"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

SOV/24-58-9-19/31

On the Flow of Gas in a Cylindrical Tube in the Presence of Friction and Heat Transfer

There are 3 figures and 4 Soviet references.

SUBMITTED: March 6, 1958

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

16.7600

77985
SOV/40-24-1-13/28

AUTHOR: Mezhirov, I. I. (Moscow)

TITLE: Turbulent Boundary Layer for an Imperfect, Compressible Gas

PERIODICAL: Prikladnaya matematika i mekhanika, 1960, Vol 24, Nr 1, pp 93-99 (USSR)

ABSTRACT: Averaged turbulent boundary layer equations for the flow of an imperfect, compressible gas about a body are derived. Starting from the continuity equation, the equation of motion, and energy equation:

$$\frac{\partial}{\partial t}(\rho I) + \frac{\partial}{\partial x}(\rho u I) + \frac{\partial}{\partial y}(\rho v I) = \frac{1}{J}\frac{\partial p}{\partial t} \quad \left(I = i + \frac{u^2 + v^2}{2J}, \quad i = e + \frac{1}{J}\frac{p}{\rho}\right) \tag{1.1}$$

for the plane turbulent motion of a real gas, the author replaces all quantities by the sum of an averaged component and pulsational component and time-averages these equations. Here, ρ is density; p, pressure;

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Turbulent Boundary Layer for an Imperfect, Compressible Gas

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SOV/[illegible]

i, enthalpy; e, internal energy; J, mechanical equivalent of heat. Fluctuational quantities of more than second order are omitted. Terms depending on the thermal conductivity and viscosity have first been omitted from (1.1) because their time averages are small in comparison with the remaining quantities. The boundary layer equations are then obtained by taking such quantities into account while neglecting derivatives in the direction along the body in comparison with derivatives normal to the body, and neglecting quantities of the order of v_0 in comparison with v^0. The velocity components v^0 and v^0 are the ratios of the corresponding averaged mass flux and average density. After some additional manipulations, the energy equation is obtained differs from that for a perfect gas only in that the averaged temperature is replaced by the averaged enthalpy. The other equations have the same form as when averaged for a perfect gas. The author then gives some particular examples. For stationary motion with no heat transfer between the body and gas, the pressure arbitrary on the

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body, and both the Prandtl number and Prandtl turbulent mixing number equal to one, I is equal to its value outside the boundary layer. Several graphs are given depicting how the enthalpy for dissociated air varies with the temperature for different values of the pressure. A second example considers the temperature constant and u = 0 on the body, the pressure constant, and the Prandtl numbers again unity. A formula is given relating I, its values on the wall and outside the boundary layer, to u and its value at infinity. This is used to show that the Nusselt number and Reynolds number are related by:

$$N = \frac{1}{2} Re_l \qquad (2.4)$$

where c_f is frictional coefficient. An approximate relationship is given between I and the speed in the case of a stationary turbulent boundary layer near a plate for Prandtl numbers which are not unity and for constant pressure and constant temperature on the plate.

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Turbulent Boundary Layer for an Imperfect, Compressible Gas

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SOV/40-24-1-13/28

A formula is obtained generalizing the usual relation for N. The author states that this form is more useful in questions of heat exchange between the wall and stream since certain relations which follow from the basic equations do not change the form of N. There is 1 figure; and 2 references, 1 Soviet, 1 German.

SUBMITTED: May 6, 1959

Card 4/4

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHIROV, I.I. (Moskva)

Gas flow in a canal in the presence of heat exchange. Izv. AN SSSR. Otd. tekh.nauk.Mekh. i mashinostr. no. 1:102-106 Ja-F '61. (MIRA 14:2)

(Fluid dynamics) (Heat—Transmission)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHIROV, I.I. (Moskva)

Imperfect-gas flow in the presence of heat transfer. Izv.AN SSSR.Otd. tekhnauk.Mekh.i mashinostr. no.3:184-185 My-Je '61. (MIRA 14:6)
(Fluid dynamics) (Heat—Transmission)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

S/207/62/000/003/015/016
I028/I228

AUTHOR: Mezhirov, I. I. (Moscow)

TITLE: Calculation of the one-dimensional flow in a variable-section duct in the presence of friction and heat exchange

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 3, 1962, 92-95

TEXT: The influence of the frictional forces and the heat exchange on the gas pressure is investigated; the problem of finding a low of variation of the duct section ensuring a given distribution of the M numbers for a given law of heat exchange is solved; the law of variation of the total gas temperature ensuring a given distribution of the M numbers in a duct of given shape is determined; a numerical method of calculation of the distribution of the M numbers along a duct of given shape for a given law of heat exchange is described. All calculations are based on the assumption of one-dimensional flow.

SUBMITTED: February 13, 1962

Card 1/1

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

L 42960-65 EWT(1)/EWP(m)/EWG(v)/FCS(k)/EWA(1) Pd-1/Pe-5/Pi-4

ACCESSION NR: AP5011317 UR/0258/65/005/002/0243/0248

AUTHOR: Mezhirov, I. I. (Moscow)

35
B

TITLE: On total pressure losses in a hypersonic wind tunnel

SOURCE: Inzhenernyy zhurnal, v. 5, no. 2, 1965, 243-248

TOPIC TAGS: hypersonic flow, boundary layer, momentum loss, energy loss, pressure loss, nozzle, Eiffel chamber, pressure recovery factor, wind tunnel

ABSTRACT: The total pressure recovery factor is evaluated in a flow equivalent to a one-dimensional flow with a straight shock wave in order to calculate the pressure losses in a hypersonic wind tunnel due to the presence of a thick boundary layer on the walls. As an analog to this flow, an inviscid, non-heat-conducting gas flow is considered in a cylindrical duct whose inlet has the same distribution of flow parameters as the output cross section of the nozzle and at its output, a one-dimensional subsonic flow (see Fig. 1 and sections 1 and 2 of the Enclosure). The flow parameters in sections 1 and 2 are described by equations of energy and momentum loss; the flow is assumed to be one-dimensional and isentropic in the inviscid flow core in section 1. An expression for the total pressure recovery factor u is established, and its dependence on the Mach number calculated for

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ACCESSION NR: AP5011317

various $\alpha = F^*/F_{core}$ is shown in graphs, where F^* is the surface of mass displacement and F_{core} is the core surface. Further, the total pressure losses in a hypersonic wind tunnel with an Eiffel chamber and also at the nozzle start-up are investigated. On the basis of the results obtained, it is concluded that the magnitude of v depends weakly on the position of shock wave in the nozzle at sufficiently large Mach numbers. This means that at nozzle start-up an insignificant increase in presssure is required in the forechamber to displace the shock wave from the inside to the nozzle exit. Orig. art. has: 5 figures and 14 formulas. [AB]

ASDOCIATION: none

SUBMITTED: 14Aug64 ENCL: 01 SUB CODE: ME

NO REF SOV: 002 OTHER: 002 ATD PRESS: 3236

Card 2/3

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

Mezhirov L.

GRANDO, A.A., kandidat meditsinskikh nauk (Kiyev); MEZHIROV, L.S. (Kiyev)

Medical problems in "Sovremennik." Vrach. delo no.1:97-99 Ja '57 (MLRA 10:4)

(MEDICINE--PERIODICALS--HISTORY)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

GRANDO, Aleksandr Abramovich [Hrando, O.A.]; MEZHIROV, Leonid Semenovich [Mezhyrov, L.S.]; STARCHENKO, S.M., red.

[History of hygiene and sanitation in the Ukraine; bibliographical index] Istoriia higieny ta sanitarii na Ukraini; bibliografichnyi pokazhchyk. Kyiv, Vyd-vo "Zdorov'ia," 1964. 123 p. (MIRA 17:12)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHIROVA, L.P.; YAKOVLEVA, M.K.; MATVEYEVA, A.V.; ABKIN, A.D.; KHOMIKOVSKIY, P.M.; MEDVEDEV, S.S.

Polymerization in emulsions under the action of γ-radiation. Vysokom.soed. 1 no.1:68-72 Ja '59. (MIRA 12:9)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova.
(Polymerization) (Gamma rays)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

66876

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SOV/76-33-11-47/47

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AUTHORS: Abkin, A. D., Sheynker, A. P., Mezhirova, L. P.

