"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

The effect of workhardening on the ....

The structure seen under the electronic microscope was heterogeneous (Figure 6) even without heat application after coldworking. The variations of electric resistance indicated very intensive further aging, though the dimensions of the second phase remained very disperse and much smaller (~300 Å) than in specimens left without workhardening (~700 Å). This phenomenon is apparently connected with the refining of the blocks and more uniform distribution of the second phase particles that are located not on the grain boundaries only but also on the lines of shearing and twinning. The increasing number of volumes in which a phase separation is possible results in refining of the grain. The conclusion was made that drawing raised hardness more than rolling with the same reduction. This seems to be due to the specific effect of different texture types and a more complex stress pattern in drawing. The higher 2nd-order distortions value after drawing confirms this assumption. It seems that the main factors determining the high strength of coldworked and aged specimens are: decomposition of the supersaturated solid solution with the formation of very disperse phase particles; refining of the mosaic blocks; the usual growth of the blocks in aging at 700° and decrease of the 2nd order distortions. But the intensity of these processes is low, which might be con-

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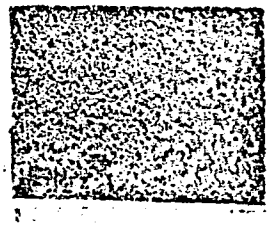
The effect of workhardening on the ....

nected with a simultaneous decomposition process and formation of phases that are splitting the blocks and raising the 2nd order distortions, i.e., with inverse processes. Coagulation of phases in workhardened specimens obviously goes on within single blocks (that stay refined for long time), mainly on account of additive separations from a solid solution. There are 7 figures.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: Febr. 25, 1960

Figure 1: Structure after quenching from 1080°C, 8 hours holding and air cooling. X 25,000.



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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

MERKIN, Roal'd Mikhaylovich; SVISTUNOVA, Galina Mikhaylovna; PROFERANSOV, D.P., nauchnyy red.; BOGINA, S.L., red. izd-va; RODIONOVA, V.M., tekhn. red.

[Estimated cost of construction] Smetnaia stoimost' stroitel'stva. Moskva, Gosstroiizdat, 1962. 41 p. (MIRA 15:7)
(Construction industry—Costs)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

YEMELIN, Ye.A.; SVISTUNOVA, G.N.; TSARFIN, Ya.A.

Simultaneous determination of sulfuric acid and phenolsulfonic acid in mixtures. Zav.lab. 28 no.5:548 '62. (MIRA 15:6)

1. Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh smol.

(Sulfuric acid) (Phenolsulfonic acid)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

Separate determination ...

the normality of $HClO_4$, 119.16 is the equivalent of MVP, E is the weighed portion. Control tests showed that the presence of the nitrile group did not interfere. If MVP is contained in the copolymer in the form of salt, 200-400 mg of the copolymer are dissolved in dimethyl formamide, and potentiometrically titrated with 0.1 N piperidine dissolved in isopropanol. To determine the nitrile nitrogen, 200 mg of the copolymer are mixed with 100 ml of 40% KOH, and the ammonia released in heating is collected in 40 ml of 0.1 N HCl. After 4-5 hr, water vapor is blown through the apparatus, and the free HCl is back-titrated with 0.1 N NaOH. Table 2 shows test results in good agreement with the total nitrogen content determined according to Dumas. There are 2 figures, 2 tables, and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh smol (Vladimir Scientific Research Institute of Synthetic Resins)

Card 2/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

YEMELIN, Ye.A.; SVISTUNOVA, G.P.

Determination of acetic anhydride in acetylating mixtures. (MIRA 14:7)
Zav.lab. 27 no.8:971-972 '61.

1. Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh smol.

(Acetic anhydride)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

YEMELIN, Ye.A.; SVISTUNOVA, G.P.

Potentiometric determination of acids in mixtures of cellulose acetate production. Zav. lab. 27 no. 12:1458-1459 '61. (MIRA 15:1)

1. Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh smol.

(Cellulose acetate) (Acids, Organic) (Potentiometric analysis)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISTUNOVA, G.P.; YEMELIN, Ye.A.; TSARFIN, Ya.A.

Determination of cobalt in cobalt naphthenate. Plast. massy no.11:56-57 '63. (MIRA 16:12)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

L 13323-63 EWP(j)/EPF(c)/EWT(m)/BDS ASD Pc-4/Pr-4 RM/WW/JW

ACCESSION NR: AT3002344 S/2513/63/013/000/0156/0159

AUTHORS: Yemelin, Ye. A.; Svistunova, G. P.; Tserfin, Ya. A.

TITLE: The separate determination of the pyridinic and nitrile nitrogen in the acrylonitrile and methylvinylpyridin copolymers

SOURCE: AN SSSR. Komissiya po analiticheskoy khimii. Trudy. v. 15, 1963. Organicheskiy analiz, 153-159.

TOPIC TAGS: nitrogen, nitrile, saponification, KOH, HCl, nitromethane, acrylonitrile, methylvinylpyridine

ABSTRACT: The determination of nitrogen in nitrile was accomplished by means of saponification with 40% aqueous KOH solution. The ammonium evolved from the reaction is absorbed in 0.1 N HCl solution and then titrated with 0.1 N NaOH solution using methyl red indicator. The saponification must be carried out in a vessel resistant to strong alkali solutions. The determination of pyrydinic nitrogen was accomplished by potentiometric non-aqueous titration. After the dissolution of methylvynilpyridine copolymer in a mixture of nitromethane and hydrochloric acid, the solution is titrated potentiometrically with 0.05 N $HClO_4$

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

L 13323-63

ACCESSION NR: AT3002344

in a dioxane solution. The nitrile group does not interfere with the pyridinic nitrogen. The average relative error is 1%. Orig. art. has: 1 table.

ASSOCIATION: Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh smol (Vladimirsk Scientific-Research Institute for Synthetic Resins).

SUBMITTED: 00 DATE ACQ: 13Jun63 ENCL: 00

SUB CODE: CH, ML NO REF SOV: 001 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

YEMELIN, Ye.A.; SVISTUNOVA, G.P.

Analysis of isophthaloyl chloride. Zhur. anal. khim. 20 no.9:1010-1013 '65. (MIRA 18:9)

1. Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh smol.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISTUNOVA, K. I., and POKROVSKIY, Ya.Ye.

"On recombination in Silicon doped by indium, potassium, and antimony."

Report to be submitted for the Intl. Conference on Photoconductivity, IUPAP, Cornell University, Ithaca, N. Y., 21-24 Aug 1961.

(Kalashnikov, S. G. is scheduled to present the paper)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

20786
S/181/61/003/003/011/030
B102/B205

9.4300 (1150, 1143, 1136)

26.2421

AUTHORS: Pokrovskiy, Ya. Ye. and Svistunova, K. I.

TITLE: Study of recombination in silicon alloyed with gallium, indium, and antimony

PERIODICAL: Fizika tverdogo tela, v. 3, no. 3, 1961, 757-767

TEXT: The electron-hole recombination in semiconductors has been studied several times, but the effect of various impurities on this process has not been duly considered. Of particular interest is the effect of the elements of the third and the fifth group on the lifetime of carriers in silicon, since these elements were used to obtain silicon of a given conductivity. A study has now been made of the effect of Ga, In, and Sb on the recombination of minority carriers in silicon. The starting material were single crystals of silicon, which had been obtained by zone crystallization. They had a resistivity of some hundred ohm·cm; the carrier lifetime varied from 200 to 800 μsec. The specimens were cut along the growth axis (111), and had a size of 15 · 4 · 3 mm³. Minute quantities of impurities were added. The distribution coefficients for Ga, Sb, and In amounted to 0.01, 0.04, and

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

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Study of ...

5.10^{-4}, respectively. The carrier concentration was determined from the Hall effect in direct current. The ratio of the Hall mobility to the drift mobility was 1.18 for n-type and 0.71 for p-type crystals. The carrier lifetime was determined from the vanishing of photoconductivity. Within the region of partial ionization of the acceptors, the hole concentration, P_o, is given by $\frac{p_o(N_D+p_o)}{N_A-N_D-p_o} = N_v e^{-E/kT}$, where N_A is the acceptor concentration, N_D the donor concentration, and N_v the effective state density in the valence band; E is the acceptor ionization energy. If $N_D \ll N_A$, p_o, $p_c = \sqrt{N_A N_v}\, e^{-E/2kT}$. For In one obtains E = 0.16 ev; the activation energy for almost all specimens was equal to E/2 = 0.08 ev. This indicates that $N_D \ll N_A$, p_o for all specimens. In the following, the authors report on a comparison of various specimens concerning the dependence of the minority carrier lifetime τ on the majority carrier concentration, and the temperature dependence of τ. [Abstracter's note: The specimens studied are indicated by numbers and letters; their composition and parameters, however, are not given]. Specimens containing gallium in concentrations of more than 10^{16} cm^{-3} had similar

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Study of ...

carrier lifetimes varying from 9 to 11 μsec. The recombination rate of these specimens was determined, not by Ga, but by unchecked impurities or defects. In-doped specimens showed the same hole concentration but somewhat shorter lifetimes. The electron trapping cross section for In was not larger than 10^{-19} cm^2. At temperatures below 200°K, all In- and Ga-doped crystals had a carrier lifetime of about 5 μsec, irrespective of their impurity concentration. With a further rise in temperature, many In-doped specimens showed an exponential increase of lifetime; in this range, τ was proportional to $1/p_o$. The hole capture cross section for In was found to be of the order of 10^{-15} cm^2. A study of the dependence of τ on the electron concentration in Sb-doped specimens showed that if the concentration of Sb is changed by two orders of magnitude, τ remains practically unchanged. This is taken as an indication that Sb does not affect the recombination rate in Si. τ is determined by deep unchecked recombination centers. In- or Sb-doped specimens had a lifetime of 10-12 μsec, which was largely independent of the concentration of In. A study of the temperature dependence of the time in which the photoconductivity in n-type In-doped specimens vanishes has shown a number of peculiarities. While Sb-doped specimens exhibit

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B102/B205

Study of ...

a slow decrease of lifetime with dropping temperature, In-doped specimens show an exponential increase of τ. The activation energy of this process was 0.16 ev. These observations may be described by the relation $\tau = \tau_{p_0}(1+N_t/p_1^t)$, where p_1^t is the hole concentration in the case where the Fermi level coincides with the indium level; N_t is the concentration of indium. The most important results of these studies are the following: 1) Ga and Sb do not affect the recombination rate in Si; the carrier lifetime in Si alloyed with these elements is determined by the existence of unchecked recombination centers. 2) The electron trapping cross section for In atoms is less than $10^{-19}cm^2$, and the hole trapping cross section for In atoms is larger than $10^{-18}cm^2$. 3) n-type Si alloyed with In and Sb displays adhesion effects. This may be quantitatively explained by the trapping of holes by ionized In atoms. Professor S. G. Kalashnikov is thanked for discussions and his interest in the work. There are 5 figures, 2 tables, and 12 references: 4 Soviet-bloc and 8 non-Soviet-bloc.

