

# Steel IRON SHIP.

Rec'd 21st JULY, 1884

No. 91 Survey held at Göthenburg  
On the Steel S.S. "Thorsten"

Date, First Survey 10<sup>th</sup> March 1883

(Received at London Office, 21/7/84)  
Last Survey 10<sup>th</sup> July 1884

TONNAGE under Tonnage Deck	1000.46
Ditto of Third, Spar, or Awning Deck	
Ditto of Poop, or Raised Qr. Dk.	665.73
Ditto of Houses on Deck	
Ditto of Forecasts	
Gross Tonnage	1666.19
Less Crew Space	81.38
	1584.81
Less Engine Room	339.96
Register Tonnage as cut on Beam	1244.85

<b>ONE, OR TWO DECKED, THREE DECKED VESSEL, SPAR, OR AWNING DECKED VESSEL.</b>	
Half Breadth (moulded)	16.5
Depth from upper part of Keel to top of Upper Deck Beams	25.46
Girth of Half Midship Frame (as per Rule)	38.00
1st Number	796
1st Number, if a 3-Decked Vessel .. deduct 7 feet	72.96
Length	252.5
2nd Number	18.422
Proportions— Breadths to Length	8:165
Depths to Length— Upper Deck to Keel	8:99
Main Deck ditto	1:14

Master C. J. Pettersson  
 Built at Lindholmens Works  
 When built 1883-84 Launched 31/8 1883  
 By whom built Motala Company  
 Owners S.S. Nav. Comp. Thule  
 Residence Göthenburg  
 Port belonging to Göthenburg  
 Destined Voyage London  
 If Surveyed while Building, Afloat, or in Dry Dock. While Building

