

15 8080 abo15K1

32352  
S/190/62/004/001/014/020  
B110/B101

AUTHORS: Uskov, I. A., Kusnitsyna, T. A., Kozlova, T. P., Solomko, V. P.

TITLE: Filled polymers. V. Introduction of aminated bentonite in polycaprolactam

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 1. 1962. 95 - 97

TEXT: The authors studied the effect of highly disperse filler with modified surface (methyl-octadecyl-ammonium bentonite) (I) upon the physico-mechanical properties of crystalline polycaprolactam. I was obtained according to I. A. Uskov (Vysokomolek. soyed., 2, 200, 1960). For producing a highly disperse powder of I, the benzene-containing or aqueous paste was dried by sublimation. Xerogel obtained in this way can be easily dispersed to a powder. In a 70% methanolic caprolactam solution, bentonite showed optimum dispersion. Methanol was removed by drying at 60°C. Polycondensation proceeded in evacuated ampuls or in a CO<sub>2</sub> stream in the presence of 3% AΠ(AG) salt and 5% alipic acid during 8 hr at 265°C.  
Card 1/4

Filled polymers. V. Introduction ...

31372  
S/190/62/004/001/014/000  
B110/B101

Mixing of the aqueous bentonite paste with caprolactam yielded a homogeneous, filled polymer. In the present case, polycondensation of a mixture of filler and caprolactam separated from the methanolic, monomeric solution took place. Tabular samples were cut from cylindrical blocks and the monomer was washed out by 10-hr boiling in water. The following molecular weights were viscosimetrically determined from solutions in 40%  $H_2SO_4$ .

X

Degree of bentonite amination in microequivalents per g	0	500	800	1000
Molecular weight of poly- caprolactam, in thousands	21.4±1.4	21.4±3.5	24.8±1.6	30.8±1.6

The degree of polymerization of polycaprolactam is not reduced by introducing fillers. A small increase is caused by neutralizing adipic acid acting as stabilizer by binding with amine adsorbed on bentonite. The

Card 2/4

32352

Filled polymers. V. Introduction ...

S/190/62/004/001/014/020  
B110/B101

thermomechanical curves for pure and filled polycaprolactam completely coincided. This is in agreement with V. A. Kargin's and T. I. Sogolova's data (Ref. 6: Vysokomolek. soyed., 2, 1093, 1960). Dependence of hardness of polycaprolactam on the content of I having a degree of amination of 800 microequivalents/gram is:

Filler content, %	0	1	3	5	8
Hardness, kg/mm <sup>2</sup>	14.1	15.4	15.8	18.7	19.1

For the first 5%, the maximum increase in hardness caused by the active filler can be observed. Comparison between differently aminated I showed for 10% filler content:

X

Degree of amination, microequivalents/gram	500	800	1000
Hardness, kg/mm <sup>2</sup>	17.0	16.0	16.8

Card 3/4

Filled polymers. V. Introduction ...

<sup>32352</sup>  
S/196762/004/001/014/020  
B110/B101

O. D. Kurilenko and R. V. Mikhalyuk (Ref. 7: Kolloidn. zh., 21, 195, 1959) found that low and high amination of bentonite led to a rise in heat of wetting with water. For maximum filler activity, not a completely hydrophobic but a somewhat polar surface is required. Aminated bentonite is an active filler of amorphous and crystalline polymers. There are 1 figure, 1 table, and 7 references: 5 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: I. W. Jordan, F. F. Maleyev, J. Polymer Sci., 31, 301, 1958; A. J. Jurzhenko, J. Phys. Colloid. Sci., 53, 294, 1949. X

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko  
(Kiyev State University imeni T. G. Shevchenko)

SUBMITTED: February 2, 1961

Card 4/4

ZAV'YALOV, A.S.; KUSNITSYNA, Z.I.

Diagrams of isothermal transformation of austenite. Izv.vys.  
ucheb.zav.; chern.met. 5 no.11:156-162 '62. (MIRA 15:12)

1. Severo-zapadnyy zaachnyy politekhnicheskiiy institut.  
(Steel--Metallography) (Phase rule and equilibrium)

BALANDIN, Yu. F.; KUSNITSYNA, Z. I.

Investigating deformations and failure in EI437B alloys during  
creep. Fiz. met. i metalloved. 14 no.4:618-624, 0 '62.  
(MIRA 15:10)

(Heat-resistant alloys--Testing)  
(Creep of metals)

WINDY, V. I.

"[Faint, mostly illegible text]

[Faint, mostly illegible text]

KUCOMAN, V. V.

5598 Kuosman, V. V. ekspluatatsiya ruchnykh elektrosuchkorezok res-1  
m-l., gosles umizdat, 1954. 64s. s ill, 21 sm (v pomoshch' mekhanizatoram  
lesozagotovok) 10,000 ekz. 1 r 65k-(55-148)  
634.982-83

SO: Kniahnaya Letopis', Vo.,. 1, 1955



ZHUBINA, L.A., kand.tekhn.nauk; MIKHLYUKOV, Yo.I., inzh.; KUSONSKIY, G.G.,  
inzh.

Using easily melting clay for glass containers production.  
Sbor. nauch. trud. Bel. politekh. inst. no.82:100-111 '60.  
(MIRA 15:5)

(Glass containers)

Rusov, A. B.

Distr: 452c(1)

1925. Volume changes in the stretching of rub-  
 ber. G. A. B. Kurov, V. I. Tsorinova, and Y. I. Nurova. Koll. Zh., 1937, 19, 581-91. Volume changes during the stretching of rubber were studied with the aid of a method of hydrostatic weighing. It was found that both for filled and unfilled rubbers there is an increase in volume on stretching, reaching 2% at maximum elongation. The specific volume-stretching curves are S-shaped with a point of inflexion corresponding to the region of elongation at which an inflexion occurs in the stress-strain curves. (In attaining a certain degree of elongation natural rubber vulcanizates show a lowering of the volume which is the greater, the greater the extent of vulcanization, and is presumably associated with crystallization of the rubber. There are 7 references.)

