

VOTIN, JOSEF DR
KOS, Rudolf, Dr.: VOTIN, Jozsef, Dr.

Complications and new technic of intragluteal injections. Orv. hetil.
99 no.21:707-713 25 May 58.

1. A Budapesti Orvostudományi Egyetem II. sz. Sebészeti Klinikájának
(igazgató: Klimko Dezső st., egyet. tanár) közleménye.
(INJECTIONS
intragluteal, compl. & new technic (Hun))

VOTINS

BIRO, L.; VOTIN, J.; SZEKELY, A.

Experimental studies on tyrothricin. *Magy. belorv. arch.* 3 no. 4:143-150 1950. (CLML 25:5)

1. Doctors. 2. Internal Department (Head Physician -- Prof. Dr. László Biro) of Kutvolgyi-uti State Hospital and Laboratory (Head Physician -- Prof. Dr. Zoltan Horn) of Anna Koltai State Casualty Hospital.

VOTIN, J.

KULLOI-RHÖRER, L.; ERDELYI, M.; MESZOLY, I.; VOTIN, J.

Clinical experiences on the therapy of postoperative complaints following cholecystectomy. Acta med. hung. 10 no.3:261-272 1957.

1. II. Chirurgische Klinik der Medizinischen Universität, Budapest.

(CHOLECYSTECTOMY, compl.
postcholecystectomy synd., choledochoduodenostomy
(Ger))

(BILE DUCT, COMMON, surg.
choledochoduodenostomy in postcholecystectomy synd.
(Ger))

(DUODENUM, surg.
same)

KOS, Rudolf, dr.; BARANKAY, Bertalan, dr.; VOTIN, Jozsef, dr.

Feeding through a gastrointestinal tube. Orv. hetil. 102 no. 15:682-688
9 Ap '61.

1. Budapesti Orvostudományi Egyetem, II sz. Sebészeti Klinika.

(NUTRITION)

KOS, Rudolf, dr.; VOTIN, Jozsef, dr.; DANIEL, Ferenc, dr.

Therapy of thrombophlebitis by use of butazolidine preparations. Orv.
hetil. 96 no.42:1170-1172 16 Oct 55.

1. A Budapesti Orvostudományi Egyetem II. sz. Sebészeti Klinikájának
(igazgató: Rubanyi Pál dr. egyet. tanár) közleménye.
(THROMBOPHLEBITIS, therapy
phenylbutazone)
(ANALGESICS, therapeutic use
phenylbutazone in thrombophlebitis)

VOTIN, Lajos, dr.

Vasodilator agents in the therapy of pulmonary tuberculosis. Tuberkulozis
15 no.11:335-337 H '62.

1. A budapesti XI. ker. TBC. Gondozo Intezet (Kozponti igazgato:
Szakkay Antal dr.) kozlemenye.

(TUBERCULOSIS, PULMONARY) (PAPAVERINE) (NICOTINIC ACID)
(THEOPHYLLINE)

VOTIN, L.

On the evil effects of free medical care. Orv. hetil. 104 no.1:38-
39 6 Ja '63.

(STATE MEDICINE)

VOTIN, Lajos, dr.

New aspects of the pathogenesis and prevention of tuberculosis in adolescents. *Tuberkulózis* 13 no.5:153-155 My '60.

1. A Budapesti XI. kerületi Tbc Gondozó Intézet (központi igazgató: Szakkay, Antal, dr.) közleménye.
(TUBERCULOSIS in adolescence)

1. VOTINOV, A.; KOBEKO, P.; MAREY, F.

2. USSR (600)

"A Study of Polymers --7. The Depolymerization of Linear Polymers", Zhur. Fiz. Khim. 16 Nos. 3-4, 1942. Leningrad, Physico-Technical Institute, Laboratory of the Chemical Properties of Polymers. Received 14 April 1941.

9. [REDACTED] Report U-1523, 24 Oct. 1951.

VOTINOV, A.; KOBKO, P.; MAREY, F.

"A Study of Polymers -- 7. The Depolymerization of Linear Polymers", Zhur Fiz. Khim.
16 Nos. 3-4, 1942. Leningrad, Physico-Technical Institute, Laboratory of the
Chemical Properties of Polymers. Received 14 April 1941.

Report U-1523, 24 Oct. 1951.

VOTINOV, A.G., inzhener.

Pneumatic jet for cement work. Gidr.stroi. 25 no.9:57-58 0 '56.
(MLBA 9:11)

(Pneumatic tools) (Concrete construction)

210

AUTHOR: Votinov, A.G., Engineer.

TITLE: Concreting bucket with feeder basket. (Bad'ya dlya betona s kobshom dlya zagruzki.)

PERIODICAL: "Mekhanizatsiya Stroitel'stva" (Mechanisation of Construction) 1957, Vol. 14, No. 1, p. 28 (U.S.S.R.)

ABSTRACT: On the Kuybishevgidrostoi buckets for concrete were used. These were filled by pneumatic delivery pipes near the places of concreting, in the operational zones of cranes. The old types of buckets, discharging the material in the vertical position, are unsuitable. The new buckets with "Kamsk" baskets are filled in the horizontal position and don't need special end-pieces to the pneumatic pipes. The filling operation can be carried out much quicker. The operative of the above factory, N.M. Ivanov introduced an improvement which allows filling from the pneumatic pipe in a horizontal position. A steel basket is welded to the top rim of the bucket. Baskets can be of various widths (up to the diameter of the bucket). When the bucket is in the horizontal position the basket is filled with concrete, directly from the pipes. Part of the concrete remains in the bucket and the other part is delivered into the basket. When the bucket is lifted by the crane into the vertical position the concrete pours from the basket into the bucket.
There is 1 diagram.

VOTINOV, A.G., inzh. (poselok Komsomol'sk Kuybyshevskoy obl.).

New apparatus for pumping cement. Prom. stroi. 37 no.1:60-61
Ja '59. (MIRA 12:1)
(Pumping machinery) (Cement--Transportation)

VOTINOV, A.G., inzhener.

Improving roller gate for automatic concrete plant batching bunkers.
(MLRA 10x6)
Gidr. stroi. 26 no. 5251-52 Mv 157
(Concrete plants)

VOTINOV, A.G., inzhener.

Circular bucket trough for concrete delivery. Gidr.stroi. 25
no.11:52 D '56. (MIRA 10:1)
(Concrete construction)

VOTINOV, A.G.

98-7-12/20

AUTHOR: Votinov, A.G., Engineer

TITLE: Improved Construction of the Ceiling of the Gallery of a
Spillway Dam (Ratsional'naya konstruktsiya potolka galerey
vodoslivnoy plotiny)

PERIODICAL: Gidrotekhnicheskoye Stroitel'stvo, 1957, No 7, p 44 (USSR)

ABSTRACT: Instead of using conventional monolithic concrete constructions
on the platform at the Kuybyshev Hydroelectric Power Plant,
prefabricated structures of reinforced concrete were in-
stalled on the spillway dam. The self-supporting structures
were designed by engineers M.F. Korotkin and N.A. Tssetsulin.
These structures realized considerable savings in material
and construction time.
The article contains 2 figures.

AVAILABLE: Library of Congress

Card 1/1

VOTINOV, A.G., inzh.

Placement of gates on the spillway dam of the Kuybyshev
Hydroelectric Power Station. Gidr.stroi. 26 no.10:51-52 0 '57.
(MIRA 10:10)

(Kuybyshev Hydroelectric Power Station)

VOTINOV, A.G., inzhener.

Efficient design for the ceiling of overflow weir tunnels. Gidr.
stroil. 26 no. 7:44 J1 '57. (Weirs) (MLRA 10:8)

VOTINOV, A.G., inzhener.

Connecting shortened conveyer belt joints by means of vulcanization.
(MLR. 9:11)

Gidr.stroi. 25 no.9:59-60 0 '56.

(Conveying machinery)

GEL'BERG, Lev Aronovich, kand.tekhn.nauk; KOLOTILKIN, Boris Michaylovich,
kand.tekhn.nauk; ZAKHARENKOV, G.N.; BOBKOV, V.T.; VOTINOV, A.P..
red.; FURMAN, G.V., tekhn.red.

