MUSIEROWICZ, St.

Distr: 4E3d/4E2c(j)

Reaction of dialkoxyoxophosphoranesulfenyl chlorides with enol ethers and esters. J. Michalski and St. Musierowicz (Tech. Univ., Lodz, Poland). *Chem. & Ind.* (London) 1959, 505.—Reactions of dialkoxyoxophosphoranesulfenyl chlorides with enol ethers and esters are shown to give ethers or esters of α-chloroalcohols. $(EtO)_2P(O)SCl$ (I) is treated with CH_2:CHOEt in C_6H_6 below 5° to yield $(EtO)_2P(O)SCH_2CEt(OH)Cl$ (II) (95%), which with water gives $(EtO)_2P(O)SCH_2CHO$ (III) (50%), $b_{0.01}$ 82°, n_D^{20} 1.4708 (semicarbazone m. 160°). Treatment of II with excess EtOH gives $(EtO)_2P(O)SCH_2CH(OEt)_2$ (IV) (75%), $b_{0.05}$ 80°, n_D^{20} 1.4531, degraded by alkali to mercaptoacetaldehyde diethyl acetal, b_{11} 72–3°, n_D^{20} 1.4409 (m.p. and mixed m.p. of 2,4-dinitrophenyl thioether 56°) (Parham, *et al.*, *C.A.* **48**, 4548*d*; Hesse and Jorder, *C.A.* **47**, 9975*h*). Acid hydrolysis of IV yields III (60%). Condensation of Na mercaptoacetal with diethyl phosphorochloridate also yields IV (60%), $b_{0.03}$ 81–2°, n_D^{20} 1.4590. Reaction of I with CH_2:CHOAc gives unstable $(EtO)_2P(O)SCH_2CH(OAc)Cl$ (V) in quant. yield, which is converted at 100° to III (65%), $b_{0.05}$ 83°, n_D^{20} 1.4693, with some AcCl as volatile product. Treatment of V with 1 mole water gives III (58%). I with isopropenyl acetate gives $(EtO)_2P(O)SCH_2COMe$ (VI) (50%), $b_{0.07}$ 82°, n_D^{20} 1.4685 (*p*-nitrophenylhydrazone m. 92–3°), and AcCl. Direct condensation of I with Me_2CO also yields VI (50%). C. A. Pinch

Card 1/1 aht

4
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2

MICHALSKI, Jan; MUSIEROWICZ, Stanislaw

Organophosphorus derivatives of sulfur and selenium. Pt. 13.
Rocz chemii 36 no.11:1655-1659 '62.

1. Department [illegible] Chemistry, Technical University, Lodz.

BEDNAREK, P.; BODALSKI, R.; MICHALSKI, J.; MUSIEROWICZ, S.

Alkyl-and alkenyl- pyridines. Pt. 8. Bul chim PAN 11 no.9: 507-511 '63.

1. Institute of Organic Synthesis, Lodz Branch, Polish Academy of Sciences.

S/122/62/000/004/006/006
D221/D302

AUTHOR: Musifulin, A.G., Engineer

TITLE: On the development of specialization and cooperation (based on the example of machine tools)

PERIODICAL: Vestnik mashinostroyeniya, no. 4, 1962, 78 - 82

TEXT: The author alleges that the machine tool industry of USSR is characterized by greater specialization than the Western countries. Plants like Moskovskiy zavod 'Krasnyy proletariy' (Moscow Factory 'Krasnyy proletariy') claim to be the largest concerns in the world. A comparison of workers in the machine tool trade and the percentage of enterprises in 1954 and 1958 both in USA and USSR is tabulated. Batches of USSR machines attain 1000 units against 50 - 100 in USA. At the same time the number of types handled by each Soviet factory has increased. This is accompanied by the introduction of flow methods of production. These factories ensure 39 % of the total output, which is planned to be increased to 70 - 80 %. The envisaged specialization is estimated to provide an average increased productivity of 30 %. The reduction in manufacturing costs due

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D221/D302

On the development of ...

to large scale specialization is illustrated in tables. However, a point is made of the lag in Soviet specialization as far as components and technology are concerned and this is compared to the large advance in the West. The labor costs of producing arbors for milling machines by specialized and auxiliary shops are tabulated. During 1958-1959 only 15 - 18 % of the value of components for the machine tool industry was made in centralized plants. This is to be increased by 2 - 2.5 times in accordance with the plan for 1965. The further development of specialization in engineering creates favorable conditions for manufacture of polymer components which may replace 10 - 12 % of metallic parts in machine tools. Construction of new, modern factories would be paid back within 1 - 1.5 year. Only 32 % of castings were made by the specialized factories, whereas the remainder was produced by small foundaries, entailing a lower work efficiency. There is a twofold increase of casting requirements planned for 1965, and an increase in the specific weight of deliveries by the cooperation of specialized units is, therefore, of importance. A similar situation exists in the output of stampings and forgings. It is claimed that reorganization of the industry management has ensured a better economical relationship and impro-

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S/122/62/000/004/006/006
D221/D302

On the development of ...

ved the prospects of rational cooperation. Many plants have closed their inefficient small shops and foundries. The cooperative output of the machine tool industry in the period of 1955 - 1960 went up by 12 - 14 %. It is planned to increase it twofold. There are 8 tables.

Card 3/3

MUSIYKO, V.A. [Musiiko, V.O.]; ZAPETSKAYA, I.V. [Zapetska, I.V.]

Serum protein fractions in Brucella infections following roentgen-ray irradiation. Ukr. biokhim. zhur. 36 no.1:48-51 '64. (MIRA 17:12)

1. Department of Biochemistry of the Pirogov Medical Institute, Odessa.

MUSIK, A.

The new UAZ family. Za rul. 21 no.1:16-17 Ja '63.

(MIRA 16:1)

1. Starshiy inzh.-ispytatel' i obshchestvennyy korrespondent zhurnala "Za rulem" na Ul'yanovskom avtozavode.
(Motortrucks)

MUSIKHIN, A.M.

General conditions for the gripping of the metal in rolling. Izv. vys. ucheb. zav.; chern. met. no.3:74-81 '61. (MIRA 14:3)

1. Moskovskiy institut stali.
(Rolling(Metalwork))

S/148/61/000/003/007/015
A161/A133

AUTHORS: Pavlov, I. M., Musikhin, A. M.

TITLE: Investigation of helical tube rolling in three-high reeling mill

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 3, 1961, 91 - 101

TEXT: The existing process investigation data are either obsolete, or they do not elucidate some problems that arose with time. The purpose of the subject investigation was to find some new data and study the dependence of the axial slip, rolling time per 1 meter tube, metal pressure, load on the motor and power consumption on the shell wall reduction on the grip cone, peripheral velocity, feed angle, and height of the roll crest. The metal pressure on the rolls was measured with dynamometers with strain wire gages. Over 700 oscillograms were recorded in rolling tubes of different dimensions and steel grades, apart from mass rolling to determine the effect of various process parameters on the quality of the tubes. The determined interdependences are discussed and illustrated in three graphs. Practical recommendations are made and the determined optimum values are given of the relative shell wall reduction (15 - 25% of the roll crest height), of the peripheral velocity of rolls, feed angle, etc. It is recommended for new mills

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being designed to diminish the gap between the reeling mill mandrel and the internal surface of the shell (or tube) and prevent crumpling of the front shell end by turning the piercing mill through 180° (around the vertical axis) from the presently used position, so as to feed shells into the reeling mill rolls with the rear end first and move in the reeling mill mandrel from the front side. It is claimed that the investigation and the analysis of the results present some interest for production engineers as an aid for more conscious control of the process, and may be utilized for further improvement of the existing rolling mill operation, as well as in designing new rolling units with reeling mills. There are 4 figures and 4 Soviet-bloc references.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: June 1, 1960

S/137/62/000/003/095/...
A006/A101

AUTHOR: Musikhin, A.M.

TITLE: Conditions of axial metal grip on diagonal rolling mills

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 30, abstract 3D170 ("Sb. nauchno-tekhn. tr. N.-i. in-t metallurgii Chelyab. sovnarkho-za", 1961, no. 3, 124 - 131)

TEXT: The investigation performed has shown that the grip angle of metal in the axial direction is, both in diagonal and in longitudinal rolling, equal to the angle between the normal to the roll surface at the contact point of the metal and the plane perpendicular to the rolling axis. The grip angle of the metal is lesser in diagonal rolling than the grip angle which corresponds to the same parameters of longitudinal rolling. The grip angle in diagonal rolling, analogous to longitudinal rolling, increases with a higher metal reduction and a greater diameter of the rolled blank at constant relative reduction. The grip angle in diagonal rolling a) does not depend on the roll diameter, b) increases slightly with a greater angle of supplying and flattening of the rolls, and increases considerably at an increasing angle between the resultant of the grip cone of the

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S/137/62/000/003/095/191
A006/A101

Conditions of axial metal grip on ....

roll and the rolling axis. In all cases, except the change of the supply angle, the slip ratio increases with a greater grip angle of the rolls.

K. Ursova

[Abstracter's note: Complete translation]

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S/137/62/000/004/064/201
A052/A101

AUTHOR: Musikhin, A. M.

TITLE: Calibration of rolls of a three-high unrolling mill for skewed pipe rolling

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 18, abstract 4D93 ("Sb. nauchno-tekhn. tr. N.-i. in-t metallurgii Chelyab. sovnarkhoza", no. 3, 1961 132-137)

TEXT: A short description is given of the trends in changing the calibration of rolls of the unrolling mill from the moment of putting in operation the first home pipe rolling installation with three-high mills to the present time.

