

IRON SHIP.

No. *4940* Survey held at *Port Glasgow* & Date, First Survey *14 May 1880* Last Survey *2nd March* 18 *81*
On the *J. S. S. "James Watt"* Master *Riepenhansen*

TONNAGE under
Tonnage Decks *1469.82*
Ditto of Third, Spar,
or Awning Deck. *3.62*
Ditto of Poop, or
Raised Or. Dk. *50.91*
Ditto of Houses
on Deck *20.53*
Ditto of Forecastle *53.09*
Tonnage *1594.94*
Crew Space *63.09*
1534.88
Engine Room *511.35*
Net Tonnage *1023.53*
out on Beam

ONE, OR TWO DECKED, THREE DECKED VESSEL.
~~SPAR, OR AWNING DECKED VESSEL~~
HALF BREADTH (moulded) *17.9*
DEPTH from upper part of Keel to top of Upper Deck Beams *24.5*
GIRTH of Half Midship Frame (as per Rule) *36.8*
1st NUMBER *79.2*
1st NUMBER, if a 3-DECKED VESSEL, deduct 7 feet *7*
LENGTH *258.5*
2nd NUMBER *18663.7*
PROPORTIONS—Breadths to Length *7.2*
Depths to Length—Upper Deck to Keel *10.55*
Main Deck ditto *15.2*

Built at *Port Glasgow*.
When built *1880-81*. Launched *15th Feb'y/81*
By whom built *Messrs R. Duncan & Co.*
Owners *Messrs Leitch & Muir*
Port belonging to *Greenock*.
Destined Voyage *Not fixed*
If Surveyed while Building, Afloat, or in Dry Dock.
While Building and afloat

STH deck as Rule *258* Feet. *6* Inches. BREADTH—Moulded *35* Feet. *9 1/2* Inches. DEPTH top of Floors to Upper Deck Beams *21* Feet. *6* Inches. Do. do. Main Deck Beams *14* Feet. *6* Inches. Power of Engines *160* Horse. No. of Decks with flat laid *2* No. of Tiers of Beams *2*

ensions of Ship per Register, length, *260.5* breadth, *36.15* depth, *20.95* *as app'd by Committee*

EL, depth and thickness *side plates* *9 x 1-2 1/2* *9 x 1-2 1/2*
EM, moulding and thickness *8 1/2 x 2 1/2* *8 1/2 x 2 1/2*
ERN-POST for Rudder do. do. *8 3/4 x 5 1/8* *8 1/2 x 5*
" for Propeller *8 1/2 x 5* *8 1/2 x 5*
tance of Frames from moulding edge to }
moulding edge, all fore and aft ... } *24* *24*

AMES, Angle Iron, for 1/2 length amidships *4 1/2* *3* *8* *4 1/2* *3* *8*
Do. for 1/4 at each end *"* *"* *7* *"* *"* *7*
EVERSED FRAMES, Angle Iron *3* *3* *7* *3* *3* *7*
FLOORS, depth and thickness of Floor Plate *36* *x* *6* *36* *x* *6*
at mid line for half length amidships *16* *-* *-* *7*
thickness at the ends of vessel *as per app'd*
depth at 1/4 the half-bdth. as per Rule *as per app'd*
height extended at the Bilges *as per app'd*

BEAMS, Upper, Spar, or Awning Deck *5 1/2* *3* *8* *5 1/2* *3* *8*
Angle or d'ble Ang. Iron, Plate or Tee Bulb Iron *as per app'd*
Angle or double Angle Iron on Upper edge *as per app'd*
Average space *24* *-* *24* *-* *24* *-*

BEAMS, Main, or Middle Deck *6* *3* *8* *6* *3* *8*
Angle or d'ble Ang. Iron, Plate or Tee Bulb Iron *as per app'd*
Single, or double Angle Iron, on Upper Edge *as per app'd*
Average space *24* *-* *24* *-* *24* *-*

BEAMS, Lower Deck, Hold, or Orlop *as per app'd*
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron *as per app'd*
Single or double Angle Iron on Upper Edge *as per app'd*
Average space *12 ft apart* *12 ft apart*

