

STEEL STEAMER ~~OR~~ MOTORSHIP.

Received at London Office. 17 DEC 1934

State if Report has been sent on the Freeboard of the Vessel *Yes*State if Report is sent on the Machinery of the Vessel *Yes*Date of completion of report 15th December 1934Port of *Göteborg*

No. 10084

Survey held at *Göteborg*Date First Survey 23rd March 1934Last Survey 8th December 1934

On the (State if Machinery fitted Aft and if Single, Twin or Triple Screw)

Single screw motor ship "GRENA" (Machinery fitted aft)

State Type (Full Scantling, Complete Superstructure with or without Tonnage Openings)

Full scantling

State Type of Erections *Hole and Poop*

TONNAGE under Tonnage Deck...

7462.46

CLASS *100 A.1.*
Carrying petroleum in bulk

State if with freeboard as condition of Class

No.

Built at *Göteborg*Launched 15th October 1934 Yard No. *483*Builders *A/B. Götaverken*Owners *A/s. J. Ludwig Mowinckels Rederi*

Managers

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

Residence *Bergen*Port of Registry *Bergen*

If surveyed while building, afloat, or in dry dock

Building, afloat and dry dock.

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

Total

Gross Tonnage

8117.28

Register Tonnage

4890.63

REGISTERED DIMENSIONS. FEET.

Length

455.5

Breadth

59.2

Depth

35.9

Length from fore part of stem to after part of stern post on summer L.W.L. See Sec. 3 (1a)

L 449.83

Breadth (greatest moulded)

B 59.00

Depth, at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c)

D 35.50

1st Longitudinal Number (L x D)

= 15969

2nd Numeral L x (B + D)

= 42509

Framing Depth "d," at middle of length. See Sec. 3 (1d)

-

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

12.67

Do. Long Bridge to top of keel

Draught Moulded

27.49

FRAMES, DOUBLE BOTTOM AND BEAMS.

