

L 11323-65

ACCESSION NR: AT4040736

cloud albedo caused by a sharp increase in the absorption of radiation by liquid water, and when $\lambda = 3$, the cloud is almost black. A method for the approximate estimation of the spectral albedo of ice-crystal clouds is proposed. It is pointed out that when ice clouds are observed from above, the spectral composition of ascending radiation will depend not only on the cloud's spectral albedo, but also on that of the underlying surface. A computation based on an assumption of grayness of an underlying surface, both ground and atmospheric, does not provide a correct picture of the spectral structure of the radiation from a cloud. Orig. art. has: 1 figure, 1 table, and 4 formulas.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory)

SUBMITTED: 00

ATD PRESS: 3101

ENCL: 00

SUB CODE: 23

NO REF SOV: 007

OTHER: 000

Card 2/2

NOVOSEL'TSEV, Ye.P.; TER-MARKARYANTS, N.Ye.

Brightness variation when crossing the water--air interface
in the presence of turbulence. Trudy GCO no. 153:121-124 '64.
(MIRA 17:9)

L 3881-66 ENT(1) CW

ACCESSION NR: AT5025229

UR/2531/65/000/170/0088/0092 38

AUTHOR: Novosel'tsev, Ye. P. 35
41,55 B+1

TITLE: Selection of a spectral range when using a radiometer for determining the temperature of the underlying surface and that of clouds

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 170, 1965. Issledovaniye radiatsionnykh protsessov v atmosfere (Investigation of radiation processes in the atmosphere), 88-92

TOPIC TAGS: atmospheric cloud, IR radiation, earth radiation, radiometer 12,44,55

ABSTRACT: The author examines the problem of choosing the optimum spectral interval for radiometric measurement of the temperature of the underlying surface and that of clouds. In making this selection, consideration is given to the questions of which spectral interval is most reliable from the standpoint of measuring departing radiation at a rather small solid angle, in which spectral regions is the radiation reading distorted least, and in which intervals is the radiation intensity most sensitive to small changes in temperature. It is found that the radiation emitted by a black body in the 8-12 μ region considerably exceeds the corresponding value for the

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3.5-4.0 μ range. However, cooled photoresistors can be used when measuring radiation in the 3.5-4.0 μ range, which are much more sensitive receivers than the bolometers required in the longer wavelength interval. Thus the two spectral regions are approximately equivalent in this respect. These two intervals are also found to be approximately equal with regard to the distorting effect of atmospheric gases. It is shown that radiation temperature measurements in the 3.5-4.0 μ range are most sensitive to temperature changes. Thus this spectral interval is recommended both for determining radiation temperature contrast and for detecting cloudiness. Orig. art. has: 5 formulas, 2 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya (Main Geophysical Observatory)

SUBMITTED: 00

ENCL: 00

SUB CODE: ES

NO REF SOV: 002

OTHER: 002

BVK

Card 2/2

L 27284-66 EWT(1)/FCC GW

ACC NR: AR6014561

SOURCE CODE: UR/0169/65/000/011/B027/B027

AUTHOR: Novosel'tsev Ye. P.

TITLE: Selection of the spectral range using a radiometer for determining the temperature of the underlying surface and clouds

SOURCE: Ref. zh. Geofizika, Abs. 11B193

REF SOURCE: Tr. Gl. geofiz. observ., vyp. 170, 1965, 88-92

TOPIC TAGS: terrestrial radiation, atmospheric radiation, spectral range, cloud temperature

ABSTRACT: An analysis has been made of the problem of selection of the best spectral range for using a radiometer to determine the temperature of the underlying surface and clouds. It was shown that measurement of radiation in the 3.5—4.0-mk area has a definite advantage in comparison with measurements in the area of the window of transparency at 8—12 mk. [Translation.] [NT]

SUB CODE: 04/ SUBM DATE: none

Card 1/1 CC

UDC: 551.525

NOVOSEL'TSEV, Ye.

Politics of revenge and aggression. Komm. Vooruzh. Sil 4 no.18:
79-83 3 '64. (MIRA 17:9)

NOVOSEL'TSEV, Yu.

Motorboat becomes a propeller. NTO 4 no.9:48 S '62.

(MIRA 16:1)

1. Akademiya pedagogicheskikh nauk RSFSR.
(Tugboats)

NOVOSEL'TSEV, Yuriy Aleksandrovich, inzh.-transportnik; POZHIDAYEVA,
M.G., red.; ROZEN, E.A., tekhn. red.

[Highways of the future] Magistrali griadushchego. Moskva,
Izd-vo "Sovetskaya Rossiya," 1962. 180 p. (MIRA 15:1C)
(Transportation)

MIKHAYLOV, N. N.; NOVOSELTSEV, Z. N.

"prediction for an optimal steering of an object containing an oscillating member by means of an analog computer."

report submitted for 4th Intl Conf, Intl Assn for Analog Computation, Brighton, UK, 14-18 Sep 64.

NOVOSEL'TSEVA, A. A.

1260. Anglo-Amerikanskaya bor'ba za neft'na blizhnem i srednem Vostoke posle vteroy mirovoy voyny. M., 1954. 16s. 22sm. (Mosk. ordena Lenina gos. un-t im. N. V. Lomonosova). 110 ekz. B. to 54-53731

SO: Knishnaya Letopis. Vol. 1. 1955

KRYLOVA, I.L.; NOVOSEL'TSEVA, I.F.

A survey of vegetation of the Kerch Peninsula. Bot.zhur. 44
no.11:1616-1624 N '59. (MIRA 13:4)

1. Institut lesa i drevesiny Akademii nauk SSSR, g.Krasnoyarsk.
(Kerch Peninsula--Plant communities)

L 2121-66 EWT(m)/EWP(1)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c) MJW/JD
ACCESSION NR: AP5022381 UR/0136/65/000/009/0075/0079
669.295:621.78

AUTHOR: Khorev, A. I.; Glazunov, S. G.; Zilova, T. K.; Novosil'tseva,
N. I.; Geras'kova, L. V. 363

TITLE: Effect of heat treatment⁶ and cladding⁶ on the strength of VT14,
VT15, and VT16 titanium alloys in biaxial tension

SOURCE: Tsvetnyye metally, no. 9, 1965, 75-79

TOPIC TAGS: titanium alloy, titanium clad alloy, alloy burst strength,
alloy property, VT14 alloy, VT15 alloy, VT16 alloy

ABSTRACT: Specimens of variously heat treated VT14⁶, VT15⁶, and VT16⁶
titanium alloys, some of them clad with VT1⁶titanium, were tested under
conditions of biaxial tension. Sheet specimens 210 x 210 x 0.8 mm
were fully annealed, formed into spherical segments 9-20 mm high, heat
treated (annealed or annealed, water quenched, and aged), and subjected
to burst tests. It was found that the burst strength of all the alloys
tested is higher than the tensile strength. The highest burst strength,
180 kg/mm², was exhibited by titanium-clad VT15 alloy annealed at 800C,

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ACCESSION NR: AP5022381

water quenched, and aged 25 hr at 480C and 15 min at 560C. Cladding had no effect on the strength of VT14 alloy, but increased the strength of VT15 and VT16 alloys. In all alloys, however, cladding greatly improved ductility. Orig. art. has: 2 figures and 2 tables. [AZ]

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM, AS

NO REF SOV: 001

OTHER: 000

ATD PRESS: 4/17

Card 2/2

NOVOSEL'TSEVA, N.P.

Experiment in raising herbaceous forest plants in open plots.
Bot. zhur. 44 no.7:974-975 JI '59. (MIRA 12:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh
i aromaticeskikh rasteniy, stantsiya Bitsa Moskovskoy oblasti.
(Botany--Ecology)

NOVOSELTSEVA, N.P.

Larkspur (*Delphinium elatum* L.), a new medicinal plant. Ap. delo 10
no.5:20-24 S-O '61. (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh
i aromaticeskikh rasteniy.
(LARKSPUR)

NOVOSEL'TSEVA, N.P.; SELIVANOVA, T.M.

Elatine content of larkspur *Delphinium elatum* L. in relation to the developmental phase and age of the plant. Med. prom. 17 no.6:44-45 Je'63 (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticeskikh rasteniy.

NOVOSEL'TSEVA, N.P.

Some characteristics of the anatomical structure of
Delphinium elatum L., Delphinium dictyocarpum DC, and
Delphinium confusum M. Pop. Rast. res. 1 no.2:246-251
'65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarst-
vennykh i aromaticheskikh rasteniy, Moskva.

RYBALKO, K.S.; PEREL'SON, M.Ye.; SHRETER, A.I.; VLASOV, M.I.; GUBANOV,
I.A.; PIMENOV, M.G.; PIMENOVA, R.Ye.; NOVOSEL'TSEVA, N.P.;
SEREBRYAKOVA, A.A.

