"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, I.A.

Participation of leading medical workers in the Revolution of 1905-1907. Sov.zdrav. 14 no.5:39-44 S-O '55 (MLRA 8:12)

1. Iz Instituta organizatsii zdravookhraneniya i istorii meditsiny imeni N.A.Semashko AMN SSSR (dir. Ye. D.Ashurkov)
(MEDICINE, history,
in Russia, participation of med.workers in revolution of 1905-1907)

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SLONIMSKAYA, I.A.

Fifty years ago; participation of medical workers in the Revolution of 1905-1907. Sov.med. 19 no.12:72-80 D '55. (MLRA 10:9)

1. Iz Instituta organizatsii zdravookhraneniya i istorii meditsiny imeni N.A.Semashko AMN SSSR (dir. Ye.D.Ashurkov)
(RUSSIA--REVOLUTION OF 1905)

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BATKIS, G.A., professor; SLONIMSKAYA, I.A., kandidat meditsinskikh nauk

M.F.Vladimirskii. Zdorov'e 3 no.5:7-8 My '57. (MLRA 10:6)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Batkis)
(VLADIMIRSKII, MIKHAIL FEDOROVICH, 1874-1951)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

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SLONIMSKAYA, I.A. (Moskva)

Participation of medical workers in the Great October Socialist Revolution. Fel'd. i akush. 22 no.10:6-9 O '57. (MIRA 11:1)
(RUSSIA--REVOLUTION, 1917-1921)
(NURSES AND NURSING)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, I.A. (Moskva)

Aleksandr Nikolaevich Vinokurov, 1869-1944. Zdrav.Ros.Feder. 2 no.3:30-32 Mr '58. (MIRA 11:3)
(VINOKUROV, ALEKSANDR NIKOLAEVICH, 1869-1944)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, I.A., kand.med.nauk (Moskva)

IUliia Aronovna Mendeleva. Fel'd. i akush. 23 no.11:31-34 N'58 (MIRA 11:11)

(MENDELEVA, IULIIA ARONOVNA, 1883-)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, I.A., kand.med.nauk

Memorable meeting. Zdorov'e 5 no.3:3 Mr '59. (MIRA 12:3)
(Krupskaia, Nadezhda Konstantinovna, 1869-1939)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, I.A. (Moskva)

Nadezhda Konstantinovna Krupskaia and Soviet medicine. Fel'd i akush. 24 no.2:35-37 Fe '59. (MIRA 2:3)
(KRUPSKAIA, NADEZHDA KONSTANTINOVNA, 1869-1939)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, I.A. (Moskva)

From the personal archives of Nikolai Aleksandrovich Semashko. Fel'd. i akush. 24 no.10:42-45 O '59. (MIRA 13:2)
(SEMASHKO, NIKOLAI ALEKSANDROVICH, 1874-1949)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

VLADIMIRSKIY, Mikhail Fedorovich (1874-1951); BATKIS, G.A., prof. [deceased]; SLONIMSKAYA, I.A.; KAL'YU, P.I., red.; ZUYEVA, N.K., tekhn.red.

[Problems in Soviet public health; articles and speeches] Voprosy sovetskogo zdravookhraneniia; stat'i i rechi. Moskva, Gos.izd-vo med.lit-ry Medgiz, 1960. 314 p. (MIRA 13:12)
(PUBLIC HEALTH)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, I.A. (Moskva)

They heard Lenin. Fel'd. i akush. 26 no.11:3-8 N '61. (MIRA 15:2)
(LENIN, VLADIMIR IL'ICH, 1870-1924)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, I.A. (Moskva)

Ivan Vasil'evich Rusakov, physician and bolshevik; on his 85th birthday. Sov.zdrav. 21 no.12:32-35 '62. (MIRA 15:12)
(RUSAKOV, IVAN VASIL'EVICH, 1877-)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, M.V.

Spectrophometry of the Orion Nebula

Spectra of Orion nebula were obtained by means of the nebular spectrograph of the Crimean Astrophysical Observatory. The obtained Balmer decrement agreed well with Greenstein's results (Astrophys. J., 89, 653 (1939)). Comparison with theoretical computations of Balmer decrement shows a substantial optical thickness of the nebula in Lyman series indicating approximately similar conditions of excitation in various parts of the nebula. The surface brightness could be evaluated by emissive lines. (RZhAstr, No. 9, 1955) Soobshch. Gos. Astron. in-ta P. K. Shternberga, No. 96, 1954, 49-61

SO: Sum. No. 744, 8 Dec 55 - Supplementary Survey of Soviet Scientific Abstracts (17)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, M.V.; RAYTBURD, TS.M.

Structure of the adsorbed water of kaolinite and montmorillonite. Dokl. AN SSSR 162 no.1:176-178 My '65. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii. Submitted December 19, 1964.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

RAYTBURD, TS.M.; SLONIMSKAYA, M.V.

Character of the hydration of exchange cations in argillaceous minerals. Dokl. AN SSSR 163 no.1:151-154 Jl '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii. Submitted December 19, 1964.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SEMASHKO, Nikolay Aleksandrovich; ASHURKOV, Ye.D., redaktor; BARSUKOV, M.I., redaktor; VINOGRADOV, N.A., redaktor; GORFIN, D.V., redaktor; PETROV, B.D., redaktor; RODOV, Ya.O., redaktor; SLONIMSKAYA, N.A., redaktor; GABERLAND, M.I., tekhnicheskiy redaktor

[Selected works] Izbrannye proizvedeniia. Red. kollegiia: E.D. Ashurkov i dr. Moskva, Gos. izd-vo med. lit-ry, 1954. 337 p.
(Public health) (MLRA 7:10)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, V. M.

20154 SLONIMSKAYA, V. M. Ekzogennyye faktory epilepsii. Vracheb. delo., 1949, No. 6, str. 533-38

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

[illegible]

3[illegible]05. [illegible] nervnoy sistemy. [illegible] Kiyev[illegible]. [illegible] - [illegible]led. [illegible], [illegible], T. XII, 1949, [illegible] - 3[illegible].

SO: Letopis' Zhurnal'nykh Statey, Vol. 44, Moskva, 1949

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, V.M.

Relapse of certain neuroinfections. Nevropat.psikhiat., Moskva 19 no.2: 9-12 Mr-Ap '50. (CLML 19:3)

1. Of the Department of Nervous Diseases (Head -- B.N.Man'kovskiy, Active Member of the Academy of Medical Sciences USSR), Kiev Medical Institute (Director -- Docent T.Ya.Kalinichenko), Kiev.

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Slonimskaya, V. I.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Ferdman, D. L. Grigor'yeva, V. A. Man'kovskiy, B. N. Slonimskaya, V. I. Maksimovich, N. A.	"Biochemistry and Therapy of Muscle Diseases"	Presidium, Academy of Sciences Ukrainian SSR

SO: W-30604, 7 July 1954

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, V.M.

2.

Adenosinetriphosphoric acid in the therapy of progressive muscular dystrophy. B. N. Man'kovskii and V. M. Slonimskaya (Med. Inst., Kiev). *Zhur. Nevropatol. i Psikhiatrii im. Korsakova* 55, 43-7(1955).—Under treatment and observation were 150 male patients, as follows: progressive myodystrophy 110, other neurologic diseases accompanied by myodystrophy or functional disturbances 40; none had polioneuritis, poliomyelitis or myasthenia. Along with a reduction in the eliminated creatinine there was observed a creatinuria, which constitutes a symptom indicative of myocardiotropic processes. The creatinuria was not thought to be due to an increase in the production of creatine in the organism, but to a lower rate of its conversion to creatinine, and a delayed resynthesis of creatinephosphoric acid. The creatine from the muscles entered into the blood stream and was then eliminated in the urine. In the majority of the patients the phosphatase activity of the blood serum was lowered. The starvation blood sugar in the majority of the patients stayed within normal limits. The blood-sugar-tolerance curve showed a delay in its return to the original level, indicating a lowering in the index of carbohydrate utilization. The same was true of the blood sugar level following the performing of graduated exercise. Morphologic studies indicated that adenosinetriphosphoric acid arrests the development of the process of muscular dystrophy. The characteristic neurologic changes are also described. M. and S. are of the opinion that in myopathy adenosinetriphosphoric acid stimulates the metabolic processes of the muscles tissues via the central nervous system.