	IN SHIP.	Any Departure from Approved Plans to be Noted.		IN SHIP.	Any Departure from Approved Plans to be Noted.
FRAMES, Spacing amidships	825		Bracket Floors, Frame	-	
" " from $\frac{3}{4}$ length to Collision bulkhead	825 815 & 675		" " Reversed Frame	-	
" " in peaks	610		" " Vertical Struts	-	
SIDE FRAMING.			Centre Girder, depth and thickness amidships	2105 x 11 1092 x 13 1/2	
Side Frame Amidships, Angle \angle	250 90 11		" " top Angles	double 90 90 12 1/2	
" " Extends up to	Upper deck		" " bottom Angles	double 100 90 14	
Bottom Reversed Frame Amidships, Angle	280 90 12		Side Girders, No. each side and thickness	2 19 & 12 1/2	
" " Extends up to	Long Bhd.		Margin Plate depth (excl. of flange) and thickness	13 1/2 level	
Depth of Framing Girder	250 & 280		" " Vertical Angle to Tank side Bracket abaft $\frac{1}{4}$ len. from stem		
Frames in Uppermost Continuous 'tween Decks, Angle, \angle or \angle	-		" " Vertical Angle to Tank side Bracket forward $\frac{1}{4}$ len. from stem		
" " Second 'tween Decks, Angle, \angle or \angle	-		" " Gussets, spacing and scantling abaft $\frac{1}{4}$ len. from stem		
" " Third " " " "	-		" " Gussets, spacing and scantling forward $\frac{1}{4}$ len. from stem		
Framing in Peaks, Angle \angle	230 90 11		Tank Side Brackets, height above base line at toe of Frame and thickness	See Plan.	
Diameter and Spacing of Rivets through Frame and Shell Plating amidships	22 2 135		INNER BOTTOM PLATING in Motor Room.		
State if Frame Joggled	Bottom frames only		Breadth and thickness of Middle Line Strake	2915 x 13 1/2	
PANTING ARRANGEMENTS (Sec. 7), state system and particulars	Deep frames and stringers as per app. plan		Thickness of remainder in Holds	13 1/2	
STRENGTHENING OF BOTTOM FORWARD. State Particulars	Back bar on bottom frames extra girders and increased shell		Are Rule requirements complied with regarding increases of scantlings in way of double bottom in E. & B. space and framing in Bankers and Boiler Room?	Yes.	
SINGLE BOTTOM.			BEAMS.		
Floors, Depth and thickness at mid-line in Holds	-		Uppermost Continuous Deck, amidships in Wells, Angle \angle or \angle	200 90 10 1/2 Centre	
Height of Brackets at side above base line at toe of frame	-		" " in way of Bridge, Angle \angle or \angle	200 90 11 1/2 Side	
Middle Line Keelson, on Floors, Angle \angle or \angle	230 90 13 1/2 300 90 14 1/2		Spacing	825	
" " Through Plate or Intercostal Plate	1680 x 12 1/2		Stringer in Wing Tanks		
" " Foundation Plate on Floors	-		Second Deck, amidships, Angle \angle or \angle	200 90 10	
" " Flat Plate Keel Angles	150 150 13 double		Spacing	825	
Side Keelsons, No. each side	One each side in Centre Tanks		Third Deck, amidships, Angle, \angle or \angle	-	
" " depth and thickness of Intercoastal Plate	1680 x 12 1/2		Spacing	-	
" " top Angles of hull angles and to shell	320 10 16 single 150 90 14 L. in long tanks 150 150 13		Fourth Deck, amidships, Angle, \angle or \angle	-	
DOUBLE BOTTOM in Motor Room.			Spacing	-	
Solid Floors, thickness and spacing	11 2 825		Poop Deck, Angle \angle or \angle	230 90 11	
" " Are Frame and Reversed Frame joggled?	Frames only		Spacing	825 & 610	
Bracket Floors, breadth and thickness at middle line	-		Bridge Deck, Angle, \angle or \angle	-	
" " breadth and thickness at margin plate	-		Spacing	-	
			Forecastle Deck, Angle \angle or \angle	230 90 11	
			Spacing	675 & 610	

PILLARS AND DECKS.

		IN SHIP.		Any Departure from Approved Plans to be Noted.	
PILLARS, No. of Rows.....					
,, in 'tween Decks, Size and Spacing.....					
,, " " " " " "					
,, in Holds " "					
,, " " " "					
2 Longitudinal Upper Line Bulkhead.					
Stiffeners and Spacing.....		channels	220 x 9 x 80 x 12 1/2		
Plating, thickness of			10 1/2, 10, 10 1/2, 11 1/2, 13.		
STRINGERS AND DECKS.					
Uppermost Continuous Deck.					
Stringer Plate, breadth and thickness in Wells		1610	x 22		
,, " " " " in way of Bridge					
,, Angle in Wells		160	160 24	add.	
Thickness of Plating abreast Deck openings in way of Wells.....		20			
Thickness of Plating abreast Deck openings in way of Bridge		✓			
Thickness of Plating within line of openings...		12			
If Sheathed, material and thickness		-			
Second Deck. Stringer in Wing Tanks					
Stringer Plate, breadth and thickness in Wells...		1000	x 10		
Stringer Plate, breadth and thickness in way of Bridge					
Thickness of Plating abreast Deck openings in way of Bridge					
Thickness of Plating within line of openings...					
If Sheathed, material and thickness					
Third Deck.					
Stringer Plate, breadth and thickness.....					
If Plated, state thickness.....					
Fourth Deck.					
Stringer Plate, breadth and thickness.....					
If Plated, state thickness					
Poop Deck.					
Stringer Plate, breadth and thickness				9-0	
Plating, Sheathing, material and thickness ...		6 1/2	2 1/2"	O.P.	
Bridge Deck.					
Stringer Plate, breadth and thickness.....				-	
Plating, Sheathing, material and thickness ...				-	
Forecastle Deck.					
Stringer Plate, breadth and thickness.....				9-0	
Plating, Sheathing, material and thickness ...				9-0	

SHELL PLATING.