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B102/B205

Study of ...

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR Moskva (Institute of Radio Engineering and Electronics of the AS USSR, Moscow)

SUBMITTED: June 24, 1960

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Card 5/5

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

24.7700 (1055, 1137, 1043)

28097
S/181/61/003/009/031/039
B108/B138

AUTHORS: Pokrovskiy, Ya. Ye., and Svistunova, K. I.

TITLE: Radiative capture of electrons by indium atoms in silicon

PERIODICAL: Fizika tverdogo tela, v. 3, no. 9, 1961, 2820-2826

TEXT: The authors measured the electrons radiative capture cross section of neutral indium atoms in indium-silicon alloys at low temperatures. They used a metallic cryostat, consisting of a double Dewar flash with observation windows. The equilibrium concentration n_o of electrons was determined from the d.-c. Hall effect, and it was found to decrease with temperature from about 10^{16} cm^{-3} at 300°K to about 10^{14} cm^{-3} at 50°K. The relaxation time τ was determined from the decrease of photoconductivity in the case of a slight deviation from equilibrium. With falling temperature, τ rises exponentially to about 85°K and remains practically constant from that point on. The authors have shown before (Ref. 1: FTT, III, 757, 1961) that the constant relaxation time is determined by the expression

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Radiative capture of electrons ...

$\tau = \frac{1}{S_n^o v n_o}$, where v denotes the mean thermal velocity of the electrons and S_n^o the conduction-electron capture cross section. The S_n^o of indium atoms was calculated from this formula and plotted against temperature in Fig. 3.

In order to explain the nature of the elementary processes determining S_n^o, the authors undertook a quantitative examination of the recombination radiation at 80°K using polished 1 mm plates as specimens. An СФ-4 (SF-4) spectrophotometer was used for electron-hole pair generation. The sharp intensity peak as determined with the aid of an 0.03 ev resolving monochromator of the type УМ-2 (UM-2) was found to be at 0.97 ev. The calculated value was 1.01 ev (Refs. 4,5: J. A. Burton. Physica, 20, 845, 1954; F. J. Morin, J. P. Maita. Phys. Rev., 96, 29, 1954). Fundamental calculations indicated that not more than 70% of the total recombination radiation could pass the surface of the samples. Substituting

0.97 ev = $1.6 \cdot 10^{-19}$ watt.sec, one can calculate the intensity of re-

[illegible] events are
[illegible] pture cross sec-
[illegible]ned by the radiative
[illegible]and V. L. Bonch-Bruyevich are

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

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S/181/63/005/001/019/064
B102/B186

AUTHOR: Svistunova, K. I.

TITLE: Attenuation of non-equilibrium conductivity in a semiconductor that contains two types of recombination centers

PERIODICAL: Fizika tverdogo tela, v. 5, no. 1, 1963, 118-123

TEXT: For a semiconductor whose recombination centers are independent of each other, the conductivity attenuation described by

$$\delta n = \sum_{i=1}^{3} A_i e^{-\lambda_i t}, \quad \delta p = \sum_{i=1}^{3} B_i e^{-\lambda_i t}, \quad \delta N_t^- = \sum_{i=1}^{3} C_i e^{-\lambda_i t}; \tag{2}$$

is calculated in the following approximations:

$$\left.\begin{aligned} &N_t^0,\ N^0,\ n_1' \ll n_0,\quad p_1' \gg p_0, \\ &\alpha_n' N_t^0,\ \alpha_p (p_0 + p_1) \ll \alpha_n (n_0 + n_1). \end{aligned}\right\} \tag{3}$$

$\delta n = \delta p = \Delta$, $\delta N_t^- = \delta N^- = 0$. In the simplest case, for $\alpha_p N^- \gg \alpha_p^t N_t^-$

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Attenuation of non-equilibrium ...

$$\left.\begin{aligned} N_i^0 \gg n_0 + n_1', \quad N_i^- (n_0 + n_1') \ll N_i^0 (p_0 + p_1') \\ N^0 \gg n_0 + n_1, \quad N^- \ll p_0 + p_1, \\ \alpha_n' (n_0 + n_1'), \quad \alpha_n (n_0 + n_1) \ll \alpha_p' (N_i^- + p_0 + p_1'), \quad \alpha_p (p_0 + p_1). \end{aligned}\right\} \qquad (7)$$

are satisfied (p-type semiconductor)

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$$\left.\begin{aligned}
\lambda_1 &= \frac{1}{\tau_1} = \alpha_n N^0 + \alpha_n^t N_t^0,\\
\lambda_2 &= \frac{1}{\tau_2} = \alpha_p (p_0 + p_1),\\
\lambda_3 &= \frac{1}{\tau_3} = \alpha_p^t (N_t^- + p_0 + p_1^t),\\
A_1 &= \Delta, \quad A_2 = 0, \quad A_3 = 0,\\
B_1 &= \Delta - B_2 - B_3, \quad B_2 = \Delta \alpha_n N^0 \frac{\lambda_3 - \alpha_p^t (p_0 + p_1^t)}{(\lambda_1 - \lambda_2)(\lambda_3 - \lambda_2)},\\
B_3 &= \frac{\Delta}{\lambda_1 - \lambda_3}\left[\alpha_n^t N_t^0 - \alpha_p^t N_t^- - \frac{\alpha_n N^0 \alpha_p^t N_t^-}{\lambda_2 - \lambda_3}\right],\\
C_1 &= \Delta - C_2 - C_3, \quad C_2 = \Delta \frac{\alpha_n N^0 \alpha_p^t N_t^-}{(\lambda_1 - \lambda_2)(\lambda_2 - \lambda_3)}, \quad C_3 = B_3.
\end{aligned}\right\} \qquad (8).$$

This solution is well suited for describing the attenuation of photoconductivity in p-type Si, doped with In and containing several types of recombination centers. As shown in FTT, 3, 757, 1961, the

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exponential growth of $\tau(T)$ at low temperatures is determined either by τ_2 (capture of holes by impurity centers) or by τ_3 (capture of holes by In atoms). n_o, p_o are the carrier equilibrium concentrations, δn, δp the deviations from equilibrium, N_t and N the concentrations of doping and foreign impurities, N_t^-, N^- the concentrations of the corresponding atoms, $N_t^o = N_t - N_t^-$, $N^o = N - N^-$, δN_t and δN are the deviations from the equilibrium populations of the investigated and foreign atoms by electrons, n_1^t, p_1^t (n_1,p_1) are the carrier concentrations if the Fermi level coincides with the energy level of the investigated (foreign) impurity, α_n^t,α_p^t (α_n,α_p) are the carrier capture cross sections for investigated (foreign) impurities.

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR Moskva (Institute of Radio Engineering and Electronics AS USSR, Moscow)

SUBMITTED: July 21, 1962
Card 5/5

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

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L 15553-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3003883 S/0181/63/005/007/1880/1886

AUTHORS: Pokrovskiy, Ya. Ye.; Svistunova, K. I. 57 56

TITLE: Some peculiarities of radiative electron capture at indium and gallium atoms in silicon 27 27

SOURCE: Fizika tverdogo tela, v. 5, no. 7, 1963, 1880-1886

TOPIC TAGS: capture, radiative capture, electron, In, Ga, Si, phonon, atom, indium, gallium, silicon

ABSTRACT: It has been found that the coefficient of electron capture at neutral atoms of In and Ga in Si is near 10^{-12} cm^3 sec^{-1} at 30K and that it increases exponentially on decrease in temperature, with an activation energy of about 0.035 ev. It has been established that the coefficient of electron capture at Ga atoms, as at In atoms, is determined by radiative transitions. An investigation of the spectral distribution of recombination radiation has shown that electron capture at Ga atoms occurs with an emission of phonons, whereas at In a considerable part of the capture process occurs without the accompaniment of phonons. The setup for measuring recombination radiation is shown in Enclosure 1. "In conclusion the authors express their thanks to Professor S. G. Kalashnikov for discussions of the results." Orig. art. has: 4 figures, 1 table, and 3 formulas.

Card 1/1 ASSOCIATION: Institute of Radio Engineering and Electronics, Academy of Sci. SSSR

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

ACCESSION NR: AP4011731 S/0181/64/006/001/0019/0024

AUTHORS: Pokrovskiy, Ya. Ye.; Svistunova, K. I.

