KABES, Karel, inz.

Influence of the overflow time on vibration and transistor changer properties. Sdel tech 12 no.4:146 Ap '64.

Photoelectric potentiometers. Ibid.:149

KABES, Karel, inz.

Transistor dynamic load impedance. Sdel tech 12 no. 6:229 Je '64.

KABES, Karel, inz.

Use of the Aripot helical potentiometers. Automatizace 7 no.8: 215-219 Ag '64.

KABES, Karel, inz. (Prague)

Czechoslovak analog computation technology. Tech praca 16 no.8: 565-569 Ag '64.

KABES, Karel, Ing.

Advantageous control of direct-current servomotors. Automatizace 7 no.10:275-276 O '64.

KABES, Karel, ing.

Electrooptical function generator. Automaitzace 7 no.12:330 D '64.

KABES, Karel, inz.

"Remote control of decentralized instalations" by W.A.Iljin [Il'in, V.A.]. Reviewed by Karel Kabes. Slaboproudy obzor 25 no.3:Suppl:Literatura 25 no.3:L23 '64.

L 46614-66 EWP(v)/T/EWP(k)/EWP(h)/EWI(1)

ACC NR: AP6024778 SOURCE CODE: CZ/0014/65/000/007/0260/0262

AUTHOR: Kabes, Karel (Engineer) 8

ORG: none B

TITLE: Measuring the response in accurate potentiometers

SOURCE: Sdelovaci technika, no. 7, 1965, 260-262

TOPIC TAGS: potentiometer, electronic measurement, electronic circuit, electronic engineering

ABSTRACT: The article describes the basic methods used to measure the response of precise potentiometers, methods not universally known which include points of technique not likely to be considered by improvised methods. Circuits are presented, and tables of tolerances and check points for the various classes of precision. Orig. art. has: 10 figures and 3 tables. [JPRS]

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 002 / SOV REF: 001

Card 1/1 mjs

0915 2614

L 10494-66

ACC NR: AP6003473 SOURCE CODE: CZ/0014/65/000/001/0024/0024

AUTHOR: Kabes, Karel (Engineer)

20

ORG: none

TITLE: ENDIM 2200 curve plotter

SOURCE: Sdelovaci technika, no. 1, 1965, 24

TOPIC TAGS: servomechanism, automation equipment

ABSTRACT: The characteristics of the ENDIM 2200 curve plotter, manufactured by the VEB Rechenelektronik of East Germany, are compared with those of the BAK-II curve plotter made by the Aritma National Enterprise of Czechoslovakia. The compared data are tabulated. Orig. art. has: 1 figure and 1 table. [JPRS]

SUB CODE: 13 / SUBM DATE: none / ORIG REF: 002 / SOV REF: 001

60

Card 1/1

KABES, K., inz.

Conference on a analog computers in Ilmenau. Automatizace 8 no.1:26 Ja '65.

KABES, Karel, inz.

A new type of screw potentiometer. Automatizace 8 no.2:49 F '65.

Japanese recording appartus. Ibid.:52-53 F '65.

Second seminar on the MEDA differential analyzer unit. Ibid.: 54-55

L 31295-66

ACC NR: AP6022126 SOURCE CODE: CZ/0014/65/000/009/0322/0326

52
B

AUTHOR: Kabes, Karel (Engineer)

ORG: none

TITLE: Aritma preferred supply and counting modular units

SOURCE: Sdelovaci technika, no. 9, 1965, 322-326

TOPIC TAGS: analog computer, computer circuit, computer technology, computer component, transistorized circuit

ABSTRACT: The article deals with the six variants of modular units being produced by the Aritma plant as standardized components of MEDA transistorized analog computers. Their technical characteristics and circuits are presented, and the principles which must be respected in their use are discussed. Orig. art. has: 9 figures and 3 tables. [JPRS]

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 003

Card 1/1 UC

0975 0040

KABES, K., inz.

Bridge for capacitance measurement with automatic control. Sdel tech 13 no.2:72 F '65.

KABES, Karel, inz.

Voltage measurement in transistor circuits. Sdel tech 13 no.3: 90-91 '65.

Analog computer used in schools. Ibid.:109-110

KABES, Karel, inz.

Conference on analog computers. Slaboproudy obzor 26 no.1:60-61 Ja '65.

KABES V.

CZECHOSLOVAKIA / Chemical Technology. Chemical Products. H
Refining of Natural Gas and Petroleum. Motor and Rocket Fuels. Lubricants.

Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 68755.

Author : Kabes V., Cejka M., Vesely S.
Inst : Not given.
Title : Structural Changes of the Sodium Type Greases as the Result of Oxidation.

Orig Pub: Chem. prumysl, 1957, 7, No 11, 590-593.

Abstract: Investigation of the effect of O_2 on physico-chemical properties and structure of greases was conducted employing Hofman's bomb. Composition of grease investigated (in wt.%) was: 83.26-mineral

Card 1/2

KABES, Vlastimil; ZAPLETAL, Jan

Use of rotary vacuum filters for dewaxing oil raffinates from Romashkiono crude oil with Bari-Sol. Pt. 1. Ropa a uhlie 5 no. 12: 356-363 D '63.

1. Slovnaft, n.p., Bratislava.

BEBRIS, K.D.; VERESOTSKAYA, N.V.; NOVIKOV, M.I.; AKSENOV, V.I.; KABICHKINA, S.I.

Effect of the method of mixing on the properties of rubber made from oil-extended butadiene-styrene raw material. Kauch. i rez. 22 no.6:17-20 Je '63. (MIRA 16:7)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Rubber, Synthetic—Testing)

BALASHOV, A.P.; BEBRIS, K.D.; VERESOTSKAYA, N.V.; DANOVICH, L.Ye.; DRIGUN, V.N.; KABICHKINA, S.I.; NOVIKOV, M.I.; SOKOLOV, V.D.

Improvement of the methods for the preparation of tread rubber compounds based on BR under the conditions of Dnepropetrovsk Tire Factory. Kauch. i rez. 23 no. 3:5-9 Mr '64. (MIRA 17:5)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti i Dnepropetrovskiy shinnyy zavod.

AUTHOR: Bebris, K.D.; Veresotskaya, N.V.; Kabichkina, S.I.; Novikov, M.I.

32

TITLE: The effect of mechanical treatment conditions in the [illegible] and vulcanizates

SOURCE: Kauchuk i rezina, no. 1, 1965, 4-8

TOPIC TAGS: [illegible]

styrene copolymer, prepared at 50 with [illegible] polymerized and oil-extended [illegible]

L 25265-65

ACCESSION NR AP5020910

Orig art:

ASSOCIATION:

Card 2/

KABIESZ A. M.

COUNTRY:	Poland	
CATEGORY		H-22
ABST. JOUR.	Referat. Zhur., Mo. 5 1960, No.	19297
AUTHOR	Kabiesz, A. M.	
	Central Mining Institute (Poland)	
	The Economic Effectiveness of Capital Investment in the Cleaning of Large-Size Coal	
TRANS. PUB.	Prace Glown. Inst. Gorn, B, No 215 (1958)	
ABSTRACT	A comparison study has been made on the technical and economic indices of various cleaning processes for the purpose of arriving at an optimum process for the cleaning of large-size coal as a function of mine output and of the content of impurities and waste rock in the run-of-mine coal. It is shown that hand picking (HP) of large-size coal is most effective at impurity contents of up to 10%. When three-product cleaning is practiced, HP is economical with impurity contents of up to 13% for	

CARD: 1/2

CARD: 2/2

SIMEONOV, Ljubomir, Dr.; KABIL, Ismet, dr., (Tusla)

Night sanatorium for pulmonary tuberculosis. Tuberkuloza, Beogr. 8 no.3-4:243-248 May-Aug 56.

