

# Steel IRON SHIP.

(Received at London Office, 18 SEP 1883)

Open No. 217 Survey held at *Malmö* Date, First Survey *March 10th* Last Survey *Septemb. 6th 1883.*  
On the *Steel Screw Steamer "Brage"*

**TONNAGE** under Tonnage Deck } *409.72*  
Ditto of Third, Spar, or Awning Deck. }  
Ditto of Poop, or Raised Qr. Dk. } *19.73*  
Ditto of Houses on Deck } *60.63*  
Ditto of Forecastle } *8*  
Gross Tonnage } *498.08*  
Less Crew Space } *29.34*  
Less Engine Room } *100.13*  
Register Tonnage as cut on Beam } *368.61*

**ONE, OR TWO DECKED, THREE DECKED VESSEL, SPAR, OR AWNING DECKED VESSEL.**  
Half Breadth (moulded) ... *12.08*  
Depth from upper part of Keel to top of Upper Deck Beams ... *15.20*  
Girth of Half Midship Frame (as per Rule) ... *24.70*  
1st Number ... *51.98*  
1st Number, if a 3-Decked Vessel .. deduct 7 feet  
Length ... *159.25*  
2nd Number ... *8278*  
Proportions— Breadths to Length... .. *0.59*  
Depths to Length—Upper Deck to Keel... .. *10.47*  
Main Deck ditto ... ..

Master *H. H. Meidell*  
Built at *Malmö*  
When built *1883.* Launched *June 30, 1883.*  
By whom built *Hockums Mekanism & Verkstads Abhebolag*  
Owners *Olof Berg*  
Residence *Bergen (in Norway)*  
Port belonging to *Bergen*  
Destined Voyage *Pacific and Mediterranean*  
If Surveyed while Building, Afloat, or in Dry Dock. *While Building*