Preliminary evaluation of plants of the family Compositae
for their sesquiterpenic lactone content. Apt. delo 14
no.5:37-41 S-O '65. (MIRA 18-11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh
i aromaticeskikh rasteniy, Bittsa, Moskovskoy oblasti.

S/271/63/000/001/047/047
D413/D308

AUTHOR: Novosel'tseva, Zh.A.

TITLE: The simulation of a controlled delay

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 1, 1963, 63, abstract 1B348 (In collection: Avtomat. regulirovaniye i upr. M., AN SSSR, 1962, 274-280)

TEXT: The author observes that in the solution of certain problems, e.g. in the analysis of systems containing long pipe runs and pumps with variable output, one needs to reproduce a variable delay whose magnitude depends on a certain signal and describes a device that realizes this delay. The device is based on memory retention of the signal on capacitors which are switched by step-by-step selector switches. To improve the accuracy polystyrene capacitors with high insulation resistance are used, and also the capacitor leads are soldered onto the selector segments, which are separated from one another by an earthed level. For read-out, the signal

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S/271/63/000/001/047/047
D413/D308

The simulation of ...

from the output of the step-by-step selector is taken to a cathode follower, which has: (1) high input and low output impedance; (2) a linearity range up to 100 V; (3) response symmetrical about zero; (4) low zero drift. The cathode follower has two stages using 6H1П (6N1P) and 6H2П (6N2P) tubes. A special control device provides for read-out of the signal after a variable time interval. It contains an integrator to which the controlling signal is fed. This signal energizes a relay which actuates the selector, and when the integrator output voltage reaches 100 V the selector makes a step. Here the instant at which the selector reads out the signal (i.e. the delay time) depends on the integrator time constant and the magnitude of the controlling signal. By varying this magnitude one can alter the delay time over a wide range. A device is described which gives linear interpolation of the stepped curve that appears at the output of the cathode follower. A new interpolation formula is proposed which allows for the introduction of an additional multiplier unit into the circuit. It is noted that for a given accuracy of reproduction of the variable delay, the range of variation of signal frequency is considerably narrower than when a

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S/271/63/000/001/047/047
D413/D308

The simulation of ...

fixed delay is simulated. The developed equipment contains three cathode followers and two computing amplifiers. The author indicates that the amplitude error in the simulation does not exceed 3%. 5 figures. 1 reference.

[Abstracter's note: Complete translation]

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ACCESSION NR: AP4015307

S/0280/64/000/001/0187/0195

AUTHOR: Mikhaylov, N. N. (Moscow); Novosel'tseva, Zh. A. (Moscow)

TITLE: Optimum transient processes in a prediction system

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 1, 1964, 187-195

TOPIC TAGS: automatic control, third order automatic control, predictor automatic control, oscillatory element automatic control, oscillatory element plus integrator control

ABSTRACT: This article presents a mathematical description of phase trajectories and an analytical method for their construction in the case of transition of an oscillatory-element-and-integrator third-order system from one steady state to another. Trajectories of the state point in a phase plane are given as are formulas for the number of sign changings, duration of transients, etc. The prediction method is suggested for a practical realization of the optimum control.

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ACCESSION NR: AP4015307

its advantage lying in that only a knowledge of the law of oscillatory-element control is necessary. An experimental verification of a third-order prediction control scheme included: (1) a conservative element plus an integrator; (2) an oscillatory element plus an integrator. Oscillograms of the transient processes in the simulator used are supplied. Orig. art. has: 8 figures and 23 formulas.

ASSOCIATION: none

SUBMITTED: 23Apr63

DATE ACQ: 12Mar64

ENCL: 00

SUB CODE: CG, IE

NO REF SOV: 002

OTHER: 001

Card 2/2

NOVOSEL'TSEVA, Zh.A. (Moskva)

Modeling of a controlled delay using standard computing elements. Avtom.
i telem. 25 no.1:91,95 Ja '64. (MIRA 17:2)

L 18857-65 ASD(a)-5/AEDC(a)/AFETR/AFMDC/RAEM(d)/ESD(dp)
ACCESSION NR: AP4041465 S/0103/64/025/006/0896/0908

AUTHOR: Gul'ko, F. B.; Kogan, B. Ya. (Doctor of technical sciences);
Lerner, A. Ya. (Doctor of technical sciences); Mikhaylov, N. N.;
Novosel'tseva, Zh. A.

TITLE: Prediction method with high-speed analog computers and its application

SOURCE: Avtomatika i telemekhanika, v. 25, no. 6, 1964, 896-908

TOPIC TAGS: automatic control, predictive automatic control, predictor, analog
computer predictor

ABSTRACT: A method of optimum or near-optimum predictive control and the principles of analog predictors are considered. A time-optimized third-order system for controlling a 3-link plant is examined as an example illustrating the method of truncating the system by one order and using an analog-type predictor. The predictive method may be used for controlling plants of any order describable

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ACCESSION NR: AP4041465

by this form of differential equation:

$$\dot{x}_1 = f_1(x_1, u)$$

$$\dot{x}_k = f_k(x_k, x_{k-1}),$$

$$\dot{x}_n = f_n(x_n, x_{n-1}),$$

where $u = u(t)$ is the controlling action; $|u(t)| \leq 1$, all functions f_k ($k = 2, 3, \dots, n$) are assumed to be continuous and continuously differentiable with respect to x_k, x_{k-1} and f , continuous with respect to u . The optimality of the trajectories computed in any (but the first) predictor is ensured by the presence inside any predictor of other predictors computing, in an accelerating manner, the trajectories in a decreasing number of links. An approximate simulator of the plant is recommended for the predictor, which is intended for repeated solving of a set of differential equations. A laboratory model of such a predictor with six computing amplifiers, built by V. V. Gurov, permits an equation-solution

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L 18857-65

ACCESSION NR: AP4041465

frequency up to 200 per sec. Orig. art. has: 12 figures and 7 formulas.

ASSOCIATION: Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automation and Telemechanics, AN SSSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: DP, IE

NO REF SOV: 007

OTHER: 003

Card 3/3

L 6526-66 EWT(d)/EPF(n)-2/EWP(v)/EWP(k)/EWP(h)/EWP(l) IJP(c) WW/BC
 AGC NR: AP5023111 SOURCE CODE: UR/0103/65/026/009/1502/1513

AUTHOR: Mikhaylov, N. N. (Moscow); Novosel'tseva, Zh. A. (Moscow)

ORG: none

TITLE: Optimal processes in a third-order system having complex poles

SOURCE: Avtomatika i telemekhanika, v. 26, no. 9, 1965, 1502-1513

TOPIC TAGS: automatic control, automatic control system, automatic control design, automatic control theory

ABSTRACT: Time-optimal processes of transition, in a third-order plant, from an initial state (X_{1i}, X_{2i}, X_{3i}) to its final stable state ($X_{1f} = X_{1spec}, X_{2f} = X_{3f} = 0$) are considered. The plant has complex conjugate poles and consists of series-connected oscillatory and integrating sections:

$X_1 = X_2, \dot{X}_2 = X_3, \dot{X}_3 = -2\delta X_3 - X_3 + U$, where δ is the damping factor of the oscillatory section, $0 < \delta < 1$, and X_1 is the plant output variable. The control law U limited in the form $|U| \leq 1$ is sought. The optimal phase trajectory in the oblique-coordinate plane $X_2 X_3$ consists of n arcs of the spirals which have the

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UDC: 62-505.385

0701 178

L 6526-66

ACC NR: AP5023111

poles in $(+1,0)$ and $(-1,0)$ points alternatively. Loci of the switching points of the above trajectories are plotted, and the variation of the number n of intervals is analyzed. The case of $\delta = 0$, i. e., when the plant has a conservative section instead of the oscillatory section, is also considered. Orig. art. has: 7 figures and 23 formulas.