B. S. Levine

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLOMINSKAYA, V.M.; BOBROVSKAYA, G.D.

Distinct hyperkinesia in rheumatic diseases of the brain.
Zhur.nevr. i psikh.55 no.8:585-588 '55. (MLRA 8:10)

1. Kafedra nervnykh bolezney (zav.-prof. B.N. Man'kovskiy) Kiyevskogo meditsinskogo instituta.
(MOVEMENT DISORDERS
hyperkinesia in rheum.dis. of brain)
(BRAIN, diseases,
rheum.dis. with hyperkinesia)
(RHEUMATISM
brain, with hyperkinesia)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

MAN'KOVSKIY, I.N., prof.; SLONIMSKAYA, V.M., prof.

Pathology of the nervous system in hypertension. Vop. klin. nevr. i psikh. no.2:5-29 '58. (MIRA 14:10)

1. Deystvitel'nyy chlen AMN SSSR (for Man'kovskiy).
(HYPERTENSION) (NERVOUS SYSTEM--DISEASES)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

MAN'KOVSKIY, B.N., prof.; SLONIMSKAYA, V.M., prof. (Kiyev)

Hypertensive encephalopathies. Vrach.delo no.7:685-690 Jl '59. (MIRA 12:12)

1. Deystvitel'nyy chlen AMN SSSR (for Man'kovskiy).
(HYPERTENSION) (BRAIN--DISEASES)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

MAN'KOVSKIY, Boris Nikitich; SLONIMSKAYA, Vera Mikhaylovna; DRACHEVA, Zinaida Nikolayevna; MINTS, A.Ya., red.; GITSHTEYN, A.D., tekhn. red.

[Nervous pathology in hypertension] O nervnoi patologii pri gipertonicheskoi bolezni. Kiev, Gos. med. izd-vo USSR, 1960. 364 p. (MIRA 14:10)

(HYPERTENSION) (BRAIN—DISEASES)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

MAN'KOVSKIY, B.N.; SLONIMSKAYA, V.M.

Acute hypertensive encephalopathy or cerebral hypertensive crisis. Zhur. nerv. i psikh. 60 no. 12:1570-1575 '60. (MIRA 14:4)

1. Kafedra nervnykh bolezney Kiyevskogo meditsinskogo instituta.
(HYPERTENSION) (BRAIN—DISEASES)

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MAKARCHENKO, A.F., prof., otv. red.; KULIKOVSKIY, A.G., kand. med. nauk, red.; LITVAK, L.B., prof., red.; MIRTOVSKIY, N.V, prof., red.[deceased]; MINTS, A.Ya., kand med. nauk, red.; SLONIMSKAYA, V.M., prof., red.; SAVENKO, S.N., prof., red.; FRUMKIN, Ya.P., prof., red.; SHAROVSKIY, S.N., prof., red. [deceased]; BYKOV, N.M., tekhn. red.

[Problems in clinical neurology and psychiatry] Problemy klinicheskoi nevrologii i psikhiatrii. Kiev, Gos.med.izd-vo USSR, 1961. 308 p. (MIRA 14:12)

1. Ukrainskoye respublikanskoye obshchestvo nevropatologov i psikhiatrov. (NERVOUS SYSTEM—DISEASES) (MENTAL ILLNESS)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKAYA, V.M., prof.

So-called reversible dynamic disorders of cerebral circulation. Vrach. delo no.5:56-63 My '62. (MIRA 15:6)

1. Kafedra nervnykh bolezney (zav. - deystvitel'nyy chlen AMN SSSR, prof. B.N. Man'kovskiy) Kiyevskogo meditsinskogo instituta.

(CEREBROVASCULAR DISEASE)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

MAN'KOVSKIY, B.N.; SLONIMSKAYA, V.M.; DRACHEVA, Z.N.

Acute disorders in the cerebral blood circulation of extra-cerebral genesis. Sov. med. 26 no.4:77-81 Ap '63. (MIRA 17:2)

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PROCESSES AND PROPERTIES INDEX

14

17

Spinel refractories. A. S. Berezhnoi and E. Z. Slonimskaya. *Ukrain. Nauch. Issledovatel. Inst. Ogneuporov i Kislotouporov* No. 45, 78-119(1939).—Fused spinel made under lab. conditions from Al_2O_3 and $Mg(OH)_2$ has valuable properties, such as high temp. of deformation (above 1800°) under load (2kg./sq. cm.). The production process has been developed. Deformation under load begins at 1600-1650°; destruction occurs at 1660° or over. Refractoriness is over 1920. Thermal stability (air quenching) is about 30-40. The resistance to slag is not as high as mentioned in the literature. It is affected, although little, by SiO_2, CaO, Martin slag and some other materials at 1600°. The introduction of some admixts., especially of chromite, accelerates the formation of spinel. Spinel refractories can be used in contact with magnesite and even highly aluminous and chromite refractories, but contact with olivine, and especially with grog and SiO_2 refractories should be voided. Tests of spinel refractories in the crown and arch of elec. steel melting furnace XT3 showed resistance far superior to that of SiO_2 refractories.

It was found possible to replace Al_2O_3 by bauxites for spinel refractories where a deformation temp. of 1500-1550° and a refractoriness of 1825° is satisfactory.

M. V. Condorle

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

C. A.

Procedure for determining specific gravity by hydrostatic weighing in kerosene. K. Z. [illegible] and K. V. Levintovich. Ogneupory 18, 127-28(1953).—The procedure in accordance with Russian Specification 2111-43 gives considerable differences between parallel determ. This was traced to difference in temp. between kerosene in a pycnometer and in a vessel for weighing which caused changes in wt. of the pycnometer for a period as long as 15-20 min. A specially designed vessel holding 6-8 pycnometers was constructed. Details and calcns. are given. N. Z. Kornich

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SLONIMSKAYA, E Z

Distr: 4E4j/4E2c

8

2

Chrome-magnesite roofs of open hearth furnaces. A. S. Frenkel, E. Z. Slonimskaya, K. M. Shmukler, and E. S. Reyzina. Sporash. Nauch.-Issled. Vsesoyuz. Nauch.-Issled. Inst. Dnepropetrovsk 1955 (1956) No. 1 34 [illegible] Referat. Zhur. Kiev 1956 Abstr. No. [illegible] To insure min. shrinkage and high resistance toward Fe oxides the raw materials should contain not more than 30% of chromite; the chromite should be high in Cr_2O_3 and low in Al_2O_3; the unburned brick should be of high density and the firing temp. high.

A. N. Peaton

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SOV/137-58-11-21919

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 11, p 12 (USSR)

AUTHORS: Frenkel', A. S., Slonimskaya, Ye. Z.

