

Синдром, И. С.: Машин, П. С.

Engr., Novo-Kramatorsk Machine Construction Factory,  
-c1948-

"Casting of large parts using modified pig," Stal', No. 7, 1948.

SHUL'GIN, Yu. N.

Methods

Continuous decolorization, washing, and neutralization of ethyl acetate. D. I. Chetverikov, Yu. N. Shul'gin, and A. G. Tarasova (Wood Chem. Combine, Ashinsk). *Gidroliz. i Lesokhimi. Prom.* 9, No. 7, 17-19(1956).—The layout of the Ashinsk Wood Chemical Combine is described. Bisulfite (I) is added to the crude EtOAc (II) while it is pumped to a cylindrical tank where sepn. from I occurs in 12-16 min. II is washed in a 2nd tank (100 kg. of water/1000 kg.). On the way to a neutralizing column II is mixed with 4% soda (III). Upon sepn. from III the purified II is dried and stored. T. Jurecic

3

SHUL'GIN, Yu.M.

Some characteristics of metal potentials and physical properties of the Sarala granite massif. Trudy SNIIGGINS no.25:24-30 '62. (MIR 16:4)  
(Kuznetsk Ala-Tau--Ore deposits)

SHUL'GIN, Yu.N.; CHETVERIKOV, D.I.; TARASOVA, A.G.

Continuous black acid apparatus, Gidroliz. i lesokhim.prom. 10  
no.1:27-28 '57. (MLRA 10:4)

1. Ashinskiy lesokhimicheskiy kombinat.  
(Acids) (Distillation apparatus)

QC  
989  
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D1

Shul'gina, A. I.

Voprosy Agroklimaticheskogo Rayonirovaniya SSSR; Sbornik Statey

[Problems of Regional Agricultural Climatology in the USSR; Collection  
of Articles] Pod Red. F.F. Davitaya (1) A. I. Shul'gina. Moskva,  
Selkhozgiz, 1958.

131 p. Diagr., Graphs, Maps, Tables.

At head of title: Vsesoyuznaya Akademiya Sel'Skikhozyaystvennykh Nauk.

SHUL'GINA, G.I.

Investigation of local bioelectric manifestations in the cerebral cortex in connection with the development of conditioned reflexes and internal inhibition. Trudy Inst. vys. nerv. deyat. Ser. fiziol. 5:14-20 '60. (MIRA 13:10)

1. Iz Laboratorii elektrofiziologii uslovykh reflektsov (zav. - M.N. Livanov) instituta vysshey nervnoy deyatel'nosti.  
(ELECTROPHYSIOLOGY) (CEREBRAL CORTEX) (CONDITIONED RESPONSE)  
(INHIBITION)

SHUL'GINA, G.I.

Investigating local bioelectric phenomena in the cerebral cortex during conditioned reflex activity. Trudy Inst. vys. nerv. deiat. Ser. fiziol. 6:244-266 '61. (MIRA 14:12)

1. Iz laboratorii elektrofiziologii uslovnnykh reflektsov, zav. -- M.N.Livanov.

(CONDITIONED RESPONSE) (CEREBRAL CORTEX)  
(ELECTROPHYSIOLOGY)

SHUL'GINA, G. I.

Dissertation defended in the Institute of Higher Nervous Activity and Neurophysiology for the academic degree of Candidate of Biological Sciences:

"Investigation of Local High-amplitude Oscillations in Potential in the Cerebral Cortex in Rabbits During Conditioned-Reflex Activity."

Vestnik Akad Nauk No. 4, 1963, pp. 119-145



LAPTEVA, N.N.; GUDZHIYEV, R.A. [deceased]; BONDARENKO, M.F.; SHUL'GINA, I.L.

Preparative fractionation of blood proteins by the method  
of continuous electrophoresis in the EFP-2 apparatus.  
Vop. med. khim. 9 no.1:84-89 Ja-F '63. (MIRA 17:6)

L. Kafedra patofiziologii Tsentral'nogo instituta usovershen-  
stvovaniya vrachey, Moskva.

ACC NR: AT6036606

SOURCE CODE: UR/0000/66/000/000/0245/0246

AUTHOR: Kuznetsov, S. O.; Sinyak, Yu. Ye.; Shul'gina, I. L.

ORG: none

TITLE: Problem of the catalytic method for the mineralization of human vital activity products [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 245-246

TOPIC TAGS: life support system, biologic metabolism, metabolic waste

ABSTRACT:

Several methods of mineralization of human metabolic wastes exist: combustion, pressure cooking, and catalytic oxidation.

In view of the fact that combustion requires high temperatures while pressure cooking requires high pressures, the development of catalytic oxidation acquires importance since the process can take place under more moderate conditions.

Card 1/3

ACC NR: AT6036606

Investigations were conducted under laboratory conditions using two different methods:

- 1 - direct oxidation of metabolic wastes in the catalyzer and,
- 2 - pyrolysis of wastes followed by oxidation of the products in a catalyzer.

The second method has the advantage in that it solves the problem of extraction of the inorganic residue from the surface of the catalyzer.

Experiments have shown that when air (and, during final stages of combustion of the polycoke remnant, oxygen or oxygen-enriched air), is used as an oxidizing agent on a platinum or hopcalite catalyzer, almost complete oxidation of organic compounds found in urine or urine-fecal mixture is possible. Optimal conditions for the process are 150—200° temperature in the pyrolysis zone, 250—300° temperature in the catalytic zone, and normal atmospheric pressure. When these temperatures are reached, the process continues at the expense of heat-producing oxidation reactions which do not require additional external heat.

The end products are composed of ash, condensate, and gases (which in the main consist of CO<sub>2</sub>, nitrogen, and sulphur). Organic

Card 2/3

ACC NR: AT6036306

nitrogen compounds are oxidized to nitrogen or ammonia (depending on the temperature in the catalytic zone).

A relationship exists between the kinetics of gas products and changes in the temperature during the course of the process.

[W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3

S/044/62/000/011/015/064  
A060/A000

24 4100

AUTHOR: Shul'gina, I.M.

TITLE: On a new form for equations of analytical dynamics

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1962, 36, abstract 11B152  
(Tr. Tashkentsk. un-ta, 1961, no. 189, 195 - 197)

TEXT: For mechanical systems with nonlinear nonholonomic constraints of the first order (relative to the velocities) and with linear constraints of the second order (relative to the accelerations), equations of motion are derived which do not contain undetermined coefficients. The process of derivation consists mainly in the application of the Gaussian principle of least action and, after that, of varying the accelerations of the dependent coordinates, expressed linearly in terms of the variations of the accelerations of the independent coordinates by using the constraint equations. Moreover, the usual Lagrangian is replaced by a different expression based on an identity transformation.

V.V. Dobronravov

[Abstracter's note: Complete translation]

Card 1/1

LAVUT, Ye.A.; VOROB'YEVA, O.I.; SHUL'GINA, I.M.

Solubility in the system  $\text{Na}_2\text{O} - \text{TeO}_2 - \text{H}_2\text{O}$  at  $70^\circ$ . Zhur.neorg.khim.  
6 no.12:2758-2761 D '61. (MIRA 14:12)  
(Tellurium oxide) (Sodium oxide)

KHARITONOV, Yu.Ya.; SHUL'GINA, I.M.; TRAGGEYM, Ye.N.; BABAYEVA, A.V.

Method of coordinating NCS-groups in the complex compounds of uranium (IV) and uranyl. Zhur.neorg.khim. 8 no.3:767-768 Mr '63. (MIRA 16:4)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova AN SSSR. (Uranium compounds—Absorption spectra) (Isothiocyanates)

S/0124/64/000/002/A012/A012

ACCESSION NR: AR4027687

SOURCE: RZh. Mekhanika, Abs. 2A79

AUTHOR: Shul'gina, I. M.

TITLE: On certain forms of equations for the motion of a system of points with variable masses

CITED SOURCE: Nauchn. tr. Tashkentsk. un-t, vy\*p. 222, 1963, 24-37

TOPIC TAGS: point system, acceleration, Gauss principle, Wagner problem, empty sphere, porous envelope, ideal gas, non-holonomic relation

TRANSLATION: On the assumption that only accelerations vary, the author obtains from Gauss's principle the equations for the motion of a system of points of variable mass with non-linear non-holonomic relations of the form

$$F_k(t, q_i, \dot{q}_i) = 0$$

As an example, he solves a problem analogous to Wagner's: an empty sphere with

1/2  
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ACCESSION NR: AB4027687

a porous envelope filled with an ideal gas with pressure  $p_0$  moves about its center, having a non-holonomic relation in the form of small sharp wheels at the ends of the shaft holding the sphere rolling inside a sphere of large diameter. M. I. Yefimov

DATE ACQ: 06Mar64

SUB CODE: PH

ENCL: 00

Card

2/3

MARKOV, V.P. [deceased]; TRAGGEYM, Ye.N.; SHUL'GINA, I.M.

Pentathiocyanate complex compounds of uranyl. Zhur. neorg.  
khim. 9 no.3:550-554 Mr '64. (MIRA 17:3)

1. Institut obshchey i neorganicheskoy khimii im. N.S.  
Kurnakova AN SSSR.

ROVATSKIN, B.S., inzh.; SHUL'GINA, L.D., inzh.