KEELSONS Centre line, single or double plate, *45* *x* *9* *45* *x* *9*
box, or Intercoastal, Plates *36* *x* *8* *36* *x* *8*
Rider Plate *4* *4* *9* *4* *4* *9*
Bull Plate to Intercoastal Keelson *4* *4* *9* *4* *4* *9*
Angle Irons *3* *3* *7* *3* *3* *7*
Double Angle Iron Side Keelson *3* *3* *7* *3* *3* *7*
Side Intercoastal Plates *3* *3* *7* *3* *3* *7*
do. Angle Irons *3* *3* *7* *3* *3* *7*
Attached to outside plating with angle iron *5* *4* *9* *5* *4* *9*

BILGE Angle Irons *3* *3* *7* *3* *3* *7*
do. Bull Irons *16 1/2* *x* *8* *16 1/2* *x* *8*
do. Intercoastal plates riveted to plating for full length *5* *4* *9* *5* *4* *9*
BILGE STRINGER Angle Irons *3* *3* *7* *3* *3* *7*
Intercoastal plates riveted to plating for full length *16 1/2* *x* *8* *16 1/2* *x* *8*

SIDE STRINGER Angle Irons *-* *-* *-* *-* *-* *-*

Transoms, material. Knight-heads. Hawse Timbers. *Plates & angles*.
Windlass *Iron, Rapiro's Patent*

The FRAMES extend in one length from *forecastle, upper, bridle and poop deck stringer*
The REVERSED ANGLE IRONS on floors and frames extend *from middle line to wing plate, and from* *wing plate to 6' above main 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 1/8* in. diameter, averaging *5 1/8* ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets *7/8* in. diameter, averaging *3 3/8* ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *7/8* in. diameter averaging *3 3/8* ins. from centre to centre.

Butts of *3* Strakes at Bilge for *half* 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 *7/8* in. diameter, averaging *3 3/8* ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *7/8* in. diameter, averaging *3 3/8* 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* 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* or *5 1/2* Breadth of laps of plating in single riveting *5 1/4*

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

Waterway, how secured to Beams *none required* (Explain by Sketch, if necessary.)

Beams of the various Decks, how secured to the sides? *by solid welded knees*. No. of Breasthooks, *3* Crutches, *3*

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *good*

Manufacturer's name or trade mark, *Anglo-South Sea Iron Works, the whole of the plates from Stockton & Mossend Iron Works*

The above is a correct description.

Builder's Signature, *R. Duncan* Surveyor's Signature, *J. R. Dunnet*

Surveyor to Lloyd's Register of British and Foreign Shipping.

GRK 296-0165

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? *In a few cases at the butts only.*

Masts, Bowsprit, Yards, &c., are *Iron & wood* 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. *Yes and tested as regd*
State also Length and Diameter of Lower Masts and Bowsprit (*Rig Top Sail Schooner*)

Foremast Length extreme *83' 6"* at heel *19 x 5 1/16* at deck *26 x 6 1/16* at head *17 x 5 1/16* 3 plates in round.
Main " " " " *67' 6"* at heel *21 x 6 7/16* at deck *26 x 6 1/16* at head *17 x 5 1/16* 3 plates in round.
Seams double riveted and butts treble riveted throughout and straps increased 1/16"

NUMBER for EQUIPMENT		Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.	No.	Weight, Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested & Suprntd.
SAILS.							Bower Anchors					
No.	Chain	<i>24' 30"</i>	<i>1 3/4</i>	<i>55 1/2</i>	<i>4 1/4</i>	<i>240-1 1/2</i>	<i>Chester A.S. Jack</i>					
Fore Sails,	Iron Str in Chain	<i>45</i>	<i>1 7/16</i>	<i>20 20</i>	<i>30 30</i>	<i>45-1 1/2</i>	<i>5461</i>					
Fore Top Sails,	Ditto do.						<i>5462</i>					
Fore Topmast Stay Sails,	Hmpn Strm Cbl						<i>5463</i>					
Main Sails,	Hawser	<i>90</i>	<i>3 1/2</i>	<i>90-11</i>			<i>5465</i>					
Main Top Sails, and	Towlines	<i>90</i>	<i>7 1/2</i>	<i>90-4 1/2</i>			<i>5464</i>					
	Warp	<i>90</i>	<i>7 1/2</i>				<i>5464</i>					
	quality <i>good</i>											