TITLE: A Method of Testing Chemically-bonded Magnesite Chrome Refractories for Resistance to Iron Oxides (Metodika ispytaniya khromomagnezitovykh ogneuporov na ustoyichivost' k vozdeystviyu okislov zheleza)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses n.-i. in-t ogneuporov, 1956, Nr 1, pp 112-119

ABSTRACT: A method of determining the resistance of chemically-bonded magnesite chrome refractories (MR) to Fe oxides by change in the volume of a sample subjected to scale action on all sides resulting from heating in a magnesite crucible of specified porosity has been developed to replace estimation of MR resistance to Fe oxides by increase in the diameter of an MR test specimen upon contact with the scale after heating. The volume of the specimen after the test is determined by calculation, based on the change in the Fe oxides contents. This method is distinguished by being reproducible, by the fact that it allows for the influence of the density of the specimen upon its resistance to Fe oxides, and by the fact that it provides satisfactory agreement of test results

Card 1/1

Ya. G.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SOV/137-59-4-7394

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 9, p 7 (USSR)

AUTHORS: Frenkel', A.S., Slonimskaya, Ye.Z.

TITLE: Determination of Chrome-Magnesite Refractory Resistance Against the Effect of Ferric Oxides

PERIODICAL: Sb. nauchn. tr. Vses. n.-i. in-ta ogneuporov, 1958, Nr 2, (49), pp 356 - 370

ABSTRACT: The authors criticize test methods previously used in checking the resistance of chrome-magnesite and magnesite-chrome work pieces against a two-side effect of Fe oxides on the refractory specimen. Information is given on a new method developed by the authors. The refractory specimen is subjected to the thorough effect of Fe-oxide smelts (cinder). The specimen whose volume was determined by hydrostatical weighing is covered on all sides with pressed cinder, placed in a crucible and heated in a Kryptol furnace. After holding, the specimen is cooled and excessive cinder is removed off its surface. The volumetric weight of the treated specimen is determined by hydrostatic weighing; the chemical method is used to determine its Fe-oxide content. With the use of the

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SOV/137-59-4-7394

Determination of Chrome-Magnesite Refractory Resistance Against the Effect of Ferric Oxides

described method it is possible to determine the quantitative dependence between the distension of the brick and Fe oxide absorption for work pieces with various chromite content. Formulae for such computations are presented. It was established that distension of the specimen was practically not observed at temperatures below the refractoriness of the cinder (1,580°C), i.e. when Fe oxide smelts were absent. An optimum testing temperature of the order of 1,650°C is recommended that is by 70° higher than the refractoriness of the cinder, as well as a temperature elevation rate of 400 degrees/hour. The specimen is 36 mm in diameter; its height is 20 mm. The cinder-specimen weight ratio is 4:1. The cinder composition should be selected with a FeO - Fe_2O_3 proportion approaching Fe_3O_4, if the Fe content in the cinder is 68 - 70%. It is recommendable to use N_2 as furnace atmosphere, or in the absence of such one to use an oxidizing but not a reducing atmosphere. The method ensures a relatively satisfactory reproducibility.

N.M.

Card 2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SOV/81-59-9-32089

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 9, p 358 (USSR)

AUTHORS: Frenkel', A.S., Slonimskaya, Ye.Z.

TITLE: The Effect of the Type of Chromite Ore and the Principal Technological Factors on the Resistance of Chromium-Magnesite Refractories Against the Action of Iron Oxides

PERIODICAL: Sb. nauchn. tr. Vses. n.-i. in-ta ogneuporov, 1958, Nr 2 (49), pp 371 - 391

ABSTRACT: The dependence of the resistance of chromium-magnesite refractories against the action of Fe oxides on the principal technological factors has been studied: on the type of the chromite ore (Saranovo, Kimpersay, South Ukrainian, Albanian), the chromite content in the charge (0-70%), the grain composition of the chromite component, the density and the burning temperature of the products. The principal methods for increasing the resistance of chromium-magnesite refractories are: the reduction of the chromite content in the products, the coarsening of its grain composition, the application of chromite from Kimpersay ores which is more

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKI, Piotr, P.

Adaptation of respiratory processes; development of blood protein system induced by oxygen. Postepy biochem. 2 no.4: 493-514 1956.

(METABOLISM, TISSUE,
resp., relation to blood proteins (Pol))
(BLOOD PROTEINS,
relation to tissue resp. (Pol))

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, A.B.

Reference book needs corrections and finishing touches ("Manual of a welder" by A.V. Lakedemonskii, V.E.Khriapin. Reviewed by A.B. Slonimskii). Mashinostroitel' no.8:47 Ag '60. (MIRA 13:9)
(Welding) (Lakedemonskii, A.V.) (Khriapin, V.E.)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, A.D., inzh.; FREYDGEYM, L.I., inzh.

Device for reloading piece goods. Mekh.i avtom.proizv. 17 no.11:32-33 N '63. (MIRA 17:4)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

FREYDGYM, L.I.; SLONIMSKIY, A.D.

Modernization of the unit for the manufacture of the inner tubes of automobile tires. Kauch. i rez. 22 no.9:49-52 '63. (MIRA 16:11)

1. Moskovskiy shinnyy zavod.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SOV/137-58-7-14601

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 94 (USSR)

AUTHORS: Shcherlin, I.D., Alyushin, Ye.I., Poletayev, G.S., Rabicheva, L.M., Slonimskiy, B.I.

TITLE: Electrothermic Recovery of Zinc at the Belovo Zinc Plant (Elektrotermicheskoye polucheniye tsinka na Belovskom tsinkovom zavode)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 21, pp 20-23

ABSTRACT: A pilot-plant installation having an electrothermic furnace of 150 kw power was employed to melt sintered Zn concentrates of the following % composition: Zn 57-60, Pb 0.7-1, Cu 2-2.3, Fe 6-9.4, Cd 0.1-0.15, CaO 0.9-1.9, MgO 0.7-0.8, SiO_2 3.4-4.7, S 0.3-1. The charge (composition of the raw mix: 60 kg sinter, 12-13.5 kg coke breeze with 12-20% moisture and 14-20% ash, and 5 kg calcined lime) was mixed in a drum mixer, calcined for 3 hours at 800-850°C in a reducing atmosphere, 15-20 kg return dross was added to it, and the whole was charged into the furnace through a bell-shaped sealed charging device. Smelting was at 68 v and 2250-2500 amps with graphited electrodes immersed 200 mm into the slag,

Card 1/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SOV/136-58-9-5/21

AUTHORS: Lakernik, M.M. and Slonimskiy, B.I.

TITLE: Electrothermic Smelting of Loktevo Slags (Elektrotermicheskaya plavka loktevskikh shlakov)

PERIODICAL: Tsvetnyye Metally, 1958, 31, Nr 9, pp 28-31 (USSR)

ABSTRACT: The authors mention large waste-slag resources in Altay and some of the attempts made to recover their metal contents. They describe pilot-plant work at Gintsvetmet on the electro-thermic smelting of samples of Loktevo slags in an electric furnace at the Irtyshskiy works. The composition of the samples was: Cu 1.92, Pb 2.78, Zn 3.56, Fe 7.0, S 1.9, SiO_2 41.08, CaO 10.15, Al_2O_3 13.59, MgO 3.38 and BaO 9.98%, Ag 114.8 and Au 2.4 g/ton. Different waste slag compositions were obtained with different smelting conditions (table 1) and from these and material balances (table 2) for copper, lead and zinc together with a consideration of energy requirements, the authors deduce a flow sheet which is economically effective. They suggest that further investigations be made to embrace slags of composition different from those dealt with and that a survey of waste-slag resources be

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Electrothermic Smelting of Loktevo Slags SOV/136-58-9-5/21

carried out. The Editor points out that if the high-silica Loktevo slags are mixed with other slags it may be possible to effect the smelting in a shaft furnace.

There are: 1 figure and 2 tables

1. Slags--Processing 2. Slags--Properties 3. Electric furnaces --Performance

Card2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

S/137/61/000/011/007/123
A060/A101

AUTHOR: Slonimskiy, B. I., Tseydler, A. A.