Use of PPF-UNI1Z flame photometers in the regulation of water in  
electric power plants. Elek. stat. 35 no.1:27-30 Ja '64.  
(MIRA 17:6)

KRYLOV, V.I.; SHUL'GINA, I.T.

Convergence of a quadrature process. Dokl. AN BSSR 6 no.3:139-141  
Mr '62. (MIRA 15:3)

1. Institut matematiki i vychislitel'noy tekhniki AN BSSR.  
(Functions, Analytic)

L 24469-65

ACCESSION NR: AP5001197

S/0250/64/008/010/0617/0620

AUTHOR: Krylov, V.I.; Shul'gina, L. T.

4  
B

TITLE: The remainder after numerical integration of periodic functions having a single argument

SOURCE: AN BSSR. Doklady, v. 8; no. 10, 1964, 617-620

TOPIC TAGS: numerical integration, integration remainder, periodic function integration, error estimate, remainder estimate

ABSTRACT: In connection with the search for techniques for very accurate numerical integration of periodic functions, the remainders of old and new methods of integration have become the object of several studies in recent years. However, none of the known estimates can be used for a priori calculations of the magnitude of the remainders; nor do they permit the extraction from the remainder of the main calculable part. The authors show that for certain classes of functions and integration rules, one can indeed construct a representation of the remainder which permits not only a correct estimate of the remainder but also the extraction of a principal part which can be evaluated much more easily (in terms of the constants entering the expressions) than the entire remainder. Derivations are based

Card 1/2

L 24469-65

ACCESSION NR: AP5001197

on the well known representations of arbitrary periodic functions through periodic functions associated with Bernoulli polynomials. The paper deals with single integrations only. Orig. art. has: 17 formulas.

ASSOCIATION: Institut matematiki i vychislitel'noy tekhniki AN BSSR (Mathematics and Computer technology institute, AN BSSR)

SUBMITTED: 25Apr64

ENCL: 00

SUB CODE: MA

NO REF SOV: 001

OTHER: 000

Card 2/2

SAKS, Vladimir Nikolayevich; RONKINA, Zinaida Zinov'yevna; SHUL'GINA, Natal'ya Iosifovna; BASOV, Valeriy Aleksandrovich; BONDARENKO, Nina Matveyevna; KRYMGOL'TS, G.Ya., otv. red.; PETROVSKAYA, T.I., red.izd-va; VINOGRADOVA, N.F., tekhn. red.

[Stratigraphy of Jurassic and Cretaceous systems in the North of the U.S.S.R.] Stratigrafiia iurskoi i melovoi sistem Severa SSSE. [By] V.N.Saks i dr. Moskva, Izd-vo AN SSSR, 1963. 226 p.

(MIRA 16:12)

(Russia, Northern--Geology, Stratigraphic)

*Shulika, M.N.*  
SHULIKA, M.N.

Physiological and morphological functions of silk glands in silkworms.  
Izv. AN Turk. SSR no.6:49-55 '57. (MIRA 11:1)

1. Institut zoologii i parazitologii AN Turkmenskoy SSR.  
(Silkworms) (Glands)



PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

100 AND 1TH ORDERS

Ca 2

Physicochemical analysis in the nitric acid treatment of phosphates. I. The system  $\text{CaO-P}_2\text{O}_5\text{-N}_2\text{O}_5\text{-H}_2\text{O}$  at 25°. A. P. Belopol'skii, M. N. Shul'gina, M. T. Serbrennikova and S. Ya. Shpunt. *J. Applied Chem.* (U. S. S. R.) 10, 403-13 (in German 413) (1937).—The isotherm of the above system at 25° was investigated, and the results are tabulated and plotted as 2 projections of a 3-dimensional model. The isotherm is characterized by satn. fields of the following solid phases:  $\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$ ;  $\text{Ca}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$ ;  $\text{Ca}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$ ;  $\text{Ca}(\text{NO}_3)_2$ ;  $\text{Ca}(\text{H}_2\text{PO}_4)_2 \cdot \text{H}_2\text{O}$  and  $\text{CaHPO}_4$ . Ca nitrates have a strong salting-out action on the phosphates.  $\text{Ca}(\text{H}_2\text{PO}_4)_2 \cdot \text{H}_2\text{O}$ , treated with nitric acid contg. 10.5-69.8%  $\text{HNO}_3$ , forms series of satd. solns. without decompn., but on a treatment of a soln. contg. over 69.8 or less than 10.5% of  $\text{HNO}_3$ , it decompn. with the formation of  $\text{Ca}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$  and  $\text{CaHPO}_4$ , resp.  $\text{Ca}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$ , treated with  $\text{H}_3\text{PO}_4$ , contg. 0.0-36.1%  $\text{P}_2\text{O}_5$ , forms series of satd. solns. without decompn., but on being treated with soln. contg. over 36.1%  $\text{P}_2\text{O}_5$ , it decompn. with the formation of  $\text{Ca}(\text{H}_2\text{PO}_4)_2 \cdot \text{H}_2\text{O}$ . Twelve references. A. A. Podgorny

ASME-ISA METALLURGICAL LITERATURE CLASSIFICATION

E-Z

SHUL'GINA, M. N.

"The Deposition of Ca and Mg from Precarbonated Solutions of  $\text{Na}_2\text{SO}_4$ ," A. P. Belopol'skiy, M. T. Serebrennikova, M. N. Shul'gina, Works of the Sci Inst of Fert and Insectofung in Ya. V. Samoylov, 1940, No 144, pp 177-84, Khim Referat Zhur IV, No 6, 83-4 (1941) (SEE: Inet. Insect/Fung. in Ya. V. Samoylov)

SO: 237/49, 8 April 1949

CA

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

LET AND END CROSS PROCESSOR AND PROPERTIES INDEX 1ST AND 4TH CROSS

2

Physicochemical analysis of sulfuric acid treatment of phosphates. V. The solubility of calcium sulfate in aqueous solutions of phosphoric acid at 40°, 60°, and 90°. A. A. Taparova and M. N. Smol'gina. *J. Applied Chem. (U.S.S.R.)* 18, 521-8(1945)(English summary); cf. C.I. 35, 3395. The soly. of various forms of CaSO<sub>4</sub> (dihydrate, hemihydrate, and anhydrite) at 40, 60, and 90° in 30-50% H<sub>3</sub>PO<sub>4</sub> was detd. Thus, a complete soly. formulation of the system CaSO<sub>4</sub>-H<sub>3</sub>PO<sub>4</sub>-H<sub>2</sub>O was established, with results given in graphic and tabular forms. (I. M. Kosolapoff

COMMON ELEMENTS COMMON VARIABLES INDEX

OPEN MATERIALS INDEX

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

FROM STEELMAKING FROM NON-IRON

GROUPS 1ST AND 2ND LETTERS 3RD AND 4TH LETTERS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

PROCESSED AND PROPERTY INDEX

Physico-chemical analysis in the field of the hydrochloric acid treatment of phosphates. I. The system  $\text{CaO}-\text{P}_2\text{O}_5-\text{HCl}-\text{H}_2\text{O}$ . A. A. Taperova and M. N. Stul'gina, *J. Applied Chem. (U.S.S.R.)* 19, 1350-7 (1946) (in Russian).—The 25° and 40° isotherms are given in tabular and in graphic form, 0-23 CaO, 0.4-50 P<sub>2</sub>O<sub>5</sub>, and 0-37.2% HCl. At 25°, there are 5 crystn. fields corresponding to (I)  $\text{CaH}_2\text{PO}_4$ , (II)  $\text{Ca}(\text{H}_2\text{PO}_4)_2 \cdot \text{H}_2\text{O}$ , (III)  $\text{Ca}(\text{H}_2\text{PO}_4)_2 \cdot \text{CaCl}_2 \cdot 2\text{H}_2\text{O}$  (new double salt), (IV)  $\text{CaCl}_2 \cdot \text{Ca}(\text{H}_2\text{PO}_4)_2$ , (V)  $\text{CaCl}_2 \cdot 4\text{H}_2\text{O}$ . There are also two triple points, (I, II, III) with CaO 15.90, P<sub>2</sub>O<sub>5</sub> 2.03, HCl 20.20, and H<sub>2</sub>O 91.17% and (III, IV, V) with CaO 21.90, P<sub>2</sub>O<sub>5</sub> 0.72, HCl 31.50, and H<sub>2</sub>O 44.88%. Projection on the HCl-CaO-P<sub>2</sub>O<sub>5</sub> plane shows a broad field of III, as compared with the rather narrow fields of IV and V. With increasing phosphate concn., the soly. of the chlorides decreases slightly; the latter have a strong salting-out effect on the phosphates. Soln. of II is, in the main, incongruent (as in the ternary system  $\text{CaO}-\text{P}_2\text{O}_5-\text{H}_2\text{O}$ ), except in a limited region bounded by I, III, and a line connecting (1) CaO 7.1, P<sub>2</sub>O<sub>5</sub> 18.2, HCl 4.0, H<sub>2</sub>O 70.7% and (2) CaO 8.7, P<sub>2</sub>O<sub>5</sub> 23.3, HCl 11.0, H<sub>2</sub>O 57.1%; the 1st point corresponds to simultaneous satn. in I and II, the 2nd in II and III. At a concn. less than 5.8% HCl acts on II in the same way as H<sub>2</sub>O, causing decompn. to I + H<sub>2</sub>PO<sub>4</sub>; at a concn. higher than 19.7% HCl acts along 2 II + 2HCl → III + 2H<sub>2</sub>PO<sub>4</sub>; between 5.8 and 19.7% HCl will not decomp. II. Along the line connecting points (1) and (2) satd. solns. are in equil. with II without sepg. new solid phases. The double salt III was identified by analysis, by its distinctive microscopic appearance (fine needles or chains), and by x-rays,

