

V. K. J. J. J. J. J.

Polarography of aromatic heterocyclic compounds. Pt. 16. Vol. 1  
Cz Chem 19 no. 9:2134-2150 S 164.

J. Jurek, J. Jurek, J. Jurek, J. Jurek, J. Jurek  
Academy of Sciences, Prague.

AMERBAYEV, V.; NAURZEYEV, Zh.

Polynomials, orthogonal with respect to convolution. Izv.  
AN Kazakh. SSR Ser. fiz.-mat. nauk 3 no. 3:70-78 S-D '65.  
(MIRA 18:12)

16.1100

25171

S/031/60/000/011/004/008  
A033/A133

AUTHOR: Amerbayev, V. M.

TITLE: On the problem of calculating the Chebychev polynomial of interpolation

PERIODICAL: Akademiya nauk Kazakhskoy SSR, Vestnik, no. 11, 1960, 56 - 59

TEXT: The author gives a definition of the Chebychev polynomial of interpolation, i.e., a polynomial of interpolation whose singular points are the roots  $x_k = \cos \frac{2k-1}{2n} \pi$  ( $1 \leq k \leq n$ ) of polynomial  $T_n(x) = \cos n \arccos x$ .

He points out that the generally known method of calculating  $L_{T_n}(f, x)$  is the Lagrange form for the polynomial of interpolation. The purpose of the author's study is to analyze the methods of calculating  $L_{T_n}(f, x)$  and his derivation of three methods of calculating the polynomial  $L_{T_n}(f, x)$ , the most interesting formula obtained having the form

$$L_{T_n}(f, x) = \frac{1}{n} \left[ b_0 + 2 \sum_{k=1}^{n-1} b_k T_k(x) \right] \quad (7)$$

The author then presents an analysis of the interpolation quadrature formula ac-

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On the problem of calculating <sup>25171</sup>...

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According to which  $L_{Th}(f, x)$  is calculated in the following form:

$$\int_{-1}^{+1} L_{Th}(f, x) dx = \frac{2}{n} \left[ b_0 - 2 \sum_{m=1}^{n-1} \frac{b_{2m}}{4m^2 - 1} \right].$$

There are 2 Soviet-bloc references.

Carl 2/2

AMERBAYEV, V.M.

Finite Laplace transform. Inzh.-fiz. zhur. 4 no.1:109-115 Ja '61.

(MIRA 1r:4)

1. Laboratoriya mashinnoy i vychislitel'noy matematiki AN KazSSR,  
Alma-Ata.

(Laplace transformation)

AMERBAYEV, V. M.

"On a Finite LaPlace Transformation."

Report submitted for the Conference on Heat and Mass Transfer, Minsk,  
BSSR, June 1961.

37581

S/044/62/000/004/010/099

C111/G444

16.4400  
16.4200

AUTHOR: Amerbayev, V. M.

TITLE: Several applications of orthogonal polynomials to the determination of functions, the Laplace transform of which are given

PERIODICAL: Referativnyy zhurnal, Matematika, no. 4, 1962, 8, abstract 4B39. ("Izv. AN Kaz SSR. Ser. matem. i mekhan.," 1960(1961), no. 9(13), 79-95)

TEXT: Considered is a system of polynomials

$$P_n(t) = \sum_{k=0}^n c_k e^{-kt},$$

which are orthogonal on  $[0, \infty)$  with a certain weight  $\omega(t)$ .  
For functions  $f(t)$  which satisfy the conditions

$$\int_0^{\infty} \omega(t) f^2(t) dt < \infty, \quad \int_0^{\infty} \omega(t) |f(t)| dt < \infty$$

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88274

S/170/61/004/001/016/020  
B019/B056

16.4400

AUTHOR: Amerbayev, V. N.

TITLE: Finite Laplace Transformation

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1961, Vol. 4, No. 1,  
pp. 109-115

TEXT: The author deals with a simple and nevertheless sufficiently exact transformation, which is, according to A. V. Ivanov, described as "finite Laplace transformation" (Refs. 1,2), in which several deficiencies of method are avoided and the mathematical difficulties are reduced. The Sturm-Liouville problem:

$$u''(x) + \lambda^2 u(x) = 0 \quad (1)$$

$$u'(0) - hu(0) = 0, u'(1) + Hu(1) = 0 \quad (2)$$

is investigated, where the set  $\{\varphi(\lambda_k, x)\}$  are the eigenfunctions of this problem, and the set  $\{\lambda_k^2\}$  denotes the eigenvalues. Thus, (1) becomes

$$\varphi''(\lambda_k, x) - p^2 \varphi(\lambda_k, x) = - (p^2 + \lambda_k^2) \varphi(\lambda_k, x) \quad (3).$$

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Finite Laplace Transformation

S/170/61/004/001/016/020  
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by (12) is the possibility of immediately being able to determine the Green function of the problem (1)-(2). Thus one obtains:

$$K(p, t) = \frac{p(p+h) \left( \operatorname{chp}(1-t) + \frac{H}{p} \operatorname{shp}(1-t) \right)}{(p^2 + hH) \operatorname{shp}1 + p(h+H) \operatorname{chp}1} \quad (13)$$

In the course of a close investigation of the relations given by Ivanov for carrying out the transformation, it is shown that the inversion formula given by Ivanov is faulty. A new inversion formula is given, and further analysis shows that the so-called finite transformation is a modification of the transformation used by G. A. Grinberg in his monography. There are 4 Soviet references.

ASSOCIATION: Laboratoriya mashinnoy i stroitel'noy matematiki AN KazSSR, G. Alma-Ata (Laboratory of Machine- and Constructional Mathematics of the AS Kazakhskaya SSR, Alma-Ata)

SUBMITTED: November 5, 1960

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AMERBAIEV, V. M.

Some Applications of Orthogonal Polynomials to the Numerical Inversion of the  
LAPLACE Integrals. p. 74

TRANSACTIONS OF THE 2ND REPUBLICAN CONFERENCE ON MATHEMATICS AND MECHANICS  
(TRUDY VTOROY RESPUBLIKANSKOY KONFERENTSIY PO MATEMATIKE I MEKHANIKE), 184  
pages, published by the Publishing House of the AS KAZAKH SSR, ALMA-ATA, USSR, 1962

AMERBAYEV, V.M.

Expansion in Neumann type series original functions defined by  
Laplace transforms. Trudy Sekt. mat. i mekh. AN Kazakh. SSR  
2:78-97 '63. (MIRA 16:10)

AMERBAYEV, V.M., kand. fiziko-matem. nauk

Movement for Communist work in science in the Siberian  
Branch of the Academy of Sciences of the U.S.S.R. Vest.  
AN Kazakh. SSR 20 no.1:83-85 Ja '64. (MIRA 17:3)

L 58444-65 INT(m) 1st DIAAP  
ACCESSION NR: AP5013878

UR/0056/65/048/005/1221/1223

AUTHOR: Kaipov, D. K.; Shubnyy, Yu. K.; Amerbayev, V. M.; Kazangapov, A.; Kosyak, Yu. G.