4  
2 May  
1

831246

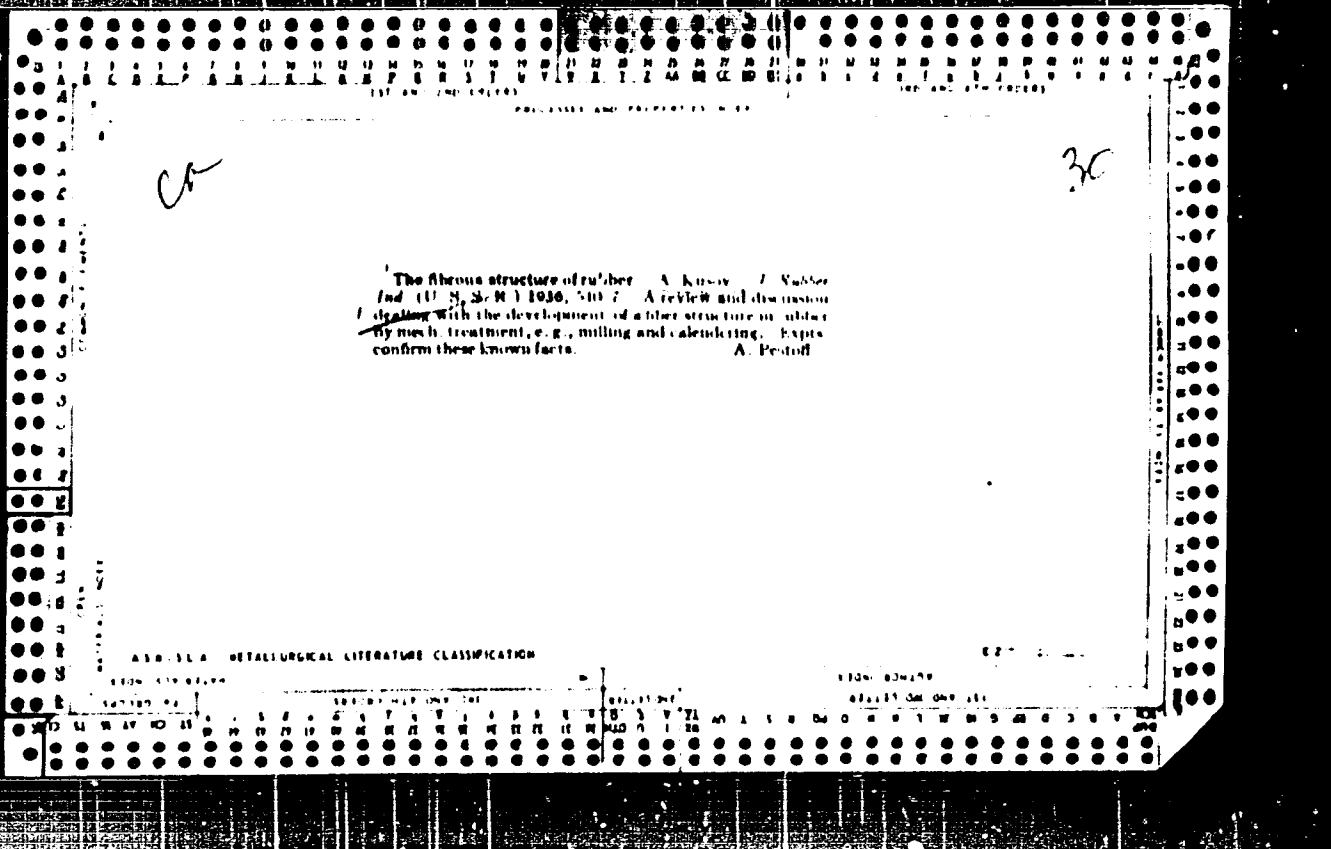
jjg

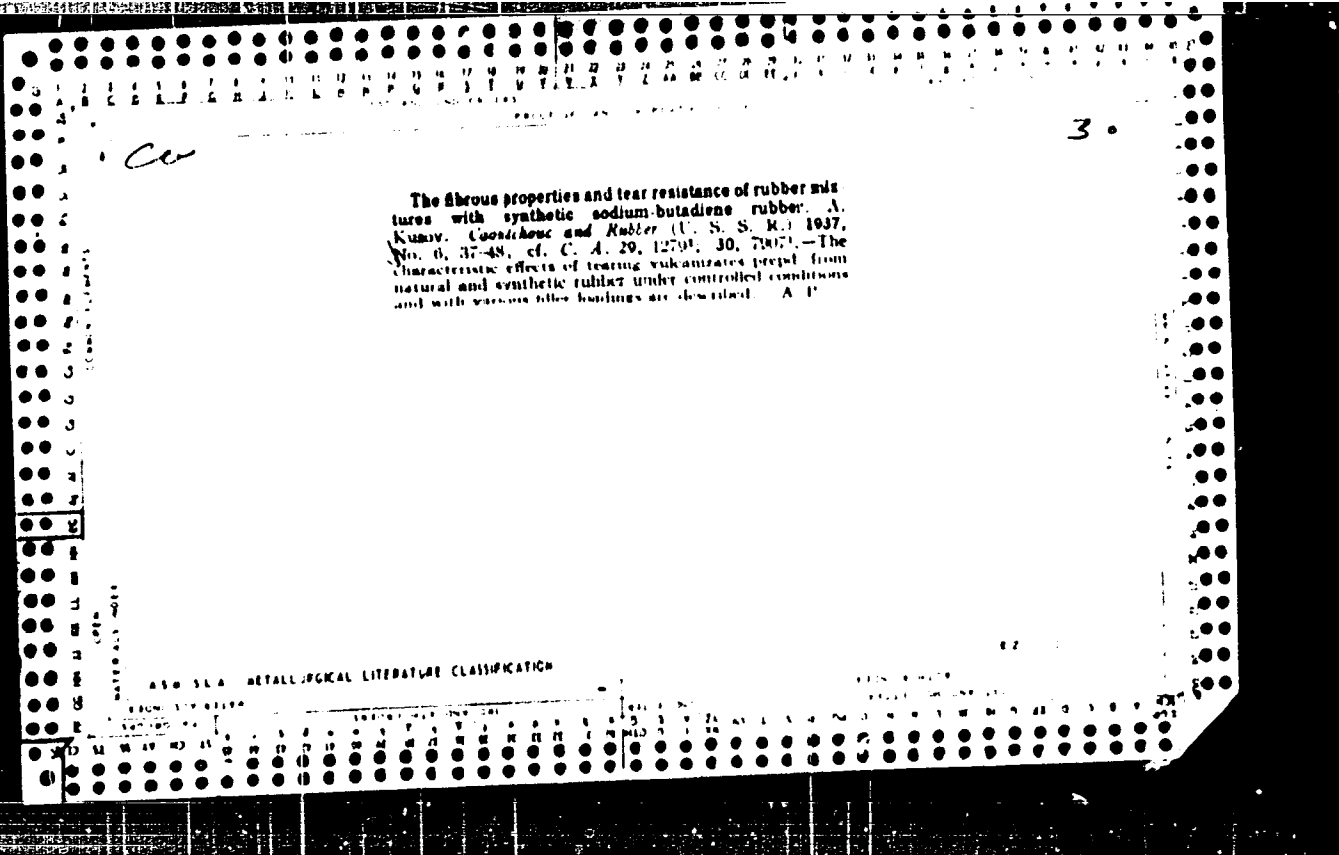
CA

30

Thermoprene from sodium-butadiene rubber. B. V. Huzov and A. B. Kusov. *J. Rubber Ind. (U. S. S. R.)* 12, 46-51 (1935); cf. *C. A.* 22, 887. The method of prepn., phys. and chem. properties of thermoprenes (I) from Na-butadiene, butadiene (from oil) and natural rubbers are tabulated. From Na-butadiene rubber there was obtained on heating: (1) 33-47% I (2) 31-51% condensate and (3) 1-18% noncondensed gases. The beginning of decompn. of natural rubber is 160° and of synthetic butadiene rubber, 230-250°. By addn. of compts. used by Fisher (*C. A.* 22, 887) the temp. of conversion of natural rubber to I was lowered to 140-140°. The temp. of Na-butadiene rubber remained unchanged despite the use of several different compts. H<sub>2</sub>SO<sub>4</sub>, chlorosulfonic acid, *o*-toluenesulfonic acid, "Rub. beta", stearic acid, coal tar, a mixt. of H<sub>2</sub>SO<sub>4</sub> and phenol, natural rubber, reclaimed rubber, silica gel, AlCl<sub>3</sub>, etc. This inert character of both synthetic rubbers is due to the absence of any side chain in their structure.

