

L 8646-65

ACCESSION NR: AP4044136

layer, 0.15—0.2 mm thick, undergoes the greatest plastic deformation and, correspondingly, the highest strengthening in the austenitic condition and more pronounced formation of the deformation texture. In deeper layers, 0.3—0.4 mm from the surface, the strengthening and texture formation are less pronounced. The inhomogeneity of the metal flow along the cross section causes elastic stresses reaching 35 to 40 kg/mm². The conditions of deformation of the 40KhSNA-type steel in the austenitic condition in the region of subcritical temperatures (550C) cause a loss of carbon in the austenite of the outer layer, owing to precipitation of carbides during deformation, and, consequently, formation of carbon-poor martensite in subsequent quenching. As a result, this layer, most strengthened in the austenitic condition, is the least strengthened by quenching. The structural, but not textural, inhomogeneity along the cross section can be partially decreased by an additional heat treatment. Orig. art. has: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

ASSOCIATION: Mashovskiy Institut anal. i splozheniya (Moscow)

Собр. 2/2

L 8646-65

ACCESSION NR: AP4044136

SUBMITTED: 00

ATD PRKSS: 3111

EN 1

SUB CODE: MM, IR

NO REF SOV: 003

ST 1

Card 3/3

KRUPIN, A.V.; CORELIK, S.S.; LYASOTSKIY, I.N.

Effect of warm rolling on the structure and properties of
transformer steel. Izv. vys. ucheb. zav.; chern. met. 7
no.9:137-142 '64. (MIRA 17:6)

1. Moskovskiy institut stali i splavov.

ACCESSION NR: AP4013094

S/0126/64/017/001/0063/0072

AUTHOR: Gorelik, S. S.; Usikov, M. P.

TITLE: Study of the process of formation of recrystallization embryos

SOURCE: Fizika metallov i metalloved., v. 17, no. 1, 1964, 63-72

TOPIC TAGS: recrystallization, recrystallization embryo, metal crystallization, aluminum crystal structure, nichrome crystal structure, fluctuation theory

ABSTRACT: By the term "recrystallization embryos", the authors refer here to regions of any size with an undistorted lattice formed during heating which are surrounded by a deformed matrix and entirely or partially separated from the matrix by large-angle boundaries. The authors studied the mechanism of the formation of these recrystallization embryos during heating after small, but supercritical, degrees of deformation, in order to determine whether formation occurs through fluctuation or whether such embryos are definite lattice regions already existing in the deformed state, as well as to clarify the atomic mechanism of the process. The results were not in agreement with the fluctuation theory of embryo-formation. The embryos were found to be formed from definite regions of deformed crystallites through a redistribution of dislocations, leading to the formation of dislocation boundaries and to the partial annihilation of the dis-

Card 1/2

ACCESSION NR: AP4013094

locations. This redistribution is of a different character than in the case of polygonic formation. The authors also analyzed, in addition to the sites of origin of the embryos, their form, orientation, and boundary structure, as well as the speed and direction of boundary dislocation during the initial stages of primary recrystallization. Tests were conducted on aluminum in polarized light and on nichrome (13% Cr) under a conventional and electron microscope. The results of the study lend weight to the hypothesis that the cause of accelerated diffusion in the case of primary recrystallization is the formation of free mobile vacancies in the redistribution process and the annihilation of dislocations in the formation of recrystallization embryos. "The authors wish to express their gratitude to L. M. Utevskiy for his help in carrying out the electron microscope study of the thin foil." Orig. art. has: 7 figures.

ASSOCIATION: Institut stali i splavov, Institut metalovedeniya i fiziki metallov TsNIICHM (Institute of Steel and Alloys, Institute of Metallurgy and Physics of Metals of the TsNIICHM)

SUBMITTED: 25Feb63

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: ML, PH

NO REF SOV: 009

OTHER: 008

Card 2/2

ACCESSION NR: /AP4029004

S/0126/64/017/003/0445/0452

AUTHOR: Spektor, E. N.; Rakshshtadt, A. G.; Gorelik, S. S.; Sagalova, T. D.

TITLE: The effect of annealing before recrystallization on the elastic properties and structure of cold rolled metals and alloys with face centered cube lattice

SOURCE: Fizika metallov i metallovedeniye, vol. 17, no. 3, 1964, 445-452

TOPIC TAGS: pre-crystallization annealing, elastic property, structure, cold rolled metal, cold rolled alloy, face centered cube, face centered cube lattice, copper, nickel, A7 bronze, L68 brass, Kh20N80 nichrom

ABSTRACT: An increase of the elasticity range, the microhardness, as well as a change in the anisotropy of the elasticity range, takes place during the pre-crystallization annealing process of pure metals and alloys with a face centered cube lattice (copper, nickel, A7 bronze, L68, Kh20N80). The width of the x-ray interference, the character of the grain and the electro-resistance changes thereby insignificantly; only a certain change in the intensity and scattering of grain maximums is observed. The authors assume that the main cause of an increase in the elasticity range is the redistribution of dislocations rather than by polygonization. A stronger effect in the case of alloys is obviously associated with the simultaneous

Card1/2

ACCESSION NR: AP4029004

occurrence of diffusion processes which lead to the formation of "clouds" around the dislocation. The purpose of this paper is to investigate the mentioned anomaly in the change of elastic properties and their anisotropy, on a number of pure metals and alloys with a face centered cube lattice, as well as the study of the physical properties and structural changes in order to expose the nature of this interesting phenomenon. The method and materials used, as well as the experimental instruments, are described in detail. The results are given in figures and tables. In conclusion, the authors claim that in the case of pure metals and alloys, hardness and resistance toward small plastic deformations increases in process of pre-recrystallization annealing, when its anisotropy drops. This effect is more apparent in alloys. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 11Mar63

DATE ACQ: 27Apr64

ENCL: 00

SUB CODE: ML

NO REF SOV: 007

OTHER: 004

Card 2/2

ACCESSION NR: AP4029009

S/0126/64/017/003/0474/0476

AUTHOR: Gorelik, S. S.; Spektor, Ya. I.; Spektor, E. N.

TITLE: On the character of the martensite grain texture after thermal mechanical treatment

SOURCE: Fizika metallov i metallovedeniye, vol. 17, no. 3, 1964, 474-476

TOPIC TAGS: Martensite, thermal mechanical treatment, 40KhSNA steel, EI-643 steel, VL-1 steel, lKh18M9T steel

ABSTRACT: The purpose of this paper is to establish the orientations and crystallographic relations between grains of austenite and the grain of martensite after tempering, in the case of the 40KhSNA, EI-643, and VL-1 steels after a low temperature thermal-mechanical treatment. All steels were deformed under identical conditions. A 70% deformation of a mached hallow ingot was achieved with a cross sectional ball rolling method. The paper figures were constructed with the aid of a grain attachment to an x-ray installation by the "reflection" method. Before x-raying, samples of the ingot were submerged up to 0.1-0.2 mm in orthophosphoric acid. The results of the investigation are shown in polar figures and in x-rays of the two types of steel, lKh18M9T and 40KhSNA. The basic grain maximum of martensite, located

Card 1/2

ACCESSION NR: AP4029009

analogously to austenite, are outlined by the $[11\bar{2}]$ $[110]$ orientation which is one of the α -iron characteristics. In a similar selection of orientations which correspond to the grain maximum, a structural conformity of directions in the lattice of austenite and martensite was observed resembling very closely the correlation described by Kurdyumov and Zaks; $[111]$ parallel to $[110]$ (Kurdyumov, G.; Zaks, G. Vestnik Metallopromy*shlennosti, 1930, vol. 9, no. 165). Orig. art. has: 2 figures

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Steel and Alloy Institute)

SUBMITTED: 01Jun63

DATE ACQ: 27Apr64

ENCL: 00

SUB CODE: ML

NO REF SOV: 004

OTHER: 000

Card 2/2

BUBLIK, V.T.; GORELIK, S.S.

