

STEEL ~~STEAMER~~ or MOTORSHIP.

Received at London Office 5 NOV 1928

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 27th October 1928 Port of LENINGRAD No. 25
 Survey held at Leningrad Date First Survey 25th January 1926 Last Survey 25th October 1928
 On the (State if Machinery fitted Aft and) Single Screw Motorship "IAN RUDZUTAK"
 State Type (Full Scantling, Complete Superstructure with or without Tonnage Openings) Complete Superstructure, without Tonnage Opening State Type of Erections Roop, Bridge & Fide
 TONNAGE under Tonnage Deck... 2644.94 CLASS A 100 A.1 State if with freeboard as condition of Class yes Built at Leningrad
 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 323.57 Launched 16th October 1926 Yard No. 300
 Total 2644.94 Breadth (greatest moulded) B 47.9 Builders Severn Shipbuilding Yard
 Gross Tonnage 3614.85 Depth, at middle of length from top of keel to top of beam at side of uppermost continuous deck. See Sec. 3 (1c) D 28.02 Owners Soviet Mercantile Fleet (Sovtorgflot)
 Tonnage 2087.12 1st Longitudinal Number (L x D) = 9066 Managers (Where necessary to be entered in Reg. Book.)
 2nd Numeral L x (B + D) = 24565 Residence (Where necessary to be entered in Reg. Book.)
 STERED DIMENSIONS. FEET. Framing Depth "d," at middle of length. See Sec. 3 (1d) 16.5 Port of Registry Leningrad
324.60 Proportions—Depth to Length—Uppermost continuous deck to top of keel 11.5 If surveyed while building, afloat, or in dry dock
48.06 Do. Long Bridge to top of keel 8.75 Building Afloat
25.92 Draught Moulded 19.52

FRAMES, DOUBLE BOTTOM AND BEAMS.