A. N. Pestoff

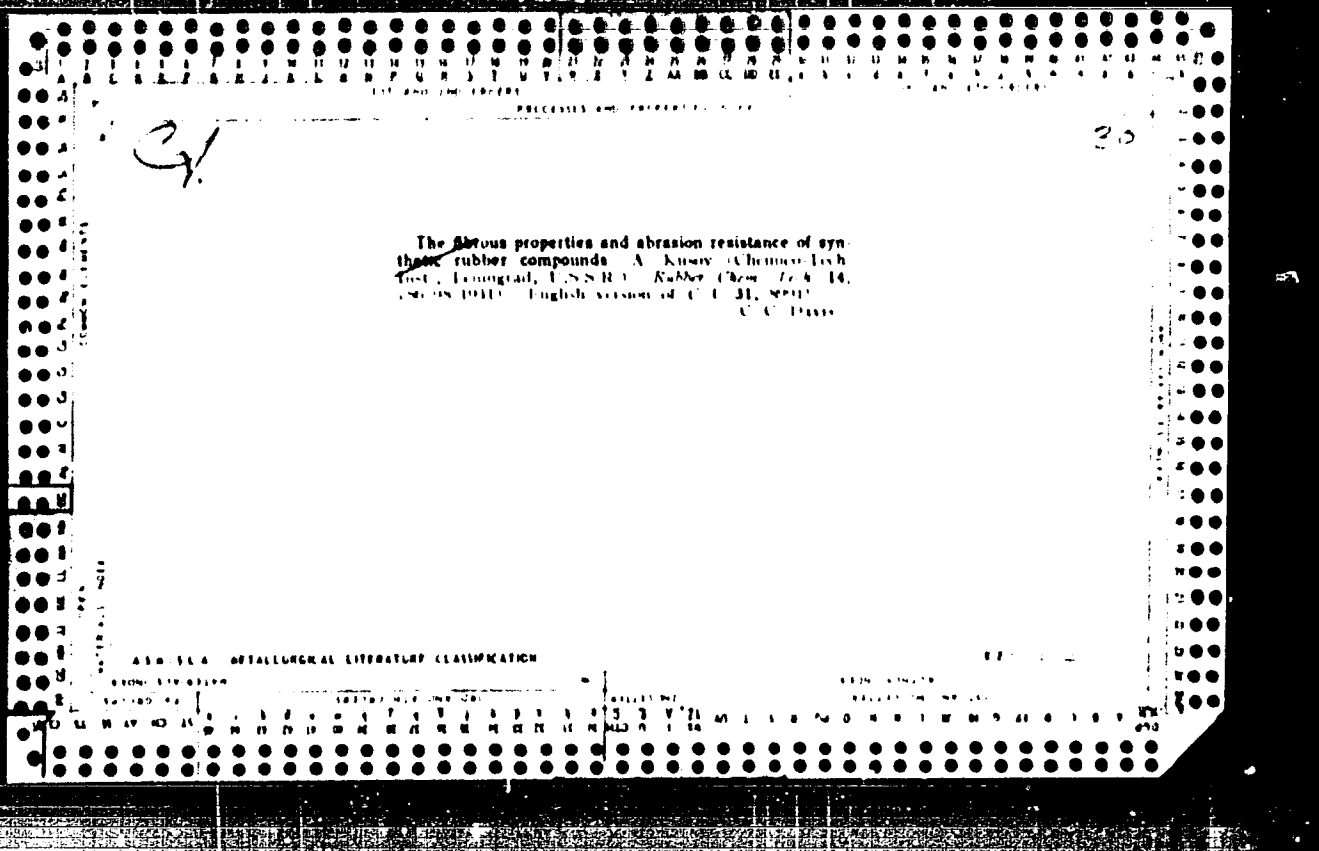




Vulcanization of synthetic rubber with fillers and the

structure of the vulcanizates. A. B. Kusov. *Chemistry of Rubber* (U. S. S. R.) 1040, No. 9, 26-31. The emulsion type of Na butyl rubber (plasticity of 0.15) was vulcanized without S, but with 20-120 parts of C black, at 120-220° in an clay press for 10-120 min. Rubber sheets were then tested for tensile strength, residual and relative elongation, swelling in CCl<sub>4</sub> and CHCl<sub>3</sub>, etc. Vulcanization improved the mech. properties. By rolling the vulcanizate on rolls cooled to 10-12°, the mech. properties were reduced close to the original mixt., but by vulcanizing again they were still further improved over the 1st vulcanization. By rolling 3-4 times and heating 4-5 times, it was possible to obtain a tensile strength of 60 kg per sq. cm., relative elongation up to 100-200%, and residual elongation up to 10-12%. The crude mixt. had a tensile strength of 3 kg per sq. cm. and, after the first vulcanization, it was 5-7 kg per sq. cm. The best results were obtained at 180 and 200°. Below 170-180° the tensile strength was low and residual elongation was high, above 200° the vulcanizates were hard and had low relative elongations. Mixts. contg. 20-30% C black were low in mech. strength, those contg. 100-150% were hard and not elastic, and those contg. 60-80% were best. Analogous results were obtained by using ZnO, whiting and kaolin, but the max. tensile strengths were only 20-25 kg per sq. cm. On the basis of the results, a proposed structure of vulcanizates is suggested. B. Z. Kamich

METALLURGICAL LITERATURE CLASSIFICATION



KUCOV, Alibek Borisbiyevich

Academic degree of Doctor of Technical Sciences, based on his defense, 5 April 1954, in the Council of the Leningrad Order of Labor Red Banner Technological Institute, of his dissertation entitled: "Research in the Physical and Mechanical Qualities of Metals."

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 26, 17 Dec 55, Bulletin MVO SSSR, Uncl. JPRS/RY 548



SMITH, A. P. [B]

"Properties of rubbers at high deformations," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 20 Jan-2 Feb 57, Moscow, Polytechnic Institute, Leningrad

D-3,684,305

RUSOV, A. B.

308. Work of stretching rubber. A. B. KUSOV.  
Kosob. i Betina, 1957, 18, No. 4, 5-6. Curves for  
the work of deformation as a function of elongation  
for vulcanised rubber are characterised by the  
absence of points of inflection. Independently of  
the nature of the raw rubber, the composition of the  
stock and the manufacturing conditions, the curves  
coincide when superimposed. Because of this the  
curves may be regarded as parts of a summary  
curve reflecting the general properties of the  
vulcanised rubber. There is a regular relation  
between the stress corresponding to the point of  
inflection of the stress-strain curves and the work  
elongation curves. There are 3 references. 03424

1-HERE (g)

2 May

728

KUSOV, A.B.; TROFIMOVA, V.I.; NILOVA, Yu.I.

Changes in specific volume associated with the stretching of rubber  
[with summary in English]. Koll.zhur. 19 no.5:587-591 S-0 '57.  
(MIRA 10:10)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta,  
Kafedra tekhnologii reziny.  
(Rubber)

SOV/124-58-8-9421

Translation from: *Differativnyy zhurnal, Mekhanika*, 1958, Nr 8, p 145 (USSR)

AUTHORS: Kusov, A.B., Voronovich, N.I.

TITLE: The Effect of Swelling of Rubber on its Physical and Mechanical Properties (Vliyaniye nabukhaniya na fiziko-mekhanicheskiye pokazateli reziny)

PERIODICAL: Tr. Leningr. tekhnol. in-ta im. Lensoвета, 1957, Nr 42, pp 47-54

ABSTRACT: The authors have made a study of the effect had on the behavior of the stress-elongation curves of different types of rubber by the various degrees of swelling (up to 70-80%) which the specimens that they examined had undergone. The curves for the swollen specimens behaved in general very much the same as did those for the specimens that had not swollen, though the modulus of extensibility and rupture strength of the swollen specimens were lower.

From the résumé

Card 1/1

SOV/124-58-8-9420

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 145 (USSR)

AUTHORS: Kusov, A.B., Kuznetsova, Z.P., Chernykh, Z.V.

TITLE: On the Change Produced by Heating in the Modulus of Extensibility of Rubber (Ob izmenenii modulya rastyazheniya reziny pri nagrevanii)

PERIODICAL: Tr. Leningr. tekhnol. in-ta im. Lensoveta, 1957, Nr 42, pp 55-62

ABSTRACT: In experiments conducted with mixtures based on various types of India rubber the authors confirm that the heating of rubber subjected to stretching causes it initially to decrease in length (i.e., causes its modulus of extensibility to increase), but thereafter to increase in length---often very markedly (its modulus of extensibility then decreasing), until the rubber fails.

From the résumé

Card 1/1

Kusov, A. B.