Mechanism of the formation of a recrystallization nucleus and the effect on it of small additions. Fiz. met. i metalloved. 18 no.3: 416-422 S '64. (MIRA 17:11)

1. Moskovskiy institut stali i splavov.

L 5378-66 EWT(m)/EWA(d)/T/EWP(t)/EWF(k)/EWP(z)/EWP(b)/EWA(c) IJP(c)

ACC NR: AP5027100 MJW/JD/HW

UR/0149/65/000/005/0128/0130
669.715

64
50
23

AUTHOR: Vaynblat, Yu. M.; Gorelik, S. S.; Granovskiy, Ye. B.
44.55 44.55 44.55

TITLE: Effect of heat treatment on certain properties and structure of the hot-pressed aluminum alloy AMg6
44.55, 27 16

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 5, 1965, 128-130

TOPIC TAGS: metal heat treatment, metal pressing, aluminum alloy, crystal orientation

ABSTRACT: Heat treatment (hardening + aging) of certain hot-pressed Al alloys markedly increases the ultimate strength and yield strength of the products fabricated from these alloys, in the direction of pressing as well as to a smaller extent, in the transverse direction. The attendant difference in longitudinal and transverse properties is often termed the pressing effect. Gorelik et al. (Metallovedeniye i termobrabortka, no. 12, 48 (1962) in their study of avial show that the pressing effect is attributable to the oriented distribution of the excess phase in the α -solid solution of Mg or Mn in Al, which hardens the alloy and impedes the processes of recrystallization. Accordingly, the applicability of this theory is tested in the

Card 1/2

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ACC NR: AP5027100

present investigation with respect to the AMg6 aluminum alloy. Rods of AMg6, pressed under industrial conditions, were heat-treated (heating to 450°C for 0.5 hr, cooling in water) and aged (heating to 150°C for 16 hr). Mechanical properties and their anisotropy in the rods were investigated following every individual stage of this treatment, in specimens cut out parallel and counter to the direction of the pressing. It was thus established that the anisotropy of mechanical properties following pressing and heat treatment is greater than following pressing alone. Radiometallographic phase analysis indicates that the specimens after pressing contain a number of phases in addition to the solid solution. The phase Mg_2Al_3 , which disappears after hardening and reappears on aging, is the most distinctly expressed. Following aging, the textural maxima on the phase lines are disposed at virtually the same angles as the maxima of the solid-solution lines corresponding to closely adjoining planes. This confirms the dependence of phase orientation on matrix texture, which indicates that the anisotropy of mechanical properties in the AMg6 alloy is chiefly conditioned by the oriented segregations of the disperse phase in the textured matrix. Orig. art. has: 1 figure, 2 tables.

ASSOCIATION: Moskovskiy inetitut stali i spлавov. Katedra materialovedeniya poluprovodnikov (Moscow Institute of Steel and Alloys, Dept for Material Science of Semiconductors)

SUBMITTED: 10Oct64

ENCL: 00

SUB CODE: MM, SS

NO REF SOV: 003

OTHER: 002

2/2

L 6989-66 EWT(m)/EWA(c)/EWP(b)/T/EWP(t) IJP(c) JD

ACC NR: AP5017333

SOURCE CODE: UR/0181/65/007/007/2235/2237

AUTHOR: Umanskiy, Ya. S.; Prilepskiy, V. I.; Gorelik, S. S.

47
B

ORG: none

TITLE: Roentgen characteristic temperature of Ge-Si solid solutions

SOURCE: Fizika tverdogo tela, v. 7, no. 7, 1965, 2235-2237

TOPIC TAGS: temperature characteristic, Debye temperature, elastic modulus, germanium compound, silicon compound

ABSTRACT: Roentgen characteristic temperature of Ge-Si solid solutions θ_M , was determined by x-ray methods. This value directly measures \bar{U}^2 , the mean square displacement of atoms from equilibrium sites. The magnitude of \bar{U}^2 depends not only on the boundary frequency but also on the form of the thermal oscillation spectrum of the lattice. Calculated and experimental values of θ_M are compared with those of θ (Debye characteristic temperature) for Ge-Si alloys of equiatomic compositions; the calculated values are obtained from the following formula:

$$\theta = a + bT_m^3 \delta^3 M^{-1}$$

where T_m is the melting point of the alloy, δ^3 is the atomic volume, M is the average atomic weight of the alloy, a and b are constants determined from data for pure com-

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ACC NR: AP5017333

ponents; and

$$\theta = \frac{h}{k} \left(\frac{3qN\rho}{4\pi M} \right)^{1/2} v$$

where N is Avagadro's number, ρ is density, M is molecular weight, q is the number of atoms in a molecule, v is the parameter incorporating the speed of the longitudinal and transverse waves. For the experiment, pure n -Ge and p -Si were alloyed and processed into crystals, whereupon θ_M was calculated from the thermal dependence of the x-ray intensities of the (711), (642) and (553) lines, using MoK_α radiation with a

Zr filter and a scintillation counter. Values for θ were obtained by employing calorimetric and elastic modulus methods. The tabulated results for Ge-Si alloys show values ranging from 460 to 475°K for θ and from 371° to 408°K for θ_M . Orig. art. has: 1 table.

SUB CODE: SS/

SUBM DATE: 15Feb65/

ORIG REF: 002/

OTH REF: 008

Card 2/2 *nds*

I. 8852-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(h)/EWA(c) IJP(c) JD/LHE/AT
ACC NR: AP5022703 SOURCE CODE: UR/0181/65/007/009/2673/2677

AUTHOR: Umanskiy, Ya. S.; Prilepskiy, V. I.; Gorelik, S. S. 164
13

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Measuring diffuse scattering of x-rays to study order in an equiatomic solid solution of germanium and silicon

SOURCE: Fizika tverdogo tela, v. 7, no. 9, 1965, 2673-2677

TOPIC TAGS: solid solution, semiconductor research, x ray scattering, ordered alloy, silicon alloy, germanium alloy 21, 44, 55 21, 44, 55

ABSTRACT: Diffuse scattering of x-rays was used for studying short-range order in an equiatomic semiconducting germanium-silicon solid solution. The experimental equipment and procedure are described. The measurements were made at room temperature at angles from 6 to 21°. Coefficients α_i associated with the localized ordering of the atoms, and the dimensional coefficients β_i determined by the difference in sizes of the component atoms were calculated for three coordination spheres by the method of least squares. The results are tabulated. The values of α_i were used for plotting a curve for the intensity of diffuse scattering by the equiatomic Ge-Si al-

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ACC NR: AP5022703

loy. The formulas used for calculating the intensities are given. A curve is also shown for radial distribution of atomic density. Orig. art. has: 3 figures, 8 formulas.

SUB CODE: 20/

SUBM DATE: 19Mar65/

ORIG REF: 007/

OTH REF: 005

BYK
Card 2/2

I. 13530-66 EWT(m)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) IJP(c) JD/HW

ACC NR: AP5028981

SOURCE CODE: UR/0149/65/000/004/0126/0130

AUTHOR: Gorelik, S. S.; Kozlovskaya, V. P.; Tomilova, L. A.

ORG: Moscow Institute of Steel and Alloys, Radiography and Physics of Metals Dept
(Moskovskiy institut stali i splavov, Kafedra rentgenografii i fiziki metallov)

TITLE: Effect of manganese on the formation of macrocrystalline rim around pressed aluminum-alloy products

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 4, 1965, 126-130

TOPIC TAGS: macrocrystalline rim, metal pressing, aluminum alloy, manganese, metal recrystallization, solid solution

ABSTRACT: According to V. P. Kozlovskaya et al. (Alyuminiyevyye splavy. Deformiruyemye splavy. Mashgiz, v. 3, 1964), increasing the Mn content of aluminum alloys to 0.6% wt. is a means of combatting the formation of macrocrystalline rim by maintaining a recrystallized structure throughout the volume of the pressed product. Since, however, the determination of the mechanism of the effect of Mn on the formation of macrocrystalline rim on products made of industrial multicomponent alloys is difficult, the authors investigated this mechanism for hot-pressed rods of binary alloys of the

Card 1/2

UDC: 669.7715

L 13530-66

ACC NR: AP5028981

Al-Mn system following heat treatment (quenching from various temperatures in the 500-620°C range). Micro- and macrostructural examination confirmed that the formation of such rim takes place on heat treatment of products pressed from aluminum alloys representing supersaturated solid solutions. The (opaque) rim forms if the pressing is performed at temperatures (420-450°C) lying in the two-phase region and if the heating during heat treatment is performed at a temperature at which particles of the disperse phase get intensively redissolved. The peripheral zone in which the rim forms on heat treatment is characterized by a more intensive decomposition of the solid solution and formation of heterogained structure (in the process of primary recrystallization) associated with nonuniform conditions of the growth of recrystallization nuclei owing to the nonuniform distribution of disperse particles. Like the decomposition, the dissolution proceeds more intensively in the rim zone and pertains primarily to the high-disperse particles of the second phase whose dissolution is evidently associated with the vigorous growth of the grains on secondary recrystallization, resulting in the formation of the macrocrystalline structure. Increasing the Mn content beyond the necessary minimum does not eliminate the possibility of rim-formation but merely displaces it in the direction of higher temperatures; at the same time this leads to an increasing anisotropy of grain size in the longitudinal cross section of the rim zone. Grain size in the direction at right angles to the pressing axis decreases whereas in the direction parallel to this axis it increases. Orig. art. has: 8 figures, 1 table.

