

# Steel IRON SHIP.

21562  
14 JUN 88

(Received at London Office)

No. 21562 Survey held at Newcastle Date, First Survey 9<sup>th</sup> Jan'y 1888 Last Survey 8<sup>th</sup> June 1888

On the Steamer "Gellivara" Schooner rigged

TONNAGE under Tonnage Deck 2585.40 OR TWO DECKED, THREE DECKED VESSEL, and SPAR, OR AWNING-DECKED VESSEL.

Master Thompson

Built at Wallsend on Tyne

When built 1888 Launched 7 May 1888

By whom built C. S. Swan & Hunter

Owners Anglo-Scandinavian Steamship Co. Ltd.

Residence 3 Victoria Street Westminster

Port belonging to London

Destined Voyage Gulf of Bothnia

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

Ditto of Third, Spar, or Awaiting Deck 18.28  
Ditto of Poop, or Raised Or. Dk. 3.98  
Ditto of House Chart on Deck  
Ditto of Forecasts

Gross Tonnage 2607.66

Less Crew Space 834.15

Register Tonnage as cut on Beam 1686.74

Less Engine Room 834.15

Register Tonnage as cut on Beam 1686.74

Register Tonnage as cut on Beam 1686.74

LENGTH on deck as per Rule 330 4 BREADTH Moulded 44 10 DEPTH top of Main Deck to Upper Deck Beams 14 10

Dimensions of Ship per Register, length, 332.5 breadth, 45.0 depth, 21.65 moulded depth 24.34 16.6

Flat Keel Plates, breadth and thickness 36 16 36 16 PLATES in Garboard Strakes, br'dth & thickness 59 12 36 12

From Garboard to upper part of Bilges 11 11 Of d'bling at Bilge, or increased thickness, and length applied 11 11

From up. prt of Bilge to l.r. edge of Sh'rstrake 11 11 Main Sheerstrake, breadth and thickness 42 13 40 13

Of d'bling at Sh' strk. & lng. applied 3/4 length 13 13 From M'n. to Spr. or Spar Dk. Sh'rstrake 13 13

Upper Spar Dk Sh'rstrake, br'dth & thickn's 12 12 Butt Straps to outside plating, breadth & thickness 10 19 10 17

Lengths of Plating 8 frame spaces 57 57 Shifts of Plating, and Stringers 2 x 2 frame spaces 2 2

Gunwale Plate on ends of Awaiting, Spar, or Upper Deck Beams, breadth and thickness 47 16 47 16

Angle Iron on ditto 4 1/2 x 4 1/2 x 12 4 x 4 x 9 Tie Plates fore and aft, outside Hatchways Steel deck

Diagonal Tie Plates on Beams No. of Pairs Flat of Upper, Spar, or Awaiting Dk. 3/4 length 7 7

How fastened to Beams 8 8 Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness 47 10 47 10

Is the Stringer Plate attached to the outside plating? Yes Angle Iron on ditto, No. 2 4 x 4 x 9 4 x 4 x 9

Tie Plates, outside Hatchways Steel deck Diagonal Tie Plates on Beams, No. of pairs Flat of Middle Deck do. do. Steel 7 7

How fastened to Beams Riveted Stringer Plates on ends of Lower Deck, Hold or Orlop Beams web frames and

Is the Stringer Plate attached to the outside plating? Yes Angle Iron on ditto, No. 2 4 x 4 x 9 4 x 4 x 9

Stringer or Tie Plates, outside Hatchways as per approved tracing of midship section & profile Flat of Lower Deck

Ceiling betwixt Decks, thickness and material 2 1/2 Pine in hold do. do. 2 1/2 Pine

Main piece of Rudder, diameter at head 8 3/4 7 3/4 do. at heel 3 3/4 3 3/4

Can the Rudder be unshipped afloat? Yes Bulkheads No. 6 No. per Rule 6

Thickness of 7/20 x 6/20 Height up to spar deck How secured to sides of ship Between double frames

Size of Vertical Angle Irons 8 x 3 x 7/16 angles with horizontal bars as sketch Are the outside Plates doubled two spaces of Frames in length? Yes

The FRAMES extend in one length from Tank side to spar deck Riveted through plates with 7/8 in. Rivets, about 7 apart.

The REVERSED ANGLE IRONS floors and frames extend Centre or middle line to main and to spar decks alternately

KEELSONS. Are the various lengths Plates and Angle Irons properly connected? Yes And butts properly shifted? Yes

PLATING. Garboard, double rivet to Keel, with rivets 1 in. diameter, averaging 4 ins. from centre to centre.

Edges of Garboards and 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 Bilge, worked carvel, double riveted; with rivets 7/8 in. diameter averaging 3 1/16 ins. from centre to centre.

Butts of all Strakes Bilge for 3/4 length, treble riveted with Butt Straps 4/20 x 5/20 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 7/16 ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 7/8 in. diameter, averaging 3 7/16 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 3/4 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted for 3/4 length amidships.

