

# Spar, ~~or Awning~~ Dk. IRON OR STEEL STEAMER.

No. 2106

State if Report is also sent on the Machinery of the Vessel *Yes* *Model No 10246*

Port of *Middlesbrough* Date of completion of Report *23<sup>rd</sup> June 1897* Received at London Office

Survey held at *Middlesbrough* Date, First Survey *20<sup>th</sup> Nov 1896* Last Survey *23<sup>rd</sup> June 1897*

On the *Steel Screw Steamer "TAI-HOKU."* Rig *Schooner* (2 Masts.)

Master *C. Conradi.*

Year of Appointment *1896*

Built at *Middlesbrough*

When built *1897* Launched *2<sup>nd</sup> April*

By whom built *Sir Raylton Dixon & Co.*

Owners *Osaka Shosen Kaisha*

Managers

(Where necessary to be entered in Reg. Book.)

Residence *Osaka.*

Port belonging to *Osaka*

Destined Voyage *Antwerp to load & Surveyed while Building, Afloat, and in Dry Dock*

TONNAGE under Tonnage Deck... *2473.14*

Do. between Tonnage Dk. and 3<sup>rd</sup>, 4<sup>th</sup>, Spar or Awning Dk.

Total under Upper Dk. *86.08*

Do. of Poop *464.69*

Do. of Bridge House *53.61*

Do. of Forecasts *101.17*

Do. of Houses on Deck

Do. of excess of Hatchways

Do. above Crown of Room ...

Do. of Space ...

Do. of Crown of Room ...

FOR FEES... *3047.45*

Line Room *1198.45*

Navigation Spaces *11.51*

TONNAGE under Beam ... *1837.49*

SPAR, ~~AWNING OR PART AWNING-DECKED~~ VESSEL,

or a Vessel having a continuous Shade Deck.

CLASS 100 A1. "Spar Deck."

FEET.

Half Breadth (moulded) ... *21.40*

Depth from upper part of keel to top of Main Deck Beams *20.91*

Girth of Half Midship Frame (as per Rule) ... *36.93*

1st Number ... *79.24*

Length ... *327.91*

2nd Number ... *25983*

Proportions—Breadths to Length ... *7.67*

Depths to Length—Main Deck to top of Keel ... *15.68*

Feet.	Inches.	BREADTH—	Feet.	Inches.	DEPTH, top of Floors to Spar	Feet.	Inches.	Power of	Horse.	No. of Decks with flat laid
327	11	Moulded	42	9 1/2	Do.	25	3 1/2	Engines	560	2

Dimensions of Ship per Register, Length *330.0* breadth *43.2* depth *25.2* Spar *Awning* Dk. Moulded depth, ft. *20* ins. *0 1/2* To Main Dk. Round up of *110 1/2* ins. Beam, Main Dk.