K. Ursova

[Abstracter's note: Complete translation]

Card 1/1

BOGDANOV, N.I.; MUSIK, V.T.; SMKURZHEVSKIY, L.G.

Assembling precast reinforced conrete elements in constructing a tire factory. Prom. stroi. 39 no.5:13-16 '61. (MIRA 14:7)
(Dnepropetrovsk—Rubber industry)
(Precast concrete construction)

MUSIKHIN, A.M., kand. tekhn. nauk; PAVLOV, I.M.; OSADCHIY, V.Ya., kand. tekhn. nauk

Roll grooving for three-high reeling mills of diagonal rolling. Sbor. Inst. stali i splav. no.40:327-329 '62. (MIRA 16:1)

1. Chlen-korrespondent AN SSSR (for Pavlov).
(Rolls(Iron mills)) (Pipe mills)

PAVLOV, I. M.; MUSIKHIN, A. M., kand. tekhn. nauk; OSADCHIY, V. Ya.

Metal pressure on the rolls of a three-high reeling mill of diagonal rolling. Sbor. Inst. stali i splav. no.40:335-337 '62. (MIRA 16:1)

(Pipe mills) (Pressure)

BERMAN, Yu.A., inzh.; MUSIKHIN, K.M., inzh.

Drying litter peat in a pneumatic tube gas drier. Torf.prom. 36 no.8:5-8 '59. (MIRA 13:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut torfyanoy promyshlennosti (for Berman). 2. Lengiprotorf (for Musikhin). (Peat--Drying)

MOROZOV, V.P., inzh.; MIKHAYLOVA, M.Z., inzh.; MUSIKHIN, K.M., inzh.

Results of testing molding and forming machines used in the manufacture of peat insulating boards. Torf.prom. 37 no.4:25-27 '60. (MIRA 13:7)

1. Lengiprotorf.

(Peat machinery--Testing)
(Insulating materials)

MUSIKHIN, L.S.

Comparative effects of ionizing radiation and benzene on bone marrow hemopoiesis in rabbits [with summary in English, p.62]. Probl.gemat. i perel.krovi 4 no.2:32-34 F '59. (MIRA 12:2)

1. Iz kafedry fakul'tetskoy terapii No.2 (zav.- prof. A.A. Nechayev) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

(BONE MARROW, physiol.
hemopoietic funct., eff. of radiatons & benzene, comparison in rabbits (Rus))
(RADIATIONS, effects,
on bone marrow hemopoietic funct. in rabbits, comparison with benzene (Rus))
(BENZENE, effects,
on bone marrow hemopoietic funct. in rabbits, comparison with radiations (Rus))

MUSIKHIN, L.S.

Cellular composition of peripheral blood in healthy rabbits. Lab.delo 9 no.3:54-57 Mr '63. (MIRA 16:4)

1. Kafedra voyenno-morskoy i gospital'noy terapii (nachal'nik-prof. Z.M.Volynskiy) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.
(BLOOD CELLS)

YESIN, O.A., (Sverdlovsk); LEPINSKIKH, B.M., (Sverdlovsk); MUSIKHIN, V.I., (Sverdlovsk).

Electromotive force technique in the determination of the activity of ferrous oxide in molten slags. Izv. AN SSSR Otd.tekh.nauk no.12:120-127 D '54. (MLRA 8:5)

1. Ural'skiy filial Akademii nauk SSSR, Sverdlovsk.
(Slag) (Iron oxides)

E. M. f. Forces were measured at 1420-70°with an Fe and a MgO electrode in electrolytes composed of $CaO-MgO-SiO_2-FeO-Fe_2O_3$ of varying compm. The FeO activity and the variations of isobaric potentials with diln. were calcd. from the e.m.f. A comparison of the values found with the data found in literature shows a satisfactory agreement, which confirms the previously found energetic nonequivalence of the slag ions and the micrononuniformity of the melts. The cell for the measurement of the e.m.f. and the method for its use are described.

MUSIKHIN, V.I., YESIN, O.A.

"EMF and Polarization in Titanium Slags,"
lecture given at the Fourth Conference on Steelmaking, A.A. Baikov Institute of Metallurgy, Moscow, July 1-6, 1957

MUSICHIN, V. I., ESIN, O. A. and LEPINSKIKH, B. M.
Sverdlovsk Polytechnic Institute.

"Influence of the Vacuum Pig-Iron Treatment on the Activity of Dissolved Silicon."

paper presented at Second Symposium on the Application of Vacuum Metallurgy.

MUSIKHIN, V.I.

18(0); 5(2) PHASE I BOOK EXPLOITATION SOV/3100

Akademiya nauk SSSR. Ural'skiy filial. Institut metallurgii

Trudy, Vyp. 4 (Transactions of the Institute of Metallurgy, Ural Branch, Academy of Sciences, USSR; No. 4) Sverdlovsk, 1958. 157 p. Errata slip inserted. 1,000 copies printed.

Editorial Board: N.A. Vatolin (Resp. Ed.), Candidate of Technical Sciences; A.S. Mikulinskiy, Professor, Doctor; V.Ya. Miller, Professor; P.A. Pazdnikov, Candidate of Technical Sciences; and S.S. Lisnyak, Candidate of Technical Sciences; Ed.: M.S. Baranovskaya.

PURPOSE: This book is intended for ferrous and nonferrous metallurgists.

COVERAGE: The book presents results of investigations of theoretical problems in metallurgy and chemistry and gives information on the efficient use of raw materials in ferrous and nonferrous metallurgy and on the development of new production processes in the metallurgical and chemical industries. The articles were written by junior members and experienced specialists of the scientific staff of the Institutes of Metallurgy, Chemistry, and Electrochemistry, Ural Branch, Academy of Sciences, USSR.

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No personalities are mentioned. References follow each article.

TABLE OF CONTENTS:

Transactions of the Institute of (Cont.) SOV/3100

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AVAILABLE: Library of Congress

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VK/jb
1-27-60

MUSIKHIN, V.I.; YESIN, O.A.; LEPINSKIKH, B.M.

Influence of Mn, P and Si on the activity of aluminum in liquid cast iron. Zhur. prikl. khim. v. 31 no.5:689-693 My '58. (MIRA 11:6)

1. Institut metallurgii Ural'skogo filiala AN SSSR.
(Iron-aluminum alloys)

AUTHORS: Musikhin, V. I., Yesin, O. A. SOV/76-32-6-25/45

TITLE: Investigation of the Properties of Molten Titanates by Means of the EMF-Method (Izucheniye svoystv rasplavlennykh titanatov metodom elektrodviznushchikh sil)

PERIODICAL: Znurnal fizicheskoy khimii, 1958, Vol. 32, Nr 6, pp.1372-1378 (USSR)

ABSTRACT: In the present paper the systems Na_2O-TiO_2 and MnO-TiO_2 are investigated by means of the EMF method, using cells without ion transfer. The experiments were carried out at 1200° and 1470°C, and 2 types of cells were used, their diagrams as well as the working technique employed being given. It was observed that the EMF varies, which fact was explained by the oxidation of Mn^{+2} to Mn^{+3}; the experiments were correspondingly carried out in a suitable way. The measurements were carried out with a high-resistance potentiometer of the type PPTV-1; the data obtained are given together with those of the chemical analysis and the calculated values of the activity and of the activity coefficient in a table. From the results of the experiments may be seen that there is quite a deviation from ideal solutions; it is assumed

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Investigation of the Properties of Molten Titanates by Means of the EM--
-Method

that ions of the type TiO_4^{-4}, TiO_3^{-2} and $Ti_2O_5^{-2}$ exist. Already Bethe (Ref 4) proposed a method of calculation which later on was extended to compounds of the type AB_3 by Peierls (Ref 5), while Kirkwood (Ref 6) calculated the free energy in another way, which method was then used by I. M. Lifshits (Ref 7) for any concentration. Using the equation of the last mentioned author the authors of this paper found out that according to B. N. Finkel'shteyn (Ref 8) a formula for the calculation of small mixing energies may be derived, while according to the equation by A. A. Zhukhovitskiy, B. N. Finkel'shteyn and I. S. Kulikov (Ref 9) another kind of derivations exists. Later on I. S. Kulikov (Ref 10) elaborated an equation for the system $FeO-SiO_2$, while V. A. Kozheurov (Ref 12) proceeded from the quasichemical method for determining the activity of the components in binary solutions. As the equations refer to the formation of a compound of the type AB the system Fe-Si was investigated, with data obtained by Schneider and Mayer (Ref 17) being compared. It is assumed that a great decrease of the coordination number z takes place in melting FeSi, and that on the other

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SOV/[illegible]-6-4-

...tigation of the Properties of Molten Titanates by Means of the ...-Method

hand quasimolecules and ferrosilicon form. There are 4 figures, 3 tables, and 19 references, 10 of which are Soviet.

AUTHOR: Ural'skiy filial Akademii nauk SSSR, Institut metallurgii, Sverdlovsk
(Ural Branch AS USSR, Sverdlovsk, Institute of Metallurgy)

SUBMITTED: February 22, 1957

1. Titanates (Liquid)--Properties 2. Titanates (Liquid)--Chemical analysis 3. Potentiometers--Applications

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SOV/76-32-8-24/37

AUTHORS: Lepinskikh, B. M., Yesin, O. A., Musikhin, V. I.

