ACC NR: AM6028923 (N) Monograph UR/

Yukhimenko, Anatoliy Ivanovich; Berkovskiy, Boris Semenovich; Mirabel', Petr Petrovich; Yefremov, Ion Ivanovich; Panchenkov, Anatoliy Nikolayevich; Belinskiy, Vissarion Grigor'yevich; Koval'chuk, Sergey Viktorovich; Putilin, Svetozar Ivanovich; Roman, Vasiliy Mikhaylovich; Miodushevskaya, Alla Vladimirovna; Tkachenko, Irina Petrovna; Ivchenko, Vladimir Moiseyevich

Problems and methods of hydrodynamics of underwater wings and propellers (Zadachi i metody girdodinamiki podvodnykh kryl'yev i vintov) Kiev, Izd-vo "Naukova dumka", 1966. 158 p. illus., biblio. (At head of title: Akademiya nauk Ukrainskoy SSR. Institut gidromekhaniki) 1,2000 copies printed.

TOPIC TAGS: dimensional flow, flow measurement, cavitation, ~~propulsion system~~, fluid mechanics, hydrodynamics, ship component, digital computer, computer calculation

PURPOSE AND COVERAGE: This book is intended for scientific and engineering personnel of research and design organizations specializing in high-speed hydrodynamics. The book discusses the hydrodynamics of bodies moving near an open surface, the discontinuity between liquids of different densitites, and the development of cavitation. There are

Card 1/2

ACC NR: AM6028923

74 references, 43 of which are Soviet.

TABLE OF CONTENTS [abridged]:

SUB CODE: 20, 09/ SUBM DATE: 01Mar66/ ORIG REF: 044/ OTH REF: 030

Card 2/2

L 36471-66 EWP(m)/EWT(1) WW/GD

ACC NR: AT6016715 (N) SOURCE CODE: UR/0000/65/000/000/0021/0032

AUTHOR: Berkovskiy, B. S.; Koshevoy, V. I.

ORG: Institute of Hydromechanics AN UkrSSR (Institut gidromekhaniki AN UkrSSR)

TITLE: Motion of a thin shape at arbitrary distances from solid and liquid boundaries

SOURCE: AN UkrSSR. Gidrodinamika bol'shikh skorostey (High speed hydrodynamics), no. 1. Kiev, Izd-vo Naukova dumka, 1965, 21-32

TOPIC TAGS: fluid flow, boundary layer theory, hydrodynamic theory

ABSTRACT: The plane linear problem of the motion of a thin shape reduces to a singular integral equation of the form

$$\int_{-1}^{+1} k(x-s)\gamma(s)\,ds=-2\Pi f'(x), \qquad (1)$$

where

$$k(x)=\mathrm{Re}\left[\frac{1}{x}+\frac{1}{x-4i\bar{h}}-\frac{\omega}{2}\,iq^{\frac{\omega}{2}x}\int_{-\infty}^{x}\frac{e^{\frac{\omega}{2}\xi}}{\xi-4i\bar{h}}\,d\xi\right].$$

Card 1/2

L 36471-66

ACC NR: AT6016715 O

The article considers the cases where

$$Fr=\infty;\ Fr=0.$$

Equation (1) then assumes the form

$$\int_{-1}^{+1}\gamma(s)\left[\frac{1}{x-s}+\operatorname{sign} Fr\,\frac{x-s}{(x-s)^2+16\bar{h}^2}\right]ds=-2\Pi f'(x)$$

The remainder of the article is devoted to the mathematical development of the problem in these terms. Orig. art. has: 45 formulas.

SUB CODE: 20, 12/SUBM DATE: 30Sep65/ ORIG REF: 004

Card 2/2

83020
S/181/60/002/008/039/045
B006/B063

24.7700

AUTHORS: Berkovskiy, F. M., Ryvkin, S. M., Strokan, N. B.

TITLE: The Current-voltage Characteristics of the Blocking Layer of a Germanium p-n Junction in the Permeable Direction

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 8, pp. 1956 - 1961

TEXT: The purpose of the present paper was to verify Shockley's relation for the current-voltage characteristic of a planar p-n junction: $I = \beta I_s [\exp(q\Phi/kT)-1]$, where $\beta = 1 + p(0)/(p(0)+n_0)$; Φ denotes the voltage applied to this junction, I_s - saturation current, q - electron charge, $p(0)$ - hole concentration in the base on the p-n junction, and n_0 - equilibrium concentration of electrons in the base. The correction factor β considers the voltage drop occurring in the semiconductor. The authors first discuss the theory and the method of measurement, and describe the apparatus that is schematically represented in Fig. 2. The square-pulse generator used was designed by Engineer G. V. Khozov. The current-voltage

Card 1/3

The Current-voltage Characteristics of the Blocking Layer of a Germanium p-n Junction in the Permeable Direction

S/181/60/002/008/039/045
B006/B063

characteristics of the p-n junctions were taken in forward direction and at current densities of up to 800 - 1000 a/cm^2. For the purpose, the authors used the method of dividing the voltages into those in the semiconductor and the volume charge region according to their relaxation rates. A correction for the Dember emf is carried out (it takes into account the different mobilities of electrons and holes). The voltage-current characteristics measured on diodes and intrinsic p-n junctions are shown in diagrams. Furthermore, the authors examined molten germanium diodes with a high-resistivity starting material ($n_o \simeq 4 \div 6.10^{13} cm^{-3}$), for which $\beta = 2$ at a voltage of 100 - 150 mv on the p-n junction. Theoretical studies have shown that the functions $\ln I = f(\Phi)$ should be straight lines, and that the cotangent of their angle of slope should be equal to kT/q; thus a voltage of 25.6 mv is obtained for $t = 20^{\circ}C$. The theory is well confirmed by experiments: 26.5 $\pm$ 0.5 mv was obtained.

Fig. 4 shows the characteristics obtained for a sample of $n = 4.10^{13} cm^{-3}$ at different temperatures between -77° and $+70^{\circ}C$. The numerical values

83020

The Current-voltage Characteristics of the Blocking Layer of a Germanium p-n Junction in the Permeable Direction

S/181/60/002/008/039/045
B006/B063

pertaining to this diagram are compiled in a table. Shockley's formula is well satisfied in this temperature range at current densities of 0.1 - 100 a/cm^2. From $\sim$ 100 a/cm^2 onward, the voltage on the p-n junctions is saturated. Its maximum value is 60 - 70 mv lower than the contact potential difference. The authors thank V. I. Stafeyev for his discussions. Yu. A. Kontsevyy is also mentioned. There are 5 figures, 1 table, and 13 references: 6 Soviet and 5 US.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR Leningrad (Institute of Physics and Technology of the AS USSR, Leningrad)

SUBMITTED: February 1, 1960

Card 3/3

9.4.160 (also 1137, 1395)
9.4177

89294
S/181/61/003/001/033/042
B102/B204

AUTHORS: Berkovskiy, F. M., Ryvkin, S. M., and Strokan, N. B.

TITLE: The effect of adhesion levels upon the relaxation of a current passing through an n-p junction

PERIODICAL: Fizika tverdogo tela, v. 3, no. 1, 1961, 230-235

TEXT: The energy levels in the forbidden band of a semiconductor, which trap free carriers, are divided into two types: recombination levels and adhesion levels; in the latter, the carriers are held back for some time, after which they may escape into the band. A study of relaxation curves furnishes data on the adhesion-center parameters, such as trapping cross section, concentration, position in the forbidden band, and duration of the establishment of thermal equilibrium in the band. In the present paper, the effect produced by adhesion levels upon the kinetics of a current passing through the p-n junction is studied. Investigations were carried out for the short-circuit current of a photo-diode; the results obtained, however, hold also for other devices containing a p-n junction. A photo-diode with n-type base was studied; the electron-hole pairs formed

Card 1/6

The effect of adhesion...

during irradiation diffused to the junction, where they were separated by the contact field and thus generated a current in the outer circuit. In germanium, adhesion usually occurs at $t \lesssim -80^{\circ}C$, and therefore the "tails" characteristic of adhesion should be expected at low temperatures also for the relaxation curves of the photo-diode current. However, no diminished relaxation rate could be observed either on Ge or Si photo-diodes down to nitrogen temperatures. Photoconduction and short-circuit current of the photo-diode were measured simultaneously on the same specimen; the experimental arrangement is shown in Fig. 1. The n-type germanium specimens (3·5·15 mm) had two ohmic and one indium contact (p-n junction). The signals coming from the resistor were observed on an oscilloscope. Fig. 2 shows a typical oscillogram recorded at nitrogen temperature (duration of pulses $\simeq 150\ \mu$sec). The photoconduction relaxation curve contains a "quick" and a marked "slow" part. The latter is related to the adhesion of carriers (Fig. 2a). The short-circuit current had a constant relaxation time approximately equaling the lifetime (2b); none of the seven specimens of different sensitivity showed a relaxation that was characteristic of adhesion (i.e., long tails). A theoretical study of relaxation due to adhesion was carried out proceeding from the

The effect of adhesion...

fundamental relations

$$P_{vM} = P_v e^{-\frac{\Delta E_M}{kT}}$$

$$\begin{cases} \frac{d\Delta p}{dt} = \beta k I - \frac{\Delta p}{\tau} - \gamma_p(\Delta p M - \Delta p_M P_{vM}), \\ \frac{d\Delta p_M}{dt} = \gamma_p(\Delta p M - \Delta p_M P_{vM}), \\ \Delta n = \Delta p + \Delta p_M. \end{cases}$$

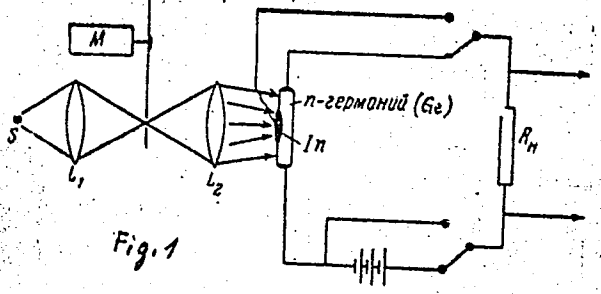


Fig. 1

with the denotations to be seen from Fig. 3, on the assumption that the filling of the adhesion centers with minority carriers (holes) is insignificant ($M \gg p_M$). If only minority carriers participate in the current of the photo-diode, it suffices to determine $\Delta p(t)$. The following is found for the hole concentration in the band: $\Delta p = \beta k I \tau [1 - \gamma_p M \tau \exp(-(t-\tau)\gamma_p P_{vM})]$; and for the amplitude of the slow component one obtains:

$\varepsilon_p = \frac{\Delta p(t=\infty) - \Delta p(t=\tau)}{\Delta p(t=\infty)} = \gamma_p M \tau \ll 1$. For the case of bipolar photoconduction and in the presence of β-type adhesion levels, formulas are also found for

Card 3/6

The effect of adhesion...