	IN SHIP. mm.	Any Departure from Approved Plans to be Noted.		IN SHIP. mm.	Any Departure from Approved Plans to be Noted.
Spacing amidships	685		Bracket Floors, Frame	-	
" from $\frac{1}{2}$ length to Collision bulkhead	685		" " Reversed Frame	-	
" in peaks	FR 605, AP 610		" " Vertical Struts	-	
HING.			Centre Girder, depth and thickness amidships	940 x 13	
amidships, \square or \square	200 x 75 x $8\frac{1}{2}$ x 12 $\frac{1}{2}$		" " top Angles	75 x 75 x 12	
" Extends up to	2 nd Deck		" " bottom Angles	100 x 100 x 14	
Frame Amidships, Angle	-		Side Girders, No. each side and thickness	one, 9	
" Extends up to	-		Margin Plate depth (excl. of flange) and thickness	800 x 12	
Framing Girder	abast AP Bhd. & fwd. of N° 30 fr. \angle 160 x 80 x 14, remainder \angle 160 x 80 x 12;		" " Vertical Angle to Tank side Bracket abast $\frac{1}{2}$ len. from stem	90 x 90 x 10	(double from Coll ^{re} Bhd. to frame N° 27)
Uppermost Continuous 'tween Decks, Angle, \square or \square	Abast N° 128 fr. in way of Bridge & fwd. of N° 30 fr. spaced every frame Elsewhere alternative frames		" " Vertical Angle to Tank side Bracket forward $\frac{1}{2}$ len. from stem	90 x 90 x 10	
Second 'tween Decks, Angle, \square or \square	As in forward holds		" " Gussets, spacing and scantling abast $\frac{1}{2}$ len. from stem	600 x 700 x 9 alt. frs. in N° 3 & 4 holds. 400 x 470 x 9 alt. frs. in N° 2 hold.	
Third " " " "	160 x 80 x 14		" " Gussets, spacing and scantling forward $\frac{1}{2}$ len. from stem	400 x 470 x 9 Every fr. in N° 1 hold.	
Peaks, Angle \square or \square	100 x 75 x 10 int. fr. in Fore Peak for ice.		Tank Side Brackets, height above base line at toe of Frame and thickness	1420 x 10	
and Spacing of Rivets through Frame and Shell Plating amidships	22 mm @ 7 diameters.		INNER BOTTOM PLATING.		
Frame Joggled	120		Breadth and thickness of Middle Line Strake	1220 x 12	
STRENGTHENING (Sec. 7), state system and particulars	frames from Coll ^{re} Bhd. to fr. N° 27. \angle 220 x 80 x 10 $\frac{1}{2}$ x 14, spaced 685 mm. with intermediate angle 160 x 80 x 14 & side stringer as approved.		Thickness of remainder in Holds	10 - 9	
NING OF BOTTOM FOR State Particulars	Double frames & increased riveting as approved.		Are Rule requirements complied with regarding increases of scantlings in way of double bottom in E. \square space and framing in Bulkheads and Boiler Room?	yes	
FROM.			BEAMS.		
th and thickness at mid-line in holds			Uppermost Continuous Deck, amidships	\angle 160 x 65 x 7 $\frac{1}{2}$ x 11	half beams.
ght of Brackets at side above use line at toe of frame			" " in Wells, Angle, \square or \square	\angle 140 x 60 x 7 x 10 $\frac{1}{2}$	ditto
Keelson, on Floors, Angles, \square or \square			" " in way of Bridge, Angle, \square or \square	every frame	
" Through Plate or Intercostal Plate			Spacing	\angle 180 x 70 x 8 x 12	
" Foundation Plate on Floors			Second Deck, amidships, Angle, \square or \square	\angle 160 x 65 x 7 $\frac{1}{2}$ x 11	half beams.
" Flat Plate Keel Angles			Spacing	Every frame	
s, No. each side			Third Deck, amidships, Angle, \square or \square	\angle 180 x 70 x 8 x 12	half beams.
thickness of Intercostal Plate			Spacing	\angle 160 x 65 x 7 $\frac{1}{2}$ x 11	half beams.
Angles			Fourth Deck, amidships, Angle, \square or \square	-	
DOUBLE BOTTOM.			Spacing	-	
Solid Floors, thickness and spacing	9, every frame		Poop Deck, Angle, \square or \square	\angle 140 x 60 x 7 x 10 $\frac{1}{2}$	with rev. bar 90 x 90 x 10 on beams N° 37, 38 & 39
" " Are Frame and Reversed Frame joggled?	120		Spacing	every frame	
Bracket Floors, breadth and thickness at middle line	-		Bridge Deck, Angle, \square or \square	\angle 160 x 65 x 7 $\frac{1}{2}$ x 11	alt. frames. (except 4 beams each end on every frame)
" " breadth and thickness at margin plate	-		Forecastle Deck, Angle, \square or \square	\angle 140 x 60 x 7 x 10 $\frac{1}{2}$	
			Spacing	every frame	

PILLARS AND DECKS.

PILLARS, No. of Rows	IN SHIP. mms.	Any Departure from Approved Plans to be Noted.	Stringer Plate, breadth and thickness in way of Bridge	IN SHIP. mms.	Any Departure from Approved Plans to be Noted.
" in 'tween Decks, Size and Spacing	Widely Spaced		1400 x 9		
" " " " "	Pillars & Girders		9 x 8		
" " " " "	as approved		8		
Centre Line Bulkhead. Stiffeners and Spacing			Thickness of Plating abreast Deck openings in way of Wells	8	
Plating, thickness of			Thickness of Plating abreast Deck openings in way of Bridge	8	
STRINGERS AND DECKS. Uppermost Continuous Deck.			Thickness of <u>Plating</u> within line of openings	8	
Stringer Plate, breadth and thickness in Wells	1300 x 13		If Sheathed, material and thickness	65 mm. pine in N° 1 & 2 holds	
" " " " in way of Bridge	1300 x 10		Third Deck, in N° 1 & 2 holds.		
" " " " at Bridge ends	19		Stringer Plate, breadth and thickness	1150 x 9	
" Angle in Wells			If Plated, state thickness	101 hold. Plating 8 x 9 mm N° 2 " " " 1000 x 9.	
Thickness of Plating abreast Deck openings in way of Wells	9 x 8		Fourth Deck.		
Thickness of Plating abreast Deck openings in way of Bridge	8		Stringer Plate, breadth and thickness	1600 x 8	
Thickness of Plating within line of openings	8		Plating, Sheathing, material and thickness	6 1/2, & 65 mm. pine	
If Sheathed, material and thickness	65 mm. pine		Bridge Deck.		
Second Deck.			Stringer Plate, breadth and thickness	1325 x 10	
Stringer Plate, breadth and thickness in Wells	1400 x 9		Plating, Sheathing, material and thickness	8, & 65 mm. pine	
			Forecastle Deck.		
			Stringer Plate, breadth and thickness	820 x 8	
			Plating, Sheathing, material and thickness	7, & 65 mm. pine	

