

GLUSHCHENKO, N.I.; LITOVKIN, P.I.; SHARUN, F.K.

"New method for harvesting sugar beet seeds. Sakh.prom. 30  
no.8:46-49 Ag. '56. (MLRA 9:11)

1. Khar'kovskaya semennaya inspeksiya (for Glushchenko).
2. 1-y Petrovskiy sakhkombinat (for Litovkin). 3. Fedorovskiy  
sveklosovkhoz (for Sharun).  
(Sugar beets--Harvesting)

LITOVKIN, V.

Joint action of industrial enterprises and economic organization in constructing and repairing roads. Zhil.-kom.khoz.  
10 no.4:32-33 '60. (MIRA 13:6)  
(Road construction)

LITOVTIN, V.; UTROBIN, N.; KUDIN, N.

What the experience of apartment-house committees tells us. Zhil.-  
kom. khoz. 10 no.10:2-5 '60. (MIRA 13:10)

1. Instruktor ispolkoma oblastnogo Soveta deputatov trudyashchikhsya,  
g. Kirov (for Utrobin). 2. Zaveduyushchiy gorodskim otdelom kommu-  
na'nogo khozyaystva, g.Luga, Leningradskoy oblasti (for Kudin).  
(Apartment houses--Maintenance and repair)

LITOVKIN, Ye., zasluzhenny trener UkrSSR; KRAVCHUK, V.

Training of participants in sea sports competitions. Voen. znan.  
40 no.9:41-42 S '64. (MIRA 17:12)

LITOVKIN, Ye., trener sbornoj komandy; KRAVCHUK, V., komandir shlyupki sbornoj  
komandy

Discrepancies in the new decathlon program. Voen. znan. 35 no.5:36  
My '59. (MIRA 12:12)

1. Dobrovol'noye obshchestvo sodeystviya armii, aviatsii i flotu USSR.  
(Aquatic sports)

LITOVKIN, Ye., obshchestvennyy trener po morskому mnogobor'yu (Kiyev);  
KRAVCHUK, V., obshchestvennyy trener po morskому mnogobor'yu (Kiyev)

Swimming instruction in outfit No.2. Voen. znan. 39 no.8:28-29  
Ag '63. (MIRA 16:8)  
(Diving, Submarine)

LITOVKINA, A. F. Cand Agr Sci -- ~~th~~ (diss) "Experience Gained  
in Cultivating Tree-Seedlings Including Oak on the Light-Brown  
Soils of Stalingradskaya Oblast." Mos, 1957. 16 pp 20 cm. (Mos  
Order of Lenin Agricultural Academy im K. A. Timiryazev),  
110 copies (KL, 25257 25-57, 116)

102  
- 100 -

LITOVKINA, A.F.

K.

USSR/Forestry - Forest Cultures.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15414

Author : A.F. Litovkina

Inst Title : Forest Belts with Oak Participation on Light Chestnut Soils.  
(Lesnyye polosy s uchastiyem duba na svetlo-kashtanovykh pochvakh).

Orig Pub : Povolzh'ya, 1957, No 7, 56-59.

Abstract : The Stalingrad Agricultural Forest Melioration and Garden-Vineyard Experimental Station studied the outcome of setting out forest belts by the cluster method in 1949-1952 at two divisions of the state forest belt of Stalingrad-Stepnoy-Cherkessk. The condition of the cultures stands in direct relation to the mechanical composition and to the solonetz nature of the light chestnut soil. Good oak growth is noted on fine

Card 1/2

44

L 1136-66 EWT(m)/EPF(c)/T/EWP(t)/EWP(b)/EWA(c)  
ACCESSION NR: AP5021679

IJP(c) - JD/13  
UR/0192/65/006/004/0643/0645  
538.113

AUTHOR: Litovkina, L. P.; Meyl'man, M. L.; Andrianov, V. G.; Sergeyeva,  
N. I.

TITLE: Electron paramagnetic resonance of Cr<sup>3+</sup> ions in single crystals of  
MgMoO<sub>4</sub>

SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 4, 1965, 643-645

TOPIC TAGS: electron paramagnetic resonance, metal crystal, crystal structure,  
chromium, magnesium, molybdenum, magnetic susceptibility, crystallography

ABSTRACT: A study was made of the spectrum of the electron paramagnetic resonance of Cr<sup>3+</sup> ions in MgMoO<sub>4</sub> crystals, synthesized at atmospheric pressure, at a frequency of 0.4 megacycles at room temperature. The concentration of chromium in the melt was approximately 0.06%. The presence of five physically non-equivalent systems of ions was established. Two of these (the so-called basic ionic systems) had a sufficient intensity of resonance transitions and were studied in detail. Experimental results indicate that MgMoO<sub>4</sub> crystals belong to the monoclinic system and that their symmetry belong to one of the three point groups: 2(C<sub>2</sub>), m(C<sub>8</sub>), or 2/m (C<sub>2h</sub>). The results obtained were verified by X-ray

Card 1/2

L 1136-66

ACCESSION NR: AP5021679

3

methods. Independently of the results of the electron paramagnetic resonance investigation, it was demonstrated that  $\text{MgMoO}_4$  crystals can have one of the following spatial groups:  $\text{C}2\text{m}$  ( $\text{C}_{2h}^3$ ),  $\text{C}2$  ( $\text{C}_2^3$ ), or  $\text{Cm}$  ( $\text{C}_s^3$ ). A table shows the angles which determine the position of the axes of magnetic susceptibility of the basic ionic systems with respect to the crystallographic axes. "The authors are indebted to V. N. Rodkina for aid in carrying out the measurements and to V. Ya. Ershov and G. F. Belova for their help in computer calculations."

Orig. art. has: 1 figure and 3 tables

ASSOCIATION: None

SUBMITTED: 15 Jan 65

NR REF SOV: 001

ENCL: 00

SUB CODE: SS, NP

OTHER: 005

*MAB*  
Card 212

L 06227-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JG/JH  
 ACC NR: AP6029615 (A, N) SOURCE CODE: UR/0192/66/007/004/0614/0616.

AUTHORS: Litovkina, L. P.

ORG: none

TITLE: Electron spin resonance of 3d- and 4f-group ions in MgMoO<sub>4</sub> single crystals.  
 Part 2: ESR of Gd<sup>3+</sup> ions

SOURCE: Zhurnal strukturnoy khimii, v. 7, no. 4, 1966, 614-616

TOPIC TAGS: EPR spectrum, gadolinium, magnesium compound, molybdate

ABSTRACT: The paramagnetic spectrum of Gd<sup>3+</sup> in MgMoO<sub>4</sub> was studied at room temperature at a frequency of 9.4 cps in fields ranging from 0 to 12 kG. The spectrum is described by a spin Hamiltonian of rhombic symmetry

$$b_z^m = 3B_1^m,$$

$$b_1^m = 60B_1^m,$$

$$b_6^m = 1260B_6^m.$$

with the following constants:

$$\begin{aligned} \hat{H}_s = & g\beta H_x \hat{S}_x + g\beta H_y \hat{S}_y + g\beta H_z \hat{S}_z + \\ & + B_1^0 O_1^0 + B_2^0 O_2^0 + B_3^0 O_3^0 + B_4^0 O_4^0 + \\ & + B_5^0 O_5^0 + B_6^0 O_6^0 + B_7^0 O_7^0 + B_8^0 O_8^0 + \\ & + B_9^0 O_9^0 \end{aligned}$$