$\Delta n = \Delta p + \Delta p_M$ and $\varepsilon_n \simeq M/(M+P_{vM})$. At sufficiently low temperatures, $M \gg P_{vM}$ and $\varepsilon_n \simeq 1$, and the slow component of the relaxation curve of majority carriers makes the main contribution toward steady concentration. Investigations showed that β-type adhesion levels practically do not influence the relaxation of the current passing through the p-n junction. The circumstance is important when selecting the material for devices supposed to conserve inertia at low temperatures. The adhesion-level type may be determined in a simple manner by means of a p-n junction: If the short-circuit current relaxation has no slow component, the adhesion level is of the β-type, and, conversely, of the α-type. A. A. Mamontova is mentioned. There are 4 figures and 8 references: 2 Soviet-bloc and 6 non-Soviet-bloc.

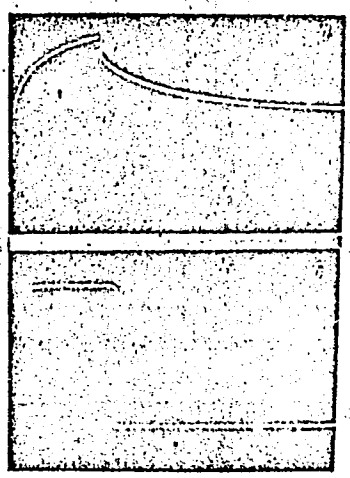
ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut AN SSSR imeni akad. A. F. Ioffe (Leningrad Institute of Physics and Technology AS USSR imeni Academician A. F. Ioffe)

SUBMITTED: July 11, 1960

Card 4/6

S/181/61/003/001/033/042
B102/B204

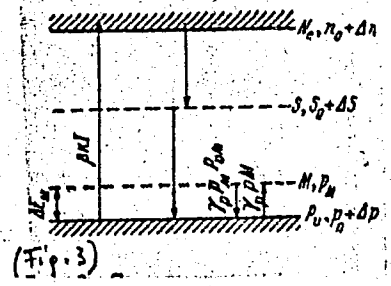
Fig. 2



Card 5/6

89294
S/181/61/003/001/033/042
B102/B204

The effect of adhesion...



(Fig. 3)

Card 6/6

30800
S/181/61/003/011/047/056
B104/B138

9.4340 (1143, 1150)

AUTHORS: Berkovskiy, F. M., Ryvkin, S. M., and Strokan, N. B.

TITLE: Effect of adhesion levels on current relaxation in instruments with n-p junctions

PERIODICAL: Fizika tverdogo tela, v. 3, no. 11, 1961, 3535-3537

TEXT: Using the results of another work (FTT, 3, 1, 230, 1961) the authors study the effect of α- and β adhesions on the relaxation of a current flowing in a junction with a thin base. This case corresponds to real conditions, and is treated by the example of a photo-diode. Only in the case of α-adhesions and $t_o \gg \theta$ is If, the relaxation of the photo-current, retarded by $(1 + M/P_{vm})$. $t_o = w^2/2D$, where w is the thickness of the base and D the diffusion coefficient; $\theta = 1/\gamma(P_{vm} + M)$. For any marked retardation the concentration of adhesion levels M must satisfy the conditions $M \gg P_{vm}$; $t_o \geqslant 1/\gamma(M + P_{vm})$, i. e., $t_o \geqslant 1/\gamma M$. On the basis of published data an estimate for germanium and silicon gives

Card 1/2

Effect of adhesion levels on current ...

$M > 10^{15}$ cm^{-13}. This shows that, although important to the kinetics of photo-conductivity, in most cases adhesion levels do not affect the inertia of germanium or silicon instruments with n-p junctions. Adhesion through the depth of the base will affect the kinetics if the resistance affects the current flowing through it. In these cases inertia "tails" could be detected in silicon at 300°K, and in germanium at 77°K. Adhesion levels can also affect other properties of instruments with n-p junctions in which there is resistance across the base. There are 2 Soviet references.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR Leningrad (Physicotechnical Institute imeni A. F. Ioffe AS USSR, Leningrad)

SUBMITTED: July 12, 1961

Card 2/2

34226
S/181/62/004/002/009/051
B102/B138

26.1512
9.4177 (also 1051, 1035)

AUTHORS: Berkovskiy, F. M., and Ryvkin, S. M.

TITLE: Sensitivity of germanium and silicon photoelements in the range of impurity excitation

PERIODICAL: Fizika tverdogo tela, v. 4, no. 2, 1962, 366-375

TEXT: The authors study the possibility of the occurrence of a photo-emf in the p-n junction in the long-wave range behind the intrinsic absorption band. The theoretical results were checked by an experimental investigation of gold-doped Ge and Si elements. It is shown that photo-emf may arise with impurity excitation in conditions where minority carriers are generated in sufficient quantity. Fig. 1 shows the transitions possible when the semiconductor contains only one kind of impurity and is irradiated with photons whose energy is less than the forbidden-band width. It is demonstrated theoretically that with impurity excitation in general, minority as well as majority carriers are produced if the quantum energy is greater than the half-width of the forbidden band. If it is less, however, only majority carriers are produced. Photo-emf

Card 1/8 3

was observed on Ge p-n junctions obtained by diffusion of antimony into p-type Ge with a gold concentration of 10^{15} cm^{-3}. From the λ-dependence of photoconductivity and photocurrent it can be seen that both cover the region of impurity excitation. Photoconductivity extends farther than photo-emf into the long-wave range. Photoconductivity and photo-emf at $\lambda > 2\ \mu$ are due to the deep acceptor levels of gold: 0.2 ev from the conduction band and 0.15 ev from the valence band. The voltages obtained experimentally are less than the calculated value, but may reach considerable values. For a load resistance of 10^8 ohms at $\lambda = 2.3\ \mu$ the emf reaches 150 mv. For an incident energy of $3 \cdot 10^{-5}$ w, this corresponds to a sensitivity of 5000 v/w. The p-n junction in gold-doped n-type silicon was obtained by electrodeposition of nickel. Photocurrent and photoconductivity have very similar spectral distribution and occur between 1.5 and 2.5 μ. They are ascribed to the level, 0.54 ev off the c-band which is near to the middle of the forbidden band. As compared with photoresistors, photoelectric signal transformers on the basis of p-n junctions have several advantages: low dark current, insensitivity to adhesion levels, independence of external voltage sources. The design of

Sensitivity of germanium and silicon...

a photoresistor (Fig. 7a) and of a photocell with p-n junction are compared in an appendix to the paper. N. B. Strokan and L. G. Paritskiy are thanked for discussion and D. V. Tarkhin and Yu. V. Shmartsev for the specimens. V. Ye. Lashkarev, K. M. Kosonogova (Izv. AN SSSR, ser. fiz. No. 5-6, 1941), G. M. Avakyants and Yu. L. Ivanov are mentioned. There are 7 figures and 7 references: 5 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: J. M. Waddel et al. Proc. IRE, 102, part B, 757, 1955.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR Leningrad (Physicotechnical Institute imeni A. F. Ioffe AS USSR, Leningrad)

SUBMITTED: July 29, 1961

Fig. 1. Band scheme with possible transitions.

Fig. 7. Photoresistance and photo cell.

Card 3/3

34227
S/181/62/004/002/010/051
B102/B138

9,4177 (1035, 1051)

AUTHORS: Berkovskiy, F. M., and Ryvkin, S. M.

TITLE: Nonsteady photo-emf at an n-p junction due to majority carriers

PERIODICAL: Fizika tverdogo tela, v. 4, no. 2, 1962, 376-378

TEXT: Steady photo-emf in semiconductors is only observed if a potential barrier exists and if minority carriers are generated. However, since the periods required to establish the photo-emf of an inhomogeneous semiconductor may be different, a nonsteady photo-emf may also be observed when only majority carriers are generated. The time required for establishment in this kind of semiconductor will depend on the lifetime τ and the time for establishment of diffusion-migration equilibrium $\varepsilon/4\pi\sigma$, which are different. A nonsteady photo-emf due to majority-carrier generation was observed at n-p junctions produced by diffusion of antimony into gold-doped p-type Ge, with an Au concentration of $\sim 10^{15}$ om^{-3}. The spectral photo-emf distribution is shown in Fig. 2 for steady illumination (a) and pulsed

Card 1/2

Nonsteady photo-emf at an...

illumination of 10 cps (b). Steady photo-emf stops at 2.8 μ. At $\lambda > 2.8$ μ, only majority carriers are generated. There are 2 figures and 6 Soviet references.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR Leningrad (Physicotechnical Institute imeni A. F. Ioffe AS USSR, Leningrad)

SUBMITTED: July 29, 1961

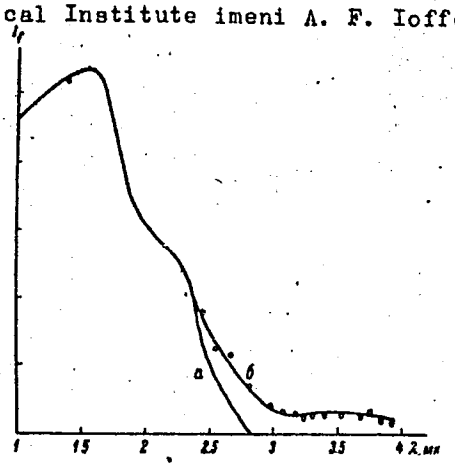


Fig. 2

Card 2/2

37808

S/120/62/000/002/039/047
E140/E163

24.7800

AUTHORS: Berkovskiy, F.M., Strokan, N.B., and Khozov, G.V.

TITLE: Study of the possibility of measuring semiconductor relaxation times of the order of 10^{-8} sec by the phase method

PERIODICAL: Pribory i tekhnika eksperimenta, no.2, 1962, 165-168

TEXT: A Kerr-cell modulator with sinusoidal 1 Mcs control signal was used to determine the lag of a fast photodiode on the basis of phase shift measurements. Two methods of obtaining the reference were examined: a photomultiplier detects the same light signal; the voltage applied to the Kerr cell is itself taken as the reference. It is considered that the delay in the photomultiplier itself is not negligible at the values used in the present measurements, whereas the phase shifts in the modulator are negligible. A constant difference was observed between the results obtained with the photomultiplier and those based on the Kerr-cell control voltage of the order of 10^{-8} sec.

Card 1/2

Study of the possibility of ... S/120/62/000/002/039/047
E140/E163

The precision of the latter method is slightly higher and superior for measurements of time intervals shorter than 10^{-8} sec.

There are 3 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR
(Physicotechnical Institute, AS USSR)

SUBMITTED: July 5, 1961

Card 2/2

BERKOVSKIY, F.M.; RYVKIN, S.M.

Effect of the optical recharging of impurity centers on the kinetics of a photo-emf. in germanium. Fiz. tver. tela 5 no.2:381-385 F '63. (MIRA 16:5)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.
(Photoelectricity) (Germanium)

BERKOVSKIY, F.M.; KASYMOVA, R.S.; RYVKIN, S.M.

