NEDYALKOV, N.S.

AUTHOR: Nedyalkov, N.S. 26-10-13/44

TITLE: A Study of Hailstorm Damages to Agriculture in Bulgaria (Issucheniye gradobitiy v Bolgarii)

PERIODICAL: Priroda, 1957, No 10, pp 86-89 (USSR)

ABSTRACT: The author gives an account of hailstorms occurring in Bulgaria and the damage they have caused to agriculture over a period of 13 years. Bulgaria is one of the European countries suffering the most from hailstorms. The worst period is from May through July when in some areas hailstorms occur continuously. Statistics show (Table 1) that more than 1,500 communities suffer from frequent damage every year where an average of 250,000 - 300,000 hectares of crops are devastated, causing the government yearly losses of more than 200 million levas. Diagram 1 shows the amount of precipitations in Bulgaria and Chart 2 the different areas with respect to the frequency of hailstorms. The author refers to a number of methods for reducing damage of crops by hail. In the first place early agricultural crops, especially grain crops, should be cultivated, for harvesting before the beginning of the dangerous period. Harvesting should be carried out quickly. Crop varieties, especially capable of recovering from hail damage,

Card 1/2

Veterinary Medicine

BULGARIA

CHENCHEV, Prof. Iv., VIZPB; NEDYALKOV, Dr. St., VII; KHRISTOV, Dr. Y., VII; DURANOV, Dr. Y., VIZPB; BODUROVA, Dr. Tsv., VII; SAVOV, Dr. At., IBPNE

"Properties of the Preparation Biozan T"

Sofia, Veterinarna Sbirka, Vol 63, No 8, 1966, pp 7-9

Abstract: Preparations Biozan T and Biozan P to be administered to newborn calves and pigs, respectively, for the prevention of intestinal and other diseases have been developed. Biozan T contains gamma-globulins active against S. enteritidus, S. typhi murium, P. bulbasepticus, E. coli (O_9, O_{78}, and O_{117}), and the virus of Aujeszky's disease and Biozan P gamma-globulins active against S. cholerae suis, S. typhi murium, E. coli (hemolytic and non-hemolytic), and the virus of Aujeszky's disease. Furthermore, vitamin C, terramycin, biomycin, and penicillin have been added to both preparations. Tests carried out on Biozan T indicated that it was non-toxic to white mice, had a bacteriostatic effect on Staph. aureus 209 and E. coli 09, and did not deteriorate with respect to antibiotic activity on being stored at 4° for 5 months. On being administered to calves 3-16 days old, Biozan T was very effective in stimulating growth. While the calves did not develop diarrhea, a definite conclusion in regard to the effect of Biozan T in producing immunity is not yet possible at this stage. Table, no references.

1/1

BULGARIA/Chemical Technology. Chemical Products and Their Application. Dyeing and Chemical Treatment of Textile Materials. I-34

Abs Jour: Ref Zhur-Khim., № 2, 1959, 6903.

Author : Nedyalkova, K.
Inst :
Title : Waterproof Impregnation of Fabrics with Application of Synthetic Latex SKS-30

Orig Pub: Leka promishlenost, 1957, 6, № 6, 13-17.

Abstract: The hydrophobic compounds for carpeculars based on Latex SKS-30 are more efficient than the emulsions for impregnations based on soaps and oil soles, which have been used in BPR for recipes of rubber latex impregnations containing, fillers, plasticizers and vul-

Card : 1/2

NEDYALKOVA, K.

Distr: 4E2c(j)/4E3b

1-[illegible] ([illegible])
2-[illegible] ([illegible])

The effect of various types of carbon black on the physical properties of high-[illegible] treads and protector mixtures based on natural rubber. [illegible] Lek. Prom. (Sofia) [illegible], No. [illegible] ([illegible]).— [illegible] that Vulkasites C[illegible] and A[illegible] are the best [illegible] was used as an antioxidant. The [illegible] hardness is connected with the [illegible] and the structure of the C blacks. [illegible] and [illegible] were [illegible], having low heat [illegible] and fatigue stability with highest possible extension modulus. Y. [illegible]

MEDYANKOVA, L.
Surname (in Caps); Given Names

Country: Bulgaria

Academic Degrees: not indicated

Affiliation: not indicated

Source: Sofia, Matematika i Fizika, No 2, Mar/Apr 61, pp 21-28

Data: "Reviewing the 11th Grade Subject Functions."

BULGARIA

NEDYALKOVA, M., DOYCHINOVA, N.: Scientific Research Institute of Hematology and Blood Transfusion (Director Prof. V. Serafimov-Dimitrov)

"Effect of Heterologous Erythrocyte Antigens on Irradiated Animals"

Sofia, Rentgenologiya i Radiologiya, Vol 5, No 4, 1966, pp 225-229

Abstract: Guinea pigs were immunized by intraperitoneal injection of a suspension of human erythrocytes and irradiated on the 7th day after the injection with X-rays in a dose of 340 r. Immunization with heterologous erythrocyte antigens increased the immunological reactivity of the experimental animals as compared with control animals that were irradiated without having been immunized, but did not affect the course of the radiation sickness as such. None of the experimental animals developed complications due to infection, while one of the control animals exhibited bacteremia on the 7th day after irradiation. Aerobacter aerogenes was isolated from the blood of this animal. Graphs, 17 references (9 USSR, 8 Western). Russian and English summaries. Manuscript received Jul 66 (Jul 65 ?).

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BULGARIA

Sofia, [illegible], Vol 20, No 1, 1967, pp 73-76

[illegible] in the spleen immunocompetent cells. Regarding the synthesis of hemagglutinating antibodies reflected in the titre of the serum agglutinins, it may be assumed that the radioprotectors applied have no absolute effect. References: 1 Bulgarian and 11 Western. (Manuscript received, 5 Sep 66.)

2/2

L 27120-66 EWT(1) IJP(c)

ACC NR: AP6004980 SOURCE CODE: UR/0056/66/050/001/0062/0068

AUTHOR: Bonchev, Ts.; Aydemirski, P.; Mandzhukov, I.; Nedyalkova, N.; Skorchev, B.; Strigachev, A.

56
B

ORG: Sofia University "Kliment Okhridski" (Sofiyskiy universitet)

TITLE: A study of Brownian motion by means of the Mossbauer effect

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 1, 1966, 62-68

TOPIC TAGS: Mossbauer effect, tin, Brownian motion, resonance absorption, viscous fluid, silicone, glycerin, isotope, gamma quantum

ABSTRACT: The authors have investigated the resonance absorption of γ quanta in Sn^{119} in SnO_2 particles suspended in different liquids. The resonance absorption spectra were obtained with a Mossbauer spectrometer with a moving source having a velocity ranging from 0 to 30 mm/sec. The source was $Sn^{119}O_2$ kept at room temperature. The absorber temperature ranged from -196 to +250C. Variation of the viscosity of a glycerin suspension by diluting the latter with water, at constant temperature, increased the line width in accordance with the law formulated by Singwi and Sjölander (Phys. Rev. v. 120, 1093, 1960). The same takes place in a

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Card 1/2

L 22120-66

ACC NR: AP6004980

suspension in a silicone oil whose viscosity is altered by changing the temperature. The results are analyzed from the point of view of the mechanism whereby the γ quantum is absorbed by the SnO_2. It is concluded that in suspensions, unlike ordinary liquids, the absorption does not occur spontaneously, nor does it occur within a certain time interval of the order of the half-life of the nuclear level, but it must be assumed that the suspension particles stay in equilibrium during some time. The absorption of the γ quantum then depends not only on the instantaneous particle velocity but also on the time interval between the jumplike changes of velocity which occur in suspension, which have a statistical nature similar to that of Brownian motion. This feature uncovers interesting possibilities for the investigation of the structure of liquids and of the γ quantum absorption mechanism. Orig. art. has: 8 figures and 10 formulas.

SUB CODE: 20/ SUBM DATE: 09Aug65/ ORIG REF: 008/ OTH REF: 003

Card 2/2 OK

ACCESSION NR: AT4017779 B/2503/63/011/01-/0121/0137

AUTHOR: Nedylikov, I.

TITLE: Some questions associated with the algebraization of pion-nucleon and pion-pion scattering

SOURCE: B"lgarska Akademiya na Naukite. Fizicheski institut. Izvestiya na Fizicheskiya institut s ANEB (News of the Institute of Physics and the Atomic Energy Scientific Research Foundation), v. 11, no. 1-2, 1963, 121-137

TOPIC TAGS: scattering, pion, nucleon, algebra

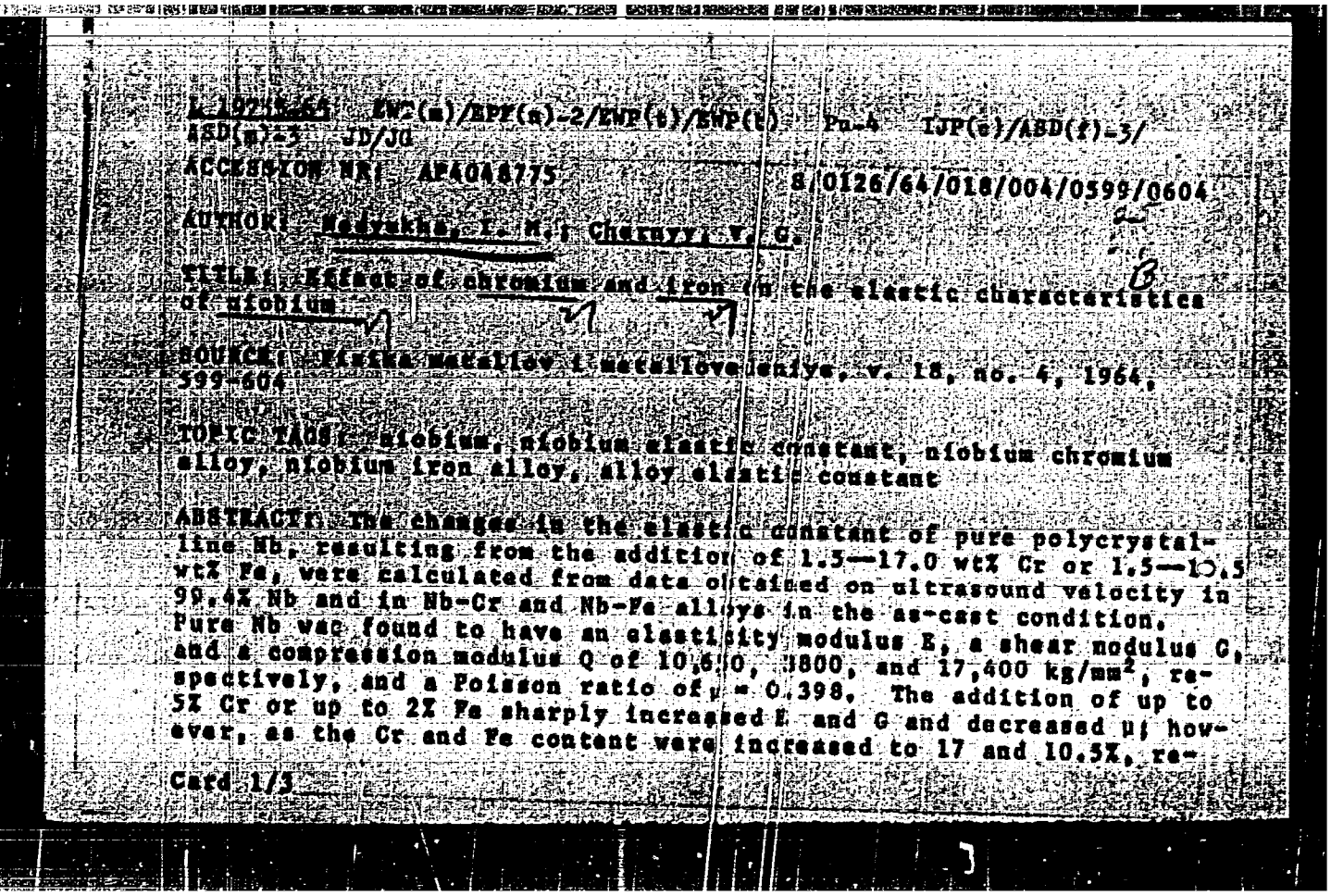
ABSTRACT: Obtained in this work, on the basis of analysis, cross-symmetry and unitarity, is an algebraic system to describe certain processes of scattering in pion-nucleon and pion-pion scattering. This system proves to be simple enough for calculations and, in the author's opinion, might also be used to explain certain properties of the solutions. Orig. art. has 46 equations.