TITLE: Resonance scattering of Gamma quanta by Mg-24 nuclei

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 5, 1965, 1221-1223

TOPIC TAGS: Gamma scattering, resonance scattering, scattering cross section, level lifetime, energy distribution, magnesium nucleus

ABSTRACT: The authors studied the resonance scattering of 1.38-MeV  $\gamma$  quanta by  $Mg^{24}$  nuclei, using the radioactive isotope  $Na^{24}$ , with a half-life of 14 hours, in the form of an aqueous solution of NaOH. The average cross section for resonant scattering was found to be  $3.7 \pm 0.6 \times 10^{-28} \text{ cm}^2$ . The energy distribution of the emitted  $\gamma$  quanta was calculated by means of a model with continuous slowing down of the recoil nuclei as a result of elastic collisions with the surrounding atoms. The distribution was calculated for the cascade in which a  $\beta$  particle with end-point energy 1.39 MeV was emitted together with two  $\gamma$  quanta with energies 2.76 and

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ACCESSION NR: AP501873

2

1.38 MeV. The lifetime of the 1.38-MeV level in  $Mg^{24}$  was found to be  $(1.1 \pm 0.2) \times 10^{-12}$  sec. This result is in satisfactory agreement with data by others. "The authors thank R. B. Begzhanov for making it possible to do the experiment in his laboratory." Orig. art. has: 1 figure and 2 formulas.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics, Academy of Sciences, Kazakh SSR)

SUBMITTED: 08 May 64

ENCL: 00

SUB CODE: NP

NR REF SOV: 003

OTHER: 004

222  
Card 2/2

L 40086-66 EWT(d)/T IJP(c) GD

ACC NR: AT6019247

SOURCE CODE: UR/0000/83/000/000/0174/0181

AUTHOR: Amerbayev, V. M.; Baybulatov, R. B.

ORG: none

TITLE: On one case of the reconstruction of an original function

SOURCE: Kazakhstanskaya mezhezovskaya nauchnaya konferentsiya po matematike i mekhanike. 1st, Alma-Ata, 1963. Trudy, Izd-vo Nauka KazSSR, 1965, 174-181

TOPIC TAGS: ordinary differential equation, integral equation, Laplace transform, approximate solution

ABSTRACT: A method is considered for the inverse Laplace transform for equations with constant coefficients. The procedure is divided into two steps: the determination of the poles of the given function and their multiplicity; the construction of the original function by the use of the Cauchy-Heaviside formula. An example is offered to illustrate the use of the algorithm adduced for finding the multiplicity of poles. Orig. art. has: 41 formulas, 2 tables.

SUB CODE: 12/

SUBM DATE: 18Nov65/

ORIG REF: 004/

OTH REF: 001

Card 1/1 *ell*

AMERBAYEV, V.V.

One class of orthogonal polynomials of a complex argument.  
Vest. AN Kazakh. SSR 18 no. 5:74-77 My '62.

(MIRA 17:10)



GALIBOV, P.; AMERCHANOV, A., prepodavatel'; GRIGOR'YEVA, N.; MAGAR, N.;  
ZHUKOV, V.; PETROV, S.

News from schools. Prof.-tekh.obr. 17 no.5:32, 3 of cover  
My '60. (MIRA 13:7)

1. Direktor Ordzhonikidzeabadskogo sel'skogo professional'no-  
tekhnicheskogo uchilishcha No.24 (Tadzhikskaya SSR (for Galibov).
2. Pomoshchnik direktora Glukhovskogo uchilishcha mekhanizatsii  
sel'skogo khozyaystva No.1 (Sumskaya oblast') (for Magar).
3. Zamestitel' direktora po uchebno proizvodstvennoy chasti  
Stroitel'nogo uchilishcha g.Kalinina (for Petrov).  
(Technical education)



1ST AND 2ND GROUPS		PROCESSES AND PROPERTIES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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<p>Calculations for furnaces with radiant roof and floor.            B. K. Amerik. <i>Metallurgicheskie Zhurnaly</i> 25, No. 9, 28-31            (1958).—Calculations are given for (1) data of the amt. of            heat transferred by radiation from the flame surface            and the side walls to the roof, wall and floor radiant tubes,            (2) comparison of various types of furnaces, (3) data of            direct heat transfer, and (4) radiation from floor and wall            surfaces.            A. A. Pochtlingk</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
<p>Rectification of mixtures. B. K. Amerik. <i>Nefteprom</i>  <i>Kharkovskoe</i> 26, No. 5, 33-6 (1934). A graph is presented  for the calcul. of the relationship between the velocity of  rectification, amt. of reflux, no. of plates in the bubble  tower and the properties of the stock. A. A. B.</p>																			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
<p>SECTION 1</p>										<p>SECTION 2</p>									

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Calculating the evaporation space of a bubble tower.  
B. S. Amerik. *Neftekhim. Khim. 1936, No. 8, 53-5.*  
A. A. Bochtlingk

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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<p>Equilibrium curves for petroleum, mazut and distilled fractions. B. K. Arsenik, V. G. Nikolaeva, A. E. Kognyan and M. E. Chernysh. <i>Trudy Gornoshchego Nauch.-Issledovatel. Naftyanogo Inst., Pererabotka Nefti</i> 1949, No. 3, 3-26; <i>Khim. Refert. Zhur.</i> 1949, No. 7, 87. -- Several cases of distn. are discussed on the basis of the contention that the boiling interval of the fraction and the method of rectification are the main factors that affect the coeff. of enriching from a single distn. The equil. curves of wide and narrow fractions indicate the relation of the concn. of the low-boiling component in the liquid to that in vapors in equil. with the liquid. The conclusions concerning the effect of the boiling interval of the fraction, the degree of distn. and the ability of the crude oil to be fractionated into its components are supported mathematically. The single equil. distn. was carried out in a newly designed app. The relative contents of phases obtained as functions of the temp. and pressure were used as data for the construction of the curves. Curves for the following petroleum were constructed: paraffin and Maikop crude oil, paraffin and paraffinless mazut, oil distillates from the Grozny paraffin and paraffinless crude oils and mixts. of oil distillates.</p> <p style="text-align: right;">W. R. Hean</p>			
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**AMERIK, B.K.**

**CA**

**22**

New method for determining the gasoline-potential for cracking mazut oils. B. K. Amerik and A. S. Dousguchinski. *Neftyanaya Prom.* 1943, 1, 854. The gasoline-potential (%) of the sample is the yield of cracked gasoline of end point 200°, when 1% carbobols are obtained and the viscosity of the residue is 60°K at 60°. Isolated from experimental data by means of previously obtained curves. The data are obtained by the following new method: 1a) 2 parallel tests, of 150 g. each, mazut is cracked in lab. autoclaves at 3 atm. and 425° within 40 and 60 min. The sp. gr. of the distillate, and the viscosity and the carbobol content of the residue are detd. The I with end point 225° varies for different mazuts from 29.5 to 43%. A. K. Koterev