SUB CODE: DP, IE/ SUBM DATE: 12Nov64/ ORIG REF: 002/ OTH REF: 003

nw

Card 2/2

L 43710-65 ENT(0)/EMP(V)/EMP(k)/EMP(h)/EMP(1) BC
ACC NR: AP6023868 SOURCE CODE: UR/0103/86/000/004/0122/0141

AUTHOR: Gul'ko, F. B. (Moscow); Novosel'tseva, Zh. A. (Moscow)

ORG: none

TITLE: Solution of nonstationary problems of filtration and prediction by simulation methods

SOURCE: Avtomatika i telemekhanika, no. 4, 1986, 122-141

TOPIC TAGS: optimal automatic control, random function, linear automatic control system, computer simulation, filter, mathematic prediction

ABSTRACT: A nonstationary problem of optimal linear filtration and prediction is considered for a class of additive noise with finite dispersion. Differential filter equations are derived, permitting the use of analog computers in the solution of the problem. Examples and simulation results are given. Representation of optimal filtration and prediction problems in the form of a differential equation with respect to the useful signal is found to be a very convenient technique for the synthesis of optimal filters and their simulation. For this reason the results obtained may in some cases prove to be more useful than other methods which are of an essentially calculational nature. The formulas obtained provide a complete solution to the synthesis problem, by defining the structure of the filter (predictor) and the values of all its

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UDC: 621.391.172.001.57

Card 2/2

L 43710-66

ACC NR: AP6023668

parameters. The most significant technical difficulties are encountered in the handling of the variable factors, the complexity of the determination of which increases disproportionately as the exponent of the differential filter equation increases. However, this problem can be easily circumvented through the use of memory devices since the law governing the change of the factors is determined by a priori information alone and is susceptible to prior computation. The results constitute an extension of the well known results of R. E. Kalman and R. S. Bussey (Novyye resul'taty v lineynoy fil'tratsii i teorii predskazaniya. Trudy Amerikanskogo obshchestva inzhenerov-mekhanikov, seriya D, "Tekhnicheskaya mekhanika" (russk. per.), t. 83, No. 1, Izd-vo inostr. lit., 1961) to a case in which the additive noise in the observed signal is of finite dispersion. Here, by virtue of the formal analogy between the basic equations in both works the study of stability and convergence aspects in the problem discussed can be carried out with the methods of Kalman and Bussey. This article deals only with the particular case of additive noise with finite dispersion—specifically, with a situation in which this interference can be reduced to white noise by means of a linear differential operator (operator without memory). In this instance, the exponent of the differential equation which describes the filter is not greater than that of the object under observation. Orig. art. has: 5 figures and 40 formulas.

SUB CODE: 09,14/ SUBM DATE: 10Jul65/ ORIG REF: 002/ OTH REF: 002

Card 2/2

SOURCE CODE: UR/0000/66/000/000/0262/0269

ACC NR: AT6029239

AUTHOR: Mikhaylov, N. N.; Novozel'tseva, Zh. A.

ORG: none

TITLE: Application possibilities of an analog prediction device for the optimum control of systems containing an oscillating circuit

SOURCE: Vsesoyuznaya konferentsiya-seminar po teorii i metodam matematicheskogo modelirovaniya. 4th, Kiev, 1964. Vychislitel'naya tekhnika v upravlenii (Computer technology in control engineering); trudy konferentsii. Moscow, Izd-vo Nauka, 1966, 262-269

TOPIC TAGS: analog digital computer, error prediction, mathematic prediction, time optimal control

ABSTRACT: The possibilities of solving the optimum control problem for third-order systems incorporating an oscillating circuit are investigated. The prediction process is based on the reduction of all coordinates of the model to zero (except the output coordinate); thereupon, the stabilized value of the output coordinate is measured and stored in the memory until the beginning of the next cycle. This value is said to be the predicted value of the system's output coordinate. This method is applicable to linear objects with transfer functions containing real poles only. Based on Pontryagin's maximum principle, systems of equations were constructed and circuit diagrams

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ACC NR: AT6029239

were designed for an optimum process in a third-order system with two conjugate complex poles. When $\delta > 0.003$, the initial conditions do not go beyond a certain limited domain. While at first glance this domain appears to be small, it grows exponentially with the growth of δ . Several modifications of the problem were investigated: 1) the modeling of optimum control for equilibrium, and 2) the modeling of optimum control for a rectilinear trajectory. The general form of the latter problem: given a time function $f(t)$, it is necessary to provide a system control such that the relations

$$x_1(t) = f(t); x_2(t) = \dot{f}(t); x_3(t) = \ddot{f}(t).$$

hold true from a previously unknown moment of time τ . When $f(t) = r_1\tau + r_2$, the problem can be considerably simplified. A circuit diagram for this case is presented. Orig. art. has: 8 figures, 4 formulas.

SUB CODE: 09,12/

SUBM DATE: 12Feb66/

ORIG REF: 006

Card 2/2

ACC NR: AP6034048 SOURCE CODE: UR/0103/66/000/010/0153/0168

AUTHOR: Gul'ko, F. B. (Moscow); Novosel'tseva, Zh. A. (Moscow)

ORG: none

TITLE: Solving the nonstationary problems of filtration and prediction with arbitrary noise by simulation methods

SOURCE: Avtomatika i telemekhanika, no. 10, 1966, 153-168

TOPIC TAGS: signal noise separation, electric filter, computer simulation

ABSTRACT: This is a continuation of the authors' earlier work (Avtom. i telemekh., no. 4, 1966); a more general form of noise, viz., arbitrary additive noise, is considered. Differential equations describing the filter are set up, which permits using analog computers for solving the problem. From known values of signal $s(\tau)$ during (t_0, t) , an estimator $\hat{x}(t_1|t)^*$ of the desirable

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UDC: 62-501.22

ACC NR: AP6034048

signal $x(t_1)$ at the moment $t_1 > t$ is sought; the estimator must satisfy the condition of mean-square error minimum for each component of vector $x(t_1)$ for any observation interval (t_0, t) . This estimator is sought as a solution of the above differential equations for the time interval (t_0, t) . The relation between the noise type and the filter structure is investigated, as well as the convergence of the estimator. An example of motion of a material point illustrates the solution of the above filtration problem. Orig. art. has: 4 figures and 70 formulas.

SUB CODE: 09 / SUBM DATE: 25Mar66 / ORIG REF: 002 / OTH REF: 002

Card 2/2

NOVOSHILOV, N. M.

3
②
18471 ~~Welding With a Consumable Electrode in an At-~~
~~mosphere of Protective Gases. K. V. Lyubavskii and N. M.~~
~~Novoshilov. Henry Bratcher, Altadena, Calif., Translation no.~~
~~5140, 8 p. (From Avtogennoe Delo, v. 24, no. 1, 1983, p. 4-8.)~~
Arc welding of steels in a shielding medium of inexpensive
active (instead of inert) gases. Photographs, radiographs, table.
3 ref.

NOVOSHILOV, N. M.

BASHENOV, V. V. (Cand. Tech. Sci.) and NOVOSHILOV, N. M. (Cand. Tech. Sci.)
Cent. Sci. Res. Inst. Technology and Machine-Building, Moscow.

"Anwendungsgebiete und Technisch-Wirt-Schaftliche Kennwerte Fuer Das CO₂
Schweissen" Schweisstechnik, No. 2, 1958.

NOVOSEILOVA, R.N., SLADKOVA, Ye.A.

Publication of geographical maps with a reduced number of colors.
Geod. i kart. no.1:30-34 Nr '56. (MIRA 9:10)
(Cartography)

NOVOSHINOV, G. P.

Novoshinov, G. P. -- "Material on the Study of the Physical Properties of the Horny Material of the Hoof in Healthy Horses and Those Afflicted with Pododermatitis." Min Higher Education USSR. Kazan' State Veterinary Inst imeni N. E. Bauman. Kazan', 1955. (Disseration For the Degree of Candidate in Veterinary Sciences).

So: Knizhnaya Letopis', No. 11, 1956, pp 103-114

ACCESSION NR: AR4015694

S/0081/63/000/023/0355/0355

SOURCE: RZh. Khimiya, Abs. 23K86

AUTHOR: Novoshinskaya, N. S.; Kiyuchnikov, N. G.

TITLE: The protection of steel in water by the salts of certain dicarboxylic acids

CITED SOURCE: Uch. zap. Mosk. gos. ped. in-t im. V. I. Lenina, no. 181, 1962, 20-27

TOPIC TAGS: corrosion, corrosion inhibitor, steel corrosion, sodium adipate, sodium malonate, sodium oxalate, iron oxide

ABSTRACT: Among the sodium salts of the dicarboxylic acids, the highest protective power with respect to steel-20 in distilled H₂O is shown by sodium adipate. Na-malonate has less protective activity, followed by Na-oxalate. The protective concentrations in distilled H₂O for 90 hrs. are 0.0001 M for Na-adipate, 0.05 M for Na-malonate and 0.1 M for Na-oxalate. With an increase in the chain length of Na salts of dicarboxylic acids on a CH₂ group, the protective properties increase. Electronographic studies of the steel surface showed that in protective concentrations of the Na salts of dicarboxylic acids, a film of γ -Fe₂O₃ is formed. Elec-
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ACCESSION NR: AR4015694

trode potentials were measured and polarization curves were recorded in solutions of Na-salts of the dicarboxylic acids. From these electrochemical measurements, it is obvious that these salts are inhibitors with mainly an anodic action. 8 refs. Authors' summary.

DATE ACQ: 09Jan64

SUB CODE: NM

ENCL: / 00.

Card 2/2

ACCESSION NR: AR4015692

S/0081/63/000/023/0355/0355

SOURCE: RZh. Khimiya, Abs. 23K83

AUTHOR: Zhuravlev, I. M.; Kallast, V. A.; Novoshinskaya, N. S.

