

USSR/General and Special Zoology. Insects. Insect  
and Mite Pests. Ornamental and Flowering Plant  
Posts.

Abs Jour : Ref Zhur-Biol., No 20, 1953, 92282

Author : Bolizin, V. I.

Inst : -

Title : Gall Flies (Hymenoptera, Cynipidae) of the  
Union of SSR Fauna which Develop on Roses.

Orig Pub : Entomol. obozreniye, 1957, 36, No 4, 925-  
934

Abstract : This is a definitive table of 13 palearc-  
tic varieties of the genus *Diplolepis*, a  
description of the damage done by them,  
and their distribution. Separation of the  
subgenus *Nipporhodites* as an independent

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USSR/General and Special Zoology. Insects, Insect P  
and Mite Pests. Ornamental and Flowering Plant  
Pests.

Abs Jour : Ref Zhur-Biol., No 20, 1958, 92282

genus was noted. A description of a new variety of *Lisbolia sibirica* from the galls on the root shoots of the rose is given. In the case of *D. mayri*, two morphologically identical breeds are noted, the northern (parthenogenetic) and the southern (digenetic).

Card : 2/2

HELIZIN, V.I.

New gallflies of the tribe Aylaxini (Hymenoptera, Cynipoidea)  
in the fauna of the U.S.S.R. Mnt. oboz. 38 no.3:662-674 '59.  
(MIRA 13:1)

1. Kurskoye Oblastnoye upravleniye sel'skogo khozyaystva.  
(Gallflies)

BELIZIN, V.I.

Mechanization of the control of wireworms. Zashch. rast. ot vred.  
i bol. 6 no.5:14-15 My '61. (MIRA 15:6)  
(Kurst Province--Wireworms)

BELIZIN, V.I.

New Figitidae (Hymenoptera, Cynipoidea) in the fauna of the U.S.S.R.  
Ent. oboz. 40 no.1:153-164 '61. (MIRA 14:4)

1. Kurskoye oblastnoye upravleniye sel'skogo khozyaystva.  
(Parasitica)

BELIZIN, V.I. (Kurak)

Oak gallflies of the genus *Cynips* L. (Hymenoptera, Cynipidae).  
Zool. zhur. 40 no. 2:207-213 F '61. (MIRA 14:2)  
(Gallflies) (Oak—Diseases and pests)

BELIZIN, V.I.

New Eucillidae species (Hymenoptera, Cynipoidea) in the fauna of  
the U.S.S.R. Zool. zhur. 40 no.10:1478-1484 0 '61. (MIRA 14:9)

1. Kursk Regional Board of Agriculture.  
(Gallflies)

BELIZIN, V.I.

~~Cynipids parasitizing on synanthropic flies in Uzbekistan~~  
(Hymenoptera, Cynipoidea). Zool. zhur. 42 no.11:1652-1658 '63.  
(MIRA 17:2)

1. Station of Plant Protection of Kursk region.

BELIZIN, V /  
BELEZIN, V.I.

Parasitic gallflies of the tribe Mordantini (Hymenoptera,  
Cynipoidea, Mordantidae) in the fauna of the U.S.S.R. Ent.  
oboz. 43 no.1:185-192 '64 (MIRA 17:6)

1. Oblastnoye upravleniye sel'skogo khozyaystva, Kursk.

AGAFONOVA, Z.Ya.; BELIZIN, V.I.

Corn pests in Kursk Province. Ent.oboz. 43 no.2:241-257 '64.  
(MIRA 17:9)

1. Kurskaya sel'sko-khozyaystvennaya opytnaya stantsiya.

BELIZIN, V.I.

Efficient use of poisonous chemicals. Zashch. rast. ot vred.  
i bol. 9 no.8:6 '64. (MIRA 17:12)

1. Glavnyy agronom Kurskoy stantsii zashchity rasteniy.

RUZSA, Gabor, dr.; BELIZNAY, Pal, dr.

Rhinological observations on scarlet fever patients during the period of 1958 and 1959. Orv. hetil. 103 no.31:1453-1455 Ag '62.

1. Vas megyei Tanacs "Markusovszky Lajos" Korhaza Gyermekfuleszeti Osztaly es Gyermekosztaly.  
(NOSE radiog) (SCARLET FEVER radiog)

BELIZNAI, Pal, dr.; PAP, Valer, dr.

Follow-up examination of our patients treated for neonatal jaundice  
or erythroblastosis fetalis. Orv.hetil. 105 no.4:158-162 26 J '64.

I. Vas megyei Tanacs "Markusovszky Lajos" Korhaz, Gyermekosztaly es  
Vas megyei Gyermekideggyozdo Intezet.

Distr: 4E3a/4E3c

Graphical representation of atomic magnetic moments.  
Soviet Academy of Sciences, Institute of Physics, Ufa  
USSR. (Ufa, Bashkiria). *Glasnik Akad. Nauk SSSR, Seriya 11*, 4  
1965. — The total value of magnetic moments of atoms  
is graphically represented.

1965

92

~~SECRET~~  
YUGOSLAVIA/Atomic and Molecular Physics - Physics of the Atom

D-1

Abs Jour : Ref Zhur - Fizika, No 6, 1958, No 12860

Author : ~~Balažević~~ <sup>i</sup>Sergyye

Inst : Inst za agropedologiyu, Sarajevo, Yugoslavia

Title : Geometric Relations of the Electron Orbit

Orig Pub : Glasnik khem. drushtva, 1957, 22, No 2, 65-80

Abstract : The author proposes methods for graphical representation of the dependences between the quantum numbers  $n$ ,  $l$ ,  $m$ , and  $s$ , corresponding to quantum mechanical calculations. The author examines both the relations between the individual numbers, as well as a graphical representation of the states determined by all four above numbers.

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BELJERI, A.

"Use and care of gas containers."

p. 10 (Teknika) Vol. 4, no. 5, Sept./Oct. 1957  
Tirane, Albania

SC: Monthly Index of East European Accessions (EEAI) LC. Vcl. 7, no. 4,  
April 1958

KLJUSZOV, I.A. [Klyusov, I.A.] (Szovjetunio); SZAFARJANC, A.R. [Safaryants, A.R.] (Szovjetunio); BORISZ, B.P. [Boris, B.P.] (Szovjetunio); MAHANEK, M.E. [Makhanek, M.Ye.] (Szovjetunio); HOROS, B.I. (Szovjetunio); BELJAJEV, Sz.F. [Belyayev, S.F.] (Szovjetunio); ALEKSZEJEV, V.N. [Aleksyev, V.N.] (Szovjetunio)

Application of rotor series. Technika 6 no.12:2-3 D '62.

BELJERI, A.

"Output of boilers in glass factories using petroleum as fuel."

TEKNIKA., Tirane, Albania., Vol. 6, No. 1, Jan./Feb. 1959

Monthly list of EAST EUROPEAN ACCESSIONS (EEAI), LC, Vol. 8, No. 7, July 1959, Unclas

BELJERI, A.

Again on "the planning of the teaching of Mechanical Engineering at our University." p. 26

TEKNIKA (Ministria Industri-Miniera dhe Ndertim-Komunikacion) Tirane, Bulgaria.  
(Issued by the Ministry of Industry and Mining and the Ministry of Construction and Communication. Bimonthly) Vol. 5 (i.e. 6) no. 3, May/June 1959

Monthly List of East European Accessions (EEAI), IC, Vol. 8, no. 11, Nov. 1959  
Uncl.

YUGOSLAVIA/Diseases of Farm Animals - Diseases Caused by Helminths. R-3

Abs Jour : Ref Zhur - Biol., No 11, 1958, 50228

Author : Boko, F., Beljin, V., Gavranovic, I.