the debyogram being distinct from those of I and II; also, III is fairly stable on standing in air and cannot therefore be a mixt. of phosphate with CaCl<sub>2</sub>; absence of x-ray lines common with II speaks against its formulation as monocalcium chlorophosphate ( $\text{CaClH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$ ). The 40° isotherm shows the crystn. fields of I, II, III, and V. The points (1) and (2) lie at CaO 7.40, P<sub>2</sub>O<sub>5</sub> 18.8, HCl 5.0, H<sub>2</sub>O 68.8 and CaO 9.20, P<sub>2</sub>O<sub>5</sub> 23.5, HCl 11.7, H<sub>2</sub>O 55.6, resp.; hence, at 40° decompn. of II into I is brought about by HCl below 7.5%, decompn. of II into III by over 20.1% HCl; between 7.5 and 20.1% HCl II is dissolved without decompn., and higher temp. widens the limits of stability of II towards HCl. The salting-out action of chlorides on phosphates is somewhat lessened. The triple point (I, II, III) lies at CaO 15.10, P<sub>2</sub>O<sub>5</sub> 4.90, HCl 19.66, H<sub>2</sub>O 60.94%; the field of I becomes broader, that of II narrower; the boundary of the fields of II and of III remains practically unchanged.

N. Thon

AS B - S L A METALLURGICAL LITERATURE CLASSIFICATION

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2

Physicochemical analysis in the field of sulfuric acid treatment of phosphates. IV. Kinetics of the transformation of the crystal hydrates of calcium sulfate in the presence of phosphoric acid. A. A. Taperova and M. N. Shul'giva. *J. Applied Chem. U.S.S.R.* 23, 27-40(1950) (Engl. translation); *Zhur. Priklad. Khim.* 23, 32-38(1950); cf. *C.A.* 40, 5629P.—Transformation velocities of  $\text{CaSO}_4 \cdot 0.5\text{H}_2\text{O}$  and  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$  to the anhyd. form were studied in the presence of  $\text{H}_3\text{PO}_4$  at temps. of 40, 60, 80, and 90°. Under some conditions the semihydrate transforms to gypsum before dehydration sets in. As expected, the rates of transformation increase with temp. With increasing  $\text{P}_2\text{O}_5$  concn., the rate of formation of gypsum from the semihydrate decreases, but that of gypsum  $\rightarrow$  anhydrite increases.

Z. D. Sheldon

SHULGINA, M. N.

USSR/Chemistry - Magnesium Compounds

Apr 51

"Polytherms of the Triple System  $MgO-P_2O_5-H_2O$ ," S. Ya. Shpuit, A. P. Belopol'skiy, M. N. Shulgina, Physicochem Anal Lab NIUIF (Sci Res Inst of Fertilizers and Insectofungicides)

"Zhur Prik Khim" Vol XXIV, No 4, pp 404-412

Studied isotherms at 0, 10, 50, 58, and 130° of syst experimentally and by interpolation and extrapolation. At 0-130° magnesium diphosphate crystallizes from  $H_2PO_4$  solns as trihydrate. In same temp range, magnesium monophosphate is represented by 2 crystallohydrates:  $Mg(H_2PO_4)_2 \cdot 4H_2O$ . Upper limit of stability of tetrahydrate is 58°. Dihydrate is in stable equil with soln from 10 to 130°. Anhyd salt is stable over entire temp range. Between 0 and 130° found 3 invariant points with 3 solid phases. Constructed polytherms on basis of data found.

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Shulgina, M. N.

80

U.S.S.R.

Physicochemical research in the field of magnesium phosphates. III. Isotherm at 80° of the quaternary system MgO-CaO-P<sub>2</sub>O<sub>5</sub>-H<sub>2</sub>O. A. P. Belopol'skii, S. Ya. Shpunt, and M. N. Shulgina. *J. Appl. Chem. U.S.S.R.* 26, 247-53 (1953) (Engl. translation).—*See C.A.* 48, 5632e. H. L. H.

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Shal'sina, M. N.

Chemical Abstracts  
May 25, 1954  
General and Physical  
Chemistry

Physicochemical research in the field of magnesium phosphate. III. Isotherm at 80° of the quaternary system MgO-CaO-P<sub>2</sub>O<sub>5</sub>-H<sub>2</sub>O. A. P. Belonol'ski, S. Ya. Shpunt, and M. N. Shal'sina. *Zh. Prikl. Khim.* 26, 277-28 (1953); *Chem. Abstr.* 48:5569, 4614d. — The 2 ternaries MgO-P<sub>2</sub>O<sub>5</sub>-H<sub>2</sub>O and CaO-P<sub>2</sub>O<sub>5</sub>-H<sub>2</sub>O of the quaternary MgO-CaO-P<sub>2</sub>O<sub>5</sub>-H<sub>2</sub>O were previously reported. The data are shown graphically on rectangular coordinates as a double projection of MgO-O-P<sub>2</sub>O<sub>5</sub> and CaO-O-P<sub>2</sub>O<sub>5</sub>. By means of a network of "isomolal" lines (same mol. sum of CaO, MgO, and P<sub>2</sub>O<sub>5</sub> per 1000 moles H<sub>2</sub>O), the compn. of the soln. within the satd. area is detd. (by means of such network of isomolal lines one projection is sufficient). There are 5 fields of satn.: MgHPO<sub>4</sub>·3H<sub>2</sub>O (I), Mg(H<sub>2</sub>PO<sub>4</sub>)<sub>2</sub>·2H<sub>2</sub>O (II), Mg(H<sub>2</sub>PO<sub>4</sub>)<sub>2</sub> (III), Ca(H<sub>2</sub>PO<sub>4</sub>)<sub>2</sub>·H<sub>2</sub>O (IV), and CaHPO<sub>4</sub> (V). The 3 transition points are in equil. with the following solid phases: Q<sub>1</sub>, I-II-IV; Q<sub>2</sub>, I-V-IV; Q<sub>3</sub>, II-III-IV. The stable pair at 80° is I-IV. The wt. % relation for MgO:CaO, and P<sub>2</sub>O<sub>5</sub> are: Q<sub>1</sub>, 10.7, 0.6, 45.0; Q<sub>2</sub>, 10.63, 0.7, 45.0; Q<sub>3</sub>, 5.8, 0.3, 55.4. The phosphates of Ca affect the soln. of the Mg salts very little. The phosphates of Mg lower the soly. of the Ca salts appreciably. I. Benconitz

*Mef*



SHUL'GINA, M. N.

AID - P-91

Subject : USSR/Chemistry

Card : 1/1

Authors : Belopoi'skiy, A. P., Shpunt, S. Ya., and Shul'gina, M. N.

Title : Isotherms of the quaternary system  $MgO-CaO-P_2O_5-H_2O$  at 50, 25, 58, 10 and  $130^{\circ}$

Periodical : Zhur. Prikl. Khim. 27, no. 4, 391-401, 1954

Abstract : The isotherms at 50 and  $25^{\circ}$  were investigated experimentally; those at 58, 10, and  $130^{\circ}$  were obtained by inter- or extrapolation. Calcium phosphates affect the solubility of magnesium phosphates in phosphoric acid solutions only slightly. Magnesium phosphates appreciably affect the salting out of calcium phosphates. Three references (U.S.S.R.): 1950-1953. Nine tables; 4 graphs.

Institution : Laboratory for Physicochemical Analysis of the Scientific Research Institute for Fertilizers, Insecticides and Fungicides

Submitted : October 3, 1952

SECRET

Magnesium phosphates. V. Application of the phase diagrams of the quaternary system  $\text{CaO-MgO-P}_2\text{O}_5\text{-H}_2\text{O}$  in the manufacture of phosphatic fertilizers from karai phosphate rock. A. P. Belopol'skiĭ, S. Ya. Shpunt, and M. N. Shul'gina, *J. Appl. Chem. U.S.S.R.* 27, 457-63 (1954) (Engl. translation).—See *C.A.* 48, 10280b. AG

B. M. R.

9

AID P - 914

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 5/22

Authors : Belopol'skiy, A. P., Shpunt, S. Ya. and Shul'gina, M. N.

Title : Application of diagrams of the quaternary system  
CaO-MgO-P<sub>2</sub>O<sub>5</sub>-H<sub>2</sub>O in the manufacture of phosphoric  
fertilizers from Kara-Tau phosphorites

Periodical : Zhur. prikl. khim., 27, no. 5, 493-500, 1954

Abstract : According to isotherms of the system CaO-MgO-P<sub>2</sub>O<sub>5</sub>-H<sub>2</sub>O,  
monocalcium phosphate is the only salt which crystallizes  
at 25° and 50°C from the liquid phase of superphosphate  
on cooling. All the magnesium salts remain in solution.  
Three tables, 3 diagrams, 5 references (Russian: 1940-54).