Butts of Main String Plate, treble riveted for 1/2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 3/4 length.

Breadth of laps of plating double riveting 6 1/2 x 6 Breadth of laps of plating in single riveting 6 1/2 x 6

Butt Straps of Keelsons, Strir and Tie Plates, treble, double or single Riveted? Throughout No. of Breasthooks, 6 Crutches, 3 x 2 transoms

What description of Iron used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c. Frames, Reverses bars & Beams by

Manufacturer's name or trademark. Norman, Long & Co. Plates by Corbett & Palmes & Iron by Stott & Co. malleable iron Co.

The above is a correct description. Builder's Signature, C. S. Swan & Hunter Surveyor's Signature, J. W. Scullard James Gibson

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

EDMUND TAYLOR & SON, Commercial and General Steam Engine, 15, Old Street, Goswell Road, London, E.C.

State clearly where plating is of alternate thickness - as distinguished from distributed thickness at ends of vessel.

If Iron Deck, state if whole or part, and if wood deck

Revised 1888

**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? *a very few*

Masts, Bowsprit, Yards, &c., are *of Steel & in good* condition, and sufficient in size and length. If of Iron or Steel give Scantling  
 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 Material, and if stamped with Maker's name.  
 State also Length and Diameter of Lower Masts and Bowsprit *Main and Fore masts with topmasts in one length, or Pole masts. Main 112' 0" x 23 1/4" diam. at deck; Foremast 108' 5" x 25 1/4" diam. at deck; double rivetted seams with 3/4 rivets; Plates 1 1/2" x 5/16" to 1 1/2" x 3/32" at head as per sketch. Lower Yard also of Steel & as per sketch & Secretary's letter 13 March/88*  
*Mastern of material Constt. Iron &c.*

NUMBER & LETTER for EQUIPMENT	SAILS.	CABLES, &c.	Fathoms	Inches	Test per Certificate	Inches per Rule	Machine where Tested and Number of Certificate	ANCHORS.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate	Weight req'd per Rule.	Machine where Tested and Number of Certificate
N <sup>o</sup> .		Chain	270	1 1/2	88 5/16	1 1/4	Machine 1. P. H. 14 W. 6524 x 5337	Bower Anchors	1	34.2.14	32.1.3.14	34.0.0	Machine 4. P. H. 14 W. 10420 x 10421 x 10422 x 10423 x 10424 x 10425 x 10426 x 10427 x 10428 x 10429 x 10430
	Fore Sails,	Iron Steam Chain	75	1 1/2	34 7/8	1 1/4	Machine 1. P. H. 14 W. 6524 x 5337		1	34.3.14	32.5.2.14	34.0.0	
	Fore Top Sails,	or Steel Wire			22 3/4				1	29.1.7	28.3.0.14	29.0.0	
	Fore Topmast Stay Sails,	or Hempen Strm Cable	100	4	Steel wire	4		Stream Anchor	1	11.1.14	13.5.0.0	10.3.0	
	Main Sails,	Towline, Hemp.	90	3	Steel wire	3		Kedge	1	5.3.14	8.2.3.7	5.2.0	
	Main Top Sails, and	or Steel Wire	90	8	Steel wire	8		2nd Kedge	1	2.2.14	5.1.2.0	2.2.0	
		Hawser			Steel wire								
		Warp			Steel wire								

Standing and Running Rigging *wire & hemp* sufficient in size and *good* in quality. She has *2* Long Boats and *2* others

The Windlass is *good* Capstan *good* and Rudder *good* Pumps *metal & good*

Engine Room Skylights.—How constructed? *On trunk casing* How secured in ordinary weather? *with thumb screws*

What arrangements for deadlights in bad weather? *Solid glass shutters & thick circular glass*

Coal Bunker Openings.—How constructed? *plate hatchways* How are lids secured? *Solid hatchways* Height above deck? *2' 6"*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *7 ports & 7 scuppers each side*

Cargo Hatchways.—How formed? *Iron plate coverings & Headledges*

State size Main Hatch *24' 0" x 14' 0"* Forehatch *16' 0" x 14' 0"* Quarterhatch *24' 0" x 14' 0" & 20' 0" x 14' 0"*

If of extraordinary size, state how framed and secured? *Deck plating in way of Hatchways 2c 3, 9 & 10 in the plans*

What arrangement for shifting beams? *2 deep web plates; 1 deep web and 3 fore & afters to each hatchway*

Hatches, If strong and efficient? *3 in solid*

Order for Special Survey No. *2048* 1st. On the several parts of the frame, when in place, and before the plating was wrought *1888, Jan'y 9. 13. 17. 18. 19. 23. 24. 30 Feb. 3*

Date *17 Feb'y 1888* 2nd. On the plating during the process of riveting *8. 16. 17. 20. 23. 24. 28. Mar. 1. 5. 9. 12.*