LENGTH on deck as per Rule	Feet. Inches.	BREADTH—Moulded...	Feet. Inches.	DEPTH top of Floors to Upper Deck Beams	Feet. Inches.	Power of Engines	Horse.	No. of Decks with flat laid	No. of Tiers of Beams
<i>159</i>	<i>3</i>	<i>24</i>	<i>2</i>	<i>14</i>	<i>0</i>	<i>65</i>	<i>65</i>	<i>1</i>	<i>2</i>
Dimensions of Ship per Register, length, breadth, depth,									
KEEL, depth and thickness	<i>7 1/4 x 1 7/8</i>		<i>6 1/2 x 1 7/8</i>		<i>6 1/2 x 1 7/8</i>		Flat Keel Plates, breadth and thickness		
STEM, moulding and thickness	<i>6 1/2 x 1 7/8</i>		<i>6 1/2 x 1 7/8</i>		<i>6 1/2 x 1 7/8</i>		PLATES in Garboard Strakes, br'dth & thickness		
STERN-POST for Rudder do. do.	<i>6 1/2 x 3 3/4</i>		<i>6 1/2 x 3 3/4</i>		<i>6 1/2 x 3 3/4</i>		" From Garboard to upper part of Bilges...		
" " for Propeller	<i>6 1/2 x 3 3/4</i>		<i>6 1/2 x 3 3/4</i>		<i>6 1/2 x 3 3/4</i>		" Of d'bling at Bilge, or increased thickness, and length applied		
Distance of Frames from moulding edge to moulding edge, all fore and aft	<i>21"</i>		<i>21"</i>		<i>21"</i>		" From up. prt of Bilge to l. edge of Sh'rstrake...		
FRAMES, Angle Iron, for 3/4 length amidships	<i>3</i>	<i>3</i>	<i>5</i>	<i>3</i>	<i>3</i>	<i>5</i>	" Main Sheerstrake, breadth and thickness...		
Do. for 1/2 at each end	<i>3</i>	<i>3</i>	<i>4</i>	<i>3</i>	<i>3</i>	<i>4</i>	" Of d'bling at Sh'stk. & lng. applied <i>20 in. up of beam</i>		
REVERSED FRAMES, Angle Iron	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	" From M'n. to Up. or Spar Dk. Sh'rstrake...		
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	<i>1 1/2</i>	<i>1 1/2</i>	<i>5</i>	<i>1 1/2</i>	<i>1 1/2</i>	<i>5</i>	" Up. or Spar Dk. Sh'rstrake, br'dth & thickness		
" thickness at the ends of vessel	<i>7/4</i>	<i>7/4</i>	<i>4</i>	<i>7/4</i>	<i>7/4</i>	<i>4</i>	Butt Straps to outside plating, breadth & thickness		
" depth at 3/4 the half-bdth. as per Rule	<i>29</i>	<i>29</i>	<i>29</i>	<i>29</i>	<i>29</i>	<i>29</i>	Lengths of Plating		
" height extended at the Bilges...	<i>29</i>	<i>29</i>	<i>29</i>	<i>29</i>	<i>29</i>	<i>29</i>	Shifts of Plating, and Stringers		
BEAMS, Upper, Spar, or Awning Deck	<i>5 x 2 1/4 x 1 3/4</i>	<i>6</i>	<i>5 x 2 1/2 x 1 3/4</i>	<i>6</i>	<i>5 x 2 1/2 x 1 3/4</i>	<i>6</i>	Gunwale Plate on ends of <i>Awning, Spar, or</i>		
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	Upper Deck Beams, breadth and thickness...		
Single or double Angle Iron on Upper edge	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	Angle Iron on ditto		
Average space...	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	Tie Plates fore and aft, outside Hatchways		
BEAMS, Main, or Middle Deck	<i>5 x 2 1/4 x 1 3/4</i>	<i>6</i>	<i>5 x 2 1/2 x 1 3/4</i>	<i>6</i>	<i>5 x 2 1/2 x 1 3/4</i>	<i>6</i>	Diagonal Tie Plates on Beams No. of Pairs		
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	Flat of Up., Spar, or Awning Dk. <i>Tine</i>		
Single or double Angle Iron, on Upper Edge	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	How fastened to Beams		
Average space...	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	Stringer Plate on ends of Main or Middle Deck		
BEAMS, Lower Deck	<i>5 x 2 1/4 x 1 3/4</i>	<i>6</i>	<i>5 x 2 1/2 x 1 3/4</i>	<i>6</i>	<i>5 x 2 1/2 x 1 3/4</i>	<i>6</i>	Beams, breadth and thickness		
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	Is the Stringer Plate attached to the outside plating?		
Single or double Angle Iron, on Upper Edge	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	Angle Irons on ditto, No.		
Average space...	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	Tie Plates, outside Hatchways		
BEAMS, Hold, or Orlop Deck	<i>5 x 2 1/4 x 1 3/4</i>	<i>6</i>	<i>5 x 2 1/2 x 1 3/4</i>	<i>6</i>	<i>5 x 2 1/2 x 1 3/4</i>	<i>6</i>	Diagonal Tie Plates on Beams, No. of pairs		
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	Flat of Middle Deck* do. do.		
Single or double Angle Iron, on Upper Edge	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	<i>2 1/2</i>	<i>2 1/2</i>	<i>4</i>	How fastened to Beams		
Average space...	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	<i>42</i>	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams		
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	<i>11</i>	<i>15</i>	<i>11</i>	<i>15</i>	<i>11</i>	<i>15</i>	Is the Stringer Plate attached to the outside plating?		
" Rider Plate	<i>7 1/2</i>	<i>15</i>	<i>7 1/2</i>	<i>15</i>	<i>7 1/2</i>	<i>15</i>	Angle Irons on ditto, No. <i>2</i>		
" Bulb Plate to Intercoastal Keelson	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	Stringer or Tie Plates, outside Hatchways		
" Angle Irons	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	Flat of Lower Deck*		
" Double Angle Iron Side Keelson	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	Ceiling between Decks, thickness and material		
" Side Intercoastal Plate	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	" in hold do. do.		
" do. Angle Irons	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	Main piece of Rudder, diameter at head		
" Attached to outside plating with angle iron	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	do. at heel		
BILGE Angle Irons	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	Can the Rudder be unshipped afloat?		
" do. Bulb Iron	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	Bulkheads No. <i>6</i> No. per Rule <i>4</i>		
" do. Intercoastal plates riveted to plating for length	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	" Thickness of <i>Plates 9/32</i>		
BILGE STRINGER Angle Irons	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	" Height up <i>all to main deck, except the forward bulkhead of the main tank which extends to lower deck beams</i>		
" Intercoastal plates riveted to plating for length	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	" How secured to sides of ship <i>by double angle irons</i>		
SIDE STRINGER Angle Irons	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	" Size of Vertical Angle Irons <i>2 1/2 x 2 1/2 x 1/4</i> and distance apart <i>30</i> ins.		
" Intercoastal plates riveted to plating for length	<i>3 1/2</i>	<i>3</i>	<i>5</i>	<i>3 1/2</i>	<i>3</i>	<i>5</i>	" Are the outside Plates doubled two spaces of Frames in length? <i>Yes</i>		