Inst : -

Title : The Speed of Growth of Echinococcus Cysts in the Liver of Pigs.

Orig Pub : Veterinaria (Jugosl.), 1957, 6, No 2-3, 446-448

Abstract : Multiple liver echinococcosis was observed in a 13 months old pig. The liver was enlarged by 5-6 times and weighed 20 kg. A very large number of echinococcus cysts was found in the liver (some of them were the size of a child's head). The author is of the opinion that such rapid growth of echinococci is determined by the specific chemical composition of the liver, and by the immunobiological properties of the organism of pigs. -- A.N. Ivanov.

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YUGOSLAVIA/Diseases of Farm Animals - Diseases Caused by Helminths. R-3

Abs Jour : Ref Zhur - Biol., No 11, 1958, 50232

Author : Boko, F., Beljin, V.

Inst : -

Title : Hymenolepidiasis in Laboratory Mice.

Orig Pub : Veterin. glasnik, 1957, 11, No 7, 680-683

Abstract : The clinical and pathologoanatomical characteristics of hymenolepidiasis in mice are described. Apart from general hygienic measures, the authors have quite successfully used pumpkin seeds (*Cucurbita pepo*) for the treatment of the animals. The animals ate the seeds quite willingly. No side-effects were observed.

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*BRJ JOZOVIC, A.*

VUJADINOVIC, Borislav; LEKIC, Svetomir; BRJJOZOVIC, Aleksandar;  
Petrovic, Miroje; ANTIC, Ratomir

Successful treatment of penetrating wound of the heart.  
Srpski arb. celok. lek. 84 no.5:660-666 May 56.

1. II Hirurska klinika Medicinskog fakulteta u Beogradu.  
Upravnik: prof. dr. Vojislav Stojanovic. IV Interna klinika  
Medicinskog fakulteta u Beogradu. Upravnik: prof. dr. Oedomil Plavsic.  
(HEART, wounds and injuries;  
right ventric. penetrating wd., ther. (Ser))

COUNTRY : POLAND B  
CATEGORY : General Biology.  
Individual Development. Postembryonic Develop-  
ment.  
ABS. JOUR. : RZhBiol., No. 5, 1959, No: 19122  
AUTHOR : Belka, Alina  
INST. : Wroclaw (Brésiau) University.  
TITLE : The Distribution of Leydig's Cells in the Skin  
of Triturus Vulgaris during Metamorphosis.  
ORIG. PUB. : Zesz. nauk. Univ. Wroclawski, 1957, B, No 2,  
21-26  
ABSTRACT : No abstract.

Card: 1/1

*BELKA, KAREL.*

CZECHOSLOVAKIA/Decorative Plants

M-11

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1841

Author : Karel Belka

Inst : Not Given

Title : Raising of Laurel and its Care

Orig Pub : Ovocnar. a zelinar., 1956, 4, No 1, 14

Abstract : Recommendations are given for the cultivation of laurel in tub cultures, for fertilization, watering, proper temperature and moisture of the air in the room, care during winter period, propagation (by half ripe cuttings, grafts).

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USCOMM-DC-55,352

BELKA, O.

Saving national values. p. 254.

SVET KOTORS, Praha, Vol. 9, no. 8, Apr. 1955.

SO: Monthly List of East European Accessions, (ESAL), LC, Vol. 4, no. 10, Oct. 1955,  
Uncl.

BELKA, Vladimir, inz.

Hollow circular piles. Inz stavby 12 no.9:417-418 S '64.

1. Regional Capital Construction Unit, Kosice.

BELKA, Wladyslaw, mgr inz.

Utilization of old steam engines in systems of combined  
steam-power generation for small industrial plants. Gosp paliw  
ll no.2:63-65 F '63.

1. Biuro Dokumentacji Technicznej, Lodz.

BELKA, Wladyslaw, mgr inz.

Appropriate exploitation of equipment as a condition for achieving the planned parameters. Gosp paliw 13 no.4:126-128 Ap '65.

1. Technical Documentation Office of Local Industry of the City of Lodz.

BELKA-GRZYBEK, A.

Histological and histochemical investigations of the adrenal cortex of the white mouse during the process of compensation. Folia biol. (Krakow) 13 no.2:139-156 '65.

Histological and histochemical investigations of the adrenal cortex of the white mouse during the process of its regeneration. Ibid.:157-171

1. Department and Laboratory of General Biology of the Silesian Medical Academy, Zabrze-Rokitnica.

BEIKANDZHIEV, R. inah.

A conference on welding. Mashinostroena 11 no.9:45 3 '62.

BELKANIYA, S. P.

Belkaniya, S. P. "Primary cancer of the vermiform appendix", Vracheb. d elo, 1949, No. 5 paragraphs 459-60.

SO: U-4630, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

BEIKANIYA, S.P.

Case of primary ilcoecal tuberculosis and absence of the appendix  
Khirurgiya no. 5, 1952

BEIKANIYA, S.P.

Pirogov's osteoplasty in spontaneous gangrene with resection of the vascular bundle. Khirurgia, Moskva no.9:52-54 Sept 1953. (CIWL 25:5)

1. Of the Surgery Division (Head -- Honored Physician Ukrainian SSR B.Z. Arkhimovich) of the Central Clinical Hospital for Water-Transport Workers and of the Central Railroad Hospital YuZ (Head of Division -- Candidate Medical Sciences D. N. Dumbadse), Kiev.

BELKANIYA, S.P. (Vinnitsa, ul. Kotsyubinskogo, d. 53, kv. 22)

Two unusual cases of acute obstruction of the colon. Nov.khir.  
arkh. no.3:79 My-Je '57. (MIRA 10:8)

1. Kafedra obshchey khirurgii (zav. - prof. A.P.Yurikhin)  
Vinnitskogo meditsinskogo instituta  
(COLON (ANATOMY)--DISEASES)

USSR / Human and Animal Morphology - Digestive Tract.

S

Abs Jour : Ref. Zhur. - Biol., No. 22, 1958, No. 101424

Author : Belkaniya, S. P.

Inst :

Title : The Problem of Anatomical Variants of the Sigmoid Colon

Orig Pub : Sb. nauchn. tr. Vinnitsk. med. in-ta, 1957, Vol. 9, 465-474

Abstract : In 100 cadavers of patients (64 men and 36 women) predominantly in middle and old age, it was shown that variants of position of the sigmoid colon (SC) fell into the Sozon-Yaroshevich classification and depended on the height and transverse dimension of the mesosigmoid. With regard to length the SC could be divided into the following categories: short loop (length up to 29 cm),

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USSR / Human and Animal Morphology - Digestive Tract. S

Abs Jour : Ref. Zhur. - Bioli, No. 22, 1958, No. 101424

average loop (up to 40 cm), long loop (40-60 cm), and extra-long loop (60-72 cm or more). An extreme form of anomaly of the SC is the so-called "duplicated colon" seen in 12T of cases; in this there was an increase in the diameter of the intestinal loop at its apex. Anomalies of the SC in the age group over 50 years were discovered in 28% of cases, but in only 7% of the young.

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HELKANIYA, S.P. (Vinnitsa, ul. Kotsyubinskogo, d.53.kv.22)

Malignant cervical melanoma with pigmentary elements which developed from a birthmark. Nov.khir.arkh. no.2:98-99 Mr-Ap '58 (MIRA 11:6)

1. Kafedra obshchey khirurgii (zav. - prof. A.P. Yurikhin)  
Vinnitskogo meditsinskogo instituta na baze gorodskoy zhelezno-dorozhnoy  
bol'nitsy.