Sensitization of photodiodes resulting from optical recharging of impurities. Fiz. tver. tela 5 no.2:524-533 F '63.
(MIRA 16:5)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.
(Diodes) (Photoconductivity)

L 18718-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3003910 S/0181/63/005/007/2023/2025

AUTHORS: Berkovskiy, F. M.; Ry*vkin, S. M. 58 53

TITLE: Impurity photoelectromotive force induced by a current

SOURCE: Fizika tverdogo tela, v. 5, no. 7, 1963, 2023-2025

TOPIC TAGS: photoelectromotive force, impurity, induction, absorption band, radiation defect, recharge, electron, hole, injection

ABSTRACT: A new effect has been discovered at illuminated silicon photodiodes: after passage of a current pulse through the n-p junction in the permissive direction, the photodiodes prove to be sensitive in a new spectral region for the fundamental absorption band. This relationship is shown in Fig. 1 (see enclosure). The photoelectromotive force has the character of a flash, the amplitude and duration of which are determined by the intensity of current or light. Electrical recharging (of electron-hole pairs) is better than optical because the injection takes place at a distance from the n-p junction representing the layer in which the photoelectromotive force is generated and because nonequilibrium

Card 1/ 2

ACCESSION NR: AP3003910

5

concentrations can be injected at higher values, the time for charging a sample thus being very small. In their work the authors used silicon photodiodes with radiation defects formed by gamma radiation from Co^{60}. Recharge of the levels of radiation defects consequently took place. It is clear that a similar effect must be observed in other materials with impurities corresponding to deep levels. Preliminary experiments have shown that the effect is observed also in Ge photodiodes that have been exposed to fast electrons. It is felt that the present need is for more detailed investigation on various materials. "The authors thank Ye. V. Ostroumova and R. S. Kasy*mova for their help in carrying out the experiments." Orig. art. has: 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physical and Technical Institute, Academy of Sciences, SSSR)

SUBMITTED: 09Mar63 DATE ACQ: 15Aug63 ENCL: 01

SUB CODE: PH NO REF SOV: 005 OTHER: 001

BERKOVSKIY, F.M.; KASYMOVA, R.S.

Negative resistance of irradiated Ge and Si diodes. Radiotekh. i elektron. 9 no.5:899-901 My '64. (MIRA 17:7)

1. Fiziko-tekhnicheskiy institut imeni A.F. Ioffe AN SSSR.

L 2132-65 EWT(m)/EPF(c)/EPF(n)-2/EWP(q)/EWP(b) Pr-4/Pu-4 IJP(c)/
ASD(a)-5/AFWL/ESD(t)/RAEM(t) JD/GG

AUTHOR: Berkovskiy, F. M.; Kasy*mova, K. S.

TITLE: Negative resistance of Ge and Si irradiated diodes

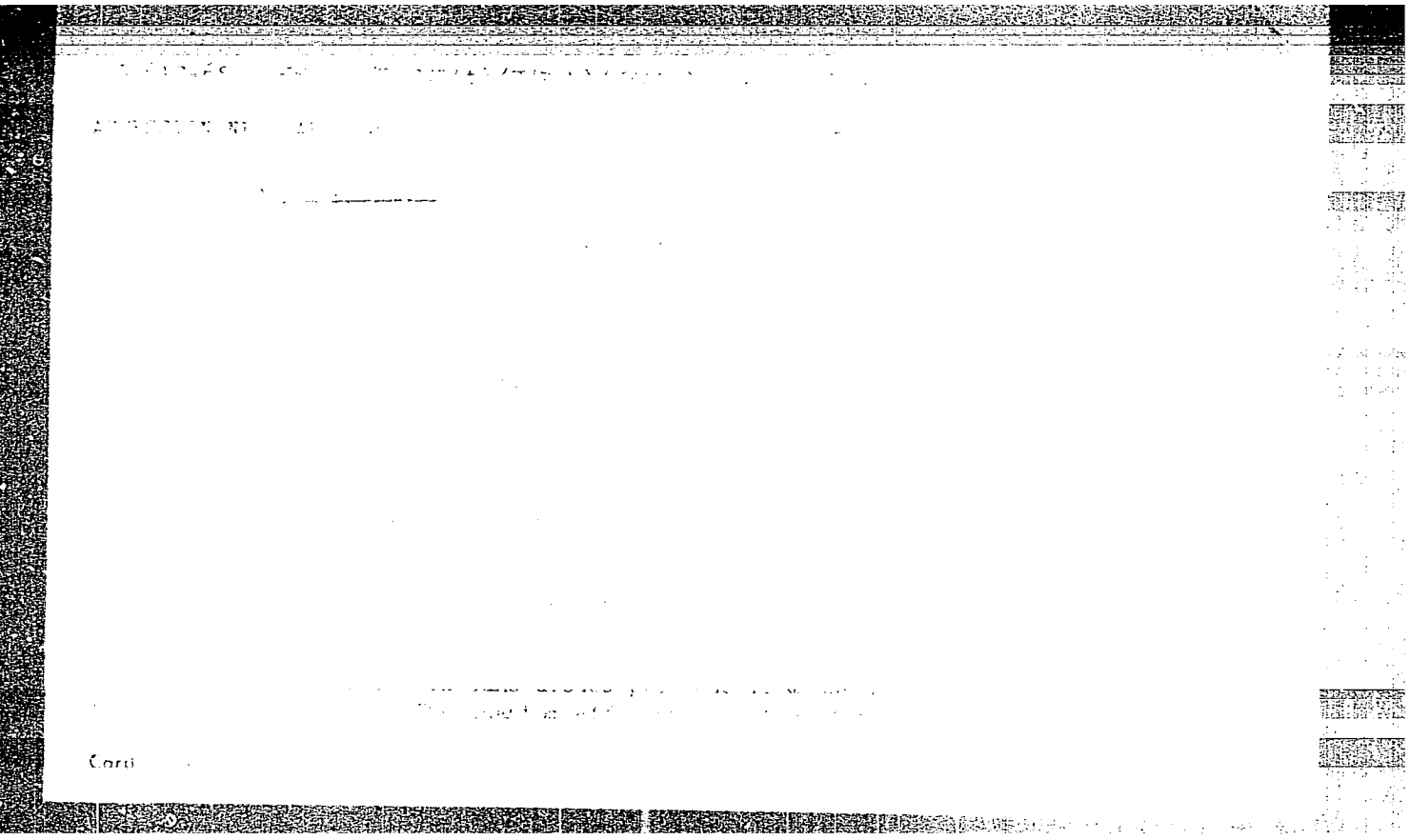
SOURCE: Radiotekhnika i elektronika, v. 9, no. 5, 1964, [illegible]

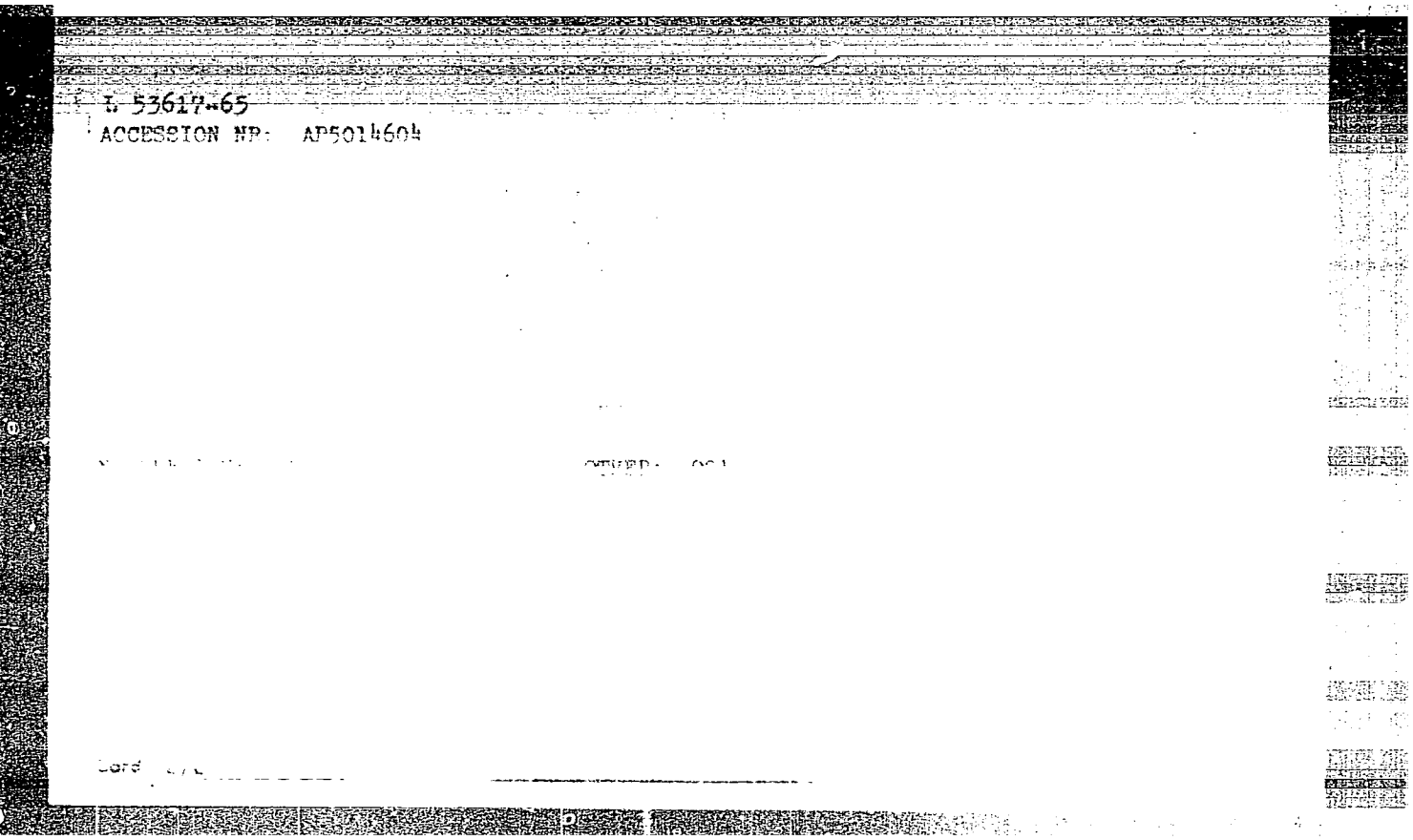
TOPIC TAGS: Ge, Si, semiconductor diode, nuclear irradiated [illegible] negative resistance

ABSTRACT: A negative resistance was observed in Ge-[illegible] irradiated by fast reactor neutrons and electrons with an [illegible]

L 2132-65
ACCESSION NR: AP4038663

SUBMITTED: 0 MAY 63





L 46192-66 EEC(k)-2/EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6027247 SOURCE CODE: UR/0109/66/011/008/1530/1532

67
B

AUTHOR: Berkovskaya, K. F.; Berkovskiy, F. M.