TITLE: Radiative capture of current carriers at impurity atoms in silicon and germanium

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 19-24

TOPIC TAGS: radiative capture, capture, current carrier, charge carrier, impurity atom, silicon, germanium, capture coefficient, electron, hole, boron, bismuth, zinc, radiative transition, recombination radiation, useful absorption, free electron

ABSTRACT: The authors have determined the temperature dependence of the capture coefficient of electrons at neutral atoms of boron and of holes at neutral atoms of bismu h in silicon, and also of electrons at singly charged negative atoms of zinc in germanium. These relations are shown in Fig. 1. on the Enclosure. The authors have found that the capture coefficient is determined by radiative transitions. In examining the connection between spectral distribution of impurity recombination radiation and deep impurity levels, they have shown that the contribution of radiative transitions, occurring without the participation of phonons, increases as the depth of level becomes greater. Because of the relative small capture coefficient,

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ACCESSION NR: AP4011731

the absorption cross section of recombination radiation because of electron transitions with zinc atoms in the conduction band of germanium should be on the order of 10^{-18} cm^2. At zinc concentrations of about 10^{16} cm^{-3} this makes the coefficient of "useful" absorption on the order of 10^{-2} cm^{-1}. Thus, the absorption at free electrons, the concentration of which (in this experiment) exceeds 10^{16} cm^{-3}, leads to a large absorption coefficient. Therefore, the "useful" absorption of recombination radiation in zinc-doped n-type germanium should not prevail. "In conclusion, the authors express their thanks to Professor S. G. Kalashnikov for discussing the results of this work and to V. G. Alekseyeva for preparing the zinc-doped germanium samples." Orig. art. has: 2 figures, 1 table, and 1 formula.

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR, Moscow (Institute of Radio Engineering and Electronics AN SSSR)

SUBMITTED: 12Jun63 DATE ACQ: 14Feb64 ENCL: 01

SUB CODE: PH NO REF SOV: 003 OTHER: 007

Card 2/2

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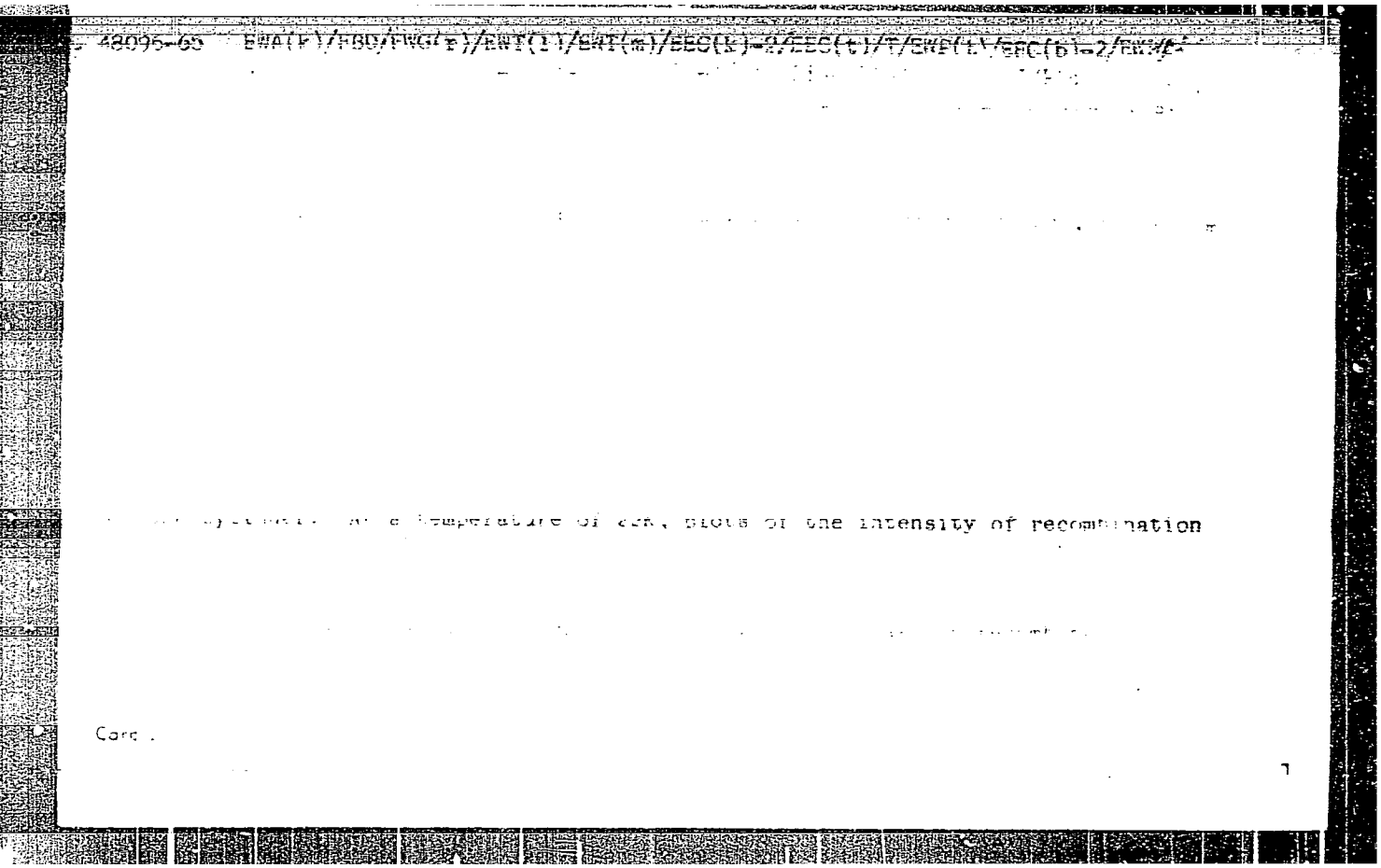

42095-65 EWA(h)/FBD/EWG(k)/EWT(l)/EWT(m)/EEC(k)-2/EEC(t)/T/EWP(t)/EPC(b)-2/EWP(t)

[illegible] at a temperature of 77K, [illegible] of the intensity of recombination

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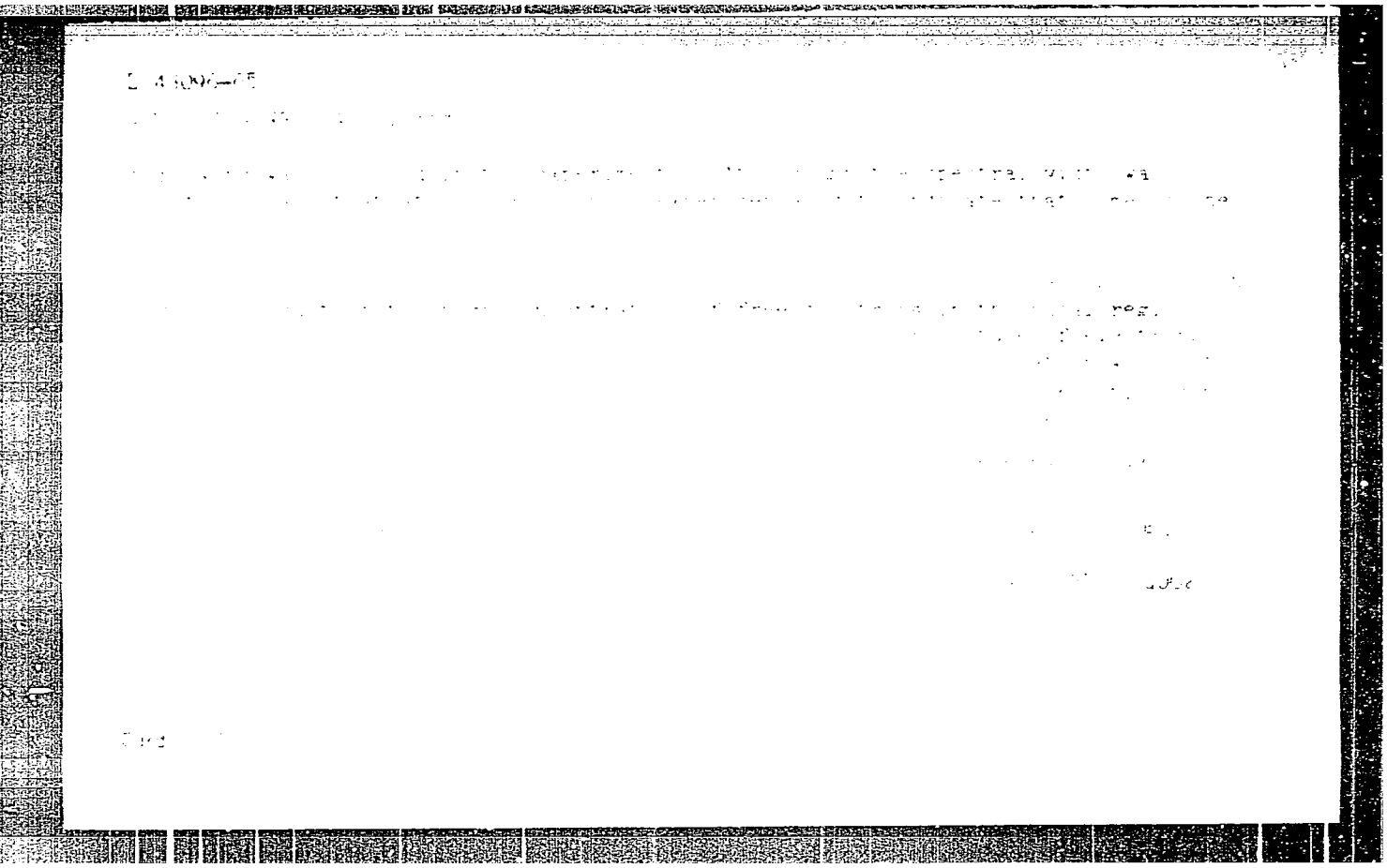

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

[illegible], I.F.; SVIRIDOVA, K.I.