ASSOCIATION: none

SUBMITTED: 15Sep62 DATE ACQ: 04Mar64 ENCL: 00

SUB CODE: PH, MM NO REF SOV: 004 OTHER: 013

Card 1/1



L 19235-65 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pn-4 IJP(c)/ASD(f)-3/
ASD(m)-3 JD/JG
ACCESSION NR: AP4048775 S/0126/64/018/004/0599/0604
AUTHOR: Medyukha, I. M.; Chernyy, V. G.
TITLE: Effect of chromium and iron on the elastic characteristics of niobium
SOURCE: Fizika metallov i metallovedeniye, v. 18, no. 4, 1964, 599-604
TOPIC TAGS: niobium, niobium elastic constant, niobium chromium alloy, niobium iron alloy, alloy elastic constant
ABSTRACT: The changes in the elastic constant of pure polycrystalline Nb, resulting from the addition of 1.5—17.0 wt% Cr or 1.5—10.5 wt% Fe, were calculated from data obtained on ultrasound velocity in 99.4% Nb and in Nb-Cr and Nb-Fe alloys in the as-cast condition. Pure Nb was found to have an elasticity modulus E, a shear modulus G, and a compression modulus Q of 10,600, 3800, and 17,400 kg/mm^2, respectively, and a Poisson ratio of $\mu = 0.398$. The addition of up to 5% Cr or up to 2% Fe sharply increased E and G and decreased μ; however, as the Cr and Fe content were increased to 17 and 10.5%, re-
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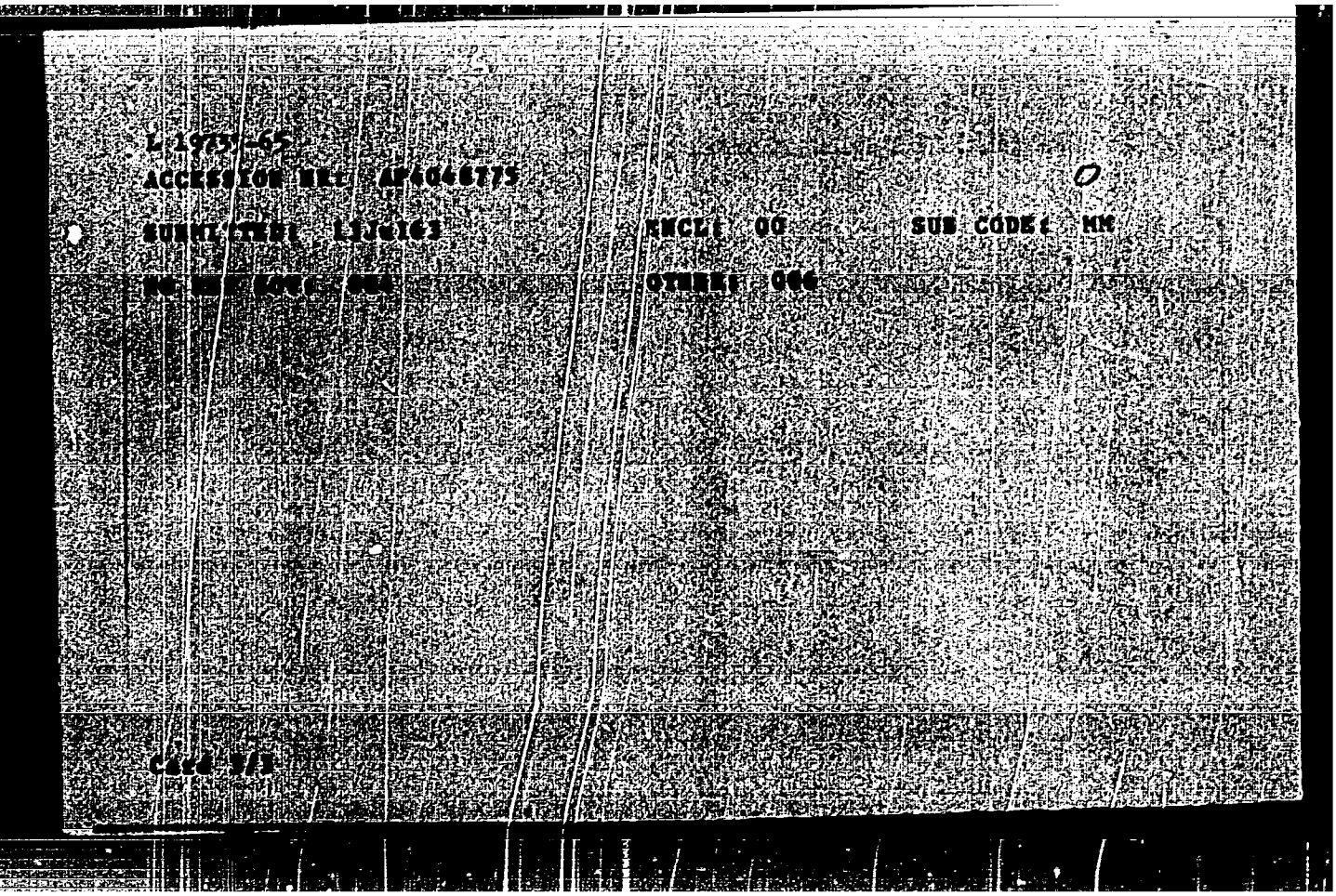
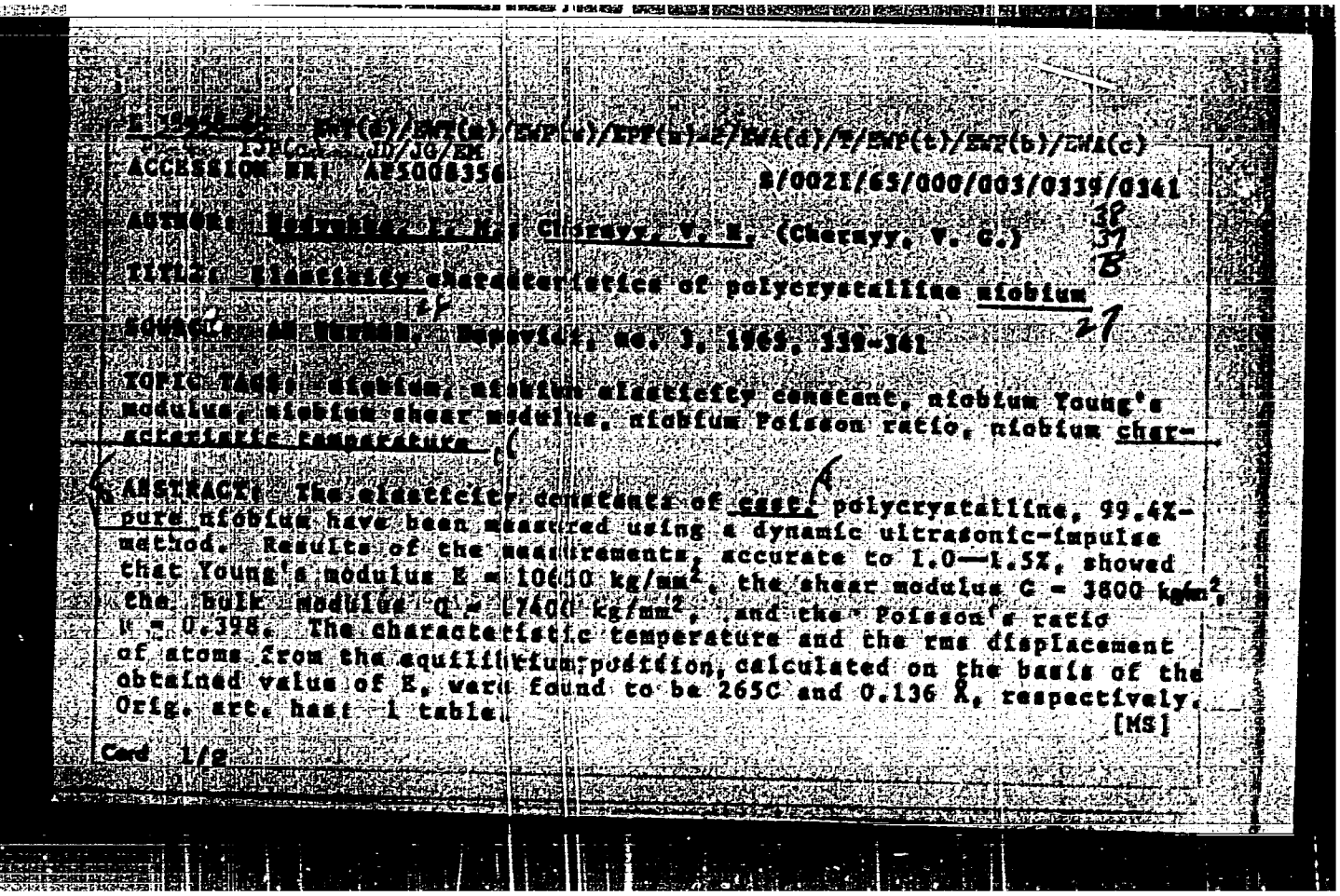
L 19735-65
ACCESSION NR: AP4048775

spectively, the changes in the absolute value of these constants became less pronounced. The compression modulus Q decreases from 17,400 to 16,400--16,540 kg/mm^2 as the Cr content is increased from 0 to 3--6%, and then again gradually increases to the former value in an alloy with 17% Cr. The addition of Fe produces analogous changes in Q. These changes are at their lowest in alloys with 1.5--2.0% Fe. With increased Cr or Fe content, the Debye temperature continuously increases from 265C in pure Nb to 330 and 317C in alloys with 17% Cr and 10.5% Fe, respectively. At the same time, the rms displacements of Nb atoms from the equilibrium position in the crystal lattice decrease from $0.138 \cdot 10^{-8}$ cm in pure Nb to $0.121 \cdot 10^{-8}$ and $0.123 \cdot 10^{-8}$ cm in alloys with 17% Cr and 10.5% Fe, respectively. The changes in the last two constants show that alloying Nb with Cr and/or Fe strengthens the interatomic bonds in the alloys. Orig. art. has: 4 figures.

ASSOCIATION: Institut liteynogo proizvodstva AN Ukr SSR (Institute of Foundry Practices, AN Ukr SSR)

Card 2/3





L 2[illegible] EWT(d)/EWT(m)/EWP(w)/EPF(n)-2/EWA(d)/T/EWP(t)/EWP(b)/EWA(c)
IJP(c) JD/JG/EM
ACCESSION NR: AT5008356 S/0021/65/000/003/0339/0341

AUTHOR: [illegible] I. K.; Chernyy, V. E. (Chernyy, V. C.) 38 37 B

TITLE: Elasticity characteristics of polycrystalline niobium 27

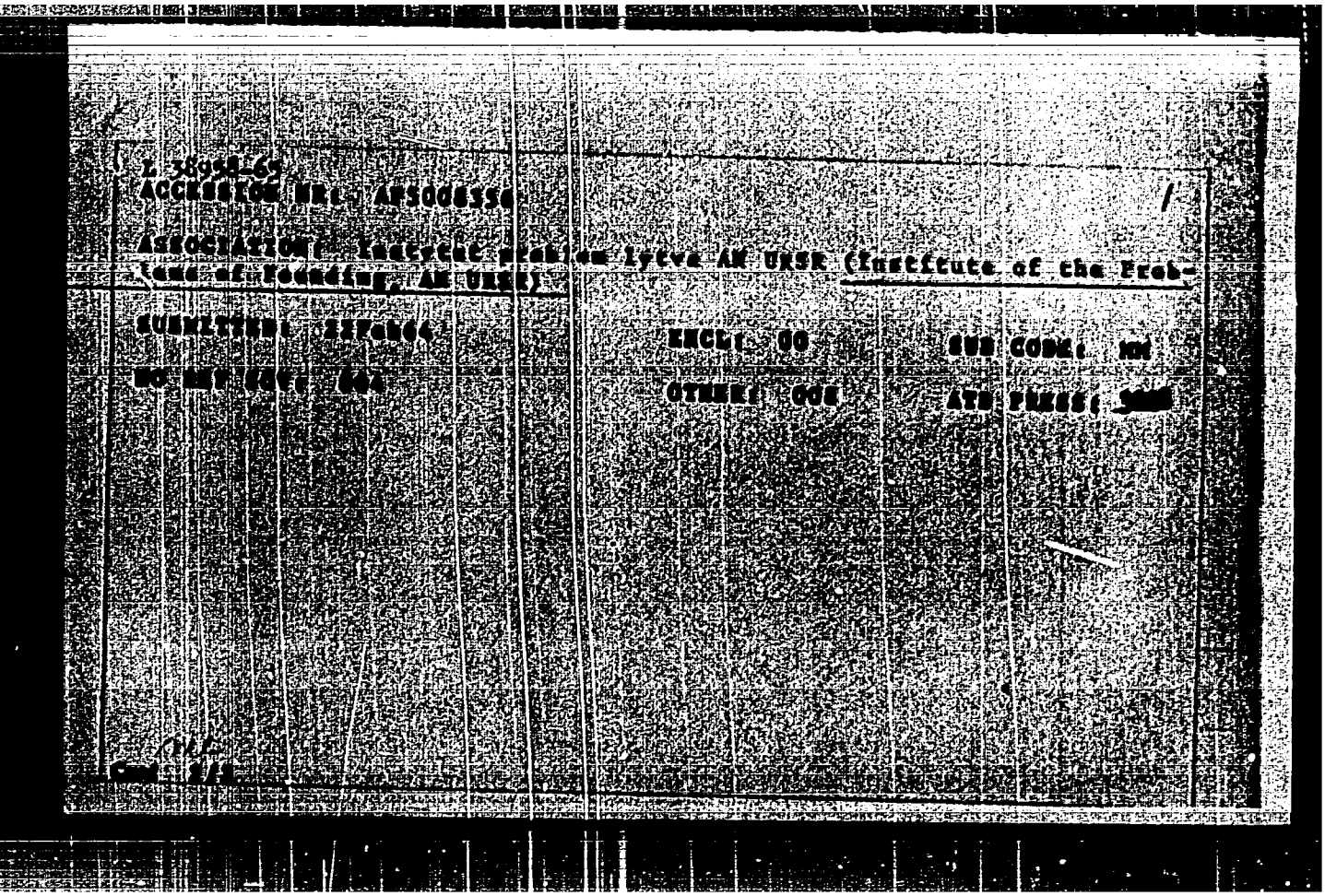
SOURCE: AN Ukrain. SSR. Dopovidi, no. 3, 1965, 339-341

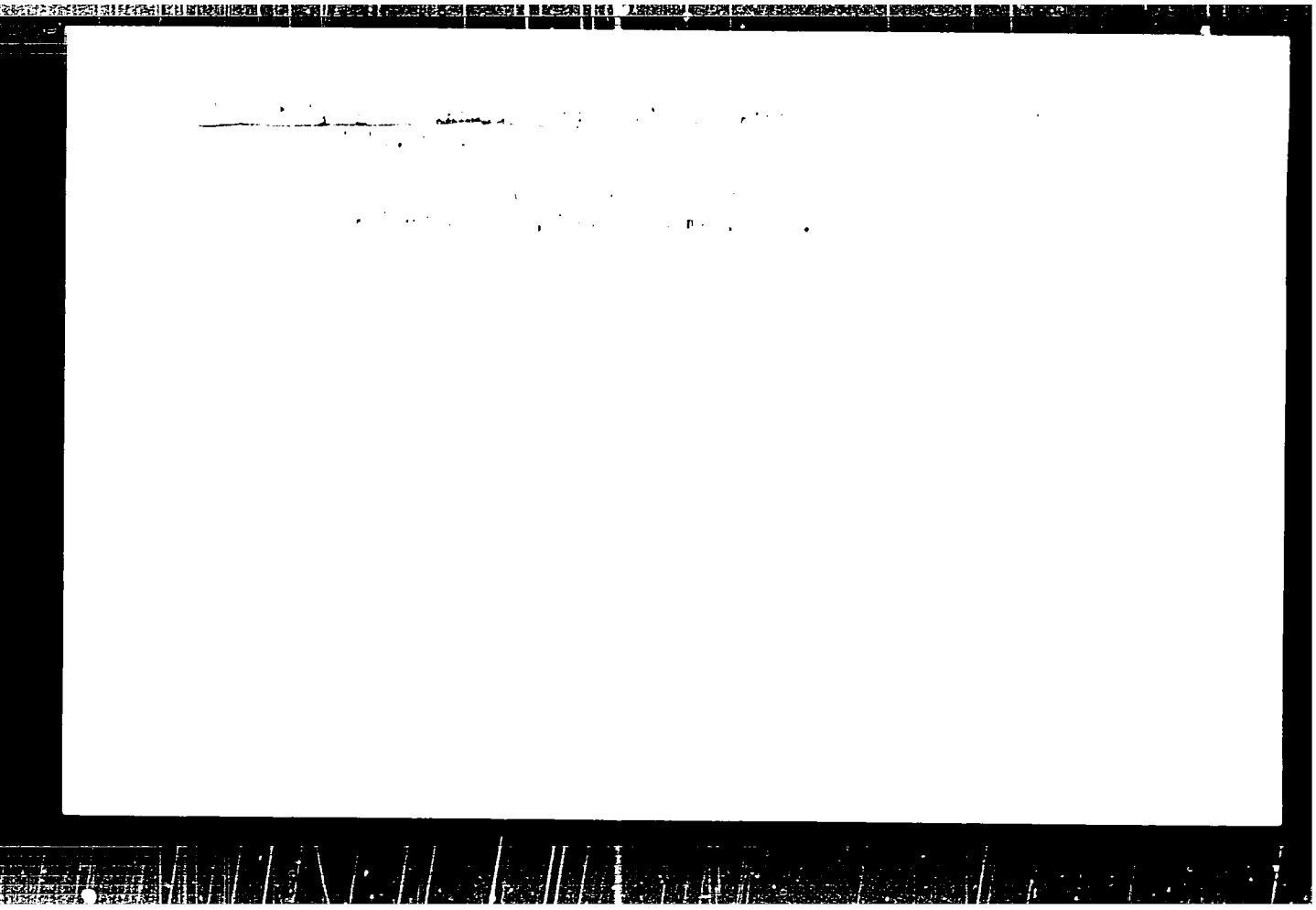
TOPIC TAGS: niobium, niobium elasticity constant, niobium Young's modulus, niobium shear modulus, niobium Poisson ratio, niobium characteristic temperature

ABSTRACT: The elasticity constants of cast, polycrystalline, 99.4%-pure niobium have been measured using a dynamic ultrasonic-impulse method. Results of the measurements, accurate to 1.0—1.5%, showed that Young's modulus E = 10[illegible]0 kg/mm², the shear modulus G = 3800 kg/mm², the bulk modulus Q = 7400 kg/mm², and the Poisson's ratio μ = 0.398. The characteristic temperature and the rms displacement of atoms from the equilibrium position, calculated on the basis of the obtained value of E, were found to be 265C and 0.136 Å, respectively. Orig. art. has: 1 table.

[MS]

Card 1/2





L 14994-66 EWT(m)/EWP(w)/EPF(n)-2/T/EWP(t)/EWP(b) IJP(c) JD/JG

ACC NR: AP5028668 (N) SOURCE CODE: UR/0126/65/020/005/0787/0788

AUTHOR: Andrushko, I. N.; Chernov, V. G.