[Data for lectures on the subject: "Housing construction in the
sixth five-year plan and means of reducing its cost"; approved by
the office of the Section on Construction, Architecture, and
Building Materials] Material k lektsii na temu: "Zhilishchnoe
stroitel'stvo v shestoi piatiletke i rezervy snizheniia ego
stoimosti"; odobren biuro seksii po stroitel'stvu, Arkhitekture
i stroitel'nyim materialam, Moskva, Ob-vo po rasprostraneniui
polit. i nauchnykh znanii RSFSR, 1958. 46 p. (MIRA 11:12)

1. Zav. otdelom nauchno-tekhnicheskoy propagandy Pravleniya
Obshchestva RSFSR (for Zakharenkov). 2. Referent otdela nauchno-
tekhnicheskoy propagandy Pravleniya Obshchestva RSFSR (for Babkov).
(Housing)

117 AND 120 SERIES PROCEEDS AND PROPERTIES INDEX

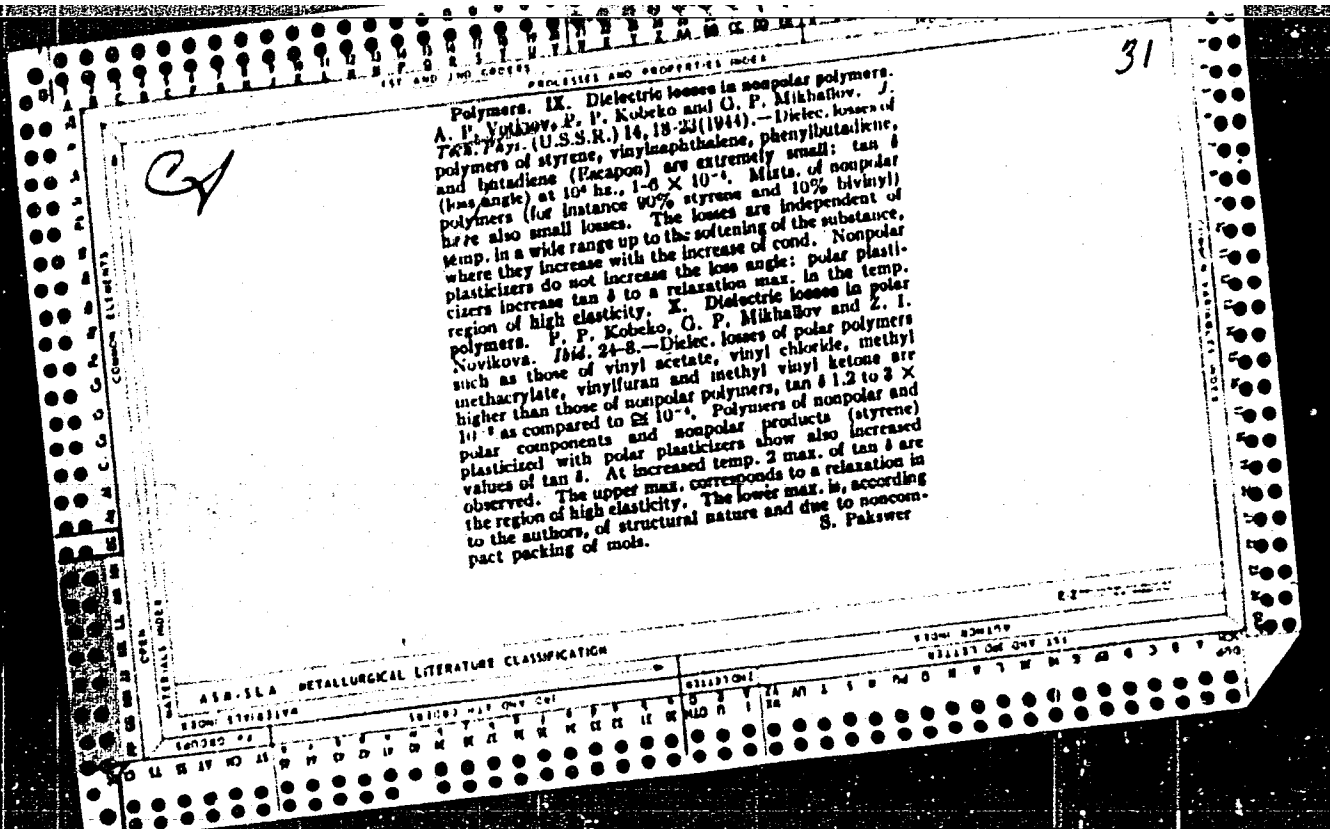
BC

3

3-Vinylthiophene: M. M. Koton (with A. P. Vaitanov and P. S. Florinski) U. S. Pat. Chem. Abstr. 1941, 14, 181-186.
3-Vinylthiophene (I) is obtained in 6% yield by distilling 3-2-thiophenylacetic acid at 120-125°. A black, lustrous, insoluble polymer of (I) is obtained by heating at 100° with 1% of HCl, SnCl₄, SbCl₅, or AsCl₃ or at 115° with 5% of benzaldehyde.

117 AND 120 SERIES PROCEEDS AND PROPERTIES INDEX

3-Vinylthiophene: M. M. Koton (with A. P. Vaitanov and P. S. Florinski) U. S. Pat. Chem. Abstr. 1941, 14, 181-186.
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VOTAVOVA, LIBUSE

Theorem on the Extremes of Entropy

★Votavová, Libuše. Ein Satz von Extremen der Entropie. Transactions of the first Prague conference on information theory, statistical decision functions, random processes held at Liblice near Prague from November 23 to 30, 1956, pp. 293-295. Publishing House of the Czechoslovak Academy of Sciences, Prague, 1957. 354 pp. Kčs 34.00.

The author derives the well-known result that the maximum of $H = -\sum_{i=1}^n \mu_i \log \mu_i$ subject to $\mu_i \geq 0$, $\sum_{i=1}^n \mu_i = 1$, $j < n$, $\mu_1, \dots, \mu_j$ fixed is $-\sum_{i=1}^j \mu_i \log \mu_i - c \log(c/n-j)$, where $c = 1 - \sum_{i=1}^j \mu_i$. He also shows that under the additional constraint $\mu_i + i \leq \mu_n$, $i = 1, \dots, n-j$, the minimum of H , if it exists, is $\sum_{i=1}^j \mu_i \log \mu_i - n \mu_n \log \mu_n - \mu \log \mu$, where $\mu_n = \max_{1 \leq i \leq j} (\mu_i)$, $M = (c/\mu_n)$ and $\mu = c - n \mu_n$. R. A. Leiber (Wheaton, Md.)

KONONKOV, Arkadiy Fedorovich; VOVCHENKO, G.D., prof., otv.red.; BERN-
SHTEYN, S.B., prof., red.; VILENSKIY, D.G., prof., red.;
GORDEYEV, D.I., prof., red.; GUDZIY, N.K., prof., red.; ZAYON-
CHKOVSKIY, P.A., prof., red.; KECHEK'YAN, S.V., prof., red.;
POLYANSKIY, F.Ya., prof., red.; RYBNIKOV, K.A., prof., red.;
SKAZKIN, S.D., akademik, red.; SOLOV'YEV, A.N., dotsent, red.;
ZAYTSEVA, M.G., red.; GEORGIYEVA, G.I., tekhn.red.

Petr Ivanovich Strakhov. Moskva, Izd-vo Mosk.univ., 1959.
91 p. (MIRA 13:2)

(Strakhov, Petr Ivanovich, 1757-1813)

VOTINOV, M. P.

VOTINOV, M. P. -- "Adiabatic Expansion as a Method of Studying the Nature of Elasticity and of Crystallization Processes in Rubber-Like Substances." Min Higher Education USSR. Leningrad Polytechnic Inst imeni M. I. Kalinin. Leningrad, 1955. (Dissertation for the Degree of Candidate of Physico-mathematical Sciences.)

SO: Knizhnaya Letopis', No 5, Moscow, Feb 1956

VOTINOV, M. P., and KUVSHINSKIY, E. V.

"Elastic properties and crystallization stresses," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 20 Jan-2 Feb 57, Moscow, Polytechnic Inst., Leningrad (Kalinin Inst.)

B-3,084,395

VOTINOV, M. P.

120-5-33/35

AUTHORS: Votinov, M.P., and Kuvshinskiy, Ye.V.

TITLE: A "Reochord" Extensometer for the Determination of the Expansion of Rubber in Stretching Tests (Reokhordnyy ekstensometr dlya opredeleniya udlineniya rezin pri ispytaniyakh na rastyazheniye)

PERIODICAL: Priory i Tekhnika Eksperimenta, 1957, No.5, pp. 122-123 (USSR).