Impurity recombination radiation from indium-doped n-silicon. Fiz. tver. tela 7 no.5:1579-1581 My '65. (MIRA 18:5)

1. Institut radiotekhniki i elektroniki, Moskva.

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L 54734-65 EWT(l)/EWP(e)/EWT(m)/EWP(l)/EWP(t)/EWP(b) IJP(c) JD/JG/GG
ACCESSION NR: AP5014589 UR/0181/65/007/006/1837/1845

AUTHOR: Pokrovskiy, Ya. Ye.; Svistunova, K. I.

TITLE: Impurity and inter-impurity radiative recombination in silicon

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1837-1845

TOPIC TAGS: radiative recombination, photoconductivity, silicon, conduction band,

ABSTRACT: This is a continuation of earlier investigations by the authors (FTT v. [illegible] with investigation of photoconductivity in [illegible] the authors investigated [illegible] of the impurity re- [illegible] boron, with an aim at ascertaining whether a allowance for the direct electronic transitions between the impurity atoms of the donor and acceptors is necessary. The silicon was strongly doped to make the impurity band overlap the conduction band of the silicon, and to [illegible] To provide a low injec- [illegible] light filter at room tem- [illegible] at low temperature. The

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ACCESSION NR: AP5014589

6

results show that at low temperatures, when the electron concentration (n) in the conduction band becomes lower than 10^{13} cm^{-3}, the recombination rate is determined by the direct radiative transitions between the donor and the acceptor atoms. The coefficient of inter-impurity radiative recombination was found to be close to 3 x 10^{-6} cm^3/sec and to depend little on the temperature. When n > 10^{13} cm^{-3}, the recombination rate is determined by radiative capture of the electrons from the conduction band by the indium or boron atoms. It is thus shown that direct electronic transitions between the donor and acceptor atoms can play an important role and even determine the rate of recombination at low temperatures at relatively low injection levels. At high injection levels, however, which were used in the earlier investigations, capture of the free non-equilibrium carriers by the neutral atoms of indium, gallium, boron, and bismuth in silicon predominate. "The authors thank S. G. Kalashnikov for a discussion of the work." Orig. art. has: 5 figures and 5 formulas. [JA]

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR, Moscow (Institute of Radio Engineering and Electronics, AN SSSR)

SUBMITTED: 21Jan65	ENCL: 00	SUB CODE: GC, NP	
NO REF SOV: 006	OTHER: 002	ATD PRESS: 4030	

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

L 9672-66 EWT(1)

ACC NR: AP5027451 SOURCE CODE: UR/0181/65/007/011/3464/3465

AUTHOR: Pokrovskiy, Ya. Ye.; Svistunova, K. I.

ORG: Institute of Radio Engineering and Electronics AN SSSR, Moscow (Institut radiotekhniki i elektroniki AN SSSR)

TITLE: Effect of doping on the recombination radiation of diodes with an *n*-GaSb base region

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, 3464-3465

TOPIC TAGS: gallium compound, antimonide, tellurium, semiconductor diode, recombination radiation, radiation spectrum

ABSTRACT: The authors study recombination radiation spectra of GaSb diodes as a function of tellurium concentration in the base region. The *p*-type emitter regions of the specimens were zinc-doped to a concentration of $\sim 1 \cdot 10^{20}$ cm^{-3}. The Hall constant at room temperature was used for determining the tellurium content in the *n*-type base region. Current-voltage curves are given as well as curves for the spectral distribution of recombination radiation. Diodes with a Hall constant of -76 show a typical rectifying current-voltage curve, while the curve for diodes with a Hall coefficient of -14.5 is characteristic of tunnel type diodes. Diodes with intermediate concentrations of tellurium have rectifying characteristics, the reverse currents increas-

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L 9672-66

ACC NR: AP5027451

ing with tellurium content. The recombination radiation spectra lie in an energy region which is narrower than the forbidden band in GaSb (~0.813 ev at 4.2°K). The energy corresponding to the peaks in the spectra increases with tellurium concentration at first, and then drops sharply. The peak shifts from ~0.74 for a Hall coefficient of -20 to ~0.70 for R = -14.5. The width of the spectra increases with concentration of tellurium, a second maximum appearing in the spectrum for GaSb with a Hall coefficient of -14.5. Thus both the transition from rectifying characteristics to tunnel characteristics and the sharp change in the nature of the spectra take place with an extremely small reduction in the negative Hall constant. A theoretical explanation is given for these phenomena. The authors are grateful to S. G. Kalashnikov for discussion of the results, and to V. G. Alakseyeva for furnishing the GaSb specimens. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 22Jun65/ ORIG REF: 001/ OTH REF: 002

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SHAPOVALENKO, B.I.; SVISTUNOVA, N.M.; CHUVILO, B.V.

Anticorrosion technique in the production of synthetic odorous substances. Masl.-zhir.prom. 26 no.4:37-41 Ap '60. (MIRA 13:6)

1. Kaluzhskiy kombinat sinteticheskikh dushistykh veshchestv.
(Kaluga--Odorous substances)
(Corrosion and anticorrosives)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISTUNOVA, R.

Automatic device for taking out samples of cement. Bud. mat. i konstr. 4 no.2:58 Mr-Ap '62. (MIRA 15:9)
(Cement--Testing)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVIETUMOVA, N.P.; AYKHODZHAYEV, B.T.; POGOSOV, Ya.I.

Synthesis and properties of cellulose acetomethacrylates. Plast. massy no.8:57-59 '65. (MIRA 18:8)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISTUNOVA, T.M.

Results of contact radiotherapy of epidermal hemangiomas in children; 3-year observations. Med. rad. 8 no.10:37-42 O '63. (MIRA 17:6)

1. Iz onkologicheskogo otdeleniya 2-v detskoy polikliniki (glavnyy vrach V.I. Troshina, nauchnyy konsul'tant - doktor meditsinskikh nauk A.P. Lazareva) Kuybyshevskogo rayona Leningrada.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISTUNOVA, T.M. (Leningrad, ul. Blokhina, d.2/77, kv.48)

Comparative evaluation of the results of short-focus roentgenotherapy in hemangiomas of the outer integuments in children immediately following the treatment and three years later. Vop. onk. 10 no.7:83-87 '64. (MIRA 18:4)

1. Iz onkologicheskogo otdeleniya 2-y detskoy polikliniki Kuybyshevskogo rayona Leningrada (glavnyy vrach - V.I.Troshina, nauchnyy konsul'tant - doktor med. nauk A.P.Lazareva).

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

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The effect of rare earth metals on ...

plasticity of the alloy at high temperatures decreases. 3) Neither the mechanical properties of the alloy at room temperature nor its grain size is affected by the addition of the elements studied in quantities less than 0.1%. 4) Ductility of the alloy at 700 °C can be improved by rare earth metal additions. This is illustrated in Fig.1, where the elongation (%) in creep at 700 °C under a stress of 36 kg/mm^2 (left-hand side scale, lower curves) and elongation during a standard tensile test at this temperature (right-hand scale, upper curves) is plotted against the actual La or Ce content in the alloy. It will be seen that all these curves pass through a maximum at approximately 0.02% of the alloying addition content. 5) The higher the melting point of the rare earth metal addition, the more pronounced is its effect on the high-temperature strength of the alloy studied. This is shown in Fig.2, where the time-to-rupture (hours) is plotted against the nominal La, Pr, Ce and Nd content in the alloy, tested at 700 °C under a stress of 36 kg/mm^2. 6) The gas content of the alloy studied is reduced 3 to 4 times by the addition of 0.05-0.15% Pr or Ce. N.N. Sorokina, N.G. Moreyn, Ye.A. Balasheva and V. Golubeva participated in this work.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

L 18729-63 EWP(q)/EWT(m)/BDS AFFTC/ASD Pad JD/HW/JG
ACCESSION NR: AP3004785 S/0129/63/000/008/0027/0033 68 64

AUTHOR: Svistunova, T. V.; Estulin, G. V.

TITLE: Fine structure of KhN77TYu alloy containing rare-earth metals

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 8, 1963, 27-33

TOPIC TAGS: heat-resistant nickel-base KhN77TYu alloy, AISI Nimonic 80, fine transgranular structure, internal friction, chromium atom diffusion mobility, heat resistance, cerium addition, lanthanum addition, neodymium addition

ABSTRACT: The effect of 0.1% additions of Ce, La, or Nd (residual content 0.02%) on the fine structure of heat-resistant Ni-base KhN77TYu [AISI Nimonic 80] alloy has been studied. Measurements of the internal friction in the 20—800C range performed on alloy containing Ce or La annealed at 1200 or 1080C and aged at 700C for 6 or 50 hr showed that both Ce and La lower the absolute magnitude of the internal friction peaks, La being more effective than Ce. In accordance with this, both Ce and La improve the heat resistance. For example, at 700C the internal friction of unalloyed KhN77TYu is 1.5 times higher and the rupture life (50 hr under a stress of 36 kg/mm^2) 4 times shorter than those of the same alloy

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ACCESSION NR: AP3004785

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containing La (rupture life 220 hr). Additions of Nd were found to reduce the size of the mosaic blocks. La and Nd also lower the diffusion mobility of Cr atoms, Nd being more effective than La. High-temperature stress-rupture tests showed that the lower the diffusion mobility of Cr atoms, the higher the heat resistance of the alloy. For example, KhN77TYu alloy containing 0.1% Nd at 700C under a load of 36 kg/mm^2 has a rupture life of 260 hr, compared with 50 hr for KhN77TYu alloy. In general, the higher the melting temperature of a rare-earth metal of the Ce subgroup (Nd, 1024C; La, 935C; Ce, 840C), the stronger is the beneficial effect on heat resistance. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: TsNIIChM

SUBMITTED: 00 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: MA, ML NO REF SOV: 010 OTHER: 005

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISTUNOVA, T.V.; ESTULIN, G.V.