ORG: Institute of Problems of Casting AN UkrSSR (Institut problem lit'ya AN UkrSSR)

TITLE: Elastic characteristics of niobium-aluminum alloys

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 5, 1965, 787-788

TOPIC TAGS: elastic modulus, atomic property, niobium alloy, aluminum, metal physical property, solubility

ABSTRACT: The following elastic characteristics of polycrystalline niobium-aluminum alloys were investigated: elastic modulus E, shear modulus G, coefficient of volume contraction Q, Poisson's ratio μ, the characteristic temperature θ and the root mean square displacement of the atoms from equilibrium in the crystal lattice $\sqrt{\bar{x}^2}$. The niobium alloys contained 0.9, 2.3, 3.3 and 7.3 wt % aluminum and were melted in an arc furnace under an inert atmosphere. The alloys were used in the cast state. The elastic properties were determined by the dynamic method and the speed of the ultrasonic waves in the samples were measured by the pulse method at a frequency of

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10 megacycles/sec. The results were presented as a function of wt % Al:

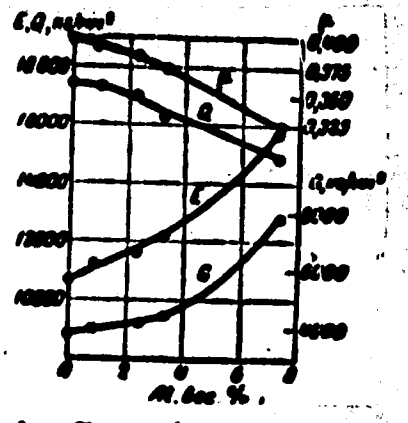

Fig. 1. Change in the shear modulus G, elastic modulus E, coefficient of volume contraction β and Poisson's constant μ as a function of aluminum content.

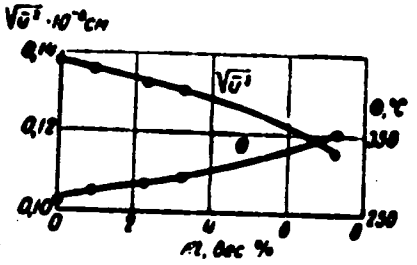

Fig. 2. Change in the characteristic temperature θ and root mean square displacement of atoms in the crystal lattice $\sqrt{\overline{u^2}}$, for niobium-aluminum alloys as a function of aluminum content.

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L 14994-66
ACC NR: AP5028568

Thus upon alloying with aluminum, the modulus of elasticity and the shear modulus increased while Poisson's ratio and the coefficient of volume contraction decreased. For example, if in pure niobium E = 10, 650 kg/mm^2; G = 3800 kg/mm^2; ζ = 17, 400 kg/mm^2 and μ = 0.398 then in the alloy containing 7.3% Al these values change to 15, 720 kg/mm^2; 7850 kg/mm^2; 14, 900 kg/mm^2 and 0.325 respectively. However, these changes did not occur uniformly as a function of % Al. The slope of the curve was smaller for changes in concentration to 3.3% than for changes from 3.3 to 7.3%. Figure 2 showed the changes occurring on the atomic level for the same changes in wt % Al. The characteristic temperature changed from 265°C for pure niobium to 350°C for 7.3% Al. The root mean square atomic displacement changed from 0.138 × × 10^{-8} cm in the pure niobium to 0.115 × 10^{-8} cm in the alloy with 7.3% Al. These values also changed more in the concentration range from 3.3 to 7.3% Al. The 3.3 wt % Al concentration coincided with the solid solubility limit of the Al in Nb; the higher magnitudes of the elastic characteristics were obviously associated with the appearance of the second phase. Orig. art. has: 2 figures.

SUB CODE: 11,20/ SUBM DATE: 04Jan65/ ORIG REF: 002/ OTH REF: 000

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Card 2/3

L 23277-66 EWT(m)/EWP(t) IJP(c) JD/JG
ACC NR: AP6011417 SOURCE CODE: UR/0021/66/000/003/0352/0354

AUTHOR: Nedyukha, I. M.; Chernyy, V.H. — Chernyy, V.G.

ORG: Institute of Casting Problems AN URSR (Institut problem litva AN URSR)

TITLE: Elastic properties of alloys of the Nb-Cr-Va system

SOURCE: AN UkrRSR. Dopovidi, no. 3, 1966, 352-354

TOPIC TAGS: niobium alloy, vanadium containing alloy, chromium containing alloy, alloy property, elastic property

ABSTRACT: The effect of vanadium on the elastic properties of niobium or niobium-4% chromium alloy has been investigated. Alloys containing 5, 10, 15, or 20% vanadium were melted from 99.4%-pure niobium, 99.5%-pure vanadium, and 99.92%-pure chromium in an arc furnace in an inert atmosphere. It was found pure niobium had a Young's modulus E of 10,650 kg/mm^2, a shear modulus G of 3800 kg/mm^2, a bulk modulus Q of 17,400 kg/mm^2, and a Poisson's ratio μ of 0.398. Corresponding figures for niobium with 4% chromium were 12,060 kg/mm^2, 4350 kg/mm^2, 17,330 kg/mm^2, and 0.384. Additions of up to 20% vanadium to niobium or niobium-chromium alloy increased E and G and decreased Q and μ. With increasing vanadium content the values of E, G, and μ for both Nb-Va and Nb-Cr-Va alloys approached each other, and at 20% vanadium

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L 23277-66
ACC NR: AP6011417

were almost equal: E, 13,580 and 13,470 kg/mm^2; G, 4960 and 4920 kg/mm^2; M, 0.368 and 0.365. The Q of Nb-Va alloys remains a little higher than that of Nb-Cr-Va alloy at any vanadium content (17,200 and 16,580 kg/mm^2 at 20% vanadium). The characteristic temperature increased from 265C for pure niobium and 290C for niobium with 4% chromium to 323 and 326C for alloys containing 20% vanadium. Deviations of atoms from the equilibrium position in the crystal lattice decreased from $0.138 \cdot 10^{-8}$ cm for pure niobium and $0.132 \cdot 10^{-8}$ cm for Nb-Cr alloy to $0.125 \cdot 10^{-8}$ and $0.126 \cdot 10^{-8}$ cm for alloys with 20% vanadium. The increase in characteristic temperature and decrease in atom deviation indicated a 'strengthening of atomic bonds. Orig. art. has: 2 figures. [AZ]

SUB CODE: 11, 14/ SUBM DATE: 26May65/ ORIG REF: 002/ ATD PRESS: 4235

Card 2/2 ULR

L 01227-67 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6032414 (A) SOURCE CODE: UR/0021/66/000/009/1166/1169

AUTHOR: Nedyukha, I. M.; Chornyy, V. N.--Chernyy, V. G.

ORG: Institute of the Problems of Casting, AN URSR (Institut problem littya, AN URSR)

TITLE: Investigation of the interatomic interaction in niobium-tungsten-molybdenum alloys

SOURCE: AN UkrRSR. Dopovidi, no. 9, 1966, 1166-1169

TOPIC TAGS: niobium alloy, tungsten containing alloy, molybdenum containing alloy, binary niobium alloy, ternary niobium alloy, alloy interatomic bond strength

ABSTRACT: Binary niobium-base alloys with 5, 10 and 20% tungsten, or 5, 10, and 20% molybdenum, ternary Nb-10% Mo alloys with 5, 10, 15 or 20% W, and Nb-10% Mo alloys with 5, 10, 15 or 20% Mo were melted from 99.4—99.99%-pure components in an inert atmosphere arc furnace. The strength of interatomic bonds was evaluated from the values of the elasticity modulus (E), characteristic temperature (θ), and the mean square root displacement of the atoms from the equilibrium position ($\sqrt{u^2}$). Tungsten and molybdenum increased E and θ and decreased $\sqrt{u^2}$ in both binary and ternary alloys. The values of E, θ and $\sqrt{u^2}$ were 11940 and 12030 kg/mm^2, 283 and 283K, and $0.13 \cdot 10^{-8}$ and $0.131 \cdot 10^{-8}$ cm for Nb-10% W and Nb-10% Mo alloys, respectively, compared with 10650 kg/mm^2, 265K and $0.138 \cdot 10^{-8}$ cm for pure niobium. Increasing the tungsten and molybdenum content to 20% in binary alloy further increased the values of E, θ and

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ACC NR: AP6032414

decreased $\sqrt{\mu}$, with molybdenum being more effective. Tungsten in Nb-10% Mo alloys and molybdenum in Nb-10% W alloys produced almost equal increases in E and $\sqrt{\mu}$, e.g., 13670 and 13530 kg/mm^2, and $0.124 \cdot 10^{-8}$ cm for Nb-10% W-Mo and Nb-10% Mo-W alloys, respectively; the corresponding values of θ were 283 and 285K. The obtained data show that θ does not always indicate the actual changes in the strength of interatomic bonds, and that E and $\sqrt{\mu}$ are more reliable indicators of the changes in the strength of interatomic bonds with alloying. Orig. art. has: 1 figure and 2 formulas. [MS]

SUB CODE: 11/ SUBM DATE: 13Oct65/ ORIG REF: 004/ OTH REF: 003/ ATD PRESS: 5096

Card 2/2 egh

L 00015-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/JG
ACC NR: AP6027794 SOURCE CODE: UR/0126/66/022/001/0114/0117

AUTHOR: Nedyukha, I. M.; Chernyy, V. G.

ORG: Institute of Metal Casting Problems, AN UkrSSR (Institut problem lit'ya AN UkrSSR)

TITLE: Elastic properties of the alloys of niobium with tantalum, vanadium and titanium

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 1, 1966, 114-117

TOPIC TAGS: metal physical property, niobium base alloy, tantalum, vanadium, titanium, elastic modulus, shear modulus

ABSTRACT: The study of these properties for alloys of the Nb-Ta, Nb-V and Nb-Ti systems is of interest considering that their components either display nearly identical values of the modulus of normal elasticity (Nb-V, Nb-Ti) or greatly differ in these values (Nb-Ta). Accordingly, alloys containing 5, 10, 20, 40, 60, 80 wt.% Ta, 2.5, 10, 20, 40, 60, 80 wt.% V and 5, 10, 15, 25, 35, 41 wt.% Ti were melted in an argon-atmosphere arc furnace and the resulting cast specimens were investigated. Elastic properties (modulus of elasticity E, modulus of shear G, volumetric modulus of elasticity Q, and Poisson ratio μ) were measured by ultrasonic and other methods described in a previous investigation (Nedyukha, I. M., Chernyy, V. G. FMM,

Card 1/4 UDC: 539.31:546.3-19'88'82

1964, 13, 599). Findings: An increase in the proportion of Ta in Nb–Ta alloys leads to a marked increase in E, G, and Q and to a decrease in μ (Fig. 1). The effect of V on Nb is more complex:

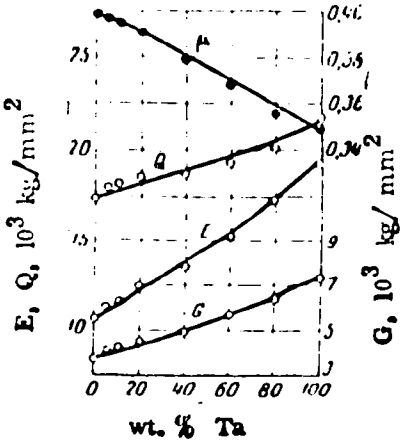

Fig. 1. Change in E, G, Q and μ of Nb–Ta alloys

in Nb–V alloys containing up to 40% V the moduli E and G increase markedly while μ sharply

decreases. In the alloy with 40% V we have: E = 14,730 kg/mm^2, G = 5,446 kg/mm^2, μ = 0.355. As the V content increases further, however, E and G decrease. The effect of Ti on Nb also is distinctive: Nb–Ti alloys containing 5% Ti display some increase in E and G, but any further increase in their Ti content leads to a steady decrease in E, G. An analysis of these findings reveals interesting regularities: in every case a change in one of these characteristics leads to an opposite change in another characteristic (cf. e.g. Fig. 2) This is associated with the

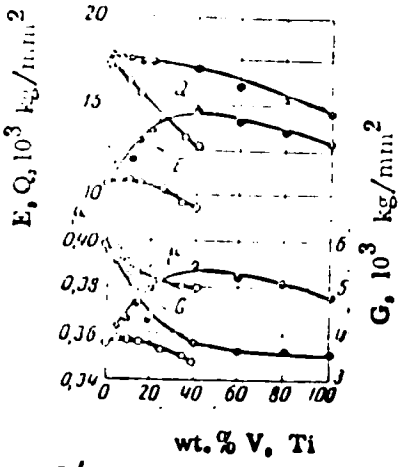

Fig. 2. Change in E, G, Q and μ of Nb–V and Nb–Ti alloys

mean square deviations $\sqrt{\overline{u^2}}$ of atoms from the equilibrium position. Thus, in every case, the curves of E and $\sqrt{\overline{u^2}}$ are mirror images of each other, as it were. As a by-product of this investigation, it is established that the characteristic temperature does not always reflect the actual nature of changes in the strength of interatomic bonding on alloying. Orig. art. has: 2 figures.

SUB CODE: 11, 20 / SUBM DATE: 31May65/ ORIG REF: 002/ OTH REF: 005

ACC NR: AP7004182 SOURCE CODE: UR/0369/66/002/006/0646/0648

AUTHOR: Nedyukha, I.M.; Chernyy, V. G.

ORG: Institute of the Problems of Casting AN UkrSSR (Institut problem lit'ya AN UkrSSR); Electric Welding Institute im. Ye. O. Paton Kiev (Institut Elektrosvarki)

TITLE: Increasing the oxidation resistance of niobium at high temperatures

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 2, no. 6, 1966, 646-648

TOPIC TAGS: niobium, oxidation resistance, [redacted] iron alloy, binary alloy, alloy, [redacted], ternary alloy, titanium containing alloy, tungsten containing alloy, nickel containing alloy

ABSTRACT: Cast binary Nb-Fe alloys containing 15—33% Fe and additionally alloyed with Ti, V, W, Cr, Al and Ni, and ternary Nb-25% Fe-(5—20)% W, V or Ti alloys were arc-melted from 99.4—99.99% pure materials and tested for oxidation resistance in air at 1200C for 5 hr. Additions of iron were found to increase the oxidation resistance of all the investigated Nb-Fe alloys, particularly at iron concentrations of 25% or higher, which

Card 1/2 UDC: none

ACC NR: AP7004182

corresponded to the existence of the pure η-phase (Nb_3Fe_2) with a carbide-type structure. Alloys with less than 25% Fe had a significantly lower resistance which, however, was many times higher than that of pure niobium. Of all the investigated alloying elements, titanium was the most effective in increasing the oxidation resistance of the ternary alloys. Nb-25% Fe-25% Ti alloy had the highest oxidation resistance: the absolute oxidation rate in 1-hr exposure at 1200C was about 4 $mg/cm^2 \cdot hr$. In contrast, small additions of up to 5% Ti or up to 10% V only slightly increased the oxidation resistance of Nb-25% Fe alloys, while larger additions greatly decreased it. A partial substitution of Ti by alloying Nb-25% Fe-25% Ti with Cr and V or with Ni and Al brought about no increase in the oxidation resistance of the alloy. An Nb-25% Fe alloy had a modulus of elasticity of 17,620 kg/mm^2 and an HV hardness of 710 kg/mm^2, compared with 10,650 kg/mm^2 and 145 kg/mm^2 for pure niobium; the Nb-25% Fe-25% Ti alloy has a Poisson ratio of 0.34. All this opens definite prospects for the development of oxidation- and heat-resistant niobium alloys with adequate technological properties on the basis of the investigated materials. Orig. art. has: 2 figures. [MS]

SUB CODE: 11/ SUBM DATE: 10Jun66/ ORIG REF: 004/ OTH REF: 004/
ATD PRESS: 5116

Card 2/2

NEDZVETSKIY, G.V., kand.tekhn.nauk; TURKIN, P.S., kand.tekhn.nauk

Studying the welding of 09G2 low-alloy steels used in car manufacture. Trudy BITM no.21:106-121 '64.

(MIRA 18:8)

L 63572-65 EWT(d)/T

ACCESSION NR: AP5015555 UR/0286/65/000/008/0098/0098
629.13.01/06

AUTHOR: Sinyashin, G. B.; Nedzel'skiy, L. V.

TITLE: A device for engaging and disengaging a plug-type connection on a beam-type carrier support. Class 62, No. 170306.