## FRAMING.

	Inches in Ship.	Inches in Ship.	20ths in Ship.	Inches per Rule Or as Approved.	Inches per Rule Or as Approved.	20ths per Rule Or as Approved.
Angles, <del>on</del> <i>on</i> <del>Base</del> <i>Base</i> , for $\frac{1}{2}$ length amidships	5	3	8	5	3	8
" " at each end	5	3	7	5	3	7
Way of Double Bottoms at Solid Floors	3	3	8	3	3	8
" " at intermdt. Bkts.	✓	✓	✓	✓	✓	✓
of Frames from moulding edge to g edge, all fore and aft	24	✓	✓	24	✓	✓
ED FRAME, Angles	3 1/2	3	8	3 1/2	3	8
FRAMING, depth of girder	✓	✓	✓	✓	✓	✓
" depth and thickness of Floor Plate	✓	✓	✓	✓	✓	✓
" at mid-line for $\frac{1}{2}$ length amidships	✓	✓	✓	✓	✓	✓
Way of Engines and Boilers	✓	✓	✓	✓	✓	✓
Thickness at the ends of vessel	✓	✓	✓	✓	✓	✓
Depth at $\frac{1}{2}$ the half-bdth. as per Rule	✓	✓	✓	✓	✓	✓
Eight extended at the Bilges	✓	✓	✓	✓	✓	✓
BRACKETS, in Cell Dble Bottoms	44	✓	7	44	✓	7
" Distance apart	24	✓	✓	24	✓	✓
GIRDER, in Double bottom, depth and thickness	44	✓	9	44	✓	9
" Angles, Top	4	4	9	4	4	9
" " Bottom	6 1/2	4	9	6 1/2	4	9
ORDERS, number and thickness	8	✓	7	8	✓	7
Angles	3 1/2	3 1/2	7 1/2	3 1/2	3 1/2	7 1/2
PLATE, depth (exclusive of flange) and thickness	26	✓	8	26	✓	8
Angles	3 1/2	3 1/2	8	3 1/2	3 1/2	8
BOTTOM PLATING, breadth and thickness of Middle Line Strake	36	✓	9	36	✓	9
" thickness in Engine and Boiler space	8	✓	10	8	✓	10
" Remainder in Holds	7 1/2	✓	✓	7 1/2	✓	✓
Spar or Awning Deck, Single Angle, Bulb	8 1/2	✓	8	8 1/2	✓	8
" Angle, Plate or Tee Bulb	✓	✓	✓	✓	✓	✓
" on upper edge	✓	✓	✓	✓	✓	✓
" space	48	✓	✓	48	✓	✓
Main Deck, Single Angle, Bulb	8	3	11	8	3	11
" Angle, Plate or Tee Bulb	✓	✓	✓	✓	✓	✓
" Angles on upper edge	✓	✓	✓	✓	✓	✓
Average space	24	✓	✓	24	✓	✓
MS, Lower Deck, Single Angle, Bulb	✓	✓	✓	✓	✓	✓
" Angle, Plate or Tee Bulb	✓	✓	✓	✓	✓	✓
" Angles on upper edge	✓	✓	✓	✓	✓	✓
Average space	✓	✓	✓	✓	✓	✓
MS, Hold, or Orlop, Plate or Tee Bulb	✓	✓	✓	✓	✓	✓
" Angles on upper edge	✓	✓	✓	✓	✓	✓
Average space	✓	✓	✓	✓	✓	✓
MS, Poop Deck, Angle, Bulb, Angle, Plate	7	✓	7	7	✓	7
" Tee Bulb	✓	✓	✓	✓	✓	✓
" Angles on upper edge	✓	✓	✓	✓	✓	✓
Average space	48	✓	✓	48	✓	✓
MS, Bridge Deck, Angle, Bulb, Angle, Plate	7	✓	7	7	✓	7
" Tee Bulb	✓	✓	✓	✓	✓	✓
" Angles on upper edge	✓	✓	✓	✓	✓	✓
Average space	48	✓	✓	48	✓	✓
MS, Forecastle Deck, Angle, Bulb, Angle, Plate	8	✓	8	8	✓	8
" Tee Bulb	✓	✓	✓	✓	✓	✓
" Angles on upper edge	✓	✓	✓	✓	✓	✓
Average space	48	✓	✓	48	✓	✓

## FORGINGS AND CASTINGS.

	Inches in Ship.	Inches per Rule Or as Approved.
KEEL, Bar or Side Plates, depth and thickness	Flat plate	10 x 2 1/2
STEM, moulding and thickness	10 x 2 1/2	10 x 2 1/2
STERN-POST for Rudder do. do.	10 x 6	10 x 6
" " for Propeller	10 x 6	10 x 6
MAIN PIECE of Rudder, diameter at head	9	9
" do. at heel	7 x 6	7 x 6

RUDDER, how constructed *Single Plate with forged iron frame*  
Can the Rudder be unshipped afloat? *Yes*