(NECK--TUMORS)

**BEKANIYA, S.P.**, (Vinnitsa, ul. Kotsyubinskogo, d. 57, kv. 22)

Some data from an analysis of eighty-one operations on the sigmoid  
for acute volvulus. Nov. khir. arkh. no.2:86-90 Mr-Apr '59 (MIRA 12:7)

1. Kafedra obshchey khirurgii (zav. - prof. A. P. Yurikhin) Vinnitskogo  
meditsinskogo instituta.  
(COLON--SURGERY)

BELKANIYA, S.P. (Vinnitsa, ul. Kotsyubinskogo, d.57, kv.22)

Surgery in megadolichosigmoid. Nov.khir.arkh. no.5:100-104 S-0 '59.

(MIRA 13:3)

1. Kafedra obshchey khirurgii (zaveduyushchiy - prof. A.P. Yevikhin)  
Vinnitskogo meditsinskogo instituta.

(COLON (ANATOMY)--SURGERY)

BELKANIYA, S. P., CAND MED SCI, <sup>Data</sup> ~~MATERIAL~~ <sup>the</sup> ON A STUDY OF  
<sup>ileus</sup> THE ~~TORSION~~ OF THE SIGMOID COLON. (CLINICO-MORPHOLOGICAL  
<sup>study</sup> INVESTIGATION)." KIEV, 1961. (KIEV ORDER OF LABOR RED  
BANNER MED INST IM ACAD A. A. BOGOMOLETS). (KL, 3-61,  
230).

L 11381-67 EWT(1) SGTB DD/GD

ACC NR: AT6036505

SOURCE CODE: UR/0000/66/000/000/0075/0076

AUTHOR: Britvan, Ya. M.; Lychko, V. G.; Belkaniya, Yu. S. 20

ORG: none

TITLE: Electrophysiological investigations of the central mechanisms of gravitational collapse [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 75-76

TOPIC TAGS: brain bioelectricity, orthostatic test, human physiology, electroencephalography, biologic acceleration effect

ABSTRACT: The present paper contains an analysis of data on the relationship between the development of orthostatic collapse, more properly termed gravitational collapse, and the initial functional state of the cortex and subcortical parts of the brain as determined from bioelectric activity. Collapse was induced in cats by keeping them in a head-upward body position, which involves greater gravitational stress than a horizontal position. Changes in the functional state were produced by means of anes-

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thetics, blockade of the reticular formation, elimination of proprioception, vestibular de-afferentation, and by placing the animal in a preliminary position with the head down. Brain bioelectric activity was recorded with an 8-channel EEG manufactured by the "Alvar" Company. Potentials were taken off from the sensorimotor and occipital regions of the brain, specific nuclei of the thalamus and anterior hypothalamus, the midbrain reticular formation, and the pons variolii. Arterial pressure and respiration were recorded simultaneously with brain biocurrents.

The experiments showed that in cats of the control series of experiments, prolonged maintenance of a vertical position results, after 6 to 10 hrs, in severe gravitational collapse with complete extinction of brain bioelectric activity, a drop in arterial pressure to 20--30 mm Hg, and terminal respiratory dysfunctions. The following stages were observed in brain bioelectric activity changes: initial desynchronization, a mixed wave phase, slow activity dominance, "zones of silence", and complete extinction. In the slow activity phase there appeared third-order waves of arterial pressure and periodic respiration, reflecting a state of threat and the struggle of basic nervous processes. Cortical--subcortical

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ACC NR: AT6036505

interactions produced nonuniform results at various stages of collapse, depending on the rapidity with which collapse developed. General diffuse inhibition of biopotentials was often seen long before the appearance of significant arterial hypotension. The function of the respiratory center was frequently impaired more seriously than that of the vasculomotor center.

In ether-anesthetized cats, the onset of gravitational collapse was considerably faster. Changes in bioelectric activity appeared at different times in the various brain centers. Respiratory excitation was not seen in the initial period. Aminazine in a dose sufficient to blockade the reticular formation of the brain stem did not prevent the development of collapse; the appearance of frequent spikes of high voltage spindle-type rhythms in all leads was characteristic. It should be noted that biopotentials often persisted into the stage of considerable arterial pressure drop accompanied by profound respiratory distress.

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ACC NR: AT6036505

In cats curarized with listenon, as in cats subjected to bilateral vestibular de-afferentation and cats kept for 1 to 1.5 hrs before the experiment in a head-down position, gravitational collapse developed rapidly, within 1 hr. The initial desynchronization was less pronounced and certain of the above-described bioelectric activity phases did not appear. It was often possible to produce collapse for a second time in the same animal after a short period. 0

Thus, our investigations demonstrate the existence of regularities in the bioelectric reactions of the brain to changes in the gravitational field vector. It was shown that the rapidity of development and severity of gravitational collapse depend on the initial functional state of the central nervous system, which determines the capacity to mobilize antigravitational mechanisms. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 4/4 egk

*BEL'KAYA, L.N.*

USSR/Geology - Ore formation

Card 1/1 Pub. 46 - 5/19

Authors : Ivankin, P. F.

Title : Regarding the article by L. N. Bel'kaya, V. N. Ognev and A. I. Semenov, "Two Hypotheses of the Formation of the Polymetallic Ore Deposits in the Altai Region"

Periodical : Izv. AN SSSR. Ser. geol. 5, 66 - 76, Sep - Oct 1954

Abstract : A critical consideration is given to the basic propositions of the effusion-deposit hypothesis of the formation of the polymetallic ores, according to which the formation of the ore is connected with the fumarole-solfatara action of volcanoes of the Devonian and Carboniferous periods. The author finds a contradiction between the basic propositions of this hypothesis and the data from thematic research and prospecting in the ore fields of the sulfur-pyrite type are connected with the last stages of the magmatic cycle beginning in the third Devonian epoch and ending in the Paleozoic era. Nine Soviet references (1946 - 1954). Table.

Institution: .....

Submitted: April 3 1954

BEL'KE, G.V.

ASTAKHOV, Aleksandr Semenovich.; BEL'KE, G.V., otv. red.; SHKLYAR, S.Ya.,  
tekhn. red.

[Effect of mine capacity and natural conditions on the cost of  
coal (Moscow Basin). Vliianie nagruzki shakhty i estestvennykh  
uslovii na sebestoimost' uгля (Podmoskovnyi bassein). Moskva,  
Ugletekhizdat, 1958. 108 p. (MIRA 11:12)  
(Moscow Basin--Coal mines and mining)

BEL'KE, G.V.

Coal industry of the Hungarian People's Republic. Ugol' 38  
no.9:55-58 S '63. (MIRA 16:11)

BELKE, J.

BCG vaccination in Poland after World War II. *Pediat.polska* 23 no.7-  
8:674-691 N-D '49. (CJML 19:2)

BEL'KEVICH, A.V.

The MS9.01 and MS9.02 balancing machines. Biul.tekh.-ekon.inform.  
Gos.nauch.-issl.inst.nauch.i tekhn.inform. 17 no.7:38-39 J1 '64.  
(MIRA 17:10)

L 6673-65 EPA(s)-2/EWP(m)/EPP(c)/K/EPP(n)-2/EPR/EPA(w)-2/T/EWP(k)/EWP(q)/  
EWP(b) Fab-2h/Pf-4/Pr-4/Ps-4/Pt-10/Pu-4 BSD/ASD(m)-3 JD/WW/JG/DJ/WH  
ACCESSION NR: AR4036009 8/0276/64/000/003/B115/B116

SOURCE: Ref. zh. Tekhnol. mashinestr. Sv. t., Abs. 5B583

AUTHOR: Bel'kevich, B. A.