**AUTHORS:** Kusov, A. B. and Voronovich, N. I. 62B-2-4/3

**TITLE:** Some Characteristics of the Hysteresis of Rubbers.  
(Nekotoryye osobennosti gisterezisa reziny.)

**PERIODICAL:** Kauchuk i Rezina, 1958, Nr.2. pp. 18 - 22.

**ABSTRACT:** The hysteresis of rubbers, structure changes of rubbers during expansion-deformation and properties of various rubbers were investigated. Natural rubber, Na-butadiene, chloroprene, nitrile, 1,3-butadiene-styrene and butyl rubber vulcanisates, with and without the addition of various fillers, were tested. The mixtures were vulcanised for a period of 10 - 120 minutes. The rate of expansion (or contraction) of the samples was 100 mm/minute, the elongations = 200 - 900%. Characteristic curves for various degrees of expansion of the samples are shown in Fig.1. During elongation the molecular bonds are "purified" at the expense of the non-chemical bonds. A similar phenomenon is observed during contraction. The mechanism of expansion can be envisaged as a continuous breaking-up process of the bonds - between the macromolecules of the rubber, and between the rubber and the particles of admixtures. The degree of disruption of the bonds increases with increasing purity of the mixture and increasing deformation. G. M. Bartonev and L. A. Vishnitskaya investigated the properties of rubbers

Card 1/3

Some characteristic of the hysteresis of rubbers. 62B-2-4/8

which crystallised during elongation and gave a number of equilibrium constants of contraction (Fig. 2, curves 1 - 9). The authors found that these curves could be superposed and represented by curve 10. They concluded that all rubbers, independent of their structure, contract equally. The various numerical values of elongation are explained by the fact that each sample is subjected to internal stresses and corresponding deformation. After defining the hysteresis losses for various rubbers the authors also found that the hysteresis losses of crystallising rubbers (natural chloroprene and butyl rubber) differs to a large extent from the values for non-crystallising rubbers (solium-1,3-butadiene, 1,3-butadiene-styrene and nitrile rubber). Typical curves for crystallising (Fig. 3A) and non-crystallising rubbers (Fig. 3B) are given. The ratio of the hysteresis losses and elongation of various rubber is shown graphically (Fig. 4). The maximum value of the break strength was found to be 250 - 400 kg/cm<sup>2</sup> which corresponds to an elongation of 1200 - 1500%, depending on the type of tested rubber. It can be assumed that the structure

Card 2/3

Some Characteristics of the Hysteresis of Rubbers. 62B-2-4/3

changes of the rubbers lead to an increasing degree of rupture of the inter-molecularly adsorption and other bonds. The process of internal destruction or rupture of the bonds can proceed at increasing load as well as at constant load: the larger the load the shorter the time required for the breaking-up of the vulcanizate. These results are similar to those obtained by S. A. Sharikov and B. A. Mezullayev on the time dependence of the strengths of solid bodies. There are 4 figures and 5 references: 3 Russian, 2 English.

ASSOCIATION: Leningrad Technological Institute in Leningrad.  
(Leningradskiy tekhnologicheskii institut in Leningrad).

AVAILABLE: Library of Congress.

Card 3/3 1. Vulcanizates-Test results 2. Synthetic rubber-Thermodynamic properties 3. Synthetic rubber-properties 4. Rubber-Test results 5. Rubber-Properties 6. Rubber-Thermodynamic properties



KUSOV, A.B.

Valuable work ("General technology of rubber" by F.F. Koshelev.  
Reviewed by A.B. Kusov). Kauch. i rez. 17 no.8:39-40 Ag '58.  
(MIRA 11:10)

(Rubber) (Koshelev, F.F.)

MIKHALEV, M.F.; KUSOV, A.B.

Plasticization of rubber by single passes between rolls. Kauch.  
i rez. 20 no. 4:34-36 Ap '61. (MIRA 14:5)

1. Leningradskiy khimiko-tekhnologicheskii institut imeni Lensoвета.  
(Rubber, Synthetic—Testing)

34133  
S/138/62/000/002/004/009  
A051/A126

15.9300  
AUTHORS: Darovskikh, G.T.; Kusov, A.B.

TITLE: Investigation of the interrelation between the indices of equilibrium and non-equilibrium expansion deformation in vulcanizates

PERIODICAL: Kauchuk 1 rezina, no. 2, 1962, 15 - 16

TEXT: The quantitative relation between the initial (non-equilibrium) and equilibrium tensions in expansion deformation of rubber is established. This relation serves to judge the equilibrium properties of vulcanizates according to data of standard physico-mechanical tests and facilitates the calculations of rubber articles, working under conditions of expansion. It eliminates the need to determine experimentally the equilibrium standard for characterizing the thickness of the vulcanization lattice. The initial non-equilibrium ( $\sigma_0$ ) and conditional-equilibrium ( $\sigma_\infty$ ) tensions, produced after 3 days of static deformation at room temperature were compared in the following rubbers: natural, chloroprene, sodium-butadiene, silicon, butyl, butadiene-styrene, butadiene-nitrile. A simple interrelation between  $\sigma_\infty$  and  $\sigma_0$  was found for these rubbers, i.e.,  $\sigma_\infty = a \sigma_0$ ; where  $a$  — the proportionality coefficient — is the tangent

X

Card 1/2

34133

S/133/62/000/002/004/009

A051/A126

Investigation of the interrelation between ....

of the angle of decline to the axis of non-equilibrium tensions, equalling from 0.5 to 0.8. In expansion deformation, the relation between  $\sigma_{\infty}$  and  $\sigma_0$  at room temperature, to an expansion of 0.7 L is expressed by  $\sigma_{\infty} = a \sigma_0$ , and at 70°C by  $\sigma_{\infty 70} = a \sigma_0 - b \sigma_0^2$ . In calculating the rubber articles working under static expansion deformation, the following equation is recommended:  $\sigma_{\infty} = 0.65 \sigma_0$ . The function  $f(\sigma_0) = \sigma_1 / \sigma_{\infty}$ , characterizing the relative section of the physical and chemical relation under the given conditions of deformation, is found. Experimental data showed that even in wide expansions at 70°C the thickness of the vulcanization lattice does not change considerably. Under selected conditions of deformation, a physical process takes place which is primarily that of chain molecule regrouping. There is 1 table, 2 figures and 2 Soviet-bloc references.

X

ASSOCIATION: Leningradskiy tekhnologicheskii institut im. Mosscveta (Leningrad Institute of Technology im. Mosscvet)

Card 2/2

DAROVSKIKH, G.T.; KUSOV, A.B.

Investigating the relationship between the equiponderant and static stresses in the stretch elongation and compression of rubbers.  
Kauch. i rez. 22 no.5:28-30 My '63. (MIRA 16:7)

1. Leningradskiy tekhnologicheskij institut im. Lensoveta.  
(Rubber—Testing) (Strains and stresses)

1

DAROVSKIKH, G.T.; KUSOV, A.B.; KRIVOKHINA, I.G.

Studying the effect of the formula on the relaxation properties  
of rubber. Kauch. i rez. 22 no.8:12-14 Ag '63. (MIRA 16:10)

1. Leningradskiy tekhnologicheskii institut im. Lensoveta.

I STON-45 BMT(m)/BPF(c)/KRP(j) Pc-u/Er-4 R1  
ACCESSION NR: AP5013735

UR/0138/65/000/005/0035/0036  
678.063.01:539.4.011.21 42  
25

AUTHORS: Kuzov, A. B.; Darovskikh, G. T.; Gordeyeva, S. S.; Filippova, T. I. 6

TITLE: Investigating the proportionality limits of stresses during the stretching of rubber

SOURCE: Kauchuk i rezina, no. 5, 1965, 35-36

TOPIC TAGS: rubber, stress measurement, vulcanizate, relaxation process / SKS 30 rubber, SKB rubber, SKD rubber, NK rubber, SKI 30 Hairit rubber

ABSTRACT: Static and equilibrium stresses are generally related linearly by a simple proportionality factor, and the validity of this factor and the possible limits of its application were investigated. Tests were made on natural rubber by a technique previously developed at NIIRP. It was found that the linear relation holds only so long as physical relaxation takes place in the system. Deviation from linearity is due to chemical relaxation. This conclusion is supported by the appearance of destructive processes in vulcanizates. Gas channel black and lampblack had little effect on changing the limit of the proportionality factor in the case of strong stretching. Tests were made on SKS-30, SKB, SKD, NK,

Card 1/2

L 5708L-65

ACCESSION NR: AF5013735

2

SKI-30, and neoprene rubber, with similar results. It was concluded that the basic factors affecting the limits of proportionality between the acting stresses appear to be the structure of the rubber and the degree of vulcanization. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Leningradskiy tekhnologicheskii institut im. Lensovet (Leningrad Technological Institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: HT, OC

NO REF SOV: 005

OTHER: 000

127.  
Card 2/2



L 3904-66 EWT(m)/EPF(c)/EWP(j)/T DJ/RM  
ACCESSION NR: AP5023506

UR/0318/65/000/008/0027/0030  
665.521.4.061.54:678.049

46  
42  
B

AUTHOR: <sup>44</sup> Alekperov, K. A.; <sup>44</sup> Kusov, A. B.; <sup>44</sup> Lukashevich, I. P.; <sup>44</sup> Sochevko, T. I.