Institution : Scientific Research Institute of Fertilizers and  
Insectifuges. Laboratory of Physicochemical Analysis.

Submitted : N 5, 1952

SHUL'GINA, M.N.

USSR/ Chemical Technology. Chemical Products and Their Application. Fertilizers I-6

Abs Jour : Referat Zhur - Khimiya, No 4, 1956, 12382

Author : Belopol'skiy A.P., Shpunt S.Ya., Shul'gina M.N.  
Title : Physicochemical Investigations of Magnesium Phosphates

Orig Pub : Sb. Issledovaniya po prikl. khimii. M.-L., Izd-vo AN SSSR, 1955, 107-148

Abstract : Studies of solubility in systems that are of interest in the production of superphosphate and of other phosphorus fertilizers from Kara-Tau phosphorites containing Mg: of the ternary system  $MgO - P_2O_5 - H_2O$  at  $0-130^\circ$ , and the quaternary system  $MgO - CaO - P_2O_5 - H_2O$  at  $10-130^\circ$ . Detected were the solid phases (SP):  $MgHPO_4 \cdot 3H_2O$  (I),  $Mg(H_2PO_4)_2 \cdot 4H_2O$  (II),  $Mg(H_2PO_4)_2 \cdot 2H_2O$  (III) and  $Mg(H_2PO_4)_2$  (IV). In the ternary system, solubility of I increases with concentration of  $P_2O_5$  in the solution and remains practically constant over

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USSR/ Chemical Technology. Chemical Products and Their  
Application. Fertilizers

I-6

Abs Jour : Referat Zhur - Khiriya, No 4, 1957, 12382

the entire temperature range that has been investigated. Solubility of II, III and IV decreases with increasing concentration of  $P_2O_5$  in the solution and it increases with rising temperature. Upper limit of stability of II is  $58^\circ$ ; III is stable from  $10$  to  $130^\circ$ ; IV is stable up to  $130^\circ$ . In the temperature interval  $0-130^\circ$  have been determined 3 invariant points corresponding to the following compositions (in %): 1) at  $58^\circ$   $P_2O_5$  38.5, MgO 9.5, SP I, II and III; 2) at  $10^\circ$   $P_2O_5$  58.9, MgO 3.2, SP II, III and IV; 3) at  $130^\circ$   $P_2O_5$  54, MgO 12.7, SP I, III and IV. The polythermal curve of the ternary system has been plotted for the interval of  $0-130^\circ$ . In the quaternary system Ca phosphates alter but little the solubility of Mg phosphates. Fields of saturation of the latter are represented on the solubility isotherms by narrow bands adjoining the corresponding branches of the

Card 2/3

- 24 -

crystallizes out while the Mg salts remain in solution.

VLADIMIROV, L.V.; SHUL'GINA, M.N.

Rapid complexometric method for determining phosphoric acid in  
defluorinated phosphate, determination of sulfate ion in super-  
phosphate. [Trudy] NIUIF no.164:51-52 '59. (MIRA 15:5)  
(Phosphoric acid) (Titration)

VLADIMIROV, L.V.; SHUL'GINA, M.N.; VASILEVSKAYA, L.S.; ROZANOVA, N.A.;  
PLETYUSHKIN, A.A.; ZHUKOVA, L.K.; BABINA, M.D.

Exchange of experience. Zav.lab. 28 no.5:548-549 '62.

(MIRA 15:6)

1. Nauchnyy institut po udobreniyam i insektofungisidam (for  
Vladimirov, Shul'gina). 2. Gosudarstvennyy nauchno-issledovatel'skiy  
i proyektnyy institut redkometallicheskey promyshlennosti (for  
Vasilevskaya, Rozanova). 3. Institut metallurgii imeni A. A.  
Bakova (for Pletyushkin, Zhukova). 4. Institut gigiyeny i  
profzabolevaniy AMN SSSR (for Babina).  
(Metals--Analysis) (Water--Purification)

YUSUF YAZOV, S.N.; SHULIM, N.N.; GLADYSHEVA, L. Ye.; BUSHLYNGOVA, F.D.

Effect of ecologic factors on the development of caterpillars  
and the incidence of jaundice in silkworms in Turkmenia. Izv.  
Akad. Nauk Turk. SSR. Ser. biol. nauk no.3:25-29 '64 (MIRA 18:2)

1. Institut zoologii i parazitologii Akad. Nauk Turkmensoy SSR.



Electrochemistry of other solutions.

of the system sulfuric acid ethyl ether

*J. Gen. Chem. (U. S. S. R.)* 4, 215 (1934); cf. C. A.

28, 1592. Elec. cond. of the system  $H_2SO_4$ - $Et_2O$  in

concn. of 27.44 100% of  $H_2SO_4$  was measured at 0

and 25°. The two isotherms for sp. cond. pass through

a max. at 90 92%  $H_2SO_4$ . Here, as in the case of other

ether solns. of electrolytes, the cond. of the system is due

to oxonium compts.  $H_2SO_4$ - $Et_2O$  and  $H_2SO_4$ - $2Et_2O$ .

XIII. Viscosity of the system arsenic chloride-anisole.

M. P. Shulgina. *Ibid.* 221 4. Viscosity of the system

$AsCl_3$ - $C_6H_5OCH_3$ , in all concns. was measured at 0°, 20°,

40°, 60° and 80°. Maxima appearing in all the isotherms

at concn. of 50 mols. % indicate the complex  $AsCl_3$ .

The  $C_6H_5OCH_3$ , but not the complex  $2AsCl_3$ - $C_6H_5OCH_3$ . The

system is nonconducting. XIV. Viscosity of the system

anisole sulfuric acid. P. A. Zavarikhina. *Ibid.* 227 8. Viscosity

of the system  $C_6H_5OCH_3$ - $H_2SO_4$  in all concns. was

measured at 20°, 30°, 40°, 50° and 60°. The isotherms

pass through a sharp max. at about 57 mols. %  $H_2SO_4$ ,

indicating the complex compd.  $C_6H_5OCH_3$ - $2H_2SO_4$ . XV.

System antimony tribromide ether. M. Usanovich

XI. Conductivity

M. Usanovich.

*Ibid.* 229 34. Elec. cond.

of the system  $SbBr_3$ - $Et_2O$  in concns. of 2.97 100 mols.

% of  $SbBr_3$  was measured at 20°; also, of mixts. contg.

14.13, 20.00, 23.31, 28.25, 47.41, 67.15, 71.85, 82.30

and 90.41 mols. %  $SbBr_3$  in  $Ph_2O$  measured in each case at

20°, 30° and 40°. The 20° isotherm rises sharply at

07.15 and at 82.3 mols. %  $SbBr_3$ . The compd.  $Et_2O$ -

$2SbBr_3$  was established. This compd. is held responsible

for the elec. cond. of the system. XVI. Electrical con-

ductivity and viscosity of the system chloromethyl ether

arsenic trichloride. F. I. Terpigov. *Ibid.* 245 0.

Viscosity of the system  $CH_3ClOCH_3$ - $AsCl_3$  in all concns.

was measured at 0°, 10°, 20°, 30°, 40° and 50°. Isotherms

indicate the compd.  $CH_3ClOCH_3$ - $AsCl_3$ . Elec. cond.

isotherms for the same system were detd. at 0°, 10°, 20°, 30°

and 40°. Cond. curves confirm the above conclusion.

Introduction of Cl into the ether mol. decreases the tendency

for complex formation with chlorides of the elements

of the 5th group of the periodic system. S. I. M.

AS 314 METALLURGICAL LITERATURE CLASSIFICATION

PROCESSED AND PROPERTY INDEX

ca γ

viscosity of the system arsenic trichloride-benzene.  
 M. P. Shul'gin *J. Gen. Chem. (U. S. S. R.)* 4, 225-6  
 (1974). Viscosity of the system  $AsCl_3-C_6H_6$  was measured  
 at 0°, 20°, 40° and 60°. Maxima appearing in all the iso-  
 therms at about 33 mols. % concn. of  $C_6H_6$  indicate the  
 compd.  $C_6H_6 \cdot 2/3 AsCl_3$ . At no concn. was there any ap-  
 preciable elec. cond. S. L. Madorsky

METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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The solubility diagram of potassium carbonate-sodium carbonate-water and its application to the separation of potassium and sodium carbonates. S. Z. Makarov and M. P. Shul'gina. *Bull. acad. sci. U. R. S. S., Classe sci. chim.* 1940, 5(11-23) (in English, 528).—The sepn. of potash and soda from their soln. is complicated by the formation of the double salt  $K_2CO_3 \cdot Na_2CO_3$  at a wide range of temps. and by the absence of expl. data on the upper limit of its existence. From the data available in the literature and from a systematic investigation of the ternary system  $K_2CO_3-Na_2CO_3-H_2O$  at 100°, 120°, 140° and 145° it has been detd. that the field of  $K_2CO_3 \cdot Na_2CO_3$  in the polythermic diagram is wedged out completely at 140°, when the compn. of the liquid phase is  $K_2CO_3$  64% and  $Na_2CO_3$  2.0%. The isotherms for higher temps. are characterized by the existence of 2 branches in accordance with the presence of only 2 solid phases,  $Na_2CO_3$  and  $K_2CO_3 \cdot 2/3H_2O$ . By complete evapn. of the eutonic solns. above 140°, it is possible to obtain a product contg. 90-7%  $K_2CO_3$ . The results confirm the correctness of the general scheme developed by M. for the production of potash and soda from the lyes of the alumina industry. Seventeen references.