TITLE: Study of the equilibrium between slag and metal, containing tin and iron

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1961, 15-16, abstract 11A95 ("Sb. tr. Gos. n.-i. in-t tsvetn. met.", 1959, no. 15, 164-172)

TEXT: The distribution of Sn and Fe among the slag and the metallic phases was studied under laboratory conditions as a function of the temperature, the compositions of the slag and of the metallic phase. It was established that the nominal equilibrium constant is not a constant quantity, but that it increases with the increase of Fe content in the metal and slag phases. Temperature variation between the limits of 1,150 and 1,300°C has practically no effect upon the value of the equilibrium constant. A reduction in the slag acidity at constant Fe content in it somewhat lowers the equilibrium constant. By statistical processing of the analyses of plant slags and crude metals it was shown that under the conditions of plant smeltings the laws derived from the principle of acting masses are qualitatively upheld, i.e. as the Fe content in the metal

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, B.I.; TSEYDLER, A.A.

Interaction between stannous oxide and silica at high temperatures. Sbor. nauch. trud. GINTSVETMET no.15:173-179 '59. (MIRA 14:4)

(Tin oxide) (Silica) (Metals at high temperatures)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SHCHERLIN, I.D.; ALYUSHIN, Ye.I.; POLETAYEV, G.S.; RABICHEVA, L.M.; SLONIMSKIY, B.I.

Studying the electrothermal method of preparing zinc and metal powder at the Belovo Zinc Plant. Sbor. nauch. trud. GINTSVETMET no.15:298-309 '59. (MIRA 14:4)
(Belovo (Kemerovo Province)--Zinc--Electrometallurgy)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, B. I., Cand Tech Sci -- (diss) "Research into types of tin content in slags from tin smelting." Moscow, 1960. 8 pp; (Ministry of Higher and Se ondary Specialist Education RSFSR, Krasnoyarskiy Inst of Non-ferrous Metals im M. I. Kalinin); 150 copies; price not given; (KL, 17-60, 159)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

RABICHEVA, L.M.; SLONIMSKIY, B.I.; LAZAREV, V.I.; ALYUSHIN, Ye.I.; POLETAYEV, G.S.; Prinimali uchastiye: TARASOV, Ye.I.; AFONIN, P.I.; SYROVEGINA, K.V., nauchnyy sotrudnik

Electrothermal method of obtaining zinc dust. Sbor. nauch. trud. Gintsvetmeta no.18:165-174 '61. (MIRA 16:7)

1. Nachal'nik elektrotermicheskoy ustanovki Belovskogo tsinkovogo zavoda (for Tarasov). 2. Starshiy master elektrotermicheskoy opytnoy ustanovki Belovskogo tsinkovogo zavoda (for Afonin). 3. Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh metallov (for Syrovegina).

(Zinc—Electrometallurgy)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, B.I.

Investigating the interaction of zinc and lead oxides with NaOH - NaCl melts at 400°. Sbor. nauch. trud. Gintsvetmeta no.18:226-230 '61. (MIRA 16:7)

(Systems (Chemistry) (Hydrometallurgy)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

PEYSAKHOV, I.L.; SLONIMSKIY, B.I.; KARMAZINA, V.D.

Volatilization and recovery of lead during the chloridizing roasting of iron concentrates. Sbor. nauch. trud. Gintsvetmeta no.19:565-576 '62. (MIRA 16:7)

(Ore dressing) (Lead--Metallurgy)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

MURACH, Nikolay Nikiforovich[deceased]; SEVRYUKOV, Nikolay Nikolayevich; POL'KIN, Stepan Ivanovich; BYKOV, Yuriy Aleksandrovich; SLONIMSKIY, B.I., red.; LUTSKAYA, G.A., red.izd-va; KARASEV, A.I., tekhn. red.

[Metallurgy of lead] Metallurgiia olova. Moskva, Metallurgizdat, 1964. 351 p. (MIRA 17:3)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

2

Ca

Laws of deformation of real materials. G. L. Sloaimskii. *J. Tech. Phys.* (U. S. S. R.) 9, 1791-807(1939).—A general theory of elasticity and plasticity. I. I. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

The laws of deformation of real materials. I. The theories of Maxwell and Boltzmann. G. L. Slonimskii. *Acta Physicochim. U. R. S. S.* 13, 95-128(1940)(in English); cf. *C. A.* 34, 2067[9].—Theoretical-math. Using the method of integro-differential equations and the time or rate of deformation factor, S. discusses and develops the Maxwell, Boltzmann and Volterra theories.

F. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Ca

2

The laws of deformation of real materials. II. The deformation of high polymers. V. A. Kargin and G. L. Slonimskii. *Acta Physicochim. U. R. S. S.* 12, 981-45 (1940) (in German); cf. *C. A.* 38, 5379[9].—Discussion from the viewpoint of the Boltzmann-Volterra theory of deformation. H. C. Thomas

COMMON ELEMENTS

COMMON VARIABLES INDEX

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

AUTHOR INDEX

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CA

PROCESSES AND PROPERTIES INDEX

2

Processes of viscous flow in the deformation of high-polymer materials. V. A. Kargin and G. L. Slonimskii (Karpov Phys. chem. Inst., Moscow). *Akad. Nauk S.S.S.R., Otdel. Tekh. Nauk, Inst. Mashinovedeniya, Soveshchanie po Vyazkosti Zhidkostei i Kolloid. Rastvorov* (*Conf. on Viscosity of Liquids and Colloidal Solns.*) 1, 197-21(1941).—In nonequil. deformations, elasticity and flow depend on the time or rate factor, and consequently do not obey the laws of Hooke and of Newton valid for the stationary state. Prior to its establishment, the irreversible process of viscous flow and the reversible elastic restoration processes cannot be sepd. Although this relaxation period is very short for either "truly viscous" or "truly elastic" substances, it can be very long in high polymers. On very rapid deformation, termed "limiting nonequil. deformation," even a viscous substance will behave like an elastic one and follow Hooke's law. In the stress relaxation of high polymers, orientation of the chains as a whole and that of its individual links do not as a rule coincide. The rate of the latter relaxation process within the chain is detd. by the energy of interaction between chain links. Translation of the chains as a whole (flow), depending on the energy of interaction between chains, lags behind the inner stress relaxation process. It only appears in its pure form once the stationary state is established and only then is it permissible to speak of viscous flow. Translational motion of chains can be hindered or suppressed by chain cross-linking as in vulcanization of rubber; the mobility of chain links remaining free, deformation will result in pure elastic effects. Anisotropy of viscosity along and across the chain axis ("oriented fibers") can be of different origin; it can result either from stress relaxation or from viscous flow. The length of the relaxation process within the chain depends on the degree of interaction of its polar groups, specifically on the variability of that interaction with the mutual position of the groups. This variation is small in cellulose but can attain significant values in rubber, as is evidenced by the change of sp. gravity on deformation and by the *Joule* heat effect. Inasmuch as viscous flow depends to a high degree on their mutual position, the motion being particularly obstructed in the case of parallel disposition of the chains, it is an error to rely on fast deformation in order to obtain best mechanical properties of a high-polymer material. This can only lead to temporary improvement of mechanical strength, at the expense of elastic properties. By way of viscous flow, permanent enhanced viscosity can be imparted to a material in a chosen direction; at the same time, inasmuch as in this case the relaxation process within the chain will appear in pure form, the elastic qualities of the material will be improved.