ABSTRACT: The principle of the extensometer and its construction is shown in Fig. 1. The specimen 1 is kept in position by means of the four knife edges 2. The knife edges are pressed against the specimens by means of a rubber band 5. Two blocks 3 made from electrically insulating material are placed on the ends of each of the knife edge carrying carriages. Nichrome wires 4 are let through holes in these blocks and are kept parallel to the direction of extension of the specimen. The resistance between the points A, B and C, D on the wires are measured by means of the DC bridge also shown on Fig.1. The off-balance current can be exhibited on the screen of a magneto-electric oscillograph, type MPO-2. A typical oscillogram is shown in Fig.2 and corresponds to a deformation at a rate of 100% per sec. in an extension-compression cycle. The extensometer may be used in the measurement of expansion when the rates of

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120-5-33/35
A, "Reochord" Extensometer for the Determination of the Expansion of Rubber in Stretching Tests.

deformation are 100-400% per sec. and in the temperature range -15° to +85 °C (Ref.1).
There are 2 figures and 2 Slavic references.

ASSOCIATION: Leningrad Polytechnical Institute imeni M.I. Kalinin
(Leningradskiy Politekhicheskiy Institut imeni M.I. Kalinina)

SUBMITTED: March 26, 1957.

AVAILABLE: Library of Congress
Card 2/2

120-6-23/26

A Device for Studying Thermoelastic Properties of Adiabatically-stressed Rubber.

thermocouples were used to measure the temperature. Since the thermal conductivity of manganin-constantan is lower by a factor of 15 than that of copper, the heat losses due to this source were also lowered (the diameter of the wires was 0.05 mm). These measures made it possible to lower the heat losses to 8%. In the second apparatus, it was not necessary to use a vacuum chamber and specimens of high area of cross-sections since in these experiments the duration of deformation was only 1.5 to 6 sec. The general heat losses at the end of a cycle calculated from cooling curves of extended specimens, did not in this case exceed 3 to 4%. The two devices are shown in Figs. 1 and 2. The extensions were measured by transforming them into electrical impulses using the off-balance current of a bridge. A similar scheme was used for the measurement of the stress. The mechanical work performed on the specimen could be estimated to an accuracy $\pm 8\%$. The apparatus was used to study deformation of resins and the results were reported by the present author in Refs. 8 to 10. There are 3 diagrams and 10 references, 5 of which are Slavic.

ASSOCIATION: Leningrad Polytechnical Institute im. M.I. Kalinin
(Leningradskiy Politekhnikheskiy Institut im.
M.I. Kalinina)

Card 2/3

120-6-23/36

/ A Device for Studying Thermoelastic Properties of Adiabatically-
stressed Rubber.

SUBMITTED: April 24, 1957

AVAILABLE: Library of Congress
Card 3/3

VOTINOV M.P.

VOTINOV, M.P.; KUVSHINSKIY, Ye.V.

Thermoelastic phenomena in SKS-30A and SKB synthetic rubbers
subjected to adiabatic deformation reaching the breaking point.
Zhur.tekh.fiz. 27 no.10:2303-2306 O '57. (MIRA 10:11)

1. Leningradskiy politekhnicheskoy institut imeni M.I.Kalinina.
(Rubber, Synthetic)

VOTINOV M.P.
VOTINOV, M.P.; SUL'ZHENKO, L.I.; KUVSHINSKIY, Ye.V.

Thermoelastic phenomena in natural rubber subjected to cyclic deformation. Zhur.tekh.fiz. 27 no.10:2307-2313 O '57. (MIRA 10:11)

1. Politekhnikheskiy institut imeni M.I.Kalinina, Leningrad.
(Rubber)

SUNTSOV, Ye.V.; VOTINOV, M.P.

Distribution of the spin density of an unpaired electron in a
macroradical formed in γ -irradiated polystyrene. Opt. i
spektr. 16 no.3:543-545 Mr '64. (MIRA 17:4)

AUTHORS: Votinov, M. P., Kuvshinskiy, Ye. V. SOV/57-28-9-24/33

TITLE: Investigation of Natural Rubber Vulcanizates by the Method of Adiabatic Stretching (Izucheniye vulkanizatorov natural'nogo kachuka metodom adiabaticheskogo rastyazheniya)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1958, Vol 28, No 9, pp. 2022-2024 (USSR)

ABSTRACT: In references 1 and 2 vulcanizing agents for natural rubber were investigated by the method of adiabatic stretching. This study was carried out at temperatures differing from room temperature and to near-rupture ranges of stretching. The measurements were carried out at stretching rates of about 100 % per second on samples which had not been previously stretched. The composition of the mixture and the method of vulcanization are described in reference 1. The method of investigation is described in references 1 - 4. This report gives information on the investigation at -15, +18 and +85°C of thermoelastic properties in products of natural rubber (NR) by the method of adiabatic stretching. It is shown that the beginning of rubber crystallization in stretching, the extent and the rate of crystallization are dependent upon tem-

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SOV/57-28-9-24/33

Investigation of natural rubber Vulcanizates by the Method of Adiabatic Stretching

perature. A temperature reduction favors crystallization. The formation of the crystalline phase leads to a loss of elastic properties in rubber. There are 2 figures and 6 references, 6 of which are Soviet.

ASSOCIATION: Leningradskiy politekhnicheskii institut im. M. I. Kalinina.
Kafedra fiziki dielektrikov (Leningrad Polytechnical Institute
imeni M. I. Kalinin. Chair of the Physics of Dielectrics)

Card 2/2

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001861110005-8

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001861110005-8"

L 35513-65
ACCESSION NR: AP5008359

ually on the nature and position of styrene substituents, e.g., the yield from
methylenestyrenes is 0.5 orders of magnitude larger than that from styrene. Or

L 22899-66 EWT(1)/EWT(m)/EWP(e)/EWP(t) IJP(c) JD/JG/AT/WH
 ACC No: AF6006859
 SOURCE CODE: UR/0181/66/008/002/0589/0591

AUTHOR: Shelekhin, Yu. L.; Votinov, M. P. Berkovskiy, B. P.
 ORG: Leningrad Polytechnic Institute im. M. I. Kalinin (Leningradskiy politekh-
 nicheskiy institut)

TITLE: Concerning ^{21, 24, 54} exchange interactions of pairs of paramagnetic Cr^{+3} ions in a
 corundum lattice

SOURCE: Fizika tverdogo tela, v. 8, no. 2, 1966, 589-591

TOPIC TAGS: corundum, ruby, chromium, paramagnetic ion, crystal lattice, electron
 paramagnetic resonance, epr-spectrum, nuclear spin, multiplet splitting

ABSTRACT: The authors indicate that when the concentration of Cr^{+3} ions in ruby
 is high there is a finite probability that these ions will be located close to one
 another, thus giving rise to an isotropic spin-spin interaction, which in turn
 leads to splitting into spin multiplets. Since the levels corresponding to states
 with spin 1, 2, and 3 are paramagnetic, they can be observed by the EPR method,
 since the intensity of the EPR spectrum for the state $S = 3$ should exhibit a
 larger temperature dependence than for the states $S = 1$ and 2. This circumstance
 can be used to separate the lines belonging to the multiplet $S = 3$. Earlier ex-

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ACC NR: AP6006859

periments did not disclose the lines corresponding to all the transitions belonging to the spin multiplet $S = 3$. The authors have therefore carried out measurements with parallel orientation at 9,188 Mcs, and observed four weak lines at 780, 1681, 2625, and 3473 oe. For perpendicular orientation they observed three similar lines with resonances at 2548, 2944, and 3289 oe. The exchange coupling constants for the spin Hamiltonian are evaluated on the basis of these lines, and the values of the parameters of the spin Hamiltonian are found to be in better agreement with the theoretical parameters of a pair oriented perpendicular to the crystal axis, than for parallel orientation. It is concluded that comparison of the theoretical and experimental parameters of the spin Hamiltonian makes it possible to determine the orientation of the axis of the pair relative to the crystallographic axis and that the observed transitions belong to the multiplet $S = 3$ of the pair formed by the Cr^{+3} ions located at the nearest neighboring crystallographic axes. Orig. art. has: 2 figures and 11 formulas.

SUB CODE: 20/ SUBM DATE: 19Aug65/ OTH REF: 004

Card 2/2 B LG

L 20684-66 ENT(1)/ETC(m)-6 IJP(c) WW/JXT(CZ)

ACC NR: AT6004861

SOURCE CODE: UR/2563/65/000/255/0162/0165

AUTHOR: Antuf'yev, V. V.; Votinov, M. P.; Shelekhin, Yu. L.

