

## STEEL STEAMER or MOTORSHIP.

Received at London Office 15 SEP 1930

State if Report has been sent on the Freeboard of the Vessel

State if Report is sent on the Machinery of the Vessel *yes*Date of completion of report *9th of September 1930* Port of *Hamburg* No. *19522*  
Survey held at *Hamburg* Date First Survey *31st January 1930* Last Survey *1st September 1930*  
On the (State if Machinery fitted Aft and (Single, Twin or Triple Screw) *Steel Twin Sc. "KARJA KNUTSEN"*State Type (Full Scantling, Complete Superstructure) *Full Scantling, longitudinal framing*State Type of Erections *Pop, Bridge and Forecastle.*

TONNAGE under Tonnage Deck...

CLASS *+ 100 A1.*State if with freeboard as condition of Class *No.*Built at *Hamburg*

Do. of space or spaces between Tonnage Dk. and Upper Dk.

Length from fore part of stem to after part of stern post on summer L.W.L. See Sec. 3 (1a) *L 470.0*Launched *30th August* Yard No. *488.*

Total

Breadth (greatest moulded) *B 64.25*Builders *Glohn & Soss, Hamburg.*

Gross Tonnage

Depth, at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c) *D 35.33*Owners *Knutson, Knut, O. A. S.*

Register Tonnage

1st Longitudinal Number (L x D) *= 16605*Managers *v*

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

2nd Numeral L x (B + D) *= 46802*Residence *Hangesund, Norway.*

REGISTERED DIMENSIONS. FEET.

Framing Depth "d," at middle of length. See Sec. 3 (1d) *v*Port of Registry *Hangesund.*