SHELL PLATING.

SCANTLINGS.					RIVETING.							
STRAKES.	AS IN VESSEL.				ANY DEPARTURE FROM APPROVED PLANS TO BE NOTED.	EDGES.			BUTTS.			
	AMIDSHIPS.		FORWARD.	AFT.		State if jogged?	Ycb	No. of Rows OF RIVETS.	RIVETS.		STRAPPED LAPPED	
	Breadth.	Thickness.	Thickness.	Thickness.					SINGLE OR DOUBLE.	Diam.		Spacing cr. to cr.
	inches. m.m.s.	inches. m.m.s.	inches. m.m.s.	inches. m.m.s.								
FLAT PLATE KEEL	1220	16	14	14		Double	22	85½	3	22	88	Doubles
„ DBLG. (if any)		-	-	-								
BOTTOM PLATING, No. of of Strakes4.....	1675 1675 1650 1400	13	18	11		Double	22	85½	3	22	77	Lapped
BILGE PLATING, No. of Strakes1.....	1445	13	18	11	Plating at Stern Frame 14	Double	22	85½	3	22	77	Lapped
SIDE PLATING, No. of Strakes3.....	1540 1690 1690	13	18x	11	1 x Stern plate of Top Strake 15mm.	Double	22	85½	3	22	77	Lapped
UPPER DECK, Sheer- strake in Wells.....	1700	13 15	13	11	1 Plate in aft well doubled	Double	22	85½	3	22	77	Strapped
UPPER DECK, Sheer- strake in Bridge ...	„	13	(at Bridge ends 21mm)			Double	22	85½	3	22	77	Strapped
STRAKE BELOW Sheer- strake in Wells.....	1630	15	13	11		Double	22	85½	3	22	77	Lapped
STRAKE BELOW Sheer- strake in Bridge ...	„	13				Double	22	85½	3	22	77	Lapped
POOP SIDE PLATING				9		Single	19	76½	1	19	66	Lapped & st
BRIDGE SIDE PLATING ...		12				Double	19	76½	2	19 with 2 bars	66 150 x 150	Lapped
FORECASTLE SIDE PLATING			10			Single	19	76½	1	19	66	Lapped

WATERTIGHT BULKHEADS.

Total No. of W.T. BULKHEADS in Vessel	6
Extending to Upper Deck (Sec. 3 c)	
" Deck next below	
As per Rule	5

FORGINGS and CASTINGS.

	Casting or Forging.	Scantlings. mms.	Maker's Name.	Any departure from approved plans to be noted.
KEEL, Bar		FLAT KEEL		
STEM	forging	220 x 60	Bolshevik Steel Works	
STERN FRAME	casting	245 x 155	Bolshevik Steel Works	
Propeller Post		220 x 155		
Rudder				
RUDDER-A x D		502 x 155		
Speed of Vessel		13 Knots		
RUDDER mainpiece at head		300	Stock-Ivonsky Steel Works	
" " heel		227	Main Piece - Bolsh. S. & U.	
" " how constructed	forged & built.		Arms - Nevsky Steel Works	
" double or single plate coupling, vertical or horizontal		Single		

STEEL.	Manufacturer's Name or Trade Mark of the Steel used in the construction of the Vessel (state process of manufacture)	Open hearth process.
	Plates	The Manoirat, Skate Steel Works, Idorsky Skate Steel Works.
	Sections	Idorsky Skate Steel Works, Skate Steel Works, Pehovskiy Shakermoskov, Krasnoy Pohlavitsky Steel Works & Dniepropetrovsk Steel Works.
	Has the Steel been tested as required by the Rules?	See Remarks.