TITLE: The Anisotropy of the Electroconductivity in a Sodium Silicate Current (Anizotropiya elektroprovodnosti v struye silikata natriya)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 8, pp. 1874-1877 (USSR)

ABSTRACT: The present investigations are intended to solve the problem whether in a flow of silicate an orientation of the anions takes place having a different resistance along and across the direction of flow. The experiments were carried out by means of melts of the system Na_2O-SiO_2 in an apparatus the diagram and the description of which are given. The flow rate was not always the same, it never surpassed, however, a Reynol'd number of 20, with the transition from an accelerated flow to a normal flow taking place according to Gagen-Puazeyl in the initial section of 1 cm length. The representation of the electric scheme as well as a description of the operation method are given. The results obtained show a clear anisotropy of the

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The Anisotropy of the Electroconductivity in a Sodium Silicate Current

electroconductivity, with a decrease of the resistance being observed in the direction along the flow, and an increase of it in the cross direction. This is explained by a complex structure of the silicon oxide anion, and it is assumed that an orientation of chain— or lamella-type silicon oxide anions in the direction of flow is present. It was found that the observations made agree with those by Bockris and Lowe (Bokris and Love) (Ref 12), and that they contradict those by Baak (Bok) (Ref 13). In the explanations of the results obtained, referring to the periodicity of the above anisotropy by the change of the composition of the silicate the authors give data obtained by N. V. Belov (Ref 15). There are 1 figure and 15 references, 6 of which are Soviet.

ASSOCIATION: Ural'skiy filial Akademii nauk SSSR, Institut metallurgii Sverdlovsk (Ural Branch of the AS USSR, Institute of Metallurgy, Sverdlovsk)

SUBMITTED : March 25, 1957

) 18

AUTHORS: Musikhin, V. I., Yesin, O. A.

SOV/76-32-10-26/39

TITLE: Cathodic Polarization in Titanium-Containing Slags (Katodnaya polyarizatsiya v titanosoderzhashchikh shlakakh)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 10, pp 2410-2414 (USSR)

ABSTRACT: The phenomenon of cathodic polarization in liquid slags already observed (Refs 2,3,4) is in the present case investigated with melts of $CaO-MgO-Al_2O_3-B_2O_3$ (with small TiO_2 additions). The construction of the electrolyzer according to Piontelli (Ref 7) turned out to be insufficient, and the direct method was not employed because the Lugin-Gaber capillaries are difficult to produce. The cathode potential was measured according to the commutator method (Ref 2) with an electrolyzer being used; a diagram of the electrolyzer is given. The determinations were carried out at 1400° with Cu - Ti, Fe - P - Ti and W-cathodes. A slow diffusion of the Ti^{4+}-ions was observed. The absence of abrupt polarization drops also points to a diffusion character. On the cathode of the iron alloy with 10% and 2-3% Ti, where

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the depolarization is apparently low an overcharging of Ti^{4+} to Ti^{3+} mainly takes place. Reduction processes of Ti^{3+} to Ti^{2+}, Ti^{4+} to Ti^{2+} and Ti^{4+} to Ti take place at the same time, which the coefficient n>1 tends to show. On the solid tungsten cathode where practically no depolarization takes place only an overcharge of the Ti-ions may be found. There are 3 figures, 1 table, and 11 references, 5 of which are Soviet.

ASSOCIATION: Institut metallurgii Ural'skogo filiala AN SSSR, Sverdlovsk (Institute of Metallurgy of the Ural Branch, AS USSR, Sverdlovsk)

SUBMITTED: May 21, 1957

MUSIKHIN, B.I.

LEVINSKIY, B.M.; YESIN, O.A.; MUSIKHIN, B.I.; VATOLIN, N.A.

Elektrokhimicheskoye legirovaniye stali vanadiem.

report submitted for the 5th Physical Chemical Conference on Steel Production.

Moscow _ 30 JUN 1958

67277

SOV/180-59-4-8/48

18.8100

AUTHORS: Yesin, O.A., Lepinskikh, B.M. and Musikhin, V.I. (Sverdlovsk)

TITLE: Study of the Thermodynamic Properties of the Lead Oxide-Vanadium Pentoxide, Lead Oxide-Silica and Lead Oxide-Vanadium Pentoxide-Silica Systems by the Method of Electromotive Force

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 4, p 47-51 (USSR)

ABSTRACT: Measurements of the emf E of a cell were used for determining the standard changes of potential $\Delta Z^{\bullet}$, of entropy $\Delta S^{\bullet}$ and of enthalpy $\Delta H^{\bullet}$. By introducing a second oxide in the electrolyte, the activity of the components and the deviation of the thermodynamic functions from ideal values can be calculated. The slag systems used were PbO - SiO_2, PbO - V_2O_5 and Pb - SiO_2 - V_2O_5 and the compositions are given in Table 1. Fig 1 shows the apparatus used, consisting of a resistance heater (1), a crucible (2), liquid lead (3), oxide mixture (4) and electrodes of platinum (5) and platinum-oxygen (7). The results for E for the PbO-SiO_2 system and the activity of PbO are given in Table 2. Fig 2 compares the results

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Study of the Thermodynamic Properties of the Lead Oxide-Vanadium Pentoxide, Lead Oxide-Silica and Lead Oxide-Vanadium Pentoxide Silica Systems by the Method of Electromotive Force

for the activity of PbO with the previous results by other workers. The present results are similar to those of Richardson and Webb (Ref 7). The negative deviations from ideal solution indicate the formation of Pb-O-Si, the stability of which increases with decreasing temperature. The thermodynamic functions for the $PbO-SiO_2$ system are given in Table 3 and Fig 3. The results confirm the formation of Pb-O-Si, with a decrease in potential and entropy and evolution of heat. The results of studies of the $PbO-V_2O_5$ system are given in Fig 2. This system shows greater negative deviations from the ideal state. The thermodynamic functions are given in Table 3 and Fig 3. These confirm the formation of Pb-O-V. Results for the system $PbO-SiO_2-V_2O_5$ are given in Table 4. Negative deviations are again observed. Results confirm that the bond in Pb-O-V is stronger than that in Pb-O-Si. The thermodynamic characteristics of PbO in the ternary system are given in Table 5. There are 3 figures 5 tables and 9 references, 5 of which are Soviet and 4 English.

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Study of the Thermodynamic Properties of the Lead Oxide-Vanadium Pentoxide, Lead Oxide-Silica and Lead Oxide-Vanadium Pentoxide-Silica Systems by the Method of Electromotive Force SOV/180-59-4-8/48

ASSOCIATION: Institut metallurgii UFAN (Metallurgical Institute UFAN)

SUBMITTED: February 20, 1959

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SOV/20-126-5-34/69

5(4)

AUTHORS: Musikhin, V. I., Yesin, O. A., Lepinskikh, B. M.

TITLE: Cathodic Polarization During the Deposition of Vanadium From Melted Oxides (Katodnaya polyarizatsiya pri osazhdenii vanadiya iz rasplavlennykh okislov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 5, pp 1037-1040 (USSR)

ABSTRACT: S. A. Sakharuk and G. M. Vaynshteyn (Ref 1) showed the possibility of an electrolytic deposition of V from melted calcium aluminate, containing V_2O_5, on a liquid iron cathode. The kinetics of this process is investigated. Figure 1 shows the polarization curves on the Fe,V-cathode for two Ca-aluminate melts (with and without SiO_2) to which different amounts of V_2O_5 (up to 3%) were added. The critical currents are proportional to the V_2O_5-content of the melts. Considering that the diffusion coefficients in liquid iron are much higher than in the oxide melts ($i'_n \gg i_n$), the following may be derived from the equation for the polarization of the concentration: $-\eta \cong \frac{RT}{nF} \ln(1 - \frac{i}{i_n})$ (2).

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Cathodic Polarization During the Deposition of Vanadium From Melted Oxides

the diffusion in the oxide melt. These processes take place at more positive potentials than the deposition of Si. The presence of iron oxides reduces the current yield of V as the cathodic reduction of Fe^{3+} and Fe^{2+} takes place more easily. There are 3 figures and 8 references, 6 of which are Soviet.

ASSOCIATION: Institut metallurgii Ural'skogo filiala Akademii nauk SSSR (Institute of Metallurgy of the Urals Branch of the Academy of Sciences, USSR)

PRESENTED: March 3, 1959, by A. N. Frumkin, Academician

SUBMITTED: March 3, 1959

MUSIKHIN, V.I. Cand Tech Sci - - (dissS) "Study of the kinetics of the electrolytic reduction of elements from molten salts," Sverdlovsk, 1960, 17 pp (Ural Pol. Technical Institute im S. M. Kirov) (KL, 34-60, 122)

PHASE I BOOK EXPLOITATION SOV/4548

Akademiya nauk SSSR. Komissiya po fiziko-khimicheskim osnovam proizvodstva stali

Primeneniye vakuuma v metallurgii (Use of Vacuum in Metallurgy) Moscow, Izd-vo AN SSSR, 1960. 334 p. Errata slip inserted. 4,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A.A. Baykova. Komissiya po fiziko-khimicheskim osnovam proizvodstva stali.

Resp. Ed.: A.M. Samarin, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: G.M. Makovskiy; Tech. Ed.: S.G. Markovich.

PURPOSE: This collection of articles is intended for technical personnel interested in recent studies and developments of vacuum steelmaking practice and equipment.