Length

Proportions—Depth to Length—Uppermost continuous deck to top of keel *13.3*

If surveyed while building, afloat, or in dry dock

Breadth

Do. Long Bridge to top of keel *v**While building, on stocks & afloat.*

Depth

Draught Moulded

## FRAMES, DOUBLE BOTTOM AND BEAMS.

	mm IN SHIP.	Any Departure from Approved Plans to be Noted.	mm IN SHIP.	Any Departure from Approved Plans to be Noted.
FRAMES, Spacing amidships	SEE LONG. FRAM.		Bracket Floors, Frame	<i>v v v</i>
" " from 1/2 length to Collision bulkhead. IN WAY OF DEEPTANK	<i>610</i>		" " Reversed Frame	<i>v v v</i>
" " in peaks	<i>610</i>		" " Vertical Struts	<i>v v v</i>
DE FRAMING.			Centre Girder, depth and thickness	<i>2130-1690x12-14</i>
Frame Amidships, Angle, [ or [	SEE LONG. FRAM.		" " top Angles	<i>90 90 13</i>
" " Extends up to	<i>u</i>		" " bottom Angles	<i>130 130 145</i>
Reversed Frame Amidships, Angle	<i>u</i>		Side Girders, No. each side and thickness	<i>2 172</i>
" " Extends up to	<i>u</i>		Margin Plate depth (excl. of flange) and thickness	<i>1150-650x135</i>
Depth of Framing Girder	<i>u</i>		" " Vertical Angle to Tank side Bracket abaft 1/2 len. from stem	ENGINE SEATINGS.
Frames in Uppermost Continuous 'tween Decks, Angle, [ or [	<i>u</i>		" " Vertical Angle to Tank side Bracket forward 1/2 len. from stem	<i>u</i>
" " Second 'tween Decks, Angle, [ or [	<i>u</i>		" " Gussets, spacing and scantling abaft 1/2 len. from stem	<i>u</i>
" " Third " " " "	<i>u</i>		" " Gussets, spacing and scantling forward 1/2 len. from stem	<i>u</i>
FRAMING IN PEAKS, <i>AND DEEPTANK FORM.</i>	<i>230 90 11.</i>		Tank Side Brackets, height above base line at toe of Frame and thickness	<i>u</i>
Diameter and Spacing of Rivets through Frame and Shell Plating amidships	<i>v</i>		INNER BOTTOM PLATING.	
State if Frame Joggled	<i>v</i>		Breadth and thickness of Middle Line Strake	<i>2586 x 13.5</i>
FRAMING ARRANGEMENTS (Sec. 7), state system and particulars	<i>3 PLATE STRINGER 980x9. 3 TIERS OF BEAMS 6430x90x12.5 3 WEB FRAMES. FORM. HOLD</i>	<i>suplens</i>	Thickness of remainder in <i>WALLS MOTOR SPACE</i>	<i>13.5</i>
STRENGTHENING OF BOTTOM FORWARD. State Particulars	<i>DOUBLE BOTTOM FRAMES IN WAY OF DEEPTANK MIDSHIP THICKNESS OF 3 BOTTOM STRAKES CARRIED THROUGH 2 EXTRA SIDE GIRDER</i>		Are Rule requirements complied with regarding increases of scantlings in way of double bottom in E. & B. space <i>and providing in</i>	<i>YES.</i>
DOUBLE BOTTOM.			BEAMS.	
Frames, Depth and thickness at mid-line in <i>WALLS DEEPTANK</i>	<i>990 x 10.5</i>		Uppermost Continuous Deck, amidships in Wells, Angle, [ or [	SEE LONG. FRAM.
Height of Brackets at side above base line at toe of frame	<i>v</i>		" " in way of Bridge, Angle, [ or [	<i>u</i>
Middle Line <i>WALLS, DEEPTANK, BULKHEAD &amp; AIR</i>	<i>11.5-7.5</i>		Spacing	<i>u</i>
" " Through Plate or Intercoastal Plate	<i>v</i>		Second Deck, amidships, Angle, [ or [	<i>u</i>
" " Foundation Plate on Floors	<i>v</i>		Spacing	<i>u</i>
" " Flat Plate Keel Angles	<i>100 100 13</i>		Third Deck, amidships, Angle, [ or [	<i>u</i>
Keelsons, No. each side	<i>2</i>		Spacing	<i>u</i>
" thickness of Intercoastal Plate	<i>10.5</i>		Fourth Deck, amidships, Angle, [ or [	<i>u</i>
" Angles	<i>150 75 10</i>		Spacing	<i>u</i>
DOUBLE BOTTOM. IN WAY OF ENGINE SPACE.			Poop Deck, <i>Angle, &amp; or [</i>	<i>200 75 10.</i>
Solid Floors, thickness and spacing	<i>11-13 650-685</i>		Spacing	<i>610-774.</i>
" " Are Frame and Reversed Frame joggled?	<i>YES.</i>		Bridge Deck, Angle, [ or [	SEE LONG. FRAM.
Bracket Floors, breadth and thickness at middle line	<i>v v v</i>		Spacing	<i>u</i>
" " breadth and thickness at margin plate	<i>v v v</i>		Forecastle Deck, <i>Angle, &amp; or [</i>	<i>200 90 13 200 75 9 610-725</i>
			Spacing	<i>u</i>