TITLE: On the "Carbanion" Mechanism of Polymerization Under the Effect of Gamma Rays

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 11, p 2636 (USSR)

ABSTRACT: Data from publications (Ref 1) on the polymerization of isobutylene, and data of the joint polymerization of isobutylene with vinylidene chloride and of the styrene with methyl methacrylate, obtained by the authors (Ref 2) show that at low temperatures and influenced by nuclear radiation, the polymerization occurs according to the carbonium mechanism. Up to present there is no information in publications on the course of a "carbanion" mechanism at the polymerization under the influence of nuclear radiation. It has been established that the polymerization may proceed according to both mechanisms (carbonium or "carbanion" mechanism) and that this is not determined by the chemical structure of the monomers, but by the nature of the medium. Data on the polymerization of acrylic acid nitrile and styrene at -78°C (Table) under the influence

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SOV/76-33-11-47/47

On the "Carbanion" Mechanism of the Polymerization Under the Effect of Gamma Rays

of gamma rays, show that the polymerization of the acrylic acid nitrile in solving agents with electron donor substituents (triethyl amine, dimethyl formamide) occurs and that none occurs in ethyl chloride (which is usually used for carbonium polymerization) containing electrophilic groups. Contrary, styrene polymerizes only in ethyl chloride. These data show that acrylic acid nitrile, which has molecules containing electronegative groups, polymerizes, under the given conditions, not according to the radical mechanism, but according to the "carbanion" mechanism. It is mentioned that more detailed results of the investigations carried out will be published later and that the authors thank Academician S. S. Medvedev. There are 1 table and 3 references, 2 of which are Soviet.

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

PHASE I BOOK EXPLOITATION SOV/4983

International symposium on macromolecular chemistry. Moscow, 1960.

Mezhdunarodnyy simpozium po makromolekulyarnoy khimii, SSSR, Moskva, 14-18 iyunya 1960 g: doklady i avtorefraty. Sektsiya II. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18; Papers and Summaries) Section II. [Moscow, Izd-vo AN SSSR, 1960] 559 p. 5,500 copies printed.

Sponsoring Agency: The International Union of Pure and Applied Chemistry, Commission on Macromolecular Chemistry

Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high-molecular compounds.

COVERAGE: This is Section II of a multivolume work containing papers on macromolecular chemistry. The papers in this volume treat mainly the kinetics of various polymerization reactions initiated by different catalysts or induced by radiation. Among the research techniques discussed are electron paramagnetic resonance spectroscopy and light-scattering interpolation. There are summaries in English, French and Russian. No personalities are mentioned. References follow each article.

Mihail, R., and J. Herscovici (Rumania). On the Mechanism of the Formation Reaction of Stereoregular Polymers 302

Simon, A., and G. Ghynes (Hungary). On the Kinetics of a Reaction on Zeigler Catalysts 310

Wichterle, O., M. Marek, and I. Prokopal (Czechoslovakia). Kinetics of the Polymerization of Isobutylene on a Heterogeneous Catalyst 322

Bořek, V. (Czechoslovakia). Heterogeneous Catalysts for the Polymerization of Alpha Olefins 330

Veselý, K., I. Ambrož, M. Vilím, and O. Šavnik (Czechoslovakia). The Effect of Donor Type Impurities on the Polymerization of Propylene. Catalyzed by the System Titanium Tricalorid-Triethyl-aluminum 337

Dolgoplosk, B.A. (USSR). Study of the Factors Leading to the Degradation of Chain Structure During the Ionic Polymerization of Dienes 346

Yerusalimskiy, B.L., Wang Fo-sung, and A.P. Kavunenko (USSR). Study of the Interaction of Organomagnesium Compounds With Salts of Heavy Metals and the Use of Organomagnesium Compounds and Their Complexes to Stimulate Polymerization 355

Szabo, I., and K. Gal (Hungary). The Effect of Organic Inner Complexes of Some Metals of Variable Valence on the Kinetics of the Polymerization of Vinyl Compounds 366

Bresler, S.Ye., M.I. Moscvitskiy, L. Ye. Podlubnyy, and Shih Kuang-i (USSR). Study of Some Details of the Mechanism of Polymerization Under the Action of Complex Catalysts 372

Tsvetkov, V.N., S.Ya. Magarik, N.N. Korneyeva, and M.J. Okuneva (USSR). Stereospecificity and the Optical Properties of Polymers 379

Birshteyn, T.M., Yu. Ya. Gotlib, and O.B. Ptitsyn (USSR). The Microtacticity of Polymers and Methods of Study 388

Abkin, A.D., A.P. Shevlyakov, M.K. Yaroslava, and L.P. Mezhirova (USSR). On Carbonium and Carbanion Polymerization Mechanisms Under the Effects of Gamma Radiation 410

Karpin, V. A., and V.A. Kabanov (USSR). Polymerization Processes in Insoluble Molecular Dispersions 433

Machácek, J., V. Majeloh, and L. Pac (Czechoslovakia). Kinetics of the Polymerization of Formaldehyde 453

Vesely, K. (Czechoslovakia). On the Mechanism of Ionic Polymerization 262

Kimmel, E., and A. Kasia (Czechoslovakia). On the Role of Nonpolar Compounds in the Cationic Polymerization of Isobutylene 272

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

"On the carbonium and carbonion mechanisms of gamma-ray induced polymerization."

report presented at the International Polymer Symposium, (IUPAC), Moscow, USSR, 14-18 June 1960.

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B015/B064

AUTHORS: Medvedev, S. S., Abkin, A. D., Khomikovskiy, P. M., Gorasimov, G. E., Gromov, V. P., Chikin, Yu. A., Tsingister, V. A., Auer, A. L., Yakovleva, M. K., Mezhirova, L. P., Matveyeva, A. V., Bezzubik, Z. G.

TITLE: Polymerization of Ethylene Under the Influence of γ-Radiation

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 6, pp. 904-915

TEXT: The radiation-chemical polymerization of ethylene in the gaseous phase and in organic substances was investigated at different pressure and radiation dose as well as some properties of the polymers formed. Co^{60} γ-radiation sources of the institut im. Karpova (Institute imeni Karpov) (1400, 1900, and 20000 gram equiv. Ra) and pressures of 50-300 atm, radiation dose of 17 to 165 r/sec, and 25°C (some experiments were made at 50°C) were the conditions. The experiments were carried out in a corresponding device (Fig. 1). The ethylene used was mass-

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spectroscopically analysed by M. V. Tikhonirov and M. V. Gur'yev. The molecular weight of the polyethylene obtained was determined by the method of light scattering by I. G. Soboleva and N. V. Mezletsova, particular data on this will be given in a separate paper. The experiments of polymerization in heptane, cyclohexane, methanol, and acetone (50 atm 25°C, ~100 r/sec) showed (Table 1) that reaction proceeds ten times were rapidly than in the gaseous phase. The polymers formed have a molecular weight of 20000-40000. Polymers of the structure $Cl_3C(C_2H_4)_2Cl$ (60%) and $Cl_3C(C_2H_4)_3Cl$ (20%) form in good yield in carbon tetrachloride. Polymerization in the gaseous phase was investigated at constant pressure (100-300 atm, 72 r/sec) and decreasing pressure (100 and 150 atm, 17-165 r/sec, 25° and 50°C). The polymer yield increases rapidly if experiments are made in the presence of polyethylene (Table 2). To begin with, the polymerization rate increases with time and reaches then a constant value. The mean molecular weight and the characteristic viscosity of the polymers increases with proceeding transformation (Table 3). The mean reaction rate amounts to 16.9 g/l.hour at 300 atm, 25°C, a duration of 24 hours and radiation dose of 72 r/sec, and the maximum rate

Card 2/4

20.5 g/l.hour (Table 4). The mean molecular weight and viscosity of polyethylene (Table 5) rise with pressure (i.e. the ethylene concentration). The maximum rate of polymerization increases somewhat with the radiation dose with a proportionality factor of 0.3, while the radiation-chemical yield decreases with an increase in the radiation dose with a factor of 0.7. The molecular weight of polyethylene increases with a reduction of the radiation dose with a factor of 0.7. The molecular weight of polyethylene increases with decreasing radiation dose (Table 6). A temperature increase from 25°C to 50°C at constant ethylene concentration (330 g/l) causes a lesser increase in the polymerization rate and the molecular weight (Table 7). Investigations carried out by Yu. M. Malinskiy and B. I. Everov in the laboratory of radiochemistry of the authors' institute showed that the polyethylene obtained has a higher density (0.945 0.975 g/cm³) and degree of crystallization than high-pressure polyethylene, differs, however, only slightly from the latter with respect to the tensile strength. In conclusion, the authors thank A. Kh. Breger, V. B. Osipov, and K. A. Gol'din for assisting in carrying out the experiments with the gamma emitters. There are 8 figures, 7 tables and 11 references: 5 Soviet, 4 US, 1 British, and 1 Belgian.

Card 3/4

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: February 24, 1960

MEZHIROVA, L.P.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

88731

S/190/61/003/001/015/020
B119/B216

11.2210

AUTHORS: Mezhirova, L. P., Sheynker, A. P., Abkin, A. D.