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 98

TOPIC TAGS: plug connection, beam type carrier support, engagement mechanism, disengagement mechanism

ABSTRACT: An Author Certificate has been issued for a device for engaging and disengaging a plug-type connection on a beam-type carrier support. The unit consists of a cantilever bracket in which a pivoted double-arm lever connected by a tie rod to a single-arm lever is mounted. The single-arm lever is rigidly connected to a rotating shaft which works in conjunction with the mechanism's actuator. To increase the alignment rate of the socket with the plug-type connection, to decrease stresses on the actuator during engagement of the connection, and to improve reliability of disengagement within the fairing support, a segment gear is mounted on the shaft of the single-arm lever. This gear meshes with the actuator-mechanism pinion gear

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L 63572-65

ACCESSION NR: AP5015555

which, by means of a rocker mechanism mounted on the same shaft, is hinged to the connecting rod of a pivoting spring-type damper. The cylindrical outer casing of the damper is hinged through a subconnection to the shaft holding the double-arm lever. This lever connects with a rod which holds the socket of the plug-type connection. The mechanism for disengaging the lugs of the beam-type support is rigidly connected to a lever on the shaft of the segment gear by means of a telescopic tie rod. (See Fig. 1 of the Enclosure.) Orig. art. has: 1 figure. [LB]

ASSOCIATION: none

SUBMITTED: 21Nov63 ENCL: 01 SUB CODE: AC, IE

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4020

Card 2/3

L 63572-65
ACCESSION NR: AP5015555

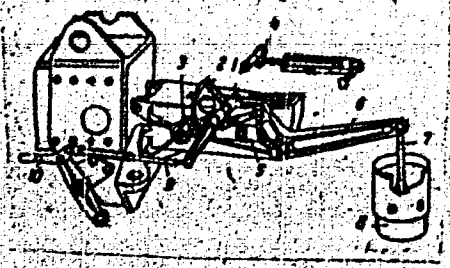

Fig. 1. Engagement and disengagement device

1 - Single-arm-lever shaft; 2 - segment gear; 3 - drive pinion; 4 - damper rocker mechanism; 5 - pivoting spring-type damper; 6 - double-arm lever; 7 - socket rod; 8 - plug-type connection socket; 9 - telescopic tie rod; 10 - disengagement-mechanism tie rod.

Card 3/3

NEDYALKOVA, M. [Nedialkova, M.]; DOBREVA, A.

Sensitizing properties of syntomycin in the use of blood preserved in solution L-12. Probl. gemat. i perel. krovi. no. [illegible]

(MIRA [illegible])

1. Institut gematologii i perelivaniya krovi (dir. - V.Serafimov-Dimitrov), Sofiya, Bolgariya.

25(1) PHASE I BOOK EXPLOITATION SOV/2228

Nedzel'skiy, Mikhail Dmitriyevich

Metallizatsiya s primeneniyem zashchitnykh atmosfer (Metallizing in a Protective Atmosphere) [Irkutsk] Irkutskoye knizhnoye izd-vo, 1957. 42 p. 2,000 copies printed.

Ed.: A.S. Shafirova; Tech. Ed.: T.I. Sorokina.

PURPOSE: This booklet is intended for the general reader.

COVERAGE: The booklet contains information compiled from institutions and plants using protective atmospheres in metal spraying. The author pays special attention to the use of generator and engine exhaust gases as a new protective atmosphere. He also stresses the advantages of this method of metallizing in a protective atmosphere. No personalities are mentioned. There are 10 references, all Soviet.

TABLE OF CONTENTS:

Card 1/2

NEDZEL'SKIY, M.D.

Metallization in a protective medium. Mashinostroitel' no.11:
15 N '63. (MIRA 16:11)

NE[illegible]EL'SKIY, [illegible]

[Application of meta[illegible]
metallizatsii v promyshlennost[illegible]
knizhnoe izd-vo, [illegible]. 62 p.

BRATSLAVSKIY, M.A.; DUGIN, Ye.V.; CHUBENKO, A.I.; NEDZEL'SKIY, N.R.; BLUSHINSKIY, V.G.

Modernization of jigging machines in coal dressing plants. Prom. energ. 17 no.11:9-10 N '62. (MIRA 15:12)
(Coal preparation plants)

CHIZHENKO, I.M.; MEDZEL'SKIY, S.I.

Improving the power factor of single-phase current converters under conditions of grid-controlled voltage. Izv. KPI 26:203-223 '57.
(MIRA 11:6)

1.Kafedra teoreticheskikh osnov elektrotekhniki Kiyevskogo politekhnicheskogo instituta (for Chizhenko). 2.Kafedra teentral'nykh elektricheskikh stantsiy Kiyevskogo politekhnicheskogo instituta (for Medzel'skiy).
(Mercury-arc rectifiers)

BUDNITSKIY, Abram Borisovich; KALNIBOLOTSKIY, Maksim Leont'yevich; NEDZEL'SKIY, Stanislav Il'ich; Prinimali uchastiye: ISHCHENKO, [illegible]; [illegible], V.S.; [illegible], O., red.; MATUSEVICH, S., tekhn. red.

[Electric equipment of thermal electric power plants] Elektrooborudovanie teplovykh elektricheskikh stantsii. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1961. 363 p. (MIRA 14:9)
(Electric power plants—Equipment and supplies)

NEDZEVETSKIY, A. V.

Nedzevetskiy, A. V. "On the motion of electrons in electron-ray magnetrons of the simplest type with asymmetric conditions," Sbornik nauch. trudov (Kuybyshevsk. insh.- stroit. in-t im. Mikoyana), Issue 2, 1948, p. 129-23.

So: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 17, 1949).

NEDZVETSKIY, A. V.

Nedzvetskiy, A. V. "On certain peculiarities of the electrolytic bath method in studying the distribution of the potential in electrical fields," Sbornik nauch. trudov (Kuybyshevsk. inzh.-stroit. in-t im. Mikoyana), Issue 2, 1948, p. 25-27.

So: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 17, 1949).

29663
S/169/61/000/005/021/049
A005/A130

3.2410

AUTHORS: Belomestnykh, V.A., Nedsvedskiy, B.S. and Shafer, Yu.G.

TITLE: Study of intensity variations of cosmic rays in the stratosphere

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1961, 11, abstract 5 G 91. (Tr. Yakutskogo fil. AN SSSR. Ser. fiz., 1960, no. 3, 15-21)

TEXT: The authors describe in detail the equipment used at Yakutsk for the investigation of cosmic rays in the stratosphere. The radiation was recorded by a counter telescope with double coincidences and single counter. The total weight of equipment was 2,150 g. The statistical recording accuracy in the Pfotzer maximum ($\sim$ 100 g/cm^2) amounts to 1.5-3.0%. Some results of analysing the data for 1957-1959 are given. In particular, the authors reveal that during this period the intensity of cosmic rays at the 50 mb level ($\sim$ 20 km) increased by (16 ± 8)% owing to the appearance of additional radiation flux with energies up to (10 ± 2) Bev.
[Abstractor's note: Complete translation.]

Card 1/1

EL'TSOV, Stepan Petrovich; NOVIKOV, Teodor Nikitovich; NEDZVEDSKIY, Pavel Ivanovich; ANDREYEVA, L.S., red.; LAVRENOVA, N.B., tekhn. red.

[Working time and rest periods of the workers of marine transportation] Rabochee vremia i vremia otdykha rabotnikov morskogo transporta. Moskva, Izd-vo "Morskoi transport," 1961. 174 p. (MIRA 15:8)

(Merchant marine)

L 1143-66 EWT(1)/T IJP(c) GG

ACCESSION NR: AP5022694 UR/0076/65/039/009/2306/2308
541.17

AUTHOR: Raykh, I. L.; Balitskaya, S. G.; Belotskiy, I. P.; Ordynskaya, V. V.; Nedvedskaya, N. A.

TITLE: Study of the oxidation of silicon in air by the optical polarization and photographic method

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 9, 1965, 2306-2308

TOPIC TAGS: silicon single crystal, hydrogen peroxide, oxidation kinetics

ABSTRACT: The oxidation of the surface of an n-type silicon single crystal oriented in the [111] plane was studied at 70-73% humidity and 20-30°C. The kinetic results representing a three-hour growth of the oxide layer showed that this growth obeys the parabolic law $L^{1.8} = 54.3t$. During the first three hours following the polishing, the oxide layer grew to a thickness of 17.5 Å. It was found that the freshly cleaned silicon surface has an effect on a photographic film, and the photographic density D was plotted as a function of the exposure time. Chemical analyses showed that H_2O_2 was formed during the oxidation of silicon in air. The con-

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L 1143-66

ACCESSION NR: AP5023094

3

coridence between the kinetics of growth of the oxide layer and the kinetics of evolution of H_2O_2 indicates that the latter may serve as the criterion for the oxidation of silicon in air. Experiments showed that the surface of silicon under vapors of a 10% aqueous solution of hydrogen peroxide decomposes 98.2% of absorbed H_2O_2. Thus, the fraction of H_2O_2 evolved amounts to only a minute part of the H_2O_2 formed during the oxidation. Orig. art. has: 2 figures.

ASSOCIATION: Odesskiy tekhnologicheskiy institut im. M. V. Lomonosova (Odessa Technological Institute) 44,55

SUBMITTED: 31Jul64 ENCL: 00 SUB CODE: GC

NO REF SOV: 007 OTHER: 004

Card 2/2 gd

KOLYKHALOV, P.A.; SHCHEGOLEVA, R.I.; VASIL'YEVA, I.N.; GUDKOVA, T.K.; MAKOVSKAYA, N.G.; TOLSTYKH, A.S.; KRAMCHENKOVA, L.V.; MEDZVETSKAYA, O.V.; STROKOVA, A.Ya.; GERMANOVICH, N.N., red.; KARZHAVINA, Ye., tekhn.red.

[Economy of Lipetsk Province; a statistical manual] Narodnoe khoziaistvo Lipetskoi oblasti; statisticheskii sbornik. Lipetsk, Lipetskoe knizhnoe izd-vo, 1959. 182 p. (MIRA 13:6)

1. Lipetskaya oblast'. Statisticheskoye upravleniye. 2. Statisticheskoye upravleniye Lipetskoy oblasti (for Kolykhalov, Shchegoleva, Vasil'yeva, Gudkova, Makovskaya, Tolstykh, Kramchenkova, Medzvetskaya, Strokova). 3. Nachal'nik Statisticheskogo upravleniya Lipetskoy oblasti (for Germanovich).
(Lipetsk Province--Statistics)

NEDZVETSKAYA, M.I. [Nedzvets'ka, M.I.], dots.

Preventing premature births. Fed., akush. i gin. 20 no.5:51-55 '58.
(MIRA 13:1)

1. Kafedra akusherstva i ginekologii (zav. - zasluzhennyy vrach USSR doktor med.nauk prof. V.M. Khmelevskiy) Kiyevskogo instituta usovershenstvovaniya vrachey (direktor - dots. V.D. Bratus').
(LABOR (OBSTETRICS))

NEDZVETSKAYA, M.I. [Niedzviets'ka, M.I.], dotsent

Significance of cytology of the varinal secretions in premature births. Ped., akush. i gin. 22 no.4:60-61 '60. (MIRA 14:5)

1. Kafedra akusherstva i ginekologii No.2 (zaveduyushchiy - prof. V.M.Savitskiy [Savyts'kyi, V.M.] Kiyevskogo instituta usovershenstvovaniya vrachey (direktor - dotsent V.D.Bratus').
(INFANTS (PREMATURE)) (VAGINA)
(DIAGNOSIS, CYTOLOGIC)

1. [illegible], A.P.; [illegible]V, V.

2. [illegible] ([illegible])

4. [illegible]eology, [illegible]tructural - [illegible] [illegible] Asia

7. Most recent tectonic [illegible] [illegible] Asia, A.[illegible] [illegible], Dokl.AN [illegible] no. 5, [illegible].

9. Monthly List of Russian Accessions, Library of Congress, [illegible] 1953, Uncl.

MEDZVETSKIY, A.P.

Development of a raw material supply for the Tajik ore mining industry during the last 25 years. Dokl.AN Tadz.SSR no.12:23-26 '54.(MLRA 9:9)

1.Vice-president AN Tadzhikskoy SSR.
(Tajikistan--Mines and mineral resources)

MEDZVETSKIY, A.P.; BARATOV, R.B.

Bibliography: Kh.M. Abdullaev's book "Genetic affinity of mineralisation with granitoid intrusions." Reviewed by A.P. Medvetskii, R.B. Baratov. Izv.Otd.est.nauk AN Tadsh. SSR no.12:169-172 '55. (MLRA 9:10)

1. Institut geologii AN Tadzhikskoy SSR.
(Ore deposits) (Abdullaev, Kh.M.)

VASIL'KOVSKIY, N.P.; MEDZVETSKIY, A.P.

Section of the Eastern Kara-Mazar upper-Paleozoic formations compared with the section of the Chirchik-Angren Basin. Dokl. AN Tadzh.SSR no.17:13-17 '56. (MLRA 9:11)

1. Institut geologii Akademii nauk Tadzhikskoy SSR i Institut geologii Akademii nauk Uzbekskoy SSR.
(Tajikistan--Geology, Stratigraphic)

NOTE: Vasil'kovskiy, N. P. is member of Inst. Geology, Acad. Sci. UzSSR

MEDVETSKIY, A.P.

Achievements in geology in Tajikistan during the last 40 years. (MIRA 11:9)
Trudy AN Tadzh. SSR 77:3-15 '57.
(Tajikistan--Geology)

24(7)
AUTHOR : n Men Dog., Yuks, M. F., Nedzvetskiy, I. S.

TITLE: Spectroscopic Observation of Rotation Mobility of Molecules in Quasi-Liquid Camphene and Tricyclene Crystals (Spektroskopicheskoye izucheniye vrashchatel'noy podvizhnosti molekul v kvazizhidkikh kristallakh kamfena i tritsiklena)

PERIODICAL: Izvestiya Akademii nauk [illegible], Seriya fizicheskaya, [illegible], Nr 11, pp 1302-1305 (USSR)

ABSTRACT: So-called quasi-liquid crystals possess a series of special qualities. Investigations carried out by Cross and Raskin (Ref 1) showed that the dispersion spectra of these crystals are to a large extent similar to the spectra of the liquid phase. The methods of observation of the expansion of dispersion lines, as worked out by the authors (resonance filter method and spectrographic method (Refs 2 and 3)), made closer comparisons possible. Experimental data thus obtained permit the following conclusions to be drawn: The fact that the intensity of anisotropic dispersion varies only slightly as the melting point is passed, seems to indicate that orientational disorder in a

Card 1/2 crystal is not different from the disorder in liquids. The fact

Spectroscopic Observation of Rotation Mobility of Molecules in Quasi-Liquid Camphene and Tricyclene Crystals

that the width of dispersion lines is equal indicates that the rotary mobility of molecules in quasi-liquid crystals is practically the same as in liquids. These results confirm Frenkel's ideas about orientated melting in quasi-fluid crystals [Ref 1]. The lack of orientational disorder in such crystals and the facility for quick re-orientation of their molecules is due to a slight anisotropy and elongation of the respective molecules. This circumstance is obvious from the very low grade of re-orientational energy of the molecules (1,5 ÷ 1,5 kilocalorie mol) which is only two times greater than the average energy of a single degree of freedom of the oscillation movement. There are 1 figure, 2 tables, and 5 references, [illegible] which are Soviet.

[illegible]

S/181/61/003/011/051/056
B104/B138

24,3430 (1227,1395,1163)

AUTHORS: Gross, Ye. F., Kalyuzhnaya, G. K., and Nedzvetskiy, D. S.