SUB CODE: 11, 13, 20/ SUBM DATE: 18Jun64/ ORIG REF: 004/ OTH REF: 000

Card

2/2

VAYNBLAT, Yu.M.; GORFLIK, S.S.; GRANOVSKIY, Ya.B.

Effect of heat treatment on certain properties and the structure
of the extruded AMgo alloy. Izv. vys. ucheb. zav. ¹telet. mek.
8 no.5;128-130 '65. (MIRA 18:10)

1. Moskovskiy institut stali i splavov, kafedra materialovedeniya
poluprovodnikov.

L 57818-65

ACCESSION NR: AP5008789

by an insignificant anisotropy in the elastic limit and modulus of normal elasticity-
near the beginning of re-crystallization

the number of dislocations per unit area is a function of the degree of orientation but is a constant

alignment of the dislocations. The increase in the resistance of molybdenum and titanium to deformation
formations in the redistribution of dislocations and their alignment

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L 57818-65
ACCESSION NR: AP5008789

...tive portion of the dislocations with the formation of a more stable dislocation configuration. The change in resistance to small plastic deformations ...
...to an extremely high level characteristic of the ...

ASSOCIATION: Moskovskiy institut stali i splyavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 17Feb64

ENCL: 00

SUB CODE: MM, SS

NO REF SOV: 003

OTHER: 002

lyp
Card 3/3

GORELIK, S.Sh.

Graphic method for the design of a system for the cooling of
objects with different temperatures. Khol.tekh. 42 no.2:19-20
Mr-Ap '65. (MIRA 18:5)

SPEKTR, E.N.; GORELIK, S.S.; RAKHSHTADT, A.G.

Structural changes in Fe and the alloy of Fe with 3,5% silicon
during subcritical annealing. Izv. vys. ucheb. zav.; Chern. met.
8 no.7:141-144 '65. (MIRA 18:7)

1. Moskovskiy institut stali i splavov.

UMANSKIY, Ya.S.; PRILEPSKIY, V.I.; GORELIK, S.S.

Studying the order in an equiatomic germanium-silicon solid solution
by measuring the diffuse scattering of X rays. Fiz. tver. tela 7
no.9:2673-2677 S '65. (MIRA 18:10)

1. Moskovskiy institut stali i splavov.

L 36117-66 EWT(m)/T/EWP(t)/ETI IJP(c) JH/JD/GD

ACC NR: AT6016423

(A)

SOURCE CODE: UR/0000/65/000/000/0158/0165

AUTHORS: Gorelik, S. S.; Kozlovskaya, V. P.; Tomilova, L. A.

ORG: none

TITLE: The mechanism of formation of large crystalline grain rims in pressed objects manufactured from aluminum alloysSOURCE: AN SSSR, Institut ¹metallurgii, Metallovedeniye legkikh splavov (Metallography of light alloys). Moscow, Izd-vo Nauka, 1965, 158-165TOPIC TAGS: metal grain structure, aluminum alloy/ D16 aluminum alloy

ABSTRACT: The mechanism of formation and the properties of the so-called large crystalline grain rim (which forms in aluminum alloy objects as a result of compression) were studied. The study was carried out on the following binary systems Al--Cu, Al--Mn, ¹Al--Mg, Al--Si, Al--Fe, and ternary systems Al--Cu--Mn, Al--Cu--Fe, Al--Mn--Fe, and Al--Si--Fe, as well as the quaternary system Al--Cu--Mn--Fe, the iron free alloy D16, and the alloy D16 containing 0.3% Fe. The macro- and micro-structure and lattice parameters of the alloys were investigated as a function of annealing temperature and composition. The electrical resistance of the central, intermediate, and rim sections of rod specimens was determined. The effect of annealing temperature on the alloy grain size was also determined. The experimental results are presented in graphs and tables (see Fig. 1). These results corroborate

Card 1/2

L 36117-66

ACC NR: AT6016423

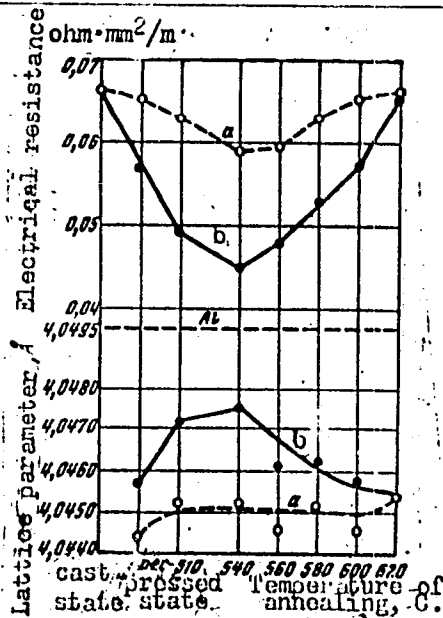


Fig. 1. Dependence of the electrical resistance and lattice parameter of the solid solution formed by alloy 6 (Al + 1.38% Mn) on the annealing temperature in the central (a) and peripheral section (b) of the rod specimen.

the view that the large crystalline grain rim forms as a result of formation of supersaturated solid solutions in the alloy. It was found that both iron and manganese aid in the formation of large crystalline grains. The authors give thanks to V. I. Dobatkin for his critical assessment of the experimental results. Orig. art. has table and figures

SUB CODE: 1167 SUB SOURCE: 16 Sep 65 OTH REF: 006/ OTH REF: 006/

L 36014-66 EWT(1)/T IJP(c) GG/WW/WG

ACC NR: AP6024513

SOURCE CODE: UR/0386/66/004/002/0052/0054

AUTHOR: Gorelik, V. S.; Zubov, V. A.; Sushchinskiy, M. M.; Chirkov, V. A. 59
12

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: Possibility of observing induced infrared radiation in Raman scattering of light

SOURCE: Zh eksper i teor fiz. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 2, 1966, 52-54

TOPIC TAGS: molecular spectrum, Raman scattering, ir radiation, ir quantum generator, stimulated emission, spectral distribution

ABSTRACT: The authors discuss a new mechanism for producing population inversion between vibrational or vibronic levels of molecules. It is shown that if certain conditions for the possible transitions between molecular levels are satisfied, such that one of the levels does not become populated in the case of Raman scattering of light, so that the thermal distribution of the molecules over the vibrational levels may become disturbed and population inversion may occur. The required threshold power is evaluated from the gain per unit length of the transition near the generation threshold, and it is shown by preliminary estimates that the required minimum power is 10^7 W/cm² for liquids and 10^4 W/cm² for gases. The latter is attainable with a xenon lamp (power $\sim 10^5$ W/cm²), and the estimated molecule density at the upper level

Card 1/2

L 36014-66

ACC NR: AP6024513

turns out then to be 10^{13} cm^{-3} . If a ruby laser is used (power $\sim 10^7 \text{ W/cm}^2$), induced Raman scattering can be observed in liquids, with a quantum yield of several times ten per cent and a molecule density 10^{16} cm^{-3} at the upper level. The proposed excitation mechanism is realizable in principle in crystals, too. Orig. art. has: 1 figure and 2 formulas. [02]

SUB CODE: 20/17/ SUBM DATE: 14May66/ ORIG REF: 003/ OTH REF: 003/
ATD PRESS: 5037

Card 2/2/1/1

L 31972-56 EWP(e)/EWT(m)/EWP(w)/ETC(f)/I/EWP(t)/ETI/EWP(k) IJP(H) JI/WH/SOF
 ACC NR: AP6019646 (A) SOURCE CODE: UR/0149/66/000/003/0134/0137
 AT/WH/JH

45
38
3

AUTHOR: Gorelik, S. S.; Gel'man, A. A.