Card 1/2

UDC: 538.113

- 00227-67

ACC NR: AP6029615

Constants  $b_n^m$  are expressed in terms of  $B_n^m$  as follows:

$$\begin{aligned} b_2^0 &= 966 \pm 1 & b_4^0 &= 64 \pm 4 \\ b_4^0 &= -7 \pm 2 & b_6^0 &= 8 \pm 6 \\ b_6^0 &= 0 \pm 1 & b_8^0 &= 0 \pm 15 \\ b_2^2 &= 453 \pm 10 & g_x &= 1.993 \pm 0.001 \\ b_4^2 &= -23 \pm 2 & g_y &= 1.993 \pm 0.001 \\ b_6^2 &= 5 \pm 1 & g_z &= 1.989 \pm 0.01 \end{aligned}$$

The greatest intensity in the parallel orientation is shown by lines due to transitions between levels 4 and 5 ( $H_{res} = 3.7$  kG) and 3 and 6 ( $H_{res} = 1.6$  kG). The width of both lines drops to zero very rapidly as the distance from the parallel orientation increases. In conclusion, the author thanks M. L. Mayl'man for his interest and useful discussion, G. F. Belova for assistance in calculations with the electronic digital computer, and V. N. Rodkina for her assistance in the experiment. Orig. art. has 1 figure.

SUB CODE: 07/ SUBM DATE: 16Oct65/ ORIG REF: 002/ OTH REF: 002

Card 2/2 Adh

L 10574-66 EWT(1)/EWT(m)/EEC(k)-2/T/EWP(t)/EWP(k)/EWP(b)/EWA(m)-2/EWA(c) IJP(c)  
ACC NR: AP5025392 WG/JD/NN/GG SOURCE CODE: UR/0181/65/007/010/3099/3101

AUTHOR: Atsarkin, V. A.; Litovkina, L. P.; Meyl'man, M. L.

ORG: none

TITLE: Electron paramagnetic resonance and spin-lattice relaxation of nonequivalent chromium ion systems in zinc tungstate single crystals

SOURCE: Fizika tverdogo tela, v. 7, no. 10, 1965, 3099-3101

TOPIC TAGS: zinc compound, tungstate, chromium, EPR spectrum, spin lattice relaxation, single crystal, paramagnetic ion

ABSTRACT: The authors study the electron paramagnetic resonance spectrum and temperature dependence of spin-lattice relaxation in admixed systems of Cr<sup>3+</sup> ions in ZnWO<sub>4</sub> single crystals grown from a melt by the Czochralski method. The number of paramagnetic systems of ions and the position of the paramagnetic axes of these systems with respect to the crystallographic axes were determined by the "spherical plotting" method (B. I. Tsukerman, M. L. Meyl'man, L. P. Sorokina, Kristallografiya, 7, 224, 1962). At room temperature at a frequency of ~9.4 Gc in specimens with various Cr<sup>3+</sup> concentrations (Cr/Zn ~ 0.1-0.5% in the initial charge) the pattern observed (in a field H ~ 3300 oersteds) was symmetric with respect to plane (010) of the crystal, corresponding to a monoclinic system. It was found that there is one main system and four secondary (pairwise-equivalent) systems of ions. The axial orientations

Card 1/3

L 10574-66

ACC NR: AP5025392

of these systems are tabulated below.

Axial orientation of paramagnetic complexes  
with respect to the crystal axes in  $ZnWO_4$

	$x_1$	$y_1$	$z_1$	$x_2$	$y_2$	$z_2$	$x_3$	$y_3$	$z_3$
a	90°	93°30'	3°30'	104°00'	100°30'	24°50'	76°00'	100°30'	24°50'
b	0	90	90	24 00	99 30	68 40	24 00	80 30	111 10
c	90	3°30'	86°30'	85 20	14 00	76 00	94 40	14 10	76 00

	$x_1$	$y_1$	$z_1$	$x_2$	$y_2$	$z_2$
a	76°00'	96°40'	16°00'	103°50'	96°40'	16°00'
b	16 00	80 00	102 30	16 00	99 50	77 20
c	97 50	12 00	80 00	82 00	12 00	60 00

The ratio of line intensities for systems I, II and IV (with a 0.4% concentration of Cr in the charge) is ~50:15:1. A qualitative study of the effect of compensating

Card 2/3

L 10574-66

ACC NR: AP5025392

dopants (Li, Na) on the line intensity ratio of the fundamental and secondary ion systems showed that an increase in the concentration of  $\text{Li}^{+}$  ions causes a reduction in the intensities of electron paramagnetic resonance lines in secondary systems II and III; at a concentration of Li ~6% (in the charge) the spectrum for these systems completely vanishes. The addition of sodium as a compensating impurity also attenuates the lines in systems II and III; however, these spectra were never completely eliminated in this case. An increase in Li concentration results in somewhat of an increase in the relative intensity of the electron paramagnetic resonance lines for systems I (fundamental), IV and V. The line intensities for systems IV and V were too small in all specimens for analysis of the electron paramagnetic resonance spectra. The resonance absorption spectra of systems II and III are analyzed in detail. A theoretical model is proposed for explanation of the experimental data. Orig. a... has: 3 figures, 1 table.

SUB CODE: 20/ SUBM DATE: 01Apr65/ ORIG REF: 004/ OTH REF: 001

HW  
Card 3/3

LITOVKO, Semen Fedorovich; MAKSIMENKO, Georgiy Dmitriyevich; TRUNINA,  
Mariya Vasil'yevna; SHAVRIN, V., red.; MEDVEDEVA, R., red.;  
LEBEDEV, A., tekhn. red.

[Reviewing and auditing the economic activity of industrial  
enterprises] Revizija khoziaistvennoi deiatel'nosti predpriatiia.  
Moskva, Gosfinizdat, 1962. 149 p. (MIRA 15:6)  
(Industrial management) (Auditing)

LITOVKO, V. I.: Master Tech Sci (diss) -- "Investigation of certain processes occurring in the hydrocyclone in the dressing of fine grades of coal in an aqueous medium". Moscow, 1959. 16 pp (Inst of Mining of the Acad Sci USSR), 150 copies (KL, No 9, 1959, 115)

AKOPOV, M.G., kand.tekhn.nauk; KLASSEN, V. I., prof., doktor tekhn.nauk;  
LITOVKO, V. I., inzh.

Theory of the action of hydrocyclones. Obog. i brik.ugl. no.10:19-  
27 '59.  
(MIRA 13:9,

1. Institut gornogo dela AM SSSR (for Litovko).  
(Separators (Machines)) (Coal preparation)

LITOVKO, V.I.

Determining the tangential rate of flow of fluids in hydrocyclones.  
Kolyma 21 no.3:28-29 Mr '59. (MIRA 12:6)

1. Institut gornogo dela AN SSSR.  
(Separators (Machinery))

KLASSEN, V.I., prof., doktor tekhn.nauk; LITOVKO, V.I., kand.tekhn.nauk

Some problems in sizing mineral grains in a hydrocyclone in a water  
medium. Trudy Inst.gor.dela 6:38-45 '60. (MIRA 14:4)

(Ore dressing) (Separators (Machines))

AKOPOV, M. G., kand. tekhn. nauk; DUNAYEV, M. N., inzh.; KLASSEN, V. I.,  
prof., doktor tekhn. nauk; KULIK, P. P., inzh.; LITOVKO, V. I.,  
kand. tekhn. nauk; MALOFEEYeva, K. T., inzh.