Effect of rare earth metal additions on the oxidation of the KhN77TIU alloy. Sbor. trud TSNIICHM no.35:5-10 '63. (MIRA 17:2)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

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L 6889-65 EPA(s)-2/EWT(m)/EWP(q)/EWP(b) Pad/Pt-10 ASD(a)-5/ESD(gs) JD/
WW/EW/JG

ACCESSION NR: AR4044234 S/0137/64/000/006/I088/I089

SOURCE: Ref. zh.Metallurgiya, Abs. 6I509

AUTHOR: Estulin, V. G.; Svistunova, T. V.

TITLE: The influence of rare-earth elements on the structure and properties of nickel-chrome alloy

CITED SOURCE: Sb. Legirovaniye staley. Kiyev, Gostekhizdat USSR, 1963, 151-155

TOPIC TAGS: nickel based alloy, chrome containing alloy, rare earth, rare earth element

TRANSLATION: Studies the behavior of rare-earth metals in the process of smelting, the nature of their distribution in the alloy, and the influence of rare-earth metals on the structure of a solid metal. An investigation was conducted using the alloy Ni43/ (0.05-0.05% C, 21% Cr, 2.5-2.8% Ti, 0.8-1.0% Al, the rest - Ni). Individual additions of Ce, La, and Nd, and mischmetal were introduced in an amount of 1%. As a result of oxidation, the amount of rare-earth metal in the melt

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L 6389-65
ACCESSION NR: AR4044234

decreases by 30-50% in 1 minute and by 80-90% in 9 minutes. The plasticity and heat resistance of the alloy are sharply lowered after the first minutes of holding of the melt with the rare-earth metal. An increase of the holding to 6-9 min leads at first to a restoration, and then to an essential increase, of these properties. Thus, the time of destruction of the alloy at 700° and a load of 23 kg/mm^2 is 250 hours; as a result of the introduction of mischmetal and holding of the melt for 1 min it drops to 40-50 hours, while with an increase of the holding to 9 min it increases to 950 hours. It is established by radiography that a large part of the rare-earth metal is in the alloy in the form of oxides, sulfides, nitrides, and others. With an increase of the holding of the melt these inclusions emerge to the surface and become slag. By autoradiography it is established that the rare-earth metal is distributed in the structure in the form of thin inclusions throughout the grain (with a rare-earth-metal content of ≤0.026). With a higher content of rare-earth metals the inclusions formed by them are located for the most part along the grain boundaries, which leads to a worsening of the properties. Bibliography: 7 references.

SUB CODE: MM, IC ENCL: 00

Card 2/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISTUNOVA, T.V., inzh.; ESTULIN, G.V., doktor tekhn.nauk, prof.

Effect of rare-earth elements on the properties of nickel-base heat-resistant alloys. Stal' 23 no.9:835-838 S '63. (MIRA 16:10)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

AUTHOR: Estulin, G. V. (Deceased); Svistunova, T. V.

TITLE: Effect of rhenium and iridium on the properties of heat-resistant nickel alloys

SOURCE: AN SSSR. Nauchnyy sovet po probleme zharoprochnykh splavov. Moscow, Izd-vo

TOPIC TAGS: KhN77TYu alloy, nickel base alloy, rhenium containing alloy, iridium containing alloy, molybdenum containing alloy, chromium containing alloy, titanium containing alloy, aluminum containing alloy

ABSTRACT: Two series of alloys, based on KhN77TYu alloy (0.03% C, 20.2% Cr, 2.5% Ti, 0.8% Al, balance Ni) and containing 2—6% rhenium and 3—5% iridium, respectively, were melted in a 4 kg-capacity induction furnace, forged into bars, [illegible] for 16 hr. Both elements considerably [illegible] its softening

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ACCESSION NR: AT4046841

3

temperature from 700 to 750—800C. Alloying with 1.5—1.8% rhenium or iridium increased the rupture life at 700C under a stress of 40 kg/mm^2 to about 180 hr as compared to about 40 hr for alloys containing similar amounts of molybdenum or tungsten (see Fig. 1 of the Enclosure). Rhenium and iridium, like molybdenum, [illegible] the interat[illegible]nds in the nickel-chromium-based solid

ASSOCIATION: none

SUBMITTED: 16Jun64 ENCL: 01 SUB CODE: MM

NO REF SOV: 007 OTHER: 000 ATD PRESS: 3137

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

L 1[illegible]-65

ACCESSION NR: AT4046841 ENCLOSURE: 01

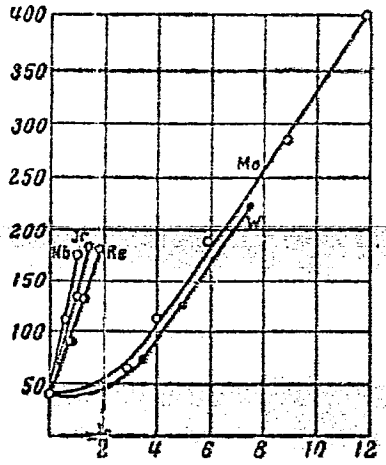

Fig. 1. Effect of alloying with refractory metals on the heat resistance of KhN77TYu alloy

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L 6615-65 EWT(m)/EWP(q)/EWP(b) Pad MJW/JD/HW
ACCESSION NR: AP4042812 S/0126/64/018/001/0150/0153

50
47

AUTHOR: Svistunova, T. V.; Estulin, G. V. (Deceased)

TITLE: Effect of rare-earth metals on the structure and properties of nickel KhN77TYu alloy

SOURCE: Fizika metallov i metallovedeniye, v. 18, no. 1, 1964, 150-153

TOPIC TAGS: heat resistant nickel alloy, KhN77TYu alloy, lanthanum containing alloy, neodymium containing alloy, praseodymium containing alloy, alloy structure, alloy mechanical property

ABSTRACT: The heat resistant and mechanical properties of a nickel-base KhN77TYu alloy (0.02% C, 20% Cr, 2.6% Ti, 0.95% Al) with and without individual additions of 0.1% La, Nd, or Pr have been investigated. It was found that during aging at 700C, decomposition of the solid solution of heat treated KhN77TYu alloy is accompanied by the precipitation of a strengthening γ'-phase of the $Ni_3(Ti,Al)$ type. The amount of the $Ni_3(Ti,Al)$ phase was the same in all alloys after

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L 6615-65
ACCESSION NR: AP4042812

identical heat treatment and increased as the duration of aging was increased. For example, after aging at 700C for 16 and 1000 hr, the amount of the phase was about 7 and 10%, respectively. The presence of La, Nd, or Pr in the alloys has no effect on the lattice constant of either the solid solution or the precipitated phase. The hardness of an alloy with or without the addition of La, Nd, or Pr changed similarly; it increased with aging for up to 250 hr, but decreased with a longer aging time because of coagulation of the γ′-phase. The mechanical properties of identically heat-treated alloys containing the same amount of the $Ni_3(Ti,Al)$ phase, with or without the addition of La, Nd, or Pr, change differently with prolonged aging. For example, aging at 700C for periods up to 100 hr has no appreciable effect on the tensile and yield strengths of the alloy but decreases its ductility characteristics. The decrease is more pronounced in an alloy without an r-e metal constituent. The addition of r-e metals stabilizes the alloy structure. At 700C, an increase in the aging time from 16 to 100 hr decreased ductility by 30% in an alloy without an r-e metal constitutent and by 12% in an alloy with La. R-e metals produced an analogous effect on the ductility of the alloys

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following a 200-hr aging under a stress of 30kg/mm^2 at 700C. For example, the ductility of KhN77TYu alloy without an r-e metal constituent aged under stress decreased by 60%, and that with added La or Pr decreased by 30% as compared with the initial ductility of the heat-treated alloy. As the aging time was increased from 16 to 100 hr, the rupture life of alloys with added La, Nd, or Pr remained the same, but decreased by 25% in the alloy without an r-e metal constituent. The above data makes it possible to conclude that small additions of r-e metals stabilize the properties of the alloys at some stage of the aging, and that stabilization results from a different behavior of the intermetallic γ′-phase during prolonged aging of alloys with and without r-e metal constituents. Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: Institut kachestvennykh staley TsNIIChM im. I. P. Bardina (Institute of Special Steels, Central Scientific Research Institute for Ferrous Metallurgy)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

L 6615-65
ACCESSION NR: AP4042812

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SUBMITTED: 03Aug63 ATD PRESS: 3094 ENCL: 00

SUB CODE: MM NO REF SOV: 005 OTHER: 000

Card 4/4

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

L 12090-66 EWT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c) MJW/JD/HW/WB
ACC NR: AP6000602 SOURCE CODE: UR/0129/65/000/012/0006/0010

AUTHOR: Babakov, A. A.; Svistunova, T. V.; Chermenskaya, N. F. 63
59
13

ORG: TsNIIChERMET

TITLE: Effect of silicon on the mechanical properties and proneness to intercrystalline corrosion of chromium-nickel-molybdenum alloy

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 12, 1965, 6-10 bottom half of insert facing p. 40, and top half of insert facing p. 41

TOPIC TAGS: nickel base alloy, corrosion resistance, intercrystalline corrosion, phase diagram metal grain structure / EP375 type Cr-Ni-Mo alloy

ABSTRACT: Cr-Ni-Mo alloys of the Kh15N55M16V (EP375) type (>0.08% C, 1% Si, 1% Mn, 0.020% S, 0.025% P, 0.35% V, 7% Fe, 2.5% Co, 14.5-16.5% Cr, 15-17% Mo (Ni base)) -- hastelloy, langaloy, etc. --are used in chemical industry in redox media and various aggressive media. Their principal shortcoming is proneness to intercrystalline corrosion in the zone of the thermal influence of welding as well as following reheating to 650-1000°C, due chiefly to the segregation of the ternary σ-phase along grain boundaries. Glass et al. (Metallkunde, 1960, no. 5) showed that reducing the Si content of these alloys to hundredths of a percent can retard the segregation rate of σ-phase in Ni-Cr-Mo alloys of the 25% Cr-15% Mo system. In this connection, the

