

IRON SHIPS.

Rec 21/4/73

Survey held at Sunderland

Date, First Survey September 20

Last Survey April 17

1873

In the

Sea Lion

Nordstjernen

Master J. H. Mathiasen

Built at Sunderland

When built 1873

Launched Feb 28/73

By whom built Bartram, Haswell & Co

Owners Horden & Co

Port belonging to Copenhagen

Destined Voyage

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

Under Deck 858.63
Third Spar, 894.26
Poop, or 9.29
Houses
Forecastle
Tonnage 1262.28
Space, 63.44
Register Tonnage, 403.93
cut on Beam
Engine Room 794.91
Register Tonnage, as a Steamer, cut on Beam

ONE OR TWO DECKED, SPAR, OR AWNING DECKED VESSELS.

Half moulded breadth 15.95
Depth from upper part of Keel to top of Upper Deck Beams 8.0
Girth of Half Midship Frame (as per Rule) 30.9

1st Number 64.85
Length 23.4

2nd Number 15.174
Depths to Length Under 13

THREE DECKED VESSELS.

Half Moulded Breadth
Total Depth if three or more Decks
Total Girth of Half Midship Frame

3rd Number
Length

4th Number
Breadths to Length Under 8

Length on deck as per Rule, 23.4
Moulded Breadth, 31.11
Depths from top of Floors to Upper and Main Deck Beams, as per Rule, 18
Power of Engines, 120
N^o. of Decks with flat laid, 2
N^o. of Tiers of Beams, 3

Dimensions of Ship per Register, length, 225.1 breadth, 22.3 depth, 16.2

	Inches in Ship	Inches required per Rule	Inches in Ship	Inches required per Rule	Inches in Ship	Inches required per Rule
Keel, if bar iron, depth and thickness	8 x 2 1/2	8 x 2 1/2	Do. if centre through plate, depth and thickness	7 1/2 x 2 1/2	7 1/2 x 2 1/2	
Stem, if bar iron, moulding and thickness	8 x 4 1/2	7 1/2 x 4 1/2	Stern-post for Rudder do.	8 x 4 1/2	7 1/2 x 4 1/2	
Stern-post for Propeller	8 x 4 1/2	7 1/2 x 4 1/2	Distance of Frames from moulding edge to moulding edge, all fore and aft	23	(Class 40A)	
Frames, size of Angle Iron, for 1/2 length amidships	4 x 3	4 x 3	Do. for 1/4 at each end	4 x 3	4 x 3	
Reversed Frames, size of Angle Iron	3 x 3	3 x 3	Floors, depth and thickness of Floor Plate at mid line for half the length amidships	18	18	
Do. at the ends	10 1/2	10 1/2	Do. do. do. at Bilge Keelson	36	36	
Do. height extended at the Bilges	36	36	Beams, Upper, Spar, or Awning Deck (No. 62)	6	6	
Single or double Angle Iron, Plate or Tee Bulb Iron	6	6	Single or double Angle Iron on Upper edge	2 1/2	2 1/2	
Average space	46	46	Beams, Main or Middle Deck (No. 59)	7 1/2	7 1/2	
Single or double Angle Iron, Plate or Tee Bulb Iron	7 1/2	7 1/2	Single or double Angle Iron on Upper Edge	3	3	
Average space	46	46	Lower Deck, Hold or Orlop (No. 28)	7 1/2	7 1/2	
Single or double Angle Iron, Plate or Tee Bulb Iron	7 1/2	7 1/2	Single or double Angle Iron on Upper Edge	3	3	
Average space	46	46	Keelson Centre line, single or double plate, box, or intercostal, size of Plates	14 1/2	14 1/2	
Do. Bulb Plate to Intercoastal Keelson	7 1/2	7 1/2	Do. Size of Angle Irons	5 x 3	5 x 3	
Do. Side Intercoastal Keelson, size of Plates	18	18	Do. Angle Irons on tops of Floors	5 x 3	5 x 3	
Do. Angle Irons on tops of Floors	5 x 3	5 x 3	Do. Bilge Keelson, Bulb Iron	7 1/2	7 1/2	
Do. Bilge Keelson, Bulb Iron	7 1/2	7 1/2	Do. Intercoastal plates riveted to plating for length	5 x 3	5 x 3	
Do. Intercoastal plates riveted to plating for length	5 x 3	5 x 3	Do. Angle Irons	5 x 3	5 x 3	
Do. Angle Irons	5 x 3	5 x 3	Do. Intercoastal plates riveted to plating for length	5 x 3	5 x 3	
Do. Intercoastal plates riveted to plating for length	5 x 3	5 x 3				

Transoms, material Iron or, if none, in what manner compensated for.
Knight-heads Iron Hawse Timbers Iron
Windlass Iron Patent Pall Bitt Nil

The Frames extend in one length from Keel to Guminals

The Reverse Angle Irons on the floors and frames extend across the middle line to angles on lower hold beam stanchion and to guminals alternately

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

Plates, Garboard, double or Riveted to Keel, double or at upper edge, with Rivets (3/4 in.) diameter, averaging (3 1/2 ins.) from centre to centre.

Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (3/4 in.) diameter, averaging (3 1/2 ins.) from centre to centre.

Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (0.9, 11) thick, double or single Riveted; with Rivets (3/4 in.) diameter averaging (3 1/2 ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? Alternate Strakes

Do. of 3 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 7/16 thicker than their plates.

Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single riveted; with rivets (3/4 in.) diameter, averaging (3 1/2 ins.) from centre to centre.

Do. Edges of Sheerstrake, Main, double or single Riveted. Upper, double or single Riveted. At upper edge single At lower edge double Main Sheerstrake

Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (8 1/2, 14) thick, double or single Riveted; with Rivets (3/4, 7/8 in) diameter, averaging (3 1/2 ins) from centre to centre.