COVERAGE: The book contains information on steel melting in vacuum induction furnaces, and vacuum arc furnaces, reduction processes in vacuum, and degassing of steel and alloys. The functioning of apparatus and equipment, especially vacuum furnaces and vacuum booster pumps is also analyzed. Personalities are mentioned in connection with some of the articles and will appear in the Table of Contents. Three articles have been translated from English. Some of the

PART IV. DEGASSING OF STEEL AND ALLOYS

MUSIKHIN, V.I.

45

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135720010-1"

PHASE I BOOK EXPLOITATION SOV/...

Vsesoyuznoye soveshchaniye po stekloobraznomu sostoyaniyu. 3d, Leningrad, 1959.

Steklovobraznoye sostoyaniye; trudy Tret'yego ... soveshchaniya Leningrad, 16-20 noyabrya 1959 (Vitreous State; Transactions of the Third All-Union Conference on the Vitreous State, held in Leningrad November 16-20, 1959) Moscow, Izd-vo AN SSSR, 1960. 534 p. Errata slip inserted. 3,000 copies printed. (Series: Its: Trudy)

Sponsoring Agencies: Institut khimii silikatov Akademii nauk SSSR. Vsesoyuznoye khimicheskoye obshchestvo imeni D.I. Mendeleyeva and Gosudarstvennyy ordena Lenina opticheskiy institut imeni S.I. Vavilova.

Editorial Board: A.I. Avgustinik, V.P. Barzakovskiy, M.A. Bezborodov, O.K. Botvinkin, V.V. Vargin, A.G. Vlasov, K.S. Yevstrop'yev, A.A. Lebedev, M.A. Matveyev, V.S. Molchanov, R.L. Myuller, Ye.A. Poray-Koshits, Chairman, N.A. Toropov, V.A. Florinskaya, A.K. Yakhkind; Ed. of Publishing House: I.V. Suvorov; Tech. Ed.: V.T. Bochever.

PURPOSE: This book is intended for researchers in the science and technology of glasses.

COVERAGE: The book contains the reports and discussions of the Third All-Union Conference on the Vitreous State, held in Leningrad on November 16-19, 1959. They deal with the methods and results of studying the structure of glasses, the relation between the structure and properties of glasses, the nature of the chemical bond and glass structure, and the crystallochemistry of glass. Fused silica, mechanism of vitrification, optical properties and glass structure, and the electrical properties of glasses are also discussed. A number of the reports deal with the dependence of glass properties on composition, the tinting of glasses and radiation effects, and mechanical, technical, and chemical properties of glasses. Other papers treat glass semiconductors and soda borosilicate glasses. The Conference was attended by more than 500 delegates from Soviet and East German scientific organizations. Among the participants in the discussions were N.V. Solomin, Ye. V. Kuvshinskiy, Yu.A. Gentev, V.P. Pryanishnikov, Yu. Ya. Gotlib, O.P. Mchedlov-Petrosyan, G.P. Mikhaylov, S.M. Petrov, A.N. Lazarev, D.I. Levin, A.V. Shatilov, N.T. Ploshchinskiy, A.Yu. Kuznetsov, E.V. Degtyareva, G.V. Byurganovskaya, A.A. Kalenov, M.M. Skornyakov, P.Yu. Bokin, E.K. Keller, Ya.A. Kuznetsov, V.F. Pozdnev, R.S. Shevelevich, Z.G. Pinsker, and O.S. Molchanova. The final session of the Conference was addressed by Professor I.I. Kitaygorodskiy, Honored Scientist and Engineer, Doctor of Technical Sciences. The following institutes were cited for their contribution to the development of glass science and technology: Gosudarstvennyy opticheskiy institut (State Optical Institute), Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry, AS USSR), Fizicheskiy institut AN SSSR (Physics Institute AS USSR), Fiziko-tekhnicheskiy institut AN SSSR (Physicotechnical Institute AS USSR), Institut fiziki AN BSSR, Minsk (Institute of Physics, Academy of Sciences, Belorusskaya SSR, Minsk), Laboratory of Physical Chemistry of Silicates of the Institut obshchey i neorganicheskoy khimii AN BSSR, Minsk (Institute of General and Inorganic Chemistry, Academy of Sciences, Belorusskaya SSR, Minsk), Institut vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High Molecular Compounds, AS USSR), Gosudarstvennyy institut stekla (State Institute for Glass), Gosudarstvennyy institut steklovolokna (State Institute for Glass Fibers), Gosudarstvennyy institut elektrotekhnicheskogo stekla (State Institute for Electrical Glass), Sibirskiy fiziko-technicheskiy institut, Tomsk (Siberian Physicotechnical Institute, Tomsk), Leningradskiy gosudarstvennyy universitet (Leningrad State University), Moskovskiy khimiko-tekhnologicheskiy institut (Moscow Institute of Chemical Technology), Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet), Belorusskiy politekhnicheskiy institut Minsk (Belorussian Polytechnic Institute, Minsk), Novocherkasskiy politekhnicheskiy institut (Novocherkassk Polytechnic Institute), and Sverdlovskiy politekhnicheskiy institut (Sverdlovsk Polytechnic Institute). The Conference was sponsored by the Institute of Silicate Chemistry AS USSR (Acting Director ... Gotlib), the Vsesoyuznoye khimicheskoye obshchestvo imeni D.I. Mendeleyeva (All-Union Chemical Society imeni D.I. Mendeleyev), and the Gosudarstvennyy ordena Lenina opticheskiy institut imeni S.I. Vavilova (State Order of Lenin Optical Institute imeni S.I. Vavilov). The ... of the Conference include ... to organize a Center for the purpose of coordinating the research on glass, to publish a new periodical ... the title "Fizika i khimiya stekla" (Physics and Chemistry of Glass), ... the International Committee on Glass. The Conference thanks A.A. Lebedev, Academician, President, and Chairman of the ... Committee, Ye.A. Poray-Koshits, Doctor of Physical and Mathematical Sciences, Member of the Organizational Committee, and R.L. Myuller, Doctor of Chemical Sciences, Member of the Organizational Committee. The editorial board ... S.M. Brekhovskikh, M.V. Vol'kenshteyn, ..., V.A. Ioffe, and N.T. ... References ... individual reports.

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Card [illegible]

Musikhin, V. L.

AUTHOR: Syritskaya, Z. M.

S/072/60/000/03/021/023
B003/B008

TITLE: 3rd All-Union Conference on the Vitreous State

PERIODICAL: Steklo i keramika, 1960, Nr 3, pp 43-46 (USSR)

ABSTRACT: The 3rd All-Union Conference on the Vitreous State was held in Leningrad at the end of 1959. It was organised by the Institut khimii silikatov AN SSSR (Institute of the Chemistry of Silicates AS USSR), Vsesoyuznoye khimicheskoye obshchestvo imeni D. I. Mendeleyeva (All-Union Chemical Society imeni D. I. Mendeleyev) and Gosudarstvennyy opticheskiy institut imeni S. I. Vavilova (State Optical Institute imeni S. I. Vavilov). More than 100 reports on the structure of glass, investigation methods of the vitreous state, the mechanism of vitrification and physicochemical and technical properties of glasses were delivered. The Conference was opened by Academician A. A. Lebedev. Fundamental investigation methods and results concerning the glass structure were discussed at the 1st meeting. Academician A. A. Lebedev reported on possibilities and results of optical methods, Ye. A. Poray-Koshits on the diffraction method, K. S. Yevstrop'yev on general problems concerning structure and properties of glasses. The 2nd meeting produced 5 reports on the problem of the vitreous state: R. L. Myuller, "Chemical Peculiarities of Polymeric Vitreous Materials and the Nature of Vitrification"; N. A. Goryunova and B. T. Kolomiyets, "On the Problems of Conformities of the Vitrification"; V. V. Tarasov, "Glass as a Polymer"; A. N. Douval'ter, "Theory of Glass Structure"; A. G. Vlasov, "Natural Oscillations of the Glass Lattice". The 3rd meeting produced 9 reports on investigation results of silicate melts and on problems of the mechanism of vitrification: A. I. Avgustinik, "On the Problem of the Formation of the Crystalline Phase From the Silicate Melt"; O. K. Botvinkin, "Process of Vitrification and the Structure of Glass"; B. M. Leninskikh, O. A. Yesin and V. L. Musikhin, "On the Structure of Melts"; I. T. Sryvalin and O. A. Yesin, "Thermodynamic Properties of the Silicate Systems $FeO - CaO - SiO_2$ and $CaO - Al_2O_3 - SiO_2$"; G. M. Bartenev, "Mechanical and Structural Vitrification"; M. V. Vol'kenshteyn, "Mechanism of Vitrification". At the 4th meeting, 13 reports dealt with problems of the glass structure and optical investigation methods: V. A. Florinskaya, "Infrared Reflection Spectra of Sodium Silicate Glasses and Their Relations to the Structure"; Ya. S. Bobovich and T. P. Tulub, "Smekal-Raman Dispersion of Light and the Structure of Some Silicate Glasses"; V. A. Kolesova, "Investigation of the Vibrational Spectra of Aluminosilicate Glasses"; N. N. Sobolev reported on the work of the Fizicheskiy Institut AN SSSR (Institute of Physics AS USSR) with

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glasses from one component, with the help of infrared spectrophotometry and the Smekal-Raman dispersion; T. A. Sidorov reported on the molecular structure and the properties of the crystalline quartz; S. N. Brekhovskikh and V. P. Cheremisinov reported on structural investigations of lead- and bismuthborate glasses with the aid of infrared spectroscopy; A. G. Vlasov, "The Quantitative Relation of the Orderly and Irregular Phase in Glass"; G. O. Bagdyk'yants and A. G. Alekseyev, "Electronographic Investigation of the Structure of Glasses"; N. A. Voyshvillo, "On the Structure of a Sodium-boron-silicate Glass Submitted to Enduring Thermal Treatment"; N. S. Andreyev, V. I. Aver'yanov, N. A. Voyshvillo, "Structural Interpretation of the Anormal Dispersion of the Visible Light in Sodium-boron-silicate Glasses". At the 5th meeting, 9 reports dealt with the investigation results of sodium-boron-silicate glasses. A. A. Appen and Gan' Fu-Si, "Boron and Alumoboron Anomaly of the Properties of Silicate Glasses"; Ye. I. Galant, "On the Coordination Numbers of Aluminum and Boron in Some Glasses"; S. P. Zhdanov reported on structural changes in boron-silicate glasses; Ye. A. Poray-Koshits and S. P. Zhdanov reported on some controversial problems concerning the structure of boron-silicate glasses and their porous products; Ye. A. Poray-Koshits and N. S. Andreyev, "Submicroscopic Inhomogeneities in the Structure of Complex Glasses". The 15 reports at

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(23)

S/081/62/000/008/033/057
B156/B101

AUTHORS: Lepinskikh, B. M., Yesin, O. A., Musikhin, V. I., Vatolin, N. A.