SCANTLINGS.					RIVETING.							
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED.	EDGES. State if jogged? <i>sides only</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>thickness mm</i>	<i>thickness mm</i>	<i>thickness mm</i>	<i>thickness mm</i>			<i>thickness mm</i>	<i>thickness mm</i>		<i>thickness mm</i>	<i>thickness mm</i>	
FLAT PLATE KEEL	2040	25½	20	20	Appld 2030 ^{mm} / _{in} wide.	double	25	90.6	3	28	115	double straps
" DELG. (if any)												
BOTTOM PLATING, No. } of Strakes 3		1220 22 17½	15	14	Appld 17½ ^{mm} / _{in}	"	22	90.6	3	22	100	" "
BILGE PLATING, No. of } Strakes 1		17½	15	14		"	"	"	"	"	"	" "
SIDE PLATING, No. of } Strakes 3		16½	12	12		"	"	"	4	"	90	lapped.
UPPER DECK, Sheer- } strake in Wells	1425	25	12	12	Appld 1480 ^{mm} / _{in} wide				3	28	126	double straps
UPPER DECK, Sheer- } strake in Bridge ...												
STRAKE BELOW Sheer- } strake in Wells	1630	19½	12	12		(upper edge)	25	90.6	4	25	100	lapped.
STRAKE BELOW Sheer- } strake in Bridge ...						single	22	90.6	2	22	80	"
POOP SIDE PLATING				10		single	22	90.6	2	22	80	"
BRIDGE SIDE PLATING ...						single	22	90.6	2	22	80	"
FOREC'TLE SIDE PLATING			10½			single	22	90.6	2	22	80	"

WATERTIGHT BULKHEADS.

		Plating Thickness. <i>m/m</i>	STIFFENERS.			
			VERTICAL.		HORIZONTAL.	
			Scantlings. <i>m/m</i>	Spacing. <i>m/m</i>	Scantlings.	Spacing.
MIDSHIP BULKH'D, Upper tween decks						
"	" Second "					
"	" Third "					
"	" Holds	<i>9-10-13</i>	<i>220 x 9 x 80 x 12 1/2 C</i>	<i>8 10</i>	<i>3 Horizontal girders</i>	
COLLISION	" (in Hold)	<i>1 1/2 - 6 1/2</i>	<i>{ 230 x 90 x 11 7/8 and as per plan</i>	<i>6 10</i>	<i>3 girders and tank top</i>	
AFTER PEAK	" "	<i>11-7 1/2</i>	<i>{ 200 x 75 x 9 3/4 150 x 75 x 8 3/4</i>	<i>6 10</i>	<i>1 horizontal girder and mess deck top.</i>	

FORGINGS and CASTINGS.

	Casting or Forging.	Scantlings.	Maker's Name.	Any departure from approved plans to be noted
KEEL, Bar		Flat plate keel		
STEM keel piece (upper part plating)	Casting	As per plan	Strömman	
STERN " { Propeller Post	Casting	"	Lindholm	
FRAME { Rudder	Casting	"	Motala	
RUDDER—A × D	Forging	317 ^{mm}	"	
Speed of Vessel		11½ knots.		
RUDDER mainpiece at head	Casting	As per plan	Lindholm	Motala.
" " heel				
" how constructed				
" double or single plate				
" coupling, vertical or		11½ ^{mm}		
" horizontal		Horizontal.		