Industrial testing of the preparation of coal pulp with  
hydrocyclones in a water medium. Obog. i brik. ugl. no. 24:  
3-10 '62. (MIRA 15:10)

(Coal preparation) (Separators(Machines))

KLASSEN, V.I.; LITOVKO, V.I.; MYASNIKOV, N.F.

Improving the physicomechanical properties of ~~zirconosilicon~~  
suspensions with the help of reagents. TSvet. met. 36 no.10:  
17-20 O '63. (MIRA 16:12)

KLASSEN, V. I.; LITOVKO, V. I.; MYASNIKOV, N. F.

"Improvement of physical and mechanical properties of ferrosilicon suspensions with help of reagents."

report submitted for 7th Intl Mineral Processing Cong, New York, 20-25 Sep 64.

KLASSEN, V.I., doktor tekhn.nauk; LITOVKO, V.I., kand.tekhn.nauk;  
ZAREMBA, S.A., kand.tekhn.nauk; BLACOVA, Z.S., inzh.;  
DOBROKHOTOVA, I.A., inzh.; KARAMYSHEV, A.P., inzh.

Improvement of physical and mechanical properties of a magnetite  
suspension by adding a peptizing agent. Obog.i brik.ugl.  
no.30:50-57 '63. (MIRA 17:4)

1. Institut gornogo dela imeni Skochinskogo (for Klassen, Litovko,  
Zaremba). 2. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-  
konstruktorskiy institut po obogashcheniyu i briketirovaniyu  
ugley (for Blagova, Dobrokhotova). 3. Obogatitel'naya fabrika  
shakhty imeni Abakumova tresta Rutchenkovugol' Donetskogo basseyna  
(for Karamyshev).

KLASSEN, V.I., doktor tekhn.nauk; LITOVKO, V.I., kand.tekhn.nauk; BLAGOVA,  
Z.S., inzh.

Effect of sodium phosphates on the technological properties of  
a magnetite suspension. Ugol' 40 no.3:63-65 Mr '65.  
(MIRA 18:4)

COUNTRY : USSR  
CATEGORY : Cultivated Plants. Industrial, Oleiferous, Sugar. M  
ABS. JOUR. : RZhBiol., №.23 1958, №. 194752  
AUTHOR : Litovshenko, M.  
INST. : ~~Узбекская Академия Наук~~  
TITLE : Agricultural Technique for Cotton Plant on the Meadow Soils of Middle Zerafshan.  
ORIG. PUB. : Khlopvodstvo, 1957, No. 7, 31-33  
ABSTRACT : In spite of their potential fertility, the yielding ability of cotton plant on these soils is lower than on previously plowed land (difference comprises 10-12 centners/ha). Here, a large number of roots of primary order develop in the cotton plant, but because of the proximity of groundwater, they lie at little depth. Because of a rich content of N and K in the humus in meadow soils, the aboveground parts of the plants have a tendency to growing out. On the basis of the characteristics of the soils given, appropriate agricultural measures assuring production of high yields are proposed. -- B. L. Klyachko-Gurvich

Card: 1/1

5/187/59/000/06/030/030  
EO31/EP13

**AUTHOR:** Zolotuhin, V.E.  
**TITLE:** The Scientific-Technical Conference at Khar'kov—  
 Aviation Institute

**PERIODICAL:** Vestsiya Uchebnoyavazedeniy Aviaticheskaya  
 tekhnika, 1959, Nr. 4, pp. 161-165 (USSR)

**ABSTRACT:** In May 1959, the 16th Conference of Professional and  
 Teaching Staff took place. At a Plenary session the  
 following reports were read: "The XXI Congress of the  
 Communist Party of the Soviet Union on the Further  
 Development of the Forces of Socialist Ownership" by  
 S.M. Mal'zev; "Director of the Chair of Aerodynamics  
 Leningrad: "The Contemporary State of Soviet Aerodynamics" by  
 Doctor Candidate of Technical Sciences I.P. Golikov; "A  
 Warplane to Produce the First Aircraft Wholly  
 Manufactured in China" by Doctor Candidate of Technical  
 Sciences S.I. Kuz'min. The work of the Conference  
 contained in twelve sections.

**Card 1/11** Contemporary bourgeois Philosophy by Senior Instructor  
 S.I. Spivat'skiy. Discussion on Trade Unions in the  
 Khar'kov Party Organization by Assistant A.G. Glavchuk;  
 "The Solution of the Housing Problem Under Socialism"  
 by Senior Instructor in the Department of Economical  
 Sciences V.A. Tikhonov; "The Film and Complete  
 Victory of Socialism in the USSR" by Senior Instructor  
 V.A. Kravets; "The Problems of Socialist Competition at  
 The XXII Congress of the Trade Unions of the USSR" by  
 Assistant Yu.N. Doroshenko;

Foreign Languages in Aviation. The following papers were read:  
 "Foreign Languages in the Life and Work of V.I. Lenin" by  
 Doctor Candidate of Philological Sciences  
 G.R. Butakov; "The Organization and Work of the  
 International Section of Foreign Language Teachers at  
 colleges which are not Specifically Language Colleges"  
 by Senior Instructor G.S. Simeonov; "Work on Translations  
 at Higher Technical Colleges" by Assistant V.I. Kryshev; 10  
 "The Principles of Constructive Handbooks of Technical  
 Books" by Senior Instructor for Third Course at  
 Aviation Colleges by Assistant A.M. Gurevich and  
 N.I. Vorob'yov.

Card 2/11

LITOVSKIY, A. A.

Glass Manufacture

Construction and performance of tank furnaces, Stek. i ker. 10, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000930210005-1

GORIN, D., kand. tekhn. nauk; MARCHENKO, S., inzh.; LITOVSKIY, M., inzh.

High frequency metallization. Avt. transp. 42 no.11:24-  
26 N '64. (MIRA 17:12)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000930210005-1"

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000930210005-1

GORIN, D.I., kand. tekhn. nauk; MARCHENKO, S.A., kand. tekhn. nauk;  
LITOVSKIY, M.A., kand. tekhn. nauk

Reconditioning crankshafts. Mashinostroitel' no. 1:16 Ja '6/  
(MIRA 19:1)

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000930210005-1"

DZHAPPUYEV, M.; PROTOPOPOV, S.; LITOVSkiY, V., master-povar; FEKINA, L., inzhener-kulinar (Lermontov, Stavropol'skogo kraja); YERMOLAYEV, V.

Advice to the cook. Obshchestv.pit. no.1:22-23 Ja '63. (MIRA 16:4)

1. Nachal'nik ot dela obshchestvennogo pitanija Nal'chikskoy kontory "Kurortprodorga", Nal'chik (for Dzhappuyev). 2. Glavnyy kulinar Glavnogo upravleniya obshchestvennogo pitanija Moskovskogo gorodskogo ispolnitel'nogo komiteta Moskovskogo gorodskogo soveta deputatov trudyashchikhsya (for Protopopov). 3. Zaveduyushchiy proizvodstvom stolovoy No.14 Novomoskovskogo tresta stolovykh Novomoskovsk, Tul'skoy oblasti (for Litovskiy). 4. Zamestitel' zaveduyushchego proizvodstva restorana "Varshava", Moskva (for Yermolayev).