The FRAMES extend in one length from *Keel* to *upper deck* Riveted through plates with *5/8* in. Rivets, about *5* apart.  
The REVERSED ANGLE IRONS on floors and frames extend *from middle line to upper deck stringer* and to *hold beam stringer* 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* in. diameter, averaging *5* ins. from centre to centre.  
" Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets *3/4 x 5/8* in. diameter, averaging *3 1/2* ins. from centre to centre.  
" Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *3/4 x 5/8* in. diameter averaging *3 1/2* ins. from centre to centre.  
" Butts of *2* Strakes at Bilge for *1/2* length, treble riveted with Butt Straps *1/16* thicker than the plates they connect.  
" Edges from Bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets *5/8* in. diameter, averaging *2 3/4* ins. from cr. to cr.  
" Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *5/8* in. diameter, averaging *2 1/2* 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 *length amidships.*  
" Butts of Main Stringer Plate, treble riveted for *1/2* length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for *length.*  
" Breadth of laps of plating in double riveting *6 dia.* Breadth of laps of plating in single riveting *3 1/2 dia.*  
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted *Keelsons treble, Stringers & tie plates double* No. of Breasthooks, *4* Crutches, *4*

What description of *Iron* is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Bessemer*  
Manufacturer's name or trade mark, *Motala*  
The above is a correct description.  
Builder's Signature, *Gunnar Nyström* Surveyor's Signature, *Mr. J. S. S. S. S.*  
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? *Some few.*

Masts, Bowsprit, Yards, &c., are *pick pine* 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 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 52 feet, dia 16 1/4 inches*  
*Mainmast 48, 15 3/4*

ence connected with the case.

NUMBER for EQUIPMENT		9106	Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested & Suprntd.
SAILS.		CABLES, &c.											
N <sup>o</sup> .		Chain .....	195	1 3/16	34 1/2 tons	1 3/16	Certificat No 4405	Bower Anchors	1	10.0.14	12.2.0.21	10.0.0.0	No 8065
1	Fore Sails,	(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)						(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	1	10.0.14	12.2.0.21	10.0.0.0	No 8067
	Fore Top Sails,	Iron Stream Chain	60	1 1/16	18 1/4	1 3/16	No 4406		1	8.2.14	10.15.0.0	8.2.0.0	No 8066
		or Steel Wire ..	tested at Lloyd's Proving house for Walker Robert Turnbull, Superintendent										
2	Fore Topmast Stay Sails,	or Hempen Strm Cable .....						The 3 Bowers	1	3.3.21	6.7.2.0	3.3.0.0	No 8073
		Towline, Hemp.						tested at Lloyd's Proving house for Walker Robert Turnbull, Superintendent					
		or Steel Wire ..						The 2nd Kedge	1	0.3.0	not tested	0.3.0.0	No 8074
1	Main Sails,	Hawser .....	75	8	Hemp			Stream Anchor	1	1.3.14	4.7.0.21	1.3.0.0	No 8074
	Main Top Sails,	Warp .....	90	6				Kedge	1	0.3.0	not tested	0.3.0.0	No 8074
	and	quality						2nd Kedge	1	0.3.0	not tested	0.3.0.0	No 8074