EQUIPMENT No. 26640

LETTER "V"

ANCHORS.

Number of Certificate.	Anchors.	WEIGHT, EL STOCK.		WEIGHT OF STOCK.		TEST PER CERTIFICATE.		WEIGHT REQUIRED BY TABLE 53.	Description of Anchor.	Makers.	Where and when tested and Superintendent.
		Kilos.	lbs.	Kilos.	lbs.	Stress.	Strain.				
31	1st Bower	2750	6080	2750	6080	48	1000		HALLS STOCKLESS	NEVERSKY S. & U.	KOLPINO 28-10-27 WEL.
22	2nd "	2650	5840	2650	5840	44	1000		"	NEVERSKY S. & U.	" 2-9-27 WEL.
25	3rd "	2422	5340	2422	5340	41	1000		"	NEVERSKY S. & U.	" 20-9-27 WEL.
41	Stream	7532	16600	7532	16600	7060	1000	7060 KILOS	ADMIRALTY TYPE	NEVERSKY S. & U.	KOLPINO 25-11-27 WEL.
31	Kedge	673	1480	673	1480	660	1000	660 KILOS	do.	NEVERSKY S. & U.	" 13-7-18 059.

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.	
			Supplied.	Per Rule.						Length.	Cir.		Length.	Cir.
323	271 1/2	2	72	100 1/2	573-3-22	538 3/4	270	2	Stud Link	Carl Schlieper	Grüne, 10-1-28, J. Quast	185 -	3	18
	220 mt	4 1/2	39				165 mt	4 1/2				185 -	3	18
												165 -	2 1/2	12 1/2
												165 -	2 1/2	12 1/2

Steering Gear, Steam Combined Electric and Hand Steering Gear. Steering Gear, Hand Manufactured by the Severney Shipyard.

Boats 8 Lifeboats 27-6 x 8-6 x 3-6. Steering Chains, Size and Test. Windlass Electric by Severney Shipyard.

Ceiling in Holds, thickness and material { 75 mm. pine in N° 1 & 4 holds. Insulation in N° 2 & 3 holds. Cargo Battens, thickness, material and spacing. 120 x 50 mm. pine @ 230 mm. between rows. N° 2 & 3 holds & N° 2 lower T. Dips. Insul'd N° 1 & 2 upper T. Dips. close lined.

Cargo Hatchways. (Upper Deck) Steel plates & Angles as approved. Thickness of Hatches 75 mm.

Size of No. 1 Hatchway (Forward) 22'-6" x 16'-6" No. 2 29'-3" x 16'-6" No. 3 22'-6" x 16'-6" No. 4 22'-6" x 16'-6" No. 5 - No. 6 -

Number of Shifting Beams and/or Fore and Aft N° 1-3, N° 2-4, N° 3-5, N° 4-3.

Builder's Signature *C. Speranin* 16. VII. 28

GENERAL DECLARATION This vessel was about 30% completed on the stocks when the survey was commenced and the steel used in the construction of the vessel was manufactured at works which have since been approved by the Committee. The major portion of the steel was tested by the Surveyors to the Russian Register of Shipping to the Society's requirements, and check tests were made on this material from shearings of plates & angles with satisfactory results (See Mr. Helyer's report on vessels under construction in U.S.S.R. dated 4th March 1926); the remainder of the steel which was delivered later being tested by the Society's Surveyors as required.