TITLE: Resin mixture plasticizer made of extracts from selective purification of petroleum lubricating oils

SOURCE: Neftepererabotka i neftekhimiya, no. 8, 1965, 27-30

TOPIC TAGS: plasticizer, butadiene styrene rubber, synthetic rubber

ABSTRACT: Applicability of 340-400°, 400-450°, and 450-500°C fractions, of the prepurified distillate extract, their mixtures, and their blends with vacuum distillation residue (above 500°C) as plasticizer for resin mixtures based on non-plasticized SKS-30 butadiene-styrene rubber was studied. The individual fractions and the residue were obtained by vacuum distillation of phenol- and furfural extracts from distillate. The distillate extract was a product of the NPZ plant at Omsk. The object of this study was to develop a substitute for the PN-6 residual extract (vacuum distillation residue--above 500°C), and to assure a compliance of the substitute with the VTU 71-61 technical standard for the PN-6 extract. The base non-plasticized resin was prepared by rolling the following mixture (in weight

Card 1/3

L 3904-66

ACCESSION NR: AP5023506

4

units): SKS-30 rubber--100, stearic acid--2.0, zinc oxide--5.0, channel gas black--50, Altax--0.6, diphenylguanidine--0.75, and sulfur--2.0. After rolling the mixture was vulcanized for 10-80 min at 143 ± 1°C. It was found that mixtures of narrow fractions of distillate extract with distillation residue can be used as plasticizer substitute for butadiene-styrene rubber. The effect of plasticizer substitute viscosity on tensile strength of SKS-30 vulcanized rubber (content of the channel gas black is 50 wt %, content of the softener is 20 wt %) is shown in fig. 1 of the Enclosure. The strength of the vulcanized rubber increases with increasing content of heavy aromatics and tar in the plasticizer. Orig. art. has: 1 figure, 2 tables.

ASSOCIATION: LTI im. Lansoveta; MINKh i GP im. I. M. Gubkina

SUBMITTED: 00

ENCL: 01

SUB CODE: MT, FP

NO REF SOV: 007

OTHER: 005

Card 2/3

L 3904-66

ACCESSION NR: AP5023506

ENCLOSURE: 01

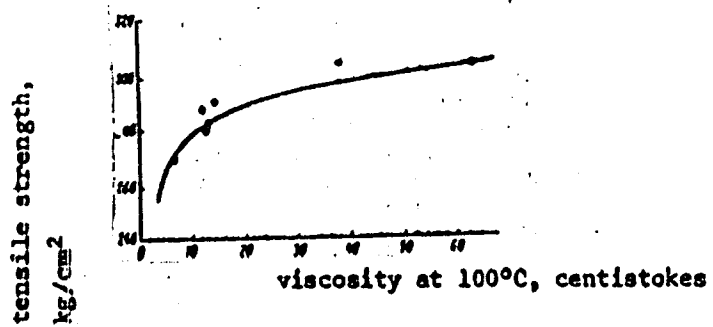


Fig. 1.

Card 3/3

L 8309-56 EWT(1)/EWT(m)/EWT(j) IJP(c) GG/RM

ACC NR: AP5026429

SOURCE CODE: UR/0153/65/008/004/0655/0658

AUTHOR: Abramova, Ye. I.; Kusov, A. B.

ORG: Department of Chemistry and Physics, Kazan Structural Engineering Institute (Kafedra khimii i fiziki, Kazanskiy inzhenerno-stroitel'nyy institut)

TITLE: Some regularities in the variation of the dielectric properties of plasticized polyvinyl chloride

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 8, no. 4, 1965, 655-658

TOPIC TAGS: polyvinyl chloride, dielectric loss, plasticizer

ABSTRACT: The dissipation factor tan delta of plasticized polyvinyl chloride was studied as a function of plasticizer type, dibutyl phthalate concentration, and temperature. Various plasticizers were employed: diethyl phthalate, dibutyl phthalate, dioctyl phthalate, triphenyl phosphate, dibutyl sebacate, dibutyl adipate. The change in tan delta with the plasticizer type at room temperature was found to be similar in all cases. The change in tan delta with the concentration of dibutyl phthalate at different temperatures (5 - 65C) was complex. At plasticizer concentrations of 4 - 6 pts. by wt. per 100 pts. by wt. of polymer, a small minimum of tan delta is observed. It is shown that the shift of tan delta curves for phthalates relative to the curve for pure polyvinyl chloride is not a linear function of the molar concentration

Card 1/2

UDC: 678.01:53

L 8309-66

ACC NR: AP5026429

of plasticizers in polyvinyl chloride. Orig. art. has: 4 figures and 1 table.

SUB CODE: 11 / SUBM DATE: 06Sep63 / ORIG REF: 004 / OTH REF: 003

PC

Card 2/2

I 8300-66 ENT (a)/AMP (s) RM

ACC NO: AP5026430

SOURCE CODE: UR/0153/65/008/004/0659/0662

AUTHOR: <sup>44/15</sup> Alekperov, K. A.; <sup>44</sup> Kusov, A. B.

B1  
03  
44

ORG: Department of Rubber Technology, Leningrad Technological Institute im. Lensoveta  
(Kafedra tekhnologii reziny, Leningradskiy tekhnologicheskiy Institut)

TITLE: Use of petroleum refining waste as a raw material for the rubber industry

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 8, no. 4, 1965, 659-662

TOPIC TAGS: filler, rubber chemical, petroleum product

ABSTRACT: One of the wastes of petroleum refining is the so-called "plast", a by-product from the unit preparing the multifunctional additive "AzNII-4". The "plast" is a brown plastic mass containing valuable reagents: unreacted sulfur and calcium chloride, sulfo salts, and a large quantity (35 - 50%) of petroleum oils (motor oil "T"). The authors found that the "plast" can be used as a softener, filler, and vulcanization activator in filled rubber mixtures based on SKS-30 butadiene-styrene rubber. It also increases the resistance of vulcanizates to thermooxidative aging. With other rubbers, the "plast" can be used as a softener and extender. In addition to improving the physicochemical characteristics of rubbers, it is very economical to use, since it amounts to 50% of the target product of the refinery, and had to be wasted

Card 1/2

UDC: 678.004.8

L 8308-66

ACC NR: AP5026430

previously. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 11 / SUBM DATE: 18Jul64 / ORIG REF: 004

OC

Card 2/2

XUSOV, A.P.; PAVLOVICH, G.I.; ...

Study of the ...  
...  
My 165.

L. ...



KUSOV, A. V.

"Investigation of the Physicochemical Properties of Rubber."  
Dr Tech Sci, Leningrad Order of the Red Banner Technological Inst  
Imeni Lensovet, Chair of the Technology of Rubber, Min of Higher  
Education USSR, Leningrad, 1954. (KL, No 8, Feb 55)

SO: Sum. No. 631, 25 Aug 55-Survey of Scientific and Technical  
Dissertations Defended at USSR Higher Educational Institutions  
(14)

KUSOV, B., predsedatel'.

Recreation room in the shop. Sov. profsoiuzy 1 no.2:60-63  
0 '53. (MLRA 6:12)

1. Sovet krasnogo ugolka instrumental'nogo tsekha Molotovskogo  
zavoda imeni Dzerzhinskogo. (Industrial recreation)

KUSOV, B.