ORG: Moscow Institute of Steel and Alloys. Department of X-ray
 Diffraction Analysis and Physics of Metals (Moskovskiy institut stali i
 splavov. Kafedra rentgenografii i fiziki metallov)

TITLE: Effect of aluminum oxide content and deformation conditions on
 the recrystallization of SAP alloys

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 3, 1966, 134-137

TOPIC TAGS: SAP, SAP alloy, sintered aluminum powder, SAP recrystal-
 lization, hot compacted SAP, cold rolled SAP, aluminum powder recryst-
 tallization

ABSTRACT: SAP powders containing 4, 7.1, 8.9, or 13.3% aluminum oxide
 were hot compacted at 450C with 94% total reduction, cold rolled with
 50% reduction, and annealed to 500-700C (hot-compacted specimens)
 or at 100-650C (cold-rolled specimens). In the hot-compacted speci-
 mens with 4% aluminum oxide, no recrystallization occurred at tempera-
 tures up to 600C, at which temperature the aluminum matrix began to
 melt. The recrystallization in cold-rolled specimens began at 450C;
 at higher temperatures an intensive grain growth and a marked decrease

UDC: 620.186.5

Card 1/2

L 31972-66

ACC NR: AP6019646

of hardness was observed. In specimens containing more than 7% ^{21 7} aluminum oxide, no recrystallization was observed up to the solidus temperature; annealing at 650C for 24 hr produced no structural changes in cold-rolled specimens with 8.9% aluminum oxide. However, the hardness and strength of specimens containing more than 7% aluminum oxide dropped after annealing at 550C or over, which was explained by crack formation. With increasing aluminum oxide the susceptibility to crack formation increased. Increases in the content of aluminum oxide also weakened the texture indication in the diffraction patterns of hot-compacted specimens. This effect was not observed in cold-rolled specimens. Orig. art. has: 4 figures. [AZ]

SUB CODE: 11/ SUBM DATE: 10Jan65/ ORIG REF: 002/ OTH REF: 001.
 ATD PRESS: 5022

Card 2/2 LC

ACC NR: AP7005395

(N)

SOURCE CODE: UR/0148/67/000/001/0131/0133

AUTHOR: Gorelik, S. S.; Reznitskiy, E. L.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Effect of the hardening phase on primary recrystallization of EI437B alloy

SOURCE: IVUZ. Chernaya metallurgiya, no. 1, 1967, 131-133

TOPIC TAGS: metal recrystallization, phase transition, alloy steel, metal grain structure

ABSTRACT: The authors study the effect which the hardening phase has on structural formation in deformed specimens of EI437B alloy. An investigation of the structure of specimens subjected to deformation at various temperatures revealed that mechanical treatment close to the boundary of the two-phase region (890-900°C) causes considerable heterogeneity in grain structure with standard heat treatment (1080°C, 8 hours). Therefore, tests were conducted to determine the stage of recrystallization at which the differences in grain structure appear and the factors which affect the structural formation. The specimens for the test were tapered (to produce a range of deformations) and cut from a single bar. These specimens were tempered to a single-phase solution (heating at 1100°C for 2 hours and cooling in water). Some of the specimens were subjected to tensile tests at room temperature while the remainder were tested at 900°C. Maximum deformation at 900°C was less than 20% with brittle fracture. X-ray

Card 1/2

UDC: 669.14.018.45.011.7

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000516130009-6

phase analysis showed segregation of a considerable quantity of hardening phase $Ni_3(Ti, Al)$ in the deformed region of these specimens. The electron microscope was used for studying the nature of this phase and its distribution. It was found that segregation of the hardening phase is extremely irregular throughout the metal. The course of primary recrystallization during standard heating (1080°C) was then studied in specimens deformed at both temperatures. The results indicate that particles of γ' -phase precipitate out at dislocations during deformation which prevents redistribution with subsequent heating and thus delays formation of recrystallization centers. The structure of specimens deformed at 900°C shows greater irregularity in grain dimensions and larger average grain size. This is probably due to the effect of the second phase on the nucleation process and the growth of nuclei during primary recrystallization. Orig. art. has: 4 figures.

SUB CODE: 11/ SUBM DATE: 27Jul66/ ORIG REF: 08

Card 2/2

ACC NR: AP7002864 (N) SOURCE CODE: UR/0149/66/000/006/0127/0129

AUTHORS: Gorelik, S. S.; Spektor, E. N.; Dolgaya, Zh. A.

ORG: Moscow Institute for Steel and Alloys, Department of X-ray Crystallography and Metal Physics (Moskovskiy institut stali i splavov. Kafedra rentgenografii i fiziki metallov)

TITLE: Influence of heating up to the recrystallization temperature on the change of elastic properties and structure of cold-rolled titanium and zirconium

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 6, 1966, 127-129

TOPIC TAGS: titanium, zirconium, metallurgic research, metal rolling

ABSTRACT: The effect of heating cold-rolled technical grade titanium and zirconium up to the recrystallization temperature on the elastic properties and structure of these metals was studied. The study supplements the results of E. N. Spektor, S. S. Gorelik, A. G. Rakhshadt, and M. B. Novikov (Fizika metallov i metallovedeniye, t. 19, v. 3, 424, 1965). The experimental technique followed is described by E. N. Spektor, S. S. Gorelik, and A. G. Rakhshadt (Izv. VUZ, Chernaya metallurgiya 7, 141, 1965). The experimental results are shown graphically (see Fig. 1). It was determined that the structural changes which result during heating of deformed metals are caused by a thermally activated redistribution of lattice dislocations.

Card 1/2

UDC: 539.32.669.017.15

ACC NR: AP7002864

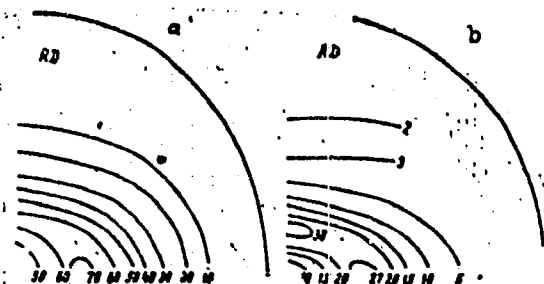


Fig. 1. Polar figures (002) for zirconium (a) and for titanium (b) after cold rolling with 60% compression deformation. $0 \leq \alpha \leq 75^\circ$ for Cu radiation

Orig. art. has: 2 graphs.

SUB CODE: 11/ SUBM DATE: 29Sep65/ ORIG REF: 009/ OTH REF: 002

Card 2/2

ACC NR: AP7002432

(N)

SOURCE CODE: UR/0219/66/000/012/0024/0028

AUTHOR: Gorelik, S. S.; Spektor, E. N.; Burdasova, T. A.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Structural changes during annealing of deformed niobium and its alloys

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 12, 1966, 24-28

TOPIC TAGS: niobium, niobium molybdenum alloy, molybdenum zirconium alloy, alloy structure, alloy property

ABSTRACT:

The recrystallization behavior of commercial-grade niobium, niobium alloy with 4% molybdenum, and molybdenum alloy with 0.15% zirconium has been investigated. Extruded, rolled, and annealed alloy sheets were cold rolled with 80-90% reduction and vacuum annealed at 500-1500C for 2 hr. It was found that the temperature of the beginning of recrystallization for niobium was 1050C, whereas that of the other alloys was 1150C. It is noted that in alloys deformed by stretching, the temperature of the beginning of recrystallization was 100-200C higher than that in rolled alloys due to a more uniform deformation in stretching. The entire recrystallization range for niobium and niobium alloy was found to be 100-150C, and that for molybdenum alloy, 200-250C. Annealing of deformed

Card 1/2

UDC: 620.18:669-1/-9-122:669.293'28'24'296'

ACC NR: AP7002432

niobium alloys in vacuum of $1 \cdot 10^{-4}$ mm Hg brings about a significant absorption of oxygen, which increases with increased temperature; at 1400C the amount of absorbed oxygen reaches 0.1%. Annealing of molybdenum alloys under the same conditions does not cause a similar effect, apparently due to a different type of oxidation. Stresses of the first order, with a magnitude of up to 10—15 kg/mm², nonuniformly distributed along the length of specimens, developed in niobium-molybdenum alloy under the effect of stretching. No such phenomena were observed in molybdenum-zirconium alloy. Orig. art. has: 2 figures and 1 table.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 002/ ATD PRESS: 5113

Card 2/2

GOBELIK, T.L. (Gor'kiy)

Scientific and theoretic conference on the subject "I.P.Pavlov's
militant materialistic theories." Fel'd. i akush. no.9:54-57 S '54.
(MLRA 7:11)

(CENTRAL NERVOUS SYSTEM, physiology
Pavlovian theory)

GOREL'IK, V.A. (Moskva); SHTIL'MAN, M.S. (Moskva)

Method of solving a network transport problem. Zhur. vych. mat.
i mat. fiz. 4 no.6:1137-1142 N-D '64.