Standing and Running Rigging *Wire & Hemp* sufficient in size and *good* in quality. She has *4* Long Boats and *2* fitted as Life boats.
The Windlass is *efficient* Capstan *efficient* and Rudder *efficient* Pumps *efficient*

Engine Room Skylights. How constructed? *deep lead framing on deep iron Cornings on bridge deck* How secured in ordinary weather? *by bolts*
What arrangements for deadlights in bad weather? *Solid lead deadlights 2 1/4 thick fitted with bulls eyes.*

Coal Bunker Openings. How constructed? *Iron Cornings* How are lids secured? *Solid hatch by bar* Height above deck? *above bridge 8 1/2 ft - upper - 18'*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *3 pairs of facing ports and 2 pairs of Scuppers before bridge house and 3 pairs of facing ports and 3 pairs of Scuppers abait bridge house.*

Cargo Hatchways. How formed? *By angles and plate Cornings.*

State size Main Hatch *24' 0" x 11' 0"* Fore hatch *8' 0" x 8' 0"* Quarter hatch *16' 0" x 11' 0"* after hatch *8' 0" x 8' 0"*

If of extraordinary size, state how framed and secured? *Double plating to iron deck as on tracing. Main Hatch fitted with 2 full depth shifting plates and 2 Hatch with one, also strong fore and after in each hatch.*
What arrangement for shifting beams? *double angles on Cornings, and screw bolts.*

Hatches, If strong and efficient? *Yes. 3" Solid.*

Order for Special Survey No. <i>146</i>	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	<i>Specially surveyed 1880-81. May 14, 28.</i>	
Date <i>14 Dec 1879</i>		2nd. On the plating during the process of riveting	<i>June 19, 23, 25, July 26, August 6, 13, 20, 23, 24, 28, 30, 31.</i>	
Order for Ordinary Survey No. <i>✓</i>		3rd. When the beams were in and fastened, and before the decks were laid....	<i>September 1, 9, 15, 20, 24, 27, October 11, 22, 26, November 3, 19, 23, 25.</i>	
Date <i>✓</i>		4th. When the ship was complete, and before the plating was finally coated or cemented..	<i>December 4, 10, 28, 1881 January 15, 24, February 1, 3, 25.</i>	
No. <i>149</i> in builder's yard.		5th. After the ship was launched and equipped	<i>March 1, 2.</i>	

General Remarks (State quality of workmanship, &c.) *Workmanship and materials good*

This Iron Screw Steamer has been constructed in accordance with the Rules and the Scantlings and arrangements shown on the accompanying tracings including the amended sketch of midship section, submitted and approved please see Sect's letters dated 11th Mar, 13th May, and 25th Nov-80.

The Committee's requirements as stated therein have been complied with. A sketch of midship section for this vessel was submitted to the Com^{tee} on the 18th Dec and Sect's reply sent on the 20th Dec-1879 but on account of subsequent arrangements this midship section was cancelled at the request of the Builders.

Has a topgallant fore-castle, bridge house and short poop of the length stated below.

Cellular bottom all fore & aft as shown on tracings and the compartments tested with a head of water to height of load line and found tight.

3 Decked Rule top post *24' 0"* *34' 6"* *220 ft*
State if one, two, or three decked vessel, or if spar, or awning decked; and the lengths of poop, fore-castle, or raised quarter deck, and the length of double, or part double bottom.

How are the surfaces preserved from oxidation? Inside *Cemented to upper part of bilges and 3 coats of paint above* Outside *3 coats of paint.*

I am of opinion this Vessel should be Classed *100 A.1. ✱*

The amount of the Entry Fee ... £ *5 : 0 : 0* is received by me, *J. L. Dinnelle*

Special ... £ *63 : 4 : 0* *March 1881*
Certificate ... £ *0 : 0 : 0*

(Travelling Expenses, if any, £ *568 : 4 : 0*)
Committee's Minute *Tuesday March, 26th 1881.*

Character assigned *100 A.1.*
Lloyd's Register

2 iron decks
7/3/81