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L 12090-66

ACC NR: AP6000602

the authors present the results of a comparative investigation of the mechanical properties (hardness, impact strength, corrosion resistance) and proneness to intercrystalline corrosion of three types of Cr-Ni-Mo alloys containing 0.06 - 1.60% Si, 15.0-25.2% Cr, 14.7-17.2% Mo. Proneness to intercrystalline corrosion was determined for sheet specimens following 48-hr boiling in a solution of 30% H_2SO_4 + 40 g/liter $Fe_2(SO_4)_3$ with subsequent 90° bending around a frame. At the same time the depth of penetration of intercrystalline corrosion was determined by the metallographic method. The corrosion resistance of alloys in 50% H_2SO_4 at 70°C was determined according to weight loss. It was established that the presence of Si in the alloys adversely affects their properties by accelerating the segregation of secondary phases. Of the investigated alloys, the alloy Kh15N65M15B* with its lower Si content (0.9%) is recommended for pilot industrial tests. Orig. art. has: 2 tables, 4 [3] figures.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 000/ OTH REF: 004

Additional Alloy designations shown in Journal

* Kh15N65M15V (EP567) 18

Kh15N70M15 19

Kh25N70M15 18

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

ACC NR: AP6027298 SOURCE CODE: UR/0133/66/000/008/0748/0751

AUTHOR: Svistunova, T. V.; Doronin, V. M.; Kruzhkov, V. I.; Topilin, V. V.; Dzugutov, M. Ya.; Vinogradov, Yu. V.; Chermenskaya, N. F.; Kordonov, B. A.

ORG: "Elektrostal'" Plant (Zavod "Elektrostal'"); TsNIIChM

TITLE: Corrosion resistant nickel-based alloys

SOURCE: Stal', no. 8, 1966, 748-751

TOPIC TAGS: corrosion resistant alloy, intergranular corrosion, nickel base alloy, fatigue strength

ABSTRACT: The authors study and compare corrosion resistance of various types of nickel-based alloys. The welded joints of these alloys are subject to intercrystalline corrosion in aggressive media. Methods are discussed for eliminating this phenomenon. Among these methods are heat treatment of the welded joints, reduction of carbon and iron content in the alloys and the introduction of carbide-forming elements. It was found that intercrystalline corrosion could be eliminated by alloying N70M27 alloy with 1.4-1.7% vanadium. This eliminates intercrystalline corrosion in welded joints up to 6 mm thick without requiring heat treatment. The new alloy is designated EP496. It was also found that intercrystalline corrosion could be eliminated in chromium-nickel-molybdenum alloys by reducing their carbon-silicon and iron content. The new

 UDC: 669.14.018.8

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ACC NR: AP6027298

alloy is designated EP567. Both of these new alloys have a fatigue limit of 5-7 kg/mm^2 at 1200°C which is 3-4 times higher than that of Kh18N9T steel. A new process is developed for melting and pressure working these alloys to satisfactory deformability. EP496 and EP567 alloys are melted in open induction furnaces with 500 and 1000 kg capacity. The ingots are worked on snagging machines until all defects are removed from their surfaces. Both alloys are difficult to machine, nevertheless, they can be roughed with much less difficulty than Kh18N10T steel. Deformation temperatures for both alloys are given. Both of these alloys have excellent corrosion resistance in hydrochloric and sulfuric acids at various temperatures and concentrations. The welded seams of these alloys are not subject to intercrystalline corrosion and therefore can be recommended for welded sheet structures and tubes used in the chemical and petroleum industries. Orig. art. has: 6 figures, 2 tables.

SUB CODE: 11/ SUBM DATE: None/ ORIG REF: 003/ OTH REF: 005

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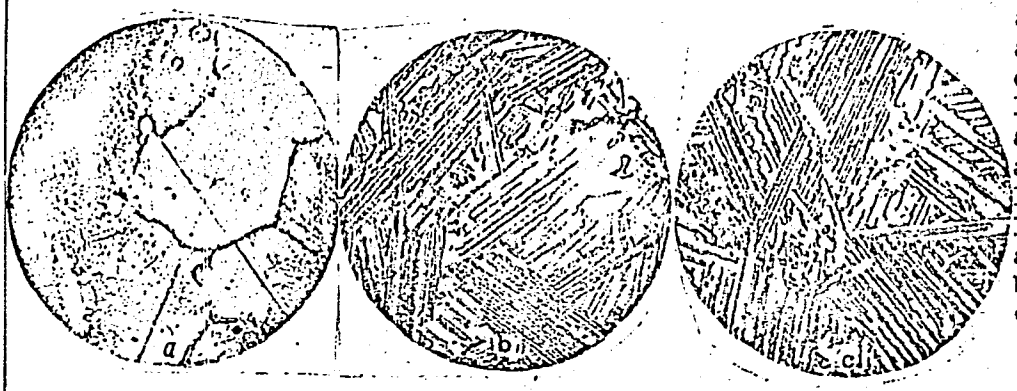

Fig. 1. Microstructure of alloys after quenching from 1150C in water and annealing at 800C for 100 hrs. X 1200:
a - N70M27;
b - N70M27F;
c - N70M27B.

decreases the corrosion stability of the alloy. The intercrystalline analysis method was developed by G. L. Shvarts. The phase and chemical analysis was carried out by Ye. F. Yakovleva and I. M. Dubrovina. The x-ray analysis was performed by V. A. Belyayeva. Orig. art. has: 3 tables and 4 graphs.

SUB CODE: 11/ SUBM DATE: none/ OTH REF: 003

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SANDLER, N.L.; SVISTUNOVA, V.I., vrach-ordinator

Peculiarities in the clinical course of influenza in the period of outbreak in 1957 and 1959 as revealed by material from the Mogilev Province Hospital. Zdrav. Belor. 6 no. 5:31-32 My '60.
(MIRA 13:10)

1. Iz Mogilevskoy oblastnoy bol'nitsy (glavnyy vrach - zasluzhennyy vrach BSSR S.T. Il'in). 2. Zaveduyushchiy infektsionnym otdeleniye (for Sandler). 3. Infektsionnoye otdleniye Mogilevskoy oblastnoy bol'nitsy. (for Svistunova).
(MOGILEV PROVINCE—INFLUENZA)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SNEGOVSKIY, F. P., kand. tekhn. nauk; POTAPKINA, N. P., inzh.
SVISTUNOVA, V. P., inzh.

New materials used in friction units of machinery. Vest. mashinostr. 42 no.12:36-37 D '62. (MIRA 16:1)

(Machinery—Construction)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISTUNOVA, Z.V., Cand Tech Sci -- (diss) "Effect of cold hardening on the structure and properties of the nickel-chrome heat-resistant alloy EI-437." Mos, 1958, 10 pp including cover (Min of Higher Education USSR. Mos Order of Labor Red Banner Inst of Steel im I.V. Stalin) 120 copies (KL, 27-58, 112)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

AUTHORS: Svistunova, Z. V., Chaporova, I. N., Vasil'yeva, N. P., Sultanyan, T. A., Kiselev, V. Ye. SOV/32-24-9-21/53

TITLE: An Electron-Microscopic Investigation of the Structure of Powder-Metallurgical Hard Alloys (Elektronnomikroskopicheskoye issledovaniye struktury metallokeramicheskikh tverdykh splavov)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 9, pp 1093-1095 (USSR)

ABSTRACT: In this paper experimental results obtained by employing new methods of producing replicas for structural examinations of hard alloys are given. Furthermore, the conditions for polished section etching are determined. The polished sections of hard alloys of the types BK 6, BK 8, BK11, T15K6 and T30K4 were produced as usual, the method of polishing by etching being employed. The reagents used and the conditions are given in a table. It is observed that satisfactory results are obtained by titanium and collodion replicas. Quartz replicas have the disadvantage of being non-resistant. Among other facts the results mentioned show that the alloys of tungsten carbide with cobalt, a normal carbon content provided, consist

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of two phases- the tungsten carbide and the solid solution of tungsten and carbon in cobalt. The fine-grained alloy BK consists of tungsten carbide granules of 0,4 to 0,7μ. Pictures of the microstructures obtained are given. There are 4 figures, 1 table, and 8 references, 6 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov (All-Union Scientific Research Institute of Hard Alloys)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISTUNOVA, Z., kand.tekhn.nauk

"Temper and strain aging of carbon steels" by K.M. Pogodina-Alekseeva. Reviewed by Z.Svistunova. NTO 2 no.7:62-63 Jl '60. (MIRA 13:7)

(Steel--Metallography)
(Pogodina-Alekseeva, K. M.)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

82719
S/133/60/000/004/008/010
A054/A026

18 1150

AUTHORS: Bernshteyn, M.L.; Svistunova, Z.V., Candidates of Technical Sciences

TITLE: The Effect of Cold Hardening on the Structure and the Properties of the ЭИ437 (EI437) Grade Heat-Resisting Alloy

PERIODICAL: Stal', 1960, No. 4, pp. 358 - 362

TEXT: The structural changes of the EI437 type alloy during cold treatment, aging and the mechanism of strengthening are discussed. A nickel-chrome alloy, EI437, with the following composition was tested: C 0.075%; Mn 0.22%; Si 0.47%; S 0.0047%; P 0.009%; Cr 20.52%; Ce 0.04%; Ti 2.62%; Al 0.56%; Cu 0.02%; Fe 0.001%; Ni res. The alloy was rolled and drawn to harden it, quenching was started at 1,080°C, cooling was carried out by water, air and in the furnace (between 1,080 - 700°C: 125°C/h and up to 500°C: 40 - 50°C/h). After quenching and deformation the samples were repeatedly heated up to 500°C, 600°C, 700°C and 800°C for holding times up to 50,000 min, with compressions of 5%, 25%, 50% and 75%. The effect of various factors on the hardness and the electrical resistance of the alloy