A.S.U.-S.A. METALLURGICAL LITERATURE CLASSIFICATION

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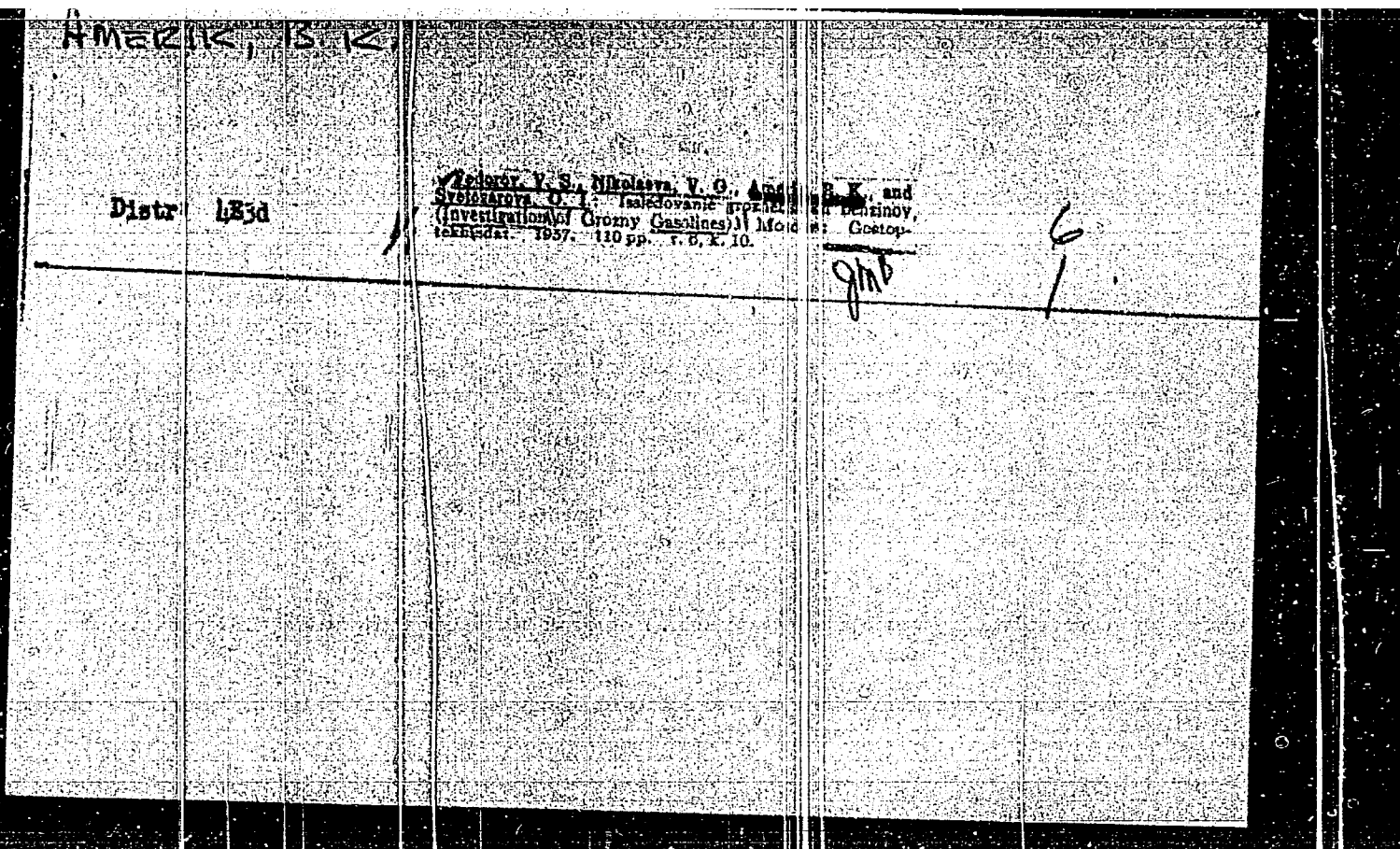
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RELATIONS:

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<p>AMERIK, E.K. CA</p>		<p>Pyrolysis of cracking residues. B. K. Amerik. U.S. S.R. 69,883, Oct. 31, 1917. For the purpose of pyrolysis, cracking residues are sprayed over a heated, base refractory mass made of a mechanically strong material. This refractory material is preheated to a very high temp. by burning the coke which deposits on its surface in the course of the process. The entire process is carried out in a set-up consisting of a reactor and a furnace connected with it. M. Hosh</p>		<p>22</p>
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>				
<p>FROM SYNDICATE</p>				
<p>FROM BOMBYA</p>				





AMERIK, B.K.

~~AMERIK, B.K.~~  
PHASE I BOOK EXPLOITATION 873

Fedorov, Viktor Stepanovich; Nikolayeva, Vera Georgiyevna; Amerik, Boris Karlovich; and Svetozarova, Ol'ga Ivanovna

Issledovaniye groznenskikh benzinov (Research in Grozny Gasolines)  
Moscow, Gostoptekhizdat, 1958. 108 p. 1,100 copies printed.

Executive Ed.: Kleymenova, K.F.; Tech. Ed.: Mukhina, E.A.

PURPOSE: This monograph is intended for workers of scientific research and plant laboratories and of planning organizations.

COVERAGE: The book describes the results of laboratory and pilot-plant investigations on the accurate fractionation of straight-run gasolines derived from crude oils processed at the Grozny plants, as well as the thermal cracking and reforming distillates produced in these plants. The temperature range for the concentration points is determined and the possibility is established of obtaining high-octane components and aromatic hydrocarbons on an industrial scale by means of an accurate fractionation of gasolines. The book

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Research in Groznyy Gasolines 873

contains numerous graphical and numerical data with regard to the physical and chemical properties, the hydrocarbon composition and the antiknock characteristics of narrow gasoline fractions. The Groz NII (Groznyy Petroleum Scientific Research Institute) is mentioned for its investigation, first under the direction of R.A.Virabyan and V.P.Govakov and since 1939 under the direction of the authors, on the antiknock properties and the hydrocarbon composition of narrow gasoline fractions. The TsIATIM, the VNII NP and a number of the Institutes of the Academy of Sciences, USSR have confirmed the findings and developed the investigations of the Groznyy Petroleum Scientific Research Institute. Engineers N.F.Lisitsyna, Z.G.Orkina, K.V.Rozinkina, Ye.M.Bobkova and G.I.Shcherbukha participated in the writing of the book. There are 15 references, of which 8 are Soviet and 7 English.

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~~ALERIK, B. K.~~, BOTNIKOV, Y. A., LAVROVSKIY, K. P., SKORLO, A. I.,  
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KORNEYEV, N. I., SUKHANOV, V. P. RUMYANTSEV, A. N.

"Processes of Continuous Thermocontact Transformations of Crude Oil  
on Coke."