ORG: none *

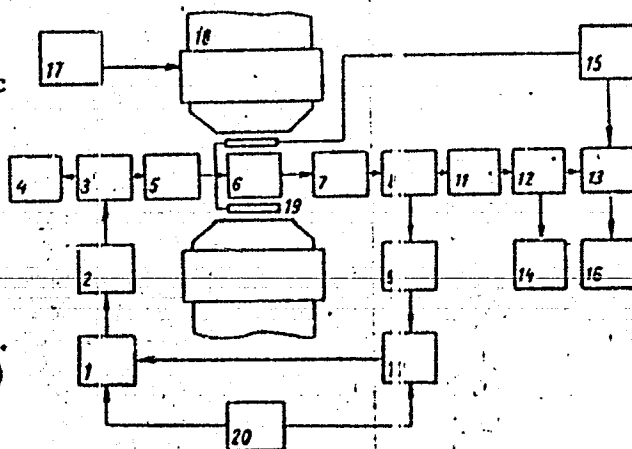
TITLE: Electronic paramagnetic resonant spectrometer for the millimeter band

SOURCE: Leningrad, Politekhnikheskiy institut, Trudy, no. 255, 1965.

Radioelektronika (Radio electronics), 162-165

TOPIC TAGS: EPR spectrometer, spectrometry

ABSTRACT: The construction of a 36-Gc ($\lambda = 8$ mm) EPR spectrometer (supplementing an older 9-Gc type) is reported. The new spectrometer intended for analyzing the complex spectra of polycrystals has been developed along the lines of the standard RE1301 type; it has a power detector and uses a "small" modulation of the magnetic field. Klystron 8-mm oscillator 1 (see figure) via attenuator 2, directional coupler 3,



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L 20684-66

ACC NR: AT6004861

and phase shifter 5 excites silver-plated brass resonator 6 (its $Q = 8000$). After the resonator, the energy is detected by crystal detector 8. The klystron frequency is stabilized by an AFC system, which consists of a 10-kc reference-voltage oscillator 20, amplifier 9, and phase detector 10; the AFC system keeps the klystron frequency constant within 0.001%. The use of 10-kc frequency, instead of the conventional 460 kc, permitted reducing the modulation broadening of lines. The new spectrometer has a sensitivity of 10^{13} unpaired electrons in the specimen. Spectral curves of T-900 and BaTiO₃ ceramics taken on both spectrometers clearly show the better resolution of the new instrument. Orig. art. has: 2 figures. [03]

SUB CODE: 20, 09 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 002

ATD PRESS: 4223

Card 2/2

ANTUF'YEV, V.V. [deceased]; DOKUKINA, A.F.; VOTINOV, M.P.; SUNTSOV, Ye.V.;
BOLDYREV, A.G.

Effect of Co^{60} γ -radiation on substituted polystyrenes. Vysokom.
soed. 7 no.3:380-384 Mr '65. (MIRA 18:7)

1. Leningradskiy politekhnicheskii institut imeni M.I. Kalinina.

ANTUF'YEV, V.V. [deceased]; VASIL'YEV, Ya.V.; VOTINOV, M.P.; KHARITONOVA, O.K.;
KHARITONOV, Ye.V.

Electron paramagnetic resonance in the system titanium-oxygen.
Fiz. tver. tela 4 no.6:1496-1499 Je '62. (MIRA 16:5)
(Paramagnetic resonance and relaxation) (Titanium oxides)

VOTINOV, M. P.

57-10-15/33

AUTHORS:

Votinov, M. P., and Kuvshinskiy, Ye. V.

TITLE:

Thermoelastic Phenomena in Synthetic Rubbers at Adiabatic Deformation Reaching the Break (Termouprugiye yavleniya v rezinakh iz SKS-30A i SKB pri adiabaticheskoy deformirovani do razryva).

PERIODICAL:

Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 10, pp. 2303-2306 (USSR).

ABSTRACT:

On the strength of the investigations given here following can be said. 1) The expansion of the vulcanisates SKS-30A and SKB reaching the break is accompanied by a heat development equivalent to the tension work, a fact which points out the kinetic nature of the elastic forces in these vulcanisates. 2) An alteration of the vulcanization process of a mixture and the introduction of a filler leads only to an alteration of the rubber elasticity modulus. The correspondances to a rule in the transformation of work into heat are not affected with it. The lacking of the crystallization processes even in important tensions ($\lambda \approx 6 \div 7,5$) is obviously determined in the first place by the irregular construction of the hydrocarbon skeleton of the final caoutchoucs. 3) In the case of rubbers with active fillers which were obtained under optimum conditions by vulcaniza-

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Thermoelastic Phenomena in Synthetic Rubbers at Adiabatic
Deformation Reaching the Break.

57-10-15/33

tion a reduction of the heat emission was observed within the
range of strong tensions a short time before the break, caused
by the solidification of the material.
There are 2 figures, 1 table, 5 Slavic references.

ASSOCIATION: Leningrad Polytechnical Institute imeni Kalinin M. I. (Leningrad-
kiy politekhnicheskii institut imeni M. I. Kalinina).

SUBMITTED: April 18, 1957.

AVAILABLE: Library of Congress.

Card 2/2

VOTINOV, M. P.

AUTHORS:

Votinov, M. P., Sul'zhenko, L. L., Kuvshinskiy, Ye. 7. 57-10-16/33

TITLE:

Thermoelastic Phenomena in Rubbers out of Natural Caoutchouc at
Cyclic Deformation (Termoelasticheskiye yavleniya v rezinakh iz natural'
nogo kauchuka pri tsiklicheskom deformirovanii)

PERIODICAL:

Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 10, pp. 2307-2313 (USSR)

ABSTRACT:

The thermoelastic properties of the natural caoutchouc were investigated according to the method of the adiabatic expansion in the cycle: expansion- shrinking. The deformation velocity amounted to 100 % per second. The patterns differed by vulcanization mode and the kind of the dispersed filler. It is shown that the initial stages of the extension in the case of non-filled ($\lambda \leq 4,5$) and filled ($\lambda \leq 1,8$ to 4) rubbers are characterized by a heat emission equivalent to the deformation work. The further deformation is accompanied by an emission of the surplus heat effected by the crystallization of the rubber. Furthermore it is shown that the beginn of crystallization and its degree depends in the case of a given prolongation on the vulcanization process as well as on the nature of the dispersing filler. Rubbers of greater inflexibility crystallize not so well. The active filler- and the channel soot supports the crystallization to a greater extent than chalk and silica gel. A deformation velocity of 100% per second guarantees the adiabatic course of the measu-

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Thermoelastic Phenomena in Rubbers out of Natural Caoutchous at 57-10-16/33
Cyclic Deformation.

rements without additional measures. It is determined that the mistakes in the quantitative analysis of the processes in rubbers in the case of adiabatic extension are connected with the ignorance of the real amount of the specific heat and with the inexactness in the determination of the prolongation in the case of shrinking which is especially essential. There are 3 figures and 5 Slavic references.

ASSOCIATION: Polytechnical Institute imeni Kalinin M. I., Leningrad (Poli-
tekhnicheskiy institut imeni M. I. Kalinina, Leningrad)

SUBMITTED: April 18, 1957

AVAILABLE: Library of Congress.

Card 2/2

Votinov, M. P.

57-11-17/33

AUTHORS: Votinov, M. P., and Kuvshinskiy, Ye. V.

TITLE: Regularities of the Transformation of Work into Heat at
Adiabatic Deformation of Rubbers Obtained from Butyl-caoutchouc
(Zakonomernosti prevrashcheniya raboty v teplo pri adiabaticheskom
deformirovani rezin iz butil-kauchuka).

PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 11, pp. 2554-2572 (USSR).

ABSTRACT: The thermoelastic properties of rubber produced from butyl-caout-
chouc according to the method of adiabatic extension were investi-
gated. The authors show that in the case of non-filled rubbers the
begin of crystallization occurs at an extension degree of $\lambda > 7$.
Vulcanization products with a gas-soot filling do not crystallize
at a deformation of up to $\lambda \approx 9,6$. The initial stages of deformation
are accompanied by a cooling-down of 1°C . The analysis given here
made it possible to prize the regularities in a rubber produced from
butyl-caoutchouc without filler in the case of extension as well as
to determine the lack of crystallization processes in rubbers with
soot filling up to 9-fold extension.
There are 1 figure and 3 Slavic references.

Card 1/2

57-11-17/33

Regularities of the Transformation of Work into Heat at Adiabatic Information
of Rubbers Obtained from Butyl-Caoutchouc.

ASSOCIATION: Polytechnical Institute imeni M. I. Kalinin (Politekhicheskiy
institut imeni M. I. Kalinina).

SUBMITTED: April 23, 1957.

AVAILABLE: Library of Congress.

Card 2/2

VOTINOV, M.P.; DEMIDENKO, N.I.

Temperature variation in the width of the spectrum of
electron paramagnetic resonance in the system titanium - oxygen
 TiO_x ($x = 1.5 \div 2.0$). Fiz. tver. tela 4 no.11:3277-3278
N 162. (MIRA 15:12)

1. Leningradskiy politekhnicheskii institut imeni
M.I. Kalinina.

(Paramagnetic resonance and relaxation)
(Excitons)

(Titanium oxide crystals)

h3131
S/181/62/004/011/033/049
B108/B102

24.7900

AUTHORS:

Votinov, M. P., and Demidenko, N. I.