STEEL.	<p>Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture). <i>Open hearth process.</i></p> <p><i>S.A. Fabrique de fer de Charleville; John Cockerill; Hauts Fourneaux; d'Angée Marbais; Usine de Fonderie; Hornes et</i> <i>Aciers de la Marinet d'Honnin; T. Stahlwerke Hoerder Eisen, August-Thyssen and Dortmund; Gießerei und Maschinenbau</i> <i>Has the Steel been tested as required by the Rules? Yes.</i></p>	<p><i>and Colville Ltd.</i></p>
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EQUIPMENT No.											LETTER C +	ANCHORS.			
Number of Certificate.	Anchors.	WEIGHT, EX. STOCK.			WEIGHT OF STOCK.			TEST, PER CERTIFICATE.				WEIGHT REQUIRED BY TABLE 53.	Description of Anchor.	Makers.	Where and when tested and Superintendent.
		Cwts.	qrs.	lbs.	Cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Cwts.			
1822	1st Bower ...	74	1	19	-	-	-	56	-	-	-		Union Stockless	Gottmund Hoerder	Gottmund 31.7.34 M.B.
1823	2nd „ ...	74	2	8	-	-	-	56	5	-	-		„ „	Hüttenwiese A.G.	„ „ „
1824	3rd „ ...	74	1	23	-	-	-	56	-	-	-		„ „	„ „ „ „	„ „ „
	Collective weight.	223	1	22								219½.			
1825	Stream	22	2	9	6	0	7	22	16	3	14	22	Body stock	„ „ „ „	„ „ „

CHAIN CABLES.										HAWSERS AND WARPS.									
Number of Certificate.	Length and size supplied.		Test per Certificate.		WEIGHT OF CHAIN CABLE.				Length and Size per Table 53.		Description.	Makers of Cables.	Where and when tested, and Superintendent.	Material	Length and Size supplied.		Breaking Test of Steel Wire.	Length and Size per Table 53.	
	Length.	Diam.	Statu-tory.	Break-ing.	Supplied.		Per Rule.	Length.	Diam.	Length.					Ins.	Length.		Ins.	Tons.
1031	301 1/2	2 7/16	106.9	149 5/8	959	1.22	890 1/4	300	2 7/16	Stud link Kettenwerke Schleier.	Lyfne 6.8.34 J.B.	TOWLINE...	130	5 1/4	77.5	130	5 1/4		
												HAWSERS & WARPS	4 x 90	3 1/2	25.7	4 x 100	2 3/4		
												"	2 x 100	2 3/4	15.2				
Stream	120	4 1/4		51.5				120	5										
Steel Wire		6 x 24							6 x 12										

Steering Gear, Steam by Donkin & Co. Steering Gear, Hand Blocks and tackle from quadrant to winch.

Boats 2 @ 26' x 8' x 3' 3" of 18' dinghy. Steering Chains, Size and Test - Windlass Steam by Halsingborgs Bors. O/B

Ceiling in Hold, thickness and material 2 1/2" pine on 2" battens Cargo Battens, thickness, material and spacing None

Cargo Hatchways.—(Upper Deck) O.T. hatches and W.T. Hatch on Hcle Sk. Thickness of Hatches Steel Covers.

Size of Hatchways (Forward) 2.4' x 5.6' Hcle No. 3 6.6' x 10.25' No. 4 No. 5 No. 6

Number of Shifting Beams and/or Fore and Afters -

AKTIEBOLAGET GÖTAVERKEN

Builder's Signature

GENERAL DECLARATION. It should be stated (a) whether the vessel is fitted for the carriage and burning of oil used as fuel Yes (b) whether the vessel, not being an oil tanker, is fitted for carrying oil as cargo The positions in which oil is carried as fuel or cargo should be indicated, together with the flash point.

The materials and workmanship are good. The vessel has been built in accordance with the approved plans and instructions, the secretaries letters of various dates and in conformity with the Rules for the class contemplated.

The vessel is constructed to carry petroleum in bulk. The vessel is also constructed to carry oil fuel in the double bottom under the machinery, in the oil fuel bunkers situated at each side of the forward end of the machinery space, in the forward deep tank and in the after peak. The flash point of the oil fuel is above 150° F. Lubricating oil is carried in the centre portion of the double bottom under the engine.

The tanks, cofferdams, bulkheads and decks have been tested in accordance with the Rules and the requirements of section 20 of the Rules (1933-34) have been complied with where applicable.