(TUBERCULOSIS PULMONARY, ther.
night sanatorium, for indust. workers (Ser))
(SANATORIA
night sanatorium for pulm. tuberc. in indust. workers (Ser))

KABIL'DHANOV, S.F.

Experimental study of prestressed elements under bending with calculation of the time factor. Sbor. nauch. trud. NII po stroi. ASiA no.4:49-60 '65. (MIRA 17:8)

KABILDZHANOV, K. M., Cand of Tech Sci — (diss) "Investigation of the Work and the Selection of an Efficient Design of a Catcher of Heavy Impurities for the Cotton Industry," Tashkent, 1959, 16 pp (Tashkent Textile Institute) (KL, 5-60, 126)

L 10511-66 EWT(m)/T DJ/WB/RM

ACC NR: AP6003466 SOURCE CODE: UR/0318/64/000/012/0006/0009

AUTHOR: Kabilov, A.G.; Kal'sina, M.P.

ORG: Novo-Ufimsk Petroleum Conversion Plant, (Novo-Ufimskiy neftepererabatyvayushchiy zavod)

TITLE: Combined scheme of dewaxing of residual rafinate and deoiling of petrolatum

SOURCE: Neftepererabotka i neftekhimiya, no. 12, 1964, 6-9

TOPIC TAGS: petroleum refining, wax

ABSTRACT: A system was developed whereby residual rafinates are dewaxed and petrolatum is deoiled at the same installation. The raw material being treated is filtered in three stages. Dewaxed oil with a pour point of minus 10 or minus 15 is obtained in the first stage on filtration of the raw material to which solvent has been added and from which wax has crystallized on cooling. The crude wax is filtered and washed at gradually increasing temperatures in the second and third stages: the temperatures of filtration are stepped up from minus 25-20 to plus 14-15 and those of the solvent used in washing from minus 15-10 to plus 16-20 in the three stages. A solution of ceresin with standard characteristics is obtained in the third stage. Filtrate fractions containing impure wax are recycled for recovery of the solvent and reprocessing of the wax. Impure wax (slop wax) is

Card 1/2 UDC: 665.545.3

L 10511-66

ACC NR: AP6003466

obtained from the solvent used for washing in the third stage. Application of the combined process made it possible to reduce costs and to increase yields of dewaxed oil and ceresin. Orig. art. has: 1 figure, and 1 table. [JPRS]

SUB CODE: 21 / SUBM DATE: none

Card 2/2

KABILOV, N.M.

Pharmacology of furacillin. Farm.i toks. 19 supplement:29-30 '56.
(MLRA 10:7)

1. Kafedra farmakologii (zav. - zasluzhennyy deyatel' nauki, deystvitel'nyy chlen AMN SSSR prof. V.I.Skvortsov) II Moskovskogo gosudarstvennogo meditsinskogo instituta imeni I.V.Stalina.

(FURAN DERIVATIVES,
furacillin, pharmacol. (Rus))

KABILOV, N. M.

USSR / Pharmacology, Toxicology, Cardiovascular Drugs. V

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 94303

Author : Kabilov, N. M.
Inst : Not given
Title : The Influence of Furacillin on the Conditioned Reflex Activity of White Rats.

Orig Pub : Zdravookhr. Tadzhikistana, 1957, No. 5, 31-35.

Abstract : A single administration of furacillin (I) (5-nitro-2-furaldehyde semicarbazone) in doses of 15, 100 and 200 mg/kg into the stomach of rats leads to predominantly stimulating processes in their brain cortices. With a 15 mg/kg dose the latent period of conditioned reflexes (LPR) decreased from 1.2 sec. to 0.4 sec., in the following 7 days only a certain lengthening of the LPR was observed from this dosage of I. With

Card 1/2

KABILOV, N.M.

Comparative photosensitizing effects of khellin, meladinin and the extract of Psonalea drupacea. Farm i. toks. 25 no.6: 733-735 N-D '62. (MIRA 17:8)

1. Institut krayevoy meditsiny AN Tadzhikskoy SSR.

KABILOV, M.M., Cand Med Sci—(diss) "On the pharmacodynamics of furacilin and its interaction with Vitamin B_1 and Glucose." Ufa, 1958. 14 pp (Second State Med Inst im N.I. Pirogov), 220 copies (KL,26-58,116)

BARATOV, R.B.; KABILOV, Sh.K.

First discovery of volcanic rock in Jurassic sediments of the Fandar'ya-Yagnob coal basin. Dokl.AN Tadsh.SSR 2 no.2: 9-11 '59. (MIRA 13:4)

1. Institut geologii AN Tadshikskoy SSR. 2. Chlen-korrespondent AN Tadshikskoy SSR (for Baratov).
(Yagnob Valley--Rocks, Igneous)

KABILOV, Sh.K.

Spherosiderite in the coals of the Fan-Yagnob deposit. Trudy AN Tadzh.SSR 104 no.1:93-94 '59. (MIRA 15:4)

1. Institut geologii AN Tadzhikskoy SSR.
(Zeravshan Valley--Spherosiderite)

KABILOV, Sh.K.

Qualitative characteristics of coal from the Fan-Yagnob deposit. Izv. Otd. est. nauk AN Tadzh. SSR no.3:39-53 '59. (MIRA 15:5)

1. Institut geologii AN Tadzhikskoy SSR.
(Ayni District--Coal)

KOLYSHKIN, Nikolay Aleksandrovich; KABIN, Konstantin Vasil'yevich; KARMISHENSKIY, A.N., red.

[Preparation of seven-strand reinforcement wire at plants of the Main Administration for Construction in the Western Regions] Izgotovlenie semiprovolochnykh armaturnykh priadei na ustanovke Glavzapstroia. Leningrad, 1964. 19 p. (MIRA 17:9)

MAST', A.

Aesthetic education in schools. p. 675

NÕUKOGUDE KOOL. (HARIDUSMINISTEERIUM) Tallinn, Estonia.
Vol. 17, no. 9, Sept. 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 12, Dec. 1959
Uncl.

KABILOV, Sh.K.

Conditions governing the sedimentation of Jurassic coal-bearing sediments in the Fan-Yagnob coal deposit. Trudy Inst.geol. AN Tadzh.SSR 4:47-63 '61. (MIRA 15:12)

1. Institut geologii AN Tadzhikskoy SSR.
(Ayni District—Geology, Stratigraphic)

KABIN, S P

- 1955

621.315.616.96 : 537.226.5

4124. Investigation of the dielectric losses of polyethylene. G. P. MIKHAILOV, S. P. KABIN AND B. I. SAZHIN. *Zh. tekh. Fiz.*, 25, No. 4, 590–4 (1955) In Russian.

Three types of dielectric relaxation losses occur in polyethylene, characterized by the following most likely relaxation times: $\tau_1 = 10^{-4}$ sec (h.f.); $\tau_2 = 10^{-3}$ sec (m.f.); $\tau_3 = 10^{-1}$ sec (l.f.). This is explained by the partly crystalline structure of the material. The losses themselves are due to the presence of polar radicals C=O in the molecule. After thermal treatment the absolute loss figures increase without appreciable change of the temperature and frequency relations of $\tan \delta$.