In a youths dormitory. Sov.profsoiuzu 4 no.10:79 0 '56. (MLRA 9:11)

1. Zanstitel' predsedatelya proizvodstvenno-massovoy komissii  
zakona zavoda imeni Dzerzhinskogo.  
(Dormitories)

KISOT, B.

Excellent brand. Sov. profociuzy 6 no.3:38-39 Mr '58. (MIRA 11:3)

1. Starshiy inzhener po rasprostraneniyu poredovykh metodov truda  
Permnskogo zavoda imeni Dzerzhinskogo.  
(Perm--Machinery industry)

BAKOV, Genriy Izmai ovich; HANUKYAN, A.M., red.

[Through the city of Ordzhonikidze; tourist guide] ko  
gorodu Ordzhonikidze; sputnik turista. Ordzhonikidze,  
Severo-Osetinskoe knizhnoe izd-vo, 1963. 54 p.  
(MIRA 17:7)

ACC NR: AR7001757

SOURCE CODE: UR/0274/66/000/010/B099/B100

AUTHOR: Taran, V. A.; Brudnik, S. S.; Kusov, I. F.

TITLE: Optimization of tolerances for parameters of a device on condition that the assigned reliability, accuracy and minimum production and operation costs are maintained

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 10B695

REF SOURCE: Tr. Mosk. in-ta elektron. mashinostr., vyp. 1, 1965(1966), 184-192

TOPIC TAGS: system reliability, industrial production, tolerance optimization, production cost, operation cost, parameter

ABSTRACT: Experience in the development of instruments and various devices has shown that, from the standpoint of reliability and cost, the use of high-precision elements is not justified. Therefore, there arises the problem of the optimization of tolerances for changes in the functional parameters of devices, on condition that the assigned reliability and minimal costs are maintained. The optimization of tolerances for the alternation of the parameters of a closed control

Card 1/2

UDC: 621.396.6.019.3

ACC NR: AR7001757

system consisting of three units (amplifier, actuating mechanism, and feedback element) is investigated. The problem is solved on the basis of the method of linear programming and presupposes the determination of values of industrial tolerances for fluctuations in amplification and transmission factors at which the alternation of these parameters in time under the given operational conditions of the device makes it possible to ensure the required reliability of its operation and, at the same time, minimal production and operational costs. Six illustrations and a bibliography of 2 titles are included. [Translation of abstract]

[DW]

SUB CODE: H09/

Card 2/2

AD. NO. 1111001

SOURCE ORIGIN: 0070302/007030/007030/0013/0013

AUTHOR: Kusev, I. P.

TITLE: Determination of the stability limits of automatic control system with the aid of analog computers

SOURCE: Izv. zh. Kibernetika, Abs. 9078

REF. SOURCE: Tr. Mosk in-ta elektron. mashinostr., vyp. 1, 1965(1966), 37-43

TOPIC TAGS: ~~automatic control system~~, analog computer, control system stability, linear control system

ABSTRACT: It is proposed to use the Routh-Hurwitz stability criterion to construct the regions of stability of linear automatic control systems in the plane of two parameters. The advantages of the proposed method are its clarity and the small volume of computational work. 5 illustrations. V. L. (Translation of abstract)

SUB CODE: 13, 12

Card 1/1

UDC: 62-5.001.5



BRUDNIK, S.S., inzh.; KUSOV, I.F., inzh.; TARAN, V.A., kand. tekhn. nauk

Using computers for calculating optimum allowances for the parameters of an executive component in securing given reliability and minimum cost of production and operation. Priborostroenie no.4:  
16-19 Ap '65. (MIRA 18:5)

KUSOV, N.D., zootekhnik

Duck-breeding farm. Ptitsevodstvo 9 no.4:22 Ap '59.  
(MIRA 12:6)

1. Stepanovskiy sovkhos, BASSR.  
(Duck breeding)

Kusov, N. F.

Kusov, N. F.

"The Problem of Increasing the Productivity of the 'Donbass' Coalmine under the Conditions of the Kuzbass in Working Inclined Strata 1.0-2.2 Meters in Thickness." Min Higher Education USSR. Moscow Mining Inst named I. V. Stalin. Moscow, 1955 (Dissertation for the degree of Candidate in Technical Science)

SO: 'Izvestiya 'Istoria', No. 27, 2 July 1955

MINDELI, E.O., kand.tekhn.nauk; KUSOV, N.F., kand.tekhn.nauk

Effect of basic factors on the rate of boring. Ugol' 34 no.7:  
33-36 J1 '59. (MIRA 12:10)  
(Boring)

MINDELI, E.O., kand.tekhn.nauk; KUSOV, N.F., kand.tekhn.nauk; ODNKOZOV,  
Z.A., gornyy inzhener; RABICHEV, A.R., gornyy inzhener; MAMONOV, V.V.,  
gornyy inzhener; GROZIN, V.M., gornyy inzhener; OSNOVSKIY, P.V.,  
gornyy inzhener; VORONIN, V.S., inzhener-shakhtostroitel';  
MUKHIN, L.V., gornyy inzhener

Discussion on N.V. Stadnichenko, V.T. Nazarov's article

"Advantageous diameter size for boreholes." Ugol' 35 no. 4:31-35

Ap '60.

(MIRA 14:4)

1. Kombinat Rostovugol' (for Rabichev, Mamonov & Grozin). 2.  
Rostovskiy sovnarkhoz (for Osnovskiy & Voronin).  
(Blasting) (Boring) (Stadnichenko, N.V.) (Nazarov, V.T.)

KUSOV, N.F., kand. tekhn. nauk; SLOZHENIKIN, V.F., inzh.

Studying the hydrodynamic gas flow from airbreakers in  
coal mining with high-pressure compressed air. Vzryv.  
delo no.57/14:282-290 '65. (MIRA 18:11)

*Kusov, N.I.*

BASHARKEVICH, L.D.; ANTROPOV, A.N.; KUSOV, N.I.; DYUKOV, A.I.; SPERANSKIY, M.A.; KREYTER, B.M., glavnyy red.; SHATALOV, Ye.T., zamestitel' glavnogo red.; YEROFIMYEV, B.N., red.; ZENKOV, D.A., red.; KRASNIIKOV, V.I., red.; NIFONTOV, R.V., red.; SMIRNOV, V.I., red.; KHEVUSHCHOV, N.A., red.; YAKZHIN, A.A., red.; NEKIPELOV, V.Ye., red.; BEREZOVSKAYA, L.I., red. izd-va; PENKOVA, S.A., tekhn. red.

[Prospecting for coal and oil shale deposits] Razvedka mestoroshedenii uglei i goriuchikh slantsev. Moskva, Gos. nauchn.-tekhn. izd-vo lit-ry po geologii i okhrane neдр, 1957. 61 p. (Metodicheskie ukazaniia po proizvodstvu geologo-razvedochnykh работ, no.9).

(Coal—Geology) (Oil shales)

(MIRA 11:4)

VASHCHENKO, I.I.; KUSOV, N.I.

"Methods of geological surveying in prospecting for fossil deposits."  
Reviewed by I.I. Vashchenko, N.I. Kusov. Razved. i okh. nedr 23 no.6:  
59-62 Ja '57. (MIRA 11:2)

1. Moskovskiy gosudarstvennyy universitet (for Vashchenko). 2. Glav-  
sevmorput' (for Kusov).

(Coal geology)



SMOL'SKIY, B.N., dotsent, doktor tekhn.nauk; FAYNGOL'D, L.A., KUSOV, R.M.

Electric methods for measuring moisture in gas. Sbor. nauch. trud.

Bel. politekh. inst. no.74:48-54 '59. (MIRA 13:8)

(Moisture--Measurement) (Gases--Analysis)

KUSOV, T.T., kandidat tekhnicheskikh nauk.

Elements of pulling the tops of different crops. Sel'khoz mashina  
no.2:19-21 F '54. (MIRA 7:2)

(Root crops--Harvesting)

KUSOV, T.F., kandidat tekhnicheskikh nauk.