TITLE: The influence of porosity and oil impregnation on the machinability of sintered materials

CITED:SOURCE: Sb. Nauka - proiz-vu. Minsk, no. 1, 1963, 15-20

TOPIC TAGS: sintered material, sintered metal, sintered material machinability, iron graphite material, cermet, cermet machinability

TRANSLATION: Results are given of the study of the influence of porosity and oil impregnation on the machinability of sintered metal inserts. It was determined that the effectiveness of oil impregnation of sintered materials rises as porosity increases. In machining sintered iron-graphite materials, an increase of porosity from 14 to 30 percent makes it possible to increase cutting speed by 45-50 percent for oil impregnated inserts and by 20-25 percent for inserts not impregnated. In machining sintered materials without graphite, an increase in

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ACCESSION NR: AR4036009

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porosity of from 21 to 31 percent does not produce any significant effect on the strength of the cutters. Impregnation of sintered iron-graphite materials with oil makes possible an average increase of 25 percent in the cutting speed, as compared with nonimpregnated materials; impregnation of sintered materials without graphite quadrupled the speed as compared with nonimpregnated materials.

DATE ACQ: 10/1/65

SUB CODE: MM

ENCL: 00

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ACCESSION NR: AR4027673

S/0276/64/000/001/B075/B075

SOURCE: RZh. Tekhnologiya mashinostroyeniya, Abs. 1B407

AUTHOR: Fel'dshteyn, F. I.; Bel'kevich, B. A.

TITLE: Turning of metalloceramic materials

CITED SOURCE: Tr. N.-i. in-ta tekhnol. avtomov. prom-sti, vyp 10, 1963, 45-53

TOPIC TAGS: metalloceramic material, metalloceramic, metalloceramic material machining, metalloceramic material turning

TRANSLATION: The authors studied the processing of metalloceramic materials by turning. The first stage of the study consisted in the collection of data on the relative machinability of the most widespread compositions of metalloceramic materials. The authors give data on the geometric parameters of the cutting portion of the cutting tools assuring the greatest or least machined surface roughness. Initial data were obtained for the setting of speeds, forces, and cutting temperatures, as well as the effect of porosity and saturation on the process of metalloceramic materials cutting. 6 illustrations.

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L 39973-65 EPP(e)/EPP(n)-2/EPR/EPA(s)-2/EPA(w)-2/EWP(c)/EWP(k)/EWP(z)/EWT(d)/T/  
 EWT(m)/EWP(h)/EWP(i)/EWP(b)/EWA(d)/EWP(l)/EWP(e)/EWP(v)/EWP(t) Pf-l/Pr-l/Ps-l/  
 Pt-10/Pu-l/Pab-10 WH/WV/MJW/JD/JG/GS  
 ACCESSION NR: AT5006667 S/0000/64/000/000/0003/0020 82

AUTHOR: Bel'kevich, B. A. (Engineer) 77  
 5+1

TITLE: Optimum structural parameters of cutting tools and optimum cutting methods for machining of cermet materials 18

SOURCE: Minsk. Belorusskiy politekhnicheskiy institut. Issledovaniya v oblasti mashinostroyeniya (Research in the field of machinery manufacture); sbornik rabot. Minsk, Izd-vo Vysshaya shkola, 1964, 3-20 14

TOPIC TAGS: powder metallurgy, cermet cutting, cutting tool design, cutting parameter, cermet machining 18

ABSTRACT: Experiments were conducted on 9 different samples of cermet materials commonly used in the manufacture of small parts by the methods of powder metallurgy in order to determine the optimum tool parameters and optimum cutting speeds. The samples were in the form of bushings with a length of 50 mm, an internal diameter of 30 mm and an external diameter of 60 mm. All cuts were taken along the end surface of the bushing, from the center outward, with the life time of the tool being determined by a wear of 0.6 mm, measured along its rear plane. From the graphs of tool life as a function of the equivalent longitudinal cutting

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speed, it was determined that the optimum tool material (for life times of 40 minutes or longer) is the hard, fine grain alloy VK3M or VK6M. In general, the presence of cobalt in the tool material will decrease its life time. Optimum geometrical parameters of the tools were determined from the graphs of tool life time as a function of the particular parameter for internally lubricated and nonlubricated cermets. During these tests, the depth of each cut was  $t = 0.3$  mm, the feed velocity was  $s = 0.1$  mm/revolution and the cutting velocity was 60 meters/minute for nonlubricated materials and 95 m/min. for lubricated materials. The optimum parameters for both types of material were as follows: front angle  $\gamma = 10^\circ$ , main rear angle  $\alpha = 12^\circ$ , auxiliary rear angle  $\alpha_1 = 5^\circ$ , main projection angle  $\varphi = 30^\circ$ , auxiliary projection angle  $\varphi_1 = 50^\circ$ , inclination angle of main cutting edge  $\lambda = 0^\circ$ , radius of curvature of the cutting blade  $r = 1.5$  mm. For a maximally smooth surface the optimum parameters are different from those for the longest life time and are as follows:  $\gamma = 10^\circ$ ,  $\alpha = 5^\circ$ ,  $\alpha_1 = 5^\circ$ ,  $\varphi = 45^\circ$ ,  $\varphi_1 = 10^\circ$ , angle in the plane of the intermediate cutting edge  $\varphi_0 = 5^\circ$ , length of the intermediate cutting edge  $f_0 = 0.4-0.5$  mm. At feed velocities higher than 0.2 - 0.25 mm/rev. the surface smoothness deteriorates quickly. Table of recommended cutting speeds (in meters/minute) and cutting forces (in kg) are given for the tool material VK3M and a ferrugraphite cermet (lubricated and nonlubricated) of 20% porosity. The feed velocities range from 0.03 to 0.3 mm/rev. and the cut depths range from  $0.2/3$  to 1.0 mm. Cutting velocity correction coefficients are worked out for

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porositics of 15% and 30% (lubricated and nonlubricated materials), as well as for different microstructures, tool materials and tool life times. If the smoothness of the machined surface is not important, the cutting speeds can be increased by about 30% using tools designed for maximum life time. "The work was performed under the supervision of Dr. of Technical Sciences, Prof. E. I. Fel'dshteyn." Orig. art. has: 8 formulas, 9 figures and 7 tables.

ASSOCIATION: Belorusskiy politekhnicheskiy institut, Minsk (Belorussian Polytechnic Institute)

SUBMITTED: 05Feb64

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BEL'KEVICH, N.

"The Forming of the Young Generation of the Shipova Forest and Their Felling Care." Cand Agr Sci, Voronezh Forest Economy/Inst, Voronezh, 1953. (RZhBiol, No 6, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

PTITSYNA, O.A.; PUDEYEVA, M.Ye.; BEL'KEVICH, N.A.; REUTOV, O.A., akademik

Photochemical reaction of triphenylphosphine arylation by diaryl  
iodonium fluoborides. Dokl. AN SSSR 163 no.2:383-385 J1 '65.

(MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet.

BEL'KESHICH, F.I.; GAYDUR, K.A.; YAKOBSON, B.V.; SOKOLOV, A.D.; TIMOFEEV, A.V.

Use of peat wax as lubricant for molding powders. *Plast. Massy*  
no. 6:64-65 '69.

(MIRA 18:8)



MA

170pen/112 03

Adsorption of Hydrogen by Metals of the Platinum Group. II. Effect of  
Pre-treatment on the Adsorptive Capacity of Blacks. P. I. BILKIN, A. B.  
KOROTKIY, and A. M. KURKOVA. *Chem. Abstr.* 1959, 53, 110 (1959). (In Russian.)  
The platinum, iridium, and rhodium blacks were treated with hydrogen to  
remove adsorbed oxygen; excess hydrogen was then removed by heating  
the blacks in a vacuum at different temperatures for a given  
time for various times, after which their adsorptive capacity for hydrogen  
was determined. It was found that the adsorptive capacity decreased with  
increasing temperature, the decrease being more rapid the higher the temperature.  
It is suggested that lack of agreement of published data for sorption  
of hydrogen by the platinum group metals is due to differences in their  
pre-treatment. A. B.