N. Thon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

A 1

Process of viscous flow in high-polymeric materials. V. Kargin and G. Slonimski (*Acta Physicochim. U.R.S.S.*, 1941, **16**, 329–336).—The relationships of viscous flow in plastic materials to the classical conceptions of the deformation of an elastic solid and the flow of a viscous liquid are discussed. In substances having long-chain mols., the first effect of a stress will be to produce a deformation of the individual mols., which is not equally distributed along the chain. Subsequently a relaxation process will equalise this deformation along the chain. At the same time a shift of the chain as a whole with respect to its neighbours may also occur, and the relative speeds of these processes will depend on the relative binding forces within a chain and between different chains, and on the mutual orientation of the chains.

F. J. G.

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SLONIMSKII, G.

"Concerning the Processes for the Viscosity of the Flow at the Decomposition of High Polymer Materials," Acta. Phys., Vol. XIV, No. 3, 1941. Physical Chemistry Inst. im. L. Ya. Karpov, Colloidal Chemistry, Moscow, Sci. Res. Order Labor Red Banner, -1941-.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G. L. Dr. Chem. Sci.

Dissertation: "Deformation Theory of Linear Polymers." Sci Res Order of the Labor Red Banner Physicochemical Inst imeni L. Ya. Karpov, 22 Dec 47.

SO: Vechernyaya Moskva, Dec, 1947 (Project #17836)

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SLONIMSKIY, G. L.

USSR/Chemistry - Polymers, Linear Sep 48
Mathematics - Applied

"Deformation of Amorphous Liquid Linear Polymers," V. A. Kargin, Corr Mem, Acad Sci USSR, G. L. Slonimskiy, Physicochem Inst imeni L. Ya. Karpov, 4 pp

"Dok Ak Nauk SSSR" Vol LXII, No 2

Theoretical mathematical treatment of the deformation of amorphous liquid linear polymers. Proposes and discusses model. Submitted 10 Jul 48.

36/49T9

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G. L.

PA 45/49T26

USSR/Chemistry - Colloids Mar/Apr 49
Chemistry - Terminology

"Terminology Used in the Viscosimetry of Dilute Solutions of Highly Polymeric Substances," G. L. Slonimskiy, S. S. Voyutskiy, Yu. L. Margolina, Physicochem Inst imeni L. Ya. Karpov, Moscow Inst of Fine Chem Tech imeni M. V. Lomonosov, Cen NII of Leather Substitutes, MLI USSR, 3½ pp

"Kolloid Zhur" Vol XI, No 2

Tabulates English and Russian terms, giving references and explanations. Submitted 25 Jun 48.

[redacted] 45/49T26

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SIDELKOVSKIY, G. L.

"Determining the Molecular Weight of Linear Polymers by Their Mechanical Properties," Zhur. Fiz. Khim, 23, No. 5, 1949; Phys. Chem. Inst. imeni L. Ya. Karpov: Lab. Colloid Chem., Moscow. -c1949-.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G. L.

USSR/Physics - Ultrasonic Absorption 11 Apr 53

"Absorption of Ultrasound in Solutions of Polymers," Yu. Ya. Gotlib and M.V. Vol'kenshteyn

DAN SSSR, Vol 89, No 5, pp 821-824

Derivation and soln of the eqs describing the Kargin-Slonimskiy model (V.A. Kargin and G.L. Slonimskiy, DAN SSSR, Vol 62, No 2, 239 (1948); Zhur Fiz Khimii, 23, 5, 563 (142)) of a net-like high polymer immersed in a soln as a sequence of sphere-segments connected by quasi-elastic forces of a statistical character. Presented by Acad A.N. Terenin 13 Feb 53.

259T87

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G. L.

1838 Mechanic

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

the structure of [illegible]

to local microdefects [illegible] growth of which brings about final destruction of the test piece. There are 15 references, and the discussion is reported.

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APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G L

5

1 PM
2 May

1338. **Mechanism of fatigue of vulcanised rubbers.** G. L. Slonimskii, V. A. Kargin, G. N. Buiko, E. V. Reztsova and M. L'yuis-Riera. "Staremie i Utomlenie", 1953, p. 100–18. Polyisobutylene and unsaturated natural and Butyl rubbers were subjected for 288 h to severe shearing deformation. Fatigue lowers the molecular weight of polyisobutylene, causing destruction or structurisation, changes the swellability of rubbers, their strength characteristics and the frequency dependence of the deformation. In the process of fatigue of rubber with uni-axial deformation there is an increase in the anisotropy of the mechanical properties of the test-piece, connected basically with reversible relaxation phenomena. Fatigue is connected with the occurrence in the deformed polymer of free radicals, which set off chemical processes such as oxidation. As a result of the non-uniformity of the structure of the rubber these processes give rise to local microdefects, the growth of which brings about final destruction of the test-piece. There are 15 references, and the discussion is reported.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G. L.

4

2 may

The solidification mechanism of Bakelite resins. G. L. Slonimskii, V. A. Kargin, and L. I. Golubenkova. *Doklady Akad. Nauk S.S.S.R.* 93, 311-14(1953).—Changes in mech. properties of PhOH-HCHO resins in all solidification stages were studied with the application of the modern conception of the connection of properties and the structure of polymers by using dynamometer balances and other apparatus inside a wide range of temp., load, and time. The resins studied were the Resol, Resitol, and Resit grades of Bakelite resins. Conclusions were drawn regarding their structure, solubilities, temp. effects, etc. W. M. Sternberg

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G.L.

Discussion of fatigue in rubber. G. L. Slonimskii, V. A. Kargin, G. N. Bulko, E. V. Rextsova, and M. L'yuis-Riera. *Doklady Akad. Nauk S.S.S.R.* 93, 523-6(1953).—The fatigue of rubber is a complex phenomenon of interrelated chem. and phys. changes. Deformation causes a rupture of chain mols., with the formation of free chem. active radicals. Chem. reactions which proceed because of the existence of reactive groups and free radicals are accelerated by deformation because of the lowering of the activation energy and by increasing the possible no. of collisions. Chem. structure changes affect the mech. and rupture mechanisms of the material. Mech. forces bring about a reorientation of the vulcanization structure and produce anisotropy in the mech. properties of the material. Relaxation processes are superimposed upon this whole complex of processes. Gradual changes in the rubber properties during fatigue finally end in destruction of the material, which is not discussed in the article. W. M. S.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G. L.

DISTR: 4E2c(j)

1234. Dynamic methods of determination of bond strength between vulcanised rubbers and between rubber and cord. M. A. TSYDLIK, A. I. LUKOMSKAYA, and G. L. SLONIMSKIY. 'Prochnost' Svyazi . . . 1954, p. 101-11. (Vses. Khim. Obshch. im. D. I. Mendeleeva, Dec., 1954). The authors carried out a comparative study of various methods of determination of bond strength in multi-ply rubber and rubber fabric test-pieces. If the plane of the joint is normal to the direction of shear or coincides with the direction of compression, then the destruction takes place principally across the joint. With the normal position of the plane of the joint in relation to the direction of compression, the destruction takes place through the rubber. On increasing the forces of destruction the scatter of the readings decreases. The use of severe tests in determining bond strength is, apparently, correct only when comparing rubbers with equal degree of fatigue. The rubbers referred to are SKB-30A, SKB, and natural rubber.

10
2 May

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G. L.

Setting of phenol-formaldehyde resins. G. L. Slonimskii, B. M. Kovarskaya, and S. I. Kiiz. Colloid J. (U.S.S.R.) 16, 375-8(1954)(Engl. translation).—See C.A. 49, 2774g.
H. L. H.

MA JSH

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G. L.