TITLE: The electrochemical alloying of metal with vanadium

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 8, 1962, 372, abstract 8K198 (Sb. "Fiz.-khim. osnovy proiz-va stali". M., AN SSSR, 1961, 238-241)

TEXT: The electrochemical extraction of V from dumped or conversion blast furnace slags containing up to 20% V_2O_5 and up to 40% FeO is described. The cathodic current yield of V in relation to D_c, the furnace atmosphere, the composition of the slag and metal and the temperature is investigated. In oxidizing atmospheres the cathodic current is much lower than in reducing atmospheres, since in the first case the V is in the form of V_2O_5. Variation between 1 and 2.5 a/cm^2 in D_c may be accompanied by a possible variation between 5 and 25% in the initial V content. The metal bath of the furnace can be used as the cathode. [Abstracter's note: Complete translation.]

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S/076/61/035/012/003/008
B101/B138

AUTHORS: Musikhin, V. I., Yesin, O. A., and Lepinskikh, B. M.

TITLE: Use of solid electrolytes in emf measurements

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 12, 1961, 2710 - 2712

TEXT: Slags used as electrolytes for the examination of melts in ferrous metallurgy by emf measurements have the drawback that they react with the cell walls making the measured emf values unstable. In a previous study (Zh. prikl. khimii, 31, 689, 1958), the authors obtained well reproducible emf values by using a mixture of Al_2O_3 with 5% refractory clay as electrolyte: Al Al_2O_3 + clay Fe, C_{sat}, Al (2). In the present paper, the authors checked data obtained with this element and compared them with those obtained with a liquid slag of 40% CaO, 40% Al_2O_3, 15% B_2O_3, and 5% MgO. Results are given in the table:

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Use of solid electrolytes...

Emf of chain (2) at 1250°C

Liquid electrolytes			Solid electrolytes		
N_{Al}	E, mv	a_{Al}	N_{Al}	E, mv	a_{Al}
0.0036	304	0.0009	0.0036	320	0.0006
0.025	180	0.0159	0.0255	182	0.0152
0.067	127	0.0536	0.0865	120	0.0630

The almost identical values for solid and liquid electrolytes allow the calculation of emf from the equation $e = 0.1 \log(1/a_{Al})$ (4). The emf values obtained with solid electrolytes are of high stability. There are 1 figure, 1 table, and 11 references: 9 Soviet and 2 non-Soviet

ASSOCIATION: Institut metallurgii Ural'skogo filiala AN SSSR (Institute of Metallurgy of the Ural Branch AS USSR)

Card 2/[illegible]

S/020/61/136/002/029/034
B004/B056

AUTHORS: Musikhin, V. I. and Yesin, O. A.

TITLE: The Diffusion Coefficients of Ions in Molten Slags

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 2, pp. 388-390

TEXT: The authors deal with the behavior of slags in electrolysis. In the present paper, they report on the determination of the diffusion coefficients of ions in molten aluminate slags (45% CaO, 47% Al_2O_3, 6% MgO, 2% B_2O_3), to which 2% Fe, Co, Si, Nb, V, Ti, and Zr were added and in silicate slags (40% CaO, 40% SiO_2, 20% Al_2O_3) with additions of Ni, Fe, V, Nb. Electrolyzer and electrodes were described in Ref. 6. Molten copper was used as cathode. Temperature was 1350-1550°C, the current density, 0.13-0.40 a/cm^2. Determination of the diffusion coefficient D was based upon the cathodic deposition being accompanied by concentration polarization. With a current density, i, being greater than the

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limiting current density, the concentration C_o of the substance, which is reduced, decreases, and vanishes after a certain time t_o. This may be found with an oscilloscope. D is calculated from t_o, C_o, and i: $D = 4i^2 t_o / \pi C_o^2 n^2 F^2$ (1), where n is the number of electrons in the elementary event of discharge. The change in the electrode potential was recorded by a loop oscilloscope, amplification being carried out by 6Н9 (6N9) and 6Г7 (6G7) tubes. Results are given in Fig. 1 as $\log D = f(1/T)$. In each slag, two groups of ions could be distinguished. The modifiers Fe, Co, Ni (first group), and also Ca (examined by other methods - Refs. 8-10) showed higher values of D than the net-forming elements of the second group: Si, Nb, V, Ti, Zr. The following holds: $D = D^o \exp(-E/RT)$ (2). The diffusion coefficients D_I of aluminate slag are greater than D_{II} of silicate slag. D^o was found for the first and second ion groups in aluminate slag: $D_{I1} = 4.85$, $D_{I2} = 0.49$; in silicate slag: $D_{II1} = 0.23$, $D_{II2} = 0.014$. According to the theory of the absolute reaction rate, $D^o = (e\lambda^2 kT/h)\exp(\Delta S^*/R)$ (3), where λ is the distance

between neighboring equilibria of the diffusion particle; h is Planck's constant; $\Delta S^{\neq}$ is the activation entropy. From $\lambda_{i,j}\exp(\Delta S^{\neq}_{ij}/2R) = \overline{\pi}_{ij}$ the following is calculated: $\overline{\pi}_{I1} = 22.2$ A, $\overline{\pi}_{I2} = 7.0$ A; $\overline{\pi}_{II1} = 4.8$ A; $\overline{\pi}_{II2} = 1.2$ A. The increased values obtained for I are explained by greater activation entropy ($\Delta S^{\neq}_{I} > S^{\neq}_{II}$). The difference between $\overline{\pi}_{iI}$ and $\overline{\pi}_{iII}$ is explained by different motions of the cations. The net-forming cations move together with the large oxygen ions (Ref. 6). The diffusion of these cations depends on that of the small modifier ions and occupy only vacancies. Their transfer is therefore small (0.6 - 0.7 A) compared to the transfer of modifier ions from one equilibrium point to another (2.7 - 3.5 A). This explains the low values of D^{o}_{2} compared to D^{o}_{1}. There are 1 figure, 1 table, and 14 references: 9 Soviet, 2 US, 2 British, and 1 German.

ASSOCIATION: Institut metallurgii Ural'skogo filiala Akademii nauk SSSR (Institute of Metallurgy of the Ural Branch of the Academy of Sciences USSR)

The Diffusion Coefficients of Ions in Molten Slags

S/020/61/136/002/029/034
B004/B056

PRESENTED: July 20, 1960, by A. N. Frumkin, Academician

SUBMITTED: July 9, 1960

Legend to Fig. 1: 1: Fe, 2: Co, 3: Ni, 4: Si, 5: V, 6: Ti, 7: Zr, 8: Nb

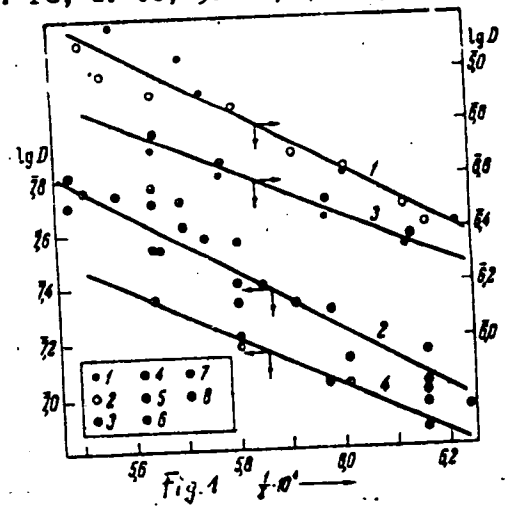

Fig. 1

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MUSIKHIN, V.I.; LEPINSKIKH, B.M.