TITLE: The carbanionic mechanism of polymerization under the action of gamma rays

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 1, 1961, 99-104

TEXT: The present work studies the polymerization of acrylonitrile and its copolymerization with styrene under the action of γ-radiation at low temperatures for the purpose of explaining the reaction mechanism. Co^{60} was used as radiative source. The experimental temperatures ranged from -50 to -112°C. Polymerization was performed in the solvents dimethyl formamide, triethyl amine, isopropyl amine, acetone, toluene, acetonitrile, propionitrile, ethyl chloride, heptane, ethyl acetate. The reaction rate was measured dilatometrically. (The volume change of the reaction mixture during polymerization was measured by the change of electric resistance of a platinum wire and a mercury thread inside the dilatometer capillary). The acrylonitrile polymers were separated from their solutions by means of

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The carbanionic mechanism of... S/190/61/003/001/015/020
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methyl alcohol and the styrene copolymers by a heptane - ether mixture. The copolymers were microanalyzed for C, H and N. In some cases the results were checked by infrared spectroscopy. At -78°C, and a dose rate of 128 rad/sec, the polymerization rate of acrylonitrile (initial concentration 3.5 mol/l) was 1.57 mol/l·sec·10^6 in isopropyl amine, 6.7 mol/l·sec.10^6 in triethyl amine, 9.7 mol/l·sec·10^6 in dimethyl formamide and 2.1 mol/l·sec·10^6 in the "bulk". The copolymerization constants were r_1 = 33 (acrylonitrile), r_2 = 0.005 (styrene). Results: Acrylonitrile polymerization occurs only in the solvents dimethyl formamide, triethyl amine and isopropyl amine, but not in solvents with electron acceptor properties. The composition of the copolymers obtained at -78°C by the above method and that of the analogous copolymers prepared by a radical reaction exhibit significant differences. The polymerization rate of acrylonitrile increases proportionately with the dose rate. A reduction of the reaction temperature from -50 to -112°C produces a great increase of reaction rate and molecular weight. The findings indicate a carbanionic reaction mechanism. The authors thank Ya. A. Tsarfin and K. G. Nogteva, both at Vladimirskiy nauchno-

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The carbanionic mechanism of... S/190/61/003/001/015/020
B119/B216

issledovatel'skiy institut sinteticheskikh smol (Vladimir Scientific Research Institute of Synthetic Resins) for carrying out the elementary analyses. There are 4 figures, 2 tables, and 8 references: 5 Soviet-bloc, and 3 non-Soviet-bloc.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: June 9, 1960

Card 3/3

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29741
S/190/61/003/011/[illegible]
B110/B147

AUTHORS: Ushakov, V. D., Mezhirova, L. P., Galata, L. A., Kostyk[illegible], Khusnutdinova, Z. S., Medvedev, S. S., Abkin, A. D., Khomikovskiy, P. M.

TITLE: Polymerization of styrene and butadiene with styrene in emulsions under the action of initiating redox systems. I. Effect of the nature of peroxide compounds on the rate of polymerization

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 11, 1961, 1716-1722

TEXT: Aim of the present work was the determination of the most active initiating redox systems for the polymerization of butadiene with styrene in emulsions, and especially of the effect of the nature of peroxides on the rate of polymerization. Nekal with 20 % of Na_2SO_4 and NaCl and mersolate mixture of Na salts of sulfonic acids of the aliphatic series $C_{[illegible]}H_{31}SO_3Na$ with [illegible] % of NaCl served as emulsifiers. Peroxides were used

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Polymerization of styrene and

as oxidants (Table). Potassium ferrocyanide and ferrous pyrophosphate complex (IV) served as reducing agents. The rate of polymerization was determined either dilatometrically or from the yield of polymer [illegible] Polymerization took place at [illegible] with an excess of butadiene, styrene [illegible] peroxides [illegible] dissolved in [illegible] % [illegible] and the calculated amount [illegible] emulsion solution. A suspension of the ferrous pyrophosphate complex was added at a certain temperature by means of medical syringes. Sodium [illegible] used [illegible] mers rate [illegible] % by weight added to water, rat[illegible] monomer [illegible] potassium ferrocyanide. The temperature was varied between [illegible] and [illegible]. Seven peroxides were investigated in amounts equivalent [illegible] weight [illegible] benzene hydroperoxide [illegible]

[illegible] hydroperoxide [illegible] had the optimum rate of polymer [illegible] [illegible] benzene peroxide [illegible] propyl benzene [illegible] hydroperoxide was lower than [illegible] diphenyl [illegible] and that [illegible] peroxide the lowest. Polymerization [illegible] proceeds [illegible] at the beginning [illegible] decreases strongly [illegible] the reducing agent [illegible] water [illegible]

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of II, only the initial rate increases. The total yield is lower than with 0.1 % by weight of II. Between 0.75 and 1 % by weight of II, initial rates and total yield are much lower. With 0.02-0.2 % by weight of I, initial rates increase. Since the total rate decreases at 0.2 % by weight, the dependence of the reaction rate on the hydroperoxide concentration is probably linked with the inhibiting effect of the decomposition products of hydroperoxide. With 0.1 % by weight of I and an equimolecular amount of $K_4Fe(CN)_6$, both total yield and initial rate increased with increasing temperature. The activation energies were determined according to the Arrhenius equation and found to be: E = 8.6 kcal/mole for II and E = 5.7 kcal/mole for I. Reduction of E by 3 kcal/mole at ~ 0°C corresponds to a 200-fold increase of the reaction rate. Since the rate is twice as high at 0°C, the pre-exponential factor in the Arrhenius equation increases by 10^2 times with decreasing activation energy of I. For the copolymerization of butadiene with styrene (ratio 70 : 30) at 5°C, the following was used Nekal (2.8 and 1.4 % by weight added to water). 0.44 % by weight of ferropyrophosphate (related to iron sulfate) of the monomer. The ratio organic phase : aqueous phase was 1 : 4 (by weight). In the case of 0.34 %

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by weight of hydroperoxide of II (equimolar ratio to the monomer) optimum rate was achieved with IV. The highest yield was achieved with aryl-alkyl hydroperoxides (I and 1,1-diphenyl ethane hydroperoxide (III)) (Table). With an emulsifier concentration of 2.8 %, maximum conversion (70-75 %) was achieved after 2 hr with 0.2 % by weight of I and with 0.3 % by weight of III. With 0.34 % by weight of II, optimum conversion (~30 %) was achieved after 2 hr. Polymerization of I and IV with 1.4 or 2.8 % by weight of emulsifier was constant up to 30 % conversion, then the rate dropped. With 1.4 % by weight, the initial rate was lower and the decrease more distinct. With an addition of 0.1 % by weight of hydroperoxide + 0.26 % by weight of IV (after 1 hr new addition of 0.1 % by weight of hydroperoxide and 0.18 % by weight of IV), constant polymerization took place up to 60 % conversion. Thus, the consumption of the initiating system causes a decrease in rate. The efficiency of redox systems and initiators depends on the reactivity of the radical as well as on the solubility of the peroxide compounds in the [illegible] mers. The lower the solubility in water the lower the [illegible] the stronger the initiating action. I + IV cause a higher rate of reaction than II + IV due to lower activation energy and lower solubility in water. For II + IV, the redox reaction occurs at the

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29741

S/190/61/003/0[illegible]
B110/B147

Polymerization of styrene and

phase boundary, for I + IV also in the aqueous phase The existence of a maximum of the rate of polymerization for I and butylisopropyl hydroperoxide is caused by polymerization inhibition due to the decomposition products of the hydroperoxides The authors thank A G Pod"yapolskaya for help with experiments and T I Yurzhenko (L'vovskiy industrial nyy institut (L'vov Industrial Institute) for supplying some hydroperoxides There are 5 figures, 1 table, and [illegible] references 4 Soviet and [illegible] non-Soviet The two references to English-language publications read as follows F. A Bovey, I M Kolthoff, Emulsion Polymerization, New York, 1955; F Fryling, Industr and Engng Chem, 41, 986, 1949

ASSOCIATION Fiziko-khimicheskiy institut im L Ya Karpova (Physico-chemical Institute imen. L Ya Karpov

SUBMITTED December 29, 1960

Card 0/[illegible]

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

15 9201 13 72, 1436, 1474

27742
S/190/61/003/011/014/016
B110/B147

11 2211

AUTHORS: Ushakov, V. D., Mezhirova, L. P., Galata, L. A., Khusnutdinova, Z. S., Sheynker, A. P., Medvedev, S. S., Abkin, A. D., Khomikovskiy, P. M.

TITLE: Polymerization of styrene and butadiene with styrene in emulsions under the action of initiating redox systems. II. Effect of the nature of the reducing agent on the rate of polymerization

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. [illegible], 1723-1729

TEXT: The effect of the reducing component of initiating systems and of the addition of a second reducing agent on the rate of polymerization is studied. Used were systems of hydroperoxides (HP) of isopropyl benzene (I) or [illegible] butyl isopropyl benzene (II) with ferropyrophosphate complex (III), potassium ferrocyanide (IV), ferrous sulfate with [illegible] anthroline, or of complexes of α α-dipyridyl with ferrous oxalate. Sodium bisulfite and the bisulfite compound of acetone served as reducing

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

S/190/63/005/004/001/020
B101/B220

AUTHORS: Mezhirova, L. P., Smigasevich, Z., Sheynker, A. P., Abkin, A.D.