1942

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PROCESSES AND PROPERTIES INDEX

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26

Viscosity of turpentine solutions of pine rosin. P. I. Bel'kevich. *Litokhim. Prom.* 3, No. 6, 8-13(1947); *Chem. Zvest.* 1941, 1, 1230.—Pine rosin consists of resinic acids, turpentine, water and mech. impurities. The viscosity of turpentine solns. of the rosin depends on the percentage of these constituents. They vary with the time of the year, locality and the method of the rosin production. The  $\eta$  of the solns. is a straight-line relationship of the rosin concn. Thus, the viscosity and  $\eta$  can be used to det. the compn. of the rosin. The results of the detns. are best presented graphically. They deviate from the results obtained by thermal analysis for resinic acid, turpentine and water by 1-4%. The detn. of mech. impurities gives the same results. M. Hosc

COMMON (C) (M) (V) (W) (X) (Y) (Z) (AA) (AB) (AC) (AD) (AE) (AF) (AG) (AH) (AI) (AJ) (AK) (AL) (AM) (AN) (AO) (AP) (AQ) (AR) (AS) (AT) (AU) (AV) (AW) (AX) (AY) (AZ) (BA) (BB) (BC) (BD) (BE) (BF) (BG) (BH) (BI) (BJ) (BK) (BL) (BM) (BN) (BO) (BP) (BQ) (BR) (BS) (BT) (BU) (BV) (BW) (BX) (BY) (BZ) (CA) (CB) (CC) (CD) (CE) (CF) (CG) (CH) (CI) (CJ) (CK) (CL) (CM) (CN) (CO) (CP) (CQ) (CR) (CS) (CT) (CU) (CV) (CW) (CX) (CY) (CZ) (DA) (DB) (DC) (DD) (DE) (DF) (DG) (DH) (DI) (DJ) (DK) (DL) (DM) (DN) (DO) (DP) (DQ) (DR) (DS) (DT) (DU) (DV) (DW) (DX) (DY) (DZ) (EA) (EB) (EC) (ED) (EE) (EF) (EG) (EH) (EI) (EJ) (EK) (EL) (EM) (EN) (EO) (EP) (EQ) (ER) (ES) (ET) (EU) (EV) (EW) (EX) (EY) (EZ) (FA) (FB) (FC) (FD) (FE) (FF) (FG) (FH) (FI) (FJ) (FK) (FL) (FM) (FN) (FO) (FP) (FQ) (FR) (FS) (FT) (FU) (FV) (FW) (FX) (FY) (FZ) (GA) (GB) (GC) (GD) (GE) (GF) (GG) (GH) (GI) (GJ) (GK) (GL) (GM) (GN) (GO) (GP) (GQ) (GR) (GS) (GT) (GU) (GV) (GW) (GX) (GY) (GZ) (HA) (HB) (HC) (HD) (HE) (HF) (HG) (HH) (HI) (HJ) (HK) (HL) (HM) (HN) (HO) (HP) (HQ) (HR) (HS) (HT) (HU) (HV) (HW) (HX) (HY) (HZ) (IA) (IB) (IC) (ID) (IE) (IF) (IG) (IH) (II) (IJ) (IK) (IL) (IM) (IN) (IO) (IP) (IQ) (IR) (IS) (IT) (IU) (IV) (IW) (IX) (IY) (IZ) (JA) (JB) (JC) (JD) (JE) (JF) (JG) (JH) (JI) (JJ) (JK) (JL) (JM) (JN) (JO) (JP) (JQ) (JR) (JS) (JT) (JU) (JV) (JW) (JX) (JY) (JZ) (KA) (KB) (KC) (KD) (KE) (KF) (KG) (KH) (KI) (KJ) (KK) (KL) (KM) (KN) (KO) (KP) (KQ) (KR) (KS) (KT) (KU) (KV) (KW) (KX) (KY) (KZ) (LA) (LB) (LC) (LD) (LE) (LF) (LG) (LH) (LI) (LJ) (LK) (LL) (LM) (LN) (LO) (LP) (LQ) (LR) (LS) (LT) (LU) (LV) (LW) (LX) (LY) (LZ) (MA) (MB) (MC) (MD) (ME) (MF) (MG) (MH) (MI) (MJ) (MK) (ML) (MM) (MN) (MO) (MP) (MQ) (MR) (MS) (MT) (MU) (MV) (MW) (MX) (MY) (MZ) (NA) (NB) (NC) (ND) (NE) (NF) (NG) (NH) (NI) (NJ) (NK) (NL) (NM) (NO) (NP) (NQ) (NR) (NS) (NT) (NU) (NV) (NW) (NX) (NY) (NZ) (OA) (OB) (OC) (OD) (OE) (OF) (OG) (OH) (OI) (OJ) (OK) (OL) (OM) (ON) (OO) (OP) (OQ) (OR) (OS) (OT) (OU) (OV) (OW) (OX) (OY) (OZ) (PA) (PB) (PC) (PD) (PE) (PF) (PG) (PH) (PI) (PJ) (PK) (PL) (PM) (PN) (PO) (PP) (PQ) (PR) (PS) (PT) (PU) (PV) (PW) (PX) (PY) (PZ) (QA) (QB) (QC) (QD) (QE) (QF) (QG) (QH) (QI) (QJ) (QK) (QL) (QM) (QN) (QO) (QP) (QQ) (QR) (QS) (QT) (QU) (QV) (QW) (QX) (QY) (QZ) (RA) (RB) (RC) (RD) (RE) (RF) (RG) (RH) (RI) (RJ) (RK) (RL) (RM) (RN) (RO) (RP) (RQ) (RR) (RS) (RT) (RU) (RV) (RW) (RX) (RY) (RZ) (SA) (SB) (SC) (SD) (SE) (SF) (SG) (SH) (SI) (SJ) (SK) (SL) (SM) (SN) (SO) (SP) (SQ) (SR) (SS) (ST) (SU) (SV) (SW) (SX) (SY) (SZ) (TA) (TB) (TC) (TD) (TE) (TF) (TG) (TH) (TI) (TJ) (TK) (TL) (TM) (TN) (TO) (TP) (TQ) (TR) (TS) (TT) (TU) (TV) (TW) (TX) (TY) (TZ) (UA) (UB) (UC) (UD) (UE) (UF) (UG) (UH) (UI) (UJ) (UK) (UL) (UM) (UN) (UO) (UP) (UQ) (UR) (US) (UT) (UU) (UV) (UW) (UX) (UY) (UZ) (VA) (VB) (VC) (VD) (VE) (VF) (VG) (VH) (VI) (VJ) (VK) (VL) (VM) (VN) (VO) (VP) (VQ) (VR) (VS) (VT) (VU) (VV) (VW) (VX) (VY) (VZ) (WA) (WB) (WC) (WD) (WE) (WF) (WG) (WH) (WI) (WJ) (WK) (WL) (WM) (WN) (WO) (WP) (WQ) (WR) (WS) (WT) (WU) (WV) (WW) (WX) (WY) (WZ) (XA) (XB) (XC) (XD) (XE) (XF) (XG) (XH) (XI) (XJ) (XK) (XL) (XM) (XN) (XO) (XP) (XQ) (XR) (XS) (XT) (XU) (XV) (XW) (XX) (XY) (XZ) (YA) (YB) (YC) (YD) (YE) (YF) (YG) (YH) (YI) (YJ) (YK) (YL) (YM) (YN) (YO) (YP) (YQ) (YR) (YS) (YT) (YU) (YV) (YW) (YX) (YY) (YZ) (ZA) (ZB) (ZC) (ZD) (ZE) (ZF) (ZG) (ZH) (ZI) (ZJ) (ZK) (ZL) (ZM) (ZN) (ZO) (ZP) (ZQ) (ZR) (ZS) (ZT) (ZU) (ZV) (ZW) (ZX) (ZY) (ZZ)

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ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

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Bel'kevich, P. I., Volkova, A. A., and Yerofeyev, B. V. "The kinetics of the thermal disintegration of stable solutions of silver oxalate and sodium oxalate", Izvestiya Akad. nauk BSSR, 1948, No. 6, p. 145-59

DECLASSIFIED, P.I.  
BEL'KEVICH, P. I.; VOLKOVA, A. A.; YEROFYEV, B. V.; LAZAREV, M. Ya.