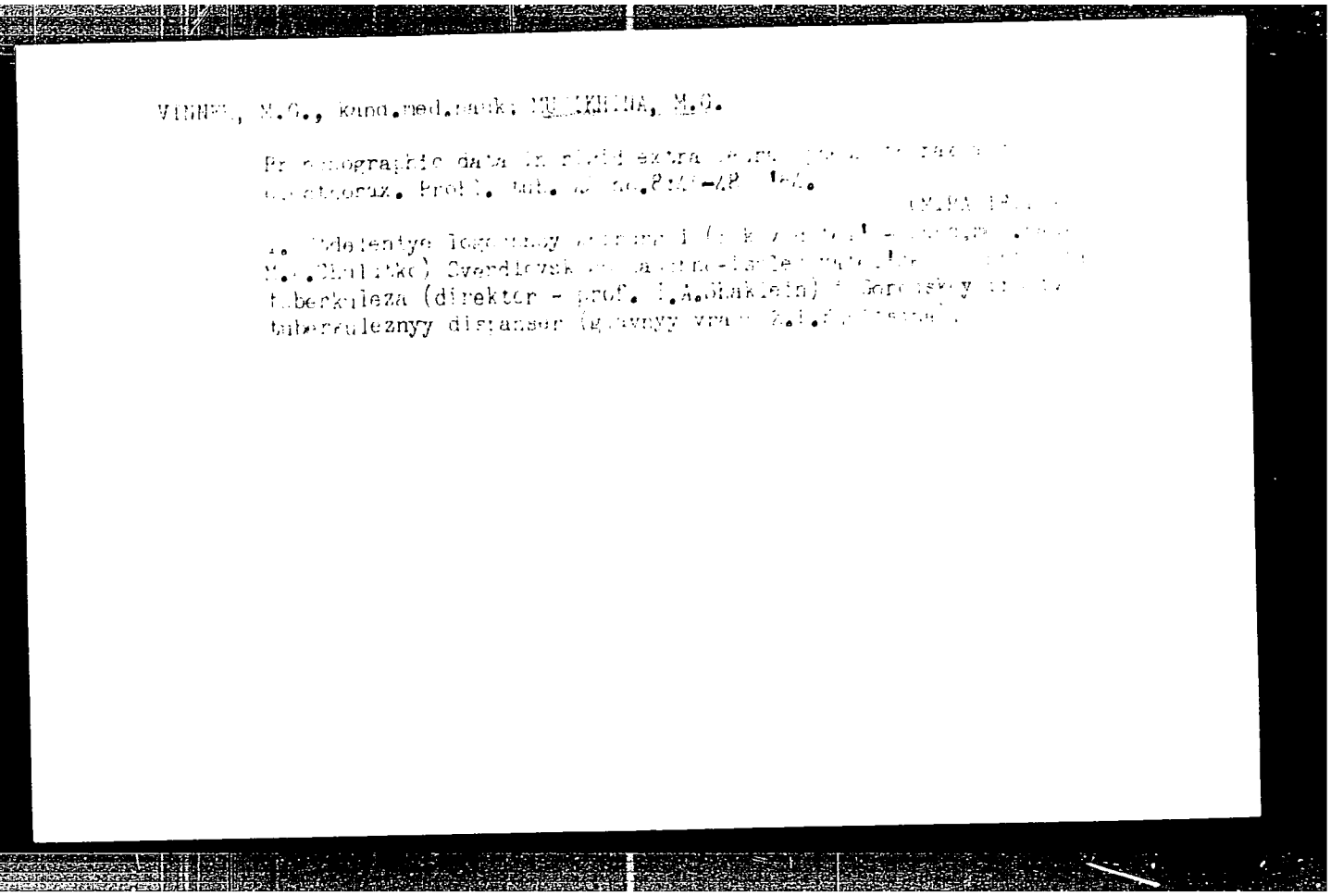
Platinum electrode in electrochemical studies of molten oxides.
Zhur.fiz.khim. 36 no.10:2302-2303 O '62. (MIRA 17:4)

1. Institut metallurgii Ural'skogo filiala AN SSSR.

MUSIKHIN, V.I.; YESIN, O.A.

Determination of diffusion coefficients of elements in liquid cast iron by oscillography at constant current. Dokl.AN SSSR 145 no.2:360-362 Jl '62. (MIRA 15:7)

1. Institut metallurgii Ural'skogo filiala AN SSSR. Predstavleno akademikom A.N.Frumkinym.
(Diffusion) (Iron alloys)



MUSIKHINA, M. G.

Pulmonary resection in the second half of pregnancy. Probl. tub. 40 no.5:99-100 '62. (MIRA 15:7)

1. Iz legochno-khirurgicheskogo otdeleniya (rukovoditel' - kandidat meditsinskikh nauk M. L. Shultko) Sverdlovskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - prof. I. A. Shaklein) i Gorodskogo protivotuberkuleznogo dispansera (glavnyy vrach - zasluzhennyy vrach RSFSR Z. P. Kunitsina)

(PREGNANCY, COMPLICATIONS OF) (LUNGS—SURGERY)

Musikhina, M.K.

AUTHORS: Panyushkin, I.V., and Musikhina, M.K., Chief Researcher Engineer 130-12-10/24

TITLE: Mixture for Fettling Open-hearth Furnace Bottoms (Smes' dlya navarki podin martenovskikh pechey)

PERIODICAL: Metallurg, 1957, No.12, p. 20 (USSR).

ABSTRACT: From September, 1956, a mixture of magnesite powder, raw dolomite (0-4 mm) and scale (optimal proportions 80, 13 and 7%, respectively) has been used for bottom fettling in the duplex shop at the Chusovsk Metallurgical Works (Chusovskiy metallurgicheskiy zavod). The authors describe the method of using this mixture and compare times for the different stages of the process with those required when magnesite alone was used, the total times being given as 4 hr 30 min and 5 hr 25 min, respectively. A fettling life of 9 - 12 days is obtained. There is 1 table.

ASSOCIATION: Chusovoy Metallurgical Works (Chusovskiy metallurgicheskiy zavod)

AVAILABLE: Library of Congress

Card 1/1

VAN'KAVSKIY, I.N., inzh.; IZOTOV, N.P., inzh.; KUSLINNA, M.K., inzh.; AVER'YANOV, V.A., inzh.; BOLOTOV, O.P., inzh.

Duplex process of steelmaking from naturally alloyed chromium-nickel iron. Stal' 20 no.6:496-500 Je '60. (MIRA 13:2)

1. Orsko-Khalilovskiy metallurgicheskiy kombinat.
(Steel--Metallurgy)

TAKHTAYEV, Yu.B.; IVANOV, R.M.; LEONOV, A.F.; VARNAVSKIY, I.N.; IZOTOV, N.I.; MUSIKHINA, M.K.

Improved technology for the making of native alloy steel at the Orsk-Khalilovo Metallurgical Combine. [Sbor. trud.] Nauch.-issl.inst.met. no.4:82-90 '61. (MIRA 15:11)

1. Nauchno-issledovatel'skiy institut metallurgii (for Takhtayev, Ivanov). 2. Orsko-Khalilovskiy metallurgicheskiy kombinat (for Leonov, Varnavskiy, Izotov, Musikhina).
(Khalilovo--Steel--Metallurgy)

S/194/62/000/007/040/160
D295/D308

AUTHOR: Musil, Alois

TITLE: New METRA recording instruments

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1962, abstract 7-2-74 m (Elektrotechnik, v. 16, no. 8, 1961, 218 - 221 [Czech.; summaries in Ger. and Rus.])

TEXT: Three new models of recording instruments of the Metra-Blansko Enterprise (Czechoslovakia) have been developed. The main model the Rg 140, has front-panel dimensions 140 x 200 mm and weighs from 6 to 8 kg, depending on the type of measuring system. The instrument has a 100 mm scale or two 45 mm scales; in the latter case the instrument has two measuring systems. The Rg 280 instrument has dimensions 280 x 200 mm and can have the same combination of scales - of two sizes. The Rg 380 instrument with dimensions 380 x 200 mm and weight up to 17 kg has up to 6 measuring systems with 45 and 100 mm scales. A new-design pen made of polystyrene is used; the ink supply suffices for 50 m recording. The magneto-electric measur-

Card 1/3

New METRA recording instruments

ing system in the instruments consists of a coil, the material of which includes epoxide resin, and a magnet of alnico alloy. The measurement range for direct voltage is 4 - 600 V, for current 10-3 - 15 A or more by using shunts. The voltmeter resistance is 100 Ω/V The same system can be used with a rectifier for a.c. measurements. The measurement range is 4-600 V for voltage and 4-600 mA for current. To measure small intensities, the Z 10 compensating amplifier is used, which extends the measurement range to 40 μA for d.c. and 6 mA for voltage. The Rg 380 instrument can contain up to 30 relays which serve to record the operation time of an object. The drive in the instruments is as follows: (1) by an RP-1 type clock mechanism with manual winding for speeds of 10 to 120 mm/h (8 day clock). (2) by the RP-4 clock mechanism with automatic winding (winding lasts 6 h, the speed is the same); (3) by a synchronous motor 220 or 110 V, 50 c/s for speeds of 10-160 mm/h (RP-2), 100-1600 mm/h (RP-2a), 3000-48,000 mm/h (RP-2); (4) by the RP-3 step-by-step motor, connected with clocks with speeds of 10-120 mm/h. The variation of speed within the limits indicated is carried out by reduction gear changes. The instruments are equipped with auxiliary devices: an indicator of paper reserve, automatic locking device

New METRA recording instruments

S/194/62/000/007/040/160
D295/D308

for pointers, internal illumination etc. The instruments are intended for use in a temperature range 0-40°C and for 75 % relative humidity. The models indicated were used as the basis of the following portable versions of recording instruments: the Vareg general-purpose voltammeter with the Z20 amplifier, and the Wattreg wattmeter with simultaneous recording of active and reactive power. 9 figures. [Abstracter's note: Complete translation.]