TITLE: Carbanion mechanism of gamma ray initiated polymerization

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 4, 1963, 473-478

TEXT: The Co^{60} gamma ray initiated polymerization of acrylonitrile (AN) and copolymerization of AN with styrene (St) and methyl methacrylate (MMA) are discussed. Results: (1) At -78°C the polymerization of AN initiated by gamma irradiation was successful in triethyl amine only, while at 0°C the electron donor or acceptor properties of the solvents (triethyl amine, ethyl chloride, acetonitrile or butyronitrile) had no effect on the polymerization. (2) When copolymerization of AN with St was initiated by gamma rays, copolymers enriched with AN formed at low temperatures, while at normal temperatures an azeotrope characteristic of the radical polymerization of these monomers was formed. (3) Copolymerization of AN with MMA, initiated by gamma rays, yielded in triethyl amine at -78°C a polymer enriched with AN, independently of the initial ratio of the monomers. $r_{AN} = 7.0$, $r_{MMA} = 0.05$, these values being close to those for catalytic

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anionic polymerization. (4) The kinetics differs from that of radical polymerization. MMA polymerizes more slowly ($0.04 \cdot 10^{-5}$ mole/l·sec) than AN ($0.96 \cdot 10^{-5}$ mole/l·sec). (5) These differences confirm the carbanion mechanism suggested by the authors for the polymerization and copolymerization of AN by gamma irradiation at low temperatures. There are 3 figures and 2 tables.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: August 26, 1961

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

L 39481-65 EWG(j)/EWT(1)/EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(j)/T/EWA(h)/EWA(c)
EWA(1) Pz-6/Pc-4/Pr-4/Ps-4/Peb/Pu-4 IJP(c)/RPL WW/GG/AT/RM

ACCESSION NR: AP4007545 S/0020/63/153/006/1378/1380

AUTHOR: Mezhirova, L. P.; Sheynker, A. P.; Abkin, A. D. 50 B

TITLE: Effect of semiconductor-type additives on the radiation polymerization of acrylonitrile and methylmethacrylate

SOURCE: AN SSSR, Doklady*, v. 153, no. 6, 1963, 1378-1380

TOPIC TAGS: acrylonitrile, methylmethacrylate, radiation polymerization, semiconducting additive, zinc oxide, titanium dioxide, chromium oxide, chromium sesquiozide, Cr sub 2 O sub 3, magnesium oxide, copper oxide, cuprous oxide, Cu sub 2 O, nickel oxide, NiO, polymerization, acrylonitrile, polymer, methacrylic acid, methyl ester, polymer

ABSTRACT: The effect of semiconductor-type additives on the radiation polymerization of acrylonitrile and methylmethacrylate was studied. These monomers tend to undergo anionic polymerization, under the influence of γ-rays (Co^{60}, 20,000 r.) at low temperatures in the presence of semiconductor-type additives

Card 1/3

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

L 39181-65

ACCESSION NR: AP4007545

ZnO, Cr_2O_3, TiO_2, MgO, Cu_2O, Ni_2O, or $Ni_2O + Li_2O$, which has been heated previously under vacuum at 100C for 6 hours (ZnO at 300C and MgO at 150C) and added in quantities to fill the whole monomer volume. Increase of the reaction surface decreased rather than increased the polymerization rate of the acrylonitrile. No increase was observed with ZnO and TiO_2 (n-type semiconductors) while the other oxides (p-type) considerably increased the polymerization rate and the polymer's molecular weight. The same applied to the acrylonitrile polymerization in triethylamine solution under the same conditions. No such effect occurred at higher temperatures (0C). At -196C MgO and Cu_2O increased solid acrylonitrile polymerization two fold which may be explained by the ionic mechanism of the polymerization under these conditions; IR spectroscopy indicated this to proceed at both =C=C- and -C-N-bonds. Similar results were obtained with methylmethacrylate in the presence of MgO at temperatures slightly below or above its melting point. The polymer obtained at -56C had high density which indicates isstereo regular nature. Results are compared with those obtained under similar conditions for cation-polymerizing monomers. The mechanism of this effect is unknown to date. Orig. art. has: 2 figures and 1 table.

Card 2/3

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

L 39481-65
ACCESSION NR: AP4007545

2

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-Chemical Institute)

SUBMITTED: 15Jul63

ENCL: 000

SUB CODE: GC, SS

NO REF SOV: 002

OTHER: 002

Card 3/3

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

L 22532-65 EWO(j)/EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(j)/T/EWA(h)/EWA(1) Po-4/Pr-4/Ps-4/Pu-4/Peb RPL GG/RM/WW

ACCESSION NR: AP4047949 S/0020/64/158/005/1159/1161

AUTHOR: Mezhirova, L. P.; Sheynker, A. P.; Abkin, A. D.

TITLE: The mechanism of radiation polymerization of acrylonitrile and methyl methacrylate in the presence of solid additives

SOURCE: AN SSSR. Doklady*, v. 158, no. 5, 1964, 1159-1161

TOPIC TAGS: acrylonitrile, methyl methacrylate, radiation polymerization, radiation polymerization mechanism, MgO, anionic polymerization, acrylonitrile methyl methacrylate copolymer

ABSTRACT: The radiation polymerization and copolymerization of acrylonitrile (I) and methyl methacrylate (II) in the presence of MgO, ZnO, powdered glass and other solid additives was investigated. The rates of the individual polymerizations and bulk copolymerizations of the two monomers at 0 and -50C in the presence of MgO were approximately an order higher than without MgO; at 0C the kinetic effects were not large-- only 1.5-2 times. In copolymerizations in the

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

L 22532-65

ACCESSION NR: AP4047949

presence of MgO the copolymers were enriched in I, while without MgO, or with glass powder or ZnO, they were enriched in II. The mechanism of the radiation polymerization of I and II changed from radical polymerization without MgO to anionic polymerization upon addition of MgO. The yield of the ionic reactions increased on going from 0 to -50C. The effect of the nature of the solid additives on the polymerization was discussed. A possible source of the anionic polymerization centers is the carbanion $(CH_3-\underset{CN}{CH})^-$, formed by the addition of an electron from the additive to the $CH_3.CHCN$ radical. The observed effects were thought to be associated with the participation of holes and electrons. Orig. art. has: 1 table and 3 figures

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physical Chemical Institute)

SUBMITTED: 09May64 ENCL: 00

SUB CODE: OC, GC NO REF SOV: 009 OTHER: 005

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOV, A. A.

36122 Vozmozhnosti umen'sheniya napryazheniy Krucheniya buril'nyKh trub pri rotornom burenii. Energet byulleten', 1949, No. 10, S. 20-23.

SO: Letopis' Zhrunal' nykh Statey, No. 49, 1949

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOV, A. A.

PA 152T7

USSR/Engineering - Drilling, Rotary Generators, Cascade

Nov 49

"Utilization of a Dual-Induction Motor Drive in a Cascade-Generator Scheme to Reduce the Turning Stresses of Drill Pipes During Rotary Drilling," A. A. Mezhlumov, 3 pp

"Energet Byul" No 11

Discusses new principle for protecting drill pipes from buckling by using regenerative breaking of dual-induction motor drive. Includes sketch showing cascade layout, and graph.

[redacted]

152T7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOV, A. A.

161T33

USSR/Electricity - Motors, Induction Calculations, Overload

May 50

"Formulas for Determining Power of Drill Hoist Electric Motors," A. A. Mezhlumov, 4 3/4 pp

"Energet Byul" No 5

Existing formulas do not allow for specific conditions of work of motor. Derives own formulas and applies them to calculating permissible overload of modern type MAD induction motors.

[redacted]

161T33

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOV, A. A.

PA 171T82

USSR/Petroleum - Drilling
Electric Drives

Sep 50

"Protecting Drill Pipes From Torsion in Rotary Drilling," A. A. Mezhlumov

"Energet Byull" No 9, pp 26-28

Use of electric rotor for drilling decreases flywheel effect and increases efficiency. Rotor can be made to operate automatically as motor or for regenerative braking to protect drill pipes for torsion. Especially valuable in rapid well drilling at 500 rpm. Gives equations to calculate parameters of electric rotor.

[redacted]

171T82

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

1. MEZHLUNOV, A.A.

2. USSR (600)

4. Electric Engineering

7. "General electric engineering." J.A. Press, Reviewed by Docent A.A. Mezhlunov, Elektrichestvo no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOV, A.A.