TITLE: The effect of oxygen, inhibitor and oxide film on the corrosion of iron in water

CITED SOURCE: Uch. zap. Mosk. gos. ped. in-t im. V. I. Lenina, no. 181, 1962, 13-19

TOPIC TAGS: corrosion, corrosion inhibitor, iron corrosion, rust, oxide film

ABSTRACT: It has been confirmed that Fe does not undergo corrosion in distilled water in the absence of oxygen. With insufficient oxygen in the water and aqueous solutions of inhibitors on the Fe surface a film is formed, consisting mainly of Fe_3O_4 and $\gamma\text{-Fe}_2\text{O}_3$. However, this film has poor protective qualities and the corrosive process proceeds with the formation of $\gamma\text{-FeOOH}$ in the solution. The presence or absence of the primary oxide film on the Fe surface does not have any influence on the further development of the process. Studies on the Fe surface by the electronographic method after treatment with aqueous solutions of inhibitors

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ACCESSION NR: AR4015692

revealed no compounds in which the inhibitors were incorporated. 11 refs.
Authors' summary

DATE ACQ: 09Jan64

SUB CODE: MM

ENCL: 00

Card 2/2

ACCESSION NR: AR4015691

S/0081/63/000/023/0355/0355

SOURCE: RZh. Khimiya, Abs. 23K82

AUTHOR: Kallast, V. A.; Zhuraviev, I. M.; Novoshinskaya, N. S.

TITLE: Study of the resistance of the protective films formed on iron during the action of inhibitors

CITED SOURCE: Uch. zap. Mosk. gos. ped. in-t im. V. I. Lenina, no. 181, 1962, 124-130

TOPIC TAGS: corrosion, corrosion inhibitor, protective film, iron corrosion, . semiconductive film

ABSTRACT: The authors determined the resistance of protective films formed on iron in solutions of the following inhibitors: potassium chromate, hexamethylene-diamine chromate, sodium molybdate, sodium tungstate, sodium benzoate, sodium adipate. The growth of the protective film starts during the first few minutes of the inhibitor's action. Later, slight thickening of the film occurs. Protective films appearing on iron under the influence of inhibitors possess semiconductive properties and have perforated conductivity. 10 references. Authors' summary

Card 1/1 DATE ACQ: 09Jan64

SUB CODE: MM

ENCL: 00

KLYUCHNIKOV, N.G.; NOVOSHINSKAYA, N.S.

Protective action of sodium adipate and dibutyl ester of
adipic acid. Zhur. prikl. khim. 36 no.11:2470-2474 N '63.
(MIRA 17:1)

1. Moskovskiy gosudarstvennyy pedagogicheskiy institut imeni
Lenina.

NOVOSILETSKIY, R.M.

Some recent data on the geological structure of the Bitkev petroleum
deposit. Trudy VNIGHI no.12:80-85 '58. (MIRA 12:3)
(Bitkev region--Petroleum geology)

NOVOSILETSKIY, R.M.

Compaction of reservoirs in fields of multizone oil reservoirs.
Neft. i gaz. prom. no.2:37-41 Ap-Je '62. (MIRA 15:6)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy
institut.

(Ukraine--Oil reservoir engineering)

NOVOSILETSKIY, R.M.

Recovery factors of certain fields in the cis-Carpathian region.

Neft. i gaz. prom. no.4:40-44 G-D '63.

(MIKA 17:12)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut,
L'vov.

NOVOSILETSKIY, R.M.

Formation of clear high-gravity oil pools in the cis-Carpathian
region. Trudy UkrNIGRI no.5:97-105 '63.

(MIRA 18:3)

NOVOSILETSKIY, R.M.

Dependence of the initial production of oil on its physico-chemical properties in the Glubinnaya fold of the Bitkov field. Trudy UkrNIGRI no.7:193-198 '63.

(MIRA 19:1)

1. NOVOSIL'TSEV, A. L.; KHODAKOV, A. L.; SHUL'MAN, M. S.
2. USSR (600)
4. Dielectrics
7. Effect of deviations from stoichiometric composition on the properties of BaTiO_3 ceramics in strong fields. Zhur. tekhn. i eksp. fiz. 23 no.3 1952.
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

NOVOSIL'TSEV, B., inzh.; CHUDINOVSKIY, L., inzh.

~~Heavy-duty~~ trailer designed by the Special Design Office of the
Moscow State Building Trust. Na stroi. Mosk. 2 no.7:15-16 J1 '59.
(MIRA 12:10)

(Truck trailers)

NOVOSIL'TSEV, A.S.

1334 Metastable States of BaTiO_3 , N. S. Novosil'tsev, A. I. Khudakov, and M. S. Shul'man, *Izvestiya Akad. Nauk SSSR*, Translation no. 2030, 4 p. (From *Doklady Akademii Nauk SSSR*, v. 83, no. 6, 1952, p. 829-831)
Previously abstracted, *Isotopes*, 1952, 1, 1, 1.
Aug. 1952

NOVOSIL'TSEV, Nikolay Sergeyevich (Rostov on the Don State Univ)
awarded sci degree of Doc Physico-Math Sci for the 6 May 57 defense
of dissertation: "Influence of crystallization conditions on Seignette
salt-electrical [seignetoelektricheskiye] properties of barium titanate"
at the Council, Mos State Univ imeni Lomonosov; Prot No 17, 21 Jun 58.
(BMVO, 12-58,20-21)

Novosil'tsev, N.S.

SUBJECT: USSR/Luminescence 48-3-1/26

AUTHORS: Novosil'tsev, N.S., Khodakov, A.L., Sholokhov, M.L.,
Fesenko, Ye.G. and Kramarov, O.P.

TITLE: The Cultivation and Investigation of Ferroelectric Monocrystals
(Vyrashchivaniye i issledovaniye monokristallov segneto-
elektrikov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya fizicheskaya, 1957, Vol 21,
#3, pp 295-304 (USSR)

ABSTRACT: The Scientific Research Physico-Mathematical Institute at the
ROSTOV/DON State University has studied the interaction of
barium titanate, strontium titanate, lead titanate and lead
zirconate with a series of substances in the molten state. A
number of suitable salty solvents for the above mentioned sub-
stances and crystallization conditions have been established.
Several methods for cultivating crystals of barium and stron-
tium titanates and zirconates were applied:

a. Monocrystals of $BaTiO_3$ and $SrTiO_3$ were obtained out of
a molten mixture of sodium and potassium carbonates and poly-
crystalline barium and strontium titanates. These monocrystals

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48-3-1/26

TITLE: The Cultivation and Investigation of Ferroelectric Monocrystals
(Vyrashchivaniye i issledovaniye monokristallov segneto-
elektrikov)

were obtained out of a molten mixture of potassium fluoride and respective titanates.

b. Monocrystals of the lead zirconate were obtained out of a molten mixture of potassium fluoride with polycrystalline lead zirconate.

Three different consignments of barium titanate crystals were grown. They differed in the value of c/a ratio. The Curie point of these crystals was at temperatures of 50°, 80° and 110°C.

During the careful studies of BaTiO₃ monocrystals, it was found out that many of their properties can be changed under the influence of various factors: some crystals aged (but the aging is reversible); some crystals after being subjected to strong heating and rapid cooling down, showed (during 3 days) a reduced dielectric permittivity from 2,750 to 1,900; some barium titanate monocrystals darkened by heating in vacuum and by cathode bombardment. This darkening was not accompanied with any structural changes but electric conductivity increased to such a degree that the measuring of dielectric parameters became impossible.

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48-3-1/26

TITLE:

The Cultivation and Investigation of Ferroelectric Monocrystals (Vyrashchivaniye i issledovaniye monokristallov segnetoelektrikov)

Thus BaTiO_3 crystallization out of molten salts yielded various modifications of crystals with anomalous ferroelectric properties. By varying temperature conditions, it was possible to grow crystals with different values of the c/a ratio, including non-ferroelectric crystals.

It was later discovered that these crystals can be carried through the whole series of states by means of thermal treatment.

Monocrystals of SrTiO_3 were obtained by two methods:

1. Out of a molten mixture of polycrystalline SrTiO_3 with potassium fluoride, and
2. Out of a molten mixture of polycrystalline SrTiO_3 with 50 % of sodium carbonate + 50 % of potassium carbonate.

The monocrystals obtained by these two methods differed in their dielectric properties.

Monocrystals of solid solutions of the $(\text{Ba,Sr})\text{TiO}_3$ type were obtained out of corresponding mixtures of barium and strontium titanates and molten potassium fluoride. Dielectric

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48-3-1/26

TITLE:

The Cultivation and Investigation of Ferroelectric Monocrystals (Vyrashchivaniye i issledovaniye monokristallov segnetoelektrikov)

parameters of these monocrystals vary considerably after thermal treatment. After 3 hours of annealing under a temperature of 1,350°C the crystals darkened but acquired normal ferroelectric properties.