ELECTRICAL RESEARCH ASSOCIATION

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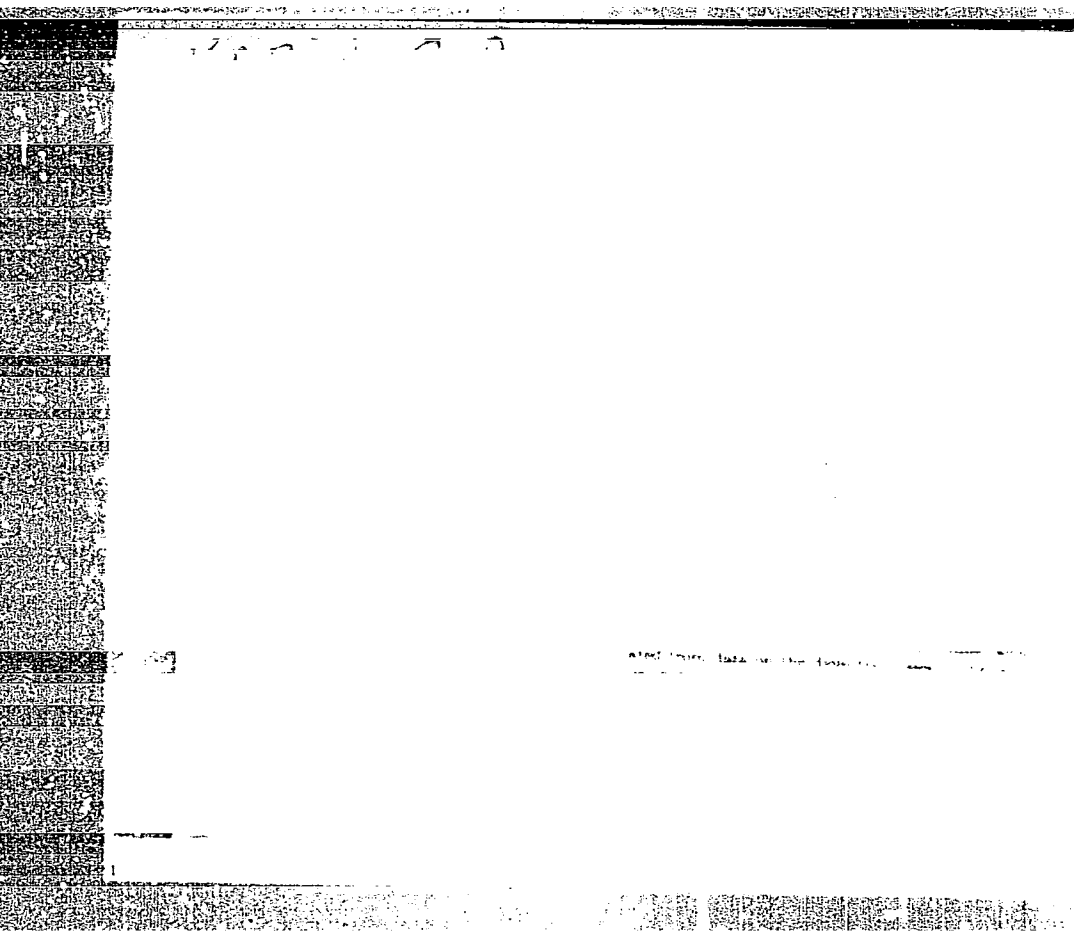

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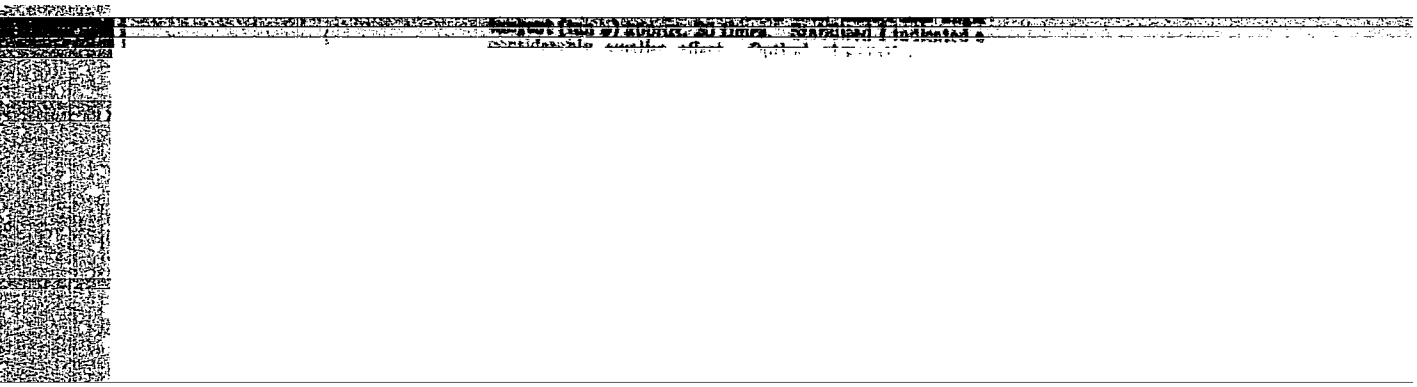

B. Rzhkewitch 1/1 910

RM

Category : USSR/Atomic and Molecular Physics - Physics of high-molecular substance D-9

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 1009

Author : Kabin, S.P., Mikhaylov, G.P.
Title : On the Mechanical and Dielectric Losses of Poly-isobutylene.

Orig Pub : Zh. tekhn. fiziki, 1956, 26, No 3, 511-515

Abstract : The mechanical losses in poly-isobutylene were investigated using pulses at frequencies of 0.5 -- 3.5 Mc over a temperature range of -100 to + 80°. In the interval from zero to +20° one observes a maximum of the amplitude absorbtion coefficient α ; at the same time, one observes a sharp decrease in the velocity of ultrasonic waves in the polymer between -20 and +30°. The tangent of the angle of the mechanical losses has a single maximum in temperature range from -60 to +80°. Determination of the tangent of the angle of the dielectric losses of pure poly-isobutylene and of a mixture with polyethylene disclosed the presence of a maximum of dielectric losses in the same temperature interval, as the mechanical losses. The dependence of log f_m on 1/T (f_m is the frequency corresponding to the maximum loss) for mechanical and dielectric losses is given by one straight line, from which an activation energy of 18.6 kcal/mol was calculated. This shows that both forms of relaxation are caused by the motion of the same kinetic units of the chain.

Card : 1/1

KABIN, S.P.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1816
AUTHOR KABIN, S.P.
TITLE On the Dynamic Mechanic Properties of Polyethylene and Polytetrafluorethylene.
PERIODICAL Žurn.techn.fis, 26, fasc.12, 2628-2632 (1956)
Issued: 1 / 1957

The present work is a careful investigation of the dynamic mechanic characteristics of polyethylene and polytetrafluorethylene of various degrees of crystallization in dependence on the temperature at different frequencies. The results were then compared with the data of works by the author and his collaborators in Zurn.techn.fis 25, fasc.4, and 12 (1955). Measurements were carried out by means of a momentum method at frequencies of 0,5, 1.0, 2.0, 3.5 and 5.0 kc of the longitudinal ultrasonic oscillations within the temperature range of - 115 up to+80° C for polyethylene and of - 65 up to + 20° C for polytetrafluorethylene. Measurements below 0° C were carried out in alcohol and those above 0° C in water. The error found when measuring the absorption coefficient α of the amplitude amounted to 5% and the velocity of the supersonic oscillations v - 20%. Recorded curves are attached. The dependence of velocity on the absorption coefficient of the amplitude in polyethylene, the temperature dependence of the product from the absorption coefficient of the amplitude multiplied by the wave length, the dependence of the logarithm of frequency on the reciprocal value of absolute temperature in accordance with mechanic and dielectric measurements, the results of the measuring of α, v,

Žurn.techn.fis, 26, fasc.12, 2628-2632 (1956) CARD 2 / 2 PA - 1816
APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000519810010-6"

and $\alpha\lambda = \pi \operatorname{tg}\delta_{mech}$ for polytetrafluorethylene within the temperature range of - 60 ÷ + 20° C and the frequency of 0.5, 1.0, 2.0, 3.5, 5.0 kc, as well as the dependence of α on temperature are shown.