Effect of concentration on the velocity of thermal decomposition  
of silver oxalate in a vehicle. Izv. AN BSSR no.1:163-175 Ja-F '51.  
(Thermochemistry) (Silver oxalate) (MLRA 8:10)

BEL'KEVICH, F. I.

BEL'KEVICH, F. I. -- "Investigation of the Kinetics of the Autocatalytic Decomposition of Substances." Sub 11 Jan 52, Moscow Order of Lenin State U imeni M. V. Lomonosov. (Dissertation for the Degree of Doctorate in Chemical Sciences).

SO: Vechernaya Moskva January-December 1952

DEL KEVICH, P. I.

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USSR:

✓ New derivation of the Kolmogorov-Erofeev equation.  
 P. I. Belkevich. *Vestn. Akad. Nauk Belarus. S.S.R.*  
~~1950, No. 3, 137.~~ New math. derivation of the Kolmo-  
 grov-Erofeev equation (B. V. Erofeev, *C.A.* 41, 4027c;  
*Ibid.* 1950, No. 3, 137), based on the method of statistical  
 mechanics, is presented. The equation  $\alpha = 1 - e^{-\alpha t}$   
 (in reference to the kinetics of the reactions of the solid  
 substances, where  $n = \sigma + b$ ,  $b = (3\pi v_0 k_1 \dots k_n U^3) /$   
 $[(\sigma + 3)]$  and  $\alpha$  is the fraction decompd. / the time,  $\sigma$  no.  
 of the successive stages by which the initial reaction centers  
 grow (when grown in 3 directions,  $b = 3$ ),  $v_0$  no. of the ini-  
 tial potential centers,  $U$  the linear velocity,  $k$  and  $n$  are  
 consta., and  $k_1, k_2, \dots, k_n$  the velocity consta. of each succe-  
 ssive stage of the formation of the initial reaction centers,  
 resp.) is based on the assumption that the reaction velocity  
 decreases proportionally to the unreacted fraction of the  
 substance, as a result of the intersection of the reaction  
 centers. A possibility of evaluation of a new topokinetic  
 equation, based on a more perfect relation between the ve-  
 locity decrease resulting from the intersection of the reac-  
 tion centers and the unreacted fraction of the substance, is  
 indicated. R. Wierbiński

Bel'kevich, P. I.

USSR .

A new topokinetic equation. P. I. Bel'kevich and B. V. Brofeev. *Vestsi Akad. Nauk SSSR*, 1962, No. 4, 116-23 (cf. preceding abstr.).—A new topokinetic equation is derived that can be used for description of the kinetics of autocatalytic reactions of solid substances involving the formation and growth of the nuclei of a solid substance. The new equation is  $[1/(1 - \alpha)^n] - 1 = kt^n$ , where  $n = s - 1$ ,  $n = \sigma + 3$ , and  $k = (8\sigma k_0)/(s + 3)!$ ,  $s$  (or resp.  $\sigma$ ). To evaluate the numerical value of the const.  $s$  (or  $n$ ), three independent methods were tested: (a) The numerical values of  $n$  are changed by integers ( $n = 1, 2, 3, \dots$ ) until the linearity of  $\log [1/(1 - \alpha)^n - 1]$  as a function of  $\log t$  is fulfilled; (b) from the values of  $\alpha$  and  $t$  at max. reaction velocity,  $[n \cdot (d\alpha/dt)_m] / (1 - \alpha_m) = (s + 3)/S = (n - 1)/S$ ; the values of  $n$  are obtained from the slopes of the straight lines,  $\log \alpha = A + n \log t$ , by use of the initial sections of the curves when  $\alpha \ll 1$  (in the equation  $A = \log(k/n)$ ); and (c) by use of the (derived) equation,  $(1 - \alpha_m)^{n-1} = (1/n) + (1/S) - (1/nS)$ . Different values (from 1 to 10) are taken for  $n$  and  $S$ , and the numerical values of the right side of the equation are found from which the values of  $(1 - \alpha_m)$  are then evaluated.  $(1 - \alpha_m)$  is plotted against  $n$  ( $s = \text{const.}$ ), or  $(1 - \alpha_m)$  against  $s$  ( $n = \text{const.}$ ), and the curves are constructed from which the  $s$  value can be found by use of the corresponding values of  $(1 - \alpha_m)$  and  $n$ . The new equation is equiv. to the topochem. equation of Kholmogorov-Brofeev,  $\alpha = 1 - \exp(-kt^n)$ , when  $s = 1$ . E. Wierbicki

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BELKEVICH, P. I.

The mechanism of thermal decomposition of some solid substances. P. I. Bel'kevich and V. B. Brofeyev. *Vestnik Akad. Nauk SSSR Ser. Khim.* 1953, No. 1, 81-70; *Referat. Zhur. Khim.* 1954, No. 26808.—The dehydration of crystal hydrates and thermal decomposn. of solid  $\text{Ag}_2\text{C}_2\text{O}_4$ ,  $\text{PbC}_2\text{O}_4$ ,  $\text{NiC}_2\text{O}_4$ ,  $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$ ,  $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$ ,  $\text{K}_4\text{Fe}(\text{CN})_6$ ,  $\text{BaNO}_3$ ,  $\text{MgCO}_3$ , and  $\text{CdCO}_3$  were studied at various temps. Also, the decomposn. was studied of these salts deposited on carriers, mechanically mixed with quartz sand, and with reaction products. A classification is proposed for thermal decomposn. reactions of solid substances based on the nature of the center and heat of the initial reaction. A kinetic analysis of the reactions is given. M. H.

①

~~BEL'KEVICH, P.I.~~

Nature of self-acceleration of reactions involving solid substances.  
Izv.AN BSSR, no.1:75-82 Ja-F '53. (MLRA 9:1)  
(Chemical reaction, Rate of)

Effect of the addition of metals on thermal decomposition of silver oxalate. P. I. Bel'kevich and P. S. Orinovich. *Izv. Akad. Nauk SSSR*, 1955, No. 2, 137-41 (in Russian).—The effect of the addn. of Al, Fe, Mg, Cu, and Pb on thermal decompn. of  $\text{Ag}_2\text{C}_2\text{O}_4$  (I) at 115-20° was studied. Addns. of Pb, Fe, and Cu in amts. not larger than 6% with respect to the wt. of I decrease the rate of the decompn. of I about 15%, while addns. of Mg and Al in the same amts. are without any effect; that the addn. of any metals prolongs the time at which the reaction at a max. rate starts, and that the decompn. follows a 1st-order reaction was formulated by the Kholmogorov-Krofecv equation (*ibid.* 1949, No. 5, 42; *C.A.* 49, 4332f),  $\alpha = 1 - \exp(-kt^n)$ , in which  $\log k = 10.9 - 0.8$ , and  $n =$  approx. 5 when the amts. of the metals added are not larger than 6% of I. However, when the addn. of Al increased from 2.2 to 46% the value of  $n$  decreased from 5.4 to 3.6. E. Wierbicki

Handwritten initials and a circled 'D' are present to the right of the text.