Report submitted <sup>for</sup> at the Fifth World Petroleum Congress, 30 May -  
5 June 1959. New York.

AMERIK, B.K.

11 (2, 4) PHASE I BOOK EXPLOITATION SOV/2213

Groznyy. Neftyanoy nauchno-issledovatel'skiy institut

Khimiya i tekhnologiya pererabotki nefti i gaza (Chemistry and Technology of Petroleum and Gas Refining Processes) Moscow, Gosstoptekhnizdat, 1959. 278 p. (Series: Itsa Trudy, vyp. 4) 2,500 copies printed.

Zaveduyushchiy: N. N. Yefremov; Tech. Ed.: A. S. Polozinskiy; Editorial Board: A. Z. Dorogochinskiy (Chairman), S. A. Amerik, G. I. Asanov, E. M. Kozlov, V. I. Lavrent'yev, Ye. S. Lavrenko, and A. G. Mikheyev (Deputy Chairman).

FOREWORD. This book is intended for petroleum engineers and technicians in scientific research institutes, planning organizations, and refineries.

CONTENTS. This collection of technical papers on oil and gas refining were originally discussed at the petroleum refining section of the Third Grozny Scientific-Technical Congress in 1957. The articles have been published to help further the development of the petroleum

refining industry and petrochemical industry in the Chechen-Ingush ASSR. The history and significance of the petroleum refining industry in the Grozny region is outlined by A. Z. Dorogochinskiy with emphasis on the interdependence of the refineries and the aircraft, automobile and rocket manufacturing industries. Change in modern engines demand a change in fuel and lubricating oil properties. The increased use of jet aircraft makes the production of high octane aviation gasoline less important than the production of the new type of fuel, aviation kerosene. The yield of which requires a quite different refinery run. Since crude recovered at the Karabulak-Achalukhi fields represent a valuable raw material for manufacturing aviation fuel, the authors investigate this problem. They present the results of the investigation and results of analysis reviewed. The re-equipment of the fuel producing line of refineries at Grozny has been carried out on the basis of findings obtained from tests and pilot plant operations, and a number of reforming and platforming units have been built to upgrade the low octane gasoline produced at Grozny. Tests were also conducted to ascertain the advisability of applying the destructive distillation of residues, which yields solar fractions badly needed for catalytic cracking unit as feed stock. Catalytic cracking units of the K3-102 type were first put on stream in the

Grozny refineries in 1952, and since that time continuous efforts have been made to boost their processing capacity, and improve the regeneration of catalysts. The authors make a number of suggestions as to how the throughput of the above units might be increased. The production of ethylene, propylene and butadiene catalysts, the contamination of catalysts and their regeneration are discussed. The operation of a contact coking reactor, its design, and products yielded by contact coking units are described. The authors also deal with the manufacture of lubricating oils, paraffin and ceresine wax and indicate way of improving their properties. Electrical dehydration and desalting of crude oil and of light products are discussed. The authors state that in recent years extensive studies were made on the chemical conversion of petroleum products, and particularly of gases. As a result, a number of gas fractionators and compressors were built and installed for the production of acetylene, propylene and benzene, to synthesize ethyl alcohol and acrylonitrile. The authors indicate that this article is devoted to problems of automating various processes and developing the related control and gauge instruments. The book contains numerous tables with the characteristics of different petroleum products obtained from refinery processing units, pilot plants and petrochemical refinery sections. Each article is accompanied by references.

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contains numerous illustrations with the characteristics of different petroleum products obtained from refinery processing units, pilot plants and petrochemical refinery sections. Each article is accompanied by references.

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AMERIK, B.K.; NAZARETOVA, N.B.; BASHILOV, A.A.

On the layout for the remodeling of the fuel division of Grozny  
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(MIRA 12:9)

(Groznyi--Petroleum--Refining)

NAZARETOVA, N.B.; BASHILOV, A.A.; AMERIK, B.K.; KRECHETOVA, P.I.;  
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Industrial experiments on the destructive distillation of fuel  
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(Petroleum products) (Distillation, Destructive)

AMERIK, B.K.; MATAYEVA, B.V.; MAYDEBOR, L.K.; PRIGORNEV, I.G.

Operation of 43-102 units for catalytic cracking and ways for  
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(Cracking process)

AMERIK, B.K.; ORKINA, Z.G.; BARYSHEV, N.V.; STANULIS, I.A.; KUTSENOK, L.Z.

Possible indices of the operation of reaction apparatuses  
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no.4:101-113 '59. (MIRA 12:9)  
(Petroleum coke)

S/081/62/000/022/056/088  
B180/B186

AUTHORS: Amerik, B. K., Bayburskiy, L. A.

TITLE: Raising the octane number of automobile gasoline

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 426, abstract  
22M82 (Neftyanik, no. 5, 1962, 15-16)

TEXT: The article considers methods of increasing the production of high-octane automobile gasolines in Grozny refineries. These methods are:  
1. thermal reforming of the straight-run 120-195°C fraction, raising the octane number from 35-38 to 68-70 by the motor method; 2. altering the conditions for catalytic cracking with a bead catalyst (raising temperature from 400 to 445°C and reducing the volumetric rate from 0.7 to 0.5-0.6 hr<sup>-1</sup>), which increases the gasoline yield from 16-18 to 32 % and raises its octane number to 76; 3. redesigning existing catalytic cracking plant; 4. thermo-catalytic treatment of residual oils, including the destructive vacuum distillation of residual oils and the catalytic cracking of distillates which, on the example of the residue from Ozeksuat crude, gives a considerably higher yield of gasoline with octane number 77 than does

Card 1/2

Raising the octane number cf...

S/081/62/000/022/056/088  
B180/B186

thermal cracking. At the same time diesel fuel type  $\Lambda$  (L) will be produced with cetane number 50, which requires no further treatment.  
[Abstracter's note: Complete translation.]

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AMERIK, B.K.; BAMBERSKIY, L.A.

Increasing the octane number of automobile gasolines.  
Neftianik 7 no.5:15-16 My '62. (MIRA 15:12)

1. Sotrudniki Groznenskogo nauchno-issledovatel'skogo  
neftyanogo instituta.  
(Gasoline)



AMERIK, B.K.; RYAZANTSEV, Yu.P.; DROZDOVA, Ye.I.; KHALOIMENKO, N.N.

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LEVASHOVA, E.P.; KOZLOVA, A.S.; ZINOV'YEV, V.R.; KONINA, V.F.;  
MUTOVIN, Ya.G.

Refining sweet mazuts. Trudy GrozNII no. 15:49-58 '63.

(MIRA 17:5)

AMERIK, V.V.; KRIENTSEL', B.A.

Some regularities in the polymerization of bifunctional monomers.  
Usp.khim., 34 no.4:653-665 Ap '65. (MIRA 18:8)

1. Institut neftekhimicheskogo sinteza imeni A.V.Topchiyeva, AN  
SSSR.



AMERIK, V.V.; KRENGEL', B.A.