## KEELSONS AND STRINGERS.

	Inches in Ship.	Inches in Ship.	20ths in Ship.	Inches per Rule Or as Approved.	Inches per Rule Or as Approved.	20ths per Rule Or as Approved.
CENTRE LINE KEELSON, Vertical Plate above floors, Through Plate, or Intercoastal Plate	✓	✓	✓	✓	✓	✓
" Rider Plate	✓	✓	✓	✓	✓	✓
" Bulb Plate to Intercoastal Keelson	✓	✓	✓	✓	✓	✓
" Horizontal Plates on Floors	✓	✓	✓	✓	✓	✓
" Angles	✓	✓	✓	✓	✓	✓
SIDE KEELSON, Angles	✓	✓	✓	✓	✓	✓
" Bulb or Plate above floors, for length	✓	✓	✓	✓	✓	✓
" Intercoastal Plate, for length	✓	✓	✓	✓	✓	✓
" Attached to outside plating with Angle	✓	✓	✓	✓	✓	✓
BILGE KEELSON, Angles	✓	✓	✓	✓	✓	✓
" Bulb or Plate above floors, for length	✓	✓	✓	✓	✓	✓
" Intercoastal Plate, for length	✓	✓	✓	✓	✓	✓
" Attached to outside plating with Angle	✓	✓	✓	✓	✓	✓
BILGE STRINGER Angles	✓	✓	✓	✓	✓	✓
" Bulb Plate, for length	✓	✓	✓	✓	✓	✓
" Intercoastal Plate, for length	✓	✓	✓	✓	✓	✓
" Attached to outside plating with Angle	✓	✓	✓	✓	✓	✓
SIDE STRINGER Angles	✓	✓	✓	✓	✓	✓
" Bulb or Intercoastal Plate, for length	✓	✓	✓	✓	✓	✓
" Attached to outside plating with Angle	✓	✓	✓	✓	✓	✓

Spar, <del>on</del> <i>on</i> <del>Deck</del> <i>Deck</i> Stringer Plates, breadth and thickness	47	9	47	9
" Angle on ditto	4 x 4	9	4 x 4	9
" Tie Plates, fore and aft, outside Hatchways	Deck plating increased in thickness in way of openings	✓	✓	✓
" Diagonal Tie Plates, No. of prs.	7 1/2	✓	7 1/2	✓
" Deck, <del>Iron</del> <i>Steel</i> , for <del>Whole</del> <i>Whole</i> lng.	3 1/2	✓	3 1/2	✓
" Wood Deck. Material & thickness	3 1/2	✓	3 1/2	✓
Main Deck Stringer Plate, breadth & thickness	47	10	47	10
" Angles on ditto, No.	4 x 4	9	4 x 4	9
" Tie Plates, outside Hatchways	Deck plating increased in thickness in way of openings	✓	✓	✓
" Diagonal Tie Plates, No. of prs.	7 1/2	✓	7 1/2	✓
" Deck, <del>Iron</del> <i>Steel</i> , for <del>Whole</del> <i>Whole</i> lng.	3 1/2	✓	3 1/2	✓
" Wood Deck. Material & thickness	3 1/2	✓	3 1/2	✓
Lower Deck Stringer Plates, br'dth & thck'n's	✓	✓	✓	✓
" Angles on ditto, No.	✓	✓	✓	✓
" Tie Plates, outside Hatchways	✓	✓	✓	✓
" Deck, <del>Material</del> <i>Material</i> and thickness	✓	✓	✓	✓
Hold, or Orlop Stringer Plate, br'dth & thck'n's	✓	✓	✓	✓
" Angles on ditto, No.	✓	✓	✓	✓
" Tie Plates, outside Hatchways	✓	✓	✓	✓
" Deck. Material and thickness	✓	✓	✓	✓
Poop Deck Stringer Plate, breadth & thickness	30	7	30	7
" Angles on ditto	3 x 3	6	3 x 3	6
" Tie Plates	12	7	12	7
" Deck. Material and thickness	Deck 2 1/2	✓	2 1/2	✓
Bridge Deck Stringer Plate, br'dth & thickness	41	9	41	9
" Angle on ditto	3 1/2 x 3 1/2	8	3 1/2 x 3 1/2	8
" Tie Plates	20	8	20	8
" Deck. Material and thickness	Deck 2 1/4	✓	2 1/4	✓
Forecastle Deck Stringer Plate, br'dth & th'kns	30	7	30	7
" Angle on ditto	3 x 3	6	3 x 3	6
" Tie Plates	12	7	12	7
" Deck. Material and thickness	Deck 3	✓	3	✓

\* If Iron or Steel Deck, state if whole or part, and if wood deck is laid thereon.