A comparison between the present work and the author's work published in Zurn.techn.fis 26, fasc.3, 1956 shows that both in the case of an amorphous polymere polyisobutylene as also in the case of the crystalline polymeres polyethylene and polytetrafluorethylene the relaxation processes which occur at 10^4 - 10^7 c can be described by the same relaxation times and the same activation energy for mechanic and dielectric losses. Such agreement confirms the assumption of common molecular mechanisms which serve as a basis of dielectric and mechanic relaxation processes.

INSTITUTION: Polytechnic Institute "M.I.KALININ", Leningrad.

24(3)

SOV/112-58-3-3611

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1958, Nr 3, p 9 (USSR)

AUTHOR: Mikhaylov, G. P., and Kabin, S. P.

TITLE: Investigation of Dielectric Losses in Polyethylene (Issledovaniye dielektricheskikh poter' polietilena)

PERIODICAL: Nauchno-tekhn. inform. byul. Leningr. politekhn. in-t, 1957, Nr 4, pp 54-55

ABSTRACT: Until recently, polyethylene has been produced primarily by polymerization of ethylene under high pressure (1,000-2,000 atm) and temperatures (200°C) in the presence of oxygen acting as a catalyst. In 1955, Zigler developed a method of polymerizing ethylene under low pressures in diesel oil in the presence of Al $(C_2H_6)_3$ and $TiCl_4$. Industrial production of low-pressure polyethylene whose thermal resistance, hardness, and tensile strength exceed those of high-pressure polyethylene has been reported. It is assumed that production of low-pressure polyethylene is cheaper than that of

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24(3)

SOV/112-58-3-3611

Investigation of Dielectric Losses in Polyethylene

high-pressure by 30%. The present work is devoted to investigating low-pressure polyethylene produced at NIIPP & EZ (Leningrad) by a special processing method. Dielectric losses have been investigated at 50, 10^3, 10^4, 10^9, and 10^{10} cps. At audio frequencies the measurements have been made within a temperature range of $-100^\circ \div 160^\circ$C. It has been found that, at variance with the high-pressure polyethylene with its 3 ranges of relaxation dielectric losses, low-pressure polyethylene has only high-frequency and low-frequency relaxation losses; medium-frequency relaxation losses are absent; this is a consequence of a stronger crystallization of low-pressure polyethylene. The maximum $\mathrm{tg}\delta \approx 3 \cdot 10^{-4}$. The $\mathrm{tg}\delta$ of low-pressure polyethylene grows after thermal aging.

A.O.M.

Card 2/2

KABIN, S. P.

AUTHORS Mikhaylov, G.P., Kabin, S.P., Krylova, T.A. 57-9-17/40

TITLE On Dielectric and Mechanical Losses in Low-Pressure Polyethylene.
(O dielektricheskikh i mekhanicheskikh poteryakh polietilena nizkogo davleniya)

PERIODICAL Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 9, pp. 2050-2055 (USSR)

ABSTRACT The results obtained by experimental investigation are given. It is shown that tgδ of the dielectric losses within the temperature range of from -110 ÷ + 120°C and at frequencies of from 1.5 to 10 kc passes through two maximum domains. A comparison is drawn with the analogous rules for high-pressure polyethylene, and it is shown that the two types of relaxation losses in the case of low-pressure polyethylene belong to the high- and low-frequency relaxation types. Measurements of mechanical losses carried out by the ultrasonic method in dependence on temperature at a frequency of 2 kc proved the existence of only a high frequency relation. Summarizing, it is stated that the following two types of relaxation losses exist:

CARD 1/2

KABIN, S. P.

Kabin, S. P. and Mikhaylov, G. P. [Leningrad, Politekhnicheskiy institut (Polytechnical Institute)] Dielectric Losses of Non-polar Crystalline Polymers

(The Physics of Dielectrics; Transactions of the All-Union Conference on the Physics of Dielectrics) Moscow, Izd-vo AN SSSR, 1958. 245 p. 3,000 copies printed.

This volume publishes reports presented at the All-Union Conference on the Physics of Dielectrics, held in Dnepropetrovsk in August 1956, sponsored by the "Physics of Dielectrics" Laboratory of the Fizicheskiy institut imeni Lebedeva An SSSR (Physics Institute imeni Lebedev of the AS USSR), and the Electrophysics Department of the Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University).

AUTHORS: Kabin, S. P., Mikhaylov, G. N. 48-22-3-24/30

TITLE: Dielectric Losses of Crystalline Non-Polar Polymers (Dielektricheskiye poteri kristallicheskikh nepolyarnykh polimerov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958, Vol. 22, Nr 3, pp. 325-328 (USSR)

ABSTRACT: In the present report the authors report on the test results of the dielectric properties on non-polar crystallizing polymers: Polyethylene and polytetrafluorethylene (ref. 1). Both polymers are typical representatives of the class of crystallizing polymers the rules of which - in a whole series of cases - differ substantially from the properties of amorphous polymers. The results may be summarized as follows: 1) Dielectric relaxation-losses can be observed both in the one as well as in the other investigated polymer. They are caused by differently constituted polar radicals which penetrate into the molecule of the polymer. 2) In the case of polyethylene, three relaxation-processes are observed at corresponding temperatures, by which it is different from amorphous polymers. 3) The amount of the losses of relaxation

Card 1/2

of the mean frequency increases according to the decrease in the degree of crystallization. The relaxation-losses of the low frequency decrease. 4) In the case of polyethylene and polytetrafluorethylene, the processes of relaxation take place at the frequency of 10^4 - 10^7 cycles per second and can be described with the same relaxation period and with one and the same activation energy, for mechanic and dielectric losses. This agreement confirms the assumption on the commonness of the molecular mechanism which are the bases for the dielectric and mechanic processes. There are 4 figures and 8 references, 7 of which are Soviet.

ASSOCIATION: Leningradskiy politekhnicheskiy institut im. M. I. Kalinina (Leningrad Polytechnical Institute imeni M. I. Kalinin). Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR (Institute for High-Molecular Compounds AS USSR)

AVAILABLE: Library of Congress

1. Polymers--Dielectric properties--Test results 2. Fluoroethylenes --Dielectric properties--Test results 3. Polyethylene--Dielectric properties--Test results 4. Polytetrafluorethylene--Dielectric properties--Test results

SOV/57-28-9-19/33

AUTHORS: Sazhin, B. I., Lobanov, A. M., Gol'denberg, A. A., Sarminskaya, T. N., Marakhonov, I. A., Kabin, S. P.