~~\_\_\_\_\_~~ KV-2 vibrator potatnoy harvester. Bel'khorrasshina no.7:17-10 J1 '57.  
(MLRA 10:8)

(kontak diggers)

KUSOV, T.P., Kand.tekhn.nauk

Elements of the theory and testing of XV-2 vibrator potato har-  
vesters. Trakt.i sel'khoz-mash. no.6:30-34 Ja '59.  
(MIRA 12:9)

(Potato digger(machine))

KUSOV, T.T., kand.tekhn.nauk

Investigating the breaking of soil clods by rollers. Trakt.i  
sel'khoz mash. no.8:22-23 Ag '59. (MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'kho-  
khozyaystvennogo mashinostroyeniya (VISHKHOM).  
(Agricultural machinery)

KUSOV, T.T.

The KVH-2 mounted vibratory potato-digging machine. Biul.  
tekh.-ekon.inform. no.8:69-70 '59. (MIRA 13:1)  
(Potato digger(Machine))

KUSOV, T.T., kand.tekhn.nauk

Mounted KVN-2 vibrator potato harvester. Trakt.i sel'khoz-  
mash. no.10:29-30 0 '59. (MIRA 13:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy inatitut sel'skokhozyay-  
stvennogo mashinostroyeniya.  
(Potato digger (Machine))

KUSOV, T.T., kand.tekhn.nauk

Investigating the performance of vibrating plowshares of  
potato harvesters. Trakt.i sel'khozmasb. 30 no.2:23-25  
F '60. (MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyayst-  
vennogo mashinostroyeniya.  
(Potato digger (Machine))



KUSOV, T.T., kand.tekhn.nauk

Harvesting potatoes at increased speeds with the KVH-2 machine.  
Trakt.i sel khozmash. 30 no.10:19-21 0 '60. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokho-  
zyaystvennogo mashinostroyeniya.  
(Potato digger (Machine))

KUSOV, T.T.; AGGERT, B.A.; DUDKO, V.I.

Results of testing potato diggers. Trakt. 1 sel'khoz mash. 32 no. 12:26-27  
D '62. (MIRA 16:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo  
mashinostroyeniya (for Kusov). 2. Konstruktorskoye byuro zavoda  
"Belinsk sel'mash" (for Dudko).  
(Potato digger (Machine)—Testing)

KUSOV, T.T., kand. tekhn. nauk

Elements of the theory and the study of the process of  
separating potato tubers from clods and stones. Trakt. 1  
sel'khoz mash. no.5:31-34 My '64. (MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyay-  
stvennogo mashinostroyeniya.

KUSOV, T.T., kand. tekhn. nauk

Multipurpose combine for harvesting root crops. Trakt. 1  
sel'khoz mash. no.5:18-19 My '65. (MIRA 18:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokho-  
zyaystvennogo mashinostroyeniya.

ZVEREV, G.N.; KUSOV, V.A.

Magnetic dipole in a medium with cylindrical discontinuity.  
Izv. AN SSSR. Ser.geofiz. no.1:128-134 Ja '63.

(MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh  
metodov razvedki, Volgo-Ural'skiy filial.  
(Electric prospecting)

KUSOV, VI. (Krasnodar); BALANSKIY, V. (Leningrad); KOZLOV, P.; KARPOV, V.  
(Magadan)

From the editor's mail. Sov. profsoyuzy 19 no.12:19 Ja '63.  
(MIRA 16:8)

1. Neshtatnyy korrespondent zhurnala "Sovetskiye profsoyuzy",  
Rovno (for Kozlov).  
(Technological innovations) (Bonus system) (Trade unions)

KUSOV, V.H.

Life cycle of *Ornithodoros lahorensis* Neumann, 1908. Izv. AN Kazakh.  
SSR, Ser. paraz. no. 7:55-59 '49. (MLRA 9:5)  
(Kazakhstan--Ticks as carriers of disease)

1951, 7. 7.

"Mrs. White, Central Intelligence Agency, 1000 Pennsylvania Ave.,  
Washington, D.C., Inst. of Biology, 1000 Pennsylvania Ave., Wash., D.C.  
(ADP107, 7. 7, 7. 7)

X: Dec 1950, 30 Mar 51



KUSOV, V.N.

Effect of DDT and benzene hexachloride preparations on the tick  
Ornithodoros lahorensis Neum., 1908. Trudy Inst.zool. AN Kazakh.  
SSR, №59-74 '53. (MIRA 10:1)  
(DDT (Insecticide)) (Benzene hexachloride) (Ticks)

KUSOV, V.H.

Ecological premises for understanding the epizootology of tick-  
borne sheep paralysis. Trudy Inst.zool.AN Kazakh.SSR 3:27-43  
'55. (MLRA 9:12)  
(Kazakhstan--Sheep--Diseases and pests)  
(Ticks as carriers of disease)

*10V* *V.N.*  
HEMENTSOVA, M.M., kandidat biologicheskikh nauk; KUSOV, V.N., kandidat  
biologicheskikh nauk

New carriers of brucellosis among mouse-like rodents. Vest. AN  
Kazakh.SSR 11 no.7:65-67 J1'55. (MIRA 8:10)  
(Brucellosis)

KUSOV, V.N.

KHRUSHCHEVA, N.F.; REMMISOVA, M.M.; KUSOV, V.N.

Brucellosis infection of ticks from domestic and wild animals. Trudy  
Inst.kraev.pat. AN Kazakh.SSR 3:30-36 '56. (MIRA 10:2)  
(BRUCELLOSIS) (TICKS AS CARRIERS OF DISEASE)

KUSOV, V.N., kandidat biologicheskikh nauk.

Length of the acaricidal effect of benzene hexachloride in cracks  
of building walls. Veterinariia 33 no.1:70-72 Ja '56.(MIRA 9:4)

1. Institut zoologii Akademii nauk Kazakhskoy SSR.  
(TICKS) (BENZENE HEXACHLORIDE)

KUSOV, V.N.

New method for collecting and studying the behavior of the tick  
Ornithodoros papillipes under natural conditions. Izv. AN Kazakh.  
SSR. Ser. biol. no.2:71-76 '57. (MIRA 11:3)  
(Ticks) (Zoology--Field work)

KUSOV, V.N.

Some problems concerning the reproduction of the tick *Ornithodoros*  
*lahorensis*. Trudy Inst. zool. AN Kazakh. SSR 7:81-91 '57.  
(Ticks) (MLRA 10:9)

KUSOV, V.N.; REMENTSOVA, M.M.

Natural infections of the tick *Dermacentor marginatus* with *Brucella*  
and *Leptospira*. Trudy Inst. zool. AN Kazakh. SSR 7:92-94 '57.

(Ticks as carriers of disease) (MLRA 10:9)  
(*Brucella*) (*Leptospira*)



**XUSOV, V.M.**

Vermipeylla alacurt Schimk. and V. dorcadia Roth. in the Katu-Tau mountains. Trudy Inst. zool. AN Kazakh. SSR 7:285-286 '57.  
(Katu-Tau--Fleas) (Parasites--Sheep) (MLRA 10r9)

USSR/Zooparasitology - Mites and Insects as Disease Vectors.

G-3

Abs Jour : Ref Zhur - Biol., No 10, 1958, 43442

Author : Kusov, V.N., Rementsova, M.M.

Inst : -

Title : Natural Infection of Ticks *Dermacentor Marginatus* by *Brucella* and *Leptospira*.

Orig Pub : Tr. In-ta zool. AN KazSSR, 1957, 7, 92-94.

Abstract : An examination was conducted of ticks *D. marginatus*, collected from cows in brucellosis farms and from healthy animals on farms with no brucellosis. In biotests on guinea pigs only one culture of *Brucella abortus bovis* was isolated from ticks, taken from a cow of a brucellosis isolator which calved 10-15 days before tick collection. Experimental results confirm the hypothesis of the authors that infection of ticks by *brucella* is most probable in the post-natal period. At the same time the infection of the same group of ticks by *leptospira* was established, by *Leptospira grippo-typhosa*.

Card 1/1

KUSOV, V.N.