(Cookery)

S/114/60/000/002/002/007  
E194/E155

AUTHORS: Zhmud', A.Ye., Engineer; Litovskiy, Yu.A., Engineer;  
and Robuk, N.N., Engineer

TITLE: Hydraulic Shock Due to the Return Wave in Water-Turbine  
Installations

PERIODICAL: Energomashinostroyeniye, 1960, No. 2, pp. 11-15

TEXT: An accident occurred to an adjustable-blade water  
turbine of the following characteristics: runner diameter 8 m,  
output 51 800 kW, head 13.8 m, and speed 62.5 r.p.m. The set had  
been running for about 3000 hours, during which load had been  
thrown off 7 times on fault and 5 times for test purposes. The  
tests were made to check the guaranteed performance of the  
governor, which operated reliably. There were no excessive  
pressures in the scroll case or other signs of excessive shock  
loading. The accident occurred during an experimental throwing-off  
of load intended to test the operation of the automatic repeated  
reclosure system of the set in case it became disconnected from the  
system. Loads of 47 and 50 MW were thrown off and the accident  
occurred whilst a load of 46 MW was being thrown off. When the

Card 1/6

8/114/60/000/002/002/007  
E194/E155

Hydraulic Shock Due to the Return Wave in Water-Turbine  
Installations

test was made the guide vanes were full open (1130 mm travel) and the runner blades were turned through 25°. After load was dropped the guide vanes began to close, and apparently closed completely. Six seconds after load was dropped the turbine made knocking sounds and there was sparking on the exciter commutator. The water at the head race rose by 2 m as against 0.6 m in the previous tests. As synchronous speed was reached the machine was automatically connected to the system; further knocking noises were heard. The turbine was shut down and the following damage was found. Three blades were broken off the runner, in two cases taking the blade-adjusting mechanism with them; four of the guide blades were missing; considerable other damage was apparent, including damage to the turbine cover; the lower support (of the generator) was displaced and cracks had appeared in the welds; and the generator brushes were damaged. It was evident that a considerable impact load had been applied to the runner from below. It had broken off the runner blades and thrown them upwards into the guide vanes.

Card 2/6

S/114/60/000/002/002/007  
E194/E155

Hydraulic Shock Due to the Return Wave in Water-Turbine  
Installations

The immediate cause was hydraulic shock due to the return wave, which has been described in the book by A.Ye. Zhmud' entitled 'Hydraulic Shock in Water Turbine Installations', Energoizdat, 1953. Briefly the cause is as follows. If when the turbine is shut down for any reason the flow of water from the guide vanes is interrupted, the water at first flows away from the runner. Then, under the influence of atmospheric pressure and back-pressure from the tail race, it flows back and is suddenly arrested as it hits the bottom of the runner. The hydraulic shock so developed increases the pressure under the runner, thus causing the damage. The conditions under which flow interruption can occur are then outlined. Methods of estimating the pressure increase are discussed and it is shown that the return wave can easily cause severe damage. The rate of propagation of the shock wave depends on the operation of the vacuum-breaking valve. If the valve is open, the air saturates and gasifies the flow of water. This creates an emulsion, which reduces the speed of propagation of the

Card 3/6

S/114/60/000/002/002/007  
E194/E155

Hydraulic Shock Due to the Return Wave in Water-Turbine  
Installations

shock waves but extends their duration. The speed with which the water rises from below towards the runner depends on the height of the tail race; on the back-pressure upon the runner; and on the distance through which the water had succeeded in passing beyond the runner. If the guide vanes close quickly and cut off the flow suddenly, the effect is more severe. After the wave has hit the runner its speed depends on the hydraulic resistance of the runner. The resistance will be high if the runner blades are nearly closed and the set speed is low. All the indications were that the failure had been caused by a shock wave of this kind. After the accident special tests were made on a similar set in the power station. Curves were taken of turbine output and vacuum under the runner as functions of the travel of the piston of the guide vane servo-motor. It was found that as the guide vanes opened the turbine output reached the maximum of 53 MW with a piston travel of 1000 mm, but further opening reduced the output. At the maximum piston travel of 1130 mm the output became 45 MW. As the opening

Card 4/6

S/114/60/000/002/002/007  
E194/E155

### Hydraulic Shock Due to the Return Wave in Water-Turbine Installations

of the guide vanes was increased the vacuum under the runner increased until, at a servo-motor piston travel of 1050 mm, it was almost complete vacuum. The tests showed why the flow of water was interrupted in the turbine when 46 MW load was thrown off. All the previous tests of throwing-off load had been carried out with shorter travel of the servo-motor piston than in the case of failure, where it was open to 1130 mm. As a result of the investigations the following two steps were taken to prevent possible recurrences of similar damage: on all the turbines the maximum travel of the guide-vane servo-motor piston was limited to 1000 mm, at which setting the vacuum under the runner under steady-state conditions does not exceed 8 m water; the times of closing of the guide vanes and the runner blades were increased to 10-14 sec and 40-50 sec respectively, which is quite permissible in this case. After these steps had been taken special tests of throwing-off load were made on one of the sets and no untoward effects were observed. It is concluded that, in general, the amount

Card 5/6

S/114/60/000/002/002/007  
E194/E155

✓  
\_\_\_\_\_

### Hydraulic Shock Due to the Return Wave in Water-Turbine Installations

that the guide vanes can be opened should be restricted in accordance with the limiting power and permissible vacuum. However, the vacuum depends not only on the extent of opening of the guide vanes but also on the head and on the height of the draught tube. Thus it is important, particularly on automatically-controlled stations, to have an electrical contact vacuum meter to give a warning when the vacuum is becoming excessive. In many adjustable-blade turbines a higher speed increases the amount of water that can flow through, which can increase the vacuum under runaway conditions. This should be allowed for in selecting the time of closing-down the turbine.

There are 6 figures.

Card 6/6

ABRAMOVA, L.I., kand.tekhn.nauk; BENIN, V.L., kand.tekhn.nauk;  
ARTYUKH, S.F., inzh.; LITOVSKIY, Yu.A., inzh.; POTAPOVSKIY, I.Ya.,  
inzh.; RIVLIN, M.I., inzh.

Electrohydraulic regulator for a hydraulic turbine.  
Energomashinostroenie 8 no.10:14-22 O '62. (MIRA 15:11)  
(Hydraulic turbines)

KHRISTOV, Tsv.; LITOVSKI, Zdr.

Obtaining of the wheat-straw bleached semicellulose by the  
neutral sulfite method. Khim i industriia 23 no.5:137-142 '61.

ANVAYER, B.I.; ZHUKHOVITSKIY, A.A.; LITOVTSEVA, I.I.; SAKHAROV, V.M.;  
TURKEL'TAUB, N.M.

Relation between the retention volume in gas-liquid  
chromatography and the dielectric constant of the stationary  
phase. Zhur. anal. khim. 19 no.2:178-183 '64.  
(MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut yadernoy  
geofiziki i geokhimii, Moskva.

STAMENKOVIC, K.; HARISLIJADIS, S.; LITRICIN, I.O.

Experimental infection of human volunteers with a Yugoslavian strain  
of trachoma virus. Acta med. iugosl. 17 no.2:117-122 '63.

l. Antitrahomski dispanzer u Tuzli, Mikrobioloski institut Medicins-  
kog fakulteta i Ocna klinika Medicinskog fakulteta u Beogradu.

S

STANKOVIC, I.; LERICIN, O.

The fate of transplantate in keratoplasty. Acta med. jugosl. 8  
no.3:315-321 1954.

1. Očna klinika Medicinskog fakulteta u Beogradu.  
(CORNEAL TRANSPLANTATION  
lamellar graft)

LITRICIN, O.; PAVLOVIC, M.