TITLE: Investigation of Some Properties of Gamma-Irradiated Polyethylene (Issledovaniye nekotorykh svoystv polietilena, podvergnutogo vozdeystviyu γ-izlucheniya)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1958, Vol 28, Nr 9, pp. 1991-1998 (USSR)

ABSTRACT: This article contains a report on a comphrehensive investigation of polyethylene. These phenomena were studied: The influence of atomic radiation upon the structure and the physical properties, the infrared spectra and the intensity curves describing the dispersion of X-rays and the functions of density, of mechanical and of electrical properties versus temperature. Samples of a basic polyethylene synthesized under high pressure and samples of polyethylene subjected to the γ-radiation of a cobalt source in air were investigated. The samples had dimensions of 21 • 30 • 53 mm. The curves of the mechanical strength versus temperature function were recorded with the equipment designed by [illegible]. The Scientific Research Institute of Polymerized Plastics. The tg δ (angle of dielec-

Card 1/3

Investigation of Some Properties of Gamma-Irradiated Polyethylene

tric losses) versus temperature function was recorded in the frequency range of 400 to $3 \cdot 10^7$ c. The measurements at $3 \cdot 10^9$ c were made on a type KB-1 Q-meter according to the perfected method of Ye. M. Chulanovskiy in the differences of the factor of merit. The temperature dependence of the mechanical losses at $5 \cdot 10^4$ c were investigated using the method of the compound vibrator (Ref 8). The study of the infrared spectra of non-stabilized polyethylene and of irradiated polyethylene substantiated the existence of processes earlier observed (Refs 1, 5). Besides, some data bearing on the modification of the structure of the macromolecule of polyethylene were obtained. Investigations of polyethylene subjected to γ-radiation from Co^{60} showed that the modifications of the structure of the macromolecule becomes manifest, when infrared spectroscopy investigations are carried out by a modification of the nature of the tg δ and the dielectric- and mechanical losses versus temperature functions. Notwithstanding the production of a "seam" the modification of the density and the percentual content of crystallized polyethylene caused by an irradiation by $(40 \pm 30) \cdot 10^6$ r is insignificant. G. P. Mikhaylo and V. M. Chulanovskiy made valuable suggestions. V. A. Karpov

Card 2/3

Investigation of Some Properties of Gamma-Irradiated Polyethylene SOV/57-27-9-19/33

and V. A. Kozlov made available the samples. There are 3 figures, 1 table, and 19 references, 10 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut polimerizatsionnykh plastmass. Institut vysokomolekulyarnykh soyedineniy AN SSSR (Scientific Research Institute of Polymerized Plastics. Institute of High-Molecular Compounds, AS USSR, Leningrad)

SUBMITTED: November 29, 1957

Card 3/3

KABIN, S.P.

Coaxial resonator for measuring ϵ and $tg\delta$ of solid dielectrics. Trudy LPI no.194:166-174 '58. (MIRA 11:11)
(Dielectrics--Measurement)

KABIN, S.P.

Dynamomechanical properties of polyethylene under vibration in shear.
Vysokom soed. 1 no.6:829-833 Je '59. (MIRA 12:10)

1.Leningradskiy politekhnicheskiy institut im. M.I. Kalinina.
(Polyethylene) (Strains and stresses)

Kabin, S.P.

S/190/60/002/01/06/021
B004/B061

24.1800

82078

AUTHORS: Kabin, S. P., Us'yarov, O. G.

TITLE: Application of the Ultrasonic Method in Determining the Concentration of Components in Polyethylene - Polypropylene Mixtures and in Copolymers of Ethylene and Propylene

PERIODICAL: Vysokomolekulyarnyye soyedineniya. 1960, Vol. 2, No. 1, pp. 46-50

TEXT: The authors used longitudinal ultrasonic waves of 2 Mc/s in the temperature range from -60 to +80°C to determine the coefficient α of the amplitude absorption, in order to draw conclusions from this on the mechanical properties of the above mixtures and copolymers. The following experimental data are given: temperature dependence of α for polyethylene - polypropylene mixtures (Fig. 1); dependence of the maximum value of α on the concentration of polypropylene in polyethylene - polypropylene mixtures (Fig. 2); temperature dependence of α for

Card 1/3

Application of the Ultrasonic Method in Determining the Concentration of Components in Polyethylene - Polypropylene Mixtures and in Copolymers of Ethylene and Propylene

S/190/60/002/01/06/021
B004/B061
82078

ethylene - propylene copolymers (Fig. 3); dependence of the maximum value of α on the concentration of propylene in ethylene - propylene copolymers (Fig. 4). The authors drew the following conclusions from these data: Mechanical polyethylene - polypropylene mixtures show two ranges of mechanical losses which are determined by relaxation processes. One range of relaxation is caused by the presence of polyethylene, the other by that of polypropylene. The most probable relaxation time is not influenced by a change in the mixture ratio of both components. Ethylene - propylene copolymers show only one range of mechanical losses whose maximum is found at 5°C. The maximum α is linearly dependent on the concentration of propylene up to a propylene concentration of 40%. This fact can be used in the analysis of ethylene - propylene copolymers, and may also be used for other copolymers. There are 4 figures and 7 references: 6 Soviet and 1 German.

Card 2/3

Application of the Ultrasonic Method in Determining the Concentration of Components in Polyethylene - Polypropylene Mixtures and in Copolymers of Ethylene and Propylene

S/190/60/002/01/06/021
B004/B061
82078

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

SUBMITTED: July 18, 1959

Card 3/3

83474

S/190/60/002/009/005/019
B004/B060

S.3832 also 2109

AUTHOR: Kabin, S. P.

TITLE: Mechanical and Dielectric Losses of Polyvinyl Ethylal in the Vitreous State. II

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 9, pp. 1324-1329

TEXT: The author studied the propagation of longitudinal waves and shear waves at a frequency of 1 mc/sec in polyvinyl ethylal (density ρ = 1.16g/cm^3), whose base molecule had the structural formula $-CH_2-\underset{\displaystyle O-CH-O \atop \displaystyle CH_3}{CH}-CH_2-CH-$. Measurements were made with piezoelectric quartz in the temperature range between 20 and 80°C. The author writes down the equations for the following values: shear modulus G = G' + iG"; longitudinal modulus M = M' + iM"; $G' = \rho v_s^2$ (v_s = ultrasonic speed with shear oscillation); $M' = \rho v_l^2$ (v_l = ultrasonic speed with longitudinal oscillation); furthermore,

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Mechanical and Dielectric Losses of Polyvinyl Ethylal in the Vitreous State. II

S/190/60/002/009/005/019
B004/B060

equations are written down for the amplitude coefficients α_s, α_l of absorption, for $\tan\delta_s$ and $\tan\delta_l$ (δ = angle of mechanical losses), for the Poisson coefficient μ, for the rational (B') and irrational (B") component of the modulus of volume compression, as well as for the maximum elastic energy stored, namely F_1, the shear component in the propagation of longitudinal waves, and F_2, the longitudinal component in the propagation of shear waves. Experimental data are given in Figs.1-3 and in a table. v_s drops from $1.2\cdot10^5$ cm/sec (20°C) to $1.1\cdot10^5$ cm/sec (80°C), α_s rises from 1.03 1/cm to 1.46 1/cm. v_l drops from $2.08\cdot10^5$ cm/sec to $1.96\cdot10^5$ cm/sec, α_l exhibits a maximum at 50°C. μ at 25°C is equal to 0.25, at 80°C it is equal to 0.28. The maximum value of $\tan\delta_{vol} = B''/B'$ is 0.017. The modulus of volume compression is at $2.7\cdot10^{10}$ dyn/cm^2, and depends little on temperature. The relaxation time of the mechanical losses coincides with the relaxation time of the dielectric losses, which is indicative of a common nature of the molecular mechanisms. The

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83474

Mechanical and Dielectric Losses of Polyvinyl Ethylal in the Vitreous State. II

S/190/60/002/009/005/019
B004/B060

dielectric losses observed in polyethylene (Ref. 11) can be explained by dipole radical losses on the strength of data obtained with polyvinyl ethylal. The author thanks G. P. Mikhaylov and Ye. V. Kuvshinskiy for a number of valuable remarks. There are 3 figures, 1 table, and 11 references: 6 Soviet, 3 US, and 2 German.

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

SUBMITTED: February 18, 1960

Card 3/3

29619
S/120/61/000/004/031/034
E194/E355

15.9300

AUTHORS: Volodin, V.P., Kabin, S.P. and Kuvshinskiy, Ye.V.

TITLE: Measurement of the dynamic mechanical properties of rubber in the frequency range from 0.01 to 4 000 c.p.s.