BEL'KEVICH, P.I.; KOSTYUK, M.S.

Principal courses of scientific activity and results of studies by  
the Peat Institute of the White Russian Academy of Sciences.  
Trudy Inst.torf.AN BSSR 4:5-19 '55. (MIRA 9:3)  
(Peat)

... of the process of the propagation of the reaction of thermal decomposition in solid phases. P. I. Lukatskiy and R. S. Ginzburg, *Dokl. Akad. Nauk SSSR*, 1955, No. 5, 147 (in Russian). The thermal decomposition of  $\text{Ag}_2\text{CO}_3$  at 100, 110, 115, and 130° is described with a general description of the electric resistance of the sample during the reaction. During the reaction, the electric resistance increases up to a maximum (at 17-30% decomposition of  $\text{Ag}_2\text{CO}_3$ ), the electric resistance decreases rapidly and explosion of the product follows up to this point the reaction follows the exponential law  $R = R_0 \exp(-kt)$ , with a close to 4. Its increase up to the maximum is proportional to the length of the sample.

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0504

BAUSIN, A.F.; SOKOLOV, A.A.; ANTONOV, V.Ya.; KURDYUMOV, S.V.; BEL'KEVICH, P.I.; SAVINYKH, A.I.; KARAKIN, F.F.; SOLOPOV, S.G.; YEFIMOV, V.S.; YAKOVITSIN, V.I.; RABKIN, B.A.; BABARIN, A.F.; MATVEYEV, L.M.; FUNIKOV, S.A.; CHERNENKOV, D.P.; BULAYEVSKIY, N.V.; kandidat tekhnicheskikh nauk; SHINKARINK, K.K.; TSUPROV, S.A.; GINZBURG, L.N.; VASIL'YEV, Yu.K.

Scientific and technical conference on the work of the peat industry of the Ministry of Electric Power Stations. Torf.prom. 32 no.2:1-20 '55.  
(MLRA 8:5)

1. Zamestitel' ministra elektrostantsiy (for Bausin).
2. Zamestitel' direktora VNIITP (for Sokolev).
3. Zamestitel' direktora MTI (for Antonov).
4. Zamestitel' direktor "kraiimasttopprom" (for Kurdyumov).
5. Direktor Instituta terfa AN BSSR (for Bel'kevich).
6. Nachal'nik Glavenergozapchasti MES (for Savinykh).
7. Glavnyy inzhener Ivanovskogo torfotresta (for Karakin).
8. Zamestitel' direktora MTI (for Selepev).
9. Upravlyayushchiy Shaturskogo torfotresta (for Yefimov).
10. Glavnyy mekhanik Invanovskogo torfotresta (for Yarovitsin).
11. Glavnyy mekhanik Leningradskogo torfotresta (for Rabkin).
12. Glavnyy inzhener Ozeretsko-Neplyuyevskogo torfopredpriyatiya (for Babarin).
13. Glavnyy inzhener Ger'kovskogo torfotresta (for Matveyev).
14. Rukovoditel' laboratorii VNIITP (for Funikov).
15. Glavnyy inzhener tresta Lenterfestroy (for Chernenkov).

(Continued on next card)

*Phys* Kinetics of the thermal decomposition of potassium permanganate in the presence of aluminum. E. S. Oshovik and P. I. Bel'kevich. *Vestn Akad. Nauk Belarus. S.S.R., Ser. Fiz.-Tekh. Nauk* 1956, No. 1, 127-9 (in Russian).—Thermal decomn. of  $KMnO_4$ ,  $2KMnO_4$ ,  $K_2MnO_4 + MnO_2 + O_2$ , is accelerated in the presence of powd. Al (16.5% Al addn.) at the temp. of  $350^\circ$ , but not at  $255^\circ$ . This accelerated effect of Al at the high temp. is due to the thermal effect of the reaction  $4Al + 3O_2 = 2Al_2O_3 + 7000 \text{ cal/kg}$  on the formation of the initial centers of the decomn. of  $KMnO_4$ . P. Werbica

3

*BEL'KEVICH, P. I.*

Category: USSR / Physical Chemistry - Kinetics. Combustion.  
Explosives. Topochemistry. Catalysis.

B-9

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30037

Author : Bel'kevich P. I.

Inst : not given

Title : Critical Comments on the Paper by M. M. Pavlyuchenko "Kinetics of  
Decomposition of Explosives"

Orig Pub: Zh. fiz. khimii, 1956, 30, No 3, 706-707

Abstract: A discussion article. See RZhKhim, 1956, 25174.

*Akademiya nauk BSSR, Institut Topfa,  
Minsk.*

Card : 1/1

-11-

~~BEL'KEVICH, P.I.~~

Review of topokinetic equations and their applicability to the  
kinetics of thermal decomposition of solids. Sbor.nauch.rab.Inst.  
khim.AN BSSR no.5:21-35 '56. (MLRA 10:5)  
(Chemical reaction--Mechanism)

*BEL'KEVICH, P. I.*

15-57-7-9711

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7,  
p 143 (USSR)

AUTHORS: Bel'kevich, P. I., Yanchenko, N. I., Slepovich, F. I.

TITLE: Regeneration of Waste Oils by Bleaching Clays  
(Regeneratsiya otbel'iyayushchimi glinami otrabotannykh  
masel--in Belorussian)

PERIODICAL: Izv. AN BSSR, ser. fiz.-tekhn. n., 1956, Nr 2, pp 125-  
139

ABSTRACT: Clays of deposits at Levaya Ruba (Vitebskaya Oblast),  
Malinovka and Vidibor (Brestskaya Oblast), Shelomy  
(Mogilevskaya Oblast), and Yel'niki (Gomel'skaya Oblast)  
are used for purifying transformer oil by the contact  
method. Clays used for this purpose have an acidity  
index from 0.06 to 0.35. The amount of clay required  
in the process is 5 to 15 percent of the weight of the  
oil. Considerably used transformer oils with an

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BEL'KEVICH, P.I.

Once more on M.M. Pavliuchenko's article "Kinetics of the decomposition of explosives." Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.4: 165-166 '56.

(MIRA 10:6)

(Explosives)

BEL'KEVICH, P.I.; KONYUSHKO, I.M.

Analysis of the composition of the adsorbed phase of montmorillonite  
type clay. Uch.zap. BGU no.29:233-250 '56. (MIRA 11:11)  
(Montmorillonite) (Adsorption)

BEL'KEVICH, Petr Illarionovich [Bial'kevich, P.]; KOSTYUK, Nestor  
Semenovich [Kestsiuk, N.]; TERESHCHANKO, Ul. [Tsiareshchanka,  
Ul.], red.; STEPANOVA, N. [Stsiapanava], tekhn.red.

[Peat as fuel and raw material in White Russia] Torf - paliunnaia  
i syravinnnaia baza BSSR. Minsk, Dziarshaunae vyd-va BSSR. Red.  
palit.lit-ry, 1957. 40 p. (MIRA 13:4)  
(White Russia--Peat)

*BEL'KEVICH, P.I.*

USSR/Physical Chemistry - Kinetics, Combustion, Explosions,  
Topochemistry, Catalysis.

B-9

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 451

Author : P.I. Bel'kevich, Ye.S. Osinavik.

Inst : Academy of Sciences of White Russian SSR.

Title : Diffusion-Chemical Action of Metal Additions at Thermal  
Dissociation of Silver Oxalate.