TITLE:

Change with temperature of the width of the spectrum of electron paramagnetic resonance in titanium - oxygen systems

PERIODICAL:

Fizika tverdogo tela, v. 4, no. 11, 1962, 3277 - 3278

TEXT: The temperature dependence of electron paramagnetic resonance of the Ti^{3+} ions in TiO_x ($1.5 \leq x \leq 2.0$) was recorded down to nitrogen temperature (77°K). Similar tests have been made before (V. V. Antuf'yev et al. FTT, 4, 1496, 1962). The spectra were studied on a highly sensitive spectrometer with an h.f.-modulated magnetic field and with differential recording of the absorption lines. The width of the spectra at 77°K. varied between 40 and 70 oersted for different specimens. The temperature dependence of the line width is shown by curves in the figure, each numbered to indicate the value of x. The high temperature at which electron paramagnetic resonance of $TiO_{1.874}$ ceases to be observable (500°C) is associated with the fact that Ti^{3+} is in a low-symmetry crystal lattice

Card 1/3

Change with temperature of the...

S/181/62/004/011/033/049
B108/B102

(β -phase of the system TiO_x). The major contribution to the line width comes from spin-lattice relaxation. The spin-lattice relaxation time depends on the degree of reduction and may vary within the range of one order of magnitude. There is 1 figure.

ASSOCIATION: Leningradskiy politekhnicheskij institut im. M. I. Kalinina
(Leningrad Polytechnic Institute imeni M. I. Kalinin)

SUBMITTED: June 30, 1962

43123
S/181/62/004/011/023/049
B125/B186

24.7800

AUTHORS:

Votinov, M. P., and Demidenko, N. I.

TITLE:

Peculiarities of electron paramagnetic resonance spectra in titanium-containing ferroelectrics

PERIODICAL: Fizika tverdogo tela, v. 4, no. 11, 1962, 3211 - 3214

TEXT: It is shown that ferroelectrics of the types BaTiO_3 , BaTiO_3 (89.9%) + $(\text{ZrO}_2, \text{MgO})$, and SrTiO_3 contain paramagnetic particles with various spin-lattice relaxation times whose existence is said to depend on the composition of the original material and the annealing conditions. The effect of such particles on dielectric properties was studied by V. V. Antuf'yev et al. (FTT, 3, 206, 1961; Nauchno-tekhnicheskiy informatsionnyy byulleten' LPI im. M. I. Kalinina 1 (Radiofizika), 100, 1961). In the present paper, measurements of e.p.r. absorption spectra at various temperatures are reported. The width of the absorption lines of such paramagnetic particles incorporated in the crystalline phase of ferroelectrics may be used as indicator for structural transformations, i. e. for transitions from the ferroelectric to the nonferroelectric state. At -195°C .

Card 1/3

S/181/62/004/011/023/049
B125/B186

Peculiarities of electron...

the spectrum of BaTiO_3 consisted of two superimposed components: A which is assumed to be Ti^{3+} and B which might be an impurity ion. In the temperature range from -100°C to $+280^\circ\text{C}$ only a single symmetrical line of B could be observed. At 300°C , and even above 400°C , six weak narrow lines superimposed on the line B could be resolved. The e.p.r. spectrum of $\text{BaTiO}_3 + (\text{ZrO}_2, \text{MgO})$ showed a third component C ($g = 1.951$) at a temperature below -50°C . Its A and B lines were less distinct. Above 430°C also in this case six narrow superimposed lines could be resolved. The phase-sensitive component B could be observed from -195°C to 450°C . The e.p.r. spectrum of SrTiO_3 showed 7 lines at -195°C of varying resolutions. Above -60°C only the lines of the components B and D were left. The low-intensity lines $\alpha, \beta, \gamma, \delta$, symmetrically arranged with respect to the center of the spectrum, obviously represent the hyperfine structure of the spectrum of a particle with a nuclear spin of $3/2$, showing very strong spin-lattice interaction. It is assumed that each of the observed components corresponds with an individual particle. The particle B is obviously incorporated in the SrTiO_3 crystal lattice while the particle D is obviously not contained in the strontium compound. The particles A and B were observed in all three ferroelectrics. There are 2 figures.

Card 2/3

Peculiarities of electron...

S/181/62/004/011/023/049
B125/B186

ASSOCIATION: Leningradskiy politekhnicheskii institut im. M. I. Kalinina
(Leningrad Polytechnic Institute imeni M. I. Kalinin)

SUBMITTED: June 22, 1962

X

Card 3/3

43237
S/844/62/000/000/057/129
D204/D307

AUTHORS: Votinov, M. P., Khenokh, M. A., Kuzicheva, Ye.A, Yev-
dokimov, V. F. and Antuf'yev, V. V.

TITLE: The EPR spectra of γ irradiated solid carbohydrates

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khi-
mii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962,
335-338

TEXT: The EPR spectra of some dry, crystalline, mono-, di-, and trisaccharides and other high-molecular weight carbohydrates were studied in an effort to determine the radiochemical changes taking place. The spectra of (1) glucose, (2) fructose, (3) saccharose, (4) galactose, (5) raffinose, (6) mannite, (7) cellulose, and (8) cellobiose are illustrated, described and discussed. Thus e.g. (1) two types of radicals were found, one of which corresponded to a fission of a C-H bond; (2) evidence was obtained of interaction between an unpaired electron and 3 equivalent protons - the radical present was a secondary one; (3) the radicals formed by

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S/844/62/000/000/057/129
D204/D307

The EPR spectra ...

the fission of a 1,2-glucoside bond and by the splitting off of a H from a C; (4) the spectrum became symmetrical on storage in air at room temperature; (5) two types of radicals were present, formed by the fission of 1,2- and 6,1-glucoside bonds and by the splitting off of H's bonded directly to C-atoms; (6) an interaction was evident between an unpaired electron with 3 nonequivalent protons; (7) two types of radicals were detected, one of which was formed by a fission of a 1,4-bond; (8) two radicals were present, one being secondary. No EPR signal was detected from γ irradiated starch. The concentrations of radicals and the EPR spectra remained essentially unchanged over more than 6 months, at room temperature; the radicals disappeared when the carbohydrates were melted. The intensity of the EPR signals increased, slower than linearly, with increasing doses of irradiation. It is concluded that information concerning the radiochemical changes may be obtained by the EPR method. There are 2 figures.

ASSOCIATION: Leningradskiy politekhnicheskii institut im. M. I. Kalinina (Leningrad Polytechnical Institute im. M.I.)

Card 2/3

The EPR spectra ...

S/844/62/000/000/057/129
D204/D307

Kalinin); Institut tsitologii AN SSSR (Institute of
Cytology, AS USSR); Institut Vysokomelekulyarnykh
soyedineniy AN SSSR (Institute of High Molecular
Weight Compounds, AS USSR)

Card 3/3

S/844/62/000/000/070/129
D204/D307

AUTHORS: Lapinskaya, Ya. M., Khenokh, M. A., Votinov, M. P., Yev-
dokimov, V. F. and Antuf'yev, V. V.

TITLE: The action of γ radiation of Co^{60} on solid hippuric acid

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 403-408

TEXT: The effects of γ radiation on hippuric acid, benzoic acid, and glycine were studied in the presence of air. PhCOOH gave rise to $\text{PhCOO}^\bullet$ only, and glycine was radiolyzed to NH_3 and CH_2O , the extent of decomposition increasing with increasing dose of irradiation. Hippuric acid itself turned pink on exposure to γ rays, but the color disappeared on recrystallization or on heating to 130°C . The physical properties of hippuric acid remained unchanged after irradiation. The EPR spectrum showed 5 lines which corresponded to a H interacting with the N-nucleus and two other protons. The intensity of the lines rose with increasing dose. On heating the irradiated

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S/844/62/000/000/070/129
D204/D507

The action of ...

ted acid to 128°C one line of the EPR spectrum was seen to disappear; at 180°C only the central doublet remained, and decomposition set in at 210°C. The γ rays ionize and excite the molecules of the acid, which subsequently break up into stable free radicals. Thus the presence of the aromatic ring gives stability to hippuric acid w.r.t. γ radiation. There are 4 figures.

ASSOCIATION: Institut tsitologii AN SSSR; Leningradskiy politekhnicheskiy institut im. N. I. Kalinina (Institute of Cytology AS USSR; Leningrad Polytechnic Institute im. N. I. Kalinin)

Card 2/2

24.7900

AUTHORS:

Antuf'yev, V. V. (Deceased), Vasil'yev, Ya. V.,
Votinov, M. P., Kharitonova, O. K., and Kharitonov, Ye. V.