Problem of ion-radical mechanism of polymerization. Izv. AN  
SSSR, Ser. khim. no.11:2081-2083 '65. (MIRA 18:11)

1. Institut neftekhimicheskogo sinteza Im. A.V. Topchiyeva  
AN SSSR.

8871-66 EWT(m)/EWP(j)/T RM

ACC NR: AP5025960

SOURCE CODE: UR/0190/65/007/010/1713/1718

AUTHOR: Amerik, V. V.; Krentsel', B. A.; Shishkina, M. V.

ORG: Institute of Petrochemical Synthesis, AN SSSR (Institut  
neftekhimicheskogo sinteza AN SSSR)

TITLE: Investigation of the crotonaldehyde polymerization reaction

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 10, 1965,  
1713-1718

TOPIC TAGS: aliphatic aldehyde, polymerization, catalytic polymeriza-  
tion, polymerization catalyst, polymerization kinetics, polymer  
structure

ABSTRACT: The polymerization of crotonaldehyde was investigated to  
help elucidate the effect of the presence of different substituents  
on the polymerization of acrolein. Polymerizations were run with an  
anionic catalyst under nitrogen atmosphere in the -80 to -60°C temp-  
erature range. Sodium methoxide and sodium naphthalene complex was  
shown to be an effective catalyst for polymerization on the carbonyl  
group. Polymerization temperature significantly affects not only the  
process kinetics but the structure of the polymer chain. Polymer

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UDC: 66.095.26+678.744

L 8871-66

ACC NR: AP5025960

yield and polymer molecular weight increased with reduction of temperature to  $-10$  to  $-20^{\circ}$ . The content of the free aldehyde group in the polymer decreased while the  $\text{CH}_3\text{CH}=\text{CH}-$  side group content increased with reduction of temperature. Maximum yield was obtained with monomer concentration of  $3 \text{ mol/l}$ . The polymer obtained was predominantly poly-acetalic, molecular weight  $1,000$  to  $10,000$ . The absence of  $\text{CH}_2\text{CH}=\text{CH}-\text{CH}-\text{O}$  units in the polymer was established by ozonolysis. The effect of solvent on polymer yield and structure are to be studied further. Orig. art. has: 3 equations, 4 tables and 5 figures.

SUB CODE: MT, OC/ SUBM DATE: 10Nov64/ ORIG REF: 001/ OTH REF: 011

Card 2/2

R/S

L 63783-55 EWT(m)/EPF(j)/EWP(j)/T RPL NW/RM

ACCESSION NR: AP501375

UR/0020/65/162/002/0364/0365

AUTHOR: Amerik, Yu.B.; Krantsel', B.A.; Shishkina, M. V.

TITLE: Effect of the application of strong electrostatic fields in the course of the polymerization of methyl methacrylate on the structure of the polymer formed

SOURCE: AN SSSR. Doklady, v. 162, no. 2, 1965, 364-365

TOPIC TAGS: polymethylmethacrylate, polymer structure, polymerization, electrostatics, polymer

ABSTRACT: In a recent article, Yu. B. Amerik, B. A. Krantsel', and M. V. Shishkina briefly review several non-Soviet studies on the preparation of poly(methyl methacrylate) (PMMA) mainly of predetermined structures (syndiotactic, isotactic, isotactic-syndiotactic block copolymers).

The authors question the conclusion of F. A. Bovey\* that there is no difference between the activation entropies for syndiotactic and isotactic monomer placement and that this placement is solely determined by the

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L 63783-65

ACCESSION NR: AP5015756

difference in the activation enthalpies for propagation of these structures. To demonstrate the role of activation entropy in the structural formation of PMMA, methyl methacrylate (MMA) was polymerized in bulk and in toluene solution in strong electrostatic fields ( $10^4$ — $10^5$  v/cm) in special reactors. Benzoyl peroxide (1 mol%) was used as initiator. The structure of PMMA formed was determined from its glass temperature ( $T_g$ ) and from the values of an arbitrary parameter J. Calculations of J-values were based on equations provided by W. E. Goode\*\* and calculated from IR spectra. Polymerization conditions and values for  $T_g$  and J obtained in electrostatic fields with different intensities are given in Table 1.

Comparison of these data with the  $T_g$  and J values given by Goode in Table 2 below indicates that: 1) polymerization in strong electrostatic fields yields PMMA with an increased percentage of syndiotactic structure; and 2) electrostatic fields affect the structure of PMMA to a lesser degree in toluene solution than in bulk.

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L 63783-65

ACCESSION NR: AP5013756

Table 1. Polymerization conditions and values

Polymerization temperature, °C	Field intensity, v/cm	Glass temperature, °C	Infrared J value
Bulk polymerization			
50	0.0	106	101
50	0.0	106	97
50	$2.0 \times 10^4$	110	107
50	$2.5 \times 10^4$	111	106
50	$4.0 \times 10^4$	113	112
Solution polymerization			
50	0.0	108	103
50	0.0	107	103
50	$6.0 \times 10^4$	112	106
50	$6.0 \times 10^4$	112	107
40	$7.0 \times 10^4$	113	109

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L 63783-65

ACCESSION NR: AP5013756

Table 2. Properties of amorphous polymers of methyl methacrylate

Type	Suggested chain configuration	Glass temp., °C	Density at 30°C, g/ml	Infrared J value
I	Syndiotactic	115	1.19	100—115
II	Isotactic	45	1.22	25—35
III	Isotactic-syndiotactic	60—95	1.20—1.22	40—80
Conventional	Essentially random	104	1.188	95—100

Strong electrostatic fields affect not only the polymer structure but also the MMA polymerization kinetics and the molecular weight of the polymer. The authors state that MMA polymerization in stronger electrostatic fields will yield PMMA specimens with a predominantly syndiotactic structure.

Card 4/5

L 63783-65

ACCESSION NR: AP5013756

\* Bovey, F. A. Polymer NMR spectroscopy. III. The rates of the propagation steps in the isotactic and syndiotactic polymerization of methyl methacrylate. Journal of polymer science, v. 46, 1960, 59-64.

\*\* Goode, W. E., F. H. Owens, R. P. Fellmann, W. H. Snyder, and J. E. Moore. Crystalline acrylic polymers. I. Stereospecific anionic polymerization of methyl methacrylate. Journal of polymer science, v. 46, 1960, 217-231.

Orig. art. has: 2 formulas, 2 tables.

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A.B. Topchiyeva Akademii nauk SSSR (Institute of Petro-Chemical Synthesis, Academy of Sciences SSSR)

SUBMITTED: 03Nov64

ENCL: 00

SUB CODE: MT,GC

NR REF SOV: 000

OTHER: 006

FSB v.1, no.9

Card 5/5



AMERIK, Yu.B.; KRENTSEL', B.A.; KONSTANTINOV, I.I.

Polymerization of vinyl oleate in the liquid crystal state.  
Dokl. AN SSSR 165 no.5:1097-1100 D '65.