	Number.	Thickness	Horizontal.	Vertical.	Spacing	Single or Double Frames.	Height up
BULKHEADS.	In Vessel.	Per Rule.	Inches.	Inches.	Inches.	Inches.	Inches.
W. T. BULKHEADS	5	✓	2 1/2	8 x 3 1/2	5 x 3 1/2	30	Double Spar Dk.
PARTITION	And otherwise stipulated by owner's instructions and	✓	✓	✓	✓	✓	✓
LONGITUDINAL	and plate as stipulated by Rules.	✓	✓	✓	✓	✓	✓

Are the outside Plates doubled two spaces of Frames in length? *Yes*



STRAKES.	PLATING.						RIVETING.									
	AS IN SHIP.			PER RULE OR AS APPROVED.			EDGES.					BUTTS.				
	AMIDSHIP.	FORWARD.	AFT.	AMIDSHIP.	FORWARD.	AFT.	Single or Double.	Breadth of Lap.	Rivets.	Double or Treble and for what Length.	Rivets.	STRAPS.	IF LAPPED.	For what Length.	Feet.	
FLAT PLATE KEEL	36	16	12	36	16	12	Double	6	1	4	Double	1	3 1/2	19	20	
GARBOARD OR A STRAKE	40	12	12	40	12	12		6 5/8	1 3/8	4 3/8		3/4	3 1/4		9	whole
B "	54	10	9	54	10	9		5 1/4	3/8	3 3/8						
C "	54	11	9	54	11	9										
D "	60	11	10	60	11	10										
E "	52	12	9	52	12	9										
F "	45 1/2	12	9	45 1/2	12	9										
G "	54	11	9	54	11	9										
H "	46	12	9	46	12	9										
J "	54	11	9	54	11	9										
K "	42	12	10	42	12	10										
L "	60 1/2	11	9	60 1/2	11	9										
M "	40	14	10	40	14	10										
N "	46	9		46	9											
O "	51	10		51	10											
P "																
Q "																
DOUBLING of Flat Plate Keel																
Length of Bilges																
Length of Sheerstrakes																
POOP SIDES																
BRIDGE SIDES																
FORECASTLE SIDES																

Manufacturer's name or trade mark of the Iron or Steel (state process of manufacture of Steel) used for Frames, Floors, Beams, Keelsons, Tie and Stringer Plates, Plating, &c. All steel by *Cammis Martin Process.*

*Consitt, Bolehow Vaughan & Co.*  
Steel Co. of Scotland, Glasgow, Middlesbrough, &c.  
Messrs. S. & C.  
J. Hall & Co.

Spar *and* Butts, treble riveted for *1/2* length amidship.  
Stringer Plate (Straps, *single* double *overlapped* for *1/2* length amidship.  
Main Stringer Plate (Butts, treble riveted for *1/2* length amidship.  
Butts of Bilge & Side Stringers and Tie Plates, treble or double riveted? *double*  
Inner Bottom Plating, riveting of Edges *Double* *Single* Butts *Double*  
Centre Girder Butts, *Double* riveted *Keelson* Butts, *Double* riveted.  
Frames, riveted through Plates with *3/8* in. Rivets, about *6* apart.  
Rivets, state whether Iron or Steel *Iron*.

FRAMES extend in one length from Centre to tankside and from tankside to gunwale.  
REVERSED FRAMES on floors and frames extend from Centre to tankside and from tankside to Spar Deck, and to Spar & forecastle decks alternately.