38911
S/181/62/004/006/017/051
B125/B104

TITLE:

Electron paramagnetic resonance in a titanium-oxygen system

PERIODICAL:

Fizika tverdogo tela, v. 4, no. 6, 1962, 1496-1499

TEXT: The state of trivalent titanium in the oxides $TiO_{1.5}$ - TiO_2 is investigated. The epr signal from Ti^{+3} can be observed in TiO_x powder at temperatures of from -70 to -100°C if $2.0 > x > 1.51$. The line width increases from 45-80 oe to 200-400 oe as temperature is raised from 77°K to 200-230°K, but the position of the lines does not change. The spin-lattice relaxation time τ_1 as determined from the width of the experimental absorption curve of Ti^{+3} is approximately $5 \cdot 10^{-9}$ sec at 77°K. τ_1 depends on temperature approximately as T^{-n} where $n \approx 1-2$. The epr signal intensity and the static magnetic susceptibility χ_0 likewise depend on the composition of the TiO_x system. In the initial section of the intensity curve, intensity

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S/181/62/004/006/017/051
B125/B104

Electron paramagnetic resonance...

$(h_2+h_1)/h_0$ increases owing to the increasing concentration of Ti^{+3} in the rutile-type lattice, where h_1 and h_2 are the moduli of the signal maximum and signal minimum and h_0 is the sum of the moduli. The peak on the intensity curve at $x \approx 1.93$ is due presumably to the formation of one or more compounds of the homologous Anderson series $TiO_{n/2n-1}$. Around $x \approx 1.8$, the g -factor changes considerably and the magnetically non-equivalent positions of Ti^{+3} pass over into equivalent positions. This region corresponds to the anomalies of the isotherms of static magnetic susceptibility. In the β -phase of the TiO_x system, the Ti^{+3} ions are ambient to low-symmetry neighborhood. At a low concentration, spin-spin interaction in the TiO_x system is of minor importance. Intensity and asymmetry of the signal decrease linearly to zero in the range of γ -phase. The g -factor of the epr signal in the β - and γ -phases changes from 1.949 to 1.963. Absorption in T-80 (T-80) ceramic ($g = 1.93$ and $g = 1.97$) at liquid nitrogen temperature is caused by Ti^{+3} in various crystalline

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Electron paramagnetic resonance....

S/181/62/004/006/017/051
B125/B104

surroundings. The physical and chemical processes in polycrystalline dielectrics containing less than 87 % titanium oxides change the intensities of the epr spectra by about one order of magnitude. There are 1 figure and 1 table. The most important English-language reference is: P. Chester. Bull. Amer. Phys. Soc., 5, 73, 1960.

SUBMITTED: January 22, 1962

Card 3/3

VOTINOV, M.P.; LAPINSKAYA, Ye.M.; KHENOKH, M.A.; YEVDOKIMOV, V.F.;
ANTUF'YEV, V.V.; STAFEYEV, A.V.

Electron paramagnetic resonance spectra of hippuric acid irradiated
by gamma rays of Co^{60} . Radiobiologiya 1 no.1:149-150 '61.
(MIRA 14:7)

1. Politekhnikheskiy institut im. M.I.Kalinina i Institut tsitologii
AN SSSR, Leningrad.

(PARAMAGNETIC RESONANCE AND RELAXATION)

(HIPPURIC ACID)

(GAMMA RAYS—PHYSIOLOGICAL EFFECT)

ANTUF'YEV, V.V.; VOTINOV, M.P.; KUVSHINSKIY, Ye.V.; SAVIN, A.G.

Studying the aging processes of titanium-containing ceramics by means of electron paramagnetic resonance. Fiz. tver. tel. 3 no.1:286-288 Ja '61. (MIRA 14:3)

1. Politekhicheskiy institut im.M.I.Kalinina i Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad.
(Titanium oxide--Spectra) (Paramagnetic resonance and relaxation)

S/181/61/003/001/038/042
B102/B204

AUTHORS: Antuf'yev, V. V., Votinov, M. P., Kuvshinskiy, Ye. V., and Savin, A. G.

TITLE: Investigation of the ageing processes of titanium-containing ceramics by means of electron paramagnetic resonance

PERIODICAL: Fizika tverdogo tela, v. 3, no. 1, 1961, 286-288

TEXT: It was the purpose of the present paper to study the electrical ageing of titanium-containing ceramics by means of electron paramagnetic resonance (epr). The investigations were carried out with capacitor ceramics (87% TiO₂, 5% ZrO₂, 2% BaCO₃, 6% Al₂O₃, and 6% SiO₂ paste, burned in the usual manner); the specimens had the shape of tubes (28 mm long, wall thickness 1 mm) and were partly electrically aged (180°C, 700 v constant voltage). The aged specimens were denoted by K_a, and those left in their original shape, by K₀. For the investigations, an epr radio-spectrometer with h-f modulation (1 Mc/sec) of the magnetic field was used; the epr signal was recorded by a recorder in the form of the first

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Investigation of the ageing processes...

S/181/61/003/001/038/042
B102/B204

derivative of the absorption curve. In the case of a fixed frequency of the shf generator of 9300 Mc/sec, the field could be varied between 1000 and 4000 gauss. At 300°K, no difference could be found between the epr spectra of K_0 and K_a ; in both cases only 1 weak broad line (with $g \approx 4.14$) was found. Therefore, all further experiments were carried out at 77°K. At this temperature, K_0 showed a complex spectrum between 1000 and 4000 gauss; the spectrum of K_a was similar, but the lines with $g \approx 1.97$ and 1.93 were 1.5 times more intense. This part of the spectrum was more accurately investigated. During ageing, the concentration of paramagnetic defects increased, and the electrical conductivity was 100-1000 times increased. An attempt is now made to find out why, in spite of this considerable increase of conductivity, the intensity of epr signals increased only 1.5 times. The opinion is widespread that ageing of titanium ceramics is related to a reduction of titanium; thus, K_0 ceramics, which had been chemically reduced in different ways, were investigated. The degree of reduction was determined from the time for which the specimens had been heated in CO at 900°C. After having been heated for 10 minutes in CO (K_0 -10), K_0 had an epr spectrum which was

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S/181/61/003/011/038/042
B102/B204

Investigation of the ageing processes...

exactly the same as that of the original K_0 . With further reduction, intensity and width of the line with $g \approx 1.93$ increased, the line with $g \approx 1.97$ remained unchanged in contrast to the effect produced by electric ageing. After 60 minutes of reduction (K_0-60) the line with $g \approx 1.93$ was so broad that it overlapped that with $g \approx 1.97$. The concentration of paramagnetic defects in K_0-60 was higher by 3 orders of magnitude than in K_0 . Thus, in the case of chemical reduction, only the concentration of 1 type of paramagnetic defects is increased, in electric ageing, however, the concentration of 2. In the pure components of the ceramics, no epr signal was found, not even (TiO_2) in the case of irradiation with 7.10^6 r γ -radiation from Co^{60} . The authors thank V. Ya. Kunin for his collaboration, and I. D. Fridberg and K. Ye. Lisker for placing the material at their disposal. There are 1 figure and 3 Soviet-bloc references. ✓

Card 3/4

Investigation of the ageing processes...

8/181/61/003/001/038/042 .
B102/B204

ASSOCIATION: Politekhnikheskiy institut im. M. I. Kalinina (Polytechnic
Institute imeni M. I. Kalinin); Institut vysokomolekulyarnykh
soyedineniy AN SSSR Leningrad (Institute of High-molecular
Compounds, AS USSR, Leningrad)

SUBMITTED: July 21, 1960

Card 4/4

VOTINOV, M.P.; SUBBOTIN, S.A.; SAMOLETOVA, V.V.; KOPYTOVSKAYA, S.P.; KUVSHINSKIY, Ye.V.

Investigating the crystallizability of "SKI" vulcanized rubber by the method of adiabatic stretching. Vysokom.sped. 1 no.7:1016-1020 J1 '59. (MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka.

(Rubber, Synthetic)

OSTANIN, V.Ye.; FROLOV, V.A.; VOTINOV, M.V.

Large hail in the Komi A.S.S.R. Vest. Mosk. un. Ser. 5: Geg.
18 no.4:72-73 J1-Ag'63. (MIRA 17:2)

LOTINOV, N.P.