(MIRA 19:1)

1. Institut neftekhimicheskogo sinteza im. A.V.Topchiyeva  
AN SSSR. Submitted May 3, 1965.

AMERIKANTSEV, B.P.

~~Constructing drains on the Moscow-Leningrad highway. Avt.dor. 20~~  
no.9(179):11-13 S '57. (MIRA 10:10)  
(Road drainage)

AMERIKANTSEV, B.P.

Setting up drainage for reinforcing subgrades located on  
sliding soils. Avt. dor. 22 no.5:12-13 My 59.

(MIRA 12:8)

(Drainage) (Road construction)

AMERIKANTSEV, B.P.

Constructing culverts and bridges on landslides. Avt. dor. 23  
no.10:12-13 0 '60. (MIRA 13:10)  
(landslides) (Bridges---Construction)

117 AND 118 SERIES										119 AND 120 SERIES									
117 AND 118 SERIES										119 AND 120 SERIES									
<div style="display: flex; justify-content: space-between;"> <span>AMERIKOV, A.V.</span> <span>PROCESS AND PROPERTIES INDEX</span> </div> <div style="margin-top: 20px;"> <div style="display: flex; justify-content: space-between;"> <span>BC</span> <span>B-I-10</span> </div> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p style="text-align: center;">           Claimant for repairing coils owned at high temp.            during operation. G.V. Kuznetsov, A.V. Anisimov            (Kobal. Zhurn. 1955, No. 1, 94-95). The authors' work            on cement is reviewed, and the composition and mode            of using the Soviet product, "Tulsk. cement", are            described. D.M.M.         </p> </div> </div>										<div style="display: flex; justify-content: space-between;"> <span>ASB-51A METALLURGICAL LITERATURE CLASSIFICATION</span> <span>E-277777-1000</span> </div> <div style="margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> <span>10000 11000 12000</span> <span>13000 14000 15000</span> </div> <div style="display: flex; justify-content: space-between;"> <span>16000 17000 18000</span> <span>19000 20000 21000</span> </div> </div>									

[illegible]

AMERIKOV, A. V.

Kukolev, G.V., Dudavskii, I.E., Amerikov, A.V.,  
and Shteinberg, E. I. SINTERING OF HIGHLY REFRACTORY  
MATERIALS. Sbornik Rabot Ukrain. Nauch.-Issledovatel.  
Inst. Ognecuporov., No. 46, 117-54 (1940).- A number  
of methods are given for the production of dolomite  
refractories.

S/131/60/000/011/002/002  
B021/B058

AUTHORS: Amerikov, A. V., Pirogov, Yu. A.  
TITLE: Manufacture of Corundum Tubes at the Experimental Plant  
of the UNIIO

PERIODICAL: Ogneupory, 1960, No. 11, pp. 527-530

TEXT: Corundum tubes were made of wet ground commercial alumina fired at 1450°C with a content of 98.8%  $Al_2O_3$  and an addition of 1% titanium dioxide, flour paste serving as plasticizer. Tubes of a length of from 1.5 to 2.0 m were pressed from the mass with a humidity of from 16.5 to 16.7%. After drying, the tubes were fired in hanging position in a kryptol furnace of the type BHMMO-120 (VNIIO-120) with electric muffle (Figs. 1 and 2), as suggested by A. S. Berezhnyy. The dependence of compressive strength, porosity and weight by volume on the firing temperature is shown in Fig. 3. The investigation results of the masses from alumina with different content of orthophosphoric acid ( $H_3PO_4$ ) are tabulated. The dependence of the compressive strength on the firing temperature is shown in Fig. 4. In conclusion, the possibility was ascertained of firing

Card 1/2



Manufacture of Corundum Tubes at the  
Experimental Plant of the UNIIO

S/131/60/000/011/002/002  
B021/B058

corundum tubes up to 1.2 m length, using a mass with flour bonding, and  
up to 2.0 m length, using a mass with phosphate bonding, in the kryptol  
furnace in hanging position. P. N. Gorovenko took part in the work. ✓  
There are 4 figures, 1 table, and 3 references: 1 Soviet and 2 US.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut ogneporov  
(UNIIO) (Ukrainian Scientific Research Institute of Re-  
fractory Materials)

Card 2/2

AMERICA, N.Y.

In the Ukrainian Refractories Institute. Ogneupory 26 no.10:454-456 '61. (MIRA 14:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneporov.  
(Ukraine--Refractory materials)

AMERIKOV, Ivan, inzh.

Underground reservoir beneath the Sliven flood cone. Kiborotekh  
i mollier 9 no. 4:121-123 '64.

*Amerikova, T. A.*

S/131/60/000/008/001/003  
B021/B058

AUTHORS: Kukolev, G. V., Strelets, V. M., Pitak, N. V.,  
Amerikova, T. A.

TITLE: Compound Pouring Ladle Nozzle Lining for the Casting of  
Rimmed Steel in Installations for Continuous Steel Casting

PERIODICAL: Ogneupory, 1960, No. 8, pp. 352-356

TEXT: It was the authors' task to elaborate a ladle nozzle lining, which undergoes only slight wash-out, is not clogged by metal, and warrants a satisfactory jet without sputtering or eddies. Highly aluminous zirconium- and magnesite inserts for the compound pouring ladle nozzle lining were produced at the Opytnyy zavod (Experimental Plant) of the UNIIO (Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov - Ukrainian Scientific Research Institute of Refractories). The pouring ladle nozzle linings were produced at the Chasov Yarskiy kombinat ogneupornykh izdeliy (Chasov Yar Kombinat of Refractories), the working processes having been previously elaborated at the Experimental Plant of the Ukrainian Scientific Research Institute of Refractories. Technical alumina of type Г 1 (G1) and Chasov

Card 1/4

Compound Pouring Ladle Nozzle Lining for the  
Casting of Rimmed Steel in Installations for  
Continuous Steel Casting

S/131/60/000/008/001/003  
B021/B058

Yar clay 41 (Ch1) were used for the production of highly aluminous<sup>15</sup> inserts. Zirconium inserts were produced from finely ground zirconium with a  $ZrO_2$  content of 69%. Chamotte pouring ladle nozzle linings were produced at the Experimental Plant of the Ukrainian Scientific Research Institute of Refractories from a mass containing 40% chamotte from Chasov Yar clay 41 (Ch1), 40% Chasov Yar clay 41 (Ch1) and 20% foundry coke. The highly aluminous and magnesite inserts, as well as chamotte pouring ladle nozzle linings were pressed in the "Tagilets" friction press. A press mold (Fig. 1) was used at the Chasov Yar Kombinat. A total view of the two parts of the compound pouring ladle nozzle lining is shown in Fig. 2. The inserts and linings were fired in periodic furnaces. The firing curves are shown in Fig. 3 and the properties of the fired products are tabulated. The compound linings were tested at the Stalinskiy metallurgicheskiy zavod (Stalino Metallurgical Plant) and the zavod "Krasnoye Sormovo" ("Krasnoye Sormovo" Plant) during the casting of rimmed steel. The experiments were conducted by collaborators of the Ukrainian Scientific Research Institute of Refractories, the Ukrniimetallov (Ukrainskiy nauchno-issledovatel'skiy