W. R. Henn

*Instit. Gen. & Inorg. Chem. im. N. S. Kurnakov, AS USSR*

AS - SLA METALLURGICAL LITERATURE CLASSIFICATION

E-Z

1ST AND 2ND ORDERS

PROCESSING AND PROPERTIES WORK

2

ca

Transformation in solid state in the system potassium carbonate-sodium carbonate. S. Z. Makarov and M. P. Shul'gin: *Bull. acad. sci. U. R. S. S., Classe sci. chim.* 1960, 001-712 (in English, 703). - The fusibility of the binary system  $K_2CO_3-Na_2CO_3$  was investigated in the transformation region in the solid state by the differential method. The fusion curve of the  $K_2CO_3-Na_2CO_3$  system investigated previously by Le Chatelier, Sackur and Amadori was modified by the solidus curve. There exist uninterrupted solid solns. with a min. soly. at approx. 40% (mol.) of  $K_2CO_3$  at  $705^\circ$ . A no. of polymorphic modifications of the initial components were detd.:  $\alpha$ ,  $\beta$ ,  $\gamma$  and  $\delta$  with conversion points at  $618$ ,  $486$  and  $356^\circ$  for  $Na_2CO_3$  and  $622$ ,  $428$  and  $250^\circ$  for  $K_2CO_3$ . There were found a no. of continuous solid solns. of the  $\alpha$ - and  $\beta$ -modifications and of solid solns. of limited soly. for the  $\gamma$ - and  $\delta$ -modifications of  $Na_2CO_3$  and  $K_2CO_3$ . The decompn. of the  $\alpha$ -solid solns. is accompanied by an endothermic effect and by the formation of  $\beta$ -solid solns., which in turn form at the edges of the system the  $\gamma$ - and  $\delta$ -solid solns. of limited soly. During the decompn. of the  $\beta$ -solid solns. at  $500^\circ$  there is formed  $K_2CO_3 \cdot Na_2CO_3$ , which is able to form solid bilateral solns. The existence of the chem. compd. is confirmed by the presence of an independent structure in an investigation of the annealed and hardened mixts. and by the presence of a singular max. on the refractive index isotherms at  $400$  and  $300^\circ$ . The resulting diagram of state for the system  $K_2CO_3-Na_2CO_3$  is identical with that of typical diagrams with transformations in the solid state of the metallic systems. Nine references.

W. R. Henn

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COMMON ELEMENTS

COMMON VARIABLE ELEMENTS

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM NOMINUM

RESEARCH GROUP

RELATIONS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

C. A. SHULGINA, M. P.

6

The hydrated form of potassium sulfate M. P. Shul'gina, O. S. Kharchuk, and O. K. Yavart'eva. *Dokl. Akad. Nauk SSSR*, 73, 202 (1972).  $K_2SO_4 \cdot H_2O$  is commonly supposed not to exist. New detns. of the polymorph of the system  $K_2SO_4 \cdot H_2O$  from 30° downwards, with mixts. differing by 0.05-0.15%  $K_2SO_4$ , showed a new crystn. branch beginning with a sharp inflection, at 9.7°, toward the temp. axis, and ending in the eutectic point at -1.8°. The transition point at 9.7° corresponds to 8.48%  $K_2SO_4$ .

the eutectic at -1.8° to 7.09%. These results were confirmed by isothermal detns. at 2, 5, and 6°, which gave points lying exactly on the new branch. By cross-inoculation of 2 systems satd. at 6°, one of which had to be the stable, the other the metastable one, the new branch was shown to correspond to the stable system, the "old", i.e., the uninflected branch, with a eutectic point at -1.9°, being unstable. Crystals taken from the stable system lost 8.97-9.20% on drying at 150°; by the device of crystn. in the presence of KI, permitting a correction for the mother liquor adhering to the crystals, the  $H_2O$  content was detd., more accurately, to 9.20%; the theoretical value for  $K_2SO_4 \cdot H_2O$  is 9.32%. Under the microscope, crystals of  $K_2SO_4 \cdot H_2O$  are clearly distinguishable from  $K_2SO_4$ . Finally, thermography of crystals of  $K_2SO_4 \cdot H_2O$  gave an arrest at -1.8° (eutectic fusion) and a transition at 9.8° (dehydration).  
N. Thon

SHUL'GINA, M.P.; KHARCHUK, O.S.; YANAT'YEVA, O.K.

New solid phases in the system:  $KCl-K_2SO_4-H_2O$ . Izv. Sekt. fiz.-khim.  
anal. 26:198-210 '55. (MLRA 8:9)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN  
SSSR i Stalinskiy meditsinskiy institut im. A.M. Gor'kogo.  
(Potassium salts) (Systems (Chemistry))

SHUL'GINA, N.I.

Paleoecological characteristics of Jurassic and lower Carboniferous  
deposits in the Ust'-Yenisey depression. Trudy Nauch.-issl. inst.  
geol. Arkt. 89:81-90 '56. (MIRA 11:1)  
(Yenisey Valley--Paleontology, Stratigraphic)

BODYLEVSKIY, V.I.; SHUL'GINA, N.I.; SAKS, V.M.,red.; GOROKHOVA, T.A.,  
red. izd-va; BORISOV, A.S.,tekh.red.

[Jurassic and Cretaceous faunas of the lower Yenisey Valley]  
IUrskie i melovye fauny nizov'ev Eniseia. Moskva, Gos. nauchno-  
tekh.izd-vo lit-ry po geologii i okhrane nedr. 1958. 195 p.  
(Leningrad. Nauchno-issledovatel'skii institut geologii arktiki.  
Trudy, vol.93.) (MIRA 12:2)  
(Yenisey Valley--Paleontology, Stratigraphic)



SHUL'GINA, N.I.

All-Union conference on accurate representation of the unified  
stratigraphy of Mesozoic sediments in the Russian Platform.  
Inform. biul. NIIGA no.2:4-7 '58. (MIRA 12:10)  
(Russian Platform--Geology, Stratigraphic)

3 (5)

AUTHORS: Milashev, V. A., Shul'gina, N. I. SOV/20-126-6-48/67

TITLE: Recent Data on the Age of the Kimberlites of the Siberian Platform (Novyye dannyye o vozraste kimberlitov Sibirskoy platformy)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 6, pp 1320 - 1322 (USSR)

ABSTRACT: At present many kimberlite bodies are found in the territory of the Siberian platform. From a survey of publications (Refs 1,3, 6,7) it is concluded that there is no agreement concerning its age. The authors found diamonds in the Permian conglomerates in the sources of the Markh river. Their age (together with the stones contained therein) could be determined certainly enough (by V. D. Korotkevich) as Permian Triassic. In 1957 results were obtained by members of the 213th excursion of the Amakinskaya expedition: V. T. Izarov, M. N. Serebryakova, et al. in the neighbouring districts which confirm the authors' data. Thus, a Prepermian age is determined for a part of the kimberlites. The kimberlites of the tube "Obnazhennaya" are breaking through the dolomites of the Turkutskaya suite. In the usual eruptive breccia a belemnite rostrum was found (Figs 1,2). According to the determination of N. I. Shul'gina (V. I. Bodylevskiy and G. Ya.

Card 1/2

Recent Data on the Age of the Kimberlites of the  
Siberian Platform

SOV/20-126-6-48/67

Krymgol'ts gave their advice) it is rather probable that this fossil belongs to the species Pachyteuthis (?) sp. which is characteristic of the Upper Jurassic-Lower Cretaceous. It is impossible to determine how deeply this belemnite has dropped into the kimberlite tube. Such "drops" of xenolites were discovered in South Africa with an uncontestable security (Refs 8,9). Consequently it can be regarded as certain that a part of the Siberian kimberlites was formed in the pre-Upper Permian formation (apparently in Carboniferous Lower Permian), another, however, in Cretaceous. Age determinations of the kimberlites between them are not known. There are 2 figures and 8 references, 7 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut geologii Arktiki (Scientific Research Institute of the Geology of the Arctic)

PRESENTED: February 18, 1959, by D. V. Nalivkin, Academician

SUBMITTED: January 7, 1959

Card 2/2

SHUL'GINA, N.I.; KARTSEVA, G.N.

Results of the conference on completing and refining generalized  
and correlating stratigraphic scales of the West Siberian Plain.  
Inform.biul. NIIGA no.19:5-7 '60. (MIRA 13:12)  
(West Siberian Plain—Geology, Stratigraphic)

SHUL'GINA, N.I.