ORG: none

45

TITLE: Investigation of a scannistor on a base of compensated germanium 27

SOURCE: Radiotekhnika i elektronika, v. 11, no. 8, 1966, 1530-1532

TOPIC TAGS: scannistor, ph transition, circuit design, germanium semiconductor, sensitivity increase, emission threshold, IMAGE CONVERTER

ABSTRACT: Recent publications contain information on the development of a new semiconductive device with two n-p transitions, a scannistor, which is a one-line television image converter. Data have also been published on scannistors made on the base of n-p transitions in silicon. In order to improve the threshold characteristics of the device and to lengthen its spectral sensitivity region, the present authors investigated a scannistor made on a germanium base. The increase in the specific resistivity of germanium by the introduction of compensating impurities and by lowering the temperature made it possible to develop a germanium scannistor which, compared to the silicon solid scannistor, has a higher resolving capacity and sensitivity. The device, shown in Fig. 1, consists of a linear n-p-n structure with

Card 1/3 UDC: 621.397.613+621.382.333.33

ACC NR: AP6027247

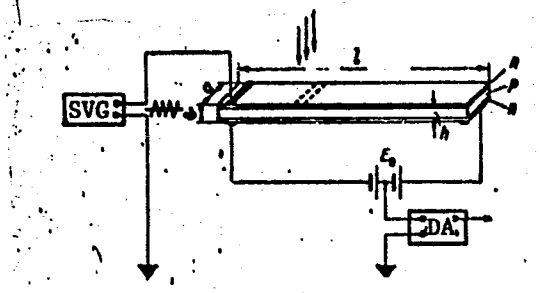


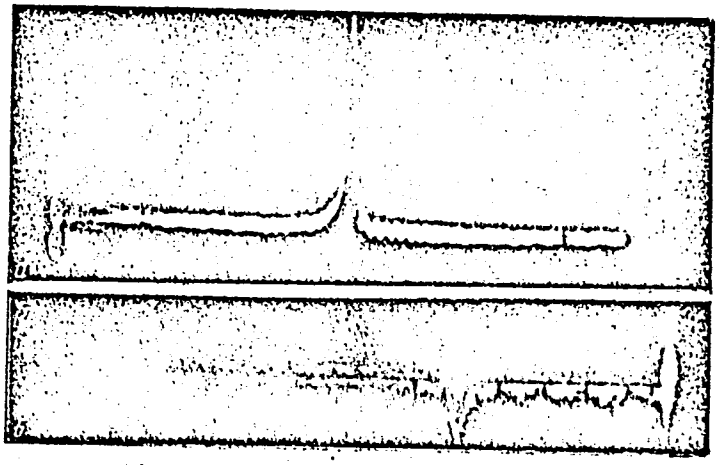
Fig. 1. Scannistor switching circuit (SVG: sawtooth voltage generator; DA: differentiating amplifier)

photosensitive n-p transitions. One of the n-layers performs the function of a voltage divider of the battery E_0. Upon application of the sawtooth voltage, the triode structure of the scannistor achieves commutation of the contour of the injected carriers, generated by the image contour. Figure 2(a) shows an oscillogram of a signal from a Ge scannistor 1 cm long, on

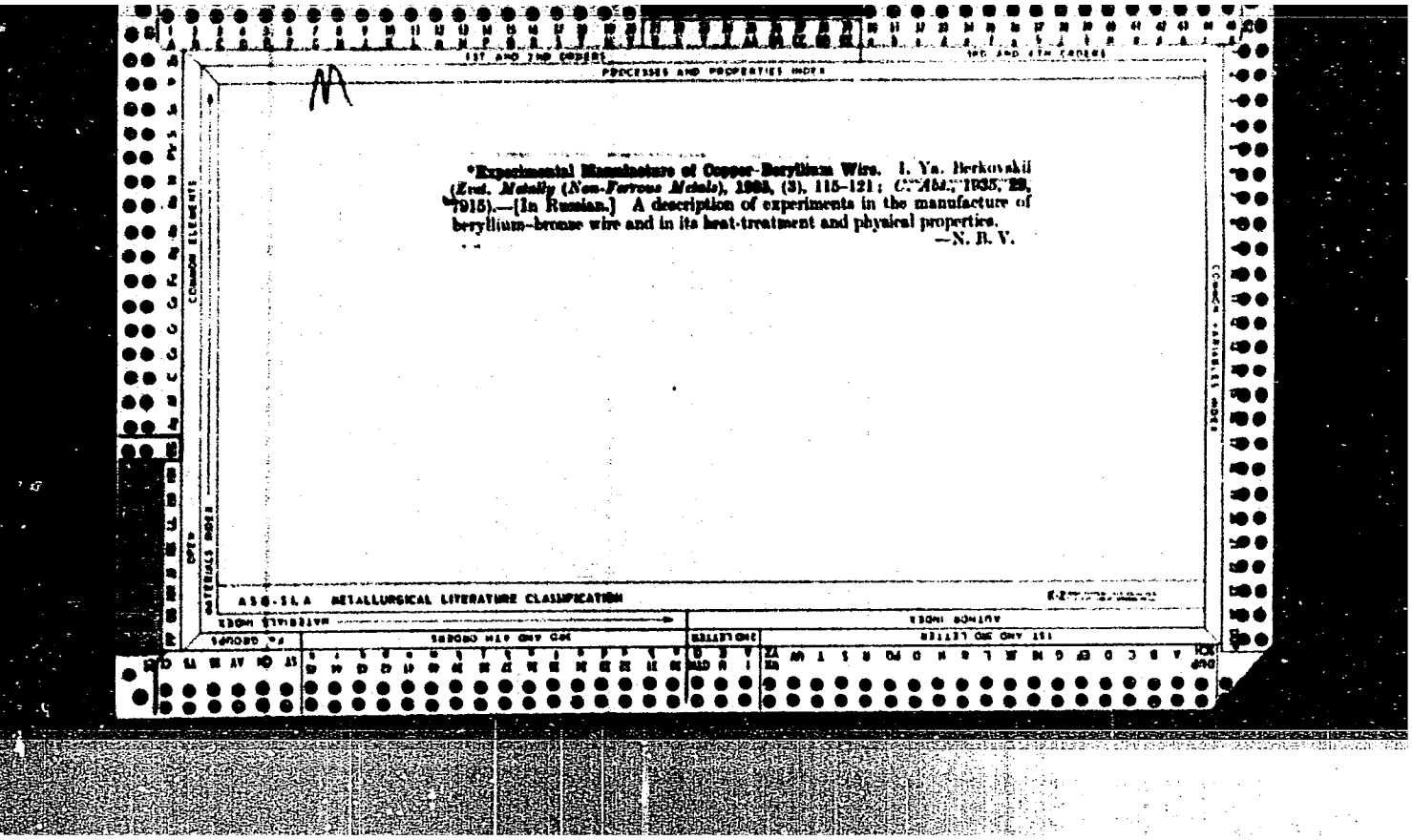
which a light strip 0.1 mm wide is projected. The motion of the light strip along the scannistor corresponds to the shift of the pulse along the oscillogram; and Fig. 2(b) shows the oscillogram of a threshold signal subjected to illumination by a flux of 10^{-3} lu. Orig. art. has: 5 formulas, and 2 figures. [26]

(a)

(b)

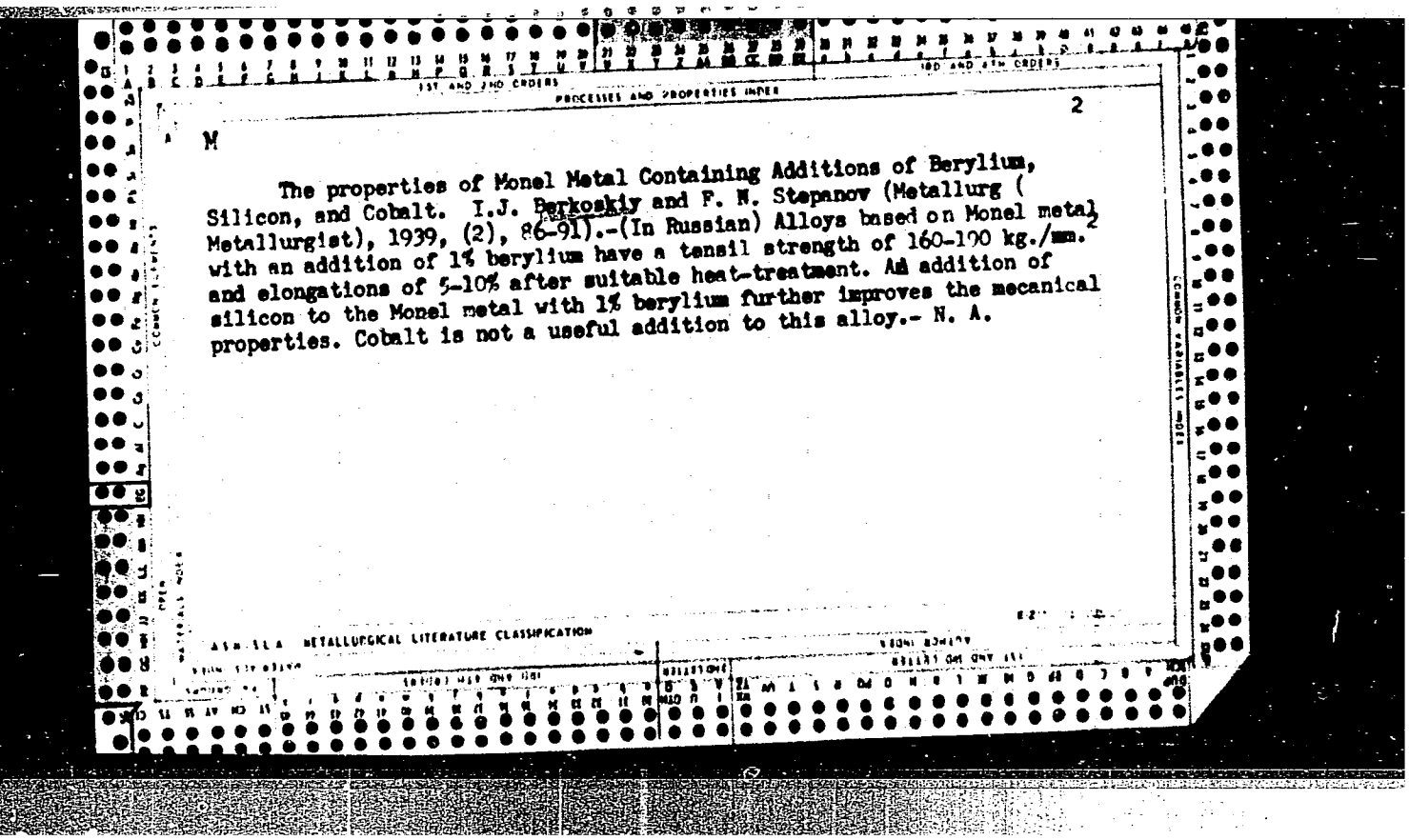


SUB CODE: 09,20/ SUBM DATE: 22Nov65/ ORIG REF: 003/ OTH REF: 003



*Experimental Manufacture of Copper-Beryllium Wire. I. Ya. Berkovskii (*Zvet. Metally* (*Non-Ferrous Metals*), 1935, (3), 115–121; *C. Abs.*, 1935, **29**, 7915).—[In Russian.] A description of experiments in the manufacture of beryllium-bronze wire and in its heat-treatment and physical properties.

—N. B. V.