## PILLARS AND DECKS.

	mm. IN SHIP.			Any Departure from Approved Plans to be Noted.		mm. IN SHIP.			Any Departure from Approved Plans to be Noted.
<b>PILLARS, No. of Rows.....</b>	✓	✓	✓		Stringer Plate, breadth and thickness in way of Bridge .....	✓	✓	✓	
"    in 'tween Decks, Size and Spacing.....	✓	✓	✓		Thickness of Plating abreast Deck openings in way of Wells .....	✓	✓	✓	
"    "    "    "    "	✓	✓	✓		Thickness of Plating abreast Deck openings in way of Bridge .....	✓	✓	✓	
"    in Holds    "    "	✓	✓	✓		Thickness of Plating <del>within line of openings</del> .....	12 2	-	8 22	✓
"    "    "    "    "	✓	✓	✓		If Sheathed, material and thickness .....	✓	✓	✓	
<b>Centre Line Bulkhead.</b>					<b>Third Deck.</b>				
Stiffeners and Spacing.....	280	90	12		Stringer Plate, breadth and thickness.....	✓	✓	✓	
	TO 180	75	9.5		If Plated, state thickness.....	✓	✓	✓	
Plating, thickness of .....	14.0	-	11.5		<b>Fourth Deck.</b>				
<b>STRINGERS AND DECKS.</b>					Stringer Plate, breadth and thickness.....	✓	✓	✓	
<b>Uppermost Continuous Deck.</b>					If Plated, state thickness .....	✓	✓	✓	
Stringer Plate, breadth and thickness <del>in Wells</del> .....	1250	x	20		<b>Poop Deck.</b>				
"    "    "    "    in way of Bridge.....	1250	x	25		Stringer Plate, breadth and thickness .....	8.5			
"    Angle <del>in Wells</del> .....	150	150	20		Plating, Sheathing, material and thickness ...	6.5	WOOD SHEATHED.		
Thickness of Plating abreast Deck openings in way of Wells .....	✓	✓	✓		<b>Bridge Deck.</b>				
Thickness of Plating abreast Deck openings <del>in way of Bridge</del> .....	20.0	-	12.0		Stringer Plate, breadth and thickness.....	100	x	11	
Thickness of Plating within line of openings...	20.0	-	12.0		Plating, Sheathing, material and thickness ...	7.0	WOOD SHEATHED.		
If Sheathed, material and thickness .....	✓	✓	✓		<b>Forecastle Deck.</b>				
<b>Second Deck.</b>					Stringer Plate, breadth and thickness .....	9.5			
Stringer Plate, breadth and thickness <del>in Wells</del> ...	1600	x	12		Plating, Sheathing, material and thickness ...	9.5	-	9.0	

## SHELL PLATING.

SCANTLINGS.					RIVETING.							
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED.	EDGES. State if jogged? <i>No.</i>			BUTTS.			
	AMIDSHIPS.		FORWARD.	AFT.		SINGLE OR DOUBLE.	RIVETS.		No. OF ROWS OF RIVETS.	RIVETS.		STRAPPED OR LAPPED.
	Breadth.	Thickness.	Thickness.	Thickness.			Diam.	Spacing cr. to cr.		Diam.	Spacing cr. to cr.	
	<i>width mm.</i>	<i>width mm.</i>	<i>width mm.</i>	<i>width mm.</i>		<i>width mm.</i>	<i>width mm.</i>		<i>width mm.</i>	<i>width mm.</i>		
FLAT PLATE KEEL .....	1330	25.5	20.5	20.5		DOUBLE	25	100	STRAPPED-3 LAPPED-4	28	100	ENDS LAPPED
„ DBLG. (if any)	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
BOTTOM PLATING, No. of Strakes ..... 4.....	1830 2100	18.0	18.0	14.5		DOUBLE	22	88	4 AT ENDS 3	22 22	90 80	LAPPED.
BILGE PLATING, No. of Strakes ..... 2.....	2010 1750	18.0	15.0	14.5		„	22	88	4 AT ENDS 3	22 22	90 80	„
SIDE PLATING, No. of Strakes ..... 3.....	1830 2010	17.5	13.0	14.0	<i>no Indorsed rules</i>	ONE ROW ONE ROW	22 25	88 88	4 AT ENDS 3	22 22	90 80	„
UPPER DECK, Sheer-strake <i>in Wells</i> .....	1400	25.5	13.0	12.0		„	25	100	STRAPPED-3 LAPPED-4	28 25	126 100	STRAPPED ENDS LAPPED.
UPPER DECK, Sheer-strake in Bridge ...	1400	29.0	✓	✓		„	25	100	3.	28	126	STRAPPED.
STRAKE BELOW Sheer-strake <i>in Wells</i> .....	2000	20.5	13.0	12.0	{ UPPER EDGE DOUBLE LOWER EDGE ONE ROW	25 25	100 88	4 AT ENDS 3	22 22	90 80	LAPPED.	
STRAKE BELOW Sheer-strake in Bridge ...	2000	20.5	✓	✓	{ UPPER EDGE DOUBLE LOWER EDGE ONE ROW	25 25	100 88	4	22	90	„	
POOP SIDE PLATING .....	✓	10.5	✓	✓		SINGLE	22	88	1 x 2	22	80	„
BRIDGE SIDE PLATING ...	✓	13.0-14.0	✓	✓		„	22	88	2 x 3	22	80	„
FOREC'TLE SIDE PLATING	✓	11.0	✓	✓		„	22	88	1.	22	80	„