A general examination was made of the vessel and the scantlings and arrangements were found generally to conform with plans which had been previously approved. The amendments on these plans and on plans subsequently approved together with the requirements of the Secretary's letters have since been carried out or equivalent strengthening fitted. The wet holes in the bulkhead plating of the fore and after peak tanks have not been countersunk; this work was completed before the survey was commenced but in view of the excellent results of water tests it is

The amount of Entry Fee	£	:	:	Fees applied for,
Special Survey Fee	£	:	:	19
Travelling Expenses, if any	£	:	:	19
				Received by me,

I am of opinion the Vessel should be Classed 100A.1. with freeboard strengthened for navigation in ice

State whether the Vessel has been built under Special Survey. Partly. See above Signature *Alex. Stevenson* *Helyer* Surveyor to Lloyd's Register of Shipping.

Certificate to be sent to: "Arcos" London Date of issue 13/11/28

Committee's Minute TUE. 13 NOV 1928 TUE. 4 DEC 1928

Character assigned 100A1

with freeboard

Lloyd's ascp.

thmc 10.28 subject

Oil Engines

DB-4316

Wick Lennig

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.)

submitted the riving might be accepted.

The materials and workmanship were found generally satisfactory.

The double bottom tanks, the fore and after peak tanks, and the oil fuel bunkers at sides of Engn. Rooms have been water tested under rule pressure and found satisfactory.

The weather decks, watertight bulkheads, tunnel and watertight doors have been satisfactorily hose tested.

The watertight doors, hand pump, windlass, electric and hand steering gear have been examined and tried under working conditions and found satisfactory.

The vessel is fitted with wireless (including direction finder), Electric Light and Submarine Signalling.

The freeboards have been assigned by the U.S.S.R. Register & cut in on vessels sides. The markings agree with those originally assigned by the Committee. For particulars see Freeboard Verification Form.

A plan of midship section as built together with 7 ship forging and casting reports are forwarded herewith.

Sister Vessel "ALEXEY RYKOFF" Same builders N° 299. Leningrad Report N° 22.

Particulars of Drop Test of Cast Steel Anchors, viz.:— Weight, Surveyor's Initials, Number of Certificate, Date of Test.	1st Bower	1655 K.gms.	W.E.L.	N° 26	27-7-27.
	2nd "	1700 "	W.E.L.	N° 19	1-7-27.
	3rd "	1515 "	W.E.L.	N° 8	29-3-27.

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop 31.4 ft., R.Q.D. — ft., Bridge 99.6 ft., Forecastle 41.1 ft. (in feet and tenths). When the Poop is joined to the B.D., this should be distinctly stated not joined.

No. and Material of Decks (this information is to be given as it should appear in the Register Book). 2 Decks (steel - upper w.s) & 3rd deck (pk. sh.) in N° 1 & 2 Hold with Erection as above.

Official No. ✓ ; Signal Letters ✓ Is bottom of Vessel coated with cement if not give particulars of composition Bilges cemented. Inside of double bottom cement fillets at butts & seams of bottom plating.

PARTICULARS OF WATER BALLAST.—

Where Fitted.	*Length. Feet.	Water Capacity. Tons.	Where Fitted.	*Length. Feet.	Water Capacity. Tons.
Double bottom, aft,	92.1	253	Fore peak tank,		40
Double bottom, under Engines and Boilers,			After peak tank,		56
Double bottom, if under Engines only,	44.9	161	Deep tank, aft,		
Double bottom, if under Boilers only,			Deep tank, forward,		
Double bottom, forward,	125.9	204	Other tanks, if fitted,		
	Total capacity of double bottom	618	(If necessary, furnish further information by sketch.)		

no wells.

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

Order for Special Survey No.

Date October 1925

Dates of Surveys held while building

1926 Jan 25, Feb. 22, 26, Mar. 19, June 16, 31, July 5, 17, 23, Aug. 9, 13, 25, 31, Sep. 9, 15, 18, 23, 28, Oct. 1, 5, 9, 12, 14, 16, 29, Nov. 2, Dec. 17.

1927 Jan 6, Mar. 3, 8, Apr. 13, May 10, 17, 19, 24, 31, Jun. 21, 28, 30, July 2, 5, Aug. 23, Sep. 1, Nov. 1, 10.

1928 March 22, 29, Apr. 12, 17, May 25, Aug. 7, 14, 21, 23, 30, Sep. 13, 15, Oct. 2, 25.

Total No. of Visits 59.