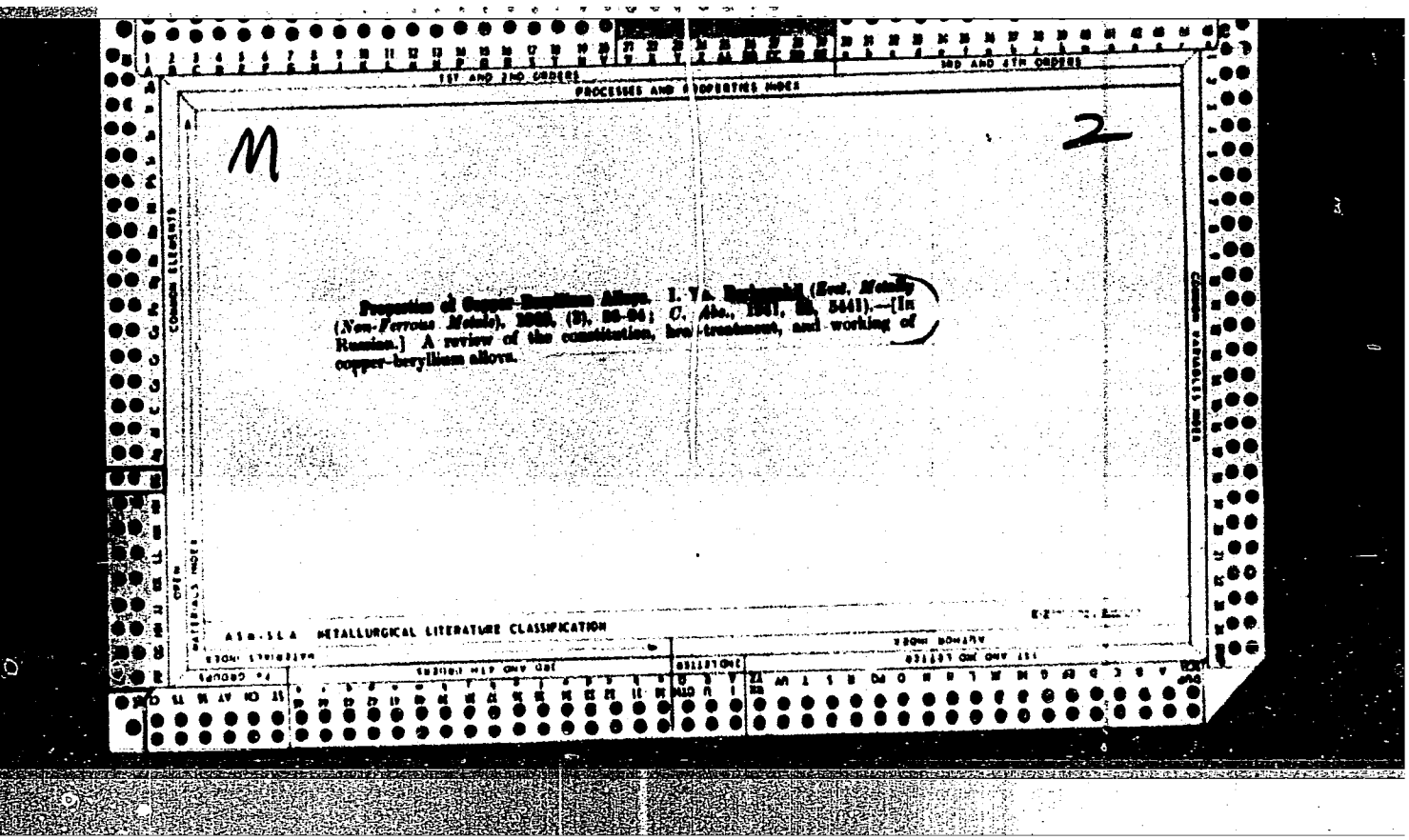
PROCESSES AND PROPERTIES INDEX

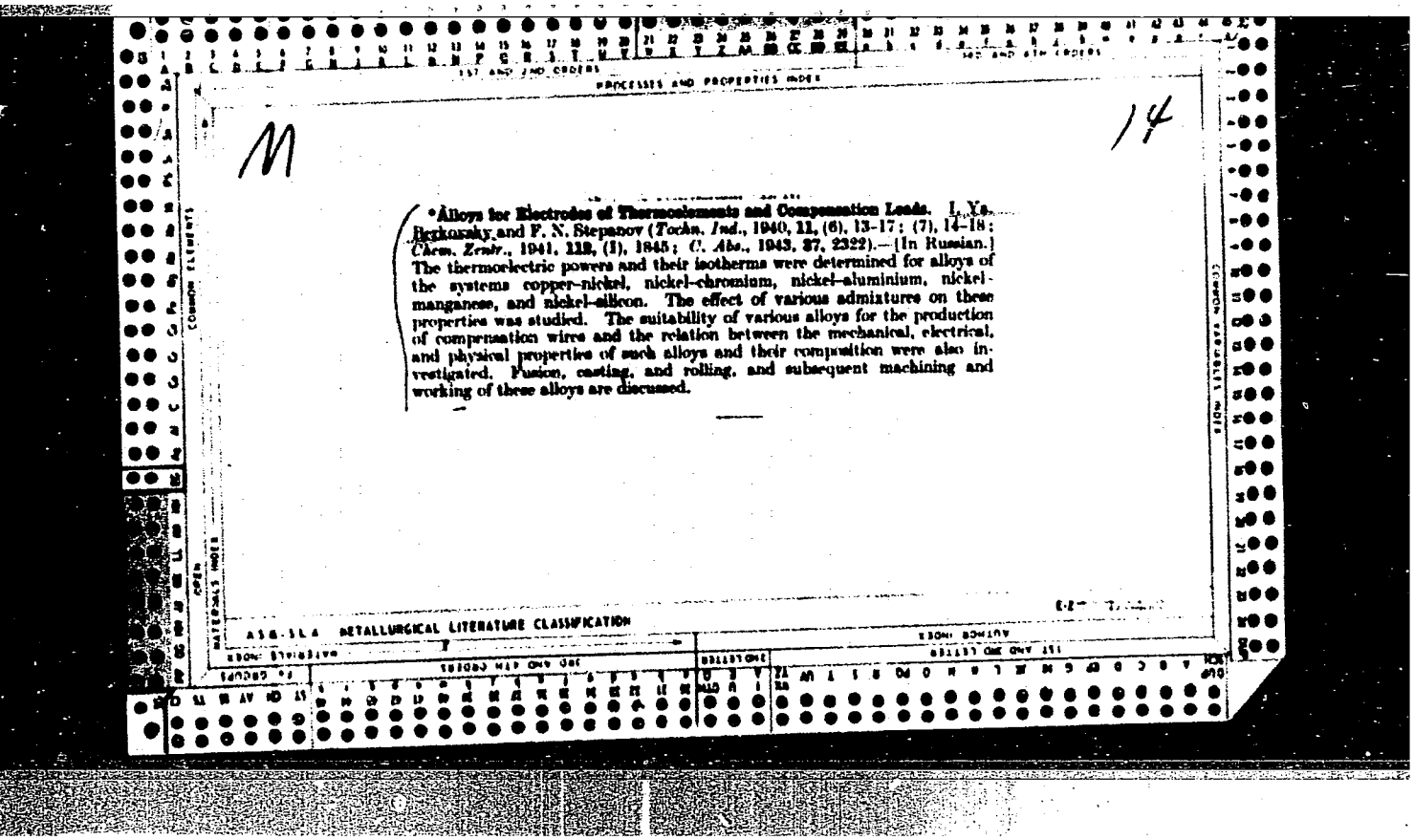
2

M

The properties of Monel Metal Containing Additions of Berylium, Silicon, and Cobalt. I.J. Berkoskiy and F. N. Stepanov (Metallurg (Metallurgist), 1939, (2), 86-91).-(In Russian) Alloys based on Monel metal with an addition of 1% berylium have a tensil strength of 160-190 kg./mm.^{2} and elongations of 5-10% after suitable heat-treatment. An addition of silicon to the Monel metal with 1% berylium further improves the mecanical properties. Cobalt is not a useful addition to this alloy.- N. A.

A.S.M. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION





M

14

•Alloys for Electrodes of Thermoelements and Compensation Leads. L. Ya. Berkovsky and F. N. Stepanov (*Tochn. Ind.*, 1940, 11, (6), 13–17; (7), 14–18; *Chem. Zentr.*, 1941, 112, (I), 1845; *C. Abs.*, 1943, 37, 2322).—[In Russian.] The thermoelectric powers and their isotherms were determined for alloys of the systems copper–nickel, nickel–chromium, nickel–aluminium, nickel–manganese, and nickel–silicon. The effect of various admixtures on these properties was studied. The suitability of various alloys for the production of compensation wires and the relation between the mechanical, electrical, and physical properties of such alloys and their composition were also investigated. Fusion, casting, and rolling, and subsequent machining and working of these alloys are discussed.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1. BERKOVSKIY, M. Ye

2. USSR (600)

4. Brucellosis

7. Morphology of the oral mucosa and of the dental pulp in experimental brucellosis in gunea pigs., Stomatologiia, No.4, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

AUTHORS: Lobarev, M.I., and Berkovskiy, V.S. 130-58-4-11/20

TITLE: Rolling Spring Strip with Parabolic Edges (Prokatka ressornoy polosy s parabolicheskimi kromkami)

PERIODICAL: Metallurg, 1958, Nr 4, pp 20 - 22 (USSR).

ABSTRACT: Spring strip with parabolic edges is used in the "Volga", Pobeda" and GAZ-69 cars: in spite of its production having started in 1947, many technological problems remain unsolved. A major difficulty is the tendency of the strip to be non-symmetrical and the authors discuss the two variants of lateral reduction distribution in existing roll-pass designs (Figure 3). At the Stalino Works, a considerable amount of rejects is due to this cause and when a similar system was adopted at the "Dneprospetsstal'" Works the reject proportion exceeded 25%. From an analysis of the causes of these defects, a satisfactory system was developed (Figure 5) in which the large lateral horizontal components of the roll pressure on the metal centre the strip in the pass and maintain symmetry. The authors give an equation for calculating the finishing-pass design and describe a simplified system for specifications omitting the edge curvature: in September - November, 1957, 568 tons of spring were rolled on the 325 mill at the "Dneprospetsstal'" Works with a total reject rate of 2.6%.

Card1/2

Rolling Spring Strip with Parabolic Edges 130-58-4-11/20

An automatic guide assembly (Figure 8) designed at the Stalinskiy metallurgicheskiy zavod (Stalino Metallurgical Works) is said to have facilitated parabolic-edge spring-strip rolling: the guides are in the open position except when the top roll of the stand is lifted by the presence of the strip. Finally, the authors criticise the standard specification, GOST 7419-55 (Figure 1). There are 8 figures.