The extensive experience in cultivation of ferroelectric crystals has shown that crystallization conditions strongly affect their ferroelectric properties. Some ferroelectrics can stay in a metastable state for a long time after solidification.

The article contains 11 graphs and 2 photos. The bibliography lists 39 references, of which 31 are Slavic.

INSTITUTION: Scientific Research Physico-Mathematical Institute at the ROSTOV/DON State University im. Molotov

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.
Card 4/4

NOVOSIL'TSEV, N.S.

Phase trajectory of an oscillation circuit containing seignetto-
electric substances. Izv. AN SSSR. Ser.fiz. 22 no.12:1427-1430
D '58. (MIRA 12:2)

1. Nauchno-issledovatel'skiy fiziko-matematicheskii institut
pri Rostovskom-na-Donu gosudarstvennom universitete.
(Hysteresis) (Ferroelectric substances)

#c Dec 58824

SOV/70-4-1-18/26

AUTHORS: Novosil'tsev, N.S. (Deceased), Khodakov, A.L., Sholokhovich, M.L., Fesenko, Ye.G. and Kramarov, O.P.

TITLE: Experimental Work on Growing Single Crystals of Ferro-electrics (Opyt raboty po vyrashchivaniyu monokristallov segnetoelektrikov)

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 1, pp 101 -- 108 (USSR)*

ABSTRACT: General review of work on (Ba, Pb)(Ti, Zr)O₃ ferro-electrics. There is a considerable difference between the observed and calculated densities of perovskite ceramics indicating disordered regions between domains. Colour and electrical conductivity are also variable. Attempts were made to grow SrTiO₃ by the Verneuil process but complications due to the formation of the hexagonal phase occurred and lowered permittivity. Growth from the melt has also been tried using an arc furnace but difficulties with oxygen deficiency and the metastable hexagonal phase again arose. Remejka (Ref 46) reported that the presence of iron oxide hindered the formation of oxygen defects but only 1.5% ferrate in BaTiO₃ gave

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SOV/70-4-1-18/26

Experimental Work on Growing Single Crystals of Ferroelectrics

a hexagonal structure. In 1956, zone refining was tried very successfully, crystals greater than 1 cm being obtained but attention has turned to the use of crystals with artificially introduced disordering. It was found in 1951-2 that appropriate thermal treatment could restore BaTiO_3 with poor permittivity curves to the proper state and the composition to the equilibrium value. In 1953, it was found that foreign atoms could alter the temperature variation of physical properties and solid solutions of BaTiO_3 - BaSnO_3 - BaZrO_3 were studied. Because of applications to memory devices, the interest in single crystals and their electrical properties increased. Melts of KF were used for obtaining crystals of $(\text{Ba,Pb})\text{TiO}_3$ and $(\text{Sr,Ba})\text{TiO}_3$. Dielectric properties have been measured at from 50 to 10^6 c/s, including recording of the hysteresis loop under various conditions. Linear expansion

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coefficients have been measured as has the dependence of Curie point on composition. A volume jump at the Curie point can be shown dilatometrically. X-ray measurements for $(\text{Ba}_{0.5}, \text{Pb}_{0.5})\text{TiO}_3$ single crystals gave $a = 3.965$, $c = 4.037 \text{ \AA}$ and $c/a = 1.016$ at 20°C . Twinning has been studied optically and supercooling at the transition through the Curie point has been shown. Cinematographic records of jump-like transitions (at about 500°C) taking 0.1 to 0.4 sec at a rate of heating of $2-4^\circ/\text{min}$ have been made. The changes in domain structure in electric fields have been followed. There are 3 figures and 48 references, 44 of which are Soviet, 2 English, 1 Dutch and 1 international.

ASSOCIATION: Rostovskiy-na-Donu gos. universitet (Rostov-na-Donu State University)

SUBMITTED: December 7, 1958

Card 3/3

NOVOSIL'TSEV, N.V.; KHODAKOV, A.L.; SHUL'MAN, M.S.

Metastable states of BaTiO_3 . Dokl. Akad. Nauk SSSR 83, No.6, 829-31 '52. .
(PA 56 no.668:5454 '53) (MLBA 5:6)

MALAKHOV, Z.S., kapitan 1 ranga zapasa; SHAKHGEDANOV, A.A., inzh.-kapitan 1 ranga; LOPATIN, A.M., kapitan 1 ranga; YEROML'YANOV, M.V., kapitan 1 ranga; BOGOYAVLENSKIY, D.M., kapitan 2 ranga; GORODENKO, B.K., kapitan 2 ranga; VAL'KOV, I.Ya., inzh.-podpolkovnik; NOVOSEIL'TSEV, O.N., kapitan-leytenant, BIRIMBERG, M.E., inzh.; FADSEYEV, V.G., vitsa-admiral, obshchiy red.; MASHAROV, A.I., red.; STREL'NIKOVA, M.A., tekhn.red.

[Practical seamanship] Morakala praktika. Moskva, Voen.isd-vo
 M-va obor.SSSR. Pt.1. 1958. 416 p. (MIRA 12:6)
 (Navigation)

NOVOSILTSEVA, N. D.

USSR/ Nuclear Physics

Card 1/1 Pub. 43 - 4/11

Authors : Dzhelepov, B. S.; Novosiltseva, N. D.; and Tishkin, P. A.

Title : Formation of Re^{188} during the bombardment of W with slow neutrons

Periodical : Izv. AN SSSR. ser. fiz. 18/1, 76-78, Jan-Feb 1954

Abstract : Experiments prove that the entrapment of neutrons by Re, which is found among the substances usually attached to W, results in the formation of Re^{188} with a spectrum limit of 2 mev and a very small life period of 16.9 hr. One of the stable tungsten isotopes (W^{188}) is considered to be the basic source for the formation of Re^{188} . The beta-spectrum of the W^{185} plus W^{188} plus Re^{188} compound derived after repeated extraction of Re from W was measured and the results obtained are given in graphs. The decomposition period for Re^{188} was established. Three references: 2-USSR and 1-USA (1946-1951). Graphs.

Institution : The A. A. Zhdanov State University, Physics Institute, Leningrad

Submitted : January 5, 1954

NOVOSIL'TSEVA, N. D.

48-22-2-10/17

AUTHORS:

Bashilov, A. A., Dzhelepov, B. S.,
Novosil'tseva, N. D., Chervinskaya, L. S.

TITLE:

The Conversion Spectrum of La¹⁴⁰ (Konversionnyy spektr La¹⁴⁰)

PERIODICAL:

Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958,
Vol. 22, Nr 2, pp. 179-190 (USSR)

ABSTRACT:

The authors succeeded in separating La¹⁴⁰ with a high specific activity from Ba¹⁴⁰ (T_{1/2} = 12,8 days). Prikhodtseva and Khol'nov (Ref 23) performed new measurements on the β -spectrum of La¹⁴⁰ under perfected conditions, which is detailed in this paper. The first chapter: Experimental conditions deals with the description of the investigation of the conversion electron spectrum of La¹⁴⁰, using a magnetic spectrometer with perfected focussation (ketron). The divergence angle of the electron beam in the spectrometer was selected in such a way, that it corresponded to the ground conversion lines of La¹⁴⁰ with respect to width. An usual Geiger-Mueller counter was used for the registration of the electrons: In

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The Conversion Spectrum of La^{140}

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the chapter: The results of investigation: It is stated, that the authors succeeded in determining 28 conversion lines corresponding to the 16 nuclear transitions. Quite as well all lines, which were discovered earlier by Cork et al. could be determined, and besides also the weak K and L lines corresponding to $h\nu = 730$ keV. In the chapter: The determination of the multipolar order of nuclear transitions into Ce^{140} . The ratio K/L: the authors used the values from tables by L.A. Sliv and I.M. Band (Ref 19) for the coefficients of internal conversion and values by Pouz for the coefficient of internal conversion on the L_{I} -shell, interpolated according to G.F. Dranitsyna (Ref 20). In this way the theoretical values for K/L at $Z = 58$ were obtained with respect to the first 6 multipoles. A corresponding table is given here. In the chapter dealing with the quantity α_K it is stated that the authors are familiar with the data on the relative intensities in the spectra of the conversion electrons as well as of the α -radiation (Ref 23). Thus arises the possibility to determine the conversion coefficients, if it were possible to combine the scales of two spectra. This could be attained if only the

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The Conversion Spectrum of La^{140}

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multipolar order of one transition were known. In the chapter: γ - γ correlations it is stated, that although the authors did not investigate the correlation between the γ -rays of Ce^{140} , the last obtained experience, however, would enable them to set up the quantum characteristics. The correlation by Bishop and Jorba (Ref 21), Robinson and Madansky (Ref 12), Bolotin (Ref 14) and Coleman (Ref 5) are referred to. In the chapter:

The quantum characteristics of the excited states of Ce^{140}
the following excited states of Ce^{140} are treated: 1) ($E_1 = 1597$ keV) of type 2^+ . 2) ($E_2 = 2083$ keV). Here only one transition to the first level ($h\nu = 486,6$ keV) is known. The transition from the third state ($E_3 = 2412$ keV) to the first and second level of Ce^{140} ($h\nu = 815,3$ and $328,6$ keV) could be observed, but no transition to the ground level could be found. 4) The fourth state ($E_4 = 2520$ keV) "apparently" discharges to all lower levels: 0, 1597, 2083 and 2412 keV, producing γ -radiation with a quantum energy of 2520, 923, 436 and 108 keV. Subsequently a more exact analysis of the mentioned states is given, data on which are compiled into a table.