Sexual maturation of the whitefish *Coregonus muksun* (Pall.) under conditions of interrupted spawning migration. Dokl. AN SSSR 134 no.3: 699-701 S '60. (MIRA 13:9)

1. Ob'-Tazovskoye otdeleniye Gosudarstvennogo nauchno-issledovatel'skogo instituta ozernogo i rechnogo rybnogo khozyaystva. Predstavleno akad. Ye.N. Pavlovskim.
(Ob' River--Whitefishes.)

VOTINOV, Nikolay Petrovich; YABLOKOVA, K.M., red.; OVECHKIN, L.T.,
tekhn. red.

[Preserve and increase fish stock in the Ob'-Irtysh basin]
Berech' i priumnozhit' rybnye zapasy Ob'-Irtyshskogo bas-
seina. Tiumen', Tiumenskoe knizhnoe izd-vo, 1960. 40 p.
(MIRA 17:3)

69694
S/126/60/009/G3/017/033
E091/E435

181130

AUTHORS: Agapova, N.P., Butra, F.P. and Votinov, S.N.
TITLE: On the Nature of Excess Phases in a Chromium-Nickel-Molybdenum-Niobium Stainless Steel
PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 3, pp 422-425 (USSR)

ABSTRACT: The steel investigated by the authors, the chemical composition of which is shown in the Table on p 422, belongs to the group of stainless steels having a stable austenite structure which does not undergo a $\gamma \rightarrow \alpha$ change even at considerable degrees of cold compression and prolonged soaking at temperatures of up to 750°C. However, it exhibits excess phases in its structure, the quantity of which varies in relation to the heat treatment given. The authors have investigated the nature of these phases. Specimens of steel were austenitized at 950 to 1300°C, followed by water-quenching and subsequent soaking for 100, 400 and 1000 hours at temperatures of 500, 600 and 750°C. Fig 1 shows the change of impact resistance, specific electrical resistance, hardness and grain size with quenching

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S/126/60/009/03/017/033
E091/E435

On the Nature of Excess Phases in a Chromium-Nickel-Molybdenum-Niobium Stainless Steel

temperature; Fig 2 shows the change in UTS, % elongation, impact resistance and hardness in relation to annealing temperature (ageing temperature) in 1000 hours. After heat treatment, the specimens were dissolved electrolytically and the excess phases liberated; the latter were investigated by chemical and X-ray analysis (Ref 1). In Fig 3 and 4, from the results of chemical analysis, the change of alloy element content in the electrolytic deposit and the total weight of the deposit in relation to the quenching and ageing temperatures is shown. By means of X-ray structural analysis it was found that the electrolytic deposit of the excess phases obtained from specimens quenched from 1200°C and above, consists primarily of NbC (Fig 5a), having a lattice parameter of 4.42 Å. As the quenching temperature is lowered, the % carbide in the deposit decreases (Fig 3) and the quantity of the intermetallic compound (MoNb)Fe₂ increases (Ref 2); the latter has a MgZn₂ type of structure with lattice

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S/126/60/009/03/G17/033

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On the Nature of Excess Phases in a Chromium-Nickel-Molybdenum-Niobium Stainless Steel

parameters of $a = 4.77 \text{ kX}$ and $c = 7.80 \text{ kX}$. An inflection in the "total weight" curves for the % element content in the electrolytic deposit can be observed at 1050 to 1150°C. This is evidently associated with solution of the intermetallic compound at these temperatures. The transition of the alloying elements from the dispersed phases to the solid solution in this temperature interval is accompanied by some decrease in hardness and increase in specific electrical conductivity and specific impact resistance of the metal. The electrolytic precipitate of specimens, quenched from 1150°C and subsequently annealed for 100, 500 and 1000 hours at 750°C and for 1000 hours at 600°C, consists primarily of an intermetallic compound of the same structural type but the lattice parameters decrease to $a = 4.755 \text{ kX}$ and $c = 7.738 \text{ kX}$; in the X-ray photographs of such specimens, lines corresponding to large reflection angles are widened considerably due to changes in the unit cell dimensions (Fig 5b). The X-ray

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S/126/60/009/03/017/033
E091/E435

On the Nature of Excess Phases in a Chromium-Nickel-Molybdenum-Niobium Stainless Steel

photographs were taken in K-Cr rays. Lengthy annealing at 500°C does not lead to separation of excess phases; at 600°C the process proceeds much more slowly than at 750°C. The chemical analysis shows a sharp decrease in Nb and an increase in Mo, Cr and Fe in the precipitate. These results enable one to assume that the intermetallic compound must correspond to the composition $\text{Mo}(\text{Fe}, \text{Cr})_2$. The molybdenides thus separating cause some change in hardness, UTS, % elongation and impact resistance of the steel (see Fig 2). There are 5 figures, 1 table and 2 Soviet references.

This is a slightly abridged translation.

SUBMITTED: November 9, 1959

Card 4/4

YOTINOV, V.P.; DEMIDENKO, N.I.

Characteristics of the spectra of electron paramagnetic
resonance in ferroelectric ceramics containing titanium.
Fiz. tver. tela 4 no.11:3211-3214 N '62. (MIRA 1:12)

1. Leningradskiy politekhnicheskoy institut imeni
M.I. Kalinina.

(Ferroelectric substances)

(Titanium)

(Paramagnetic resonance and relaxation)

BOLDYREV, V.V.; ZAKHAROV, Yu.A.; LYKHIN, V.M.; VOTINOVA, L.A.

Effect of the addition of cadmium ions on the thermal stability of silver oxalate. Kin.i kat. 4 no.5:672-682 S-O '63. (MIRA 12:12)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki, elektroniki i avtomatiki pri Tomskom politekhnicheskoye imeni Kirova.

ZAKHAROV, Yu.A.; SAVEL'YEV, G.G.; BOLDYREV, V.V.; VOTINOVA, L.A.

Changes in the physicochemical properties of solids under the effect of additions. Part 3: Some properties of silver azide containing Pb^{++} and CO_3^{--} additions. Kin. i kat. 5 no. 3: 807-814 S-O '64. (MIRA 17:12)

1. Tomskiy politekhnicheskiy institut imeni Kirova.

ACCESSION NR: AP5007573

8/0020/65/160/005/113/1137

45

44

AUTHOR: Rarevskiy, A. V.; Maudlin, G. B.; Boldvrev, V. V.; Vorinova, L. A.

SUBMITTED: 21 Jul 64

ENCL: 00

SUB CODE: SS, TD

Carry 2/2

RAYEVSKIY, A.V.; MANELIS, G.B.; BOLDYREV, V.V.; VOTINOVA, L.A.

Role of dislocations in the thermal decomposition of ammonium perchlorate crystals. Dokl. AN SSSR 160 no.5:1136-1137 F '65.
(MIRA 18:2)

1. Institut khimicheskoy fiziki AN SSSR. Submitted August 3, 1964.

ZAKHAROV, Yu.A.; BOLDYREV, V.V.; IYKHIN, V.M.; VOTINOVA, L.A.;
SAVEL'YEV, G.G.; BREGER, A.Kh.

Study of the effect of preliminary irradiation on the thermal
degradation of silver oxalate containing cadmium admixture.
Dokl.AN SSSR 145 no.1:122-124 J1 '62. (MIRA 15:7)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki, elektroniki
i avtomatiki pri Tomskom politekhnicheskoye imeni S.M.Kirova
i Fiziko-khimicheskiy institut imeni L.Ya.Kapova. Predstavleno
akademikom M.M.Dubininym.
(Silver oxalate) (Cadmium) (Radiation)

SOV/78-4-6-35/44

5(4) 5(2)
AUTHORS:

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TITLE:

The Solubility of Iodine in Iodide Solutions of the Rare Earths Elements (Rastvoreniye yoda v rastvorakh yodidov redkozemel'nykh elementov)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 6, pp 1428 - 1430 (USSR)

ABSTRACT:

The solubility of iodine in iodide solutions of lanthanum, cerium, praseodymium, neodymium, and samarium was determined. The optical density in the isomolar solutions of the iodides of the rare earth elements was measured according to the method of Ostromyslenkiy-Job, and the existence of the polyiodides of lanthanum and cerium was detected. The investigation results of the solubility of iodine in the iodide solutions of lanthanum and cerium at 20° are given in table 1. The solubility of iodine in 0.17 and 0.34 mol iodide solution of the rare earth elements of the cerite group is given in table 2. The results show that the solubility of iodine rises in the iodide solutions of lanthanum and cerium with the increase of the iodide concentration. The data of table 2 show that the solubility of

Card 1/2

The Solubility of Iodine in Iodide Solutions of
the Rare Earths Elements

SOV/78-4-6-35/44

Iodine is reduced with the reduction of the ionic radius of the rare earth elements. The solubility of iodine increases with the rise of temperature. The solubility of iodine in solutions of lanthanum and cerium increases with the rise of their concentration under formation of polyiodides. The composition of the polyiodides was determined. The composition- and the optical diagram of the systems CeJ_3-J_2 and LaJ_3-J_2 are given in figures 1 and 2. Both diagrams show a maximum optical density in the case of the following ratio of the components: $MeJ_3:J_2 = 1:9$. The polyiodides $Me(I_7)_3$ were detected in lanthanum and cerium. There are 2 figures, 2 tables, and 5 references, 4 of which are Soviet.