Card 3/3

COUNTRY : Czechoslovakia
CATEGORY :
ABS. JOUR. : RZKhim., No. 22 1959, No. 79943
AUTHOR : Zeman, M., Klatil, M., and Musil, B.
INST. : Not given
TITLE : Changes Observed in the Skin of Rabbits Injected Subcutaneously with Thiophene and with Mixtures of Thiophene and Refined Toluene
ORIG. PUB. : Kozarstvi, 8, No 10, 302-303, 309 (1958)
ABSTRACT : The authors note that Petrava refined toluene (I) contain an increased amount of thiophene (II) in refined I varies from 50 to 100 mg per 100 ml. The authors have shown that refined I from which all thio-compounds have been removed causes considerably smaller irritation of the skin in rabbits when injected subcutaneously than

CARD: 1/2

MUSIL, F.

Oscillopolarographic behavior of the blood-serum-filtrate reaction modified by addition of zinc ions in acute lung diseases. Chem zvesti 18 no.5/6:429-434 '64.

1. Central Laboratorium, Enterprise Institute of National Health, Zavody V.I. Lenina, Hospital, Plzen.

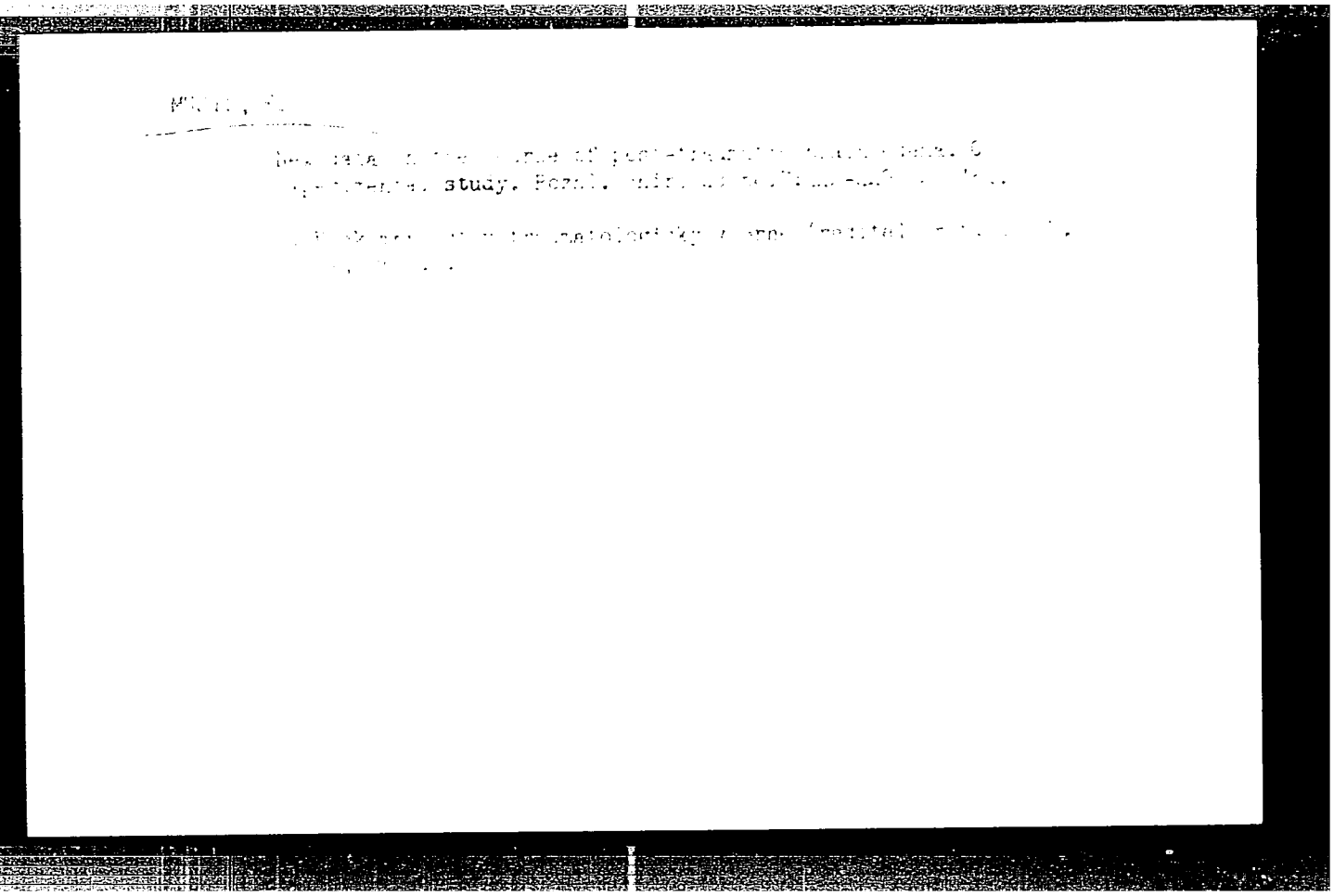
MUSIL, FRANTISEK

STEPAN, Jan; FRIDRICH, Eduard; MASOPUST, Jaroslav; MUSIL, Frantisek

Mineral metabolism in guinea pigs. Cas. lek. cesk. 93 no.22-23: 610-616 4 June 54.

1. Z Ustavu lekarske chemie university Karlovy, pobocky v Plzni a Zkusebni a kontrolni sekse Vyskumneho ustavu organickych synthes Pardubice-Rybitvi.

(ELECTROLYTES, metabolism, in guinea pigs)



MUSIL, F.

Control of the calcium-carbonate solution during the process of preserving eggs. p. 295. Vol. 6, no. 6. 1955. PRUMYSL POTRAVIN. Praha.

Source: East European Accessions List (EEAL), LC, Vol. 5, No. 3. March 1956.

MUSIL, F.

Experiments in preserving eggs in limewater. p. 310. Vol. 6, no. 6. 1955. PRUMYSL POTRAVIN. Praha.

Source: East European Accessions List (EEAL), LC, Vol. 5, no. 3. March 1956.

MUSIL, FRANTISEK

Mikrobiologie vajec a vajecnych vyrobku (vyd. 1.) Praha, Statni nakl. technicke literatury, 1956. 67 p. (Microbiology of eggs and egg products. 1st. ed.)

DA Not in LC

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

Abs Jour : Ref Zhur - Biol., No 7, 1958, 31002

Author : Orel Vitezslav, Musil Frantishek, Znoilova Vera
Inst : -
Title : Relationship Between the Color of the Yolk and Certain Properties of Eggs.
(Zavisimost' mezhdu okraskoy zheltka i nekotorami svoystvami yaits).

Orig Pub : Ptitsevodstvo, 1957, No 5, 33-35.

Abstract : There exists only an insignificant correlation between the color of the yolk and the weight of the eggshell. There is no relationship between the color of yolk, thickness of eggshell, and loss of weight of the eggs. The visibility of yolks in candling depends on the following factors: colloidal state of the white, the form of the egg, the internal structure of the eggshell, the shade and the color of the white.

Card 1/1

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application. Food Processing Industry. H-28

Abs Jour : Ref Zhur - Khimiya, No 17, 1958, 59187

Author : Orel Vitezslav, Musil Frantisek
Inst : -
Title : Influence of the Method of Packing Eggs on Their Stability During Storage and During Transportation.

Orig Pub : Prumysl potravin, 1957, 8, No 3, 136-139

Abstract : Eggs were stored in a horizontal position and with the blunt end up or down. During storage, the quality of the eggs were evaluated according to the colloidal condition of the albumin, according ot the position of the yolk, and according to the dimensions of the air sac. Experiments with transporting eggs were conducted during their transfer in automachines during a quiet and fast trip with the eggs packed in pressed or grated carton crates. It was established that the best way to pack

Card 1/2

Abs Jour : Ref Zhur - Khimiya, NO 17, 1958, 59187

eggs is with the blunt end up; through 10 days of storage at 25°, the eggs packed with the blunt down showed a decline of the colloidal condition of the albumin 6-7% greater than eggs stored in the opposite position. Horizontal packing showed the greatest deterioration.

Card 2/2

Q

CZECHOSLOVAKIA/Farm Animals. Poultry.

Abs Jour: Ref Zhur-Biol., No 17, 1958, 78814.

Author : Orel, Vitezslav; Musil, Frantishek.
Inst :
Title : Selection of Fertile Eggs Depending on the Hatching of the Disk By Candling After 20 Hours of Incubation.

Orig Pub: Za sots. s.-kh.nauku, 1957, A6, No 4, 369-392.

Abstract: Results of use of the method of selection of fertile eggs depending on the hatching of the embryonal disk showed that the accuracy of determination of the fertility of eggs fluctuates strongly. In candling, the embryonal disks located deep in the yolk or eccentrically near the halation are passed as infertile. Eggs with good

Card : 1/2

COUNTRY : CZECHOSLOVAKIA
CATEGORY : Chemical Technology. Chemical Products and Their Applications. Food Industry
ABS. JOUR. : Referat. Zh. Khim., No. 23, 1959, No. 83063

AUTHOR : Musil, F.; Orel, V.
INST. : -
TITLE : Suitability of Early Spring Eggs for Preserving

ORIG. PUB. : Prumysl potravin, 1958, 9, No. 1, 44-49

ABSTRACT : It has been established that eggs, laved in the period of spring frosts, may be preserved if the egg-shell is free of cracks. Eggs having red egg-white, after sorting out, may be used in the manufacture of melanges; with a thorough homogenizing its quality will conform to that made of normal eggs.