(MIRA 18:2)

S/094/61/000/001/003/007
E073/E33S

AUTHORS: Pen'kov, N.I., Gramshpul', E.A., Gorelik, V.I.,
Kislov, B.A. and Zotin, P.Ye.

TITLE: Electrolyser for a Ternary Alloy

PERIODICAL: Promyshlennaya energetika, 1961, No. 1, p. 15

TEXT: In one of the plants producing a ternary alloy, carbon electrodes of 400 x 400 x 550 mm were used. For a loading of 12 000 A the current density at the cathode surface was 0.282 A/cm² and at the anode surface it was 1.25 A/cm². During the gradual burning-off of the carbon anodes fragments of the carbon and the ash dropped off, which formed a sludge and screened a part of the liquid surface of the lead cathode, leading to a sharp decrease in yield. Furthermore, the arrangement of the anodes in the electrolyser was such that the current density at the cathode surface was highly non-uniform, which led to local overheating and a reduction in output. To eliminate these drawbacks, the authors proposed
Card 1/4 ✓

S/094/61/000/001/003/007
E073/E35

Electrolyser for a Ternary Alloy

substitution of the carbon electrodes by graphite blocks of 300 x 400 x 800 mm. Fragments did not fall off the graphite and thus sludge formation was prevented. In spite of the fact that the current density remained the same, 12 000 A, as for carbon anodes, the current intensity in the case of graphite anodes is distributed more uniformly and consequently the cathode surface of the electrolyser is utilised more efficiently (see sketches). Practical introduction of the proposal of the authors (for which third prize was awarded in the Fifteenth All-Union Competition on Saving Energy) led to the following results.

- 1) The output of the electrolyser increased from 1200-1300 to 1500-1600 kg/day.
- 2) The current efficiency increased from 52-55 to 58-62%.
- 3) The specific electricity consumption decreased from 1650 to 1600 kWh/ton.

The resulting annual saving in electricity for the work
Card 2/4

S/094/61/000/001/003/007
E073/E335

Electrolyser for a Ternary Alloy

under consideration was 1 035 000 kWh.
Note: this is a complete translation.

↓

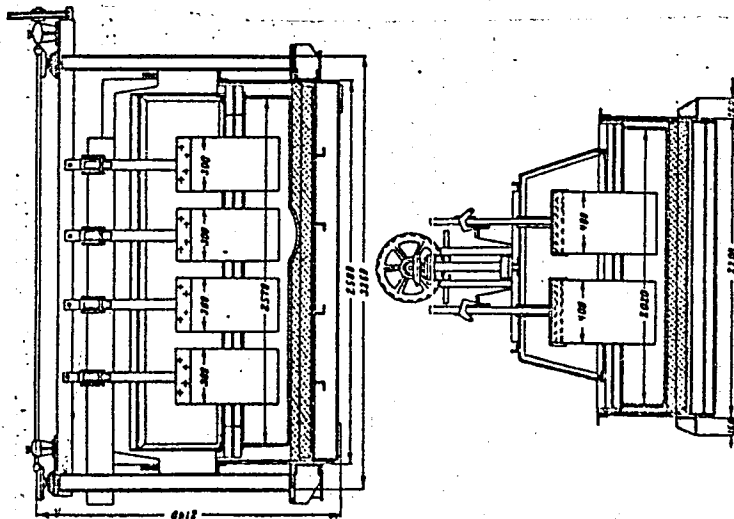
Card 3/4

S/094/61/000/001/003/007
E073/E335

Electrolyser for a Ternary Alloy

Fig:

Card 4/4



Общий вид электролизера.

BIBIK, A.I.; GORELIK, V.I.; KOROKHOV, V.G.; POLISHCHUK, A.V.

Efficient procedure for manufacturing rolls of reduction
rolling mills. Met. i gornorud. prom. no.3:67 My-Je '64.
(MIRA 17:10)

POLYAKOV, P.P.; KOROKHOV, V.G.; GORELIK, V.I.

Standardization of the roll outfit. Standartizatsia
29 no.6:47-48 Je '65. (MIRA 18:12)

1515. Gerasik, Y. M. An applied vibrational calculation of shock-absorbers composed of rubber-metal. In Russian. *Trudy Vuzovskogo Nauchnogo Issledovaniya*, No. 1, 1964, pp. 1-4, 100 pp. 650x.

The elementary knowledge in the oscillations of a system with a degree of freedom in the presence of viscous resistance is used in determining the natural frequencies of a system.

Courtesy Referativnyi Zhurnal, USSR
translation courtesy Ministry of Supply, England

Y.M. Gerasik

RABOTIN, Aleksandr Nikolayevich; GORELOV, V.M., inzh., red.; DUGINA,
N.A., tekhn.red.

[Counterboring and reaming] Zenkerovanie i rasvertyvanie. Pod
red. V.M.Gorelova. Izd.2. Moskva, Gos.nauchno-tekhn.isd-vo
mashinostroit.lit-ry, 1959. 37 p. (Nauchno-populiarnsia biblio-
teka rabocheho-stanochnika, no.19). (MIRA 13:4)
(Drilling and boring)

NOVIKOV, S.S.; BURMISTROVA, M.S.; GORELIK, V.P.

Condensation of nitroalkanes with 2,2-dimethyl- β -hydroxypropionic
and 2,2-dimethyl- β -hydroxybutyric aldehyde. Izv. AN SSSR Otd. khim.
nauk no.10:1876-1878 O '60. (MIRA 13:10)

1. Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk
SSSR. (Propionaldehyde) (Buryraldehyde) (Paraffins)

NOVIKOV, S.S.; BURMISTROVA, M.S.; GORELIK, V.P.; CHKHIKVADZE, Yu.G.

Condensation of nitro alkanes with acetaldehyde. *Izv. AN SSSR Otd. khim.nauk* no.4:695-698 Ap '61. (MIRA 14:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Paraffins) (Acetaldehyde)

OSTROUMOV, Valentin Sergeevich; GORELIK, Vera Semenovna; BELYAKOV, A.,
otv.red.; KONDRAT'YEVA, A., red.izd-va; PANEGINA, T., tekhn.red.

[Organization of work on the revaluation of fixed assets] Orga-
nizatsiia raboty po perechtsenke osnovnykh fondov. Moskva, Goe-
finizdat, 1959. 101 p. (MIRA 12:12)
(Valuation)

TSELIKOV, A.I., akademik; MEYEROVICH, I.M., kand. tekhn. nauk; GORELIK,
V.S., inzh.; ROKOTYAN, S.Ye., inzh.

Relation between unit power consumption and the metal pressure
on the rolls. Stal' 25 no.12:1101-1102 D '65.

(MIRA 18:12)

L 09461-67

ACC NR: AP6024656

SOURCE CODE: UR/0070/65/011/004/0504/0609

AUTHOR: Gorolik, V.S.; Zheludev, I. S.; Sushchinskiy, M. M.

ORIG: Physios Institute im. P. N. Lobedev AN SSSR (Fizichoskiy institut AN SSSR);
Institute of Crystallography AN SSSR (Institut kristallografii AN SSSR)

TITLE: Study of the Raman spectrum of NaNO_2 single crystal near the phase transition point.

SOURCE: Kristallografiya, v. 11, no. 4, 1965, 604-609

TOPIC TAGS: sodium compound, Raman spectrum, phase transition, ferroelectricity, temperature dependence, line broadening, crystal lattice vibration

ABSTRACT: This is a continuation of an earlier study (Kristallografiya v. 10, no. 3, 335, 1965) and deals with the behavior of most lines of the Raman spectrum of single-crystal NaNO_2 in the temperature interval from 30 to 178C. Principal attention was paid to the small temperature range ($\pm 20^\circ$) near the phase transition point (160C). The single crystal was a rectangular prism 3 x 7 x 10 mm, cut so that its smallest side was oriented along the ferroelectric axis z. The Raman spectra were photographed with a spectrograph, using the 4358 Å mercury line for excitation.