Orig Pub : Vestsi AN BSSR. Ser. fiz. tekhn. n., Izv. AN BSSR. Ser  
fiz.-tekhn. n., 1957, No 1, 65-70

Abstract : A layer of powdered metal (Al, Fe or Cu) was added to a  
weighed sample of  $Ag_2C_2O_4$  (I) and the sample was pressed  
into a tablet, which was kept in storage before experi-  
menting for some time  $\tau$ . It was revealed that the ther-  
mal dissociation (DT) was retarded by the metals, if  $\tau$   
had been less than one month. A gradual transition from

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USSR/Physical Chemistry - Kinetics, Combustion, Explosions,  
Topochemistry, Catalysis.

B-9

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 451

retardation of DT to its acceleration is observed, if  $\tau$  increased with-in the range from 1 to 6 months. If  $\tau > 8$  months, DT proceeds with an explosion. The obtained regularities are explained from the point of view of autocatalytical action of the dissociation product, which is crystallochemically homologous to the initial substance, on the DT speed.

Card 2/2

HEL'KEVICH, P.I.; CHISTOVA, L.R.

Ion-exchanging properties of peat. Exchange of cations in peat.  
Report no. 1. Trudy Inst. torf. AN BSSR 6:130-141 '57. (MIRA 11:7)  
(Peat) (Ion exchange)

HEL'KEVICH, P.I.; CHISTOVA, L.R.

Ion-exchanging properties of peat. Applicability of ion-exchange adsorption equations to a description of cation-exchange phenomena in peat. Report no.2. Trudy Inst. torf. AN BSSR 6:142-149 '57. (MIRA 11:7)

(Peat) (Ion exchange)

BEL'KEVICH, P.I.; CHRISTOVA, L.R.

Ion-exchanging properties of peat. Exchange of cations in  
sulfonated peat. Report no.3. Trudy Inst. torf. AN BSSR 6:  
150-158 '57.

(MIRA 11:7)

(Peat) (Ion exchange)

BEL'KEVICH, P.I.; CHISTOVA, L.R.

Ion-exchanging properties of peat. Applicability of ion-exchange adsorption equations to the exchange of cations in sulfonated peat. Trudy Inst. torf. AN BSSR 6:159-165 '57.

(Peat) (Ion exchange)

(MIRA 11:7)

HEL'KEVICH, P.I.; VERZAL, V.V.

Determination of plasticity of peat and clay masses. Trudy Inst. torf.  
AN BSSR 6:166-179 '57. (MIRA 11:7)  
(Ceramics) (Peat)

HEL'KEVICH, P.I.; TSYBUL'KIN, V.M.

Use of sulfocarbon for the purification of waste water from plants producing gas from peat. Sorption of chemicals from their water solutions by sulfocarbon. Report no. 1. Trudy Inst. torf. AN BSSR 6:180-184 '57. (MIRA 11:7)  
(Sewage--Purification) (Sulfocarbons)

BEL'KEVICH, P.I.; TSYBUL'KIN, V.M.

Use of sulfocarbon for the purification of waste water from plants producing gas from peat. Sorption of water-soluble compounds from waste water by sulfocarbon. Report no. 2. Trudy Inst. torf. AN BSSR 6:185-189 '57. (MIRA 11:7)

(Sewage--Purification) (Sulfocarbons)

HEL'KEVICH, P.I.; VERZAL, A.I.; MALEVICH, A.A.

Purification of crude peat wax with mineral sorbents. Trudy Inst.  
torf. AN BSSR 6:190-200 '57. (MIRA 11:?)  
(Ozocerite)

SASIM, A.S.; BEL'KEVICH, P.I.

Extraction of bitumen from peat at various temperatures by means of  
"kalosha" gasoline. Trudy Inst. torf. AN BSSR 6:209-216 '57.  
(MIRA 11:7)

(Peat) (Bitumen)

TSYBUL'KIN, V.M.; BEL'KEVICH, P.I.

Presence of carbohydrates in the alcohol-benzene fraction of  
bitumen from peat-forming plants. Dokl. AN BSSR 2 no.11:465-466  
D '58. (MIRA 12:8)

1. Prestavleno akademikom MN BSSR T.N. Godnevym.  
(BITUMEN) (PEAT--ANALYSIS) (CARBOHYDRATES)

BELKEVICH, P. I.

AUTHOR: Bel'kevich, P. I.

76-32-2-35/38

TITLE: On the Paper by M. M. Pavlyuchenko "The Kinetics of the Decomposition of Explosives" (Reference 1)  
(O stat'ye M. M. Pavlyuchenko "Kinetika razlozheniya vzryvchatykh veshchestv" (1))

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 2, pp. 468-469 (USSR).

ABSTRACT: In connection with the answer of M. M. Pavlyuchenko (reference 2) to the critical remarks (reference 3) of the author of this paper (reference 1) on Pavlyuchenko's work another comment is made here. It is pointed out that Pavlyuchenko in his answer (reference 2) writes as follows. "Nowhere in my work I pointed out that the centers are formed within the range of a circle with the radius of  $(t - \tau)v$  and the more within the range of a growing core of the solid product, this would be absurd." Therefore it is said to be not at all understandable that Pavlyuchenko does not know his own work since the formulae deduced therein are based just on this absurd assumption. In this connection Pavlyuchenko's work is again discussed and finally a passage from this work is

Card 1/2

On the Paper by M. M. Pavlyuchenko "The Kinetics of the  
Decomposition of Explosives" (Reference 1)

76-32-2-35/38

mentioned which reads as follows. "At the time  $T$  a circular  
limit of the radius  $(t - \tau)v$  and of a circumference of  $2\pi$   
 $(t - \tau)v$  is formed at the surface around every center as a  
result of the reaction."

There are 2 figures, and 3 references, 3 of which are Soviet.

ASSOCIATION: Peat Institute AS Beloussian SSR, Minsk  
(Akademiya nauk. BSSR, institut torfa, Minsk)

SUBMITTED: November 2, 1956.

KEYWORDS: 1. Explosives--Theory 2. Mathematics

Card 2/2

TSYBUL'KIN, V.M.; HEL'KEVICH, P.I. [Bial'kevich, P.I.]

Study of the chemical composition of benzene-rich bitumen of  
peat producers and peats of hill deposits. Vestsi AN BSSR. Ser.  
fiz.-tekhn. nav. no.1:47-52 '59. (MIRA 12:6)  
(Bitumen) (Peat)

BEL'KEVICH, P.I.; TSYBUL'KIN, V.M.

Chemical composition of alcohol-benzene bitumen extracted from  
peat-forming plants and upland-type peat deposits. Trudy Inst.  
torfa AN BSSR 7:117-122 '59. (MIRA 14:1)  
(Peat) (Bitumen)

KAGANOVICH, F.L.; BEL'KEVICH, P.I.; RAKOVSKIY, V.Ye.

Composition of peat wax. Report No. 1: Separation of waxes by  
low-temperature stage extraction. Trudy Inst. torfa AN BSSR  
7:123-130 '59. (MIRA 14:1)

(Peat) (Waxes)

KAGANOVICH, F.L.; BEL'KEVICH, P.I.; RAKOVSKIY, V.Ye.

Composition of peat wax. Report No. 2: Composition of the  
saponifiable part of peat wax. Trudy Inst. torfa AN BSSR  
7:131-138 '59. (MIRA 14:1)  
(Peat) (Waxes)

KADACH, M.V.; BELIKOVICH, P.I.; RAKOVSKIY, V.Ye.

Refining of peat wax. Trudy Inst. torfa AN BSSR 7:139-147  
'59. (MIRA 14:1)

(Peat) (Waxes)

BEL'KEVICH, P.I.; CHISTOVA, L.R.

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Ion exchange properties of peat. Report No. 5: Quantitative  
absorption of cations by sulfonated peat. Trudy Inst. torfa  
AN BSSR 7:148-151 '59. (MIRA 14:1)  
(Peat) (Ion exchange)