#### MASTS, SPARS, &c.

	Material.	Total Length	DIAMETER AND THICKNESS.				No. of Plates in round.	ANGLES.		RIVETING.	
			At Partners.	Heel.	Hounds.	Head.		Number.	Size.	Seams.	Butts.
LOWER MASTS...	Fore	Steel 56-0	23 x 3/16	17 x 5/16	18 x 5/16	14 x 5/16	1	✓	✓	Single	Double
	Main	80-0	23 x 3/16	17 x 5/16	18 x 5/16	14 x 5/16	1	✓	✓		
	Mizen										
Bowsprit											
Rigging, Material and Size, Shrouds											
Sails.	One complete	Suit of									

#### EQUIPMENT No. 33449 LETTER V

#### ANCHORS.

Number of Certificate.	Anchors.	WEIGHT, EX. STOCK			WEIGHT OF STOCK			TEST, PER CERTIFICATE			WEIGHT REQ. BY RULE			Description of Anchor.	Makers.	Where and when tested and Superintendent.
		Cwts.	qrs.	lbs.	Cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Cwts.	qrs.	lbs.		
31286	1st Bower	39	0	7	10	0	7	35	4	0	7	38	0	0	Rodgers Patent	Hartshorn & Co. L.C. 12-3-97. Welford.
31290	2nd "	36	1	0	9	0	7	33	5	2	14	38	0	0	"	"
31289	3rd "	33	2	0	8	1	14	31	5	0	0	32	1	0	"	"
	Collective weight	108	3	7				108	1	0						
31287	Stream	11	2	0	2	3	14	13	7	2	0	11	2	0	Rodgers Patent	Hartshorn & Co. L.C. 12-3-97. Welford.
31288	Kedge	5	3	0	1	1	21	8	0	2	14	5	3	0	"	"
	2nd Kedge															

#### CHAIN CABLES.

#### HAWSERS AND WARPS.

Number of Certificate.	Fathoms.	Size.	Test per Certificate Tons.	WEIGHT OF CHAIN CABLE		Fathoms and Size Per Rule.	Description.	Makers of Cables.	When and where tested, and Superintendent.	Material.	Fathoms.	Size.	Breaking Test of Steel Wire Towline.	Fathoms and Size Per Rule.	
				Supplied.	Per Rule.										
12754	270	2	100 3/4 72	543-1.5	555-3-0	270 x 2	2 1/2	Hartshorn & Co. L.C. 10-2-97. Welford.		TOWLINE Steel	120	4	33	120 x 4	
										HAUSEP	"	90	4 1/2	39	90 x 3 1/2
										WARP	"	90	3 1/4	22	90 x 2 1/4
Stream Chain } Steel Wire ... }	90	4 1/2	39			90 x 4 1/2									

Boats *Four Sigsbee and four others*  
Pumps, Number *Eight* deck pumps (tested). Diameter of Barrel and Tail Pipe *Barrels 5. Tail pipes 2 1/2*  
Windlass is *Iron* Capstan  
Engine Room Skylights. How constructed? *Deck*  
What arrangements for deadlights in bad weather? *Strong Teak shutters and bullrogs*  
Coal Bunker Openings. How constructed? *Plates and angles* How are lids secured? *ships sides*  
Number of Scuppers, and number and dimensions of Freeing Ports, &c. *On each side, 6 scuppers, 5 freeing ports.*  
Ceiling in Holds, thickness and material *2 1/2 pine* Ceiling 'tween Decks, thickness and material *2 pine*  
Cargo Hatchways. How formed? *Plates and angles* Hatches, if strong and efficient? *yes*  
State size No. 1 Hatch (Forward) *12-0 x 10-0* No. 2 Hatch *20-0 x 14-0* No. 3 Hatch *20-0 x 12-0* No. 4 Hatch  
Number of Web Plates, Shifting Beams and Fore and Afters to each Hatch *One web plate and three fore and afters in Hatches*  
No. 2 and 3. *Three fore & afters in No. 1 Hatch* No. of Breasthooks *Eight* No. of Crutches *2 + dup floors.*  
Bulwarks, height above deck and description *4-1/2 feet* Main Rail, material and size *6 x 3 x 30, built angle*  
The above is a correct description.  
Builder's Signature (name only) *FOR SIR RAYLTON DIXON & COMPANY, LIMITED.* Surveyor's Signature *Allison B. Wilson.*  
Surveyor to Lloyd's Register of British & Foreign Shipping.