Card 1/2

UDC: 548.0:535.36

L 09461-67
ACC NR: AP6024665

Seven lines were registered, whose frequencies agreed essentially with those published earlier. The Raman spectrum obtained near the transition point differed noticeably from that obtained at 30C. The low-frequency lines shifted in linear fashion, while the higher frequency lines exhibited practically no shift. All observed lines broadened with increasing temperature, but the broadening of the low-frequency lines was larger. Some of the lines vanished with increasing temperature. A group-theoretical analysis of the spectrum for both the high and the low frequency parts of the spectrum is used to interpret the results. The vanishing and the intensity variations of the spectra agree with the selection rules, and the broadening is due to ordinary temperature effects connected with the increase of the interaction between the lattice oscillators themselves and the interaction between the lattice oscillators and other degrees of freedom of the crystal. The authors thank Professor P. A. Bazhulin for interest in the work and also V. I. Murzin for valuable advice. Orig. art. has: 4 figures, 1 formula, and 2 tables.

SUB CODE: 20/

SUBM DATE: 03 AUG 65

ORIG REF: 012/

OTH REF: 005

Card 2/2 LC

GORELIK, Ya. polkovnik zapasa, kand. voyennykh nauk

A true fighter of the party. Voen. znan. 41 no.6:15 Ja '65.
(MIRA 18:5)

GORELIK, Ya., polkovnik, kandidat voyennykh nauk.

Development of tank engineering ("Tanks." V. Mostovenko. Reviewed
by IA. Gorelik). Voenn. znan. 31 [i.e. 32] no.4:31 Ap '56. (MJRA 9:8)
(Tanks (Military science)) (Mostovenko, V.)

GORELIK, YA. M.

USSR/ Nuclear Physics - Literature

Card 1/1 Pub. 86 - 35/52

Authors : Gorelik, Ya, M. (Moscow)

Title : Popular literature on atomic energy

Periodical : Priroda 45/1, 119-120, Jan 56

Abstract : A running comment is made on popular books and pamphlets recently published on the peaceful uses of atomic energy. It is stated that there are many more uses than those cited in the books and that the books sometimes contain erroneous statements. Authors mentioned are Leshkovtsev, Zhmuds'kiy, Faydush, Shcherbakov, Kitaygorodskiy, Mikhaylov and Romadin.

Institution :

Submitted :

AUTHOR: **G ORELIK, YA**
Gorelik, Ya., Candidate of Military Sciences 25-10-39/41

TITLE: Inter-Continental Ballistic Rocket (Mezhkontinental'naya
ballisticheskaya raketa)

PERIODICAL: Nauka i Zhizn', 1957, # 10, p 63 (USSR)

ABSTRACT: The Russian scientist K. E. Tsiolkovskiy designed a multistage rocket system with successively dropped stages, and on whose principle Soviet scientists based the construction of the USSR inter-continental ballistic rockets. The cylindrical body of the rocket has no wings, is several meters long, has a stream-lined, pointed head, and is made of an especially heat-resistant material. Inside the body are powerful liquid-fuel rocket engines, fuel and oxidizer tanks and control equipment. In contrast to the non-ballistic rocket, the ballistic rocket starts vertically, is raised to a considerable height beyond the atmosphere into cosmic space, and after performing the so-called ballistic curve it falls to the target with a speed of 20,000 to 25,000 km per hour. The directing of the rocket after its start is automatic. The article then describes the American ballistic rocket, the "Atlas".

AVAILABLE: Library of Congress
Card 1/1

~~GORHUK, Ya. M.~~; DOBROVOL'SKIY, M.B.; RUBIN, S.B.; KANEVSKAYA, M.D., red.;
KARYAKINA, M.S., tekhn.red.

[Concise dictionary of terms and definitions in the fields of atomic energy, atomic weapons, and atomic defense] Kratkii slovar' nekotorykh terminov i opredelenii po atomnoi energii, atomnomu oruzhiu i protivatomnoi zashchite. Moskva, Izd-vo DOSAAR, 1958, 61 p. (MIRA 11:4)

(Atomic energy--Dictionaries)

(

SOV/25-59-9-35/49

AUTHOR: Gorelik, Ya. Candidate of Military Sciences

TITLE: The Voice of Soviet Scientists

PERIODICAL: Nauka i zhizn', 1959, Nr 9, p 73 (USSR)

ABSTRACT: This is a review on the book of collected articles "Sovetskiye uchenyye ob opasnosti ispytaniy yadernogo oruzhiya" (Soviet Scientists Talk About the Danger of the Tests of Nuclear Weapons) edited by Corresponding Member of the Academy of Medical Sciences of the USSR, A.V. Lebedinskiy, and published by the Atomizdat Publishing House, Moscow, 1959. Contributions were made by V.M. Klechkovskiy and I.V. Gulyakin, B.V. Kurchatov, P.M. Chulkov, O.I. Leypunskiy. There is 1 photograph and 1 Soviet reference.

Card 1/1

GORBLIK, Ya., polkovnik, kand. voyen. nauk; ZAKHAROV, V., polkovnik, dots,
kand. voyen. nauk; DESNITSKIY, G., general-mayor artillerii; KITOSHVILI,
Sh., podpolkovnik; VLADIMIROV, V., polkovnik

"Concise dictionary of tactical, operational, and general military
terms." Reviewed by IA. Goreli and others. Voen. vest. 39 no.2:
83-91 F '59. (MIRA 12:7)

(Military art and science--Dictionaries)

(Russian language--Dictionaries)

GORELIK, Ya.

"People's avengers." Reviewed by IA. Gorelik. Sov. voen 43 no.22:
41 N '61. (MIRA 15:2)
(Moscow Province--World War, 1939-1945--Underground movements)

BOBROV, N.N., kand.tekhn.nauk; GORELIK, Ye.A., starshiy prepodavatel';
BOBROV, N.N., kand.tekhn.nauk, ~~1958~~ 1958.

["Uses of fuel and lubricants"; guide for laboratory practice]
Primenenie goruchego i smazochnykh materialov; uchebnoe posobie
po laboratornomu praktikumu. Moskva, Mosk.in-t neftekhim. i
gazovoi promyshl. im. I.M.Gubkina, 1958. 41 p.

(MIRA 14:4)

(Lubrication and lubricants--Testing)
(Fuel--Testing)

89060
S/138/60/000/010/002/008
A051/A029

15.9300

AUTHORS: Abramova, Ye.N., Chernaya, V.V., Gorelik, Ye.A.

TITLE: Thermo-Sensitization of Natural and Synthetic Latexes

PERIODICAL: Kauchuk i Rezina, 1960, No. 10, pp.12-18

TEXT: The authors discuss the production of articles from latexes by the gelatinization of thermo-sensitized mixtures. They prove that by the introduction of an excess of ammonia no retarding of the complex-formation is accomplished when natural and synthetic latexes are used neither the retarding of the gelatinization at room temperature is attained. Further study was carried out on the possibility of lowering the activity of the complex by using stabilizers. The OC-20 (OS-20) product was investigated. It is formed as a result of the processing of octadecyl alcohol with ethylene oxide and is a typical example of a non-ionic stabilizer, i.e., a product which does not disassociate in an aqueous solution and thus holds back the disassociation of other ions. The investigations showed that by introducing an excess of ammonia or by using the non-ionic stabilizer OS-20 no retarding effect of the zinc-ammonium complex, i.e., of the gelatinizing agent is reached. (Figs.1,2). The activity of the zinc-ammonium complex when introducing ammonium salts increases,

Card 1/7

89060

S/138/60/000/010/002/008

A051/A029

Thermo-Sensitization of Natural and Synthetic Latexes

depending on the presence of anions, in the following order: $Cl^- < SO_4^{2-} < NO_3^-$. The investigations further revealed that the zinc-ammonium complex, as a result of its activity, does not help to produce a stable thermosensitized mixture and cannot be used as a thermosensitizing agent. The J1-4 (L-4) latex containing the zinc-ammonium complex was stable only for 24 hours. The property of polyvinylmethyl ether to decrease its solubility with an increase in temperature renders it useful in the production of thermosensitized latex mixtures. ПБМЭ (PVME) was synthesized at the Institut organicheskoy khimii AN SSSR (Institute of Organic Chemistry at the AS USSR) by Professor M.F. Shostakovskiy and was investigated in addition to the foreign product Lutonal M-40. A 20% aqueous solution of OS-20 was used as the stabilizer. Experiments were carried out with natural and synthetic latexes. It was noted that when producing mixtures with PVME a strict procedure must be maintained for the natural latex qualitez viz. 1) introduction of the dispersion sulfur and accelerators, 2) introduction of the stabilizer, 3) lowering the pH of the mixture. For the synthetic latex L-4: 1) introduction of the stabilizer, 2) lowering the pH of the mixture, 3) introduction of the ether, 4) introduction of zinc oxide. The introduction of ether into the L-4 latex increases the viscosity from 17-18 to 80-100 cpoise. The viscosity remains constant with further storage of the mixtures for a period of