Setting of phenol-formaldehyde resins. G. L. Slonimskii, B. M. Kovarskaya, and S. I. Klaz (Sci. Research Inst. Plastics, Moscow). *Kolloid. Zhur.* 16, 390-5(1954).—Plastics of the novolak type contg. <1% hexamethylenetetramine (I) and plastics contg. any amt. of I but cured below 120° were sol. in EtOH and cyclohexanone (II). Plastics, contg. 1-5% I and cured above 120° or contg. >5% I and cured at 120°-130°, swelled in II; the mech. properties of their gels were studied. Plastics contg. >5% I and cured above 130° did not swell or dissolve, and their modulus of elasticity was at a 2nd deformation greater than at the first.

J. J. Bikerman

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

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

Abs Jour : Ref Zhur. - Fizika, No 1, 1957, No 1005

Author : Slonimskiy. G.L., Kargin.V.A., Buyko, G.N., Reztsova, Ye.V., L'yuis.Riyera. M.

Title : Concerning the Problem of the Mechanism of Rubber Fatigue

Orig Pub : Stareniye i utomleniye kauchukov i rezin i povysheniye ikh stoykosti. L., Goskhimizdat, 1955, 100-118

Abstract : See Ref. Zhur. Khim. 1956, 48630

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G.L.

Math. Setting of urea-formaldehyde resins. B. M. Kovarskaya, G. L. Slonimskii, and V. A. Kargin. Colloid J. (U.S.S.R.) 17, 413-17(1955)(Engl. translation).- See C.A. 50, 4551g. B. M. R.

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SLONIMSKIY, G.L.

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Setting of urea-formaldehyde resins. B. M. Kovarskaya, G. L. Slonimskii, and V. A. Kargin (Sci. Research and Project Inst. Plastics, Moscow). *Kolloid. Zhur.* 17, 428-33 (1955); cf. *C.A.* 50, 3799b.—Urea-formaldehyde resins (not further characterized) pass 3 stages during setting. During stage 1, the resin is a liquid fully sol. in H_2O and freezing to a glass at 0° to −5°. During stage 2, it contains 40–50% H_2O, is only partially sol. in H_2O and alcs., is glassy below 0° and freely flowing above 60°; as it has no yield stress, it probably contains only linear chains longer than those of the first stage. During stage 3, the resin is solid but, probably, still consists of linear polymers, since resins plasticized with $C_3H_8O_3$ (e.g., 20%) become viscous liquids on heating (e.g., to 180°). J. J. Bikerman

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SLONIMSKIY, G L

Plastics performance at low temperatures

and G. C. Ives. *World Refrig.* 6, 197-205(1955).—A review of recent advances in knowledge of the behavior of plastic materials at low temps. with particular reference to packaging film used for refrigerated products. L. C. Flowers

Crystalline state of polymers. V. A. Kargin and G. L. Slonimskii. *Uspekhi Khim.* 24, 787-808(1955).—A review with 97 references covering the period through 1953. It is pointed out that the existence of 2 types of structural units in polymers, i.e. chains and monomer link units, leads to 2 types of polymer crystals in distinction from crystals of low-mol. substances. The concepts of homogeneity and heterogeneity require further clarification and delineation in polymer systems. The thermodynamic properties of cryst. polymers are analogous to those of aq. solns. of soaps. Cryst. polymers per se require the divergence of the structural and the thermodynamic criteria of phase states, a factor ignored in some of the earlier studies. It is pointed out that during crystn. of a polymer there occurs a selection of cryst. forms which yield the least internal tension and greatest freedom for thermal motion. G. M. K.

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SLONIMSKIY, G. L.

Heat propagation in oriented polymers. V. A. Kargin, G. L. Slonimskii, and Yu. S. Lipatov. Doklady Akad. Nauk. S.S.S.R. 104, 96-7(1955).—Polystyrene, poly(methyl methacrylate), capron, and polyethylene were tested for heat anisotropy in their oriented amorphous and cryst. states. The orientation was done by stretching to corresponding elongations. A thin layer of readily fusible material (wax + oil) was spread over the oriented sample surface, and an electrically heated "point" heat source was used, consisting of a truncated cone with 0.7 sq. mm. cross-section. Anisotropic bodies form elliptic fusion figures, whereas round figures are formed by nonanisotropic bodies. The results indicate that oriented cryst. polymers exhibit anisotropy; amorphous ones do not. W. M. S.

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SLONIMSKIY, G. L.

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2 May

905. Mechanism of fatigue in polymers. V. A. KARGIN and G. L. SLONIMSKIY. *Dokl. Akad. Nauk. S.S.S.R.*, 1955, 105, 751–4; *Ref. Zhur. Khim.*, 1956, abs. 16075. The authors hold that the observed changes in properties of polymers under prolonged static or dynamic influence are due to the development of secondary chemical processes changing a significant part of the substance, although the primary act appears to be the formation of free radicals as a result of chain scission by mechanical forces. The secondary processes which develop may lead to destruction and structurisation in dependence upon temperature and concentration of free radicals, which is the higher the greater the intensitivity of mechanical action. Thus fatigue is regarded as a mechano-chemical process in which the mechanical action initiates, accelerates, and retards the various chemical processes whose course changes the structure of the polymer. 3514249

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4258. **Mechanical properties of carbon black-petrolatum mixtures.** V. A. KARGIN, G. L. SLONIMSKII and E. V. RESTROVA. *Dokl. Akad. Nauk S.S.S.R.* 1955, 105, 1007-9; *Chem. Abs.*, 1956, 50, 9777. The mechanism of the effect of carbon black on rubber is greatly complicated by the chemical activity and the highly elastic deformation of rubber. A carbon black-petrolatum mixture was selected as a model of similar changes not complicated by chemical changes resulting from interaction with the hydrocarbon because of the chemical inertness of petrolatum hydrocarbons. The components were ground for 10 to 15 min at room temperature, and the mixture was stored for 24 h. Although the components had no highly elastic properties when taken singly, the mixture had a well-defined high elasticity. The mechanical properties of the mixture were studied, and compression and relaxation curves were compared with similar curves for rubber-carbon black mixtures; they proved to be similar. Furthermore, the tensile strength and elasticity of mixtures after heating 2 to 3 h to 180 to 200° showed that the relatively weak structure first formed at low temperature breaks down, and a firmer structure, possibly formed by chemical changes, is produced. The relatively low strength of the carbon black-petrolatum structure shows, however, that reinforcement of rubber by carbon black must be principally due to their interaction. 421C6-R

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SLONIMSKIY, G. L.

5895. Mutual solubility of polymers. III. Heats of mixing of polymers. IV. Influence of packing density of molecules upon their mutual solubility. G. V. STRUMINSKII and G. L. SLONIMSKII. *Zh. Fiz. Khim.*, 1956, No. 9, 1941–7; No. 10, 2144–8. *Referat. Zh. Khim.*, 1957, abs. 34615. Cf. *Rubber Abs.*, 1957, abs. 2555. III. From data on heats of solution of polymers, their mixtures, and on heats of mixing of their solutions, heats of mixing of polymers are determined using Hess's Law. The mixtures included various rubbers. The data show that most polymers mix endothermically while mixtures of their equal-concentration solutions separate into two phases, but exothermic mixing and the absence of separation is observed with mixtures of natural rubber and sodium butadiene rubber. Polymers which are similar in structure are not mutually soluble. It is concluded that mutual solubility of polymers is determined by the sign of their heat of mixing.

IV. It has been shown that the mixing of SKB with SKS-30 rubber and with polystyrene proceeds with the liberation of heat, while mixes of their equal-concentration solutions separate out into two phases. This separation indicates a negative heat of mixing. The authors explain the observed positive heat effect by the reduction of the volume of the system on mixing of their components.

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SLONIMSKIY, G.L

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Thermomechanic study of epoxy resins. B. M. Kovar 4

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contg. I have a few long cross linkages J. J. Bikerman

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SLONIMSKIY, G.L.

MALINSKIY, Yu.M.; SLONIMSKIY, G.L.