Correspondence.—State dates and initials of letters respecting this case (Reference should be made to any correspondence connected with this case) *4th, 6th, 9th Nov. 1st Dec. 1896. 10th & 25th Jan. 7, 27th May, 17th June 1897 (M.) 19th Feb. 1897 (E.)*

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed.*

Is the riveted work properly closed? *yes*

Are the liners between the frames and plates solid single pieces? *yes*

to plate, &c., conform well to each other? *yes*

from the faying surfaces? *yes*

Are the butts of Plating, Stringers, &c., properly shifted and strapped? *yes*

General Remarks (State quality of workmanship, &c.)

*This vessel has been built in accordance with the Rules and the plans approved by the Committee. The whole of the material used in the hull is of good malleable quality and the workmanship has been well executed throughout. The decks, waterways, deck pumps, tunnel, watertight doors and stowage gear are in good order.*

List of plans &c. accompanying this Report viz. Midship Section, Profile, Amended Profile, Pumping arrangements, Through beams and deck plating in way of Machinery Space, Bridge deck plating in way of the Machinery Space, Rudder, Report on Ships fittings.

The Surveyor should state the Number of Report and Name of any Sister Vessel.

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop *30-0* ft., R.Q.D. or Break *✓* ft., Bridge Dk *15-6* ft., F'castle *44-5* ft. (in feet and tenths). When the Poop is joined to the B.D., this should be distinctly stated *✓*

No. and Material of Decks (if Iron or Steel) and whether wholly or partially covered with wood, and No. of tiers of Beams (this information is to be given as it should appear in the Register Book) *2 D (all, 1 W) 2 to B and wire frames.*

Official No. *✓*; Signal Letters *✓*

How are the surfaces preserved from oxidation? Inside *Portland Cement & Paint* Outside *Paint*

PARTICULARS OF WATER BALLAST.—State whether the Double bottom is constructed on the cellular system *Cellular D.B.*

Where fitted.	Length.		Water Capacity.	Where fitted.	Length.		Water Capacity.
	Feet.	Tons.			Feet.	Tons.	
Double bottom, aft.	58-0	99-0	Fore peak tank,				36-6
Double bottom, forward,	114-0	181-5	After peak tank,				22-0
Double bottom, under Engines and Boilers,	86-0	207-3	Midship deep tank,				
Double bottom, if under Engines only, <i>✓</i>			Other tanks, if fitted, <i>✓</i>				
Double bottom, if under Boilers only, <i>✓</i>			(If necessary, furnish further information by sketch.)				

State whether the above have been tested as required by the Rules *Tested as per Rules.*

Order for Special Survey No. <i>226</i>	1st. On the several parts of the frame, when in place, and before the plating was wrought	<i>1896 Jan 20 24 27 Feb 4 9 11 14 17 21 29 31 1897 Jan 8 13 14</i>
Date <i>11/11/96</i>	2nd. On the plating during the process of riveting	<i>18 20 Feb 3 8 11 15 16 17 22 23 26 Mar 1 2 4 10 11 12 15 18 22 24 26</i>
Order for Ordinary Survey No. <i>✓</i>	3rd. When the beams were in and fastened, and before the decks were laid	<i>24 30 Apr 1 May 4 10 13 14 21 25 27 28 June 1 4 9 11 14 15 16 19</i>
Date <i>✓</i>	4th. When the ship was complete, and before the plating was finally coated or cemented	<i>21 23</i>
No. <i>444</i> in builder's yard	5th. After the ship was launched and equipped	
	Total No. of Visits	<i>54</i>

The amount of Entry Fee.....£ *5* : : :  
Special Survey Fee ...£ *101* : : :  
Travelling Expenses, if any £ : : :  
Fees applied for, *23-6-1896*  
Received by me, *R.H.*

Certificate to be sent to

I am of opinion this Vessel should be Classed *100 A1, Steel, "Spar Deck".*

With, or without Freeboard, as condition of Class

*Allison B. Wilson.*  
Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute *THUR, 24 JUN 1897*

Character assigned *100 A1, Steel Spar Deck.*

*2 mcs 6, 9 1/2*  
*Rec. light*  
*1 Dk (Stl.) + Spar Dk. (Stl. Teak &)*  
*+ Wab frames*

*Ample*