PERIODICAL: Pribory i tekhnika eksperimenta, no. 4, 1961, p. 179

TEXT: A previous work (Ref. 1 - this journal, 1957, No. 5, 86) described equipment for determining the dynamic mechanical properties of rubber in the frequency range of 100 to 4 000 c.p.s. It was shown that, in principle, the apparatus could be used for lower frequencies and this has now been done. Measurements of the shear modulus and tangent of mechanical loss angle can now also be made in the frequency range of 0.01 to 100 c.p.s. The output of an ultralow-frequency generator is amplified and applied through a resistance to the coil of a vibrator. A peak voltmeter is used to measure the voltage drop across the resistance which is proportional to the stress applied to the specimen. It also measures the

Card 1/2

Measurement of ....

alternating component of the output voltage from a capacitative pick-up which is proportional to the displacement of the specimen. A phasemeter is used to measure the phase-angle between the voltage corresponding to stress and that corresponding to strain. Measurements can be made in the temperature range -30 to +60 °C. Test results are quoted for shear modulus and tangent of mechanical loss angle as functions of frequency at a temperature of 15 °C for СКБ (SKB) base rubber. Thus, at a frequency of 0.01 c.p.s. the shear modulus is 2.6×10^6 dynes/cm^2 and tan $\delta = 0.17$. At a frequency of 100 c.p.s. the corresponding figures are 5.4×10^6 dynes/cm^2 and tan $\delta = 0.3$ c.p.s.
There are 2 figures and 1 Soviet-bloc reference.

ASSOCIATION: Leningradskiy politekhnicheskiy institut (Leningrad Polytechnical Institute)

SUBMITTED: November 17, 1960

Card 2/2

15·8560 2209,1372, also 1043,1477 S/190/61/003/004/011/014
B101/B207

AUTHORS: Kabin, S. P., Malkevich, S. G., Mikhaylov, G. P., Sazhin, B. I. Smolyanskiy, A. L., Chereshkevich, L. V.

TITLE: Study of the dielectric losses and polarization of some fluoroplasts

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 4, 1961, 618-623

TEXT: This paper studies the effect of crystallization upon the dielectric constant ε and tan δ of the dielectric losses. Substances with the following parameters were studied:

Substance:	Denotation	$d_{20°}$, g/cm^3	ε, 10^5 cps, 0°C	tan δ, 10^5 cps, 0°C	melting point, °C
polyvinylidene fluoride	F-2	1.86	7.0	0.19	180
copolymer from tetrafluoroethylene and fluorovinylidene 1:4	CF-1	1.86	6.4	0.18	145

Card 1/3

Study of ...

Substance:	Denotation	$d_{20°}$, g/cm^3	ε, 10^5 cps, 0°C	tan δ, 10^5 cps, 0°C	melting point, °C
ditto, ratio 1:2	CF-2	1.91	8.6	0.09	160
ditto, ratio 1:1	CF-3	1.98	8.0	0.08	205

ε and tan δ were measured between -150°C and melting point of the polymer at frequencies of 5-10^7 cps on 0.1-0.5 mm thick samples according to a method described in Ref. 4 (G. P. Mikhaylov, B. I. Sazhin, Vysokomolek. soyed., 1, 9, 1959; Zh. tekhn. fiz., 25, 2186, 1955). The maximum error was less than 10%. Fig. 1 shows ε and tan δ as a function of temperature. The maxima occurring therein which are caused by relaxation, were also observed when tan δ was a function of frequency. Since tetrafluoroethylene has a symmetrical molecule with small dipole moment, the increase of ε and tan δ in the copolymers, is due to the polarity of vinylidene fluoride. Three ranges of dielectric losses owing to relaxation were observed. 1) high-frequency relaxation at CF-2 and CF-3 in the range of from -180- -100°C

Card 2/3

KABIROV, A. V.

USSR.

/The Corrosion of Iron in Fused Salt Mixtures. [illegible] A. V. Kabirov, and O. [illegible] 1954, 27 [illegible] (in Russian). The [illegible] of iron in fused [illegible]

KABIROV, R.Sh., nauchnyy sotrudnik; URMANOV, Z.A.

Treatment and prophylaxis of gastrointestinal diseases in young farm animals. Veterinariia 40 no.4:63-65 Ap '63.
(MIRA 17:1)

1. Bashkirskaya nauchno-proizvodstvennaya veterinarnaya laboratoriya (for Kabirov).

ASTAKHOV, Yuriy Nikolayevich; VENIKOV, Valentin Andreyevich; ZUYEV, Eduard Nikolayevich; KABIROV, Yuriy Sadekovich; IVANOV, S.M., red.; NAZAROVA, A.S., tekhn. red.

[Cybernetics in power engineering] Kibernetika v energetike. Pod red. V.A.Venikova. Moskva, Izd-vo "Znanie," 1962. 35 p. (Novoe v zhizni, nauke, tekhnike. IV Seriia: Tekhnika, no.14) (MIRA 15:8)

(Power engineering) (Automatic control)

TOPIC TAGS: man, rickettsia, R. burneti, R. mooseri, D. gibbiformis, immunity, complement fixation test, antibody, antigen

ABSTRACT: [illegible] immunity to certain [illegible]

Card 1/2

ACCESSION NR: AP5008026

ENCL: 00

SUB

Card 2/2

LIPKIN, M.Ye.; ARTYKOV, M.S.; ISAYEV, Yu.V.; POLULYAKH, P.A.; VARIVODINA, T.A.; SHILYAYEV, L.F.; PUN'KO, T.A.; ANDREYEVA, A.P.; BAKULINA, L.I.; ABRAMOVA, S.G.; KLIMOVA, T.K.; YEGOROV, V.A.; KEREYEV, N.I.; KABIROVA, M.B.; DASHEVSKIY, V.V.; SORKIN, Yu.I.; KOLENDOVICH, A.I.; SERGEYEVA, L.I.; NAGAYEV, V.N.; NESTEROVA, G.N.; ALEKSEYEVA, N.A.; GOLUBEVA, V.N.; ANISIMOVA, T.I.; OVASAPYAN, O.V.; GALOYAN, V.O.; ARAKELYAN, K.A.

Abstracts of articles received by the editors. Zhur.mikrobiol., epid. i immun. 42 no.3:147-152 Mr '65. (MIRA 18:6)

ROGOVA, N.A.; KABIROVA, M.G.

Organization of trachoma control in Semipalatinsk Province. Zdrav.Kazakh. 22 no.11:3-6 '62. (MIRA 16:2)

1. Iz kafedry glaznykh bolezney (zav. - kand.med.nauk N.A. Rogova) Semipalatinskogo meditsinskogo instituta i glaznogo otdeleniya (zav. - M.G. Kabirova) Semipalatinskoy oblastnoy bol'nitsy.
(SEMIPALATINSK PROVINCE—CONJUNCTIVITIS, GRANULAR)

KABIROVSKIY, Yu.P., inzh.

Concerning the rim seals of electric transformers. Energetik 8 no.9:14 S '60. (MIRA 14:9)
(Electric transformers)

KABIROVSKIY, Yu.P., inzh.

Preservation of insulator flanges. Energetik 9 no.5:26 My '61.
(MIRA 14:5)
(Electric transformers--Repairing)

KABISH, G.

Six month later. NTO no.7:48 Jy '59. (MIRA 12:11)

1. Uchenyy sekretar' respublikanskogo soveta nauchno-tekhnicheskogo obshchestva Uzbekskoy SSR.
(Uzbekistan--Research, Industrial)

DOLOTOVA, I.A.; KABISHCHER, S.G.; SALISHCHEVA, Ye.P.; DOLGALLO, G.N.; MALYY, V.M.; KLOCHKO, A.I.