The orifice of the nasolacrimal duct in trachoma. Acta med.  
jugosl. 9 no.2-3:167-182 1955.

1. Klinika za očne bolesti Medicinskog fakulteta u Beogradu i  
Odeljenje za uvo, grlo i nos Gradske bolnice u Beogradu.  
(NASOLACRIMAL DUCT, in various dis.  
trachoma, histol. & clin. aspects of mucosa of orifice.  
(Ser))  
(TRACHOMA, pathol.  
nasolacrimal duct orifice mucosa, histol. & clin.  
aspects. (Ser))

LITRICIN, O.

Our experiences in cataract extraction with gillette blade after  
the method of Malbran. Srpski arh. celok. lek. 83 no.4:491-493  
Apr 55.

1. Klinika za očne bolesti Medicinskog fakulteta u Beogradu.

Upravnik: Djordje Nesic.

(CATARACT EXTRACTION,

Malbran's method with gillette blade (Ser))

LITRICIN, O.; STANKOVIC, I.

First cases of intra-epithelial epithelioma (Bowen's disease)  
of the eye in Yugoslavia. Srpski arh. celok. lek. 83 no.9:  
1020-1025 Sept 55.

1. Klinika za ocne bolesti Medicinskog fakulteta u Beogradu.

Upravnik: Djordje Nesic.

(CARCINOMA, EPIDERMOID,

    Bowen's dis. of eye, diag. & surg. (Ser))

(EYE, neoplasms

    Bowen's dis., diag. & surg. (Ser))

LITRICIN, O.; BLAGOJEVIC, M.

X-ray-induced cataract. Acta med. jugosl. 10 no.2:243-257  
1956.

l. Clinique Ophtalmologique de la Faculte de Medicine de  
Belgrade.

(CATARACT, in inf. & child  
caused by radiother. (Fr))  
(RADIOTHERAPY, inj. eff.  
cataract in child. (Fr))

MILOSEVIC, Boša; LITRICIN, Olga

Tuberculoma sclerae. Srpski arh. celok. lek. 85 no.1:101-104  
Jan 57.

1. Klinika za očne bolesti Medicinskog fakulteta u Beogradu  
Upravnik: Vladimir Cavka.

(SCLERA, dis.

tuberculoma (Ser))

(TUBERCULOMA, case report

sclera (Ser))

LITRICIN,O.; BLAGOJEVIC,M.

Patho-histological verification of tuberculous nature of certain  
eye diseases. Tuberkuloza, Beogr. 11. no.4:439-446 0-D '59.

1. Klinika za ocne bolesti Medicinskog fakulteta,Beograd  
(upravnik: prof. dr. V. Cavka).  
(TUBERCULOSIS OCULAR diag.)

JUGOSLAVIA

Prof Dr Olga LITERIĆIN [Affiliation not stated]

"The First International Symposium on Plastic Surgery of Eye and Adnexa."

Belgrade, Srpski Arhiv za Celokupno Lekarstvo, Vol 90, No 10, Oct 62;  
pp 1001-1005.

Abstract: Review of this meeting held in New York in May 1962; mainly  
1- or 2-sentence abstracts of papers presented with names and origins  
of authors, very few if any subjective comments.

1/3

[ YUGOSLAVIA ]

Olga LITRICIN, Nedelja TOMIC-JOVANOVIC and Dusan STOJANOVIC, Eye Clinic of Medical Faculty of University (Klinika za ocne bolesti Medicinskog fakulteta Univerziteta), Head (Upravnik) Prof Dr Ivan STANKOVIC, Belgrade.

"Lesions of the Eye in Children."

Belgrade, Srpski Arhiv za Celokupno Lekarstvo, Vol 91, No 1, Jan 63;  
pp 17-25.

Abstract [French summary modified]: Review of the cases of 637 children with ocular injuries, treated between 1955 and 1961. Early treatment is essential but results depend most on type of injury (perforating and non-magnetic foreign body have worst prognosis.) Graph, 5 tables; 1 Western and 3 Yugoslav (1 unpublished) references.

[ 1/1 ]

-----

LITRICIN, Olga

Histopathology of congenital glaucoma. Srpski arh. celok.lek.  
91 no.9:803-810 S'63.

1. Klinika za ocne bolesti Medicinskog fakulteta Univerziteta  
u Beogradu. Upravnik: prof.dr. Ivan Stankovic.

LITRICIN, Olga; ILLIC Ruzica

Toxoplasmosis in ophthalmology. Srpski arh. celok. lek. 91  
no.10:955-961 0<sup>o</sup>63.

1. Klinika za ocne bolesti Medicinskog fakulteta Univerziteta  
u Beogradu. Upravnik: prof. dr. Ivan Stankovic.

S

LITRIĆE, Olga; TARIĆ, Nedelja; LJBOLJEWIC, Vera

Use of sibconjunctional anti-hemotherapy in chemical eye diseases.  
Srpski arh. celok. lek. 92 no.2:173-179 F'64.

1. Oena klinika Medicinskog fakulteta Univerziteta u Beogradu  
(Upravnik: prof. dr. Ivor Stanković).

LITRICIN, Triva, dr.

Etiology, clinical aspects and surgical treatment of cardiospasm.  
Med. arh., Sarajevo 8 no.3:49-59 May-June 54.

l. I Hirurska klinika Medicinske velike sole u Beogradu, upravnik  
prof. dr. Mil. Kostic.  
(CARDIOSPASM  
etiol. & surg.)

LITRICIN, Triva, asist.dr.

Surgical treatment of epiphrenic diverticulum of the esophagus.  
Srpski arh.celok.lek. 87 no.11:1455-1459 Nov. 54.

I. I Hirusska klinika Medicinskog fakulteta u Beogradu. Upravnik:  
prof. dr Milovoje Kostic.  
(ESOPHAGOS, diverticula,  
surg.)

LITRICIN, T.

Differential diagnosis of echinococcosis of the lungs.  
Srpski arh. celok. lek. 83 no.9:969-979 Sept 55.

1. I Hirurska klinika Medicinskog fakulteta u Beogradu.

Upravnik: Milivoje Kostic.

(ECHINOCOCCOSIS,

lungs, diag. & differ. diag. from other lung dis. (Ser))

(LUNGS, dis.

echinococcosis, differ diag. from other lung dis. (Ser))

KOSANOVIC, Bogdan, dr.; LITRICIN, Triva

Surgical treatment of congenital lung cyst. Srpski arh.  
celok. lek. 85 no.4:471-476 Apr 57.

1. I Hirurska klinika Medicinskog fakulteta u Beogradu.  
Upravnik: prof. dr. Bogdan Kosanovic.

(LUNG, cysts  
congen., surg. (Ser))

LITRICIN, Triva

Acute obstruction of the peripheral arteries caused by the emboli.  
Srpaski arh. celok. lek. 87 no.12:1147-1156 D '59.

1. I Hirurška klinika Medicinske fakultete Univerziteta u  
Beogradu, Upravnik: prof. dr Bogdan Kosanovic.  
(EMBOLISM case reports)

DAVIDOVIC, S., prof., dr.; GLIDZIC, V., dr.; LITRICIN, T., doc., dr.

Injuries of the thoracic cage. Voj.san.pregl. 18 no.2:152-156 F '61.

1. Medicinski fakultet u Beogradu. I hirurska klinika.

(THORAX wds & inj)

LITRICIN, Triva; GLIDZIC, Vukasin

Dissecting aneurysm of the superficial femoral artery. Srpski arh.  
celok. lek. 89 no.4:495-499 Ap '61.