Increasing cosinus φ and the efficiency coefficient of asynchronous motors of deep-well pumps. Energ. buil. no.6:18-20 Je '53. (MLRA 6:5)
(Electric motors, Induction) (Pumping machinery)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

TAREYEV, B.M., professor, doktor tekhnicheskikh nauk; GIKIS, A.F., dotsent, kandidat tekhnicheskikh nauk; MEZHLUMOV, A.A., dotsent, kandidat tekhnicheskikh nauk (Baku); STOLOV, L.Y., dotsent, kandidat tekhnicheskikh nauk (Kazan'); YUMATOV, A.A., inzhener (Kronshtadt); RAKHIMOV, G.R., dotsent, kandidat tekhnicheskikh nauk; KONSTANTINOV, V.I., inzhener (Moscow); NEYMAN, L.R.; ZAYTSEV, I.A., dotsent, kandidat tekhnicheskikh nauk; LUR'YE, A.G., dotsent, kandidat tekhnicheskikh nauk.

Terminology of theoretical electrical engineering. Elektrichestvo no.2:74-82 F '54. (MLRA 7:2)

1. Vsesoyuznyy zaochnyy energeticheskiy institut (for Tareyev). 2. Rostovskiy institut inzhenerov zheleznodorozhnogo transporta (for Gikis). 3. Sredneaziatskiy politekhnicheskiy institut (for Rakhimov). 4. Chlen-korrespondent Akademii nauk SSSR (for Neyman). 5. Leningradskiy politekhnicheskiy institut im. Kalinina (for Neyman, Zaytsev, Lur'ye). (Electric engineering--Terminology)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

Subject : USSR/Engineering - Petroleum AID P - 2795

Card 1/1 Pub. 28 - 4/13

Author : Mezhlumov, A. A.

Title : Automatic bit feeding in turbine drilling

Periodical : Energ. byul, 8, 10-14, Ag 1955

Abstract : Since even the best driller can not keep steady manual control in feeding the bit in turbine drilling for an 8-hour shift, and, therefore, never attains the full potential, the author offers a new method of automatic bit feeding in turbine drilling. His theoretical reasoning, supplemented by mathematical formulae, is illustrated with a diagram of the device performing automatic bit-feeding in turbine drilling.

Institution : None

Submitted : As above

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOV, A.A.

Using the method of electrical analogy to study torsional vibrations in drill pipe. Energ.biul. no.5:7-10 My '56. (MLRA 9:8)
(Oil well drilling--Equipment and supplies)
(Vibration--Electromechanical analogies)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHIZMOV, A.A.

Electric rotary oil-well drills. Energ.biul. no.9:11-16 S '57. (MIRA 10:10)

(Oil well drilling)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

FUKS, V.L.; MEZHLUMOV, A.A.

Measuring and controlling stresses on electrodrill clamps during drilling. Izv. vys. ucheb. zav.; neft' i gaz 3 no.10:99-104 '60. (MIRA 14:4)

1. NIPI, Neftekhimavtomat, Azerbaydzhanskiy politekhnicheskiy institut.

(Oil well drilling, Electric)
(Strains and stresses)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOV, A.A.

Aeration of drilling fluid in oil well drilling. Burenie no.2: 10-13 '65. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut burovoy tekhniki.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOV, A.A., kand. tekhn. nauk, dotsent (Baku)

Regenerative braking of an asynchronous drive with a long shaft. Elektrichestvo no.4:62-65 Ap '65.

(MIRA 18:5)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

GEYMAN, M.A.; MEZHLUMOV, A.O.; MUSINOV, V.I.; SAFIULLIN, M.N.; YUZBASHEV, G.S.

Using electrodrills and turbodrills in aeration drilling. Neft. khoz. 39 no.4:21-26 Ap '61. (MIRA 14:6)
(Oil well drilling, Electric—Equipment and supplies)
(Turbodrills)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

[illegible], [illegible] ... Y, [illegible], red.

[illegible] elektrobur[illegible]. Moskva, Nedra, 1964. 242 p.

(MIRA [illegible])

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUKOV, G.A.

Our experience in repairing coal elevator chains. Sakh.prom.30 no.5: 48 My '56. (MLRA 9:9)

1.Spitakskiy sakharnyy zavod.
(Hoisting machinery--Repairing)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOV, L.A.

Prospecting and completion operations in offshore oil and gas fields of Krasnodar Territory. Neft. khoz. 40 no.10:9-12 O '62. (MIRA 16:7)

(Krasnodar Territory—Oil well drilling, Submarine)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

L 53708-65 EWT(d)/EWT(m)/FA/EPF(c)/EWA(d)/EWP(j)/T/EWP(t)/EWP(h)/EWP(b)/EWP(l) Po-4/Pr-4 IJP(c) JD/RM

ACCESSION NR: AP5014796 UR/0092/65/000/006/0018/0019

AUTHOR: Meshlumov, O. (Director); Belov, V. (Assistant director of scientific dept); Shaymardanov, I. (Senior research associate of drilling dept)

TITLE: Dirigibles in the age of supersonic aircraft

SOURCE: Neftyanik, no. 6, 1965, 18-19

TOPIC TAGS: lighter than air aircraft, economics, transport aircraft

ABSTRACT: The problem of using dirigibles in the Soviet economy was raised at the first All-Union Conference of Airship Designers held recently in Novosibirsk. It was stressed that dirigibles possess valuable characteristics which in some respects make them superior to both the airplane and the helicopter. Future dirigibles will use an inert lifting gas (helium), will be powered by diesel and gas-turbine engines, and will have envelopes made of durable, inexpensive, and light-weight synthetic materials. A dependable, all-weather dirigible is urgently needed for hauling bulk freight in such hard-to-reach areas as the gas fields of the Tyumen' region in Siberia.

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

L 53708-65

ACCESSION NR: AP5014796

0

According to estimates, if the ton-kilometer cost of transporting freight by airplane is taken as 1, the cost for the helicopter would amount to 5.65, while for the dirigible it would be only 0.33. Orig. art. has 1 figure.

ASSOCIATION: Instituta Giprotymen'neftegaz

SUBMITTED: 00 ENCL: 00 SUB CODE: AC, GO

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4016-F

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUKOV, O. A.

Portable pressure pump for casing pressure maintenance. Nov.neft. tekh.:Bur. no.3[1.ei2]:2 '48. (MLRA 9:4)
(Oil well drilling) (Pumping machinery)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOV, O. A.

AID P - 332

Subject : USSR/Mining

Card : 1/1

Authors : Mezhlumov, O. A., Belyakova, A. S. and Varshavskiy, G. E.

Title : Three years of double bore drilling in Dagestan

Periodical : Neft. Khoz., v. 32, #5, 27-30, My 1954

Abstract : A comparison of single and double hole drilling in different depths (about 900, 1100 and 1500 meters) is outlined. The rates of drilling in each case are presented in two tables. The results indicate the appreciable advantage of double bore drilling. 4 Russian references (1951-52).

Institution : None

Submitted : No date

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

EMMANUILOVA, Ye.M.; MIRSKIY, Ya.V.; STAROSTIN, I.I.; MEZHLUMOVA, A.I.; BUNIN, K.F.; MIZYAKOV, D.I.

Experimental industrial preparation of catalysts from Askan clay by acid activation. Trudy GrozNII no.4:82-90 '59.

(MIRA 12:9)

(Askanite) (Catalysts)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOVA, A.I.

128

PHASE I BOOK EXPLOITATION SOV/6246

Soveshchaniye po tseolitam. 1st, Leningrad, 1961.

Sinteticheskiye tseolity; polucheniye, issledovaniye i primeneniye (Synthetic Zeolites: Production, Investigation, and Use). Moscow, Izd-vo AN SSSR, 1962. 286 p. (Series: Its: Doklady) Errata slip inserted. 2500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk. Komisiya po tseolitam.

Resp. Eds.: M. M. Dubinin, Academician and V. V. Serpinskiy, Doctor of Chemical Sciences; Ed.: Ye. G. Zhukovskaya; Tech. Ed.: S. P. Golub'.

PURPOSE: This book is intended for scientists and engineers engaged in the production of synthetic zeolites (molecular sieves), and for chemists in general.

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Synthetic Zeolites: (Cont.) SOV/6246

COVERAGE: The book is a collection of reports presented at the First Conference on Zeolites, held in Leningrad 16 through 19 March 1961 at the Leningrad Technological Institute imeni Lensovet, and is purportedly the first monograph on this subject. The reports are grouped into 3 subject areas: 1) theoretical problems of adsorption on various types of zeolites and methods for their investigation, 2) the production of zeolites, and 3) application of zeolites. No personalities are mentioned. References follow individual articles.