ASSOCIATION: Zavod "Dneprospetsstal'" ("Dneprospetsstal'" Works)

Card 2/2

18.5100, 28.1000

77431
SOV/130-60-1-14/22

AUTHORS: Lobarev, M. I. (Chief of Rolling-Shop), Berkovskiy, V. S. (Senior Roll-Pass Designer)

TITLE: Measures of Improving Technical and Economical Performance Figures of Section Mills

PERIODICAL: Metallurg, 1960, Nr 1, pp 30-32 (USSR)

ABSTRACT: Reducing mill 825 and section mills 550, 325, and 280 were modernized at "Dneprospetsstal'" Plant (zavod "Dneprospetsstal'"). The plant produces high-speed steel R-18 (similar in composition to U. S. high-speed steel 18-4-1), Kh12-steel (composition (%): C, 2.00 to 2.30, Mn, 0.35; Si, 0.40; Cr, 11.0 to 12.5; Ni, 0.15 to 0.30; Mo, 0.50 to 0.80; S and P, traces), 3Kh2V8-steel (Composition (%): C, 0.30-0.50; Mn, 0.2-0.4; Si, $\leqslant$ 0.0.35; Cr, 2.2-2.7; Ni, $\leqslant$ 0.3; V, 0.2-0.5; W, 7.5-9.0%) and other high-alloy steels and alloys. Improvements concerned: (1) Heating furnaces: (a) introduction of a

Card 1/8

chromium-magnesite bottom; (b) addition of chamotte zones in dinas walls; (c) installation of electric system for combustion and pressure control; (d) modernization of trough design; (e) partial removal of supporting partitions in the "welding" zone; (f) replacement of face delivery by side delivery, eliminating breadkown of rolls after reheating. (2) Mill 325: Turning sheets were installed in front of the stand for the rolling of billets of various length and cross section. The horizontal section of the sheets was provided with rolls to avoid scratching and ensure easy movement of the metal. Advantage: elimination of heavy labor in front of stand. Manipulator in the back of the stand moves the piece from pass to pass. (3) Mills 325 and 280: (a) connection of roughing and finishing lines by roller table drive; (b) installation of automatic turning mechanism with interchangeable twist rolls (see Fig. 1). The mechanism works adequately when product is being

rolled in both lines simultaneously. Advantages: decrease of rejects, increase of rolling speed, and possible rolling of square high-speed steel shapes without intermediary heating; (c) introduction of a turning roll pipe (see Fig. 2). The head of the pipe is attached by bolts to a clamp

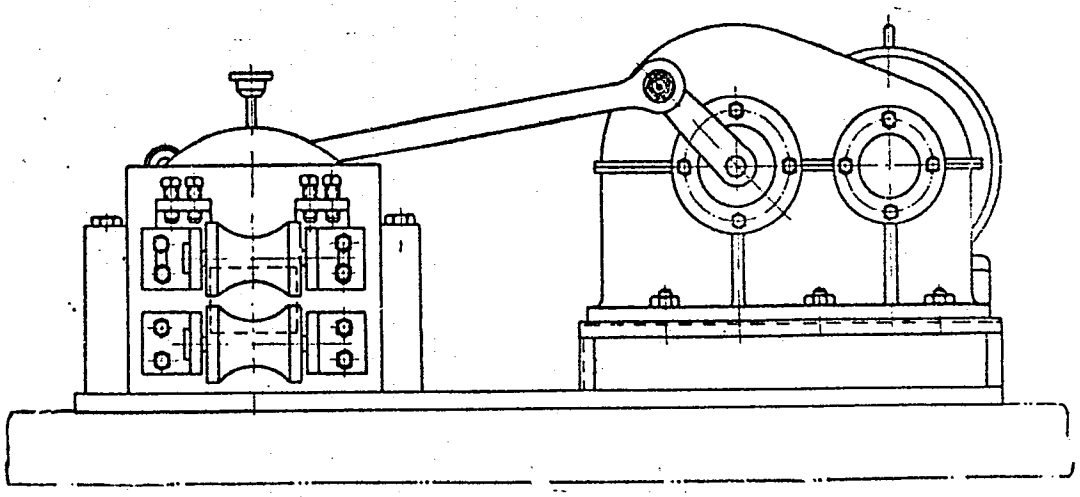
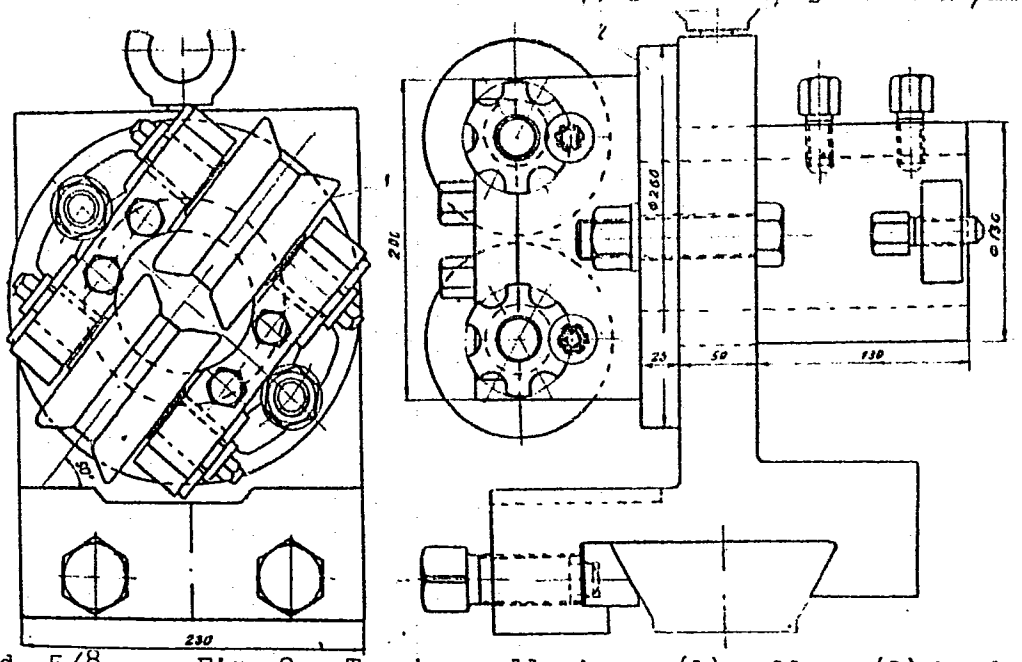


Fig. 1. Turning mechanism



Card 5/8 Fig. 2. Turning roll pipe: (1) roller; (2) head.

on bar. A steel tube (not shown in Fig. 2) is inserted into the head with one end protruding toward the rolls. Slits in the head at the place of attachment to the clamp allow positioning of the rolls in regard to the axis of rolling. Advantages: rejects due to surface flaws were drastically reduced. (4) Launching of a special workshop for production and repair of roll accessories. (5) Mill 550: installation of (a) screwdown mechanisms for bottom and top rolls; (b) turning mechanism in front of finishing stand; (c) drive roller tables and pullover gears. (6) Mill 825: automation of ingot handling and transfer. Furthermore, the following operations were automated: coiling, feeding, and transfer mechanisms, as well as flying shears. Advantages: decrease of service personnel from 32 to 8 (at Mill 280). The planned full automation of mill 280 involves the automation of: (1) roughing stand units; (2) inspection of hot sections; (3) removal of hot metal from coiler and cooler; (4) marking; and (5) installation of rotary

shears. Another important trend concerns the increase of preheating rates. By increasing soaking pit temperatures from 700 to 1,000° C the heating time of ingots was reduced considerably, i.e., by 30% for stainless steel and 15% for ball bearing steel. Preheating high-alloy steel billets in continuous furnaces on hearth tubes eliminated intermediary heating. As a result of studies conducted by the Central Plant Laboratory (TsZL) in collaboration with the shop, the reject due to decarburization was reduced from 68.6 tons in 1955 to 2.2 tons in 1958. The design of reducing stand passes has been developed with a view to achieving maximum metal stability in the passes and rolling an entire batch of steel on one set rolls at maximum reduction rates. The introduction of edging passes has greatly improved the rolling of rounds. Excellent results were achieved in rolling enlightened profiles for machine-building, including stainless steel channels, spring strip with parabolic edges, and Kh12F1-steel high-hardenability and -wear-re-

sistant die steel containing 12% Cr and 0.70-0.90% V) plough blades. As a result of the above modernization the output at the shop was upped by 41.8%, productivity of labor increased by 56.1%, and spoilage reduced to 0.19% as compared to 1953. There are 2 figures.

ASSOCIATION: "Dneprospetsstal'" Plant (Zavod "Dneprospetsstal'")

Card 8/8

BERKOVSKIY, V.S., inzh.; LOBAREV, M.I., inzh.; KHUDIK, V.T., inzh.; CHIZHIKOVA, I.Yu., inzh.

Wear and the surface finish of cast-iron rolling mill rolls. Stal' 21 no. 4:340-343 Ap '61. (MIRA 14:4)

1. Zavod "Dneprospetsstal'".
(Rolls (Iron mills)--Testing)

BERKOVSKIY, V.S.; AVRUNIN, P.M.

Improving roll grooving on the 550 mill. Metallurg 7 no.10: 7-11 O '62. (MIRA 15:9)

(Rolls (Iron mills))

BERKOVSKIY, V.S., inzh.; LOBAREV, M.I., inzh.

Rolling the blade of a composite share made of Kh12F1 steel.
Stal' 22 no.10:919-921 O'62. (MIRA 15:10)

1. Dnepropetrovskiy staleplavil'nyy zavod vysokokachestvennykh i spetsial'nykh staley.
(Rolling (Metalwork)) (Plows)

BERKOVSKIY V.S., inzh.; OSADCHIY, A.N., inzh. Prinimali uchastiye: STETSENKO, N.V.; LOBAREV, M.I.; AVRUNIN, P.M.; SHALIMOV, M.I.; IVANISHKIN, A.Ya.; OVECHKIN, V.I.; POVETKIN, G.I.; SHEVERDIN, V.I.

Grooving for the rolling of strip with acute angles. Stal' 23 no.7: 627-631 Jl '63. (MIRA 16:9)
(Rolling (Metalwork)) (Rolls (Iron mills))

BERKOVSKIY, V.S.; VASILEVICH, N.P.; YEFREMENKO, S.Z.; KHUDIK, V.T.

Production of upset strip for the t-sion suspension of the "Zaporozhets" automobile. Metallurg 10 no.1:28 Ja '65. (MIRA 18:4)

1. Zavod "Dneprospetsstal'".

BERKOVSKIY, V.S.; GUN, G.Ya.; KRAKHT, V.B.; KRAKHT, N.G.

Investigating plastic flow in passes in conditions of plain strain. Izv.vys.ucheb.zav.; chern. met. 8 no.4:123-127 '65. (MIRA 18:4)

1. Moskovskiy institut stali i splavov.

BERKOVSKIY, V.S.; OSADCHIY, A.N.; AVRUNIN, P.M.

Improving the roll pass design of jobbing mills for the rolling of high alloy steel. Metallurg 10 no.3:24-25 Mr '65.
(MIRA 18:5)

1. Moskovskiy institut stali i splavov i zavod "Dneprospetsstal'".

POLUKHIN, P.I.; BERKOVSKIY, V.S.; OSADCHIY, A.N.; STETSENKO, N.V.; AVRUNIN, P.M.; IVANKIN, Yu.I.