Habitations and behavior of sexually mature ticks *Ornithodoros*  
*lahorensis* outside the host. Trudy Inst. zool. AN Kazakh. SSR  
9:124-134 '58. (MIRA 11:7)  
(Kar~~u~~-Tau--Ticks) (Animals, Habitations of)

4

KUSOV, V. N.

"Ticks of the Genus *Ornithodoros* in Kazakhstan and Their Epidemiologic Significance."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Institute of Zoology, Academy of Sciences of the Kazakh SSR, Alma-Ata

KUSOV, V.N.; POSPELOVA, Z.K.; PETUSHEV, V.M.

Changes in the blood and urine of animals infected with  
tick-borne paralysis. Trudy Inst.zool.AN Kazakh.SSR 12:  
226-235 '60. (MIRA 13:7)

(Ticks as carriers of disease)  
(Blood--Analysis and chemistry)  
(Urine--Analysis and pathology)  
(Veterinary medicine)

KUSOV, V. N.

Feeding habits of the tick *Ornithodoros tartakovskyi* Olen.,  
1931. Trudy Inst. zool. AN Kazaki. SSR 16:186-191 '62.  
(MIRA 15:10)

(Kazakhstan--Ticks--Host animals)

KUSOV, V.N.; LOSEVA, Ye.I.; KAMARDINA, M.G.; ROMANOVSKIY, I.D.;  
SKVORTSOVA, P.G.

Distribution of the tick *Ornithodoros tartakovskyi* Olenov in  
Kzyl-Orda Province. Trudy Inst. zool. AN Kazakh. SSR 19:  
161-172 '63. (MIRA 16:9)  
(Kzyl-Orda Province—Ticks)

KUSOV, V.N.

Invasion activity of ticks *Ornithodoros papillipes* Bir., 1895  
in caves. Trudy Inst. zool. AN Kazakh. SSR 22:150-160 '64.  
(MIRA 17:12)



GALUZO, I.G.; akademika; ...  
red.; VSEVOLODOV ...  
KOVALEVA, I.F.; red.

[Toxoplasmosis of ...]  
Alma-  
Ata, Nauka Kazakh.SSR, ... (MIRA 18:11)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata, Institut zoologii.
2. Akademiya nauk Kazakhskoy SSR, Alma-Ata (Ist. Galuzo).

KUSOV, V.N.; USHAKOV, K.P.

Feeding of Ornithodoros ticks on sleeping animals. Izv.  
AN Kazakh. SSR. Ser. biol. nauk 3 no. 6: 63-67 N-D '65.  
(MIRA 18:12)

KUSOV, V.S.

Determination of elevations by a rod with constant base. Geod.i  
kart. no.6123-25 Je '62. (MIPA 15:8)  
(Leveling)

KUSOV, Ye.F., inzh.

Study of the electrohydraulic drive of an a.c. contact electric  
mine locomotive. Nauch. soob. IGD 11:140-152 '61.

(MIRA 16:4)

(Mine railroads)

KUSOV, Ye.F., inzh.

Study of the start-up of an asynchronous motor with saturable reactors  
in the rotor circuit shunted by a resistor. Mekh. i avtom. v gor.  
prom. no.3:173-179 '63. (MIRA 16:10)

KUSOV, Ye. P., inzh.

Study of the performance of the hydroelectric drive on an a. c.  
contact-type mine locomotive in transient operation. Mekh. i  
avtom. v gornoj prom. no.2:191-203 '62.

(MIRA 16:1)

(Mine railroads)

DOKUKIN, Aleksandr Viktorovich, laureat Gosudarstvennoy premii, zasl. deyatel' nauki i tekhniki RSPER, prof., doktor tekhn. nauk; BERMAN, Valerion Mikhaylovich, zasl. tekhn. nauk; FONOMARENKO, Yuriy Filippovich, kand. tekhn. nauk; KUSOV, Yevgeniy Fedorovich, kand. tekhn. nauk; KOVAL', Yuriy Viktorovich, inzh.; KASHTANOV, Leonid Nikolayevich, kand. tekhn. nauk; ABRAMOV, V.I., ved. red.

[Centrifugal and displacement hydraulic transmissions and the prospects for their use in the mining industry]  
TSentrobezhnye i ob'emnye gidroperedachi i perspektivy ikh primeneniya v gornoi promyshlennosti. [iz] A.V.Dokukin i dr. Moskva, Nedra, 1964. 369 p. (MIRA 18:2)

VODENICHAROV, Ye.I., ATANASOV, A.P., KUS'OVA, A.B., KALAMAROV, V.I., GROZEV, N.D.

Working capacity of nonhospitalized patients [with summary in French]  
Zhur.nevr. i psikh. 58 no.8:991-994 '58 (MIRA 11:9)

1. Okrzhnoy psikhonevrologicheskiy dispanser, Stara-Zagora,  
Bolgariya.

(EPILEPSY, physiology,  
working capacity (Rus))

(WORK,  
capacity in epilepsy (Rus))



AKATOV, A.I.; Primalni uchastiye: TATSIYENKO, P.A.; LUK'YANOV, S.M.;  
KOSUL'NIKOV, M.D.; KUSOVA, T.A.; YEGOROV, N.A.

Efficient flow sheet for Lisakovka deposit ore dressing.  
Obog. rud. 8 no.3:8-12 '63. (MIRA 17:1)

MAZO, R.E.; KUSOVA, Ye.Ye.

Changes in the ballistocardiogram of children with nephritis.  
Pediatriia 42 no.8:39-42 Ag'63 (MIRA 17:4)

1. Iz kafedry pediatrii ( zav. - prof. A.S. Levin) Belorusskogo  
Instituta usovershenstvovaniya vrachey.

L 8187-66

ACC NR: AP5027494

SOURCE CODE: UR/0326/65/012/004/0631/0637

AUTHOR: Kusova, Z. R.<sup>65</sup>

ORG: Botany and Pharmacognosy Department of the Tomsk Medical  
Institute (Kafedra botaniki i farmakognozii Tomskogo meditsinskogo  
instituta)<sup>65</sup>

24  
B

TITLE: Effect of gibberellin on belladonna

SOURCE: Fiziologiya rasteniy, v. 12, no. 4, 1965, 631-637

TOPIC TAGS: circulatory drug, respiratory drug<sup>65</sup>, pharmacognosy, plant  
growth, alanine, arginine, asparatic acid, glutamic acid, threonine,  
proline, valine

ABSTRACT: In a series of experiments belladonna seeds were treated  
with gibberellin to determine effects on plant productivity, stratifica-  
tion periods, and amino acid and alkaloid levels. Groups of belladonna  
seeds were soaked in a 0.02% gibberellin solution, stratified for 8, 4,  
3 and 2 week periods in moist sand at +3 to +4°C, and then planted in  
fields. Some of the plants received additional gibberellin (0.02%  
solution) treatment with plants sprayed twice at 10 day intervals.  
Amino acid concentrations were determined qualitatively at 3 different  
periods by Boyarkin's method and by chromatography. Alkaloid levels

Card 1/2

UDC: 581.142.036.04+633.888.41+547.94

L 8187-66

ACC NR: AP5027494

0

were determined by Kulesheva's method. Weight and height of plants also served as indices. Findings show that gibberellin treatment of belladonna seeds accelerates germination, reduces stratification periods, and increases alkaloid levels. Gibberellin treatment of seeds and a 4 week stratification period provide the most favorable conditions for increased alkaloid levels in plants. Growth and height of plants are barely affected, but the dry weight of the leaves and stems and their alkaloid levels are increased. However, additional gibberellin treatment of plants acts as an overdose: plant height is almost doubled, dry weight of leaves and roots is reduced, and alkaloid levels of the leaves and roots are decreased. Additional gibberellin treatment seriously changes amino acid concentrations leading to a retardation of alkaloid synthesis. Orig. art. has: 3 figures and 2 tables.

SUB CODE: LS/ SUBM DATE: 09Mar64/ ORIG REF: 011/ OTH REF: 002

jw

Card 2/2