Adopting the flotation of iron quartzite. Gor.zhur. no.4:65-68 Ap '64. (MIRA 17:4)

1. Mekhanobrchermet (for Dolotova, Kabishcher, Salishcheva).
2. TSentral'nyy gornobogatitel'nyy kombinat, Krivoy Rog (for Dolgallo, Malyy, Klochko).

1. KABISHCHER, YA. YE.

2. USSR (600)

4. Machinery Industry

7. "Specialization and cooperation in Soviet machine building industry." S. I. Semin. Reviewed by Eng. Ya. Ye. Kabishcher. Vest mash. No. 9 1952.

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

KABISHCHER, Yakov Yefimovich; VINOGRADOV, G.S., inzh., red.; GVIRTS, V.L., tekhn.red.

[Controlling losses in work time] Bor'ba s poteriami rabochego vremeni. Leningrad, 1956. 7 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Informatsionno-tekhnicheskiy listok, no.25. Organizatsiia i ekonomika proizvodstva) (MIRA 10:12)
(Time study)

PRITULA, V.A., inzhener; KABISHCHEVA, A.S.

Breakdown of reinforced concrete by stray currents. Stroi.prom. 32 no.7:38-40 Jl '54. (MLRA 7:7)

1. Trest Stal'montazh (for Kabishcheva)
(Reinforced concrete) (Electric currents, Vagrant)

KARMAZIN, V.I., doktor tekhn.nauk; KABISHER, S.G., inzh.; KHVATOV, Yu.A., inzh.; KARMAZIN, V.V., inzh.; BURAYEV, B.K., inzh.

Industrial production of final iron ore concentrates. Met. i gornorud. prom. no.3:58-62 My-Je '62. (MIRA 15:9)
(Ore dressing)

KABISHCHER, S.G.; KARMAZIN, V.I.; KHVATOV, Yu.A.; BURAYEV, B.K.

Obtaining high-grade flotation concentrates at the New Krivoy Rog Mining and Ore Dressing Combine. Gor.zhur. no.8:58-62 Ag '62. (MIRA 15:8)

1. Mekhanobrchermet (for Kabishcher). 2. Dneproretrovskiy gornyy institut (for Karmazin). 3. Novo-Krivorozhskiy gorno-obogatitel'nyy kombinat (for Khvatov, Burayev).
(Krivoy Rog Basin--Flotation)

KABISOV, Kh.G.

Organizing a continuous work schedule in the filling system. Gor.zhur. no.4:5-6 Ap '55. (Mine management) (MIRA 8:7)

18

SOV/127-59-4-5/27

AUTHORS: Kabisov, Kh.G. and Muzal'kov, M.I., Mining Engineers

TITLE: The Stoping of Protecting Blocks in the Mines. (Otrabotka shakhtnykh okhrannykh tselikov.)

PERIODICAL: Gornyy zhurnal, 1959, Nr 4, pp 32-35 (USSR)

ABSTRACT: The losses of ore left in the protecting blocks cut down the production figures of mines. On the other hand the eventual extraction of ore from these blocks involved large expenses and extensive preparatory operations. The authors proposed a new method consisting of the gradual replacement of the natural protecting block by an artificial one. The method was tried out at the Zgid polymetallic mine of the Sadon Mining Management, and was found to be reliable, comparatively inexpensive and secure. In this particular case, it was found that after the sinking of the main

Card 1/2

The Stoping of Protecting Blocks in the Mines.

shaft, the vein formed a part of the protecting block. The method consisted in extracting horizontal layers and gradually filling in the empty space with rocks, and pouring a concrete mixture over them. (Figure 3). The method is described in detail. Such replacement of only one block gave an economy of 800,000 rubles without counting the value of the extracted ore. There are 2 sets of diagrams and 1 profile.

ASSOCIATION: Sadonskoye rudoupravleniye. (The Sadon Mining Management).

L 32202-65 EWT(l) IJP(c) GS

ACCESSION NR: AT5[illegible] S/0000/64/000/001/0043/0045

AUTHOR: Slyusarskiy, Ye. P.; Kabisov, F. S.

TITLE: The theory of nonradiative transitions in the "non-Condon approximation"

SOURCE: Nauchnaya konferentsiya molodykh uchenykh Moldavii, 3d. Tr.

Gosizdat Kartya Moldovenyaske 1964 41-45

TOPIC TAGS: nonradiative transition, thermal transition, electron phonon interaction, "non-Condon" model

ABSTRACT: Starting from an expression for the total probability of thermal transi-

Condon model calculations

Card 1/2

L 32202-65

In the case of [illegible] crystals, the increase in nonradiative transition [illegible] may reach 10^2 for certain values of the material constants of the crystal [illegible].
authors deeply appreciate the constant guidance provided by V. A. Kovarskiy."
Orig art has [illegible]

ASSOCIATION: [illegible]

SUBMITTED: 21Feb65 ENCL: 00 SUB CODE: [illegible]

NO REF SOV: [illegible] OTHER: [illegible]

Card 2/2

MUKHAMEDZHANOV, S.M.; ISABAYEV, T.T.; KABIYEV, F.; MURTAZIN, Zh.V.

Underground waters of the Tarbagatay Range and its margin. Izv.AN Kazakh.SSR. Ser.geol.nauk no.4:58-73 '63.(MIRA 16:9)

1. Institut geologicheskikh nauk AN Kazakhskoy SSR, Alma-Ata.

MUKHAMEDZHANOV, Serk Mukhamedzhanovich; ISABAYEV, Turlybay Tadzhibayevich; KABIYEV, Fayzulla Kabiyevich; MURTAZIN, Zhamshit Vakhitovich; SHLYGIN, Ye.D., doktor geol.-miner. nauk, prof., otv. red.; RZHONDKOVSKAYA, L.S., red.

[Underground waters of the Tarbagatay Range and its piedmont plains] Podzemnye vody khrebta Tarbagatai i ego ravninnykh predgorii. Alma-Ata, Izd-vo "Nauka" Kazakhskoi SSR, 1965. 147 p. (MIRA 18:9)

1. Chlen-korrespondent AN Kaz.SSR (for Shlygin).

KABIYEV, O.: Master Med Sci (diss) -- "The pharmacodynamics of derivatives of camphor-oxime, semicarbazone, and thiosemicarbazone". Alma-Ata, 1958. 22 pp (Kazakh State Med Inst), 300 copies (KL, No 8, 1959, 138)

KABIYEV, O.K. (Alma-Ata) ; KARIMOV, M.A. (Alma-Ata)

Sixth Conference of Oncologists and Radiologists of the Kazakh S.S.R. combined with Out-Session of the Institutes of Oncology of the Academy of Medical Sciences of the U.S.S.R. Vop. onk. 9 no.8:122-124 '63. (MIRA 17:4)

DRUZ', V.A.; SOKOL'SKIY, D.V.; Prinimali uchastiye: CHULKOVA, G.L., studentka-diplomnitsa; KABIYEV, T., student-diplomnik; SAVICHE, Ye.I., laborant

Potentiometric study of the reactions underlying the catalytic hydrogenation in the gas phase. Trudy Inst.khim.nauk AN Kazakh.SSR 8:45-55 '62. (MIRA 15:12)
(Hydrogenation) (Catalysis)
(Potentiometric analysis)

KABIYEV, T.; FASMAN, A.B.; MOLYUKOVA, N.I.; SOKOL'SKIY, D.V., akademik

Promotion of a skeletal nickel catalyst by molybdenum. Dokl. AN SSSR 159 no.5:1087-1090 D '64 (MIRA 18:1)

1. Kazakhskiy gosudarstvennyy universitet im. S.M. Kirova.
2. AN KazSSR (for Sokolovskiy).

FASMAN, A.B.; KABIYEV, T.; SOKOL'SKIY, D.V., akademik; YAGUDEYEV, T.A.