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Dubinin, M. M. Introduction 5

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Synthetic Zeolites: (Cont.) SOV/6246

Misin, M. S., L. M. Maksimova, V. A. Litvinova, and L. B. Khandros. Production and Adsorption Properties of NaA, NaP, CaA and CaP Zeolites 135

Misin, M. S., L. M. Maksimova, V. A. Litvinova, L. B. Khandros, G. A. Polyakova, and L. S. Urin. Production and Adsorption Properties of NaX, CaX and AgX Zeolites 143

Piguzova, L. I., A. V. Agafonov, A. S. Vitukhina, V. F. Dmitriyeva, A. T. Slepneva, V. A. Burylov, and N. A. Chepurov. Synthesis Conditions and Thermal Stability of Type X Zeolites 152

Mirskiy, Ya. V., M. G. Mitrofanov, and T. N. Bredikhina. Ion Exchange of Na for Ca in Type A Synthetic Zeolite 167

Mirskiy, Ya. V., M. G. Mitrofanov, B. M. Popkov, L. T. Belotov, and A. I. Meshlumova. Production of Synthetic Zeolites Under Industrial Conditions 169

Card [redacted] 3/4

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

S/08'/62/000/021/031/069
B149/B101

AUTHORS: Mirskiy, Ya. V., Mitrofanov, M. G., Bolotov, L. T., Mezhlumova, A. I., Bunin, K. F., Dul'skaya, V. N., Mel'nik, A. N.

TITLE: Preparation of experimental samples of molecular sieves under industrial conditions

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1962, 319, abstract 21K106 (Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya, no. 2, 1962, 13 - 15)

TEXT: Molecular sieves are prepared in the following way: a crushed silicate chunk is cooked in an autoclave with live steam, transferred to a collector, diluted with steam condensate, cooled and transferred to a container; whereupon sufficient condensate is added to make a working solution, which is left to settle. The clean solution is pumped into another container. A strong alkali solution is transferred from the montejus into a mixer which has a paddle and heater, followed by the condensate and $Al(OH)_3$; the mixture is heated for 3 hours with stirring. After this the Na-aluminate solution is transferred to a collector from

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which the strong solution can be taken to a vessel where it can be diluted with condensate to a working concentration. The latter solution is pumped through a rotameter and fed into a jet mixer together with the Na-silicate solution. The mixture then passes into a continuously working paddle mixer where the gel is formed as a thin pulp. This pulp is transferred to the mixer in which the aluminate solution was previously prepared. The pulp is heated in the mixer until the gel crystallizes. The mass is then transferred into the collectors which previously contained the aluminate and the zeolite is washed by 2 - 3 decantations, then filtered and washed in a filter-press. The cake is divided into two parts, one of which undergoes preliminary drying in a chamber dryer and is transferred on to crusher-roll mill while the other is transferred directly to the mill. There the zeolite is mixed with clay into a mass which is made into tablets, and the latter are dried, calcined and sieved from crumbs in a drum sieve. Part of the zeolite is treated with $CaCl_2$ to prepare a selective adsorbent for separating gasoline fractions. The weight of 1 m^3 of sodium zeolite is 0.73, and its sorption capacity for water is 0.25 cm^3/g. 5 references. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

S/065/62/000/011/001/006
E075/E436

AUTHORS: Pal'chikov, G.F., Mezhlumova, A.I., Krichko, A.A., Kaganer, G.S., Stepuro, S.I., Brovenko, A.V.

TITLE: Extraction of aromatic hydrocarbons from middle petroleum fractions and catalytic gas oils with aqueous pyridine

PERIODICAL: Khimiya i tekhnologiya topliv i masel, no.11, 1962, 19-25

TEXT: Following the laboratory work reported previously (Khim. i tekhnol. topliv i masel, no.4, 1961) trial batches of aromatic extracts (400 to 500 kg) were obtained on a pilot plant scale from a catalytic gas oil and kerosene - gas oil fractions from Anastasiyevka crude. The extraction was carried out using aqueous solution of technical pyridine (boiling point range 114 to 134°C). The feed saturated with pyridine vapour meets the pyridine solution in the extractor. Countercurrent extraction takes place, the raffinate and the extract solutions leaving the opposite ends of the extractor. For the extraction of the kerosene - gas oil fraction the raffinate contained 30% by

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E075/E436

Extraction of aromatic ...

volume of pyridine (water free) and the extract solution - 80.7% pyridine, 10% water and 9.3% extract. The extraction was conducted at 15°C. The extract constituted 32 to 35% of the feed and contained about 80% aromatic hydrocarbons. The extract with 50% of the aromatic hydrocarbons was obtained with the yield of 70%. The extracts were subjected to high temperature hydrogenation. For the extract from the catalytic gas oils the yield of naphthalene obtained by the hydrogenation was 30%. For the kerosene - gas oil fraction about 20% yield of naphthalene was obtained and 40% of a solvent containing 95% of aromatic hydrocarbons. There are 1 figure and 7 tables.

ASSOCIATION: SNKh Checheno-Ingushsk. ASSR

Card 2/2

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

KRICHKO, A.A.; MEZHLUMOVA, A.I.; PAL'CHIKOV, G.F.; TITOVA, T.A.; Prinimali uchastiye: CHERKASOVA, V.F.; RAVIKOVICH, T.M.

Hydrogenation of aromatized petroleum crude without catalysts for obtaining naphthalene and other products. Neftepер. i neftekhim. no.9:30-33 '63. (MIRA 17:8)

1. Groznenskiy kreking-zavod, Groznenskoye upravleniye neftepererabatyvayushchey i neftekhimicheskoy promyshlennosti i Institut goryuchikh iskopayemykh.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

ACCESSION NR: AT 4016001 S/2625/63/000/015/0165/0175

AUTHOR: Mirskiy, Ya. V.; Mitrofanov, M. G.; Popkov, B. M.; Ruchko, L. F.; Bolotov, L. T.; Mezhlumova, A. I.

TITLE: Development of the technology for the industrial preparation of molecular sieves

SOURCE: Grozny*y. Neftyanoy nauchno-issledovatel'skiy institut. Trudy*, no. 15, 1963. Tekhnologiya pererabotki nefti i gaza. Neftekhimiya (Technology of processing petroleum and gas. Petroleum chemistry), 165-175

TOPIC TAGS: adsorbent, zeolite, molecular sieve, hydrogel, aluminosilicate

ABSTRACT: The characteristics and industrial production of adsorbent synthetic zeolites having good molecular-sieve properties have been investigated, using micro-granular sodium zeolite with cubic crystals of 0.1 to several microns on a side. The results show that the properties of zeolites are affected by the following factors: method of preparation and composition of the hydrogel, temperature and duration of crystallization, concentration of the gel-forming solutions, stirring of the hydrogel, ion-exchange conditions, washing of the crystals, and granulation and hardening of the zeolites. Zeolites of the structural type designated as Type I (Type A in the West) are of great interest. A

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ACCESSION NR: AT 4016001

study of the adsorptive properties of sodium and calcium zeolites showed that the adsorptive properties of zeolites crystallized from hydrogels of the same composition, but by different methods, are very similar. The best method of preparation is to mix solutions of sodium aluminate and sodium silicate. A stable Type I zeolite can be made from hydrogels for which the molar ratio $SiO_2:Al_2O_3$ is < 2. When this ratio approaches 3, a zeolite of Type II results. Hydrogels crystallize at a satisfactory rate at 75-100C. The effec' on the crystal size of the concentration of gel-forming solution and the stirring rate (2 hours at 90C) and the effect of the crystallization time on the adsorptive properties and crystal size of zeolites (crystallization without stirring at 90C) were also investigated and the data tabulated. A new apparatus for preparing zeolites is described in detail and illustrated. In the preparation of the test samples, the yield was 68-74% of the theoretical. These zeolites with their pronounced molecular sieve properties, obtained under industrial conditions, made it possible to crystallize large amounts of aluminosilica hydrogels in large-sized apparatus. Orig. art. has: 1 figure and 6 tables.

ASSOCIATION: Neftyanoy nauchno-issledovatel'skiy institut, Grozny°y (Petroleum Scientific Research Institute)

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

L 10531-66 EWT(m)/T WW

ACC NR: AP6003467 SOURCE CODE: UR/0318/64/000/012/0015/0020

AUTHOR: Krichko, A. A.; Lozovoy, A. V.; Meshlumova, A. I.; Muselevich, D. L.; Pal'chikov, G. F.; Skvortsov, D. V.