Standing and Running Rigging *is* sufficient in size and *good* in quality. She has *1* Long Boat and *20* feet and *1* Boat *18* feet.  
The Windlass is *made by Hockmums* Capstan *by Bergsund* and Rudder *good* Pumps *5*.  
Engine Room Skylights. How constructed? *Iron coaming 24" high* How secured in ordinary weather? *Wood stanchion Top with Bullseyes bolted to Iron Coaming*  
What arrangements for deadlights in bad weather? *to batten down*  
Coal Bunker Openings. How constructed? *like ordinary cargo hatch coaming* How are lids secured? *same as cargo hatches* Height above deck? *18 inches*  
Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *4 scuppers on each side*  
Cargo Hatchways. How formed? *on Main deck of Iron standing 2 feet 6 inches above deck*  
State size Main Hatch *19'3" x 8'9"* Forehatch *7 feet x 5 feet* Quarterhatch *10'6" x 8'9"* Tankhatch *3'6" x 4'10"*  
If of extraordinary size, state how framed and secured?  
What arrangement for shifting beams? *Guides of angle irons*  
Hatches, If strong and efficient? *2 1/4 inches according to Rules.*

Order for Special Survey No.	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	1883. April 20. March 10. 19.
Date		2nd. On the plating during the process of riveting	May 7. 9. 29. June 1. 12-31.
Order for Ordinary Survey No.		3rd. When the beams were in and fastened, and before the decks were laid....	April 20.
Date		4th. When the ship was complete, and before the plating was finally coated or cemented..	June 12. 21. July 12. 17
No. 38, in builder's yard.		5th. After the ship was launched and equipped	August 2, 19. 25. 28, 30. Sept 6.
State dates of letters respecting this case		1st March & 10 April 1883.	

General Remarks (State quality of workmanship, &c.) *In accordance with the requirements of the Rules for Steel Ships and the approved Section and Drawings, the Materials and Workmanship are examined from laying the Steel to the completion of the ship at different stages on the above stated days. - The Angles, Plates and Bolts used are inspected at Malma by the Society's Surveyor Mr C.A. Moller of Gothenburg as testified by the annexed two Certificates. The Stem, Keel and Stump are examined at Malma by Mr T.E. Hindler and found sound. The Rivets used are also examined at different times by Mr Hindler and found to be of good material. The workmanship is satisfactory in all respects. The Tanks are tested by hydraulic pressure according to the Rules. The Shaft tunnel is well constructed and sufficient made and fitted with a watertight sluice door on the Engine room bulkhead worked from the upper deck. - The Pumping arrangements are satisfactory. - The above stated certificates for Test of Anchors and Chains have been produced. - The whole Equipment is good and satisfactory.*

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 form.)  
How are the surfaces preserved from oxidation? Inside *Cement or 3 coats of oil paint* Outside *3 coats of oil paint*  
I am of opinion this Vessel should be Classed *100 A 1, Steel, A & C P.*  
The amount of the Entry Fee *£ 2 : 0 : 0* is received by me, }  
Special *£ 24 : 18 : 0* Sept 7 1883 }  
(to be sent as per margin). Certificate ... *0 : 5 : 0*  
(Travelling Expenses, if any, £ *8.0.0.*)  
Committee's Minute *FRIDAY 23 SEPT 1883* 18  
Character assigned *100 A 1, Steel, A & C P.*  
*Th J Seadron*  
Surveyor to Lloyd's Register of British and Foreign Shipping.