CARD: 1/1

MUSIL, Frantisek

Removal of broken Kuntscher nail. Rozhl. chir. 36 no.8:547-550 Aug 57.

1. Vyzkumny ustav traumatologicky v Brne, reditel prof. Vladimir Novak.
(FRACTURES, surg.
compl., break in intramedullary Kuntscher nail, removal by draw wires (Cz))

MUSIL, Frantisek

Multiple injuries caused by a mine explosion with injury to the external iliac artery. Rozhl. chir. 36 no.8:555-559 Aug 57.

1. Vyzkumny ustav traumatologicky v Brne, reditel prof. Vladimir Novak.

(ARTERIES, ILIAC, wds. & inj.
in child, caused by mine explosion, surg. (Cz))
(EXPLOSIONS
mine blast causing inj. of external iliac artery in child (Cz))

MUSIL, Frantisek ve spolupraci s V. Mastnym (Rajecko 162, p. Rajec n. Svit.)

Intracranial injury & shock. Rozhl. chir. 37 no.1:18-21 Jan 58.

1. Vyzkumny ustav traumatologicky v Brne, reditel prof. MUDr Vladimir Novak.

(SHOCK, statist.
incidence in brain inj. (Cz))
(BRAIN, wds. & inj.
incidence of shock(Cz))

MUSIL, F.

Autonomic function test in concussion of the brain. Cesk. fysiol. 8 no.4:318-319 July 59.

1. Vyzkumny ustav traumatologicky, Brno.
(BRAIN, wds. & inj.) (AUTONOMIC NERVOUS SYSTEM, funct. tests)

MUSIL, F.; KREJCI, V.; SALANSKY, I.; SPONAR, J.

General and local vegetative changes in wound healing. Rozhl.chir. 39 no.6:374-379 Je '60.

1. Vyzkumny ustav traumatologicky v Brne, reditel prof. MUDr. V.Novak, Ustav experimentalni patologie Brno, prednosta prof. MUDr et RNDr. V. Uher
(WOUND HEALING)
(AUTONOMIC NERVOUS SYSTEM physiol)

MUSIL, Frantisek; RAUSER, Vladimir

On the treatment of periathritis humeroscapularis calcarea.
Acta chir. orthop. trauma. Cech. 28 no.6:525-540 D '61.

1. Vyzkumny ustav traumatologicky v Brne, reditel prof. MUDr. Vladimir Novak, doktor lekarskych ved Katedra lekarske fyziky a chemie lekarske fakulty University J. Ev. Purkyne v Brne, prednosta prof. MUDr. Oktavian Wagner.
(SHOULDER dis)

MUSIL, Frantisek

On a previously used classification of intracranial injuries into concussions, contusions, and compressions of the brain. Rozhl. chir. 40 no.10:650-657 O '61.

1. Vyzkumny ustav traumatologicky v Brne, reditel prof. MUDr. Vladimir Novak, Dr.Sc.

(BRAIN wds & inj)

MUSIL, Frantisek; SPONAR, Jaromir

Circumscript interstitial calcinosis. Rozhl. chir. 40 no.12:836-843 '61.

1. Vyzkumny ustav traumatologicky v Brne, red. prof. MUDr. Vlad. Novak, doktor lek. ved.
(CALCIFICATION) (FINGERS diseases)

KLEMENT, V.; MUSIL, F.; PROKOP, V.

Statistical evaluation of some malignancy tests developed for the improvement of diagnosis. Neoplasma 9 no.2:177-184 '62.

1. Onkologische Abteilung des staatlichen Fakultatskrankenhauses in Pilsen. Institut der medizinischen Chemie der medizinischen Fakultat der Karlsuniversitat, Sitz in Pilsen. Interne Abteilung des Bezirkskrankenhauses Pilsen-Nord, CSSR.

(NEOPLASMS diag)

MUSIL, F.

Oscillographic polarography and its use in medicine. Prac. lek. 14 no.9:426-429 N '62.

1. Ustav lekarske chemie lekarske fakulty University Karlovy v Plzni, zast. prednosta V. Habermann, prom. lekar.
(OSCILLOMETRY) (POLAROGRAPHY)

HABERMANN, V.; MUSIL, F.; SMULA, Zd.; SPINKA, J.

Contribution to laboratory diagnosis of malignant neoplasms. (Preliminary communication). Rozhl. chir. 41 no.10:674-679 O '62.

1. Ustav lekarske chemie fakulty vseobecneho lekarstvi University Karlovy v Plzni zast. prednosta V. Habermann, prom. lekar II. chirurgicka klinika fakulty vseobecneho lekarstvi University Karlovy v Plzni prednosta doc. dr. J. Spinka.

(NEOPLASMS) (BLOOD CHEMICAL ANALYSIS)

MUSIL, Frantisek; SUVA, Josef

Effect of orotic acid on the liver parenchyma. V. Effect of purine substances and diet on the serum protein picture and liver lipids. Plzen. lek. sborn. 23:11-18 '64

1. Ustredni laboratore ZUNZ Zavody V.I. Lenina , Plzen (vedouci: MUDr. F. Musil); Farmakologicky ustav lekarske fakulty University Karlovy v Plzni, (prednosta: prof. MUDr. Zd. Kocher).

MUSIL, F.

The effect of ethyl alcohol on the course of cerebral edema after injuries. Rozhl. chir. 44 no.4:234-243 Ap '65.

1. Vyzkumny ustav traumatologicky v Brne (reditel: prof. dr. V. Novak, DrSc.).

PROCHAZKOVA, Bozena; SUVA, Josef; MUSIL, Fra[illegible], Fr.

Changes in the chromatographic spectrum of lipids in the rat liver after administration of orotic acid and vitamin B12. Plzen. lek. sborn. 24:25-31 '64.

1. Farmakologicky ustav lekarske fakulty Univerzity Karlovy v Plzni (prednosta: prof. dr. Zd. Kocher) a Ustredni laborator Zavodniho ustavu narodniho zdravi, Zavody V.I. Lenina v Plzni (vedouci: dr. Fr. Musil).

MUSIL, Frantisek; POKORNY, Milos. Techniska spoluprace: KUNESOVA, Marie

perience with heparin Spofa linguets in atherosclerosis. Vnitrni lek. 11 no.12:1198-1202 D '65.

1. Ustredni biochemicka laborator ZUNZ LZ Plzen (predn sta - MUDr. Frantisek Musil) i Vnitrni oddeleni ZUNZ LZ Plzen (predn sta - doc. MUDr. Milos Pokorny, CSc,)

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ACC NR: AP6006083 SOURCE CODE: CZ/0053/65/014/004/0313/0313

AUTHOR: Suva, J.; Kastlova, B.; Prochazkova, B.; Musil, F. 29 B

ORG: Institute of Pharmacology, Medical Faculty, Plzen (Farmakologicky ustav lek. fak.); Central Laboratory ZUNZ ZVIL, Plzen (Ustredni lab. ZUNZ ZVIL)

TITLE: Changes in the concentration of esterified fatty acids and cholesterol in the liver following administration of orotic acid and vitamine B sub 12 [This paper was presented during the Twelfth Pharmacologic Days, Smolenice, 28 Jan 65.]

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 4, 1965, 313

TOPIC TAGS: aliphatic carboxylic acid, vitamin, liver, aromatic carboxylic acid, heterocyclic base compound, biologic metabolism, biochemistry, pharmacology, drug effect

ABSTRACT: Orotic acid 1% in purified diet of rats for 21 days with or without B_{12} i.p. 50, 100, 300 and 500 γ/Kg. produced considerable difference in esterified fatty acids in the liver. Orotic acid alone increased liver fat, B_{12} decreased it; the highest dose of B_{12} decreased esterified fatty acids, even orotic acid-fed animals. Total increase of lipids was predominantly due to triglycerides. [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 002

Card 1/1 HW

MUSIL, F.

Objectives and development of operational planning in building construction. p.13. POZEMNI STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 3, no. 1, Jan. 1955.

SOURCE: East European Accessions List (EEAL), Library of Congress, Vol. 4, No. 12, December 1955.

MUSIL, F.

Ways of operational planning in our building construction. p. 78. POZEMNI STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 3, no. 2, Feb. 1955.

SOURCE: East European Accessions List (EEAL), Library of Congress, Vol. 4, No. 12, December 1955.

MUSIL, F.

Operational planning in production management using the business accounting method. p. 115. POZEMNI STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 3, no. 3, Mar. 1955.

SOURCE: East European Accessions List (EEAL), Library of Congress, Vol. 4 No. 12, December 1955.

MUSIL, F.

Improvement in the service of supplying materials for construction achieved on the basis of the calculation to production, p. 303, POZEMNI STAVBY, (Ministerstvo stavebnictvi) Praha, Vol. 3, No. 8, Aug. 1955

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 4, No. 12, December 1955

MUSIL, F.; VALASEK, L.

MUSIL, F.; VALASEK, L. Prototype of a prefabricated corner house in Gottwaldov. p. 93

Vol. 4, no. 3, Mar, 1956
POZEMNI STAVBY
TECHNOLOGY
Praha, Czechoslovakia

So: East European Accession Vol. 6, No. 2, 1957

TUMA, Jiri, inz.; MUSIL, Frantisek, inz.

Construction of high buildings by the lift slab method. Poz stavby 11 no.2:106-107 '63.

MUSIL, Frantisek, doc., inz.; KULA, Bohumir

Problems of the quality of G-type panel constructions. Poz stavby 11 no.5:229 '63.