LENGTH on deck as per Rule	252	6	BREADTH— Moulded	33	DEPTH top of Floors to Upper Deck Beams	23	16	Power of Engines	320	N <sup>o</sup> . of Decks with flat laid	2	N <sup>o</sup> . of Tiers of Beams	3
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Dimensions of Ship per Register, length, breadth, depth,	BREADTH			DEPTH			DEPTH Moulded	Plating					
	Inches in Ship	Inches per Rule	16ths per Rule	Inches in Ship	Inches per Rule	16ths per Rule		Inches in Ship	16ths in Ship	Inches per Rule	16ths per Rule		
KEEL, depth and thickness	8" x 2 1/4	Flat Keel Plates, breadth and thickness	26	9/16	26	9/16							
STEM, moulding and thickness	8" x 2 1/4	PLATES in Garboard Strakes, br'dth & thickness	26	9/16	26	9/16							
STERN-POST for Rudder do. do.	8 1/2 x 5	" From Garboard to upper part of Bilges	28	9/16	28	9/16							
" for Propeller	8 1/2 x 5	" Of d'bling at Bilge, or increased thickness, and length applied	28	9/16	28	9/16							
Distance of Frames from moulding edge to moulding edge, all fore and aft	24"	24"	24"	24"	24"	24"	" From up. prt of Bilge to lr. edge of Sh'rstrake	8	1/16	8	1/16		
FRAMES, Angle Iron, for 2/3 length amidships	4 1/2 x 3	" Main Sheerstrake, breadth and thickness	8	1/16	8	1/16							
Do. for 1/3 at each end	4 1/2 x 3	" Of d'bling at Sh'stk. & lng. applied	8	1/16	8	1/16							
REVERSED FRAMES, Angle Iron	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	" From M'n. to Upr. or Spar Dk. Sh'rstrake	8	1/16	8	1/16		
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	22 1/2	22 1/2	22 1/2	22 1/2	22 1/2	22 1/2	" Up. or Spar Dk Sh'rstrake, br'dth & thckn'ss	40	10/16	40	10/16		
" thickness at the ends of vessel	9/16	9/16	9/16	9/16	9/16	9/16	Butt Straps to outside plating, breadth & thickness	6 1/2 x 1 1/4	9/16	6 1/2 x 1 1/4	9/16		
" depth at 3/4 the half-bdth. as per Rule	11 1/4	11 1/4	11 1/4	11 1/4	11 1/4	11 1/4	Lengths of Plating	12	12	12	12		
" height extended at the Bilges	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	Shifts of Plating, and Stringers	18	18	18	18		
BEAMS, Upper, Spar, or Awning Deck	7	7	7	7	7	7	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	56	8/16	56	8/16		
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	7	7	7	7	7	7	Angle Iron on ditto	4 x 3 1/2 x 3/16					
Single or double Angle Iron on Upper edge	3	3	3	3	3	3	Tie Plates fore and aft, outside Hatchways	12	7/16	12	7/16		
Average space	48	48	48	48	48	48	Diagonal Tie Plates on Beams No. of Pairs	5 1/2	5 1/2	5 1/2	5 1/2		
BEAMS, Main, or Middle Deck	8	8	8	8	8	8	Flat of Up., Spar, or Awning Dk.*	3 1/2	3 1/2	3 1/2	3 1/2		
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	8	8	8	8	8	8	How fastened to Beams	4	4	4	4		
Single, or double Angle Iron, on Upper Edge	3	3	3	3	3	3	Stringer Plate on ends of Main or Middle Deck	52	1 1/2	52	1 1/2		
Average space	48	48	48	48	48	48	Beams, breadth and thickness	52	1 1/2	52	1 1/2		
BEAMS, Lower Deck	8	8	8	8	8	8	Is the Stringer Plate attached to the outside plating?	Yes					
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	8	8	8	8	8	8	Angle Irons on ditto, No. 2	4 x 3 1/2 x 3/16					
Single or double Angle Iron on Upper Edge	3	3	3	3	3	3	Tie Plates, outside Hatchways	12	7/16	12	7/16		
Average space	2 1/2 and 4 1/2 frame	Diagonal Tie Plates on Beams, No. of pairs	5 1/2	5 1/2	5 1/2	5 1/2							
AMS, Hold, or Orlop							Flat of Middle Deck* do. do.	5 1/2	5 1/2	5 1/2	5 1/2		
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron							How fastened to Beams	4	4	4	4		
Single or double Angle Iron on Upper Edge							Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	34	1 1/2	34	1 1/2		
Average space							Is the Stringer Plate attached to the outside plating?	Yes					
ELSONS Centre line, single or double plate, box, or Intercostal, Plates	17	17	17	17	17	17	Angle Irons on ditto, No.	4 x 3 1/2 x 8/16					
Rider Plate	10 3/4	10 3/4	10 3/4	10 3/4	10 3/4	10 3/4	Stringer or Tie Plates, outside Hatchways	4 x 3 1/2 x 8/16					
Bulb Plate to Intercostal Keelson							Flat of Lower Deck*						
Angle Irons	5 x 3 1/2	Ceiling betwixt Decks, thickness and material											
Double Angle Iron Side Keelson							" in hold do. do.						
Side Intercostal Plate							Main piece of Rudder, diameter at head						
do. Angle Irons	5 x 3 1/2	do. at heel											
Attached to outside plating with angle iron							Can the Rudder be unshipped afloat?						
GE Angle Irons	5 x 3 1/2	Bulkheads No. 6 No. per Rule	6	6	6	6							
do. Bulb Iron							" Thickness of						
do. Intercostal plates riveted to plating for length							" Height up 4 to upper 2 to maindeck						
GE STRINGER Angle Irons	5 x 3 1/2	" How secured to sides of ship riveted to double frames											
Intercostal plates riveted to plating for length							" Size of Vertical Angle Irons 3 x 3 x 1 1/2 and distance apart						
GE STRINGER Angle Irons							" Are the outside Plates doubled two spaces of Frames in length?						

FRAMES extend in one length from Keel to Upper Deck Riveted through plates with 1/16 in. Rivets, about 5 apart.  
 REVERSED ANGLE IRONS on floors and frames extend from middle line to Maindeck and to Upper Deck alternately  
 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 1/16 in. diameter, averaging 5 1/2 ins. from centre to centre.  
 Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 1 1/16 in. diameter, averaging 3 3/8 ins. from centre to centre.  
 Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 1 1/16 in. diameter averaging 3 ins. from centre to centre.  
 Butts of 4 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 7/16 thicker than the plates they connect.  
 Edges from Bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 1 1/16 in. diameter, averaging 3 3/8 ins. from cr. to cr.  
 Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 1 1/16 in. diameter, averaging 3 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 1/2 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted 1/2 length amidships.  
 Butts of Main Stringer Plate, treble riveted for 1/2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 1/2 length.  
 Breadth of laps of plating in double riveting 5 1/4 Breadth of laps of plating in single riveting  
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble & double No. of Breasthooks, 5 Crutches, 30  
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Motala Comp. Bessemer Steel. Beams Iron  
 Manufacturer's name or trade mark, Motala Comp.  
 The above is a correct description.  
 Builder's Signature, \_\_\_\_\_ Surveyor's Signature, C. J. Pettersson  
 Surveyor to Lloyd's Register of British and Foreign Shipping.