## WATERTIGHT BULKHEADS.

**Total No. of W.T. BULKHEADS in Vessel—**

Extending to Upper Deck (Sec. 3 c).....16.

Deck next below 1.

As per Rule \_\_\_\_\_ YES.

FORGINGS and CASTINGS.

	Casting or Forging.	Scantlings.	Maker's Name.	Any departure from approved plans to be noted.
<b>KEEL, Bar</b> .....	FLAT KEEL PLATE.			
<b>STEM</b> .....	FORGING	265x70	GUTHOFFEN. HUTTE OBERN. BLOHM & VOSS	
<b>STERN FRAME</b> { Propeller Post .....	✓	✓	✓	
{ Rudder „ .....	CASTING	290x86	BLOHM & VOSS.	
<b>RUDDER—AxD</b> .....	2287.			
<b>Speed of Vessel</b> .....	11.5 Km.			
<b>RUDDER</b> mainpiece at head ...	3482 φ	FORGING	HANIEL & LUEG, DUSSELDORF.	
„ „ heel ...	2602 φ	„		
„ how constructed .....	ORDINARY RUDDER.			
„ double or single plate .....	SINGLE PLATE 2952.			
„ coupling, vertical or horizontal .....	HORIZONTAL. 6 COUPLING BOLTS 4".			

## STEEL.

Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture) S. M. Open Hearth process.

Plates: Gutehoffnungshütte Oberhausen, Mitteldutsche Stahls. Drauzenbürg, Vereinigte Stahls. Düsseldorf, Joesigwerk, O. S. Mannesmann-  
röhrenwerke, Lückingen. - Profile: Gutehoffnungshütte Oberhausen, Vereinigte Stahls. Werke, Hoerder Verein. - Piers: Fr. Hünke, Lönne,  
Has the Steel been tested as required by the Rules? YES. (Altkna 1/4 W. G. W. Gahlen, Ratingen, Fr. Groppe, Rheinhausen, Düsseldorf  
Eisenbahntechnikschicht, Barmen)

Has the Steel been tested as required by the Rules? YES.







GENERAL REMARKS—(The Surveyor should state the Number of Report and Name of any Sister Vessel. Plans showing Vessel as built should be forwarded and a List of the Plans should be embodied.)

This vessel has been made at Works approved and tested by the Society's Surveyors in accordance with the Rules.

anchors and chain cables have been compared with the certificates and found in order.

The approved plans are retained in this Office for the Sister Vessel No. 489.

The vessel has been towed to Gothenburg for installation of Machinery. The tonnage measurements will be carried out at Gothenburg and freeboard assigned and in addition it remains to lay wood decks and complete the wood work outfit, masts & rigging, also to supply the equipment of steel wire ropes, hawsers and ways.

The Gothenburg Surveyors have been advised accordingly.

4 Tonnage certificates attached.

Particulars of Drop Test of Cast Steel Anchors, viz.:— Weight, Surveyor's Initials, Number of Certificate, Date of Test.	1st Bower	Head 51.2.14. lbs. drop test 12 feet. Mr. 7917. Disseldorf. 13.5.30. Bug.
	"	Shank 23.1.16. " " " 12 " " Mr. 584. " " " " "
	2nd "	Head 51.3.10. " " " 12 " " Mr. 7918. " " " " "
	"	Shank 22.3.19. " " " 12 " " Mr. 587. " " " " "
3rd "	"	Head 51.0.14. " " " 12 " " Mr. 7916. " " " " "
	"	Shank 22.3.27. " " " 12 " " Mr. 569. " 29.4.30. Hawsers.