ORG: IGI (Administration of Petroleum Conversion and Chemical Industry, Groznyy (Upravleniye n/pererabatyvayushchey i khimicheskoy promyshlennosti); Groznyy Cracking Plant, Grozny (Groznenskiy kreking-zavod)

TITLE: Hydrogenation of petroleum products in a fluidized solids catalyst layer

SOURCE: Neftepererabotka i neftekhimiya, no. 12, 1964, 15-20

TOPIC TAGS: hydrogenation, catalysis, naphthalene, petroleum refining

ABSTRACT: Aromatized fractions with 83-91% aromatics and an average molecular weight of 165.5-169.0 (boiling range 200-300°) were extracted with aqueous pyridine from a catalytic cracking gas oil and subjected to hydrogenation on an Al-Co-Mo oxides catalyst in a fluidized bed. The optimum conditions for the production of naphthalene by this process comprised 20 atm pressure, ~550° temperature, hourly space velocity of 0.8-0.9 kg/l.hr, and a supply of hydrogenating gas (80% H_2 and 20% CH_4) amounting to 1-1.5 m^3/kg raw material. Under these conditions, a 50% conversion of the raw material to products boiling below 230° was obtained and the yield of naphthalene was 12-14% by weight in a single hydrogenation stage. The authors are grateful to V. S. Al'tshuler and G. P. Sechenov for their help in this work. Orig. art. has: 3 figures, 3 formulas, and 3 tables. [JPRS]

SUB CODE: 21, 07 / SUBM DATE: none / ORIG REF: 005 / OTH REF: 006

UDC: 665.581

Card 1/1

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

DRONIN, A.P.; ZAMANOV, V.V.; KRICHKO, A.A.; LOZOVOY, A.V.; MAKAR'YEV, S.V.; MEZHLUMOVA, A.I.; PAL'CHIKOV, G.F.; STEPURO, S.I.

Combined arrangement for the use of thermal-cracking kerosine. Khim. i tekh. topl. i masel 9 no.6:18-24 Je'64 (MIRA 17:7)

1. Giprogrozneft', Institut goryuchikh iskopayemykh AN SSSR i Grozneftekhimzavody.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

KRICHKO, A.A.; MALYAVINSKIY, L.V.; [illegible]UMOVA, A.I.; PAL'CHIK[illegible], [illegible].F.; SKOVRONEK, B.K.; STE[illegible], [illegible].

Obtaining dearomatized catalytic-cracking gas oil and motor tests for it. Nefteper. i neftekhim. no.3:12-14 '65. (MIRA 18:8)

1. Institut goryuchikh iskopayemykh, Groznefteknimzavody i Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.

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L 30247-66 EWT(m)/T WE

ACC NR: AP6013820 (A) SOURCE CODE: UR/0318/65/000/012/0003/0005

42

B

AUTHOR: Pal'chikov, G. F.; Mezhlumova, A. I.; Kaganer, G. S.; Stepuro, S. I.; Krichko, A. A.; Titova, T. A.

ORG: Grozneftekhimzavody Association (Ob"yedineniye Grozneftekhimzavody); Institute of Mineral Fuels, AN SSSR (Institut goryuchikh iskopayemykh, AN SSSR)

TITLE: Processing of catalytic gas oils by extraction with pyridine and hydrogenation

SOURCE: Neftepererabotka i neftekhimiya, no. 12, 1965, 3-5

TOPIC TAGS: pyridine, solvent extraction, gas oil fraction, hydrogenation, naphthalene, petroleum product, gasoline

ABSTRACT: The paper describes the results of an extractive separation of catalytic gas oils from low-sulfur and sulfur feed stock by means of wet pyridine and the results of the hydrogenation of the extracts. The extractive separation of the gas oils was carried out in a continuous unit with a vertical countercurrent extractor provided with a pulsed packing of perforated metal discs. The output of the unit was 1 liter/hr. The degree of separation of aromatic hydrocarbons from gas oil was 70-75%; for bicyclic hydrocarbons, 95%. The extract from the low-sulfur gas oil was used directly as the feed stock for the hydrogenation. It is concluded that catalytic gas oils produced by refineries in the southern and eastern regions of the Soviet Union can be

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L 30247-66

ACC NR: AP6013820

4

used to obtain naphthalene (10-13% yield), high-quality diesel oil (53-66% yield), and a stock (18% yield) for the production of carbon black and aromatized gasoline. N. F. Danil'chenko and I. L. Tsitron participated in the study. Orig. art. has: 2 tables.

SUB CODE: 11,07/ SUBM DATE: None / ORIG REF: 004

Card 2/2 CC

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

DEMBOVSKAYA, Ye.A.; KONYASHINA, R.A.; MEZHLUMOVA, A.I.; PAL'CHIKOV, G.F.

Analyzing the chemical composition of the extract of gas oils from catalytic cracking. Khim. i tekh.topl. i masel 10 no.11, 16-19 N '65. (MIRA 19:1)

1. Institut goryuchikh iskopayemykh, Moskva.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

KRICHKO, A.A.; [illegible] T.V.
STEPURO, S.I.; [illegible]

Production of phenanthrene from the low-sulfur gas [illegible] from catalytic cracking. [illegible] 10-14 [illegible]

1. Institut [illegible] "Grozneftekhimzavody".

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOVA, R. P., aspirant

New "optical" bleaches. Zhil.-kom. khoz. 11 no.8:30 Ag '61. (MIRA 14:9)

1. Akademiya kommunal'nogo khozyaystva.
(Fluorescence) (Bleaching)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOVA, R., inzh.

Use synthetics correctly. Zhil.-kom.khoz. 12 no.6:32 Je '62. (MIRA 15:12)

(Cleaning compounds)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMOVA, R.P., aspirant

The role of additives in washing with detergents. Gor.khoz. Mosk. 36 no.12:32 D '62. (MIRA 16:2)

1. Akademiya kommunal'nogo khozyaystva imeni K.D.Pamfilova. (Cleaning compounds)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMYAN, A.A.

Stimulation of splenic regeneration in rat [illegible]
i med. 57 no.5:[illegible] My '[illegible].

1. Kafedra gistologii zav. - prof. [illegible]
zooveterinarnogo instituta. Submitted May [illegible], [illegible].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMYAN, E. G.

Astvatsaturyan, Kh. A. and Mezhlumyan, E. G. "The medicinal effect of the donor's immunized blood upon the typhoid fever of the patient," Sbor. i nauch. trudov (In-t gematologii i perelivaniya krovi. Pak. Khirurg. Klinika Yerevansk. Med. In-ta) III, 1948, p. 79-91

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No 15, 1949.)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMYAN, G.B.

Genesis of the Svarants iron ore deposit. Izv. AN Arm. SSR. Geol. i geog. nauki 13 no.1:13-23 '60. (MIRA 13:9)

1. Institut geologicheskikh nauk AN Armyanskoy SSR.
(Servants region (Armenia)—Iron ores)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMYAN, G.B.

Find of spinel in titanomagnetite ores of the Svarants deposit. Izv. AN Arm. SSR. Geol. i geog. nauki 13 no.3/4:123-126 '60. (MIRA 13:9)

1. Institut geologicheskikh nauk AN ArmSSR.
(Svarants region (Armenia)—Spinel)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMYAN, G.B.

Secondary quartzites in the area of the Svarants iron ore deposit. Izv. AN Arm. SSR. Geol. i geog. nauki 14 no.2:63-70 '61. (MIRA 14:3)

1. Institut geologicheskikh nauk AN Armyanskoy SSR.
(Goris District—Quartzites)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

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L 15812-66 EWT(m)/EWP(j)/T/EWP(t)/EWP(b) IJP(c) JD/JG/RM

ACC NR: AP6000904 SOURCE CODE: UR/0022/65/018/004/0101/0105

AUTHOR: Movsesyan, M. Ye.; Gevorkyan, V. A.; Safaryan, F. P.; Mezhlumyan, P. G. 62 61

ORG: Yerevan State University (Yerevanskiy gosudarstvennyy universitet) B

TITLE: Investigation of luminescence of acetyl acetonates of samarium, europium, and terbium 27

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 18, no. 4, 1965, 101-105

TOPIC TAGS: samarium compound, europium compound, terbium compound, luminescence, absorption spectrum, temperature dependence, rare earth element, luminescence spectrum, spectral line

ABSTRACT: In view of the possibility of obtaining a large quantum yield from organic complexes of rare-earth elements, the authors synthesized acetyl acetonate complexes with Sm, Eu, and Tb by means of a technique described by B. B. Anufriyev and A. N. Zaydel' (ZhETF, v. 24, no. 1, 1953, 114). The absorption of the solutions of the complexes of the rare-earth elements was investigated with the aid of a quartz spectrophotometer (SF-4). A spectrograph (ISP-73) and photographic photometry were employed in the visible region. The samples were cooled with nitrogen vapor. The absorption spectra showed the presence of two absorption regions with a slight contribution from the rare-earth ion. The luminescent spectra obtained at -185C showed strong luminescence for the Sm complex (especially at 6453 Å), which became stronger with decreasing temperature. In the case of Eu, only a few luminescence lines were observed at room temperature, but more at -185C. The Tb acetyl acetonate had intense

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ACC NR: AP6000904

luminescence at room temperature, especially at 5420, 5446, and 5472 Å. Lowering the temperature caused line shifts and a redistribution of the luminescence intensity. The data on the various lines are tabulated. Authors thank Candidate of Chemical Sciences S. A. Vardanyan for consultation on the synthesis of the complexes. Orig. art. has: 3 figures and 4 tables.