Ammonites of Franz Josef Land and the Taymyr Peninsula and  
their significance for zonal correlation of the Kimeridgian  
in the Arctic. Trudy NIIGA 111:136-149 '60. (MIRA 14:7)  
(Ganza, Cape—Ammonoidea)  
(Taymyr Peninsula—Ammonoidea)

DIBNER, V.D.; SHUL'GINA, N.I.

Results of stratigraphic investigations of marine middle and  
upper Jurassic sediments in the Franz Josef Land in 1953-1957.  
Trudy NIIGA 114:65-77 '60. (MIRA 13:11)  
(Franz Josef Land--Geology, Stratigraphic)

SAKS, V.N.; SHUL'GINA, N.I.

Cretaceous system in Siberia; suggestions on its division  
into stages and zones. Geol. i geofiz. no.10:23-41 '62.  
(MIRA 15:12)

1. Institut geologii i geofiziki Sibirskogo otdeleniya  
AN SSSR, Novosibirsk, i Nauchno-issledovatel'skiy institut  
geologii Arktiki, Leningrad.  
(Siberia—Paleontology, Stratigraphic)

SNM, V.I., SNIGOR, A.I.

Investigating the circulation stage in the Chuvash system.  
Geol. Zhurnal, no. 9:9-13 '61 (1961 10:2)

I. Institut geol. i geofiziki Sibirskogo otdeleniya AN SSSR,  
Novosibirsk.



SHUL'GINA, N. M.

4

✓ Physicochemical research in the field of magnesium phosphates. IV. Isotherms at 50°, 25°, 58°, 10°, and 130° C. for the quaternary system MgO-CaO-P<sub>2</sub>O<sub>5</sub>-H<sub>2</sub>O. A. P. Belopol'skiĭ, S. Ya. Shpunt, and M. N. Shul'gina. *Appl. Chem. U.S.S.R.* 27, 367-74 (1954) (Engl. translation). See *C.A.* 48, 13393c. H. L. H.

②  
H.L.H.

SHUL'GINA, N. S.

✓ The role of heredity in the adaptive water metabolism changes in related species. V. V. Koval'skii, N. S. Shul'gina, and I. K. Rzhepishevskii (Physiol. Inst., Acad. Sci. U.S.S.R., Moscow). *Ukrain. Biokhim. Zhur.* 23, 343-7(1951)(in Russian). Expts. were performed with *Citellus pygmaeus bruneri* and *Citellus suslicus meridionalis* which consisted primarily of comparative H<sub>2</sub>O-content detns. in various tissues of the 2 species. The study is more in the nature of a physiologic and genetic investigation than of a biochemical. B. S. Levine

USSR / General Problems of Pathology. Transplantation U-2  
of Tissues and Tissue Therapy.

Abs Jour: Ref Zhur-Biol., No 15, 1958, 70727.

Author : Shul'gina N. S.

inst : ~~Not given.~~

Title : Biological Activity of Fractions of Tissue Prepara-  
tions Obtained by Electro-Dialysis.

Orig Pub: Tr. Yubil. nauchn. konferentsii, posvyashch. 80-  
letiyu akd. V. P. Filatova, Kiyev, Gosmedizdat  
UkrSSR, 1956, 170-172.

Abstract: Fractionation was accomplished by dialysis against  
water and by electro-dialysis (obtaining anode and  
cathode fraction and residue) of tissue extracts  
from the organs of a steer and from a human placenta.  
Biological activity was estimated according to the  
stimulation of multiplication of yeast cells, and

Card 1/2

PUCHKOVSKAYA, N.A., prof.; MUCHNIK, S.R., doktor med.nauk; SHUL'GINA, N.S.,  
kand.biolog.nauk

Histologic and biochemical changes in the cornea after chemical  
and thermal burns. Oft.zhur. 14 no.4:202-208 '59.  
(MIRA 12:10)

1. Iz Ukrainskogo nauchno-issled.eksperimental'nogo instituta  
glaznykh bolezney i tkanevoy terapii im. akad.V.P.Filatova  
(direktor - prof.N.A.Puchkovskaya).  
(CORNEA--WOUNDS AND INJURIES) (BURNS AND SCALDS)

SHUL'GINA, N.S., starshiy nauchnyy sotrudnik

Role of disorders of the immunobiological system in the pathogenesis  
of burn processes of the cornea. Oft.zhur. 14 no.6:323-327 '59.  
(MIRA 13:4)

1. Iz Ukrainского nauchno-issledovatel'skogo eksperimental'nogo  
instituta glaznykh bolezney i tkanevoy terapii im. akad. V.P.  
Filatova (direktor - prof. N.A. Puchkovskaya).  
(CORNEA--WOUNDS AND INJURIES) (ANTIGENS AND ANTIBODIES)

SHUL'GINA, N.S., starshiy nauchnyy sotrudnik

Role of the allergic factor in the development of the pathological process in eye burns. Oft. zhur. 15 no.8:475-479 '60.  
(MIRA 14:1)

1. Iz Ukrainskogo nauchno-issledovatel'skogo eksperimental'nogo instituta glaznykh bolezney i tkanevoy terapii im. akad.V.P. Filatova (direktor - prof. N.A.Puchkovskaya).  
(BURNS AND SCALDS) (EYE WOUNDS AND INJURIES)  
(ALLERGY)

MUCHNIK, S.R.; SHUL'GINA, N.S.

Effect of tissue therapy on the course of experimental  
(alloxan) diabetes. Uch.zap. VEIGB 5:236-245 '62 (MIRA 16:11)

\*

SHUL'GINA, N.S.; CHERNYAK, S.S.

Biological activity of tissue preparations from various tissues  
of animal origin. Uch.zap. VEIGB 5:293-301 '62 (MIRA 16:11)

\*



SHUL'GINA, N.S. (Odessa)

Research in the field of noninfectious immunity in eye burns.  
Pat. fizicl. i eksp. terap. 7 no.6:21-23 N-D '63.

(MIRA 17:7)

1. Iz Ukrainского nauchno-issledovatel'skogo eksperimental'nogo  
instituta glaznykh bolezney i tkanevoy terapii imeni akademika  
V.P. Filatova (direktor - chlen-korrespondent AMN SSSR prof.  
N.A. Puchkovskaya).

SHUL'GINA, N.S.

Scientific conference dedicated to the 10th anniversary of  
the organization of the tissue depository in Hradec Kralove,  
Czechoslovakia. Oit. zhur. 18 no. 1990 '63      (MIRA 17:4)

VINONOV, I.V.; SHUL'GINA, N.S.

Scorption and separation of zirconium and hafnium on Soviet  
anion exchangers. Ukr. khim. zhur. 31 no. 11:1219-1222 '65  
(MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

MINAROV, I.V.; FRAYMAN, I.B. [deceased]; SHIL'GINA, N.M. [Sov. Union, U.S.S.R.]

Obtaining pure rubidium salts from technical rubidium chloride.  
Khim. prom., [Ukr.] no.1:30-31 Ja-Mar '65. (MIRA 19:4)

1:2009

S/203/62/002/005/005/010

I046/I246

4.1100

AUTHOR: Shul'gina, A.V.

TITLE: Ionospheric disturbances as observed at the Murmansk station

PERIODICAL: Geomagnetizm i aeronomiya, v.2, no.4, 1962, 876-885

TEXT: Report on the ionospheric disturbances research undertaken at the Murmansk station ( $\varphi = 68^{\circ}57'N$ ,  $\lambda = 33^{\circ}03'E$ ) from January 1954 to January 1960, i.e. within one-half of the solar activity cycle characterized by the all-high number of sun spots observed in the last 200 years. The B-index (total absorption) does not vary with the solar activity (about 30% throughout the period); the  $f_{min} \geq 3.0$  Mc index (enhanced absorption) increases from 37% in 1954 to 73% in 1958. The occurrence frequency of the E-layer and its night-time maximum are independent of solar activity. The screening index A, with its night-time maximum, and day-time minimum, doubles in value during the maximum activity years. The index  $|\Delta f_oF2|/f_oF2 > 20\%$ , with its summertime minimum, is independent of

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Ionospheric disturbances as observed... S/203/62/002/005/C05/010  
I046/I246

solar activity. The total number of disturbed hours increases in proportion to the total number of sunspots,  $W$ , for  $0 \leq W \leq 2000$ . In years of minimum activity, the prevailing disturbances have short life-times (5 to 24 hours) and occur mainly in the lower ionospheric layers, whereas in maximum activity years essentially large and very large disturbances (life time from 60 to over 100 hours) are observed distributed uniformly through the ionosphere. There are 9 figures and 4 tables.

ASSOCIATION: Polyarnyy geofizicheskiy institut Kol'skogo filiala  
AN SSSR (Polar Geophysical Institute of the Kola  
Division AS USSR)

SUBMITTED: April 2, 1962

Card 2/2

SHUL'GINA, N.V.

Ionospheric disturbances from observations made at Murmansk  
Station. Geomag. i aer. 2 no.5:878-885 S-0 '62. (MIRA 15:10)

1. Polyarnyy geofizicheskiy institut Kol'skogo filiala AN SSSR.  
(Ionosphere)

ABRITALIN, V.L.; ZHURIN, R.B.; SIMONOVA, N.I.; SHEBERSTOV, V.I.;  
SHUL'GIHA, O.Ye.