The fireboards have been verified and the marks cut in on the vessel's sides.

The amount of Entry Fee s. 200-20 Fees applied for, 15th Dec 1934 1000

Special Survey Fee.... s. 10999:17 Received by me, 27.12.34 31

Unboard fee 345-80

Travelling Expenses, if any £

It is of opinion the Vessel should be Classed +100 A.1 Carrying Petroleum in Bulk.

State whether the Vessel has been built under Special Survey Yes.

Signatures S. Townsend S. Heringst.

Surveyors to Lloyd's Register of Shipping.

Certificate to be sent to Gottenburg Office. Date of Issue 2/1/35

Committee's Minute

Character assigned

FRI. 31 DEC 1934

+100 A.1
Carrying petroleum in bulk

Lloyd's adv

+ Limb 12.34

2 OB - 150 OB

Oil Ex. CL

My



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Lloyd's Register Foundation

W1188-01732/2

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 is similar to the same builder Yard No 438 M/S "NORDANVIK" Got. Rept. No 8165 and is a sister vessel to Yard No 482 M/S "BRAJARA" Got. Rept. No. 100857

See sister vessel M/S "BRAJARA" for plans.

The following plans are now forwarded:—

Midship section as built.

Longitudinal section and plans as built.

also Forging and Casting Reports (7) and mast certificate.

Particulars of Drop Test of Cast Steel Anchors, viz. :— Weight, Surveyor's Initials, Number of Certificate, Date of Test.	<u>HEAD</u>				<u>SHANK</u>			
	1st Bower	2nd	3rd	Stream	1st Bower	2nd	3rd	Stream
	48.1.20 M.B. 4374	24.7.34	25.3.27 M.B. 1475	24.7.34	25.1.20 M.B. 1476	24.7.34	25.3.5 M.B. 1474	24.7.34
	49.0.16 M.B. 4375	24.7.34	—	—	—	—	—	—
	48.2.18 M.B. 4376	24.7.34	—	—	—	—	—	—
	22.2.9 M.B. 4377	24.7.34	—	—	—	—	—	—

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop 101 ft., R.Q.D. ft., Bridge ft., Forecastle 59.0 ft. (in feet and tenths). When the Poop is joined to the B.D., this should be distinctly stated

No. and Material of Decks (This information is to be given as it should appear in the Register Book) 1 Sk (ste).

Official No. : Signal Letters L.I.X.B. Is bottom of Vessel coated with cement part. if not give particulars of composition Cement in F.W. & B. tank, fore peak and E.R. bilges.

PARTICULARS OF WATER BALLAST.—

Where Fitted.	Length. Feet.	Water Capacity. Tons.	Where Fitted.	Length. Feet.	Water Capacity. Tons.
Double bottom, aft,			Fore peak tank, W.B.		95
Double bottom, under Engines and Boilers,			After peak tank, O.F. or W.B.		152
Double bottom, if under Engines only, 27' O.F. or W.B. } 45' F.W.	75.9 incl afterdam	209	Deep tank, aft, O.F. or W.B. (Oil fuel bunkers)	19	414
Double bottom, if under Boilers only,			Deep tank, forward, O.F. or W.B.	22	375
Double bottom, forward,			Other tanks, if fitted,		
Lub. oil tank in Centre under Engines 27' = 26 tons.			(If necessary, furnish further information by sketch.)		
	Total capacity of double bottom	209			

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

Order for Special Survey No. 204

Date 11.12.33.

Dates of Surveys held while building

March 23. April 4.5.24. May 8.9.17.22. June 2.6.7.21.27.28. July 5.13.18.23.30
Aug. 6.9.16.22.25.28.31. Sept. 5.8.19.22.24.26.28.29. Oct. 1.3.4.6.10.11.15.16.22
30.31. Nov. 2.8.9.10.12.13.14.15.16.19.22.26.27.30. Dec. 1.3.5.7.8.

Total No. of Visits 64