Card 2/7

89060

S/138/60/000/010/002/008

Thermo-Sensitization of Natural And Synthetic Latexes A051/A029

one month. The mixtures containing PVME have good technological properties, which allows for the production of easily-processed raw gels on hot molds. Films of various thickness were obtained depending on the length of time the mold was kept in the mixture. The deposition kinetics of L-4 latex and qualitex-based mixtures varies. In investigating the nitroparaffins as thermosensitizing agents for natural and synthetic latexes, it was shown that the latter, as well as PVME, render the latex temperature-sensitive only in the presence of zinc oxide or other metal oxides and hydroxides, in addition to which a small amount of non-ionic stabilizer must be added. In studying nitrobutanol, nitromethane, nitroethane, 2-ethyl-2-nitropropanediol, 1, 3- and 2-methyl-2-nitropropanol, it was established that the nitroparaffins cause gelatinization in the L-4 latex at room temperature even in the presence of an excess of stabilizer. Thus, the nitroparaffins are recommended as gelatinizing agents when producing articles from the L-4 latex at low temperatures. As to the qualitex latex, the best results were obtained when using 2-ethyl-2-nitropropanediol and small quantities of zinc oxide. The pH has little effect on the properties of the mixtures containing nitroparaffins. The sodium and zinc salts of mercaptobenzoimidazol had no thermosensitizing effect on L-4 and L-7. In the case of natural latexes, qualitex and re-vultex stable thermo-sensitive mixtures were obtained which produced a stable

Card 3/7

89060

S/138/60/000/010/002/008

Thermo-Sensitization of Natural and Synthetic Latexes

A051/A029

uniform raw gel on the molds at a temperature from 60 to 80°C. It is pointed out that the salts mentioned have a tixotropic effect, which is a big disadvantage when used as thermosensitizing agents. Figure 6 shows that the optimum temperature of the mold in the mixture is 70°C, so that with a holding time of 60 sec the thickness of the vulcanized film is 0.8 mm. The method for producing thermosensitized mixtures by introducing a coagulant into a protected latex was also investigated based on Reference 12 and the possibility of obtaining thermosensitizing mixtures with OP-10 on the L-4 latex and a few batches of experimental SKS-30 latex was shown. There are 7 graphs and 12 references: 2 Soviet, 7 English, 2 French and 1 German. ✓

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy i lateksnykh izdeliy
(Scientific-Research Institute of Rubber and Latex Products)

Card 4/7

L 9697-136 EWT(m)/EWP(j) RM

ACC NR: AP502652L SOURCE CODE: UR/0286/65/000/019/0069/0069

AUTHORS: ⁴⁴¹⁵⁵ Silonova, M. S.; ⁴⁴¹⁵⁵ Trofimovich, D. P.; ⁴⁴¹⁵⁵ Peschanskaya, R. Ya.; ⁴⁴¹⁵⁵ Kydel'nant,
 N. L.; ⁴⁴¹⁵⁵ Goralik, Ye. A.

ORG: none 36
2

TITLE: Method for obtaining sponge rubber. Class 39, No. 175220 ¹⁵ announced by
 Scientific Research Institute for Rubber and Latex Products (Nauchno-issledovatel'skiy
 institut rezinovykh i lateksnykh izdeliy) ⁴⁴¹⁵⁵

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 69

TOPIC TAGS: rubber, sponge, gelatin, gelatinization agent, catapin, latex 15,44155

ABSTRACT: This Author Certificate presents a method for obtaining sponge rubber
 from latexes, using secondary gelatinization agents. To improve the structure of
 the sponge, catapin is used as the secondary gelatinization agent.

SUB CODE: 11/ SUBM DATE: 05Mar64

OC
 Card 1/1 UDC: 678.061-1,96

2

KATSNEL'SON, F.Ya.; GORELIK, Ye.I.; KARLOV, V.A..

Tropacine therapy of spastic motor paroxysms (salaam spasms, nodding) in young children. Zhur. nevr. i psikh. 61 no.7:1088-1090 '61. (MIRA 15:6)

1. Dispansernoye otdeleniye dlya detey i podrostkov (zav. - V.A. Kolegova) pri bol'nitse imeni Solov'yeva, Moskva.
(SPASMS) (TROPACINE)

KATSMEL'SON, F.Ya.; GORELIK, Ye.I.

Use of diacarb in treating various forms of epilepsy in childhood. Zhur. nevr. i psikh. 61 no.7:1091-1094 '61. (MIRA 15:6)

1. Dispansernoye otdeleniye dlya detey i podrostkov (zav. - V.A. Kolegova) pri bol'nitsse imeni Solov'yeva, Moskva.

(EPILEPSY)

(THIADIAZOLE SULFONAMIDE)

USSR / Human and Animal Physiology. Digestion, Stomach.

Abs Jour : Ref Zhur - Biol., No 15, 1958, No. 70252

Author : Zaryadova, Ye. A.; Gorolik, Ye. M.

Inst : Grodnensk Agricultural Institute

Title : Studies of the Secretory and Motor Functions of the Stomach

Orig Pub : Tr. Grodnensk. s.-kh. in-ta, 1957, No 3, 273-276

Abstract : The addition of concentrates of vitamins A (12,500-15,000 units per 100 kg) and D (1000 units per 100 kg) to the feed of shoats early in the spring led to an increase in weight and secretion of the gastric succus, and also increased its digestive powers and acidity. The movements of the stomach became more frequent and uniform; there was an acceleration of evacuation of the gastric contents.

Card 1/1

GORELIK, Ye. M., CHERNOBROV, S. M. and ZEL'DES, V. Ya.

"The Exchange of Nickel Ions at Cationites," an article included in the book "The Theory and Practice of the Application of Ion-Exchange Agents," edited by K. V. Chmukov and published by the AS USSR, 1955, 164 pp.

SOV/137-58-9-18784

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 89 (USSR)

AUTHORS: Chernobrov, S.M., ~~Gorelik, Ya.M.~~

TITLE: Use of Ion Exchangers to Extract Nickel and Cobalt from Ammonia Solutions (Primeneniye ionitov dlya izvlecheniya nikelya i kobal'ta iz ammiachnykh rastvorov)

PERIODICAL: V sb.: Materialy Soveshchaniya po primeneniyu obmena v tsvetn. metallurgii. Moscow, 1957, pp 64-72

ABSTRACT: A description is presented of methods of extracting nonferrous metals from NH_3 solutions of low metal content. Sulfo-carbon, (I), an ion exchanger made by sulfuric-acid treatment of a natural carbon, was used. The rate of flow of the solution was 1 m/hr in all experiments. In some experiments, determination of the dynamic exchange capacity (DEC) of I for Ni was quantitatively determined. Experiments in the simultaneous absorption of Ni and Co from ammonia solutions and in extraction of the absorbed metals from the I were run in a column 35 mm in diameter, the thickness of the layer being 900 mm and the quantity of I being 400 g. The initial solution contained 1 g Ni, 0.2 g Co, 50 g NH_3 and 100 g $(\text{NH}_4)_2\text{CO}_3$ /liter.

Card 1/2

SOV/137-58-9-16784

Use of Ion Exchangers to Extract Nickel and Cobalt (cont.)

The experiments showed that I possesses the capacity to absorb Ni and Co from ammonia solutions. The DEC of I for Ni was found to be 0.5 and for Co 1.2 mg equiv/g. The absorbed Ni is virtually completely extracted from the I by the H₂ ion; extraction of the Co is somewhat more difficult. Joint absorption of the Ni and Co from ammonia solutions shows the Ni to be the first to appear in the filter. The DEC of I in terms of the combined total of Ni and Co ions is 1.9-2.0%. When Ni and Co are displaced by 150 H₂SO₄/liter, up to 90% of the original Ni and up to 86% of the original Co are extracted in the final fraction. The volume of the concentrated fraction upon extraction is appx. one-tenth of the volume of the initial solution.