**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? *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? *No*

Masts, Bowsprit, Yards, &c., are *Iron* 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 *Foremast 76 feet x 24" Dmt*  
*Mainmast 71 feet x 24"*

NUMBER for EQUIPMENT	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.		N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate	Wght req'd per Rule.	Machine where Tested & Suprntd.
								Bower Anchors	Stream Anchor					
2	Fore Sails,	Chain	270	1 1/16	7 3/4 x 5 1/4	270 x 1 1/16	L.P.L. day 20/11/83	1	28.0.14	27.4.2.14	27 3/4	17 Oct 1883		
1	Fore Top Sails,	Iron Stream Chain	75	1 1/16	24 x 13 1/2	75 x 1 1/16	16 Sept 1882	1	28.0.7	27.2.1.21	27 3/4	17 Oct 1883		
1	Fore Topmast Stay Sails,	or Steel Wire	90	12		90 x 11		1	25.2.7	25.10.3.21	25 1/2	29 Sept 1883		
1	Fore Topmast Stay Sails,	or Hempen Strm	90	11		90 x 10 1/2		1	9.1.21	11.11.1.0	8 3/4	16 Oct 1883		
2	Main Sails,	Towline, Hemp	90	7 1/2		90 x 7		1	4.2.21	7.1.1.0	4 1/2	16 Oct 1883		
	Main Top Sails,	or Steel Wire	100	7				1	2.1.21	5.0.0.0	2 3/4	16 Oct 1883		
	and	Warp	200	5										
		quality												

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

Standing and Running Rigging *Wire and Hemp* sufficient in size and *good* in quality. She has *4* Long Boat and *2* small  
 The Windlass is *Harfield's Steam* Capstan *Good* and Rudder *Good* Pumps *2 to each compartment*  
**Engine Room Skylights.**—How constructed? *Iron trunk Wood skylight* How secured in ordinary weather? *Secured*  
 What arrangements for deadlights in bad weather? *—* Height above deck? *1"*  
**Coal Bunker Openings.**—How constructed? *Lids in middle deck* How are lids secured? *—*  
**Scuppers, &c.**—What arrangements for clearing upper deck of water, in case of shipping a sea? *Waterports and Scuppers*  
**Cargo Hatchways.**—How formed? *Iron framed*  
 State size *Main Hatch 20' x 11' x 2'-6" x 6 1/16* Forehatch *8' x 9' x 2'-6" x 6 1/16* Quarterhatch *16' x 10' x 2'-6" x 6 1/16*  
 If of extraordinary size, state how framed and secured? *By Webplates*  
 What arrangement for shifting beams? *Secured to double angles*  
**Hatches,** If strong and efficient? *Yes*

Order for Special Survey No. \_\_\_\_\_  
 Date \_\_\_\_\_  
 Order for Ordinary Survey No. \_\_\_\_\_  
 Date \_\_\_\_\_  
 No. \_\_\_\_\_ 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 }  
 2nd. On the plating during the process of riveting }  
 3rd. When the beams were in and fastened, and before the decks were laid.... }  
 4th. When the ship was complete, and before the plating was finally coated or cemented.. }  
 5th. After the ship was launched and equipped }  
*Special Survey seen 2 or 3 times in the week while building*

**General Remarks** (State quality of workmanship, &c.)  
*She is built in accordance with the Rules and the approved tracings of the 28/12 and the Committee's letters—*  
*The Steel material used in the building is tested in accordance with the annexed Reports*  
*The material and workmanship is of good quality and the ship is this day viz 10<sup>th</sup> of July 1884 in a good and efficient state fit for the conveyance of dry and perishable goods to and from all parts of the world*

State if one, two, or three decked vessel, or if spar, or awning decked; and the lengths of poop, bridge, fore-castle, or raised quarter deck. (If double bottom, state particulars on separate sheet.)  
 How are the surfaces preserved from oxidation? Inside *Bottom Portland Cement other parts painted* Outside *painted*  
 I am of opinion this Vessel should be Classed *100A1*  
 The amount of the Entry Fee .....£ 4 : : is received by me, } *C. A. Hall*  
 Special .....£ 66 : 13 : 14 July 1884 }  
 (to be sent as per margin). Certificate ... : :  
 (Travelling Expenses, if any, £ ..... ) £ 70 : 18 :  
 Committee's Minute  
 Character assigned *100A1*  
*L.A.P.P.*  
*2 Dks 1st 100*  
*3 Jan 1884*  
 TUESDAY 22 JULY 1884  
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No. 91  
 No. in Reg. Book  
 Master  
 Engines  
 Boilers  
 Registered  
 ENGINE  
 Description  
 Diameter of  
 Diameter of  
 Diameter of  
 No. of Feet  
 No. of Bilg  
 Where do t  
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 Are all the  
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