Universal deformeter. Zav.lab. 22 no.10:1247-1249 '56. (MLRA 10:5)

1.Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni L.Ya. Karpova.

(Testing machines)

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SLONIMSKIY, G. L.

Coexistence of polymers. I. Physical and mechanical properties of rubbers based on combinations of [illegible] elastomers. N. F. Komskaya and G. L. Slonimskiy (Gen. Tire Ind., Moscow). Zhur. Fiz. Khim. 30, 1522-36(1956). — Investigations were made of basic principles involved in mixts. of polymers as exemplified by mixts. of elastomers. Natural rubber, butadiene polymer, styrene-butadiene, and nitrile-butadiene were investigated because of difference in chem. compn. and structure. Every elastomer was tested by itself and in combination with the others chosen. Typical rubber mixts. were used. All mixts. were compounded on rubber rolls and tested. It was concluded from all typical rubber-testing data that: (1) Mixts. of amorphous polymers should be studied as cosolns. of liquid phases which conform to thermodynamic laws. (2) The rubbers examined can be divided into 2 groups according to their mech. behavior. The anomalies in properties observed with mixts. of butadiene and styrene-butadiene are supposed to be due [illegible] heterogeneous 2-phase structure in these mixts. [illegible] compatibility of 2 polymers should be examined from [illegible] view. Macroscopic compatibility can always be [illegible] in practice provided the polymers can be put into [illegible] Microscopic compatibility or [illegible] depends on their thermodynamic properties.

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SLONIMSKII, G. L.

The mutual solubility of polymers. II. The viscosity of rubber mixtures and the behavior of their solutions. G. L. Slonimskii and N. F. Komskaya (Inst. Tire Ind., Moscow). *Zhur. Fiz. Khim.* 30, 1745-61(1956); cf. *C.A.* 51, 12529h. It has been assumed that rubbers SKB and SKS-30 are mutually insol. under the conditions corresponding to formation of a vulcanizate. To clarify this, viscosity measurements of rubber mixts. were carried out by using the formula: $\sigma = \eta\, de/dt$, where σ is the stress, η viscosity, e relative residual deformation (elongation or compression), and t time. In some mixts., e.g. SKB + NK and SKS-10 + SKS-30, viscosity changes correspond to mixt. compos., whereas mixts. SKS-30 + SKB-30 + NK show a substantial viscosity increase. Two possible causes for the viscosity increase are a strong structure-forming interaction between the components and formation of a micro-nonhomogeneous mixt. (I) parts of which are linked together by long-chain mols. In rubber mixts. no structure forming interaction can be assumed and only the formation of I is admissible. Stronger than 1% equiconcd. solns. of anomalous rubber mixts. in a common solvent sepd. in 2 phases after a period of time, e.g. one day, whereas normal mixts. remained homogeneous for 4 years. The min. concn. at which a sepn. occurred depends on the nature of the solvent. The sepn. is considered to be a confirmation of the formation of I. A mutual soly. is detd. by the mol. interactions. Entropy changes are negligible. B. Ryshkewitch

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~~SLONIMSKIY, G. L.~~
SLONIMSKIY G. L.

Vol 30, Issue Nr 5, May, 1956

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STUDIES ON THE ORIENTATION OF HIGH POLYMERS

I. AMORPHOUS POLYMERS

Yu. S. Lipatov, V. A. Kargin and G. L. Slonimskii

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[illegible]
[illegible] Chemistry
Moscow

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SLONIMSKIY, G.L.

ZHURNAL FIZICHESKOY KHIMII

Vol 30, Nr 6, June, 1956

STUDIES IN HIGH POLYMER ORIENTATION

II. CRYSTALLINE POLYMERS

Yu. S. Lipatov, V. A. Kargin and G. L. Slonimskii

It was shown that the cold drawing of the crystalline polymers gutta-percha, saran and nylon 6 did not change markedly the values of their heats of solution in suitable solvents. The increase in the negative heats of solution resulting from the cold drawing and redrawing of polyethylene is regarded as due to a certain increase either in the degree of crystallinity or in the density of the molecular packing in the amorphous regions of the crystalline polymer. Emphasis has been placed on the kinetic character of the cold drawing process.

The Karpov Institute
of Physical Chemistry
Moscow

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KARGIN, V.A.; SOGOLOVA, T.I.; SLONIMSKIY, G.L.; RESTSOVA, Ye.V.

The mechanism of fluidity of polymer formation. Zhur.fiz.khim. 30 no.8:1903 Ag '56. (MIRA 10:1)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova i Institut shinnoy promyshlennosti, Moskva.
(Polymers)

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The mutual solubility of polymers. III. The heat of mixing of polymers. G. V. Struminskii and G. L. Slonimskii (L. Ya. Karpov Phys.-Chem. Inst., Moscow). Zhur. Fiz. Khim. 30, 1941-7(1956); cf. preceding abstr.—The relation between the mutual soly. of polymers and the sign. of the heat effect during mixing was investigated by the detn. of the heat of soln. and of mixing of cellulose esters, Na butadiene, butadiene-styrene, natural rubber, polyacrylates, polymethacrylates, polystyrene and other polymers in an adiabatic calorimeter, with benzene, cyclohexanone, $CHCl_3$, and acetone as common solvents. Before testing, most polymers were purified by pptn. with nonsolvents, but synthetic rubber samples were used as received, because their purification resulted in soly. losses due to strong oxidation resulting from the autoxidant removal during the purification. The method used in blending the polymer mixts. affected the results, and the methods were standardized on the viscosity detns. of dil. solns. of the polymers in 5-6 different concns., not exceeding 1%, and extrapolating the characteristic viscosities to 0 polymer concn. The heats of

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STRUMINSKII, G.V. and Etc.

mixing, reproduced in a table, varied between +5.9 and −8.0. Most of the polymers mix endothermally, and their solns. separate into layers; their apparent miscibility is caused by their high viscosity. Natural rubber mixes exothermally with Na butadiene, nitrocellulose (11.9% N), acetylcellulose (56% Ac-group), and poly(vinyl acetate), and the mixts. do not separate. IV. The effects of molecular packing tendency upon the mutual solubilities. G. L. Slonimskii and G. V. Struminskii. *Ibid.* 2144-8.—The anomalous results of mixing of Na butadiene rubber with butadiene styrene, a single-phase formation upon the mixing of solns. of the same concn. when the heat of mixing is pos., and a layer formation with a neg. heat of mixing effect, is explained by the significant influence of the vol. reduction during the mixing of these polymers. When no contraction occurs during the mixing, the heat effects do not depend upon the degree of polymerization, and the sign of the heat effect can even be reversed if the mol. density of the structure becomes reduced during the polymerization. The existence of lower crit. mixing temps. above the polystyrene setting temp. for butadiene rubber with butadiene styrene and with polystyrene is concluded from the exptl. results and the data in the literature. The lower crit. mixing temp. is caused by the lowering of the mol. packing density at temps. below the polystyrene setting temp.

W. M. Sternberg

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SLONIMSKIY, G.L.; STRUMINSKIY, G.V.

Mutual solubility of polymers. Part 4. The effect of density of packing of polymer molecules on their mutual solubility. Zhur. fiz. khim. 30 no.10:2144-2148 O '56. (MLRA 10:4)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova, Moskva.
(Polymers) (Solubility)

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SLONIMSKIY, G L.

