rudder new Pumps 2 of Metal good

General Remarks and Statement and Date of Repairs, if any.

DATES of Surveys held while building, 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 }
	<u>June 17th 1857</u>	<u>July 13th "</u>	<u>August "</u>

The outside planking of this Vessel, including the keels of the lower timbers is fastened with Yellow Metal to the entire exclusion of Iron.

The floor of the upper Deck is fastened with galvanized Iron nails.

General & Davison

Present condition of Caulking of Bottom, good Deck, good and Waterways good
 If Sheathed, Doubled, Felted, or Coppered _____ When last done _____

I am of opinion this Vessel should be Classed First

The Amount of the Fee.....£ 5: " : " is received by me,
Order No 669 Special£ 28: 16: *
 Certificate£ " : " : " * 13/100 Return (over) from Petty Cash 23/10/57

Committee's Minute 25th September 1857

Character assigned 1 for 9 Years