SUB CODE: 07/ SUBM DATE: 21Dec64/ ORIG REF: 009/ OTH REF: 001

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

[illegible], R. [illegible], Engineer, [illegible]

Dissertation: "[illegible] Wall[illegible] and Cylindri[illegible] Limit [illegible] Elasticity."

21, [illegible]

Military Aeronotic [illegible] N. Ye. Zhukovsky.

SO Vecheryaya Moskva
[illegible] 71

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

A.11?

Plates, Lasks, Shells, Membranes

4118. Meshkumyan, R. A., Flexure and torsion of thin-walled cylindrical shells beyond the elastic limit (in Russian), *Prikl. Mat. Mekh.* 14, 2, 253-264, May-June 1950.

A thin-walled cylindrical shell is assumed to be compressible and to obey in the plastic range a stress-strain law of deformation with hardening. Paper is confined to a reduction of the equilibrium equations to a system of fourth-order ordinary differential equations in terms of displacements. For the original formulation of the problem the reader is referred to the work of Vlasov ["Thin-walled elastic bars," Moscow-Leningrad, Gosstrokhsdat, 1940] and for methods of solving the plastic-elastic boundary-value problem to the work of Ilyushin [AMR 4, Rev. 2913]

Courtesy of Mathematical Reviews H. I. Ansoff, USA

Nov. 51

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMYAN, R.A.

Meĭlumyan, R. A. The boundary conditions in bending and torsion of thin shells beyond the elastic limit. Akad. Nauk SSSR. Prikl. Mat. Meh. 14, 537–542 (1950). (Russian)

A variational principle is used to obtain the equations of a thin shell in the region of small plastic deformation. Results obtained in a previous paper by the author [same journal 14, 253–264 (1950); these Rev. 12, 373] are used in the derivation. *H. I. Ansoff* (Santa Monica, Calif.).

Source: Mathematical Reviews, Vol. No. 4

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMYAN, R. A.

Deformation (Mechanics)

Applied theory for elastic plastic membranes and its application to structural calculation. Inzh.sbor., 14, 1951.

Monthly List of Russian Accessions, Library of Congress, May 1952. Unclassified.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMYAN, R. A.

USSR/Mathematics - Elasticity Mar/Apr 51

"Determining the Bearing Capacity of Thin-Walled Construction With Consideration for Reinforcement of the Material," R. A. Mezhlumyan, Mil Air Eng Acad, Moscow

"Prik Matemat i Mekh" Vol XV, No 2, pp 175-182

Studies distribution of forces and moments beyond modulus of elasticity, ratio of forces, and moments, and computes bearing capacity.

177149

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMYAN, R. A.

USSR/Physics - Deformation Jul/Aug 52

"The Function of Transverse Deformation," R. A. Mezhlumyan, Moscow

"Prik Matemat i Mekh" Vol XVI, No 4, pp 491-494

Constructs the function of transverse deformation which permits one to det Poisson's coeff for any deg of deformation in a material. Gives a method for reconstructing the diagram of monoaxial tension from graphs of stress-strain relations.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMYAN, R. A.

MEZHLUMYAN, R. A. -- "Certain Problems of the Applied Theory of Elasticity." Dr Tech Sci, Inst of Mechanics, Acad Sci USSR, 14 Jan 54. (Vecherniaya Moskva 5 Jan 54)

SO: SUM 168, 22 July 1954

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74 Ezhlumyan P.A.

109/12/3 539.374

The Reverse Problem of the Applied Theory of Plasticity, and the Carrying Capacity of Constructions (Material of Construction Possesses Strengthening)

Izv.Akad.Nauk.Otd,tekh.Nauk (12),80-95 1955

P.A. Mezhlumyan U.S.S.R.

This offers a method of determining all possible combinations of external stresses causing any given state of construction, with the aid of the given stress-strain state. External stresses can be determined which correspond either to the stage of destruction, or to the states induced by a certain portion of the breaking load. Whatever the law of strengthening, the reverse problem of the applied theory of plasticity can be solved without resorting to the method of consecutive approximations. Several numerical examples are considered, and various criteria of strength briefly analyzed. (Bibl.15)

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

MEZHLUMYAN, R. A.

"Spatial Elastic Plastic Stability of Thin-Walled Rods During Central Eccentric Compression," by R. A. Mezhlumyan, Moscow, Inzhenernyy Sbornik, Vol 23, 1956, pp 3-27

Methods of determining critical flexibility, based on solutions of problems concerning the spatial elastic-plastic stability of bars, are presented. Calculated data are compared with experimental data. Resulting data are compared with other previously published works.

Sum 1239

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001033810003-2

SOV/24-58-12-25/27

AUTHOR: Mezhlumyan, R.A. (Moscow)

TITLE: The Converse Problem of Applied Theory of Plasticity for Statically Indeterminate Beams (Obratnaya zadacha prikladnoy teorii plastichnosti dlya staticheski neopredelimykh balok)

PERIODICAL: Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 12, pp 144-147 (USSR)

ABSTRACT: The previous paper in this series was published in Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh Nauk, 1955, Nr 12 (Ref.1). The present paper describes a method for the calculation of the shearing forces and bending moments acting upon a beam which is deformed in a given way. The formulae used for these two quantities are

$$Q_y = EI_{x1}(z)\frac{d\chi(z)}{dz}, \qquad M_x = EI_{x2}(z)\chi(z) \qquad (1.8)$$

using the notation of Ref.1. It is pointed out that the deformed state cannot be chosen arbitrarily. It is necessary to assume some additional result such as the

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SOV/24-58-12-25/27

The Converse Problem of Applied Theory of Plasticity for Statically Indeterminate Beams

hypothesis of the conservation of plane sections. The method is used for delimiting the zones in the cross-section corresponding respectively to plastic and elastic deformation (Fig.3). There are 3 figures, 1 table and 2 Soviet references.

SUBMITTED: 10th July 1956.

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RAZUMOV, N.A., kand. ekonom. nauk; MEZHLUMYAN, S.G., aspirant

Evaluating the consumer quality of production according to organoleptic indices. Standartizatsiia 29 no.3:7-12 Mr '65. (MIRA 18:5)

1. Nachal'nik Tekhnicheskogo upravleniya Moskovskogo gorodskogo soveta narodnogo khozyaystva (for Razumov). 2. Akademiya obshchestvennykh nauk pri TSentral'nom komitete Kommunisticheskoy partii Sovetskogo Soyuza (for Mezhlumyan).

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L 4107-66 EWT(d)/EWP(c)/EWP(v)/T/EWP(k)/EWP(h)/EWP(1)/FBA/ETC(m) WW/JT

ACC NR: AP5021494 SOURCE CODE: UR/0118/65/000/008/0013/0018

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B

AUTHOR: Rasumov, N. A. (Candidate of economic sciences, Head); Meshluryan, S. G. (Engineer, Aspirant)

ORG: [Rasumov] Technical Bureau, Mosgorsovnarkhoz (Tekhnicheskoye upravleniye Mosgorsovnarkhoza; [Meshluryan] Academy of Social Sciences, TSK KPSS (Akademiya obshchestvennykh nauk TSK KPSS)

TITLE: Mechanization of Soviet industry 14

SOURCE: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 8, 1965, 13-18

TOPIC TAGS: industrial production, industrial management, industrial organization, industrial automation, production engineering, labor employment, labor policy, working condition

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ABSTRACT: The 1966-70 plan for industrial expansion anticipates overall mechanization of production processes with emphasis on the elimination of indirect heavy manual labor. According to the authors, these objectives are very appropriate for the industry of the city of Moscow, since they consider it to be the most advanced and best supplied with highly skilled personnel.

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Much labor is lost in assembling.[14] Specifically, the assembly of twelve transfer machines for turning and grinding races, manufactured by Moscow's machine tool plants for the First State Bearing Plant (1GPZ), accounted for 66% of the total cost of these machines. One-half of this figure constituted outlays for installing and setting up the equipment. Analysis showed that this high cost was attributed to low precision of machining and poor preparation of design drawings. This resulted in a large volume of manual fitting during assembly operations, thus lowering the quality and reliability of transfer machines.

As of 1 January 1965, 44% of all the workers[14] in industrial establishments of the Moscow Sovnarkhoz were performing manual labor. Nine percent of all the workers were performing heavy manual labor. This situation, according to the authors, was caused by the fact that throughout the whole of Soviet industry, the efforts to step up labor productivity were centered on direct production, involving direct labor, and very little attention was paid to problems of indirect labor, including managerial practices. This attitude brought about a widening gap between the high technological level of primary production processes and the large share of manual labor and imperfect organization of supporting operations. Such functions as loading and unloading, transportation, storage, and clean-up, which could easily be mechanized with simple, inex-

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