Card 2/4

Compound Pouring Ladle Nozzle Lining for the  
Casting of Rimmed Steel in Installations for  
Continuous Steel Casting

S/131/60/000/008/001/003  
B021/B058

institut metallov - Ukrainian Scientific Research Institute of Metals),  
the TsNIICHM (Tsentral'nyy nauchno-issledovatel'skiy institut chernoy  
metallurgii - Central Scientific Research Institute of Ferrous Metallurgy),  
the Stalino Metallurgical Plant and the "Krasnoye Sormovo" Plant. Fig. 4  
shows highly aluminous inserts after their use in 50 t pouring ladles.  
They were tested at the "Krasnoye Sormovo" Plant with apertures of 30 mm  
diameter. The aperture of the insert was washed out by 1-2 mm in diameter  
when casting rimmed steel of type 3Kv (3kp). The wear amounts to 4-6 mm  
when casting weld steel of type CB 08A (Sv08A), which is explained by its  
higher content of iron oxides. The authors state in conclusion that the  
production technology of compound nozzle linings was elaborated for con-  
tinuous rimmed-steel casting. The compound lining consists of a porous  
chamotte pouring ladle nozzle as a carrying part, and a highly aluminous  
magnesite- or zirconium insert as working part. The highly aluminous  
inserts showed the best wear resistance during tests. There are 4 figures,  
1 table, and 5 references: 1 Soviet, 2 British, and 2 US.

Card 3/4

Compound Pouring Ladle Nozzle Lining for the  
Casting of Rimmed Steel in Installations for  
Continuous Steel Casting

S/131/60/000/008/001/003  
B021/B058

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut ogneporov  
(Ukrainian Scientific Research Institute of Refractories) ✓

Card 4/4

KUKOLOV, G.V.; STRELET'S, V.M.; PITAK, N.V.; AMERIKOVA, T.A.

Sectional nozzles for the continuous pouring boiling steel. Ogneupory  
25 no.8:352-356 '60. (MIRA 13:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.  
(Steel--Metallurgy)



AMERIKS, E., and others.

Academician Pauls Lejins; an obituary. p. 161.

LATVIAS PSR ZINATNU AKADEMIJA. VESTIS. RIGA, LATVIA. No. 3, 1959

Monthly List of East European Accessions. (EEAI) LC, Vol. 9, no. 2,  
Feb. 1960 Uncl.

AMERIKS, E.

Miraculous means. Sov. profsoiuzy 18 no.4:4-6 F '62.  
(MIRA 15:3)  
1. Zamestitel' predsedatelya Prezidiuma Verkhovnogo Soveta  
Latviyskoy SSR.  
(Latvia--Politics and government)  
(Latvia--Trade unions)

22 (1)

SOV/27-59-3-11/37

AUTHORS: Salmanov, G., School Director, and Amerkhanov, A.,  
Deputy Director.

TITLE: Changes in the Training of Machine Operators  
(Izmeneniya v podgotovke mekhanizatorov)

PERIODICAL: Professional'no-tekhnicheskoye obrazovaniye, 1959, Nr 3,  
p 11 (USSR)

ABSTRACT: At the Trade School for Agricultural Mechanization Nr 3,  
Tadzhik SSR, 240 tractor-driver-machinists with fitter's  
qualifications are trained for 11 months. Since the  
Tadzhik Republic is in need of more versatile machine opera-  
tors, the staff of the school considers it necessary that  
the rural vocational-technical schools should train such  
personnel as are urgently needed by kolkhozes and sovkhoses  
but are not trained at the existing mechanization schools.  
This refers particularly to machinists of excavating machines  
electricians, mechanics of tractor brigades, mechanics for  
mechanization of labor-consuming processes in animal hus-  
bandry, and fitters. It would be advisable to organize

Card 1/2

AMERKHA NOV, T.K., elektromekhanik

Device for transmitting indications of the hump light signal  
to the locomotive. Avtom., telem. i svyaz' 3 no.7:19-20  
J1 '59. (MIRA 12:12)

1. Yudinskaya distantiya signalizatsii i svyazi Kazanskoy  
dorogi.

(Railroads--Yards)  
(Railroads--Signaling)

AMERLING, K.

Transformation of Widal's hemoclasia in dysmicrobism into a  
postprandial physiological leukocytosis during eumicrobism.  
Lek.listy 5 no.8:224-228 Ap '50. (CLML 19:2)

1. Of the Propedeutic Clinic of the Medical Faculty Palackeho  
University in Olomouc (Head -- Prof. Karel Amerling, M.D.).

AMERLING, K.

Multiple organs to shock in allergy. Lek. listy, Brno. 7 no.  
11:265-268 1 June 1952. (CJML 22:3)

1. Of the Propedeutic Clinic (Head -- Prof. K. Amerling, M. D.  
of Palacky University, Olomouc.

AMERLING, K.

"The Physiological Basis for a Light Diet."  
(Propedeutic Clinic of Palacky University in Olmuetz)

SO: Sborn. pathofysiol., Prague, Vol 7 (1953), No. 1-4, pp 161-165.

KOCK, Istvan; AMIS, Dezsó

Report on the conference of the Invention offices of the socialist countries held in Bucharest. Ujit lap 13 no.22:3-4 N '61.



NOVOZHILOVA, N.I., kand. tekhn. nauk; ANDERSON, R.A., inst.

Economics of the manufacture of welded spans. Trudy NII mostov no. 5:  
(2-85 '59. (MIRA 12:7)

(Bridges, Iron and steel)

SHILOV, I.A.; ROZANOV, S.I.; AMTEVSKAYA, Ye.I.

Some mechanisms determining chemical body temperature regulation  
in the development of small passerine birds. Zhur.ob.biol. 21  
no.1:74-76 Ja-Y '60. (MIRA 13:5)

1. Chair of Vertebrate Zoology, Moscow State University.  
(BODY TEMPERATURE) (PASSERIFORMES)

~~AMETIST, A. I.~~

Producing window blocks with beaded casings. Gor.i sel'.stoi.  
no.4:24 Ap '57. (MIRA 10:5)

1.Glavnyy inzhener Khar'kovskogo derevoobrabatyvayushchego kombinata.  
(Windows)

AMETIST, A.I., inshener.

Trimming machine with automatic running of the saw blade.  
Der.prom. 6 no.6:23-24 Je '57. (MLRA 10:8)

1.Khar'kovskiy derevesbdelechnyy kombinat.  
(Woodworking machinery)  
(Automatic control)

AMETIST, A.I.; OMEL'CHENKO, A.A., master

Making solid plain doors using wood waste. Suggested by A.I. Ametist,  
A.A. Omel'chenko. Rats. i izobr. predl. v stroi. no. 16:132-134 '60.  
(MIRA 13:9)

1. Glavnyy inzhener derevoobdelochnogo kombinata Khar'kovskogo  
sovnarkhoza, Khar'kov, Biologicheskaya ul., d. 13.  
(Wood waste) (Doors)

AMETIST, A.I.