Oval and edged oval system of roll passes on tandem light section mills for rolling high alloy steel. Stal' 25 no.4:337-341 Ap '65. (MIRA 18:11)

1. Moskovskiy institut stali i splavov i Zavod "Dneprospetsstal'".

BERKOVSKIY, Ye.

DUBOVYY, Ye. D.; BERKOVSKIY, Ye M.; VORONTSOV, I. M.; GINZBURG-DUBOVAYA, D. Ya.

Clinico-morphologic modifications in breast cancer in pre-operative x-ray irradiation. Vest khir. Grekova, Leningr. 71 no. 6:27-31 1951. (CLML 21:3)

1. Of the Department of Roentgenology (Head -- Prof. Ye. D. Dubovyy), Department of Pathological Anatomy (Head -- Prof. D. M. Khayutin), Odessa Medical Institute (Director -- Docent A. N. Motnenko) and of the Department of Oncology (Head -- Docent. I. M. Vorontsov), Odessa Institute for the Advanced Training of Physicians (Director -- Docent F. Ye. Kurkudym).

1. BERKOVSKIY, Ye. M.

2. USSR (600)

4. Mouth Diseases

7. Morphology of the oral mucosa and of the dental pulp in experimental brucellosis in guinea pigs. Stomatologiia. no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

BERKOVSKIY, M.M.

Botryomycosis of the hard palate. Stomatologiia no.5:60-61 S-O '55. (MLRA 9:2)

1. Iz patologoanatomicheskoy laboratorii Odesskogo nauchno-issledovatel'skogo instituta stomatologii (dir.-starshiy nauchnyy sotrudnik M.I. Kukhareva)
(PALATE--TUMORS) (GRANULOMA BENIGNUM)

BERKOVSKIY, Ye.M.; DROBYSHEVSKIY, V.L.

Morphology of the argyrophylic substance of the dental pulp in amphodontosis (paradontosis). Stomatologiia, no.6:11-16 N-D '55. (MLRA 9:5)

1. Iz patologoanatomicheskogo otdela (zav.-kandidat meditsinskikh nauk Ye.M. Berkovskiy) Odesskogo nauchno-issledovatel'skogo instituta stomatologii (dir.-starshiy nauchnyy sotrudnik M.I. Kukhareva)

(PERIODONTIUM, dis.
periodontitis, dent. pulp in, morphol. of argyrophylic substance)
(DENTAL PULP, anat. & histol.
argyrophylic substance morphol. in periodontitis)

USSR / Human and Animal Morphology, Normal and Pathological. S
Digestive System.

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 35914

Author : Berkovskiy, E. M.
Inst : Ukrainian Institute of Stomatology
Title : The Effect of Certain Diets of Poor Quality on the Morphology of the Tissue of the Tooth and Amphodont.

Orig Pub : Tr. Ukr. in-ta stomatol., 1957, vyp. 2, 13-19.

Abstract : None given

Card 1/1

USSR / Human and Animal Morphology, Normal and Pathological. S
Digestive System.

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 35912

Authors : Berkovskiy, E. M.; Drobyshevskiy, B.L.
Inst : Ukrainian Institute of Stomatology.
Title : Age Changes of the Argurophil Substance in the Dental Pulp.

Orig Pub : Tr. Ukr. in-ta stomatol., 1957, vyp. 2,113-118.

Abstract : None given

Card 1/1

BERKOWSKI, Leopold, mgr inz.

Cracks in thermally treated items. Przegl mech 23 no. 1: 14-17 10 Ja '64.

1. Zaklady Przemyslu Metalowego H. Cegielski, Pozman.

BERKOWSKI, Leopold, mgr inz.

Cracks in thermally treated items. Pt. 2. Przegl mech 23 no. 2:53-55 Ja '64.

1. Zaklady Przemyslu Metalowego H. Cegielski, Poznan.

BERKU

RUMANIA / Chemical Technology. Aromatic Substances. H
Essential Oils. Perfumery and Cosmetics.

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 75127.

Author : Berku.
Inst : Not given.
Title : An Extract From Oak Moss.

Orig Pub: Rev. ind. ailiment. prod. vegetale, 1956, No 1, 22-24.

Abstract: No abstract.

Card 1/1

RENNE, Vladimir Tikhonovich, doktor tekhn.nauk, prof.; BERKU, Adrian [Bercu, A.], inzh.; KARABANOV, Valentin Iosifovich, inzh., kand.-tekhn.nauk, nauchnyy sotrudnik; KOZYREVA, Mariya Semenovna, kand.-tekhn.nauk, nauchnaya sotrudnitsa

Study of a saturation liquid for power condensers. Izv. vys. ucheb. zav.; elektromekh. 5 no.12:1424-1428 '62. (MIRA 16:6)

1. Zaveduyushchiy kafedroy elektroizolyatsionnoy i kabel'noy tekhniki Leningradskogo politekhnicheskogo instituta (for Renne). 2. Bukharestskiy institut elektrotekhnicheskikh issledovaniy (for Berku). 3. Leningradskiy politekhnicheskiy institut (for Karabanov, Kozyreva).

(Condensers (Electricity)) (Electrolyte solutions)

BERKu, S.

137-1958-1-587

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 92 (USSR)

AUTHORS: Mikulesku, R., Berku, S., Dragan, I.

TITLE: Determining the Free Spread of Copper and Brass When Rolling in Plain Rolls (Opredeleniye svobodnogo ushireniya medi i latuni pri prokatke v gladkikh valkakh)

PERIODICAL: Zh. metallurgiya, 1956, Vol 1, pp 101-105

ABSTRACT: The hot rolling of Cu and brass on plain rolls of identical diameter, and cold rolling on plain rolls of different diameters, is investigated. Comparison of the spread values confirms that the factors affecting the spread of Cu and brass are H, Δh, B, and R. Employment of the Riedel nomogram to determine spread in the hot rolling of steel enables the Authors to propose a nomogram for determining the spread of Cu and brass and a general formula for determination of the spread: $\Delta B = KB\,\Delta H\sqrt{R\,\Delta H}/\sqrt{B/\sqrt{R\,\Delta H}}\,BH + h\sqrt{R\,\Delta H}$, where K is a correction factor determined from the diagram in accordance with the relative reduction.

Yu.F.

Card 1/1 1. Brass--Deformation--Mathematical analysis 2. Copper--Deformation--Mathematical analysis

SHUL'TE, Yu.A.; GLADKIY, S.I.; BARYSHEVSKIY, L.M.; BERKUN, M.N.; LUNEV, V.V.; SAPELKIN, A.I.; VOICHOK, I.P.; SHEVCHUK, P.T.; KURBATOV, M.I.

Heat treatment of medium-carbon steel castings. Lit. proizv. no.4:9-10 Ap '64. (MIRA 18:7)

GLADKIY, S.I.; BERKUN, M.N.; BARYSHEVSKIY, L.M.; VOLCHOK, I.P.

Samples for the control of mechanical properties of steel castings. Lit. proizv. no.11:40 N '64. (MIRA 18:8)

LUNEV, V.V., inzh.; BERKUN, M.N., inzh.; VOLCHOK, I.P., inzh.; UMANSKIY, M.A., inzh.

Effect of heat treatment on the cold strength of cast medium-carbon steel. Mashinostroenie no.6:71-72 N-D '64 (MIRA 18:2)

SHUL'TE, Yu.A.; LUNEV, V.V.; BERKUN, M.N.; VOLCHOK, I.P.; GLADKIY, S.I.

Effect of structural dispersity on the properties of medium carbon cast steel. Fiz.-khim. mekh. mat. 1 no.2:218-220 '65. (MIRA 18:6)

1. Mashinostroitel'nyy institut im. V.Ya. Chubarya, Zaporozh'ye.

SHUL'IE, Yu.A., doktor tekhn.nauk; PARASYUK, P.F., inzh.; SHERSTYUK, A.A., inzh.; MIKHAYLOV, P.A., inzh.; KURBATOV, M.I., kand.tekhn.nauk; BERKUN, M.N., inzh.

Increasing the durability of high-manganese steel castings. Mashinostroenie no.4:57-58 Jl-Ag '65. (MIRA 18:8)

ALEKSANDROV, A.G., kand. tekhn. nauk; BRAUN, M.P., doktor tekhn. nauk;
Prinimali uchastiye: GOL'VERK, I.M.; BERKUN, M.N.; KURBENKO, L.M.;
GALKIN, Yu.N.

Cast, nickel-free, heat-resistant alloys. Lit. proizv. no.12:
8-10 D '65. (MIRA 18:12)

HERKUN,N.; MALEYEVA,R.

Increasing the effectiveness of approaching grabs. Mor.flot 15 no.6:4-6 Je '55. (MLRA 8:8)
(Cranes, derricks, etc.)

BERKUN, N.; VOVK, V.

Some simplifications in the filling out of forms required for the transportation of bulk cargoes. Mor. flot 20 no.11:8-9 N '60.
(MIRA 13:11)

1. Nachal'nik kommercheskogo otdela Azovskogo upravleniya Chernomorskogo gruzovogo morskogo porta (for Berkun). 2. Revizor kommercheskogo otdela Chernomorskogo gruzovogo morskogo porta (for Vovk).
(Merchant marine) (Bills of lading)

BERKUN, N.

What the functions of the commercial department should be. Mor. flot 24 no.12:8 D '64. (MIRA 18:8)