TITLE: Complex structure of the absorption spectrum of monocrystalline gallium phosphide

PERIODICAL: Fizika tverdogo tela, v. 3, no. 11, 1961, 3543-3545

TEXT: Single crystals of GaP were investigated at nitrogen temperature. Single crystals 4 to 5 mm long, 0.3 mm to a few microns thick were obtained from the melts by crystallization (G. Wolff et al., Bull. Am. Phys. Soc., 29, 1, 1954). In transmitted light thin crystals appeared orange and thick ones yellow-green. The absorption spectra were taken with an ИСП-67 (ISP-67) spectrograph with a camera of 1800 mm focal length. In the region studied the dispersion was 10.5 Å/mm. The absorption edge of a GaP single crystal is shown in Fig. 1. This spectrum was taken for specimens that had been cooled slowly. Rapidly cooled specimens had only one broad line (5363.2 Å) which is shifted into the long wave range by a few angstroms. The lines can be grouped in pairs, an intense narrow and a weak narrow line, a weak and a strong broad line, and two broad lines. The distance

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Complex structure of the absorption ...

between the lines in each pair is 130 cm^{-1} within the limits of error. It is concluded from this structure that the valence band of the crystal consists of three bands from each of which the electrons make transitions to two discrete levels below the bottom of the conduction band, under the action of light. A possible energy level scheme is shown in Fig. 2. There are 2 figures, 1 table, and 7 references: 2 Soviet and 5 non-Soviet. The three most recent references to English-language publications read as follows: E. O. Kane. J. Phys. Chem. Solids, 1, 249, 1957; F. Stern, R. M. Talley. Phys. Rev., 108, 158, 1957; R. Braunstein. J. Phys. Chem. Solids, 8, 280, 1959.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

SUBMITTED: July 15, 1961

S/020/62/146/005/005/011
B125/B186

AUTHORS: Gross, Ye. F., Corresponding Member AS USSR, Nedzvetskiy, D. S.

TITLE: Resonance and non-resonance radiation of centers in a GaP crystal and interaction with the lattice phonons

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 5, 1962, 1047-1050

TEXT: The luminescence of exceptionally pure GaP crystals was studied at T = 4.2°K. About 100 lines were discovered in the luminescence spectrum, formed probably by superimposition of several spectra. A group of intense lines was separated out; this recurs regularly (up to seven times with sufficient exposure), decreasing in intensity each time. Comparison of the absorption spectrum with the luminescence spectrum shows that the absorption line ν_0 corresponds to direct electron transition. The broad luminescence and absorption lines are approximately symmetric with respect to the ν_0 line. The slight deviation from Levshin's law of mirror symmetry is probably due to size differences of the phonons in the excited and the non-excited electron states. A very intense, narrow, sharp line of

Card 1/3

GROSS, Ye.F.; NEDZVETSKIY, D.S.

Fine structure of the damping times for edge radiation bands in GaP crystals. Dokl. AN SSSR 152 no.2:309-312 S '63. (MIRA 16:11)

1. Chlen-korrespondent AN SSSR (for Gross).

GROSS, Ye.F.; NEDZVETSKIY, D.S.

Generation of long-wave edge-luminescence bands in GaP crystals.
Dokl. AN SSSR 152 no.6:1335-1338 O '63. (MIRA 16:11)

1. Chlen-korrespondent AN SSSR (for Gross).

GROSS, Ye.F.; KOCHNEVA, N.S.; NEDZVETSKIY, D.S.

Free and bound excitons in GaP crystals. Dokl. AN SSSR 153 no.3:574-577 N '63. (MIRA 17:1)

1. Chlen-korrespondent AN SSSR (for Gross).

L 10809-65 EWT(l)/EWT(m)/EEC(b)-2/EWP(b) IJP(c)/BSD/EAEM(a)/APGC(b)/
ESD(t)/APTL/ASD(a)-5/AS(mp)-2/ESD(ge)

ACCESSION NR: AP4046733 S/0054/64/000/003/0007/0010

AUTHOR: Gross, Yu. F.; Nedzvetskiy, N. S.

TITLE: Linear and continuous red luminescence in crystals of GaP

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 3, 1964, 7-10

TOPIC TAGS: emission, emission spectrum, luminescence, semiconductor, indium phosphide, impurity center, transition

ABSTRACT: An attempt is made to interpret the emission spectrum of GaP, which at 4.2 K consists of a great number of narrow lines and a continuous wide band, by making use of the available experimental data of the authors and other researchers. It was determined that the intensity of the six narrow equidistant emission lines increases with increasing temperature and that between the temperature of liquid helium and liquid nitrogen their intensity is several times greater than the intensity at 4.2K. The emission of all the lines in the red part of the spectrum can be excited by blue and longer wavelength red

Card 1/2

ACCESSION NR: AP4046731

radiation. On the basis of an analysis of all the experimental data, the existence of this group of six lines was attributed to phonon-assisted electronic transitions at an impurity center. If the shortest wavelength line at 6497.2Å is attributed to an electronic transition, the rest of the lines can be interpreted as the same transition accompanied by one, two, three, four, and five phonons. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 10Oct63 ATD PRESS: 3117 ENCL: 00

SUB CODE: SS, EM NO REF SOV: 006 OTHER: 006

Card 2/

ACCESSION NR: AP4041729 S/0181/64/006/007/2180/2183

AUTHORS: Gross, Ye. F.; Nedzvetskiy, D. S.

TITLE: Change in luminescence spectrum of GaP crystals as a function of the intensity of the exciting light

SOURCE: Fizika tverdogo tela, v. 6, no. 7, 1964, 2180-2183

TOPIC TAGS: gallium compound, luminescence spectrum, crystal formation, spectrum intensity, light excitation, electron capture

ABSTRACT: This is a continuation of earlier investigations of the strong dependence of the luminescence spectra of "pure" GaP crystals on the method of their preparation (DAN SSSR v. 146, 1047, 1962; 152, 309, 1963; 154, 64, 1964). In the present study the authors observed for the first time a radical change in the relative intensity of these spectra at very low intensity of the exciting light. Using blue light from an SDVSh-500 mercury light at 4.2K, spectra

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ACCESSION NR: AP4041729

A, B, and C of Enc. 01 were observed. When the light intensity was reduced to one-tenth, spectrum A, which originally was brightest, was strongly attenuated, and spectrum B became brightest. Further decrease of the intensity to 1/100 of the initial value left only the end bands of spectrum B. Spectrum A could not be photographed even when spectrum B was over exposed. This points to the presence of a threshold excitation intensity, below which only the edge bands are excited in GaP, and the remaining luminescence spectra do not appear. This threshold value varied from crystal to crystal. The phenomenon is explained by assuming that the electron capture cross section for the centers producing spectrum B is much larger than for the other spectra. Orig. art. has: 2 figures.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet (Leningrad State University)

SUBMITTED: 29Jan64

ENCL: 01

Card 2/4

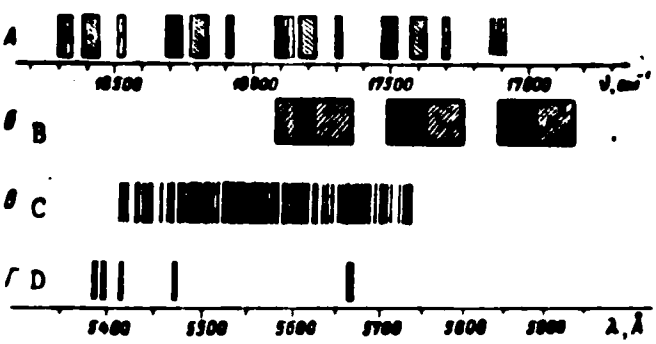
ACCESSION NR: AP4041729

SUB CODE: SS NR REF SOV: 006 OTHER: 006

Card 3/4

ACCESSION NR: AP4041729

ENCLOSURE: 01



Schematic diagram of four main luminescence spectra observed in GaP crystals at 4.2K

A - luminescence of bound excitons and their phonon repetitions, B - band-type edge luminescence, C - Multiple line spectrum of weak narrow line, D - hydrogen-like series of luminescence lines (phonon repetitions of these lines are not shown in the figure)

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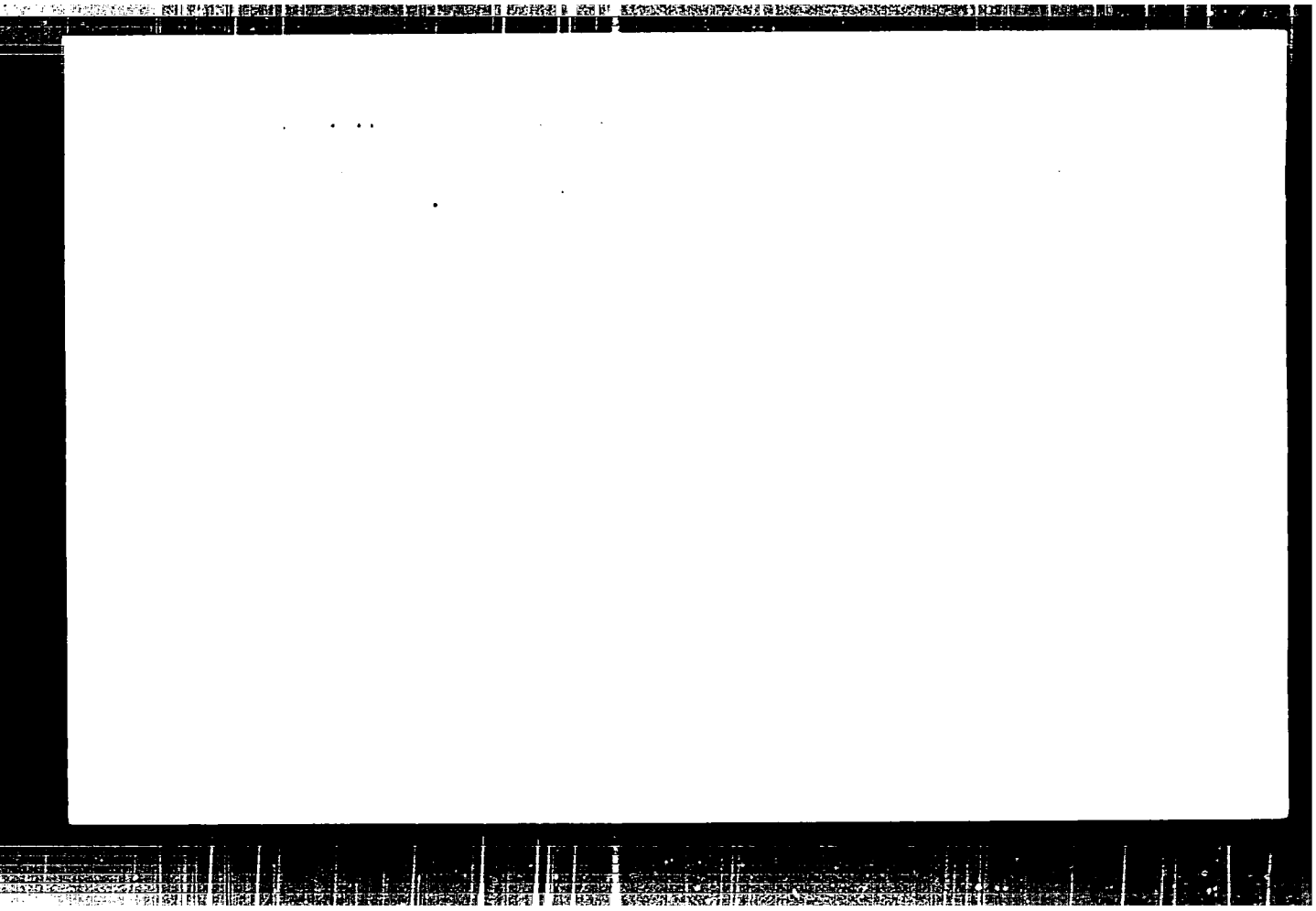


APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

ACCESSION NR: AP4010750 S/0020/64/154/001/0064/0067

AUTHOR: Gross, Ye. F. (Corresponding member); Nedzvetskiy, D. S.

TITLE: Converging line spectrum of luminescence in GaP-crystals

SOURCE: AN SSSR. Doklady*, v. 154, no. 1, 1964, 64-67

TOPIC TAGS: GaP-crystals, crystals luminescence, hydrogen-like line spectra, crystal lattice defects, impurities in crystals, acceptor energy levels

ABSTRACT: It has been previously found by several investigations that the luminescence spectra of GaP greatly depend on the excitation conditions which indicates that impurities and lattice defects affect the luninescence. It is shown in the present paper that in some of the investigated GaP-crystals the luminescence spectrum contains many lines, and can be considered as a superposition of several spectra. In addition to the spectra previously reported, this group of crystals shows a line sequence apparently of a common origin. The position of the lines can be described by a Balmor-like formula. The intensity of the

ACCESSION NR: AP4010750

lines of this sequence is temperature dependent. Similar spectra were found in silicon by S. Zwerdling et al. (Phys. Rev. Letters 4, 173 (1960)) and attributed to acceptor levels. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 27Jul63 DATE ACQ: 10Feb64 ENCL: 00