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop 99.0 ft., R.Q.D. V ft., Bridge 30.4 ft., Forecastle 46.0 ft. (in feet and tenths). When the Poop is joined to the B.D., this should be distinctly stated No.

No. and Material of Decks (this information is to be given as it should appear in the Register Book) One steel deck. 2nd deck fore & aft.

Official No. ; Signal Letters Is bottom of Vessel coated with cement yep. Cem. if not give particulars of composition Cargo tanks, cofferdams & oil fuel tanks not coated, Fore & after peak & F.W. tanks cement.

PARTICULARS OF WATER BALLAST.—

Where Fitted.	*Length.	Water Capacity.	Where Fitted.	*Length.	Water Capacity
	Feet.	Tons.		Feet.	Tons.
Double bottom, aft,	✓	✓	Fore peak tank,	27.1	205
Double bottom, under Engines and Boilers,	✓	✓	After peak tank,	19.0	83
Double bottom, if under Engines only, AFT	67.0	286	Deep tank, aft,	✓	✓
Double bottom, if under Boilers only,	✓	✓	Deep tank, forward,	38.0	426
Double bottom, forward,	✓	✓	Other tanks, if fitted,	✓	✓
	Total capacity of double bottom	286.	(If necessary, furnish further information by sketch.)	✓	✓

\* The wells are not to be included in the lengths of the tanks.

Order for Special Survey No.

Date

Dates of Surveys held while building

1930. Jan. 31. Feb. 8, 10, 13, 18, 19. March 3, 5, 10, 11, 21, 24, 25, 26, 28. April 3, 4, 7, 10, 14, 17, 23, 24, 26, 30. May 2, 6, 8, 9, 12, 13, 16, 17, 20, 21, 23, 26, 27, 31. June 2, 4, 5, 6, 7, 11, 16, 21, 25, 27, 28. July 1, 2, 5, 14, 16, 18, 19, 22, 23, 25, 26, 28, 30, 31. August 1, 4, 6, 7, 8, 11, 14, 15, 18, 20, 25, 27, 28, 30, Sept. 1.