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The Conversion Spectrum of La^{140}

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There are 6 figures, 4 tables, and 23 references, 6 of which are Soviet.

ASSOCIATION: Fizicheskiy institut Leningradskogo gos. universiteta im. A.A. Zhdanova (Physics Institute, Leningrad State University imeni A.A. Zhdanov)

AVAILABLE: Library of Congress

1. Lanthanum-Conversion spectra

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L 11401-63

BDS

S/032/63/029/005/015/022

45

AUTHORS: Zilikova, T. K., Novosil'tseva, N. I., Palkin, B. A., Ryazanov, N. V. and Fridman, Ya. B.

TITLE: Method of testing sheet materials for biaxial extension at a different reserve of elastic energy

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 5, 1963, 600-604

TEXT: Analysis of a number of operational failures such as the explosion of the British "Comet" jet aircraft has shown that with a rise in the reserve of elastic energy in the presence of defects not only acceleration of deformation and failure occur, but also a reduction in the strength of a material can be expected. A device has been constructed to test biaxial extension of sheet material at a different reserve of elastic energy by means of pneumatic (gaseous nitrogen) or hydraulic (liquid AMG-10), arranged so that the working part of the test piece was in a zone of practically symmetrical biaxial extension. In tests of the influence of the working medium transmitting pressure to the test piece on the strength and nature of failure of the sample, test pieces were broken down into rather large pieces in the hydraulic test and into fine pieces in the pneumatic. In tests of the influence of the volume of the working medium it was found that increase in the volume of the container did not lead to substantial change in the kinetics, although the rate of deformation increased. There are 6 figures Card 1/1 Ja/llb \ and 2 tables.

KHOREV, A.I.; GLAZUNOV, S.G.; ZILOVA, T.K.; NOVOSIL'TSEVA, N.I.; GERAS'KOVA, L.V.

Effect of thermal treatment and cladding on the strength of
VT14, VT15, and VT16 titanium alloys under biaxial tension.

TSvet. met. 38 no.9:75 S '65.

(MIRA 18:12)

L 23052-66 FSS-2/EWT(1)/EWT(m)/EWP(t)/EWP(k) JD/JW/HW

ACC NR: AP6011404

SOURCE CODE: UR/0057/66/036/003/0549/0556

AUTHOR: Kul'gavchuk, V. M.; Novoskol'tseva, G. A.

ORG: none

TITLE: A study of the heating and evaporation kinetics of exploding wires by the x-ray method

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 3, 1966, 549-556

TOPIC TAGS: exploding wire, electrical explosion

ABSTRACT: Simultaneous oscillographic recordings were made of the electrical parameters and the x-ray pulse in an investigation of the kinetics of heating and evaporation of copper and brass wires 5 cm long and 1.0 and 0.78 mm in diameter, respectively, exploded by high-density current. The wires were exploded in the air and in polyethylene tubes. The experiments aimed at an investigation of the causes of the "current pause" occurring after the heat-up, and the process of phase transition from liquid to vapor. The experimental arrangement made it possible to obtain x-ray photographs of the process at any instant. The time dependencies of the main parameters obtained were as follows. Current followed a roughly sinusoidal curve from zero to a maximum of about 100 ka at the 16 μ sec mark, falling back to zero at about the 30 μ sec mark. Voltage, which stayed at 1 to 1.5 kv during the initial period, showed a sharp upward peak of up to 8 kv at about the 20 μ sec time mark. The resistance and power followed roughly the voltage curve with maxima at about

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ACC NR: AP6011404

0.23 ohm and 800 w, starting from near-zero after the 8 μ sec time mark. The energy followed roughly the power curve, reaching a ceiling of about 3 kJ when the voltage, resistance, and power were subsiding from their maxima. Wires enclosed in polyethylene tubing displayed slightly lower values and a faster drop of the current, delayed and considerably (about 50%) lower peak values for voltage and power, a run-away rise in the case of resistance, and slightly lower and somewhat delayed values in the energy curve. The x-ray photographs showed an expansion of wire diameters by 1.48 and 1.53 times for copper and brass, occurring 1.0 and 0.2 μ sec before the corresponding voltage peaks when the spent energy amounted to 4.27 and 5.5 kJ, respectively. After this the wire began to display an increasing series of transverse layers of lesser density 0.1 to 1 mm thick. On the basis of their luminosity on conventional photographs and also from the bulging of the polyethylene tubing, these layers were interpreted as arc discharges. At the instants of voltage peaks, the wire was already cut up into 1 to 5 mm pieces of solid matter, with about 15% of the metal evaporated. The process of breaking up intensified further after the peak. Other parameters calculated from the observation data were the speed and energy of expansion of the wire, and the spread of explosion products in time in the case of bare wire and wire enclosed in polyethylene tubes. The explanation of the process of disintegration of the wire into pieces was found in the variations of its initial diameter. A variation of 1% in diameter is considered sufficient to cause a considerable excess of temperature in the narrows. The faster rise of temperature in one section accelerates the process of exploding in that area, which in turn has the effect of slowing down the heating process in the adjacent cooler sections, mainly because of the vapor pressure developing in the process. Speculations regarding the

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ACC NR: AP6011404

changes in the kinetics of evaporation in the case of smaller specimen diameters and increased heating rate are presented. Smaller wire diameters would lead to finer breakup into layers. An increase of the heating rate (up to one order) would result in a more pronounced skin effect and consequently in a more even rate of evaporation along the specimen. However, a fully equal evaporation could be expected only at heating rates 2 to 3 orders higher than that used in this experiment. Orig. art. has: 6 figures. [FP]

SUB CODE: 20/ SUBM DATE: 02Mar65/ ORIG REF: 008/ OTH REF: 009/ ATD PRESS:

4234

Card 3/3 *fv*

NECHAYEV, K.A.; NOVOSLAVSKAYA, O.Ya.; FROLOV, K.M.; KHANINSON,
Ya.G.; VOLKOVA, K.V., red.; VOROTILINA, L.I., tekhn. red.

[Novosibirsk; notable places and sights] Novosibirsk; pa-
miatnye mesta i dostooprimechatel'nosti. Novosibirsk, Novo-
sibirskoe knizhnoe izd-vo, 1961. 174 p. (MIRA 15:8)
'Novosibirsk--Guidebooks)

SEMENOV, V.; NOVOSLAVSKIY, L.

Establishing norms for the working capital and supplying credit to state farms. Den.1 kred. 19 no.6:33-42 Je '61. (MIRA 14:6)

1. Nachal'nik otдела finansirovaniya sovkhovov Ministerstva finansov SSSR (for Semenov). 2. Starshiy kreditnyy inspektor Novosibirskoy kontory Gosbanka (for Novoslavskiy).

(State farms—Finance)

(Novosibirsk Province—Agricultural credit)

NOVOSPASSKIY, A.F.; LEONIDOV, N.K., redaktor; VAYNSHTEYN, Ye.B., tekhnicheskii redaktor

[Modern blast furnaces] Sovremennaya domennaya pech'. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1950. 394 p. [Microfilm] (MIRA 9:12)
(Blast furnaces)

NOVOSPASSKIY, A.F.

GERB

Novospasskiy, A. F. Konstruktion moderner Hochdruck-
(Übersetzt aus dem Russ.) 8vo, pp. 132, Berlin, 1954
Verlag Technik. (Price DM. 45.-)

NOVOSPASSKIY, G.D.
BRODSKIY, M.V.; PETROV, V.V.; NOVOSPASSKIY, G.D.; ZATSEPIN, V.F.

Remote signaling and remote control for radio relay lines.

Elektrosviaz' 11 no.8:26-31 Ag '57.

(MIRA 10:12)

(Radio relay systems)

NOVOSPASSKIY, V.V.; RAKOV, S.I., tekhnicheskii redaktor.