Do. Butts of Main Sheerstrake, double or treble Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double or treble Riveted for 1/2 length amidships. Breadth of laps of plating in double Riveting (4 1/4) Breadth of laps of plating in single Riveting (2 1/4)

Butt straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted?

How secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.)

The various Decks, how secured to the sides? Riveted to Frames & Stringer Plate No. of Breasthooks, 5 Crutches, 3

Description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Shipping purposes

Manufacturer's name or trade mark, Plates - Messrs Iron Works Co. Angles - Tynan & Co.

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

Builder's Signature, Bartram, Haswell & Co Surveyor's Signature, Lenhouse Martindale

Lloyd's Register Foundation

2019

1873-0340

11221 Iron
Workmanship. Are the butts of plating planed or otherwise fitted? Planed
Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? Well jointed
Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? Solid pieces
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? Yes Generally and are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? Yes
Are there any rivets which either break into or have been put through the seams or butts of the plating? A few in butts only

Her Masts, Bowsprit, Yards, &c., are in Good condition, and sufficient in size and length. If they are of Iron or Steel give the 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

She has a Steering House & Chart House joined in Midships on the Spar Deck 17 ft long & 9 1/2 feet wide. Midship Section attached.

This vessel was contracted for previous to July 1872. Certificates for Chain Cables dated 18th December 1872.

Number for equipment		Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test as per Certificate.	Weight req'd per Rule.	Test req'd per Rule.
SAILES.		270	1 1/2	43 20	1 9/16	43 20	Bowers	3	23.3.24	23.3.24	23.2.0	23.10.0.0
CABLES, &c.							(State Machine where Tested, and name of Superintendent).					
N ^o Fore Sails,	Chain											
Fore Top Sails,	Hempen Stream	90	9				Stream	1	10.0.14		10.0.0	
Fore Topmast Stay Sails	Cable	60	1 1/16				Kedges	2	5.1.0		5.0.0	
Main Sails,	Hawser	85	6 1/2						2.2.0		2.2.0	
Main Top Sails,	Towlines	85	4									
and	Warp											
	All of <u>good</u> quality.											

Her Standing and Running Rigging Complete sufficient in size and good in quality. She has 2 Life Long Boat and 3 Masts

The present state of the Windlass is Iron Patent Capstan & Steam Winch and Rudder Good Pumps Good

Engine Room Skylights.—How constructed? Strong Wood Frame How secured in ordinary weather? Bars & Screws

What arrangements are there for deadlights in such for bad weather? Bulls Eyes let into strong wood frame, Bars & Screws.

Coal Bunker Openings.—How constructed? Iron How are lids secured? Iron Studs How high above deck? 6

Scuppers, &c.—What arrangements are there beyond the scuppers on deck, for clearing upper deck of water, in case of a sea coming on board? No Bulwarks, all being open & fitted with iron stanchions & bars, galvanized.

Cargo Hatchways.—How formed? Strong plates & angle State size 19 ft by 10 ft with deep plate beam, strong iron floor & after & 4 iron pillars.

If of extraordinary size, state how framed and secured? ✓

What arrangement for shifting beams? ✓

Hatches, themselves, whether strong and efficient? Yes Main Hatchways.—State size 19 ft by 10 ft with deep plate beam, strong iron floor & after & 4 iron pillars.

Order for Special Survey No. 2395 DATES of
Date 21st December 72 Surveys held
Order for Ordinary Survey No. — while building
Date — as per
No. 71 in builder's yard. Section 18.
1st. On the several parts of the frame, when in place, and before the plating was wrought Built under S.S. 1872
2nd. On the plating during the progress of riveting Dep 20.23.0.29.28.31. R. 27.8.20.22.25.28.30. L. 24.6.10.11.12
3rd. When the beams were in and fastened, and before the decks were laid 18.22.25.31. 7.3.0. 4.13.15.18.20.24.28.30
4th. When the ship was complete, and before the plating was finally coated or cemented 4.12.14.18.20.24.26.27.31.4
5th. After the ship was launched and equipped 6.11.14.18.19.21.22.26.27.29. April 1.5.8.10.17

General Remarks,

The double bottom is fitted with a flange plate 1/16 running up the bilge plating, with knee plates above & below. - I note Mc Intyre's plan as shown on the Section. The Builders could not obtain the exact size angles for the Keelsons & hold stringers as per Rule, but they are 1/2 thicker & 1/2 small on the narrow edge (flange). The after double bottom extends from the after Engine Bulkhead to the narrow run off about 52 ft long. Fore double bottom extends from the Fore Engine Room Bulkhead towards forward & is about 63 1/2 ft long. She is built on the Old Rules and the lower edge of Spar Deck Sheerstrake is single rivetted, but all the edges of outside plating from above top of bilges to topsides are double rivetted, single being allowed by the Rules & there are two strong moulding rivetted to upper & lower edges of Spar Deck Sheerstrake all fore & aft formed of half round iron 3 in by 1 1/2 inches.

State if one, two or three decked vessel, or if spar or awning decked, and lengths of poop, forecabin or raised quarter deck, or of double or part double bottom.

In what manner are the surfaces preserved from oxidation? Inside Red Paint & Cement in Cellar Outside Red Paint

I am of opinion this Vessel should be Classed 90 A1 Spar Deck

The amount of the Entry Fee£ 5 : : : is received by me,

Special£ 54 : 19 : :

Certificate : : : :

(Travelling Expenses)
(if any) £

Committee's Minute 22nd April 1873

Character assigned 90 A

AREP M.B.

Spar Deck

This vessel appears

eligible to be classed

90 A1 Spar Deck

as recommended

for double bottom

Lloyd's Register

Foundation