Mechanization and automation of the industrial processes at the  
Kharkov Woodworking Combine. Bum. 1 der. prom. no.2:6-8 Ap-Je  
'64. (MIRA 17:9)

PE3OK, Ya.N.; AMETIST, B.I.

X-ray kymographic study of the organs of the mediastinum in the  
differential diagnosis of malignant and inflammatory diseases of  
the lungs. Khim. med. 38 no.5:59-64 My '60. (MIRA 13:12)  
(MEDIASTINUM—RADIOGRAPHY) (LUNGS—DISEASES)

AMETOV, M. Yu. (ENGR)

USSR/Engineering - Welding, Processes

May 52

"Effect of Welding Conditions on Structure and  
Strength of Weld of Medium-Carbon Steel," M. Yu.  
Ametov, Engr, Azerbaydzhan Industrial Inst imeni  
Avizbekov M. Azizbekov

"Avtogen Delo" No 5, pp 13-14

Establishes that spot welding of medium-carbon  
steel is accompanied by decarburization of zone  
around nucleus of welded spot. Width of this zone  
depends on conditions of welding process and in-  
creases with increase of welding time and current.  
Strength of welded spot decreases with increase in  
the width of decarburized zone.

217T40



AMETOV, M. Yu.

"Decarburization of Grain Boundaries in the Spot Welding of Carbon and Certain Alloy Steels." Cand Tech Sci, Georgian Order of Labor Red Banner Polytechnical Inst imeni S. M. Kirov, Min of Higher Education USSR, Baku, 1954. (KL, No 7, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions  
(14)

AMETOV, M. Yu., assistant.

Measurement of microhardness as a method of studying spot-welded joints.  
Trudy Azerb. ind. inst. no. 7:74-80 '54. (MIRA 9:9)  
(Welding research)

SOV/137-57-10-19454

Translation from. Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 144 (USSR)

AUTHOR: Ametov, M.Yu.

TITLE: Decarburization of the Boundary of a Molten Nucleus During Resistance Spot Welding of Carbon Steels (Obezuglerozhivaniye granitsy yadra pri kontaktnoy tochechnoy svarke uglerodistykh staley)

PERIODICAL: Tr. Azerb. industr. in-ta, 1956, Nr 14, pp 124-130

ABSTRACT: A summary of results of an investigation dealing with the decarburization of the boundary of a molten nucleus (DBMN) depending on conditions of resistance spot welding operations and the C content of steel. It is demonstrated that decarburization affects the structure and the strength of the spot-weld metal. Carbon steels containing 0.06, 0.1, 0.53, and 0.83% C were investigated. The microstructure of the decarburized zone and the distribution of microhardness throughout the cross section of the spot weld are shown. Spot welding of hypoeutectoid and eutectoid carbon steels is accompanied by DBMN of the spot weld. A principal parameter of spot-welding technology affecting the width of the decarburized zone is the duration of the

Card 1/2

SOV/137-57-10-19454

Decarburization of the Boundary of a Molten Nucleus (cont.)

welding impulse. During welding in accordance with a given technology, the width of the decarburized zone diminishes with increasing C content of the steel.

V.Ts.

Card 2/2

SOV/137-57-10-19455

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 144 (USSR)

AUTHOR: Ametov, M.Yu.

TITLE: The Effect of Chromium and Nickel on Decarburization of the Boundary of a Molten Nucleus During Resistance Spot Welding (Vliyaniye khroma i nikelya na obezuglerozhivaniye granitsy yadra pri kontaktnoy tochechnoy svarke)

PERIODICAL: Tr. Azerb. industr. in-ta. 1956, Nr 15, pp 157-167

ABSTRACT: A presentation of results of an investigation dealing with the effect of Cr and Ni on the degree of decarburization of the boundary of the molten nucleus (DBMN) during resistance spot welding of low-alloyed (20KhN) and high-alloyed (1Kh18N9T) Cr-Ni steels. The occurrence of the DBMN was studied as a function of duration of the welding impulse. The degree of DBMN was evaluated in terms of changes in ferrite content of the microstructure and in terms of the microhardness characteristics of the metal at the boundary of the molten nucleus. A graph of microhardness distribution throughout the cross section of the spot weld is shown together with the microstructure of metal at the boundary of the molten nucleus. It is shown

Card 1/2

SOV/137-57-10-19455

The Effect of Chromium and Nickel on Decarburization (cont.)

that spot welding of steels 20KhN and 1Kh18N9T is accompanied by DBMN; the intensity of the DBMN process diminishes as the degree of alloying of steel with Cr, Ni, and, possibly, Ti is increased. It is established that decarburization noticeably impairs the strength of welded joints in low-alloy steels, but has practically no effect on the strength of weld metal in the case of high-alloyed steels.

V.Ts.

Card 2/2

Ametov, M. K.

Distr: 1E2c

Influence of welding conditions on the structure and the strength of the weld. M. K. Ametov. Avtomat. Svarka 10, No. 3, 63-6 (1957).—Middle- and low-C steel samples, 40 x 200 x 2 mm., were coupled by one-spot welding. The joint quality was checked, considering the welding conditions. It was found that the height of the weld metal in the welding process duration. Max. height is obtained in the shortest process time. The specific strength of the joint increases with its height. The height of the weld metal increases with its height. The height of the weld metal is approx. half of the total thickness of the plates being welded.

2  
1

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AMETOV, M.Yu.; ASRIYAN, V.A.; BAGIRZADE, K.M.

~~www.ozon.ru~~  
Production of metal parts for foundations of offshore drilling rigs.  
Izv. vys. ucheb. zav.; neft i gaz no.8:107-114 '58. (MIRA 11:10)

1. Azerbaydzhanskiy industrial'nyy institut im. M. Azizbekova.  
(Oil well drilling rigs)



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TITLE: The effect of alloying on the tendency of copper to gripping in dry sliding friction

SOURCE: Za tekhnicheskii progress, no. 11, 1965, 37-39

TOPIC TAGS: copper, copper base alloy, aluminum containing alloy, zinc containing alloy, wear resistance, metal friction, metallurgic testing machine / MN-1 metallurgic testing machine

ABSTRACT: The results of a study of the effect of alloying copper with aluminum and zinc on the tendency toward gripping in dry sliding friction are given. The aluminum and zinc contents of the alloys were up to 15 and 50%, respectively. The specimens had a diameter of 50 mm and a thickness of 10 mm in the wear-resistance tests. An MN-1 machine was used for performing tests under a load of 30 kg and a friction moment of 150 kg-cm. All the alloys that displayed gripping with pure copper were in the region of a homogeneous solid solution (see Fig. 1). A definite law of the effect of the concentration of the alloy components on the tendency of copper to gripping was found. The tendency to gripping with binary copper alloys is a function of the nature

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