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A054/A026

The Effect of Cold Hardening on the Structure and the Properties of the ЭИ437 (EI437) Grade Heat-Resisting Alloy

were analyzed in detail. It was found that the hardness of the alloy grows in each case of deformation in proportion to the degree of hardening, on account of the desintegration of the blocks, the increase in secondary distortion and the decomposition of the solid solution. The changes in hardness and electrical resistance observed at 500°C indicate that the decomposition of the solid solution starts already at this temperature. The increase in electric resistance is more pronounced in the samples deformed than in those not deformed due to the formation of atomic segregations in the solid solution. This increase depends on the rate of previous deformation, its accumulated energy contributing to the development of heterogeneity in the solid solution upon repeated heating. The electrical resistance is stabilized after a holding time of 5,000 min indicating two simultaneous processes: the decrease in electric resistance during the decomposition of the solid solution will be compensated by an increase upon the formation of heterogeneity, similarly to the phenomenon observed in "natural" aging. At 600°C the formation of heterogeneity in the solid solution and aging is more

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The Effect of Cold Hardening on the Structure and the Properties of the ЭИ437 (EI437) Grade Heat-Resisting Alloy

intensive than at 500°C. At a compression of 75% a decrease in hardness could be observed by a partial recrystallisation during a long heating interval. At 700°C hardness and electric resistance display a change which is characteristic of dispersion hardening. In samples considerably deformed high and stable values for hardness were observed. At a compression of 50% the hardness does not decrease, not even for a holding time of 50,000 min. According to X-ray analyses, the secondary distortion partially decreases when increasing the heating time at 700°C. When heating for 50,000 min, these distortions, as well as the indices for hardness, are identical for samples treated by rolling and drawing. Electron-microscopical tests proved that the high degree of hardness in samples compressed to 50% after a long aging is due to the maintenance of a highly dispersed condition of the second phase. The drop in hardness after 50,000 min is not only due to the coagulation of the second phase, but also to the beginning of recrystallization which is mainly remarkable in samples compressed to 75%. At 800°C decomposition, coagulation of the second phase and the recrystalliza-

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

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A054/A0/26

The Effect of Cold Hardening on the Structure and the Properties of the ЭИ437 (EI437) Grade Heat-Resisting Alloy

tion are still more pronounced. The decrease in hardness due to coagulation and recrystallization sets in the earlier, the greater the compression. The X-ray analysis of electrolytical deposits discovered in samples compressed to 50% and 75%, after aging for 30,000 min at 800°C, showed that hardening with the accumulation of surplus energy promotes the transformation of the cubic face-centered, metastable γ'-phase into a more stable η-phase (Ni_3Ti type) with hexagonal lattice. It can be concluded that the recrystallization of the cold-hardened EI437 alloy results at a long and repeated treatment at 700°C in the decrease of heat-resistance at this temperature. When heat treatment is carried out at 600 - 650°C, where the strengthening effects of tempering can still be maintained, the heat-resistance of the metal increased after the thermo-mechanical treatment. There are 7 figures, 1 table and 9 references: 8 Soviet and 1 German.

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISYUK, I.V.

Distribution of snow cover in the complex semidesert conditions of the trans-Volga region. Trudy GGO no.36:137-141 '52. (MIRA 11:1)
(Volga Valley--Snow)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISYUK, I.V.

SVISYUK, I.V.

Experience in giving service in agricultural meteorology to a basic model machine-tractor station. Meteor. i gidrol. no.9: 38-39 S '57. (MLRA 10:9)
(Meteorology, Agricultrual) (Machine-tractor stations)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

USSR/Cultivated Plants - Grains M

Abs Jour : Ref Zhur Biol., No 12, 1958, 53541

Author : Svisyuk, V.I.

Inst : Petrovsk Agricultural Meteorological Station

Title : Agrometeorological Conditions of Development of Winter Wheat in Petrovskiy Rayon of the Stavropol'skiy Krai

Orig Pub : Materialy po izuch. Stavropol'sk. kraya. Vyp. 8, 1956, 33-41

Abstract : The results of observations made at the Petrovsk Agricultural Meteorological station on the chief stages in the development of winter wheat. The article examines the problems of the sowing periods, conditions of wintering, spring-summer conditions of vegetation, agricultural technique in 1943-1946 and in 1947-1955,and the harvesting of the crop.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISZT, Pal

In commemoration of M. V. Lomonosov; on his 250th birthday. Fiz szemle 11 no.11:337-340 N '61.

1. Magyar Tudomanyos Akademia Muszaki Fizikai Kutato Intezete, Budapest.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISZT, Pal

In commemoration of Academician A. F. Ioffe. Fiz szemle 12 no.2: 43-46 F '62.

1. Muszaki Fizikai Kutatointezet.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISZT, P.; SCHANDA, J.

Some remarks on the photoelectroluminescence of ZnS single crystals. Acta phys Hung 14 no.2 3:121-125 '62.

1. Research Institute for Technical Physics of the Hungarian Academy of Sciences, Budapest. Presented by G. Szigeti [Gyorgy Sziegti]

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVIGZT, P.

Narrow bands of the luminescence of CuBr and of alkali halide phosphors activated by CuBr. Acta phys Hung 14 no.2 3:283-294 '62.

1. Research Institute for Technical Physics of the Hungarian Academy of Sciences, Budapest. Presented by G. Szigeti [Gyorgy Szigeti]

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVIGET, P.

Ultraviolet irradiation of ZnS single crystals kept in the atmosphere of various gases. Chekhosl fiz zhurnal 13 no.2:88-90 '63.

1. Research Institute for Technical Physics, Hungarian Academy of Sciences, Budapest, Hungary;

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVISZT, P.

On the darkening of ZnS single crystals by light. Acta physica Pol 26 no.3/4:823-827 S-O '64.

1. Research Institute for Technical Physics of the Hungarian Academy of Sciences, Budapest.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

Brit. Abs. B II

June 1953

SVIT, N. P.

1

Fibres; Textiles; Cellulose; Paper

Straight-bar knitting machines. Svit N. P. (U.P. 684,245, 22.11.49. Czechoslov., 30.12.48).—The machine comprises an independent shaft for controlling the welt bars and a draw-off roller shaft for winding up, unwinding, and discharging the sets of hosiery articles into containers arranged underneath the rollers and for simultaneously returning the draw-off hooks to their basic position. The two shafts operate automatically and independently of each other.

O. POTTER.

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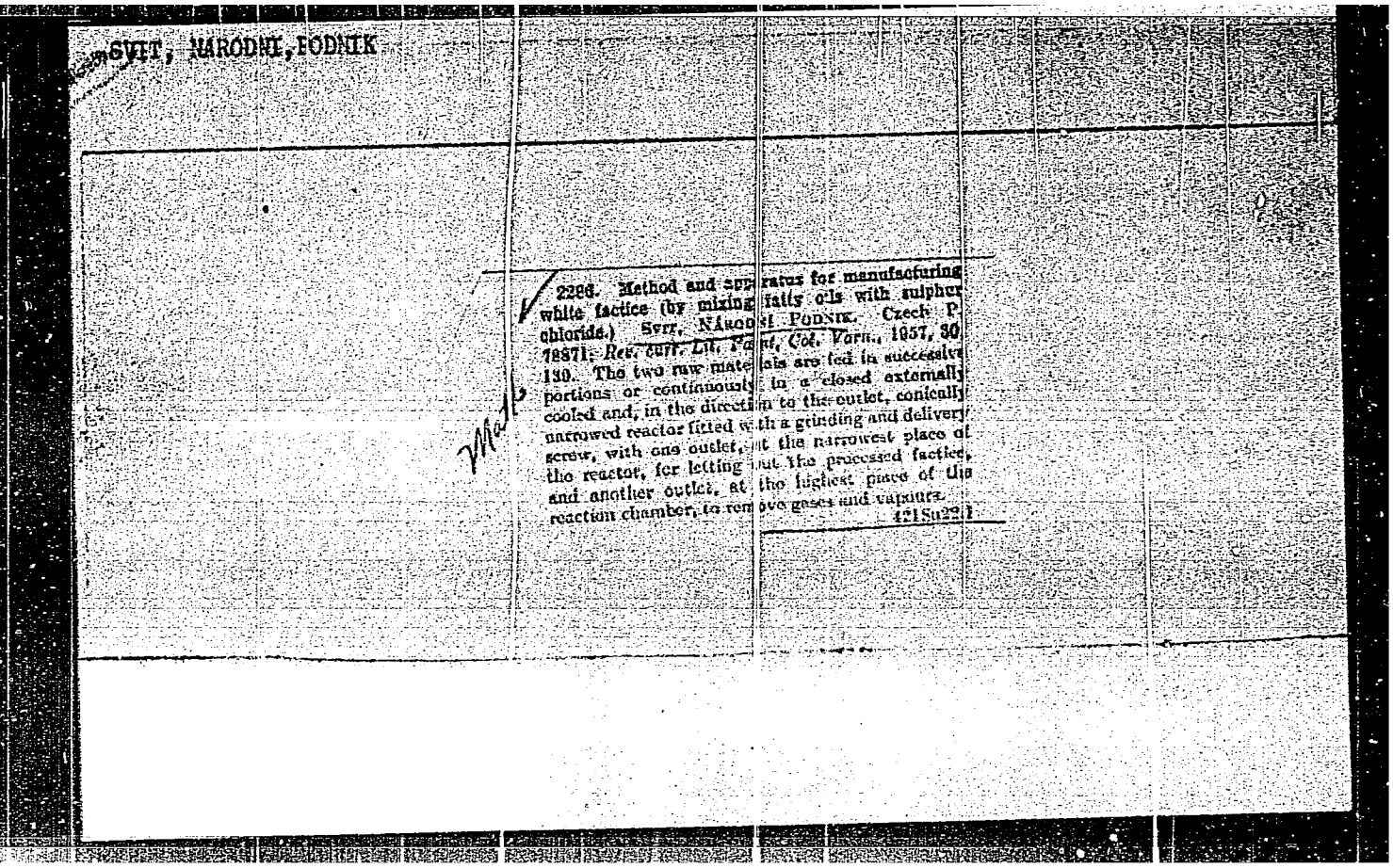