[In Western Caucasus] Na Zapadnom Kavkaze. [Moskva, Izd-vo VTsSPS
Profizdat, 1954. unpagad]. (MIRA 8:4)
(Caucasus, Western--Description and travel)

NOVOSZEL, Tibor, dr.; RISKÓ, Tibor, dr.; FATER, József, dr.

~~NOVOSZEL, Tibor, dr.~~
The role of spondylodesis in the therapy of spinal tuberculosis.
Tuberk. kerdesei 9 no.2:79-82 Apr 56.

1. Az Allami Fodor József TBC. Gyógyintézet (igazgató-őorvos:
Riskó, Tibor dr.) közleménye.
(TUBERCULOSIS, SPINAL, surg.
spondylodesis, indic. & compl. (Hun))

NOVOSZEL, T.

RISKO TIBOR, Dr.; NOVOSZEL, T. Dr.

Abductive resection in surgery of the hip. *Magy. sebészeti 10 no.2-3*:
133-137 Apr-June 57.

1. As Allami Fodor Jassaf Tbc. Gyógyintézet (Budapest) közleménye
Igazgató-főorvos: Risko Tibor dr.

(HIP, surg.

abductive resection, technic (Hun))

RISKO, Tibor, Dr.; NOVOSZEL, Tibor, Dr.

Our surgical results with costo-vertebratomy-spondylodesis. Orv.hetil.
100 no.13:466-472 29 Mar 59.

1. Az Allami Fodor Jozsef Tbc. Gyogyintezet, Budapest (igazgato-
foorvos: Sebok Lorand dr.) I. sz. Sebészeti Osztalyanak (foorvos:
Risiko Tibor dr.) kozlensege.

(TUBERCULOSIS, SPINAL, surg.
costo-vertebratomy-spondylodesis, technics ' results
(Hun))

RISKO, T.; NOVOSTSEL, T. (Badareshka)

Experience with surgical therapy of tuberculous spondylitis
with special reference to the operation of costo-vertebrotomy-
spondylolisthesis. Khirurgia 15 no.2/3:222-224 '62.

(TUBERCULOSIS SPINAL surg)

NOVOSZEL, T.

Report on a study-tour to the National Paraplegic Center in
England. Orv. hetil. 105 no.27:1286-1287 5 JI'64

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001237520018-

CZECHOSLOVAKIA

NOVOTNA, ; REKTORIK, ; [Affiliation not given].

"Scientific and Working Meeting of the Psychiatric Section, 6th
April 66."

Prague, Ceskoslovenska Psychiatrie, Vol 63, No 1, Feb 67, pp 68-69

Abstract: The following papers were submitted at the Meeting:
VOLAVKA, J.; Automatic Analysis of EEG and Clinical Data; MATOUSEK,
M.; Recording System for Automatic Evaluation of EEG; MATOUSEK, M.;
ROUBICEK, J.; VOLAVKA, J.; EEG in Schizophrenias. No references

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PROCESSING AND PRIORITIES INDEX

COMBOS ELEMENTS

INTERNAL INDEX

Potato rot. L. M. Horowitz-Vlasova and N. V. Novitskiy. *Schriften central. biochem. Forschungsinst. Nehr.-Gemeinschaft.* (Moscow) 2, 143-51(1933).—The typical rotting of potatoes is caused by *B. solaniperda* alone or in assoc. with *B. macerans* or *Clostridium butyricum*; all parts of the potato are attacked (starch, proteins, cellulose, etc.). Infection is not specific and fortuitous, but results from conditions favoring abundant growth of the organism in the soil and so is of a general character. After harvesting, potatoes should be kept in single layers (not piled) in dry, well-ventilated rooms. Infected potatoes should be sought and destroyed. Julian F. Smith

Consider 3 as sub 11 Food & Nutrition Section

ASM-5L A METALLURGICAL LITERATURE CLASSIFICATION

FROM: 51703200

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27

Obtaining fats and oils from oil seeds. L. M. Horovitz-Vlasova and N. V. Novotzky. *Sbornik nauč. biokem. Forschungen. Nahr. Genussmittel.* (Moscow) 2, 284-312 (1922).—Attempts to apply Beckmann's fermentation method to the liberation of oil from other oil-seed materials than rapeseeds were unsuccessful with walnuts; with flaxseed oil the oil yield was 51-55%; with hempseed, linseed, mustard seed and soy beans the treatment was unsuccessful. Probably the oil is liberated by penetration of evolved lactic acid into the cells. The use of *B. delbrücki* for this purpose offers interesting possibilities to the fat and oil industries. Julian F. Smith

ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSING AND PROPERTIES INDEX

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Use of esters of *p*-hydroxybenzoic acid as preservatives. A. D. Lebedev. *Proc. Inst. Sci. Research Food Ind.* (Leningrad) 2, No. 2, 2-5 (1953).—In view of the high bactericidal potency of certain *p*-hydroxybenzoates, especially butyl *p*-hydroxybenzoate (PhOH. 225), a systematic study was made of effects on bacteria, yeasts and fungi in different media. Improved methods were developed for economical production of such esters and for detg. concn. of preservatives in food products. A study of the preservative potency of sodium salts of ethyl and propyl *p*-hydroxybenzoates. N. V. Novikova. *Ibid.* 4-10. In tests with bacteria, yeasts and fungi the minimum effective concn. was 0.12% for Na Pr *p*-hydroxybenzoate and 0.25% for Na Et *p*-hydroxybenzoate. Potency is so increased by free acid, e. g., fruit acids, that 0.1% of Et ester or 0.03% of Pr ester may suffice. In margarine and edible oils as much as 0.2% preservative may be needed. *Synthesis of esters of p-hydroxybenzoic acid.* E. V. Fil'kina and B. P. Zolotarev. *Ibid.* 11-14.—Isomerization of K salicylate in CO₂ at 180-220° is preferred to the Kolbe synthesis for prepp. the acid; 1 mol. acid was esterified in 5 mols. EtOH. Similarly the Pr ester, m. 96° after recrystn. from H₂O, was made with com. EtOH and purified by extrn. with CS₂. The Ph ester was prepd. by thermal decarboxylation of the acid, by esterification with PhOH in presence of POCl₃, and by treating the acid (OH group blocked) successively with PCl₅ and PhONa, then hydrolyzing to free the OH group. This last method is too tedious; the second method is preferred. *Determining ethyl p-hydroxybenzoate in food products.* B. I. Guterman. *Ibid.* 15-22.—The Weim gravimetric method (C. A. 22, 2013) gives good results in liquors, juices and aq. solns. but not in protein materials. The colorimetric methods with FeCl₃ and with Millon reagent (Weiss, C. A. 22, 2013) are tedious and lack accuracy. The hydrolytic method (detg. the liberated alc.) is excellent for the Me ester but unsuitable for other esters. A rapid, accurate method is described in which tributylphenol is used as reagent; it is applicable to aq. solns., sirups, liquors and the like, but not to protein materials. Julian F. Smith