Investigating the developing properties of 1-phenyl pyrazolidone-3  
and other pyrazolidone-3 derivatives. Zhur. nauch. i prikl. fot.  
i kin. 10 no.5:321-329 S-0 '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut (NIKFI),  
Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i  
krasiteley (NIOPIK) i Leningradskiy institut kinoinzhenorov (LIKI).



SHUL'GINA, T.M.

Teaching astronomy in secondary schools. Uch.zap.MGPI 118:83-97  
'57. (MIRA 13:5)

1. Prepodavatel' Novosibirskogo pedagogicheskogo instituta,  
prikomandirovanny k kafedre astronomii Moskovskogo  
gosudarstvennogo pedagogicheskogo instituta im. V.I. Lenina.  
(Astronomy--Study and teaching)

SHUL'GINA, T. V.

Presenting the concept of seasons in a school course on astronomy.  
Uch.zap.MGPI 118:113-119 '57. (MIRA 13:5)  
(Seasons)

SHUL'GINA, V. P.

USSR/Engineering - Hydraulics, Grounds Jan 52

"Compacting Capability of Loess Grounds and Effect of Water-Soluble Salts on the Compacting Process," Ye. D. Rozhdestvenskiy, Cand Tech Sci, V. P. Shul'gina

"Gidrotekh i Melio" No 1, pp 51-63

Clarifies the nature of ground consolidation and studies effect of NaCl,  $\text{MgSO}_4$ ,  $\text{CaSO}_4$  and  $\text{Na}_2\text{SO}_4$  on capability of grounds to be compacted. Establishes that loess-type grounds of Central Asia may be used as construction materials for hydraulic earth structures.

202T61

SHUL'GINA, V.P.

ROZHDESTVENSKIY, Ye.D.; SHUL'GINA, V.P.

Shrinkage of loess-type soils and how it is affected by certain salts.  
Trudy Inst.soor.AN Uz.SSR no.7:225-239 '55. (MLRA 10:3)  
(Loess)

14(6)

SOV/112-59-1-459

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 1, p 61 (USSR)

AUTHOR: Shul'gina, V. P., and Chakhvadze, G. Z.

TITLE: Use of Gypsum-Containing Soils in Hydraulic Structures

PERIODICAL: Tr. Sredneaz. n.-i. in-ta irrigatsii, 1957, Nr 90, pp 123-132

ABSTRACT: Results of laboratory and field investigations of borrow soils placed and roller-compacted in the body of the Kuyu-Mazar reservoir dam showed that such soils have characteristics (seepage coefficient, setting modulus, etc.) not inferior to those of nongypsum soils. Washing gypsum ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ) out of the placed soil proved to be a slow process; it can be accelerated by raising the volumetric weight, by making the slopes a bit easier, and by ensuring normal functioning of draining devices. The investigations revealed that the presence of up to 20% of gypsum in the soil cannot be regarded as an obstacle in using such soil for hydraulic structures. Bibliography: 8 items.

N.M.S.

Card 1/1

CJALJVADZE. G.Z.; SHUL'GINA, V.P.

Physical and mechanical properties of soils compsing the slopes  
of collectors in the Golodnaya Steppe (based on 1957 research  
data). Trudy SANIIRI no. 98:3-18 '59. (MIRA 14:1)  
(Golodnaya Steppe--Soil physics)

KARVITSKIY, M.P.; KUNITSKIY, L.S.; CHAKHVADZE, G.Z.; SHUL'GINA, V.P.

Methods for determining the granulometric composition of gypsum-  
treated soils. Trudy SANIIRI no. 98:43-46 '59. (MIRA 14:1)  
(Soil mechanics)

ROZHDESTVENSKIY, Ye.D. Prinimali uchastiye: GORBUNOV, B.P., kand. tekhn. nauk; SHUL'GINA, V.P., kand. tekhn. nauk; OBEL'CHENKO, A.N., kand. tekhn. nauk; KUDRINA, S.A., kand. khim. nauk; KURBANOV, B.P., otv. red.; BAKLITSKAYA, A.V. red.; BARTSEVA, V.B., tekhn. red.

[Physical properties of the loess soils of Uzbekistan] Fiziko-tekhnicheskie svoistva lessovykh gruntov Uzbekistana. Tashkent, Izd-vo Akad. nauk Uzbekskoi SSR, 1960. 269 p. (MIRA 14:9)  
(Uzbekistan--Loess)



SHUL'GINA, V.P., kand.tekhn.nauk; STUPAKOVA, L.F.; MOYILEV, Yu.L.,  
kand.tekhn.nauk

Laying roadbeds of gypsumed soils. Avt.dor. 25 no.4:14 Ap '62.  
(MIRA 15:5)

(Road construction)

MOTYLEV, Yu.L., kand. tekhn.nauk; BUTLITSKIY, Yu.V., mlad. nauchn. sotr.; STUPAKOVA, L.F., ml. nauchn. sotr.; FEDOSEYEVA, T.I., ml. nauchn. sotr.; SHUL'GINA, V.P., kand. tekhn.nauk; IVANOV, N.N., prof., doktor tekhn. nauk, retsenzent; BEZRUK, V.M., doktor geol.-miner. nauk, retsenzent; KOVRIZHNYKH, L.P., red.; BODANOVA, A.P., tekhn. red.

[Investigating the stability of a saline-soil roadbed] Issledovaniia ustoichivosti zemlianogo polotna iz zasolennykh gruntov. Moskva, Avtotransizdat, 1963. 115 p.

(MIRA 16:8)

(Road construction) (Soil mechanics)

1. SHUL'GINA, V. V.
2. USSR (600)
4. Leningrad - Spireaea
7. Sprira varietties tested for cultivation in Leningrad Trudy Bot. inst. An SSSR  
Ser. 6 no. 2, 1952

Monthly Lists of Russian Accessions, Library of Congress, March, 1953, Unclassified.

SHUL'GINA, V.V.

Cultivation of woody lianas in Leningrad. Trudy Bot. inst.Ser.  
6 no.4:157-194 '55. (MLRA 9:2)  
(Leningrad--Climbing plants)

ARTYUSHENKO, Z.T.; VASIL'YEV, I.V.; GZYRYAN, M.S.; GOLOVACH, A.G.; GRUBOV, V.I.; ZAMYATHIN, B.N.; PIDOTTI, O.A.; PILIPENKO, F.S.; POLETIKO, O.M., kand.biolog.nauk; RODIONENKO, G.I.; RUSANOV, F.N.; SAAKOV, S.G.; SOKOLOV, S.Ya., prof., doktor biolog.nauk, red.; FEDOROV, A.I.A.; SHIPCHINSKIY, N.V. [deceased]; SHULIGINA, V.V.; SHUKHOBODSKIY, B.A.; GOLOVNIN, M.I., red. izd-va; KRUGLIKOVA, N.A., tekhn.red.

[Trees and shrubs of the U.S.S.R.; wild, cultivated, and promising exotic trees and shrubs] Derev'ia i kustarniki SSSR; dikorastushchie, kul'tiviruemye i perspektivnye dlia introduktsii. Moskva. [Vol.4. Angiosperms: Leguminosae - Punicaceae] Pokrytosemennye: Semeistva bobovye-granatovye. 1958. 973 p. (MIRA 11:12)

1. AN SSSR. Botanicheskiy institut.  
(Angiosperms) (Trees) (Shrubs)

SHUL'GINA, Yo.F.

Distribution of some hydrochemical and hydrological elements in  
the off the mouth of the Kuban River (based on oservations during  
August-September, 1953). Trudy GOIN no.28:152-162 '55.(MLRA 9:6)  
(Kuban River) (Azov, Sea of)

SHULGINA, Ye.F.

Distribution of alkalinity values as an index of the interaction  
of river and sea waters in the Sea of Azov. Trudy GOIN no.52:49-  
73 '60. (MIRA 13:11)

(Azov, Sea of ~~Sea water~~ Composition)

SHUL'GINA, Ye.F.

Hydrochemical characteristics of the northwestern part of the Black  
Sea according to observations made in 1956-1958. Trudy GOIN  
no.59:29-57 '61. (MIRA 14:7)  
(Black Sea--Water--Composition)



CHERNYSHEV, M.P.; ROZHKOVA, L.P.; SHUL'GINA, Ye.F.; IGNATOVICH, A.F.;  
LABUNSKAYA, L.S.; FOMINA, T.V.; CHERNYAKOVA, A.P.; SHPAKOVA,  
L.N.; TARASOVA, M.K.; ANFILATOVA, A.I.; SLAVIN, L.B.;  
BARYSHEVSKAYA, G.I.; DERIGLAZOVA, N.V.; MATUSHEVSKIY, G.V.;  
AL'TMAN, E.N.; KROPACHEV, L.N.; CHEREDILOV, B.F.; POTAPOV,  
A.T.; DUDCHIK, M.K.; REGENTOVSKIY, V.S.; YERMAKOVA, L.F.;  
SEMENOVA, Ye.A.; KULIKOVSKIY, I.I.; KIRYUKHIN, V.G.; AKSENOV,  
A.A., red.; NEDOSHIVINA, T.G., red.; SERGEYEV, A.N., tekhn.  
red.; BRAYNINA, M.I., tekhn. red.