SVIT, NARODNI PODNIK

2296. Method and app... raus for manufacturing ... white factice (by mixing ... fatty oils with sulpher ... chlorids.) Syrr. Národ... ní Podnik. Czech P... 19871; *Rev. curr. Lit. Pa... nt, Col. Varn.*, 1957, 30 ... 130. The two raw mate... rials are fed in successive ... portions or continuously ... in a closed externally ... cooled and, in the directi... n to the outlet, conically ... narrowed reactor fitted w... th a grinding and delivery ... screw, with one outlet, ... at the narrowest place of ... the reactor, for letting ... out the processed factice, ... and another outlet, at ... the highest place of the ... reaction chamber, to rem... ove gases and vapours. ... 421Su22 1

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

GALAKTIONOV, A.T., kand. tekhn. nauk; SVIT, P.P., inzh.; FOFANOV, A.A., kand. tekhn. nauk

Modernizing the ASIF-25 machine. Svar. proizv. no.8:38-39 Ag '63. (MIRA 17:1)

1. Ural'skiy politekhnicheskiy institut im. S.M. Kirova.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVIT, P.P., inzh.; FOFANOV, A.A., kand.tekhn.nauk; ZHURAVLEV, L.G., kand. tekhn.nauk

Butt welding of high-speed steel wire during drawing. Svar.proizv. no.4:25-26 Ap '64. (MIRA 18:4)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

ALEKSEYEV, Nikolay Sergeyevich; SVIT, Ya.Ya., red.; SHCHEDRINA, N.L., tekhn. red.

[Struggle against juvenile delinquency in the German Democratic Republic] Bor'ba s prestupnost'iu nesovershennoletnikh v Germanskoi Demokraticheskoi Respublike. Moskva, Gos. izd-vo iurid. lit-ry, 1959. 131 p. (MIRA 15:3)
(Germany, East--Juvenile delinquency)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

CHIRKIN Veniamin Yevgen'yevich; SVIT, Ya.Ya., red.; TARASOVA, N.M., tekhn. red.

[Reorganizing industrial management in the people's democracies] Reorganizatsiia upravleniia promyshlennost'iu v stranakh narodnoi demokratii. Moskva, Gos. izd-vo iurid. lit-ry, 1961. 161 p. (MIRA 14:8)
(Communist countries—Industrial organization)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVITA, M.I.

After the reorganization of the district link of the public health. system. Zdrav. Belor. 6 no.3:13-15 Mr '60. (MIRA 13:5)

1. Glavnyy vrach Zel'venskogo rayona.
(ZEL'VA DISTRICT--PUBLIC HEALTH, RURAL)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVITA, M.N., inzh.

Emery machine with a dust suction fan. Torf.prom. 36 no.2:34-35 '59. (MIRA 12:4)

1. Torfopredpriyatiye Osintorf.
(Grinding machines)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVITAK, B.

Present conditions and trends in ore preparation in the United States and Canada. Rudy 10 no.9:334-336 S '62.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVITAK, I.

"Bibliography of the Works of Karl Marx and Friedrich Engels on Religion and Ways of Overcoming it." p. 419,
(CESKOSLOVENSKA ETHNOGRAFIE, Vol. 2, No. 4, 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4
No. 5, May 1955, Uncl.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

SVITAL'SKAYA, N.I.

29326 K voprosy of spetsificheskom antigene rakovoy kletki. Voprosy onkologii i rentgenologii, No. 1-2, 1948, S. 29-34

SO: Letopsi' Zhurnal'nykh Statey, Vol. 39, Moskow, 1949

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

YERMOLAYEV, V.L.; KOTLYAR, I.P.; SVITASHEV, K.K.

Internal conversion from the fluorescent to the phosphorescent level in naphthalene derivatives. Izv.AN SSSR.Ser.fiz. 24 no.5:492-495 My '60. (MIRA 13:5)
(Naphthalene--Optical properties) (Luminescence)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

L 22914-66 EWT(m)/EWP(t) IJP(c) JD/JG
ACC NR: AP6009657 SOURCE CODE: UR/0181/66/008/003/0758/0766

AUTHORS: Rzhanov, A. V.; Svitashev, K. K.; Filatova, Ye. S.; Shepel', V. M.

ORG: Institute of Semiconductors, SO AN SSSR, Novosibirsk (Institut poluprovodnikov SO AN SSSR)

TITLE: Investigation of the surface photoconductivity of germanium

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 758-766

TOPIC TAGS: germanium, photoconductivity, surface property, semiconductor conductivity, semiconductor impurity, forbidden band, spectral energy distribution

ABSTRACT: This is a continuation of earlier work (FTT v. 3, 1557, 1961) dealing with impurity photoconductivity and the concentration of photoactive surface defects. The present investigation was made with p-type germanium doped with gallium, and having a specific resistivity 20 -- 30 ohm cm and a carrier lifetime ~800 μsec. The samples were placed in a cryostat in vacuum 5×10^{-7} torr and exposed

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ACC NR: AP6009657

to monochromatic radiation from the IKS-12 instrument. Measurements were made of the temperature and spectral dependences of the surface photoconductivity and also of its time lag. The impurity photoconductivity of a thin sample of germanium was measured with light modulated at 12 cps. No impurity photoconductivity was observed at room temperature and at dry ice temperature, but was observed at liquid nitrogen temperature (- 170C), at which all other measurements were made. The results demonstrated once more the existence of a specific photoconductivity in germanium, connected with excitation of surface defects. The experimental reasons for this conclusion are presented in detail. The results also show that it is possible in principle to obtain data on the energy levels of the photoactive surface defects in the forbidden band of the semiconductor by analyzing the surface-photoconductivity spectra. Further data can be expected from these results if the surface potential can be determined by an independent method and the spectral resolution is improved. Work is continued in this direction. Orig. art. has: 12 figures, 3 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 20Jul65/ ORIG REF: 003/ OTH REF: 005

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001654210006-6

ACC NR: AP6018576 SOURCE CODE: UR/0181/66/008/006/1955/1957

AUTHOR: Rzhanov, A. V.; Svitashev, K. K.; Shepel', V. M.

ORG: Institute of Physics of Semiconductors, SO AN SSSR, Novosibirsk (Institut fiziki poluprovodnikov SO AN SSSR)

TITLE: Influence of capture of nonequilibrium carriers by surface defects on the spectrum of the intrinsic photoconductivity of a thin sample of germanium

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1955-1957

TOPIC TAGS: photoconductivity, germanium semiconductor, capture cross section

ABSTRACT: The authors compare the pulses of intrinsic photoconductivity of thick and thin samples of p-type germanium at liquid-nitrogen temperature. The shape of the photoconductivity pulse of the thin sample exhibited singularities characteristic of the presence of traps. It is shown that the total change of the conductivity of the sample under the influence of the light consists of three factors (photoconductivity proper, change in surface conductivity as a result of change in carrier density, and change in surface conductivity as a result of change of the surface charge), and in the region of 1.64 μ the contribution of the third process is comparable in magnitude with the contributions of the first two. The additional illumination, which normally eliminates adhesion of nonequilibrium carriers on the germanium surface at low temperatures, reduced the photoconductivity of the thin germanium to approximately the same value as that of thick germanium (5 vs. 0.5 mm) and eliminated the peak at 1.64 μ.

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In memoriam Prof. dr. Karel Greif. Cesk. otolaryng. 14 no.1: 53-60 F'65.

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GROF, P.; SVITAVSKA, E.; VOJTECHOVSKY, M.

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(PHENMETRAZINE toxicol) (EMOTIONS)
(PSYCHOPHARMACOLOGY)

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SOURCE: East European Accessions List (EEAL), Library of Congress, Vol. 4, No. 12, December 1955.

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New means of sealing well equipment. Razved. i prom. geofiz. no.40:64-65 '61. (MIRA 15:7)
(Oil well logging--Equipment and supplies)

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Protein hydrolyzates as soup seasoning. Kons. i ov. prom. 14 no.11:43-45 N '59. (MIRA 13:2)

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(Proteins) (Condiments)

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COUNTRY : USSR
CATEGORY : Weeds and Weed Control.

ABS. JOUR. : RZhBiol., No. 3, 1959, No. 11220

AUTHOR : Svitek, I.
INST. :
TITLE : "Dikotex-30" - A Preparation for the Destruction of Weeds in the Flax and Grain Sowings.

ORIG. PUB. : Len i konoplya, 1958, No. 5, 46-48

ABSTRACT : The preparation "dikotex-30" (30% potash salt of 2-methyl-4-chlorophenoxyacetic acid) (I) made in Czechoslovakia for the control of weeds in flax and grain sowings is obtained by means of the chlorination of orthocresol and by the condensation of the salt of the chlorinated cresol with monochloroacetate of potassium. Owing to the use of (I), the expenditures for the weeding of flax are reduced by 31% and the yield of straw is increased by 30%. The quality of the delivered straw was raised from grade 8 to grade 6; the marketable length of the straw increas-

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SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956

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SO: Monthly East European Accession (EEAL), LC, Vol. 4, No. 9, Sept. 1955, Uncl.

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