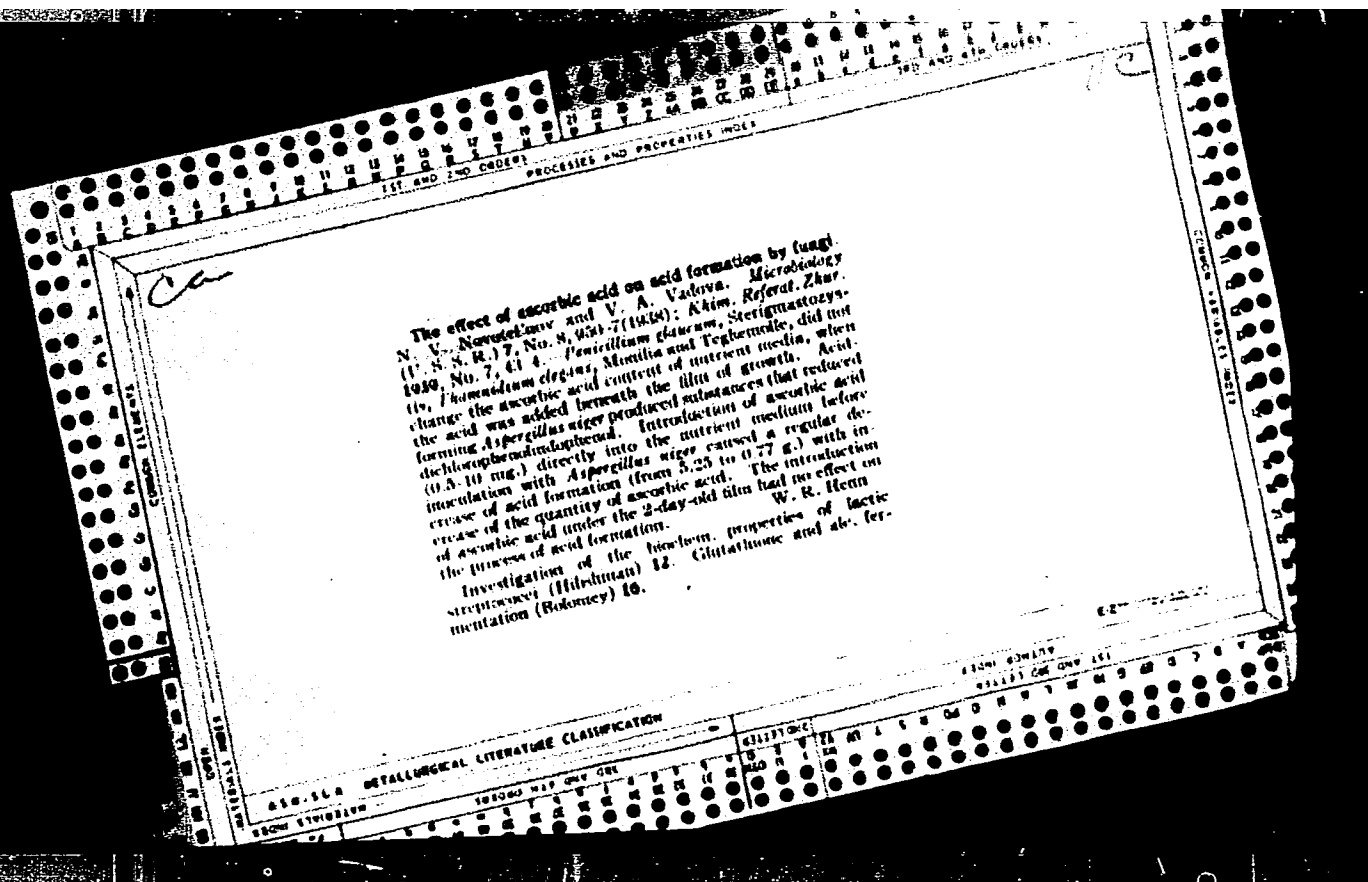
PROCESSING AND PROPERTY INDEX									
Classification of unified juice. N. V. Novotol'nov and R. I. Barbovskaya. Proc. Inst. Sci. Research Food Ind. (Leningrad) 8, No. 2, 8-20 (in English 21) (1935). From numerous tests with various strains of <i>Saccharomyces</i>, <i>Penicillium</i>, <i>Serigomastocystis</i> and <i>Aspergillus</i>, the most active in pectase production were found to be <i>Serigomastocystis</i> and <i>Aspergillus oryzae</i> and these were accordingly used in expts. on clarifying apple and raspberry juices after treatment with SO₂. In semifactory tests addn. of a 2% aq. ext. of the dry mycelium led to nearly quant. decompn. of the pectin in 24 hrs. without loss of quality in the juice. The optimum conditions for this biochem. clarification are: temp. 30-37°, pH 4.5. J. P. S.									
ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION									
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Action of microorganisms on pentoses and protozoa.
L. M. Horovitz-Vlasova and N. V. Kopylovskaya, Proc. Inst. Sci. Research Food Ind. (Leningrad) 3, No. 3, 34-50 (1937); cf. C. A. 30, 4191^a. Pentosans from cottonseed- and sunflower-seed hulls were converted to pentoses and org. acids in 3 ways: (1) by acid hydrolysis to pentoses and fermentation, e. g., with *Aerobacter aerogenes* (forming lactic acid, HAc and CH₄) or with *B. esterificans* (forming butyric acid and traces of EtOH); (2) by direct fermentation of pentosans, e. g., with *Sterigmatocystis*, *Penicillium*, *Aspergillus*, *Dematium*, *Mucilina* and like fungi. With these organisms citric and oxalic acids are among the final products of fermentation of the intermediate pentoses. Tests with several *Clostridium* and *Saccharomyces* organisms, and with *B. narum cellulolyticum* are also described.
Julian F. Smith

1ST AND 2ND ORDERS		PROCESSING AND PROPERTIES INDEX		3RD AND 4TH ORDERS	
12		B-II-7 Production of vegetable oils by biochemical methods. (The Bachmann process). L. M. HON- YING-VLADIMIROV and V. V. KOSCHENKO (Alpen. Ost- u. Sudruss. 1922, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792			



USSR/Medicine - Pectin Decomposition Jul/Aug 49
Medicine - Biochemistry

"Two-Phase Fermentative Decomposition of Pectin,"
M. V. Novotelnov, V. Ye. Deyeva, Chair of Micro-
biol and Biochem, Leningrad Inst of Refrig and
Dairy Ind, 54 pp

"Biokhim" Vol XIV, No 4

Study of decomposition of pectin by pectinase
prepared from *Aspergillus niger* indicated there
are at least two phases in the process. First is
characterized by a sudden decrease in viscosity
with a very small increase in the reducing sub-
stances due to the esterase effect on the pectin
62/4952

USSR/Medicine - Pectin Decomposition Jul/Aug 49
(Contd)

molecule, and is accompanied by cleavage of the
neuronic complex. "Pectolic" acid, liberated by
the cleavage, reacted with a hydrolytic agent is
decomposed at the glucoside bonds. Reducing sub-
stances are increased, and d-galacturonic acid is
the final product. Submitted 27 Oct 48.

62/4952

NOVOTEL'NOV, M. V.

Sep/Oct 49

USSR/Medicine - Vitamin C
Pectin

"Use of a Fermentive Method to Obtain P-Factor En-
riched Vitamin C Concentrate," N. V. Novotel'nov,
B. Ye. Deyeva, Chair of Microbiol and Biol, Lenin-
grad Inst of Refrigeration and Milk Ind, 7 pp

"Biokhim" XIV, No 5

From chemical standpoint, hydrolytic disintegration
of pectine obtained from dog rose represents complex
system of related reactions. Due to severe macera-
tion of plant cell, there is intensified release of
blocked ascorbic acid. Pectine matter in dog rose

157759

Sep/Oct 49

USSR/Medicine - Vitamin C
(Contd)

contains large quantity of substances, polyphenolic
in nature, which react on process of pectolysis with
freed carbonic complex. Glucosides -- substances
which are always present in the reaction -- have P-
vitamin activity. These substances are better than
ordinary purified alcohol concentrates. Submitted
27 Oct 48.

157759

NOVOTEL'NOV, N. V.

"The Vitamin, Antibiotic, and Antioxidizing Properties of the Flavone Glucosides of Dog Rose Fruits and Methods for Their Utilization." D^r Biol Sci, Inst of Botany imeni V. L. Komarov, Acad Sci USSR, Leningrad, 1954. (KL. No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)

SO: SUM No. 556, 24 Jun 55

Novotel'nov, N.V.

USSR/Biology - Biochemistry

Card 1/1 Pub. 22 - 30/40

Authors : Novotel'nov, N.V., and Yezhov, I.S.

Title : Antibiotic and anti-oxidizing properties of yellow pigments of grain

Periodical : Dok. AN SSSR 99/2, 297-300, Nov 11, 1954

Abstract : Experiments showed that the antibiotic effect of the yellow pigments of grain (wheat) is connected with the ability of the flavone glucoside hydrolytic-splitting products to block the fermentation systems which participate in the aerobic breathing of the microbe cells. The biological role of the yellow pigments, concentrated in the peripheral section of the grain, is explained. Data on the anti-oxidizing properties of the pigments and their separation from the grain are presented. Nine USSR references: (1935-1953). Tables.

Institution :

Presented by: Academician A. L. Kursanov, September 8, 1954

NOVOTEL NOV, M.V.

NOVOTEL NOV, M.V., kandidat biologicheskikh nauk; GRISHCHENKO, A.D.,
kandidat tekhnicheskikh nauk; ABRAKOVA, P.F., inzhener.

Use of a fermented extract from the dog rose fruit and a crystalline aglucon fraction of flavone glucosides as antioxidants in the production of butter. Trudy LTIKHP 7:3-11 '55. (MIRA 10:9)

1. Kafedra biokhimi i mikrobiologii, kafedra tekhnologii moloka i molochnykh produktov.

(Butter--Preservation) (Antioxidants)

May 22 Nov, N.V.

Stabilization of oxidation of ascorbic acid of the crystalline glycosyl fraction of flavone glycosides of the rose fruit (N. V. Korotkiy, M. I. Gerasimov, V. I. Kuznetsov, N. V. Korotkiy, Inst. Leningrad. Univ., 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623,

by 100 units of ascorbic acid. The best effect was obtained with 100 units of ascorbic acid to aglycon (3.33 to 1) molar ratio. The interaction between these substances in the complex has a much greater effect than the effect of the aglycon fraction alone. The antioxidant activity of the aglycon fraction is ascribable to the presence of a labile pyrone structure, specifically substituted with a methyl group, of the type $\text{O}=\text{C}-\text{C}=\text{C}$.