O.B.

1. Ammonia--Processing
2. Nickel--Separation
3. Copper--Separation
4. Ammonia--Test results

Card 2/2

GAPT, Ya.M., kand.med.nauk; Prinsipalni uchastiye: BRANZBURG, N.A., vrach;
GOL'TS, I.P., vrach; GORELIK, Ya.S., vrach; ZVONKINA, O.M., vrach;
LIVSHITS, R.I., vrach; LUR'YE, Ye.L., vrach; OZHE, N.B., vrach;
RYBAL'SKAYA, V.G., vrach; CHELNOKOVA, A.K., vrach; YAVORSKIY, A.V.,
vrach

Dynamics of the tuberculous process in patients transferred to the
third group of dispensary registration. Probl. tub. 38 no.3:3-8
'60. (MIRA 14:5)

1. Iz protivotuberkuleznogo dispansera No.4 Moskvy (glavnyy vrach -
zasluzhennyy vrach RSFSR S.M.Zamukhovskiy).
(TUBERCULOSIS)

DANTSER, N.A.; GORELIK, Ye.S.

Clinical death during a lung operation due to pulmonary tuberculosis.
Akt. vop. tub. no.2:207-212 '63. (MIRA 17:9)

FRADKIN, V.A.; GORELIK, Yo.S.; OTSUP, L.N.

Materials on the determination of the prothrombin index and
anticoagulant therapy in a phthisiosurgical clinic. Akt. vop.
tub. no.2:246-252 '63. (MIRA 17:9)

GURELIK, Z.; YAKUSHEV, T.

Use of machinery in sorting onions. Sov. torg. 36 no.10:51-52
0 '62. (MIRA 16:2)

(Onions)
(Sorting devices)

GORELIK, Z.A. [Harelik, Z.A.]

Effect of tectonics on relief formation and the distribution of rivers in the region of the Mikashevich-Zhitkovichi shelf and some characteristics of its development. Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.3:66-75 '63. (MIRA 16:10)

Microfilm frame containing a document page. The page has a large handwritten letter 'R' in the top left corner. The main text is a bibliographic entry:

Gorelik, Z. A., and Rozin, A. M. MINERAL RESOURCES IN THE WESTERN PART OF WHITE RUSSIA (FORMERLY PART OF POLAND). *Russkaya Nedra*, 11 [5] 31-35 (1940). Found in this district are clays, marl, phosphorites, glauconite, sands, peat, vivianite, limestone, refractory clays, bog, iron ores, white quartz sands, brown coal, NaCl, hard coal, and mineral waters.

The microfilm frame includes a header with the text 'AUTHOR INDEX' and '1ST AND 4TH COVERS'. On the right side, there is a vertical label 'SERIALS UNIT'. At the bottom, there is a label '1ST AND 4TH COVERS' and 'PROCESSING AND REPRODUCTION'.

ca 3

Chalk rocks in the western regions of the White Russian S. S. R. and their industrial exploitation. Z. A. Gorelik. *Soviet Geol.* 1941, No. 3, 188 p. F. H. R.

ASNT-51A METALLURGICAL LITERATURE CLASSIFICATION

FROM STRIP	TO STRIP	FROM STRIP	TO STRIP
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

GORELIK, Z.A.

Prospects for using glauconites in the White Russian S.S.R. Trudy
Inst.geol. AN Uz. SSR no.9:192-196 '53. (MIRA 12:1)
(White Russia--Glauconite)

GOBELIK, Z.A.
GOBELIK, Z.A., kand.geol.-mineral.nauk.

Connection between the present-day White Russian relief and
tectonic structures. Vestsi AN BSSR. Ser. fiz.-tekh. nav.
no.2:161-165 '57. (MIRA 11:1)
(White Russia--Geology, Structural)

GOBELIK, Z.A.

Prospects for using glauconites in the White Russian S.S.R.
Trudy Inst.geol.nav. AN BSSR no.1:192-196 ' 58.

(MIRA 12:1)

(White Russian--Glauconite)

GORELIK, Z.A.

Relationship between the modern relief of the Polesye Lowland and the structural features. Izv.vys.ucheb.zav.; geol. i razv. 1 no.11:9-22 N '58. (MIRA 12:11)

1. Belorusskiy gosudarstvennyy univeristet.
(Polesye--Geology, Structural)

GORELIK, Z.A.

Tectonic background of the origin of the Novogrudok and Minsk Uplands and the Oshmyany and Kopyl' Ridges. Dokl. AN BSSR 2 no.11:467-471 D '58. (MIRA 12:8)

1. Predstavleno akademikom AN BSSR K.I. Lukashevym.
(White Russia--Geology, Structural)

LUKASHOV, K.I. [Lukashou, K.I.]; GORELIK, Z.A.; STETSKO, U.U.

Minerals of the White Russian S.S.R. and prospects for the
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BSSR.Ser.fiz.-tekh.nav. no.2:63-75 '59. (MIRA 12:11)
(White Russia--Mines and mineral resources)

GORELIX, Z.A. [Harelík, Z.A.]

Tectonics of the region of the Oshnyany and White Russian
Uplands and their origin. Vestsi AN BSSR Ser. fiz.-tekh. nav.
no.3:106-118 '59. (MIRA 13:3)
(White Russia--Geology, Structural)

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1. Belorusskiy gosudarstvennyy universitet.
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GOEBLIK, Z.A.

Origin of the Mozyr' Hills. Dokl. AN BSSR 3 no.6:262-264 Je '59.
(MIRA 12:10)

1. Predstavleno akademikom AN BSSR K.I. Lukashevym..
(Mozyr' Hills--Geology, Structural)

GORELIK, Zalman Abramovich, kand.geologo-mineral.nauk; ROMANOVSKIY, Nikolay Tarasovich, kand.geograf.nauk; SHKLYAR, A.Kh., kand. geograf.nauk, nauchnyy red.; SHEVLAK, V.A., red.; VOROTYNSKAYA, S.A., tekhnred.

[Natural resources of the White Russian S.S.R. and their utilization] Prirodnye bogatstva Belorusskoi SSR i ikh ispol'zovanie. Minsk, 1960. 37 p. (Obshchestvo po rasprostraneniuiu politicheskikh i nauchnykh znanii Belorusskoi SSR, no.13).

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(White Russia--Natural resources)

LUKASHEV, K.I. [Lukashou, K.I.]; GORELIK, Z.A. [Harelik, Z.A.]

Discussion of the problem of gas and oil deposits in the White
Russian S.S.R. Vestsi AN BSSR. Ser.fiz.-tekh.nav. no.3:132-133 '60.
(MIRA 13:9)

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(White Russia--Gas, Natural--Geology)

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150 '60. (MIRA 13:12)

(Polotsk District--Sand)

GORELIK, Zalman Abramovich; MISHAGOVA, Edit Donal'dovich; LEVKOV, Ernst
Arkad'yevich; AVKSENT'YEV, A.N., red.; BARABANOVA, Ye., red. izd-
va; VOLOKHANOVICH, I., tekhn. red.

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1. Institut geologicheskikh nauk AN BSSR. Predstavleno akademikom AN BSSR K.I. Lukashevym.

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(Salt domes)

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1. Institut geologicheskikh nauk AN BSSR. Predstavleno akademikom AN BSSR K.I.Lukashevym.

(Pripet Valley--Salt domes)

KOPULIN, D.N.; GORELIK, Z.A., nauchn. red.

[Geology and minerals of White Russia] Geologiya i poleznye iskopaemye Bel'russii. Minsk, Izd-vo M-va vysshogo, srednego spetsial'nogo i professional'nogo obrazovaniia BSSR, 1962. 119 p. (MIRA 18:5)

GOBELIK, Z.A. [Hareluk, Z.A.]

Tectonic pattern and basic characteristics of the history of the formation of structural elements in the Pol'sk salt bank. Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.2:78-90 '62. (MIRA 18:4)

BONDARENKO, B.V. [Bandsrenka, B.V.]; GORELIK, Z.A. [Harelík, Z.A.]

Tectonics and the basic characteristics of the history of the formation of structural elements in the Strelchevskaya area of the Pripet fault. Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.4:78-84 '62.

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GORELIK, Z.A.

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1. Institut geologicheskikh nauk AN BSSR. Predstavleno akademikom
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