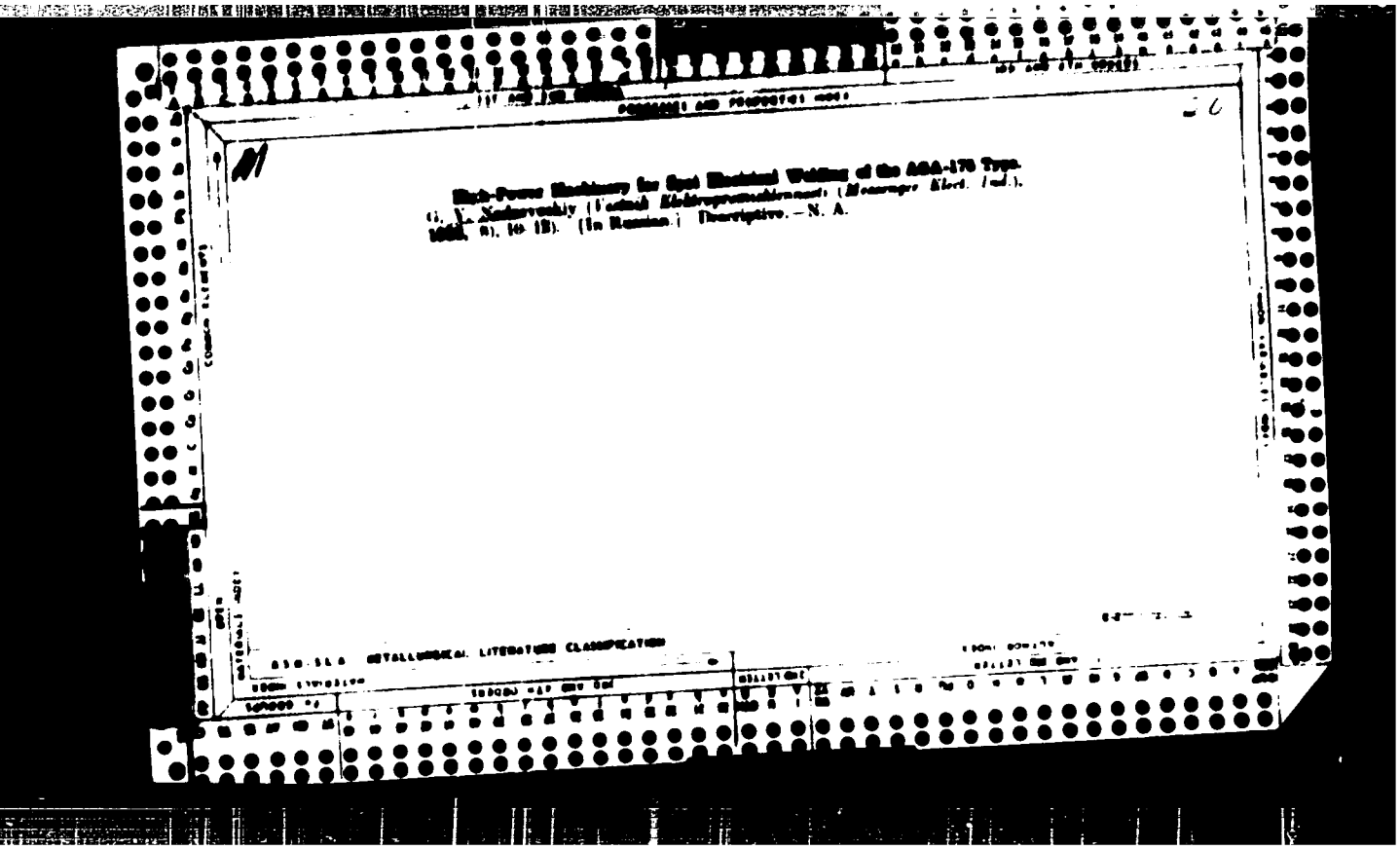
SUB CODE: PH NO REF SOV:003 OTHER: 008

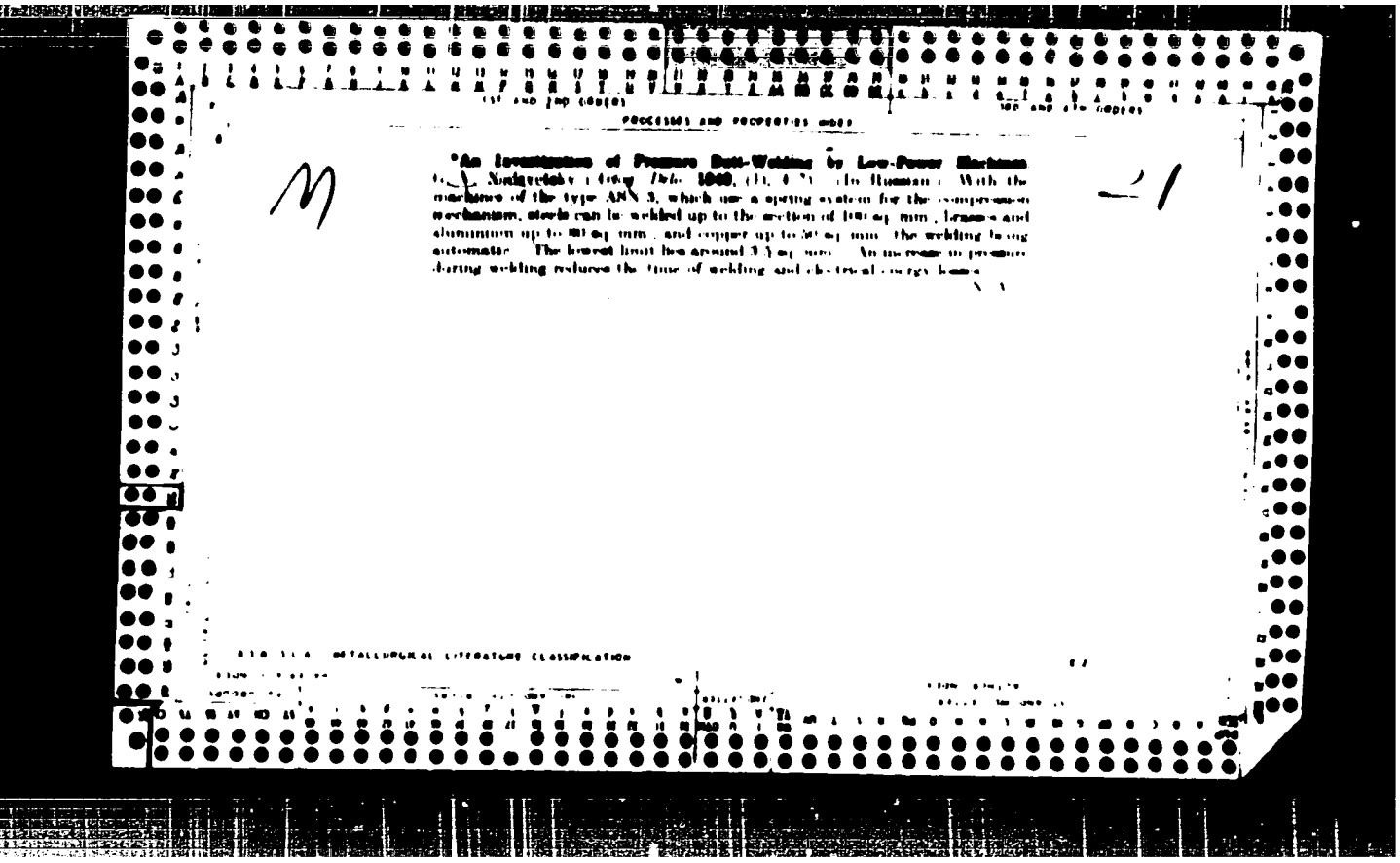
Card 2/2

GROSS, Ye.F.; NEDZVETSKIY, D.S.

Changes in the luminescence spectrum of GaP crystals as dependent on the intensity of the exciting light. Fiz. tver. tela 6 no.7:2180-2183 Jl '64. (MIRA 17:10)

1. Leningradskiy gosudarstvennyy universitet.





PROCESSES AND PROPERTIES INDEX

*An Investigation of Pressure Butt-Welding by Low-Power Machines

METALLURGICAL LITERATURE CLASSIFICATION

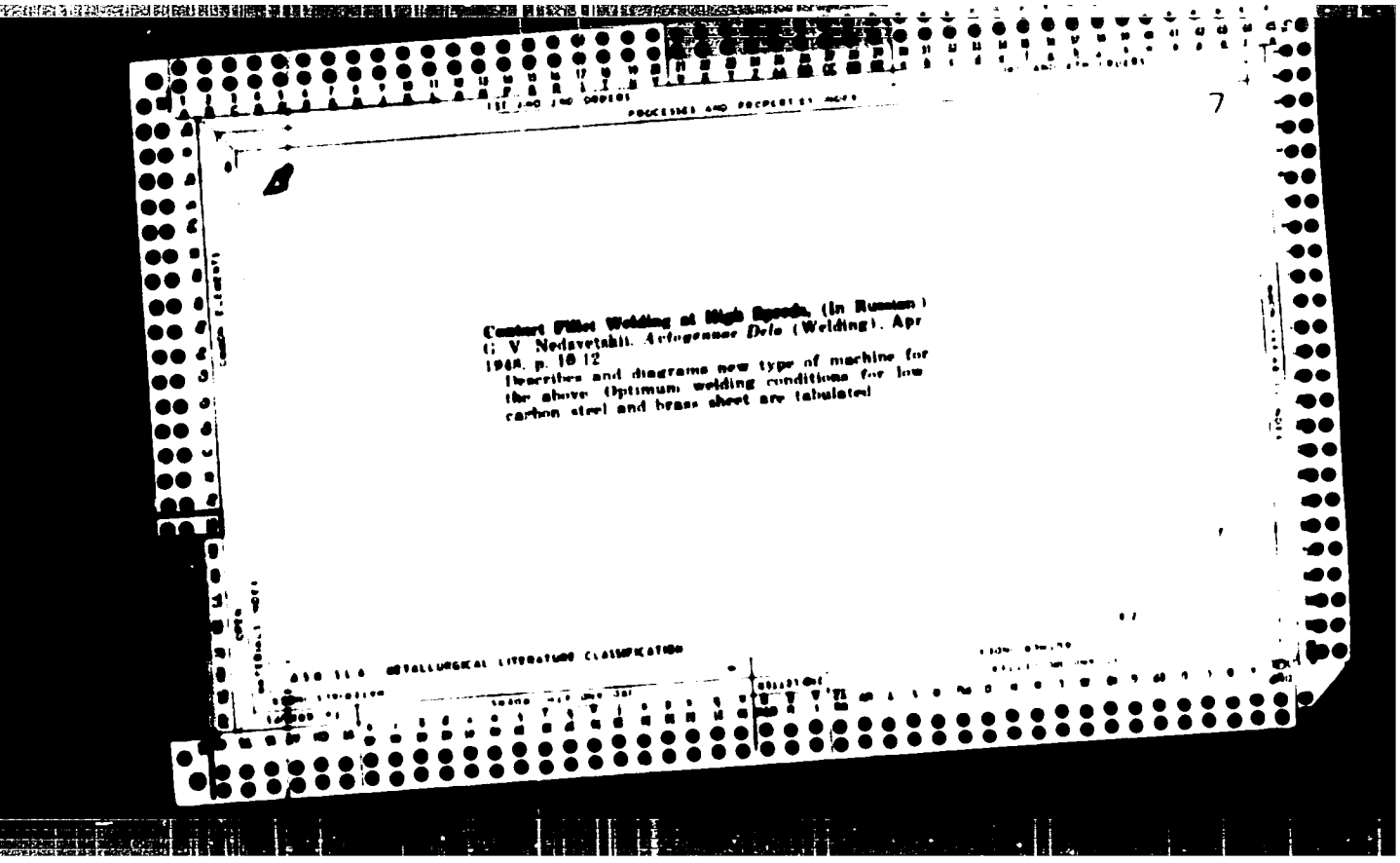
M

*An Investigation of the Pressure Butt-Welding of Non-Ferrous Metals. G. V. Nesiavetsky [illegible] 1949, [illegible] (In Russian.) Weld tests of copper rods 16 mm. dia., by means of the welding machine [illegible], showed that the best results were obtained with a welding pressure of [illegible] kg./sq. mm. and a welding [illegible] of 72 [illegible] amp./sq. mm. Lower values of welding pressure which depend on the [illegible] used were used for brass. Experiments on aluminum showed that welds having the highest strength are produced with [illegible] welding pressures of 0.25 [illegible] kg./sq. mm.

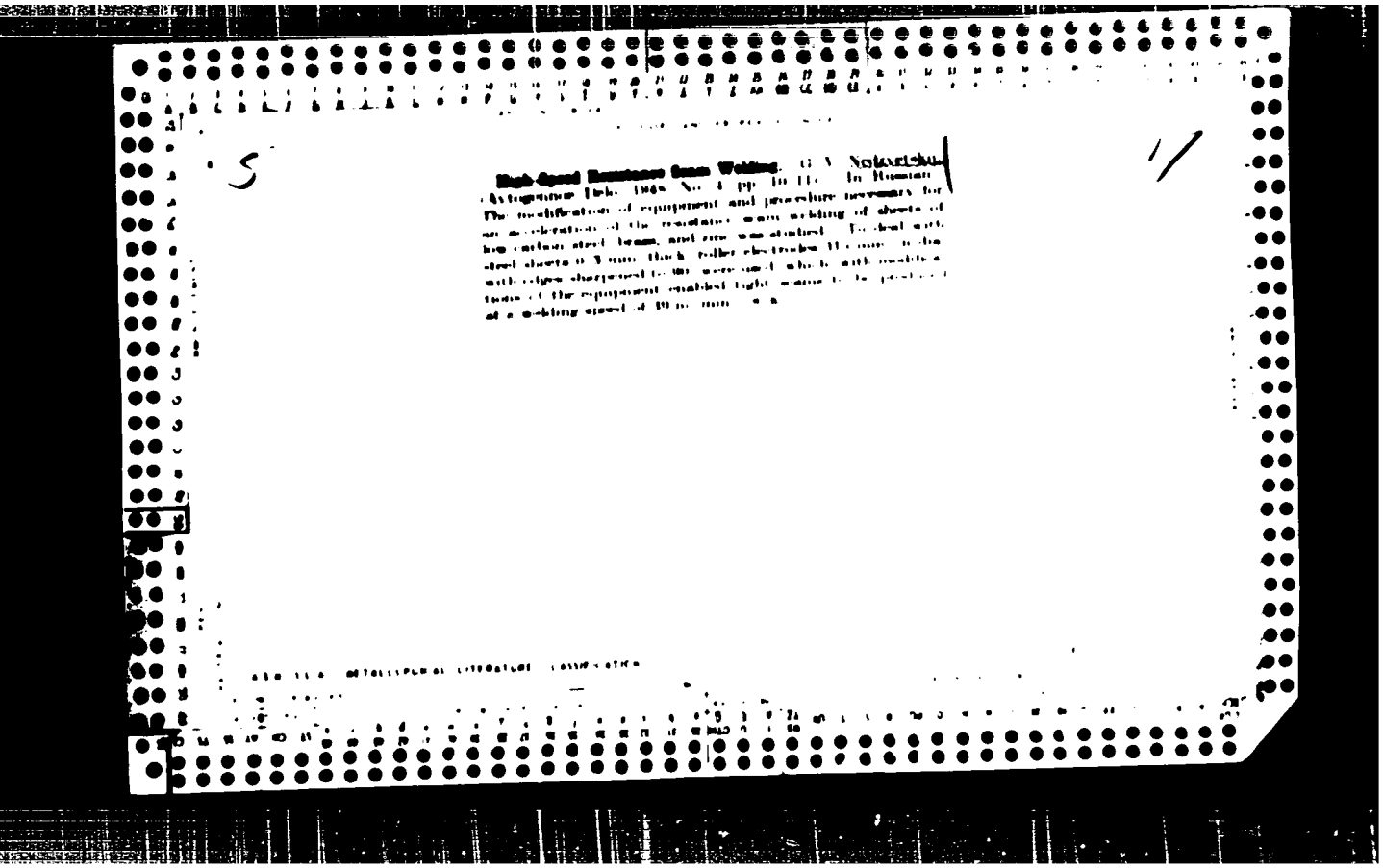
PROCESSES AND PROPERTIES INDEX

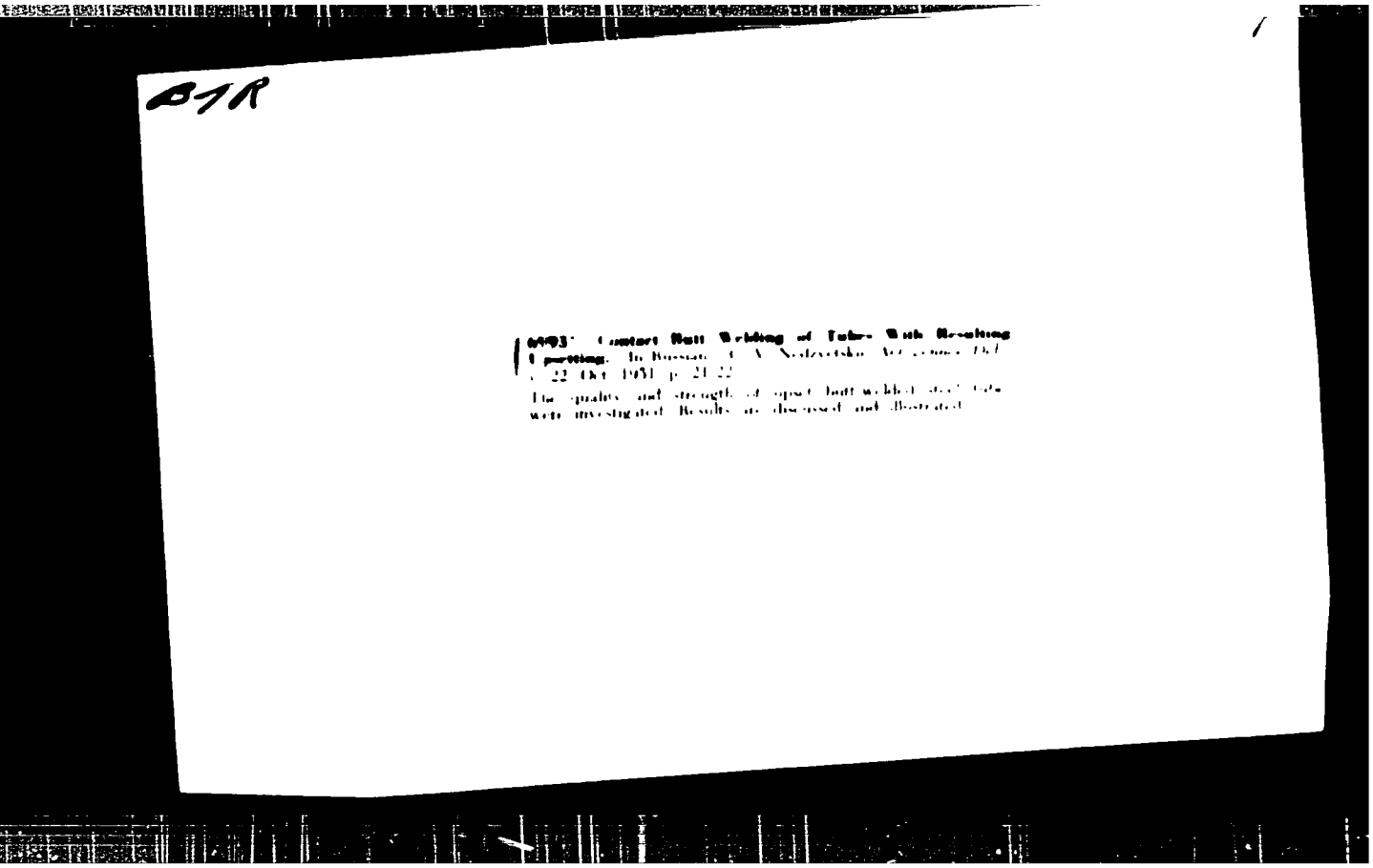
Investigation of the Butt Contact Resistance Welding of Low Carbon Steel. G. V. Nadavetskiy and E. G. Damler (Welding Journal, 1961, vol. 9, Sept., pp. 185–188). An English translation is presented of a paper which appeared recently in the Russian journal *Avtogennoe Delo* in which the authors give an account of the investigation of the factors affecting the quality of electric resistance welds. Curves are presented which show the decrease in the electrical resistance of round steel bars in end-to-end contact with increasing mechanical pressure on the joint. Increasing the mechanical pressure resulted in a reduction in the width of the heat-affected zone and tended to refine the grain of the metal at the joint. Lowering the current density generally speaking tended to increase the width of the heat-affected zone and to coarsen the grain, but this tendency could be counteracted by increasing the time during which the current flowed.