[Hydrometeorological handbook of the Sea of Azov] Gidrometeoro-  
logicheskii spravochnik Azovskogo moria. Pod red. A.A.Aksenova.  
Leningrad, Gidrometeoizdat, 1962. 855 p. (MIRA 16:7)

1. Gidrometeorologicheskaya observatoriya Chernogo i Azovskogo  
morey.

(Azov, Sea of--Hydrometeorology)

S/081/62/000/004/064/087  
B150/B138

11 5136  
AUTHORS: Gamid-Zade, G. A., Shul'gina, Ye. M.

TITLE: Optimum conditions for the catalytic cracking of kerosine and gas oil fractions of petroleums of the Kyurovdag and Siazan deposits

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 475, abstract 4M119 (Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya, no. 4, 1961, 3-5)

TEXT: Kerosine and gas oil fractions of petroleums of the Kyurovdag and Siazan' deposits, with an evaporation of 92% up to 350°C, were subjected to catalytic cracking in a laboratory plant over an alumo-silicate ball catalyzer at temperatures of 440, 450 and 460°C, with a volumetric speed of 0.7-0.8 hrs<sup>-1</sup>. It was found that the optimum cracking conditions for the indicated fractions of Siazan petroleum are a temperature of 440°C with

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S/081/62/000/004/064/087  
B150/B138

Optimum conditions for the...

volumetric speed 0.7-0.8 hrs<sup>-1</sup>. With these conditions the resultant yield of gasoline with octane number 77.8 is 30%, and 6.6% gas, in which number propane-propylene is 1.61% and isobutane 2.05%. The optimum cracking conditions of a similar fraction of Kyurovdag petroleum are - temperature 460°C and volumetric speed also 0.7-0.8. The yield of gasoline with octane number 77.6 is in this case 30%, and of gas 10.4%, in this number propane-propylene is 2.68% and isobutane 2.75%. [Abstracter's note: Complete translation.]

35  
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60

Card 2/2

SHUL'GINA, Ye.M.; ARUTYUNOVA, A.Kh.; BLYUMSHTEYN, A.Ye.

Improving the method for determining the hydrogen sulfide content  
in gases. Nefteper. i neftekhim. no. 3:26-29 '64. (MIRA 17:5)

1. Novo-Bakinskiy neftepererabatyvayushchiy zavod.

SHUL'GINA, Ye.O. (Bogorodsk, Gor'kovskoy oblasti)

Effect of pests on the nectar yield in plants. Zashch. rast.  
ot vred. i bol. 6 no.11:10 M '61. (MIRA 16:4)

(Honey plants---Diseases and pests)

FROLOVA, A.V. (Moskva, Leningradskiy prospekt, d.48,kv.49); KRONGAUZ, A.N.;  
SHUL'GINA, Z.I.; BOBYLEV, V.G.

Dosimetric investigations of ionization chambers for soft X-ray  
irradiation. Vest. rent. i rad. 36 no. 1:49-54 Ja-F '61.

(MIRA 14:4)

1. Iz dozimetricheskogo otdela (zav. - dotsent A.N. Krongauz)  
Nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta  
Ministerstva zdravookhraneniya RSFSR (dir. - prof. I.G. Lagunova).  
(IONIZATION CHAMBERS) (X RAYS)

SHUL'GINA, Z.L.

Method of phtivazid therapy (dosage and bacteriostatic concentration in the blood. Sov.med.19 no.10:38-43 0 '55.

(MLRA 8:22)

1. Iz terapevticheskogo otdeleniya Instituta tuberkuleza Akademii meditsinskikh nauk SSSR (dir. Z.A. Lebedeva, nauchnyy rukovoditel'--prof. N.A.Shmelev)

(NICOTINIC ACID ISOMERS, therapeutic use

isoniazid in tuberc., dosage & bacteriostatic action)

(TUBERCULOSIS, therapy

isoniazid, dosage & bacteriostatic action)

SHUL'GINA, Z. L.

Name : SHUL'GINA, Z. L.  
Dissertation : Phthivazid therapy in pulmonary tuberculosis; a clinical and microbiological study  
Degree : Cand Med Sci  
Defended At : Inst of Tuberculosis Acad Med Sci USSR  
Publication Date, Place : 1956, Moscow  
Source : Knizhnaya Letopis' No 6, 1957



USSR / Microbiology. Microbes Pathogenic for Man  
and Animals. Bacteria. Microbacteria.

F-4

Abs Jour: Ref Zhur-Biol., 1958, No 17, 76834.

Author : Shuĭgina, Z. L.

Inst : Tuberculosis Institute, Academy of Medical Science  
USSR.

Title : Phthivazide-Stable Strains of Microbacteria of  
Tuberculosis and Their Changes in the Organism of  
Tubercular Patients.

Orig Pub: Tr. In-ta tuberkuleza Akad. med. nauk SSR, 1956,  
8, 48-56.

Abstract: Resistance to phthivazide [an isonicotinic-hydra-  
zine derivative] (I) was determined in 88 cultures  
of tuberculosis bacteria (TB) isolated from 67  
patients with chronic fibrous-cavernous tuberculo-  
sis (68) disseminated with infiltrated and lobar

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55

SOURCE CODE: UR/0418/66/000/006/0111/0112

ACC NR: AP7006803

AUTHOR: Shul'ginov, B. S. (Engineer)

ORG: None

TITLE: Compressive and tensile strength of LKF plastic

SOURCE: Tekhnologiya i organizatsiya proizvodstva, no. 6, 1966, 111-112

TOPIC TAGS: tensile strength, plastic, compressive strength, material deformation

ABSTRACT: Data are given on the strength properties of LKF thermoplastic polymer. This material contains 50% polyvinyl chloride resin, 45% methyl methacrylate and 5% chlorinated polyvinyl chloride resin. The material is easily machined, resistant to the action of acids and bases and moisture resistant. The results of compressive tests at relative deformation rates of 0.33-133%/min are shown in Figure 1. The material conforms to Hooke law in section OA, begins to bulge in the middle section on all lateral surfaces at the beginning of horizontal segment AB, and cracks begin to show at the point B with a consequent reduction in loading on section BC. The increase in strength on section CD is due to the increase in cross sectional area of the specimen as a result of flattening. If deformation is stopped on the first half of horizontal segment AB, the specimen remains more or less permanently deformed unless it is heated to 60-70°C and held at this temperature for about an hour. This treatment fully re-

UDC: 620.17:678.546

Card 1/2

ACC NR: AP7006803

stores the original dimensions of the specimen. The maximum compressive strength of the material was taken as the mean arithmetic value of all strength measurements at a given rate of deformation. Tensile tests at deformation rates of 3.8-72%/min at room temperature showed brittle fracture without any residual deformation. The relationship between deformation and loading is linear up to the breaking point. The relationship between the strength characteristics of LKF plastic and deformation rate is shown in Figure 2 (curve 1--tension; curve 2--compression). The results show that comparatively small changes in the rate of deformation may cause considerable changes in the compressive strength of the material. This may be explained by the fact that the polymer is in the elastic state under compression and in the vitreous state under tension. Orig. art. has: 2 figures.

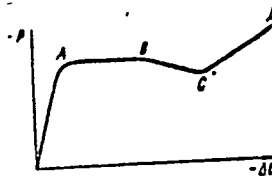


Fig. 1

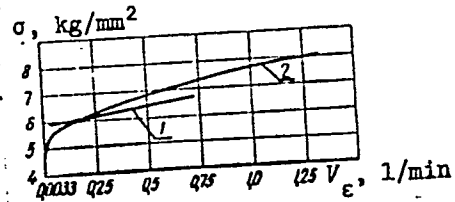


Fig. 2

SUB CODE: 11/ SUBM DATE: None

1 1947-47 (M)/M(W)/M(T)/M(T) 3D  
ACC FOR 130029921

SOURCE CODE: UR/0432/06/00/004/002/0033

AUTHOR: Troyan, I. A. (Candidate of technical sciences); Shul'ginov, B. S. (Candidate of technical sciences)

ORG: None

TITLE: Testing of materials for fatigue by means of a load regulating device

SOURCE: Mekhanizatsiya i avtomatizatsiya upravleniya, no. 4, 1966, 52-53

TOPIC TAGS: ~~mechanical apparatus~~, mechanical fatigue, fatigue test, cyclic load, *physics*  
*laboratory instrument*

ABSTRACT: A special device regulating the progressive increase of cyclic loads in fatigue testing is described. The device, designed by the Material Research Institute of the AN UkrSSR, is used for determining the endurance limits in accordance with Prot's method. The application of this method is briefly outlined with references to 1947 and 1960 sources. The device consists of a water storage tank, a pressure tank and a system of interconnecting pipes and valves. The rate of water flow from the pressure tank to the loading system is regulated by a set of valves. The progressive increase in load pressures is assured by a constant water level in the pressure tank, sustained by the water supply from the storage tank. The function of the system is outlined and its arrangement is shown in a diagram. Orig. art. has: 1 figure.

SUB CODE: 20/ SUBM DATE: None/ ORIG REF: 001/ OTH REF: 001

Card 1/1