Promoting the skeletal nickel catalyst by oxygen-containing anions of transition metals. Dokl. AN SSSR 162 no.3:600-602 My '65. (MIRA 18:5)

1. Kazanskiy gosudarstvennyy universitet im. S.M.Kirova, 2. AN KazSSR (for Sokol'skiy).

L 3661-66 EWP(e)/EWT(m)/ETC/EWG(m)/T/EWP(t)/EWP(z)/EWP(b) IJP(c) DS/JD/HW
ACCESSION NR: AP5018455 UR/0364/65/001/007/0868/0871
541.136

AUTHOR: Kabiyev, T.; Fasman, A. B.; Isabekov, A.; Chernousova, K. T.

TITLE: The effect of conditions of the genesis of Ni-Al alloy on the electrochemical activity of hydrogen diffusion electrodes.

SOURCE: Elektrokhimiya, v. 1, no. 7, 1965, 868-871

TOPIC TAGS: nickel alloy, catalytic activity, electrochemistry, hydrogen gas

ABSTRACT: The conditions of the production of Ni-Al alloys may effect the extent to which such compounds as $NiAl_3$, Ni_2Al_2, NiAl and Ni_3Al have been leached out. The rate of leaching of these compounds and their catalytic activity are significantly different, and at the same time the activity of the catalyst is significantly impaired by the presence of aluminum. During hydrogenation of unsaturated compounds and in hydrogen diffusion electrodes a catalyst prepared from 1:1 Ni-Al alloy is preferred. It has the greatest stability and the necessary mechanical strength. In the present report such catalysts were prepared under different cooling rates. The effect of the conditions of crystallization on the resulting structure and activity of the skeletal nickel catalyst was investigated. The current-

Card 1/4

voltage characteristics of different electrodes are shown in Fig. 1 of the Enclosure. Electrodes were tested at 1.5 atm pressure of hydrogen in 30% KOH at 30—100° C. The polarizing current density comprised 100 ma/cm^2. It was found that the activity of the catalysts produced from Ni-Al alloys prepared from different methods depends on their physical parameters: grain size, extent of dendrite heterogeneity and the completeness of removal of aluminum. It was found that the activity of catalysts is directly related to the content of $NiAl_3$ phase in the starting alloy. During sintering of electrodes a partial interaction of carbonyl nickel with aluminum eutectic and with $NiAl_3$ phase takes place. Consequently, leaching is impaired. Thus, the electrochemical activity of the diffusion electrode is a function of the ratio of active nickel to bound nickel. The sharp improvement in the electrode characteristics upon electrochemical activation is apparently a result of the increase of this ratio, since all phases containing aluminum are destroyed. When the alloy is crystallized in the furnace at 300° C the reaction Ni_2Al_3 + eutectic → $NiAl_3$ is more complete. The area occupied by this phase is greater than under any other conditions. An intermetallic compound is produced with the greatest extent of dendritic heterogeneity. Such high dendritic heterogeneity facilitates a more complete leaching of the appropriate phases and increases the lifespan and stability of the electrodes. Orig. art. has: 2 tables

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000519810010-6"

L 3661-66 3
ACCESSION NR: AP5018455

and 3 figures.

ASSOCIATION: Kazakhskiy gosudarstvennyy universitet im. S. M. Kirova (Kazakh State University) 94155

SUBMITTED: 04Jan65 ENCL: 01 SUB CODE: MM, EM

NO REF SOV: 002 OTHER: 003

Card 3/4

L 3661-66

ACCESSION NR: AP5018455

ENCLOSURE: 01

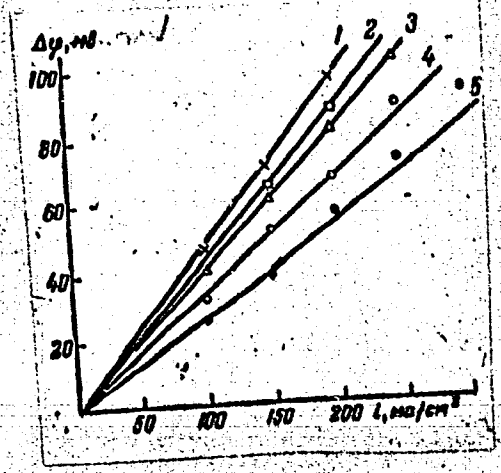

Fig. 1. Current-voltage characteristics of hydrogen diffusion electrodes at 88° C: 1--tempered from liquid; 2--standard; 3--4 hrs at 800° C; 4--cooled in air; 5--10 hrs at 300° C

Card 4/4

ACC NR: AP7004663 (A,N) SOURCE CODE: UR/0076/66/040/008/1758/1765

AUTHOR: Fasman, A. B.; Molyukova, N. I.; Kabiyev, T.; Sokol'skiy, D. V.; Chernousova, K. T.

ORG: Kazakh State University im. S. M. Kirov (Kazakhskiy gosudarstvennyy universitet)

TITLE: Modification of skeletal nickel catalyst with transition metal admixtures. Part 2: Electrolytic oxidation of hydrogen and catalytic hydrogenation on skeletal nickel-chromium alloys

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 8, 1966, 1758-1765

TOPIC TAGS: nickel alloy, chromium alloy, hydrogenation, anodic oxidation

ABSTRACT: The paper examines the effect of adding chromium to a skeletal nickel catalyst containing 50 wt. % Al during the electrolytic oxidation of hydrogen on ceramic diffusion electrodes and in a catalytic hydrogenation reaction. Alloying with chromium was found to lower the activity of skeletal nickel catalyst during the electrooxidation of hydrogen in alkaline electrolytes and during hydrogenation of potassium maleate and o-nitrophenol. The hydrogenation rate decreases upon addition of small amounts of Cr, then increases, reaching a maximum on a catalyst containing 5% Cr, and finally decreases monotonically. A study of the phase composition of the Ni-Cr-Al system showed that up to 30 wt. % Cr the system contains the compounds $NiAl_3$ and Ni_2Al_3. An increase in the chromium content of the alloy leads to the formation of two new phases equivalent in microhardness to the compounds Cr_4Al_9 and $CrAl_4$. An

Card 1/2 UDC: 541.128

ACC NR: AP7004663

analogy is demonstrated in the kinetics and mechanism of the processes of anodic oxidation, cathodic evolution of hydrogen, and catalytic hydrogenation on nickel-chromium alloys. Orig. art. has: 9 figures and 2 tables.

SUB CODE: 11,07/ SUBM DATE: 28Jan65/ ORIG REF: 024/ OTH REF: 008

Card 2/2

KABKO, G.

An important means of price control. Sov.torg. 36 no.12:20-22 D '62. (MIRA 16:1)

(Retail trade—Prices)

L 35840-66 EWT(1)

ACC NR: AP6015344 SOURCE CODE: UR/0119/66/000/005/0024/0026

AUTHOR: Vaynberger, G. Ya. (Engineer); Vasil'yev, Yu. K. (Candidate of technical sciences); Karpenko, B. K. (Candidate of technical sciences); Kabkov, G. Ya. (Engineer); Larchenko, V. I. (Engineer); Rybal'chenko, Yu. I. (Engineer)

ORG: none

TITLE: Stepping motors

SOURCE: Priborostroyeniye, no. 5, 1966, 24-26

TOPIC TAGS: stepping motor, micromotor, servomotor / RShD gear stepping servomotor, EShD stepping servomotor

ABSTRACT: A very brief description is supplied of (1) RShD reactive-rotor gear stepping motor intended for smaller steps and higher speeds and (2) EShD

Card 1/2

UDC: 621.313.13 - 133.4