Total No. of Visits 79



PARTICULARS OF LONGITUDINAL FRAMING. *BLOHM & VOSS. No. 488.*

FRAMING.					AMIDSHIPS.			ENDS.			AMIDSHIPS.			ENDS.			RIVETING.							
					In Ship.			In Ship.			Per Rule or as approved.			Per Rule or as approved.			Rivets in Longitudinal Frames.		Spacing of Rivets on each side of Transverses and Bulkheads.		Rivets in Brackets to Bulkheads.			
					1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.	1000.		
					mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.	mm.		
Framing of L, [ or C .....																								
Frames in Bridge <del>Width</del> Decks L																								
Frames from Uppermost Continuous Deck																								
L No. 1					180	75	8	V	V	V	V	V	V	V	V	V	V	22	135	135.	5	22		
L " 2					200	90	11	180	90	10	V	V	V	V	V	V	V	25	150	150.	8	22		
L " 3					200	90	11	180	90	10	V	V	V	V	V	V	V	22	135	135	9	22		
L " 4					200	90	13	200	90	10.5	+200	90	10	V	V	V	V	22	135	135.	8	22		
L " 5					230	90	11	230	90	11	V	V	V	V	V	V	V	22	135	135.	9	22		
L " 6					250	90	11	230	90	11	V	V	V	V	V	V	V	22	132	9 a 100	10	22		
L " 7					250	90	11	230	90	11.5	+250	90	11.	V	V	V	V	22	132	9 a 100	10	22		
L " 8					250	90	12	250	90	11	+250	90	12.	V	V	V	V	22	132	9 a 100	11	22		
L " 9					250	90	14	280	90	12	+250	90x13.	V	V	V	V	22	132	9 a 78	11	22			
L " 10					280	90	12	280	90	12	V	V	V	V	V	V	22	132	9 a 78	11	22			
L " 11					300	90	13.5	300	90	13.5	+280	90	13	V	V	V	V	22	132	9 a 78	12	22		
L " 12					350	100	14/16	350	100	14/16	V	V	V	V	V	V	V	22	135	9 a 67.	18	22		
L " 13					350	100	14/16	350	100	14/16	V	V	V	V	V	V	V	22	135	9 a 67.	18	22		
L " 14					350	100	14/16	350	100	14/16	V	V	V	V	V	V	V	22	135	9 a 67.	18	22		
L " 15					350	100	14/16	350	100	14/16	V	V	V	V	V	V	V	22	135	9 a 67	18	22		
L " 16					350	100	14/16	350	100	14/16	V	V	V	V	V	V	V	22	135	9 a 67	18	22		
Spacing of Longitudinal Frames					915 22.			V			V			V			V			V		V		
BOTTOM					915-560.			V			V			V			V			V		V		
Double Bottoms																								
L, [ or C } Tank Top Longitudinals																								
Bottom																								
Spacing of Longitudinals																								
Amidships																								
At Ends...																								
Transverses.																								
In Bridge																								
Width Decks																								
Depth and Thickness					400	9.5	V	V	V	V	V	V	V	V	V	V	V	22	100		V			
Face Angles					FLANGED	90	V	V	V	V	V	V	V	V	V	V	V	V			V			
Lugs to Shell*					90	90	10.	V	V	V	V	V	V	V	V	V	V			V				
In Upper 'tween Decks.																								
Depth and Thickness					495	10	F. 350x10.	V	V	V	V	V	V	V	V	V	V	22	100		V			
Face Angles					90	90	10.5	90	90	10	V	V	V	V	V	V	V	V			V			
Lugs to Shell*					90	90	10	90	90	10	V	V	V	V	V	V	V			V				
Depth and Thickness					1015-915	12	F. 750x12	V	V	V	V	V	V	V	V	V	V	22	100		V			
Face Angles					150	90	12.5	90x90x12	Double	V	V	V	V	V	V	V	V			V				
Lugs to Shell*					150	150	12	150	150	12	V	V	V	V	V	V	V			V				
In Hold.																								
Brackets					1715-2055-12	1150x12.	V	V	V	V	V	V	V	V	V	V	22	100		V				
Spacing of Transverse Frames					2380-3005	7044L-125Z.	V	V	V	V	V	V	V	V	V	V	V			V		V		
* State if joggled or liners.																								
Longitudinal Beams of L, [ or C																								
Bridge Deck L					150	75	8	V	V	V	V	V	V	V	V	V	915.	Transverse	280x95	230x90	V	V		
Upper					180	90	11	165	75	9	V	V	V	V	V	V	915-825	Beams.	455x10	FLANG.	145Z.	V	V	
Second					200	90	10	165	75	9.5	V	V	V	V	V	V	915-825		610x105	90x13.5	V	V		
Third					200	75	9.5	165	75	9.0	V	V	V	V	V	V						V	V	
					V	V	V	V	V	V	V	V	V	V	V	V						V	V	
The particulars of framing in peaks (if any) are given in the following table.																								

The particulars of framing in peaks (if ordinary), Floors, Centre Girder, Side Girders and Margin Plate and their angle attachments, etc., to be entered in their respective places provided for on the Report Forms.

NOTE :—This slip to be pasted on the forms.

5c,11,24.—T.

NOTE:—This slip to be pasted on the fourth page of the Report, and reference to same to be made under framing, etc., on the first page.

of Test.

PARTICULARS FOR RECORD in the REGISTER BOOK Length of Race 99.2 s