708. Stability of cholesterol in blood-serum of animals. S. V. [illegible] (Biokhimiya, U.S.S.R., 1947, 12, 314—[illegible]).—The blood-serum of the dog was pptd. with Ag_2SO_4 and the filtrate heated until a light ppt. was obtained. This was filtered and the second filtrate contained only 4—6% of the original N vol. of the serum but 65—70% of the cholesterol. With rabbit's serum this procedure left only 20—40% of the cholesterol; this result was obtained even if the cholesterol level of rabbit blood was raised to that of the dog by feeding with cholesterol. It is concluded that the stability of cholesterol does not depend on its combination with protein, and that the stability varies in different species. D. H. S.



Constant Fillet Welding at High Speeds. (In Russian)
G. V. Nedavetskii. *Avtogennoe Delo* (Welding). Apr 1948. p. 10-12
Describes and diagrams new type of machine for the above. Optimum welding conditions for low carbon steel and brass sheet are tabulated





BTR

8512*. Flash Welding of Dissimilar Metals. (In Russian.) [illegible]
C. V. Nedzvetskiy [illegible]
Tests were made by flash welding [illegible]
copper to aluminum and aluminum [illegible]
welds are illustrated.

NEDVETSKIY, G.

Subject: PUBLICATION OF WELDING ISSUED BY THE MINISTRY OF THE METALLURGICAL INDUSTRY AND ORE MINING AND THE MINISTRY OF MACHINE MANUFACTURE.
Vol 2, No. 1, Feb. 1955

Title: Welding by Cold-Pressing.
Author: [redacted]
p. 11

Title: Butt Welding of Unlike Metals by Fusion
Author: [redacted]

[illegible], Vol 2, No. 2, February 1955

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

NEDZVETSKIY, G.V.

Resistance welding of a kovar pipe end with an outlet into [illegible] semiconductor diodes. Avtom. svar. 17 no.3:84-85 Mr '64. (MIRA 17:11)

1. Bryanskiy institut transportnogo mashinostroyeniya.

KRDEVETSKIY, O.V., kandidat tekhnicheskikh nauk.

Effect of speed of electrode rotation on the resistance in roller welding. Svar. proizv. no.1:7-9 Ja '55. (MLRA 9:4)

1.Moshitskiy institut transportnogo mashinostroyeniya.
(Electric welding)

PERIODICAL ABSTRACTS

Sub.: USSR/Engineering AID 4181 - P

NEDZVETSKIY, G. V.

VLIYANIYE SKOROSTI VRASHCHENIYA ELEKTRODOV NA SOPROTIVLENIYE PRI ROLIKOVOY SVARKE (Effect of Electrodes Rotation Speed on Resistance in Seam Welding). Svarochnoye proizvodstvo, no. 1, Ja 1956: 7-9.

Research was conductec to ascertain the influence of roller speed and pressure in seam welding of carbon and galvanized metal sheets. Analysis was made of contact and intermediate resistances, the interdependence between the speed of rotation, the pressure exerted by rollers, the thickness of welded sheets and other characteristics. The author presents concise results and observations on the experiments. Four graphs and 1 sketch.

SUBJECT: USSR/Welding 135-2-3/12

AUTHOR: Nedsvetskiy, G.V., Candidate of Technical Sciences.

TITLE: Welding without circuit interrupters. (Parametry reshima svarki bes preryvatelya).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 2, pp 11-12 (USSR)

ABSTRACT: The article reviews briefly the general principles of continuous seam welding (without the use of circuit interrupter) which is widely used for joining sheet metal in ultimate thickness up to 1 mm - and describes the experiments conducted at the author's institute with the aim to find the best suitable welding technology for low-carbon steel.

Welding speed, current density, electrode pressure, sheet steel gauge, size of electrodes, cleanliness of surface were investigated as factors influencing the quality and strength of welded joints. Described and shown in schematic drawings are two welding fixtures - one for welding zinc sheet boxes, the other for welding tin boxes and zinc coated tin boxes.

The welding machines used in the experiments were: AW-16-2;

Card 1/2

TITLE: Welding without circuit interrupters. (Parametry reshima svarki bes preryvatelya). 135-2-3/12

AWn-25, AW -25-4, МШПЦ-100. The two latter are also used for welding cylindrical parts of small diameters. A diagram showing the relation between the sheet metal gauge and the welding speed, and the required electric power (in A/hr) and electrode pressure has been plotted.

The article contains 4 diagrams, 2 drawings, 1 photograph (macro-structure).

INSTITUTION: Beshitsa Institute for Transport-Machinebuilding (Beshitskiy institut transportnogo machinostroyeniya).

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress

Card 2/2

NEDZVETSKIY, G. V. (Docent)

"Resistance Welding of Galvanized Steels," p. 143 in book Reports of the Interuniversity Conference on Welding, 1956. Moscow, Mashgiz, 1958, 266pp.

NEMVETSKIY, G.V., kand.tekhn.nauk; DUBROVSKIY, M.V., inzh.; STEPANENKOV, I. Ye., inzh.

Seam welding of low-alloy 09G2 steels. Svar. proizv. no.12 35-36 D '61. (MIRA 14:12)

1. Bryanskiy institut transportnogo mashinostroyeniya.
(Steel alloys--Welding)

MEDZVETSKIY, G.V., kandidat tekhnicheskikh nauk.

Parameters of seam welding without interrupter. Svar. proizv. no.2:11-12 F '57. (MLRA 10:3)

1. Beshitskiy institut transportnogo mashinostroyeniya.
(Electric welding)

NEDZVETSKIY, G.V., kand.tekhn.nauk; ABRASHIN, A.V., inzh.

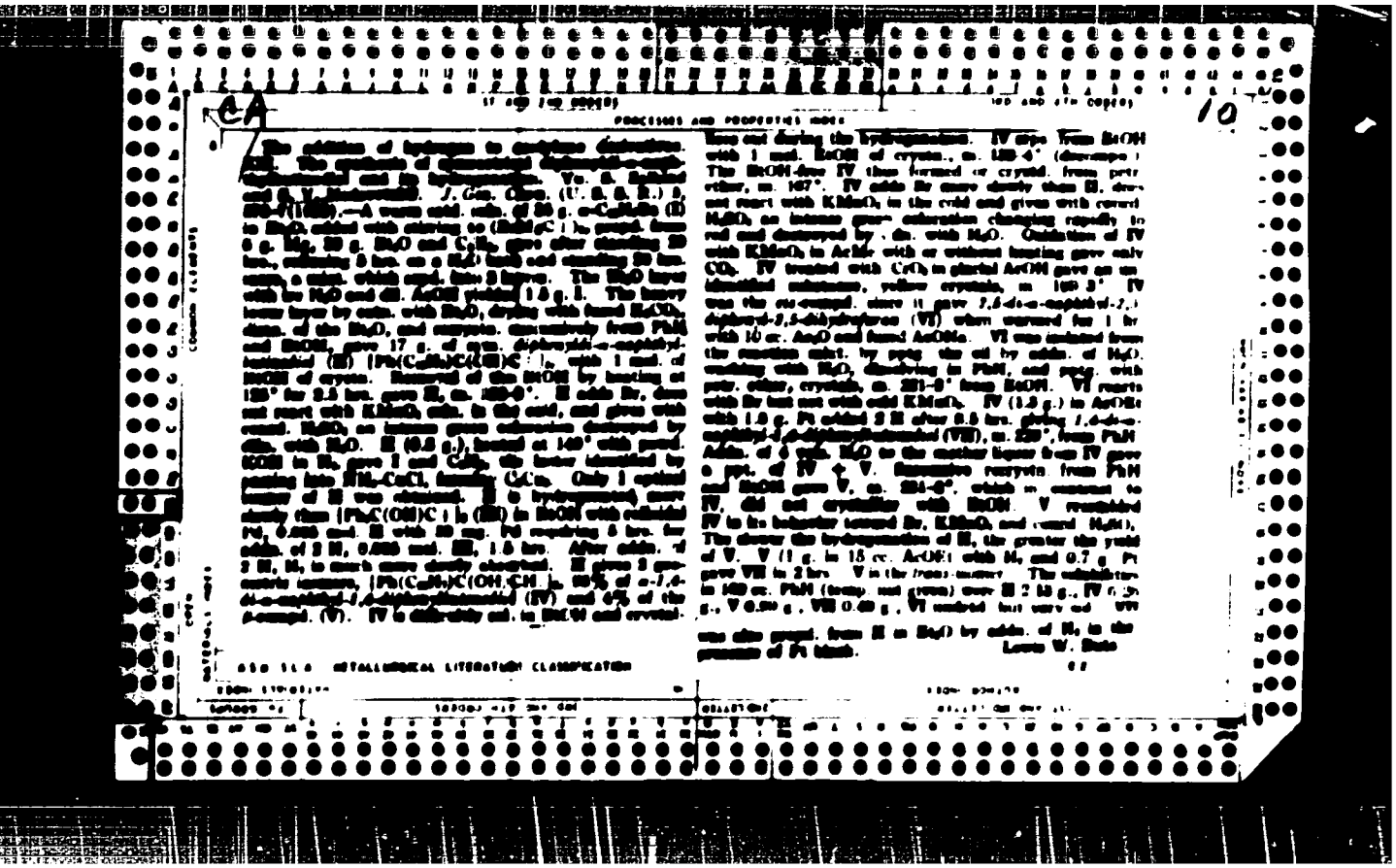
Condenser charge welding of heat exchangers. Svar. proizv. no.1: 36-37 O '63. (MIRA 16:11)

1. Bryanskiy institut transportnogo mashinostroyeniya.

PROCESSES AND PROPERTIES INDEX

The action of halogen [illegible] on [illegible]. VI. The action of hydrogen iodide on [illegible]. Yu. S. [illegible] and [illegible]. J. Russ. Phys.-Chem. Soc. [illegible], 1011-[illegible]; cf. C. A. [illegible].—[illegible] (I) [illegible] with HI a mixt. of [illegible] (II) and [illegible] (III). I with a satd. soln. of HI in AcOH (10 cc. per 2 g. of glycol) at room temp. for 4 hrs. gave a reaction product [illegible] as a heavy oil when poured into H_2O. The oil was washed by decantation, dissolved in Et_2O, washed with [illegible] and dried with $CaCl_2$. Vacuum distn. after removal of the Et_2O gave a yellow oil in [illegible]% yield, easily sol. in AcMe, Et_2O and PhH, more difficultly in EtOH and petr. ether. The oil was not further investigated, but the analytical results and mol.-wt. detn. indicated II mixed with III. I with HI in AcOH (10%) at room temp. after 2.5 hrs. gave crystals of III in 25% yield, colorless, m. 145-6°, very sol. in AcMe, Et_2O, PhH, but EtOH and petr. ether. The filtrate from III contains II and unchanged I. Increased HI concn. increases the amt. of II. III does not decolorize $KMnO_4$ in the cold, does not add Br_2, and is not [illegible] by heating 20 hrs. with 20% KOH. III with 3% $KMnO_4$ in AcMe at 60-5° or with CrO_3 in AcOH at the b. p. is converted to a small extent to AcPh and a small amt. of acids not identified. The isomer of I which m. 120° (IV) gave with 10% HI in AcOH at room temp. after 2.5 hrs. 20% of III together with some I. IV is isomerized to I by HI. The reverse transformation by HI was not observed. Probably only I gives II and III directly. III (8.5 g.), refluxed 6 hrs. with 100 g. EtOH and 6 g. Zn dust, gave V, m. 84°, easily sol. in AcMe, $CHCl_3$, Et_2O, PhH, EtOH, and petr. ether. Analysis of V corresponded roughly to [illegible]. V in the cold decolorizes neither Br_2 in $CHCl_3$ nor alk. $KMnO_4$ soln. V did not split out HI with alc. KOH nor was it oxidized by heating [illegible] hrs. at the b. p. with 3% $KMnO_4$ in AcMe. The analysis for V indicated a compd. richer in H than required by the suggested formula, but since V is so stable to oxidants it is not an olefin. Heating III in [illegible] with Mg or in PhH or [illegible] with Zn leaves it unaltered. Heating 8 g. III, 1.5 g. Zn, and 15 cc. of freshly distd. [illegible] for 1.5 hrs. at the b. p. in H_2 or N_2 gave VI, m. 100-4°, sol. in AcMe, $CHCl_3$, PhH, petr. ether and EtOH. VI is probably [illegible]; the structure was not detd. Lewis W. Butz

METALLURGICAL LITERATURE CLASSIFICATION



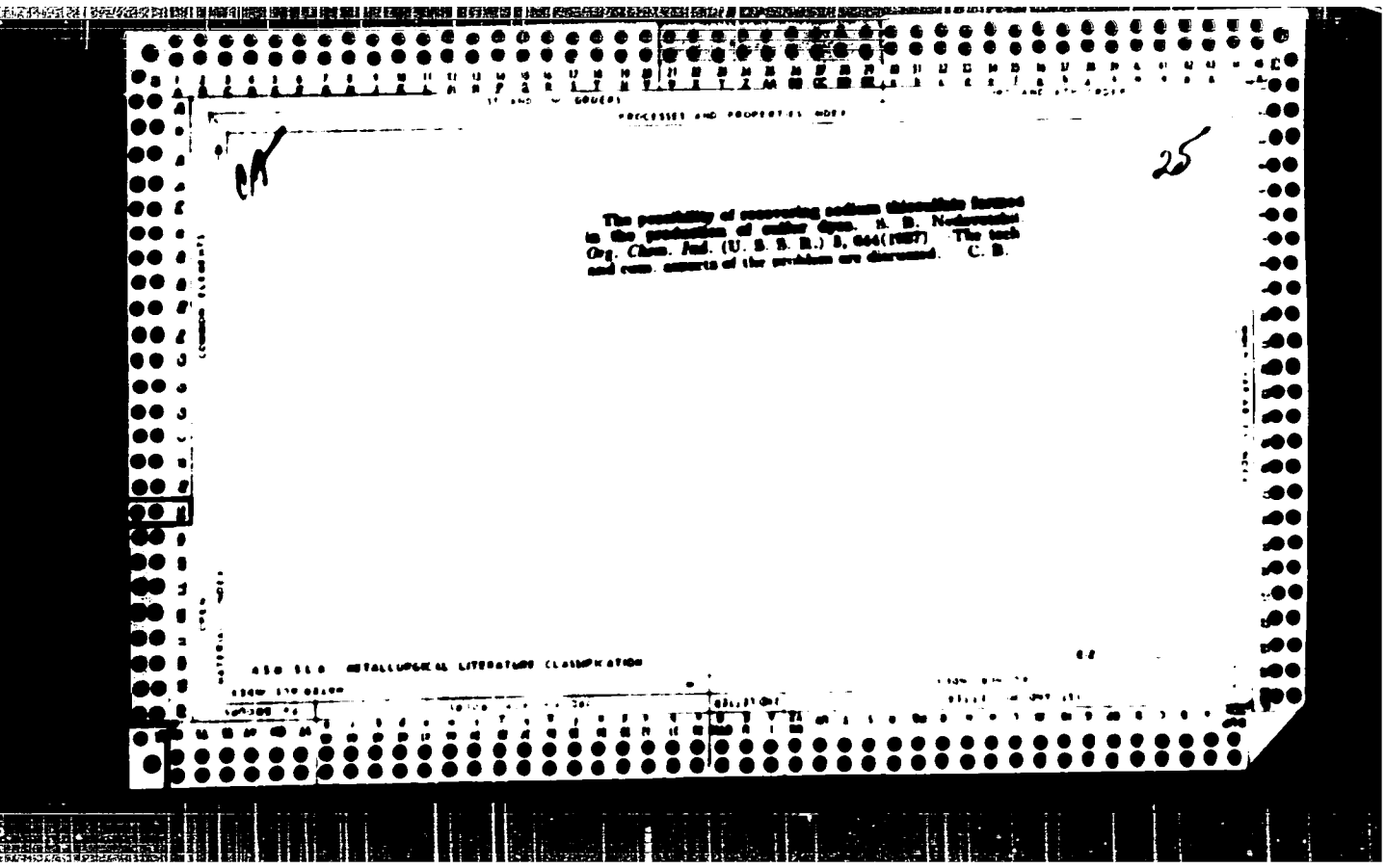
The reaction of iodine with starch. S. V. Nesterevskii. Bull. acad. sci. U. R. S. S., Classe sci. math. nat. 1936, 1361 (in French 1370). Until a soln. of 1 g. of sol. starch has been treated with 38.4 mg. of I_2, or a soln. of 1 g. of amylose with 53.4 mg. of I_2, there is no change in the viscosity of the soln. When more I_2 is added, the viscosity ecalse rise, and the amt. of material coagulated by KI is changed. There is no I_2 in the filtrates after coagulation. These effects are independent of concn. It is concluded that a chem. reaction first occurs, and that the remaining I_2 is adsorbed on the inde starch. H. M. Leicester