1. I hirurska klinika Medicinskog fakulteta Univerziteta u Beogradu.  
Upravnik: prof. dr Bogdan Kosanovic.

(FEMORAL ARTERY dis) (ANEURYSM case reports)

LITRICIN, T., doc., dr; STEVANOVIC, D., asis. dr; KARADZIC, Al., asis. dr

Ebolism of the common and other iliac arteries. Med. arh. 15 no.5:  
55-60 S-0 '61.

1. I hirurska klinika Medicinskog fakulteta u Beogradu (Upravnik;  
prof. dr B. Kosanovic).  
(EMBOLISM case reports) (ILIAC ARTERY dis)

LITRICIN, T., doc. dr.; GLIDZIC, V., dr.

Transplantation of fresh veins in arterial diseases. Med. arh. 16  
no. 3:17-23 My-Je '62.

1. I. hirurska klinika Medicinskog fakulteta u Beogradu (Upravnik:  
prof. dr B. Kosanovic).  
(VEINS transpl) (ARTERIES surg)

LITRICIN, Triva

Chronic arteriopathy of the axillobrachial artery due to  
crutches. Srpski arh. celck. lek. 90 no. 3: 337-341 Mr '62.

1. I hirurška klinika Medicinskog fakulteta Univerziteta u  
Beogradu Upravnik: prof. dr. Bogdan Kosanovic.  
(CRUTCHES) (AXILLARY ARTERY dis)  
(BRACHIAL ARTERY dis)

S

LITRICIN, Triva; ZIVKOVIC, Borivoje

Gastric diverticula. Srpski arh. celok. lek. 91 no.5:517-522  
Maj '63.

1. I hirurska klinika Medicinskog fakulteta Univerziteta u  
Beogradu Upravnik: prof. dr Bogdan Kosanovic.  
(STOMACH DIVERTICULA)

S

YUGOSLAVIA

GLIĐIĆ, Vukašin, and LITRIĆ IN, Triva, First Surgical Clinic (I Hirurška Klinika), Faculty of Medicine (Medicinski Fakultet), University (Univerzitet) of Belgrade; KOSANOVIC, Prof Dr Bogdan, Clinic Director (Upravnik).

"The Diagnosis and Treatment of Arterial Lesions Accompanied by a Large Hematoma."

Belgrade, Srpski Arhiv za Celokupno Lekarstvo, Vol 91, No 6, June 1963, pp 599-604.

Abstract: [Authors' German summary modified] The authors describe six cases of arterial lesions, four of A. femoralis, one of A. brachialis, and one of A. glut. superior., all complicated by a large hematoma. The cases were reported two to 33 days after onset. One case ended in death. Suture was applied in two cases, transplantation in one, and ligature in another. The limb was saved in each case. The suggestion by the authors is that urgent surgical intervention is in order in such cases because of poor results from delayed operations and of the danger from secondary bleeding, thrombosis, emboly, and infection of the hematoma.

Three photographs, four recent Western references.

1/1

- 21 -

LITRICIN, Triva; GLUSIC, Vukasin

' Arteriography as a diagnostic method in tumors of extremities.  
Srpski arh. celok. iek. 42 no.1263-72 Ja '64

1. I Hirurska Klinika Medicinskeg Fakulteta Univerziteta u  
Beogradu (Uprevniki prof. dr. Djubomir Rasovic).

YUGOSLAVIA

LITRICIN, Triva; and GLIDZIC, Vukasin, First Surgical Clinic of the Medical Faculty of the University (I Kuirurska Klinika Medicinskog Fakulteta Univerziteta); Head (Upravnik) Prof Dr Ljubomir RASOVIC, Belgrade

"Arteriovenous Anastomosis"

Belgrade, Srpski Arhiv za Celokupno Lekarstvo, Vol 94, No 4, Apr 66; pp 343-350

Abstract: [French summary modified] Clinical and laboratory data on 9 patients with arteriovenous anastomosis on the legs and 3 on the arms or hands. Diagnosis was by arteriography; surgery in 5 gave good results. Patient photograph, 5 roentgenograms, 4 Soviet, 11 Western references. Manuscript received 10 Dec 65.

1/1

DZHABERZADE, D.A.; LITROVENKO, M.G.; FAYERMAN, I.L.

Capacity of 20 KHN shot peened sucker rods. Trudy AzNII DN  
no.6:192-199 '57. (MIRA 12:12)  
(Sucker rods) (Shot peening)

SOV/92-59-2-22/40

14(7)

AUTHOR: Litrovenko, M.G., EngineerTITLE: A Table Used in Lowering and Lifting Pump Rods (Stolik dlya spusko-  
pos"yemnykh operatsiy s nasosnymi shtangami")

PERIODICAL: Neftyanik, 1959, Nr 2, pp. 22-23 (USSR)

ABSTRACT: It is known that pump rods must be lifted and lowered every time the oil is overhauled. Since this operation is complicated and difficult, the laboratory of pump rods operating under the Azerbaijani Scientific Research Institute has developed a special table facilitating the procedure. It consists of a 500 mm metal disk attached to a connecting pipe through which the pump pressure tube is run. This connecting pipe is provided with 1-in. sleeve with a hose used for washing the rods of deep well pumps. The 18 kg table, shown in Fig. 1 and 2, can be easily transported on a special carriage and brought from one wellhead to another. The table under discussion has been tested at the Azerbaijani oilfields and found to be useful. There are 2 figures.

ASSOCIATION: Laboratoriya AzNII (The Laboratory of the Azerbaijani Scientific Research Institute)

Card 1/1

ALT, Gyozo; LITS, Ferenc (Siofok)

Incentive awards and the sphere of activity; remarks about a polemic article by Emil Tasnadi, President, Hungarian Patent Office. Ujratlap 15 no.12:11 25 Je '63.

BYKOV, A.N.; YERMOLAYEVA, Ye.A.; KIRILLOVA, T.M.; LITS, N.P.

Colored polymers of caprolactam and aminoanthraquinones as  
stabilizing agents in polymerization process. Khim.volok no.4:  
9-10 '62. (MIRA 15:8)

1. Ivanovskiy khimiko-tehnologicheskiy institut.  
(Azepinone) (Anthraquinone) (Polymerization)

BYKOV, A.N.; KIRILLOVA, T.M.; LITS, N.P.

Spectrophotometric investigation of colored polycaprolactams.  
Vysokomolosod. 5 no.3:428-431 Mr '63. (MIRA 16:3)

1. Ivanovskiy khimiko-tehnologicheskiy institut.  
(Polyamides—Absorption spectra.)

LITS, Ye. A.; CHERNIKIN, V.I.

Optimum heating temperature of petroleum products while emptying  
them from railroad tank cars. Trydy VNII NP no.5:117-121 '56.

(MILRA 9:8)

(Tank cars) (Petroleum--Transportation)

LITSAREV, M.A.

About wollastonite from the Archean metamorphic complex of the Aldan Massif. Dokl.AN SSSR 108 no.1:143-146 My '56. (MLRA 9:8)

1. Institut geologicheskikh nauk Akademii nauk SSSR. Predstavлено akademikom D.S. Korshinskim.  
(Aldan Plateau--Wollastonite)

LITSAROV, M.A.

Datolite from Archaean calciphyres along the middle Kurankh River in  
southern Yakutia. Trudy IGEM no.10:5-11 '57. (MIRA 11:6)  
(Kurankh Valley--Ditolite) (Calciphyre)

LITSAREV, M.A.