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The curing process of phenol-formaldehyde resol resins. I. The study of resols. V. A. Kargin, G. L. Slonimskii, and L. I. Golubenkova (L. Ya. Karpov Phys.-Chem. Inst., Moscow). *Zhur. Fiz. Khim.* 30, 2435-40(1956).—The resols studied were condensation products of 6 mols. of phenol with 7 mols. of HCHO in the presence of NH_3, and the mech. properties at different polymerization depths during curing were studied. Reversible chain structures are important in the development of mech. properties of resols, and interactions are spread widely in the production of highly elastic plastics. Chain structures are formed from intermol. structure and at high-temp. resols behave like low-mol. amorphous substances, and at low deformation, like linear polymers. The formation and breakdown of the phys. chains are manifested in the sharply reversible relation of the resol viscosity to stress (viscosity being reduced at high stress), and the disappearance of the highly elastic conditions at higher stresses.

W. M. Sternberg

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SLONIMSKIY, G. L.

USSR/Physics of High Molecular Substances D-9

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 11541

Author : Slonimskiy, G.L., Alekseyev, P.I.
Inst :
Title : Investigation of the Effect of Deformation on Relaxation Processes in Rubber.

Orig Pub : Dokl. AN SSSR, 1956, 106, No 6, 1053-1056

Abstract : A study is made of the influence of the action of a variable force at sonic frequency on the relaxation of statically compressed specimen of rubber in the region of the vitrification temperature. If a constant single-axis compressing stress is applied to the specimen, corresponding to a strain $\Delta \varepsilon$, then when sinusoidal mechanical vibrations are superimposed, one observes the development of an additional strain, as a result of which a new conditionally-balanced state is characterized by a lower value of the modulus. The effect is observed in a narrow range of

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SLONIMSKIY, G. L.

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The curing process of phenol-formaldehyde resol resins. II. Investigation of the resitols. G. L. Slonimskii, V. A. Kargin, and L. I. Golubenkova (L. Ya. Karpov Phys.-Chem. Inst., Moscow). *Zhur. Fiz. Khim.* 30, 2656-61(1956); cf. *C.A.* 51, 9208h.—The thermal and mech. behavior of resitols (obtained in the thermal setting of the resin, in the prepn. of which 7 mols. H_2CO and 6 mols. PhOH were used) was studied at different condensation depths and within wide temp. limits, and their soly. and swelling tendency in different org. solvents were detd. While in the resitol stage the high-mol.-wt. mols. can combine into a spatial network phys. in character, and their no. may be different at different temps. and on swelling. The nature of the distribution of phys. bonds in the 2-component resitol-solvent system permits obtaining systems of the same concn. but having different mech. properties. Resitols dissolve in solvents which can form H-bonds: cyclohexanone, phenol, dioxane, tricresol, butane, etc., at higher temps. Their soly. depends on the temp., the rate of its rise, and on the size of the specimen.

W. M. Sternberg

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SLONIMSKIY, G. L.

2318 Investigation of the influence of vibrations upon the relaxation processes in vulcanized rubbers. [illegible] and P. I. [illegible] [illegible] 1956, 106, 1053-6. The authors investigate the action of direct or sonic frequency on the relaxation of a statically compressed rubber test piece in the vitrification region. If to the test piece there is applied a constant mono-axial compression stress which corresponds to a deformation $\Delta\epsilon$, then with the application of sinusoidal mechanical oscillations one finds a development of supplementary deformation as a result of which a new conditional equilibrium state is characterised by a lower value of the modulus. The effect is found in a narrow interval of frequencies and temperatures. The phenomenon is studied as a function of conditions of deformation of the size of the load and amplitude of dynamic force. With the growth of the amplitude of the specific load the magnitude of the effect characterising $\Delta\epsilon$ increases. At the same time the vibration causes a bigger supplementary deformation than a corresponding increase of static load stress. The position of the maximum of the curve of dependance of $\Delta\epsilon$ upon temperature does not depend upon the frequency of vibration. The frequency range of the effect as a first approximation does not depend upon the

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SLONIMSKIĬ, G.L. & ALEKSEEV, O.I.

temperature. This shows the impossibility of the mutual compensation of the effects of temperature and frequency which are characteristic of the mechanical relaxation processes. The authors consider that the effect discovered is governed by the mutual interaction of the relaxation processes of the change of shape and volume of the object, i.e. of the processes of regrouping leading to a change of shape of the molecules and of the density of packing. It is assumed that the effect of vibration is governed by the increase in volume of the test-piece which goes on with the decrease of the alternating force. This does not occur in phase with the alternating force. As the moment of the growth of the force this permits the development of relaxation processes leading to a higher value of compression deformation. 634241

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[illegible], [illegible], [illegible], [illegible] V., [illegible], [illegible]

"Mechanical properties of aliphatic amorphous polyethers," a paper presented at the 9th Congress on the Chemsitry and Physics of High Polymers, 2[illegible] Jan-2 Feb 57, Moscow, Research Inst. of Organic Chemistry.

B-3,0[illegible]4,395

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[illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible]

"Epoxide Resins and thermomechanical properties," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28, Jan-2 Feb 57, Moscow, Plastics Research Inst.

B-3,084,395

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SIMONINSKIY, G. L., SOGOLOVA, T. I. and KARGIN, V. A.

"The Particularities of Flow in Polymers."

TITLE: General Meting of the Department ⊠ for Chemical Sciences of the AN USSR Held in May 30-31, and June 28, 1957.

PERIODICAL: Izvestiya AN SSSR, Otdel. Khim. Nauk, 1957, Nr 11, pp. 1416-1419 (USSR)

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SLONIMSKIY, G. L., and MONTELEYEV, G. M.

"Laws of deformation and relaxation of rubbers," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Rubber Research Inst.

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[illegible], [illegible], [illegible], [illegible], [illegible], [illegible]

"Mechanico-chemical processes in rubber deformation and recovery," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Rubber Research Inst.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SHONINSKIY, [illegible] L., and KORSHAK, V. V.

"Molecular weight ~~of the~~ distribution in Polycondensation products," paper presented at the 9th Congress on The Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Tashkent Textile Research Inst.

B-3,[illegible]4,305

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410002-1

SLONIMSKIY, G. L.

"A Mechanical Method for the Production of New Types of Polymers," by V. A. Kargin, B. M. Kovarskaya, L. I. Golubenkova, M. A. Akutin, and G. L. Slonimskiy, Khimicheskaya Promyshlennost', No 2, Mar 57, pp 77-79

Equipment similar to rubber masticators has been designed for breaking down plastics by the exertion of mechanical force, so that the fractional parts of chain molecules which are then formed and which possess the properties of free radicals may react with other chain molecules or parts of chain molecules, forming block polymers, or combine with monomers, forming grafted polymers. The equipment in question consists of two circular corrugated plates between which the material is triturated when the lower plate is rotated against the upper plate that remains staticnary. Two different types of plates are described: one has a rectangular groove with the contour of an Archimedes spiral and a depth gradient and the other a groove which possesses the same contour but exhibits a uniform depth and is cut in such a manner that a ridge with a profile corresponding to that of a Whitworth screw winding results.

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SUMNIMERTY, V. A.

The first type of plate was found to be best suited for the copolymerization of low-molecular brittle resins with elastomers and the second for combining different types of elastomers with each other. By applying the method of mechanical disintegration, block polymers representing combinations in different proportions of nitrile rubber with phenol-formaldehyde novolacs, epoxy-resins, and refined coal-tar pitch were obtained. The time required for the experimental preparation of the block polymers was 4-5 minutes. Samples weighing 10-20 g were used, and the mechanical disintegration was carried out in an atmosphere of inert gas.

The authors conclude on the basis of the results described by them that the mechanical method of producing block polymers and grafted polymers is superior to chemical methods. They add that an apparatus for the continuous production of block polymers and grafted polymers by the mechanical method is being developed at the Scientific Research Institute of Plastics, and that the availability of this apparatus will make possible the industrial production of such polymers by the method described.

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