1. Nachal'nik kommercheskogo otdela Azovskogo upravleniya uglerudovoznogo flota.

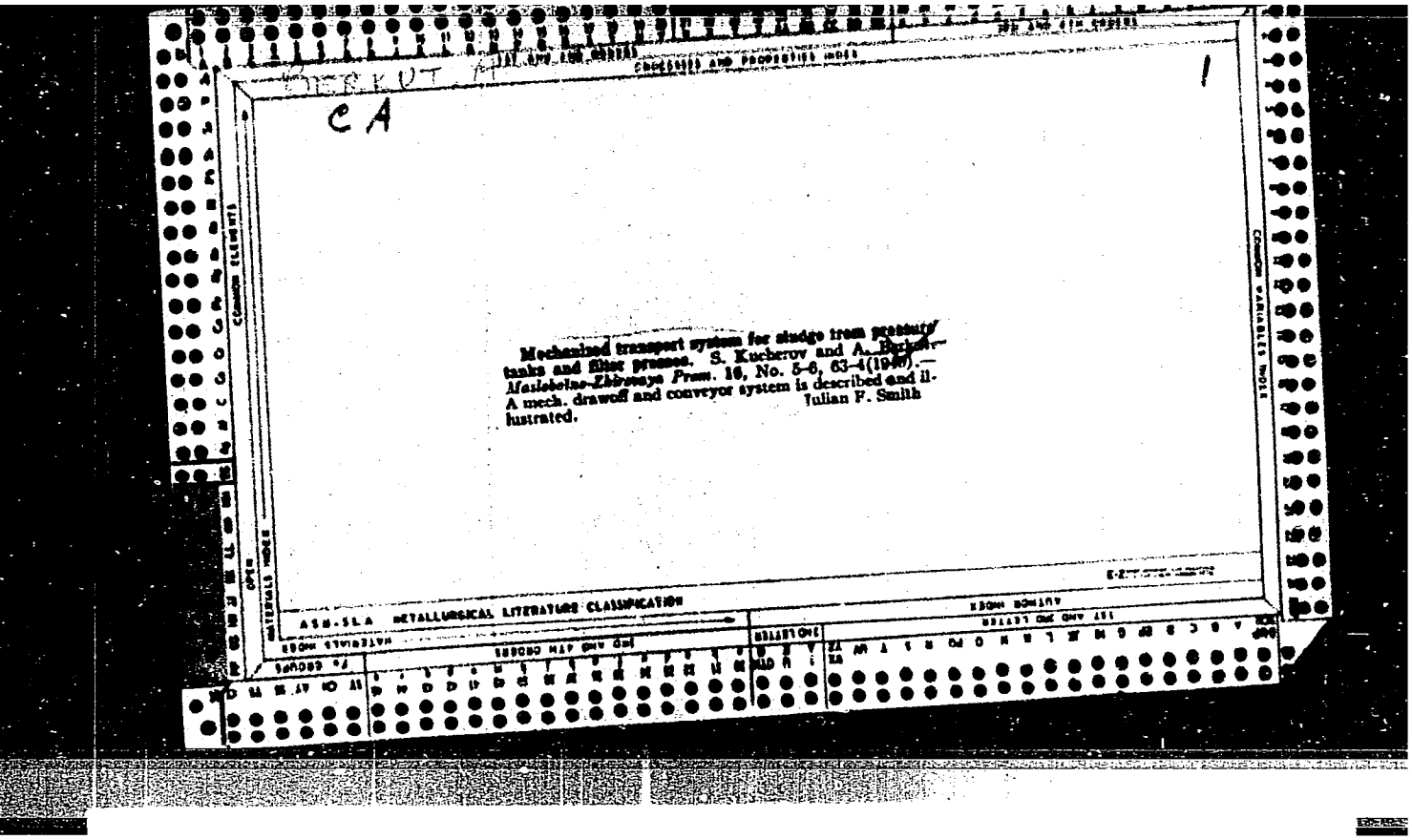
BERKUN, V.A. (Khar'kov)

Approximate solution of the problem on fluid flow toward a well in a nonhomogeneous aquifer. Inzh. zhur. 4 no.2:342-346'64 (MIRA 17:8)

BERKUN, V.A.

Determining the initial gas reserves of interacting fields. Gaz. delo no.3:6-9 '63. (MIRA 17:8)

1. Ukrainskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta prirodnogo gaza.



BERKUT, A.Ye.

BERKUT, A.Ye.; GRAMMAKOV, A.G.; ORLOV, V.M.; KHROPOVA, P.M.

Manifestations of static electricity during the production of oilcloth. Leg. prom. 17 no.12:29-32 D '57. (MIRA 11:1)
(Synthetic fabrics--Electric properties)

ORLOV, V.M., kand.tekhn. nauk; BERKUT, A.Ye., inzh.

Using ultraviolet radiation for neutralizing electrostatic discharges. Svetotekhnika 4 no. 7:26-27 Jl '58. (MIRA 11:7)
(Ultraviolet rays)
(Electrostatics)

ORLOV, V.M., kand. tekhn. nauk; BERKUT, A.Ye., inzh.; KOMYAK, N.I., inzh.

Neutralization of electrostatic charges in fibrous materials. Tekst. prom. 18 no. 7:49-50 Jl '58. (MIRA 11:7)
(Textile fibers)
(Electrostatics)

POPOV, V.V.; GOVOROV, V.P., nauchnyy red.; YEL'CHUKOV, V.S., red.; BERKUT, I.V., otv.za vypusk

[Program for the subject "Machines and apparatus for sanitary engineering work" in the technical school major - "Sanitary installations in buildings," approved by the Ministry of Higher Education of the U.S.S.R., April 14, 1955. A 65-hour course] Programma predmeta "Stanki i mekhanizmy dlia proizvodstva sanitarno-tekhnicheskikh rabot" k uchebnomu planu spetsial'nosti tekhnikumov "Sanitarno-tekhnicheskie ustroistva zdanii," utverzhdennomu Ministerstvom vysshego obrazovaniia SSSR, 14 aprelia 1955 g. Ob"em programmy - 65 chasov. Moskva, Uchebno-metodicheskii kabinet, 1958. 7 p. (MIRA 12:2)

1. Russia (1917- R.S.F.S.R.) Ministerstvo stroitel'stva. Otdel uchebnykh zavedeniy upravleniya kadrov.
(Building machinery)

SLOBODCHIKOV, G.T., inzh.; SPIRIDOVICH, N.F., inzh.; GOVOROV, V.P., inzh., nauchnyy red.; YEL'CHUKOV, V.S., red.; BERKUT, I.V., otv.za vypusk

[redacted]

[Program for the subject "Water supply and sewer systems" in the technical school major "Sanitary installations in buildings," approved by the Ministry of Higher Education of the U.S.S.R., April 14, 1955. A 105-hour course] Programma predmeta "Vodosnabzhenie i kanalizatsiia" k uchebnomu planu spetsial'nosti tekhnikumov "Sanitarno-tekhnicheskie ustroistva zdanii," utverzhdennomu Ministerstvom vysshego obrazovaniia SSSR, 14 aprelia 1955 g. Ob"em programmy - 105 chasov. Moskva, Uchebno-metodicheskii kabinet, 1958. 9 p. (MIRA 12:2)

1. Russia (1917- R.S.F.S.R.) Ministerstvo stroitel'stva. Otdel uchebnykh zavedeniy upravleniya kadrov.

(Water-supply engineering)

KOSTRYUKOV, V.A., inzh.; KOPYLOV, L.I., inzh.; GOVOROV, V.P., inzh., nauchnyy red.; YEL'CHUKOV, V.S., red.; BERKUT, I.V., otvetsv. za vypusk

[Program for the subject "Production standards and estimates" in the technical school major "Sanitary installations in buildings," approved by the Ministry of Higher Education of the U.S.S.R., April 14, 1955. A 90-hour course] Programma predmeta "Tekhnicheskoe normirovanie i smety" k uchebnomu planu spetsial'nosti tekhnikumov "Sanitarno-tekhnicheskie ustroistva zdanii," utverzhdennomu Ministerstvom vysshego obrazovaniia SSSR, 14 aprelia 1955 g. Ob"em programmy - 90 chasov. Moskva, Uchebno-metodicheskii kabinet, 1958. 9 p. (MIRA 12:2)

1. Russia (1917- R.S.F.S.R.) Ministerstvo stroitel'stva. Otdel uchebnykh zavedeniy upravleniya kadrov.
(Construction industry)

LAVRCV, D.P., inzh.; GOVOROV, V.P., inzh., nauchnyy red.; YEL'CHUKOV, V.S., red.; BERKUT, I.V., otvetstv. za vypusk

[Program for the subject "Safety engineering and fire prevention" in the technical school major "Sanitary installations in buildings," approved by the Ministry of Higher Education of the U.S.S.R., April 14, 1955. A 45-hour course] Programma predmeta "Tekhnika bezopasnosti i protivopozharnaia tekhnika" k uchebnomu planu spetsial'nosti tekhnikumov "Sanitarno-tekhnicheskie ustroistva zdanii," utverzhdennomu Ministerstvom vysshego obrazovaniia SSSR, 14 aprelia 1955 g. Ob"em programmt - 45 chasov. Moskva, Uchebno-metodicheskii kabinet, 1958. 10 p. (MIRA 12:2)

1. Russia (1917- R.S.F.S.R.) Ministerstvo stroitel'stva. Otdel uchebnykh zavedeniy upravleniya kadrov.
(Industrial accidents) (Fire prevention)

BERKUT, V.G., vedushchiy konstruktor

New device for track respiking. Put' i put. khoz. 7 no.6:10 '63. (MIRA 16:7)

(Railroads—Equipment and supplies)

ESKIN, V.A.; KRAMINSKAYA, N.N.; BERKUT, Yu. V.; IRLIN, Sh. P.; IZOTOV, P.V.

Epidemiology and clinical characteristics of Ussuri leptospirosis. Zhur. mikrobiol. epid. i immun. 29 no.8:54-60 Ag '58. (MIRA 11:10)
(LEPTOSPIROSIS,
ussuri, epidemiol. in Russia & clin. aspects (Rus))

GRITSAY, V., inzh.; BERKUTA, V., inzh.; OLITSKIY, G., inzh.

The housing construction combine mastered its planned capacity.
Zhil. stroi. no.8:11-14 '62. (MIRA 15:9)
(Alma-Ata--Concrete plants)

BERKUTA, A.V.

Polyacrylamide as an effective means for reducing the amount of fibers left suspended in the white water in the paper industry. Bum. i der. prom. no.3:11-13 Jl-S '64.

(MIRA 17:11)

BERKUTA, A.V.; DYATEL, Yu.P.

Ways of improving the technology of the purification of waste water at the Poninka Woodpulp and Paper Combine. Bum. i der. prom. no.4:11-13 O-D '64 (MIRA 18:2)

BERKUTA, A.V.

All-Union interplant school. Bum. i der. prom. no.4:50-51
O-D '64 (MIRA 18:2)

BERKUTOV, A.; GOL'DVASSER, V.

Stressing the teacher's role in the education and training of students. Grazhd. av. 12 no.11:8-9 N '55. (MIRA 15:9)
(Aeronautics--Study and teaching)

BERKUTOV, A.; MESHKOV, P., aspirant

The main thing is economy. Grazhd. av. 21 no.9:28 S '64.
(MIRA 17:10)

1. Nachal'nik otdela material'no-tekhnicheskogo snabzheniya Severnogo territorial'nogo upravleniya (for Berkutov). 2. Moskovskiy institut narodnogo khozyaystva imeni Plekhanova (for Meshkov).

BERKUTOV, A.B.; MUN, A.I.

Salt lakes of Kazakhstan and their industrial significance. Vest. AN Kazakh. SSR 13 no.7:49-53 Jl '57. (MLRA 10:9)
(Kazakhstan--Mines and mineral resources) (Lakes)

BERKUTOV, A.N.; KOGAN, L.A.; MASINA, TS.B.

Replacing the checker-brick of regenerators in coke battery no.2.
Koks i khim.no.5:23-28 '56. (MLRA 9:10)
(Coke ovens)

BERKUTOV, A.N.

Treatment of Deep Chest Wounds
VOYENNO-MEDITSINSKIY ZHURNAL (Military Medical Journal), no.2, February 1955, p. 31

BEKKUTOV, A.M., professor; Leningrad, ul. Lebedeva, d. 10-a, kv.7.

Injurious factors of atomic explosion; review of the literature.
Vest.khir.75 no.5:95-104 Je '55. (MLRA 8:10)
(ATOMIC WARFARE,
inj.factors of atomic explosion)

BERKUTOV, A.N., professor

G. F. Nikolaev; obituary. Vest.khir 76 no.7:159-160 Ag '55
(OBITUARIES, (MLRA 8:10)
Nikolaev, G.F.)