SUBMITTED: March 25, 1958

Card 2/2

YOTINOVA, V.V.; IGNATOV, D.V.

Investigating diffusion processes of iron and chromium in
single crystals of corundum and ruby. Trudy Inst. met.
no.8:263-268 '61. (MIRA 14:10)

(Metal crystals)
(Diffusion coatings)

VOTINOV, Ye.N., inzh. (Alapayevsk)

Rail welding on narrow-gauge railroads. Put' i put. khoz, 7
no.11:8-9 '63. (MIRA 16:12)

RAZIN, P.S., dotsent; FILIMONOVA, A.Ya.; VOTINOVA, Ye.P.;
MIKHAYLICHENKO, S.I. (Vladivostok)

Some problems in the pathogenesis of pneumonia in the Maritime
Territory. Klin.med. no.4:43-45 '62. (MIRA 15:5)

1. Iz Vladivostokskogo meditsinskogo instituta (dir. - dotsent
V.M. Zhivoderov).
(MARITIME TERRITORY--PNEUMONIA)

VOTINTSE V, K. K.

28957. VOTINTSE V, K. K. O Prichinayh Obrazovaniya Blinchatogo L'da na oz. Baykal Priroda, 1949, No. 9, s. 57-58.

SO: Letopis' Zhurnal'nykh Statey, Vol. 39, Moskva, 1949

2-Vinylfuran. M. M. Kotov, A. J. Yotlavsky and P. S. Florinskii. *J. Applied Chem.* (U. S. S. R.) 14, 181-8 (in French, 1941) (1941).—Vinylfuran was prepd. from 2-furaldehyde (I), which on being condensed with NaOAc in the presence of Ac_2O forms 2-furanacrylic acid (II) in the thermal decompn. of which is obtained 2-vinylfuran (III). It is prepd. as follows: 100 g. I is placed in a 1.5-2-l. round-bottom flask together with 200 g. Ac_2O and 200 g. NaOAc. The mixt. is heated for 11 hrs. on an oil bath to 170°, followed by treatment with hot H_2O , and filtration for the removal of resins, yielding a yellow cryst. ppt. which is wpl. after cooling. The yield of the dist. product, m. 139-40°, is 120-25 g. A 150-ml. Wurta flask is charged with 100 g. II and is gradually heated to 250-255°. III distils over as a yellow oil with a small amt. of water. The product is treated with a small amt. of caustic for the removal of CO_2 and then with H_2O until neutral, followed by drying over $CaCl_2$ and distn. The yield was 42% of a 99.5% pure III. The distn. flask contains 45 g. of a brownish solid resin, m. 102°, which is easily sol. in C_6H_6 , forming a film after the evapn. of the latter. It is evidently a polymer of III. If when heated to 100-150° is not polymerized in the absence of a catalyst, but at 200° resinification takes place with evolution

RCO₂H and RAc. Exposure of I to the air for 3 months gives a titrat. of RCO₂H and RAc and, in 1 expt., a very small amt. of a compd. $C_{11}H_{10}O_4$, m. 103-4°, which may be the impure peroxide. Heating 5 g. of I with MnO_2 -HCl for 13 hrs. gives 4.2 g. of α -(2-methyl)propionic acid (III), Mp 73.5-74.5°; III does not decarboxylate $KMnO_4$ and does not form an acetate. Reducing III with $FeSO_4$ for 13 hrs. gives a nearly quant. yield of I. III (4 g.) and 30 cc. aq. H_2PO_4 , reduced 7 hrs., give 0.8 g. of RII and 0.5 g. of α -(2-methyl)propionic acid, m. 104-5°. III. 1,2-Diaryl-1-propen-1-ols. Reynolds, C. Fummi and Carleton A. Spratt. *Ibid.* 2043 4.—Isomeric

$Ph_2C=CH-CH_2OH$ (15%), $Ph_2C=CH-CH_2OH$ (15%), drying oil (5%). Peroxides and alkalis have little influence on the polymerization, while halogen compds. accelerate the process (HCl , $SbCl_5$, $SnCl_4$, $SiCl_4$, etc.). In the presence of catalysts the product was sol. in most solvents. The dielec. properties were tested by effecting a partial polymerization in ampoules (with or without catalyst), placing the semi-finished product (dissolved in C_6H_6 or $PhMe$) on thin iron sheets to effect complete polymerization in the form of films. The dielec. losses of these films fluctuated from $\tan \delta = 7.5 \times 10^{-6}$ to $\tan \delta = 2 \times 10^{-6}$, depending evidently upon the structure of the III, the nucleus of which has 1 atom of O. A. A. Boettling

VOTINTSEV, A.M., starshiy prepodavatel'

Calculations of transverse holding booms for narrowing sections
of rivers. Trudy STI 37:182-188 '64. (MIRA 18:5)

PRAVDIN, L.F.; NEKRASOV, V.I.; NIKONCHUK, V.N.; VOTINTSEV, A.M.

Problems of floating larch. Trudy Inst. lesa 45:145-165 '58.
(MIRA 11:11)

(Larch)

(Lumber--Transportation)

VOTINTSEV, P., gvardii podpolkovnik

Electromechanical target installation. Voen. vest. 38 no.1:69-71
Ja '59. (MIRA 12:7)

(Targets (Military science))

VOTINTSEV, F.I., starshiy master (g. Noginsk)

Grounding of the guard wires of 400-500 kv. overhead power transmission lines. Energetik 13 no.10:24-26 0 '65.

(MIRA 18:10)

VOTINTSEV, F.I., inzhener.

Quality of connector installation on steel-aluminum wires.
Energetik 3 no.12:24-25 D '55. (MLRA 9:2)
(Electric Lines)

VOTINTSEV, F.I.

VOTINTSEV, F.I.

AID P - 3715

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 20/25

Author : Votintsev, F. I., Eng.

Title : The quality of joints on steel-aluminum wires

Periodical : Energetik, 12, 24-25, D 1955

Abstract : The author discusses the methods of joining wires in newly constructed electric power transmission lines. He criticizes the methods used which often lead to severe damage and suggests the use of improved methods and of periodic control of joints. One table, 2 drawings.

Institution : None

Submitted : No date

VOTINTSEV, F. I., ENG.

Electric Lines

Pole of the balanced beam type for grounding connectors. Rab. energ. 2 no. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

2

VOTINTSEV, P.I., inzhener.

Installing transmission line cables at crossings of two-wire lines. Ener-
getik 1 no.1:19-20 Je '53. (MIRA 6:8)

(Electric lines--Overhead)

C.A.

Role of sponges in the silica cycle in the waters of Lake Balkal. K. K. Kotlyarsky. Doklady Akad. Nauk S.S.S.R. 62, 661-3 (1948).—The fact that the water of Lake Balkal contains markedly less SiO_2 (2-4 mg./l.) than its tributary rivers (7-10 mg./l.) is attributed to the influence of siliceous sponges on the geochem. SiO_2 cycle. Analyses are given of 5 sponges of the Balkal. *Lubomirskia baicalensis* and *Baicalospongia bacillifera* are the most important. Si, Fe, Al, Cr, Ca, Mg, Cu, Ni, Pb, Zn, Mn, N, P, and I were det'd. The max. SiO_2 content is about 30% of the dry org. material. The dead sponges form on the bottom of the lake a typical siliceous sediment. W. Eitel

VOTINTSEV, K. K.

USSR/Medicine - Plankton
Medicine - Nitrogen Compounds

Dec 48

"Observations on the Regeneration of Biogenous
Elements During Decomposition of Epischura Balcalen-
sis Sars.", K. K. Votintsev, 4 pp

"Dok Ak Nauk SSSR" Vol. LXIII, No. 5

Studied process of decay position in predominant form
of zooplankton from Lake Baykal, Epischura balcalen-
sis. Since Votintsev was interested chiefly in re-
generation of nitrogen compounds and phosphorus, ob-
servations were limited to changes of NH_4 , NO_2 , NO_3 ,
 PO_4 and SiO_2 . Determines time intervals for
ammonification and mineralization of nitrogen-
35/49750

USSR/Medicine - Plankton (Contd)

Dec 48

containing compounds. Submitted by Acad L. S.
Berg, 28 Oct 48.

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