Order for Ordinary Survey No. *✓* 3rd. When the beams were in and fastened, and before the decks were laid... *17. 20. 22. 26. April 4. 11. 13. 16. 18. 23.*

Date *✓* 4th. When the ship was complete, and before the plating was finally coated or cemented... *26. 28. May 1. 2. 4. 5. 11. 15. 17. 18. 23. 25.*

No. *103* in builder's yard. 5th. After the ship was launched and equipped *30 June 1. 4. 5. 8*

State dates of letters respecting this case *2<sup>nd</sup> & 10<sup>th</sup> February & 13<sup>th</sup> & 14<sup>th</sup> March 1888*

**General Remarks** (State quality of workmanship, &c.) *This vessel has been built in accordance with the Rules for Steel Ships, and approved tracings. On the Spar deck principle, & with web frames and Longitudinals as shown on the tracings; The Longitudinals connected to webs with double bars, and an inner bar fitted to reverse bars as approved. On the cellular bottom system, and with additional longitudinal struts added to the Spar deck. The Spar Sheerstrake being doubled for 3/4 length its whole breadth and the Topsides strake made 1 1/2" and fitted with double Butt straps treble rivetted 3/4 length, & the outer strap quadruple rivetted for 1/2 length. It is fitted with quarter pillars for 1/2 lengths at alternate beams, and the Engine room Bulkheads are strengthened by a vertical plate in addition to the horizontal bars. Double bottom test to a head of water not less in height than the load line and proved satisfactory. The workmanship and materials are of a good description throughout. The*

State if one, two, or three decked vessel, or if spar, or awning decked; and the lengths of poop, bridge, forecabin, or raised quarter deck. (If double bottom, state particulars on separate form.)

How are the surfaces preserved from oxidation? Inside *Portland cement to upper* Outside *3 coats of paint*

I am of opinion this Vessel should be Classed *100 A.T. turn of Bilges & paint above. Both each side of double bottom in four holds, with wailes & one p. of paint cement*

The amount of the Entry Fee *£ 5 : - : -* is received by me, *James Gibson*

Special *£ 88 : 0 : 6* 13/6/88 - 18 -

(to be sent as per margin). Certificate *Ratio -* *FRIDAY 18 JUNE 1888*

(Travelling Expenses, if any, £ - - -)

Committee's Minute

Character assigned *100 A 1 Steel Spar OK*

*Lauch* *Subject to satisfy*

*td m/c* *Upon as to holding*

No. *21562*  
 No. in Survey held at  
 Reg. Book.

on the  
 Master *Thompson*  
 Engines made at *N*  
 Boilers made at  
 Registered Horse Power

ENGINES, &c.—

Description of Engines

Diameter of Cylinders *18*

Diameter of Screw shaft

Diameter of screw *12*

No. of Feed pumps *1*

No. of Bilge pumps *1*

Where do they pump from

No. of Donkey Engines

Suction, how

Are all the bilge suction pipes

No. of bilge injections *2*

How are the pumps worked

Are all connections with the

Are they fixed sufficiently

Are they each fitted with a

What pipes are carried to

Are all pipes, cocks, valves

Are the pipes, cocks, and

When were stern tube, m

the screw shaft tunnel

OILERS, &c.—

Number of Boilers *2*

Working Pressure *16*

Description of superheating

each boiler be worked

of square feet of fire

of each valve *11 1/2*

Do they fitted with casing

of boilers *16.5*

of rivet holes

age of strength of l

compensating rim

Outside diameter *36*

Greatest length between riv

Pitch of stays to ditto, sid

rules *161* Diameter

Pitch of stays to ditto

smallest part *2*

Greatest pitch of stays

plates, front

Diameter of Superheater o

Pitch of rivets

Distance between rings

rt of

Newcastle

Continuation of Report No. 21562 dated June 1888 on the

S.S. "Gellivara"

in deck

description of safety  
beam from main boilers can

butt strap

lap of plating 7 1/2

or washer

or butt

e of shell by rules 160

water tubes

for piston

air of top and

ts of corrugated

ing bolts &amp; top

at pump room

room outfit

his vessel

this district

d workman

attention

before the vessel proceeds on her present voyage.

classified

The plating in the flat of bottom secured at the Butts for 1/2 length  
amidships, with double Butt straps and treble rivetted.

James Gibson

Referring to the Builders letter attached hereto  
regarding the water-ballast tank within the Engine space, I beg to  
explain that, on re-testing the work in question after the machinery  
was fitted, it was found that several of the holding down Bolts  
were leaking a good deal, the machinery being fitted close down  
upon the inner bottom, which is doubled for the purpose, the bolts in  
question should, in my opinion, have been Lap screwed through the  
inner bottom in order to secure efficiency, in so far as water-tightness  
is concerned, but owing to a trade strike amongst the Engineers in  
this district, it appears doubtful whether this matter can receive  
workman attention before the vessel proceeds on her present voyage.

J. S.

Chas. R.

British & Foreign Shipping.