AUTHOR: Litsarev, M.A.

TITLE: 11-58-3-3/14

Grossularite Wollastonite Skarns of the Emei'dzhak Phlogopite Deposit (South Yakutia). (Grossularo-vollastonitovyye skarny emel'dzhakskogo flogopitovogo mestorozhdeniya Yuzhnaya Yakutiya)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1958,  
# 5, pp 31-45 (USSR)

ABSTRACT: The article presents the conclusions of a study of grossularite wollastonite skarns found in the Aldan mountain range. The presence of datolite, prehnite and vesuvianite was also discovered in certain parts of this range in the course of numerous geological expeditions of the last 6 years. After going into the geologic structure and mineral composition of these skarns, the article deals with their role in different diffusive mesomatic zones. Many figures, tables and photographs were studied by the author and after citing the opinion of many scientists he arrives at the following conclusions:  
1) The formation of skarns in contact with Archean pegmatites containing calcareous marbles took place during the post-magmatic stage, as the development of different (by their

Card 1/4

11-58-3-3/14

Grossularite Wollastonite Skarns of the Emel'dzhak Phlogopite Deposit  
(South Yakutia)

content) zones is connected with the replacement of marbles and pegmatites. The consecutiveness of zones was established as follows:

- a) primary pegmatite
  - b) rocks adjacent to skarns
    - 1) piroxene-plagioclase
    - 2) pyroxene-scapolitic;
  - c) grossularite - wollastonitic skarns:
    - 1) endoskarn
    - 2) exoskarn
    - 3) calcareous marble
- 2) Distribution of zones in a skarn belt and the changes of mineral composition within separate zones shows that zonality is caused by bimetasomatic interaction of contacting rocks and occurs in connection with the diffusive exchange of their components.
- 3) The compositions of garnets, monoclinic pyroxene, plagioclase and scapolite, gradually and continuously change not only during the transition from one zone to another, but also

Card 2/4

11-58-3-3/14

Grossularite Wollastonite Skarns of the Emel'dzhak Phlogopite Deposit  
(South Yakutia)

within the boundaries of one zone.

4) It is possible to state, after a review of the correlations of minerals, that they were not formed simultaneously, which, among other factors, were most likely caused by changing temperatures.

5) The paragenesis of wollastonite plus scapolite is stable during the first stage of the formation of minerals, i.e. when temperatures are high; and it becomes unstable during the second stage, when temperatures drop. As a result of the reaction of these minerals to a solution, grossularite is developed and forms fringes around scapolite grains or even completely replaces them.

6) It could thus be said, that the complex process of the forming of the Emel'dzhak Phlogopite Deposit occurred in shallow depths, in contrast to facies not containing wollastonite.

Card 3/4

LITSAREV, M.A.

AUTHORS: Vasil'yeva, Z. V., Litsarev, M. A.,  
Organova, N. I.

20-3-46/59

TITLE: Natural Sulfate Apatite  
(O prirodnom sul'fatapatite)

PERIODICAL: Doklady Ak SSSR, 1958, Vol. 118, Nr 3, pp. 577-580 (USSR)

ABSTRACT: Apatite is comparatively widely distributed in the phlogopite layers in the Aldan region. It occurs as a mineral admixture in various crystalline slates and gneisses, granites and pegmatites, mostly in the form of small irregular grains distributed over the entire rock. The largest apatite accumulations are combined with metasomatic formations, in particular with phlogopite veins and nests which are deposited in diopside and spinel-diopside rocks. The dimensions of the apatite crystals vary from a few millimeters to 35 to 40 cm, their colour being green, pale blue or red. An unusual specimen of apatite was found in the phlogopite deposit "Nadezhnoye" (On the upper course of the river Pravyy Kurung-Khoonku, district of Aldan). Small apatite crystals (1 - 1,5 mm, figure 1) are composed of an

Card 1/4

Natural Sulfate Apatite

20-3-46/59

aggregate of even smaller crystals with a characteristic zonal structure (figure 1b). The inner parts of these latter micro crystals are very weakly double-refracting (almost isotropic) whereas the external layers are normally refracting. The latter variety of apatite in certain points forms shapeless separations, fills up the gaps between the isotropic apatite and without doubt is of a later origin. The interrelations established between these two components of the identical apatite sample lead to the assertion, that here one variety of apatite was replaced by the other. An incomplete pseudo-morphosis (para-morphosis) of two chemically differing apatite varieties is observed here. The analysis of these varieties was not successful, because a separation was impossible. An X-ray structure analysis showed two excess lines. They can well be made to harmonize with the indices of the apatite-like component with  $a_2 = 9,56$ ;  $c_2 = 6,77$ ;  $c_2/a_2 = 0,708$ . As it is shown by table 1, it is possible to attribute indices corresponding to the second phase to all other lines. This justifies the assumption, that here two apatite phases are existent. The parameter  $a$  of the second phase is much greater, which is characteristic for Cl-apatite, as is well known. The

Card 2/4

Natural Sulfate Apatite

20-3-46/59

chemical analysis is given in table 2. It reflects the composition of both apatite phases and corresponds, after subtracting  $\text{CaCO}_3$ , to the total formula of apatite, which is distinguished by the presence of S, which obviously replaces P isomorphously, and by the occurrence of Na, which replaces Ca. From this the occurrence of Na-S-apatite may be presumed, the existence of which was proved (reference 1). Intermediary forms also became known. From these facts and from the investigations of the apatite from "Nadezhnoye" it can be conceived to consist of two phases, Na-S-apatite and normal apatite. For the purpose of clarifying the problem, to what extent it consists of pure S-apatite, a finely ground sample was washed out with water for three days. The presence of sulphur and chlorine, as well as the absence of phosphorus was determined. Therefore, in this apatite phosphorus is completely replaced by sulphur. From these considerations the formula  $\text{Na}_6\text{Ca}_6\text{O}_{24}\text{Cl}_2$  is proposed. This variety was not yet observed in nature. It forms about 5% of the total apatite mass. The predominant component corresponds to the formula  $\text{Ca}_{10}\text{P}_6\text{O}_{24}\text{Cl}_1(\text{OH}, \text{F})$ . The ordinary apatite here forms a paramorphosis of an earlier sulfate-

Card 3/4

Natural Sulfate Apatite

20-3-46/59

-apatite, which proved to be unstable on the conditions of metasomatism because of its solubility and was preserved only in the crystal cores. There are 1 figure, 2 tables, and 1 reference.

ASSOCIATION: Institute for Ore Deposits, Petrography, Mineralogy and Geochemistry AN USSR (Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii Akademii nauk SSSR)

PRESENTED: August 29, 1957, by N. V. Belov, Academician

SUBMITTED: August 28, 1957

AVAILABLE: Library of Congress

Card 4/4

LITSAREV, M. A., Cand Geol-Min Sci -- (diss) "Types of phlogopite de-  
posits of alpine, conditions of its formation, and principles of local-  
ization." Moscow, 1960. 25 pp; with diagrams; (Academy of Sciences  
USSR, Inst of the Geology of Ore Deposits, Petrography, Mineralogy, and  
Geochemistry); 150 copies; price not given; (KL, 22-60, 133)

LITSAREV, Mikhail Alekseyevich; PETROV, V.F., otv.red.; SHLEPOV, V.K.,  
red.izd-va; DOROKHINA, I.N., tekhn.red.