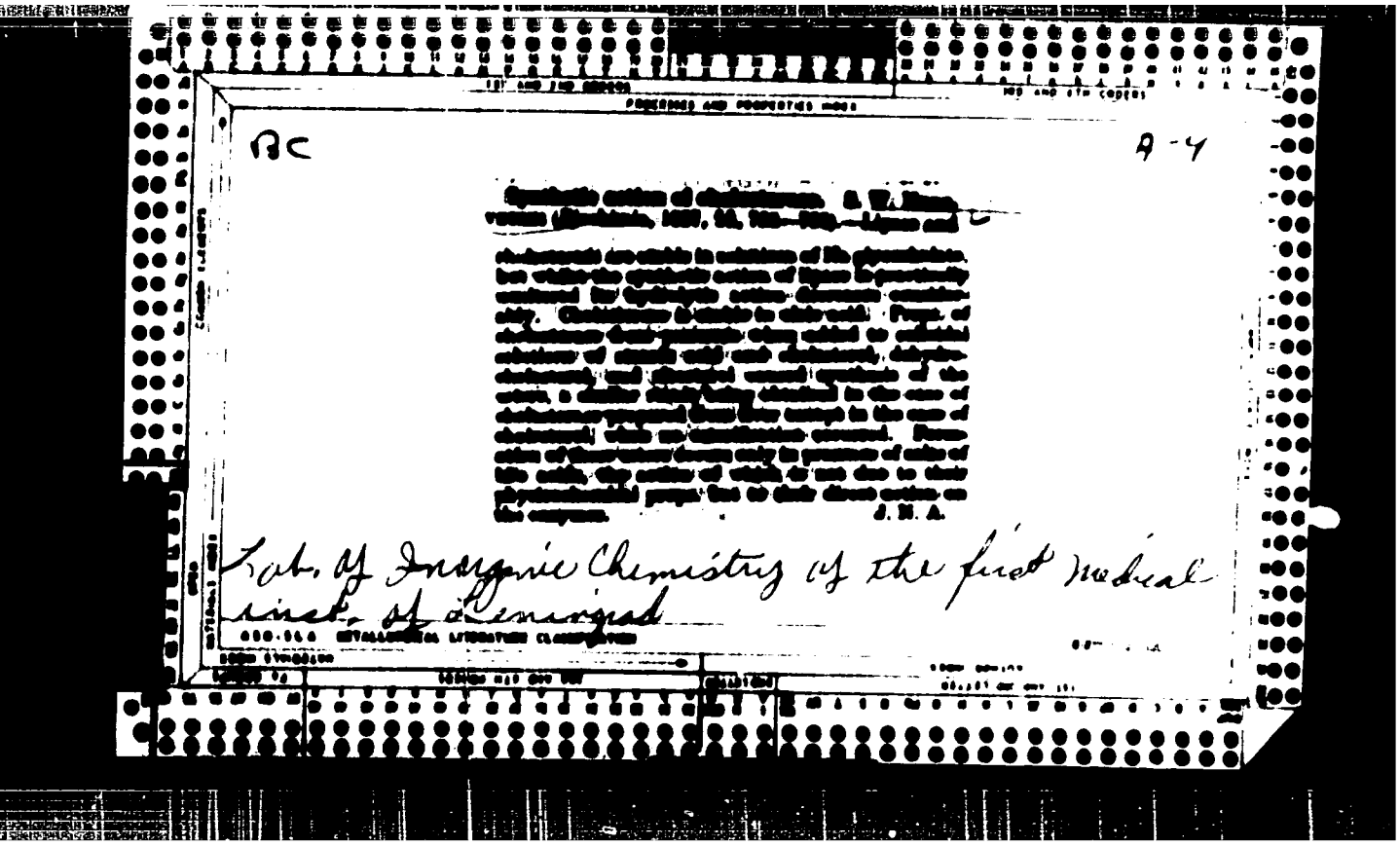
PROCESSES AND PROPERTIES INDEX

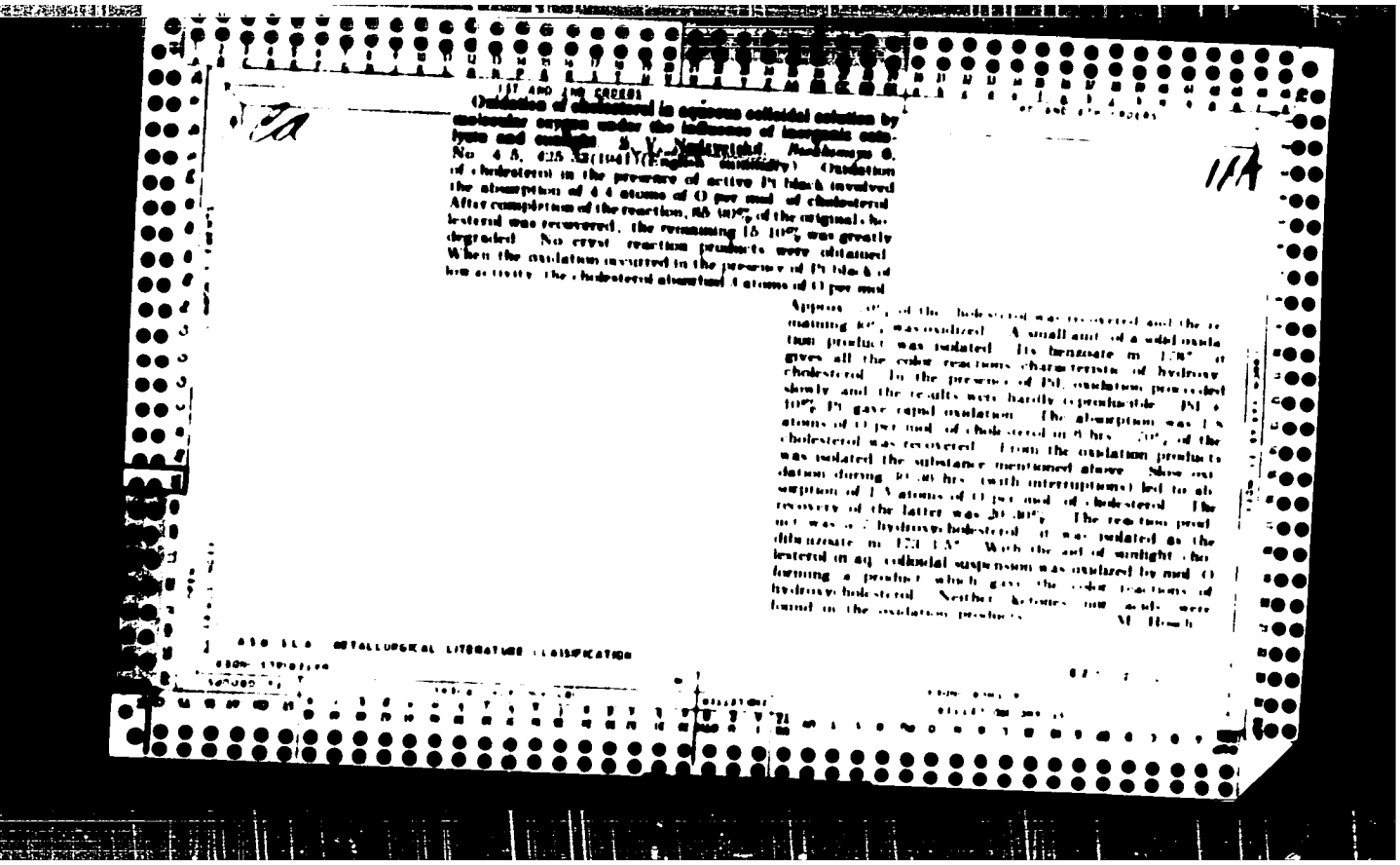
Cholesterase, its properties and synthetic action. S. V. Nedsvetskii. Biokhimiya 2, 758-66 (1937); cf. C. A. 30, 8517.—In a previous investigation, it had been shown that cholesterol esters could be synthesized through the aid of a prepn. from the pancreatic gland. This synthesis was possible only in the presence of bile salt. There was some doubt as to whether the action was not due to lipase. The present work shows that the pancreatic gland actually contains an enzyme, cholesterase, distinct from lipase. Cholesterase is unstable in water or in 0.025 N NH_4OH. Placed in these media, its activity is practically destroyed in 2 hrs., and the addn. of a bile salt brings about no activity. Lipase, on the other hand, is more stable in these solns., and its synthetic action is maintained for 10 days. In the presence of a soln. of a bile salt, both cholesterase and lipase maintain their full activity for 20 days. Cholesterase does not show any specificity toward cholesterol derivs. (dehydrocholesterol and sitosterol); the synthesis of the esters of these sterols proceeds at about the same rate as the synthesis of cholesterol esters. The bile salt apparently unites chemically with the enzyme. Its action is not due to a surface tension effect. For one and the same amt. of substratum and enzyme, the reaction rate increases in proportion to the concn. of the bile salt. Beyond a certain concn. of salts, the reaction rate does not change.

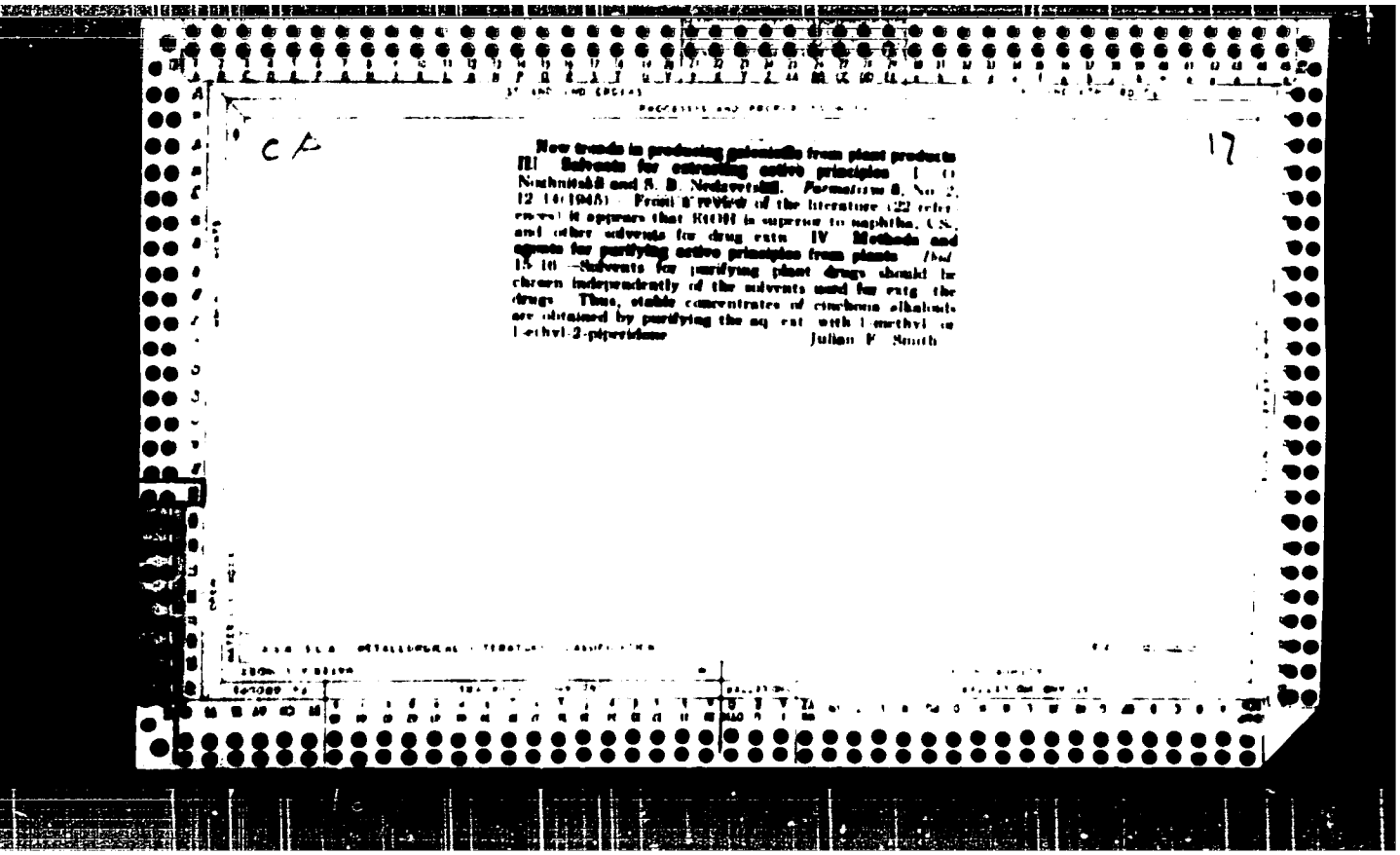
H. Cohen

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION









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New trends in producing galenicals from plant products
III. Solvents for extracting active principles. I. G. Nushtaev and S. D. Nedzvetskii. *Farmatsiya* 8, No. 2, 12-16 (1945). From a review of the literature (22 refer.) it appears that Et$_2$O is superior to naphtha, CS$_2$, and other solvents for drug extn. IV. Methods and agents for purifying active principles from plants. *Ibid* 15-16.—Solvents for purifying plant drugs should be chosen independently of the solvents used for extg. the drugs. Thus, stable concentrates of cinchona alkaloids are obtained by purifying the aq. ext. with 1-methyl- or 1-ethyl-2-piperidone. Julian F. Smith

CA

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Recent trends in producing pharmaceuticals from plant products. V. Apparatus for extracting active principles from plant products. I. O. Noshnitskii and S. D. Neis-avetskii. *Farmatsiya* 9, No. 3, 9-13(1946); cf. C. A. 41, 2208a. A major obstacle to efficient use of modern solvents in extg. Soviet plant products is that available app. is not vapor-tight for safe use with toxic solvents such as $CHCl_3$ or $C_2H_4Cl_2$. Another is that available app. is not adapted to countercurrent operation nor to dissolution. Modernization is essential. **VI. Individual pharmaceuticals and how they should be prepared.** *Ibid.* 13-15. A large area of pharmaceutical science as related to Soviet plant sources remains to be explored, and much can be accomplished without recourse to synthetic drugs.

Julian F. Smith