[Genesis of Aldan phlogopite deposits] Genezis flogopitovykh  
mestorozhdenii Aldama. Moskva, Izd-vo Akad.nauk SSSR, 1961. 166 p.  
(Akademija nauk SSSR. Institut geologii rudnykh mestorozhdenii,  
petrografii, mineralogii i geokhimi. Trudy, no.67). (MIRA 14:8)  
(Aldan Plateau--Phlogopite)

LITSAREV, M.A.

Formation and distribution of phlogopite deposits in the  
U.S.S.R. Zakonom. razm. polezn. iskop. 6:340-372 '62.  
(MIRA 16:6)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,  
mineralogii i geokhimii AN SSSR,  
(Phlogopite)

LITSCHMANN, J., inz.

"Data transmission, planning, and solution methods" by J.Jircunek,  
L.Palounck. Reviewed by J.Litschmann. Automatizace 7 no.11,  
Suppl;Technicka literatura insert N '64.

LITSERMAYYIR, N.V.

Find of a mineral of the helvite-danalite group in skarns of  
Central Asia. Zap. Vses. min. ob-va 89 no.4:466-468 '60.  
(MIRA 13:11)  
(Soviet Central Asia--Minerals)

GEGELE, V.G.; LITSINOVA, I.A.

Effect of mineral additions on Tkibuli coal pyrolysis.  
Trudy Inst. priki. khim. i elektrokhim. AN Gruz. SSR 4:  
81-89 '69. (MIRA 17:5)

3-58-7-18/36

AUTHORS: Litsis, N.A. and Epshteyn, I.Ye., Candidate of Technical Sciences, Dotsent

TITLE: Engineering Knowledge to Teachers of Basic Sciences of Industrial Production (Uchitelyam osnov proizvodstva - inzhe-nernyye znaniya)

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 7, pp 58-60 (USSR)

ABSTRACT: A scientific methodical conference called by the Rizhskiy pedagogicheskiy institut (The Riga Pedagogical Institute) jointly with the Ministry of Education of the Latvian SSR debated measures to improve the polytechnical education of future teachers. The conference proposed replacing the state examination of teachers in special industrial disciplines, by the presentation of a diploma project on a given subject. The number of hours for teaching industrial drawing must therefore be increased.

ASSOCIATION: Ministerstvo prosveshcheniya Latviyskoy SSR (Ministry of Education, Latvian SSR)

Card 1/1

R.  
LITSIS, N. [Licitis, N.]

Concerning the natural scientific and philosophical significance  
of Lobachevskii's geometry. In Russian. Vestis Latv ak no.3:33-44  
'60. (EEAI 10:7)  
(Geometry)

LITSIS, N. [Licitis, N.]

Nikolai I. Lobachevskii's natural, scientific, and philosophical ideas in the development of notions about space and time. Vestis Latv ak no.8:5-18 '60.

(EEAI 10:9)

(Lobachevskii, Nikolai Ivanovich)  
(Space and time)

KUDRITSKIY, R.; VOLKOV, A.; FOGEL', Z.; PODOBED, Yu.; TITOV, A.; SHEIN, R.;  
LITSITIS, Ya. [Licitis, J.]; OSTROVENETS, V.; SEMENTSOV, N.

Specialization is indispensable. Tekh. est. no.4:22-23 Ap '65.  
(MIRA 18:6)

1. Spetsial'noye khudozhestvenno-konstruktorskoye byuro Kiyevskogo soveta narodnogo khozyaystva (for Kudritskiy, Volkov, Fogel').
2. Spetsial'noye khudozhestvenno-konstruktorskoye byuro Soveta narodnogo khozyaystva Moskovskogo gorodskogo ekonomicheskogo rayona (for Podobed). 3. Spetsial'noye khudozhestvenno-konstruktorskoye byuro Soveta narodnogo khozyaystva Leningradskogo ekonomicheskogo rayona (for Titov). 4. Spetsial'noye khudozhestvenno-konstruktorskoye byuro Sredne-Ural'skogo soveta narodnogo khozyaystva (for Shein). 5. Spetsial'noye khudozhestvenno-konstruktorskoye byuro Soveta narodnogo khozyaystva Latviyskoy SSR (for Litsitis, Ostrovenets, Sementsov).

LITSKEVICH, V., arkitektor (Vladivostok)

Special problems in maintaining apartment houses in the Maritime Territory. Zhil.-kom. khoz. 9 no.9:20-21 '59.. Zhil.-kom. khoz.  
9 no.9:20-21 '59. (MIRA 13:2)  
(Maritime Territory--Apartment houses--Maintenance and repair)

LIKHOVA, L.F.; LITSKEVICH, V.K.; TEMKINA, Ye.L., red.izd-va; OSELEDETS,  
Z.M., tekhn.red.

[Planning apartment houses taking local surface features into  
account] Proektirovanie zhilykh domov s uchetom rel'efa  
mestnosti. Moskva, Gos.izd-vo lit-ry po stroit., arkhit.  
i stroit.materialam, 1960. 59 p. (MIRA 14:1)  
(Apartment houses)

RUDKOVSKIY, Ye.N., inzh., red.; MEYERSON, D.S., kand. arkhit.,  
red.; LITSKEVICH, V.K., kand. arkhit., red.; OTSEP, Ye.F.,  
inzh., red.

[Provisional instructions on fire prevention requirements  
for designing 10 story and higher apartment houses; for  
use in experimental design and construction] Vremennye uka-  
zaniia po protivopozharnym trebovaniiam dlia proektirovaniia  
zhilykh zdaniil vysotoi 10 etazhei i bol'sei; dlia primeneniia  
v eksperimental'nom proektirovaniii i stroitel'stve  
(SN 295-64). Moskva, Stroizdat, 1965. 8 p. (MIRA 18:8)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po  
grazhdanskому stroitel'stvu i arkhitekture. 2. Gosudarstven-  
nyy komitet po grazhdanskому stroitel'stvu i arkhitekture pri  
Gosstroye SSSR (for Rudkovskiy). 3. Tsentral'nyy nauchno-  
issledovatel'skiy i proyektnyy institut tipovogo i eksperi-  
mental'nogo proektirovaniya zhilishcha Gosudarstvennogo ko-  
miteta po grazhdanskому stroitel'stvu i arkhitekture pri  
Gosstroye SSSR (for Meyerson, Litskevich, Otsep).

LITSKAVICH, V., arkhitektor.

Characteristics of a dwelling the Maritime Territory. Zhil  
stroi. no. 6:23. 31 Je '61. (MIRA 14:7)  
(Maritime Territory--Apartment houses)

LITSKEVICH, K.

Public housing and climatological peculiarities of the southern  
part of the Far East. Sbor. nauch. rab. DVNIIIS no.1:75-86 '61.  
(MIRA 16:11)

LITSKIN, YA. I.

Litskin, Ya. I. and Bodrova, V. Ya. - "The treatment of dysentery with sulfidine enemas",  
Vracheb. delo, 1949, No. 4, paragraphs 317-18.

SO: U-4329, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 21, 1949).

LITSMAN, E.P.

Theoretical study of the problem of making chips in a drum  
chipper. Gidroliz.i lesokhim.prom. 13 no.3:6-9 '60.  
(MIRA 13:7)

1. Leningradskaya lesotekhnicheskaya akademiya.  
(Woodworking machinery)

LITSMAN, E.P.

Studying the process of wood chipping with the DR-04 chipper.  
Gidroliz. i lesokhim.prom. 17 no.2:10-13 '64. (MIRA 17:4)

1. Leningradskaya lesotekhnicheskaya akademiya im. S.M.Kirova.