ZHELANOV, S.P.; FILIPPOVA, V.S., red.; PONOMAREVA, A.A., tekhn.red.

[A club of lathe operators] Kruzhok tokarei. Moskva, Gos.uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1957. 36 p. (MIRA 11:2)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye shkol.
(Turning)

SOV/76-33-9-16/37

5(4)

AUTHORS: Zhelankin, V. I., Kutsev, V. S., Ormont, B. F.

TITLE: Investigation of Equilibrium in the Reaction of the Reduction of Hafnium Dioxide by Carbon at High Temperatures

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol. 33, Nr 9, pp 1988-1991 (USSR)

ABSTRACT: In spite of the fact that hafnium carbide is one of the highest melting compounds (3890°C), and is therefore of special interest, there are no data in publications concerning the equilibrium in the system HfO_2 - C - CO - HfC_xO_y. Investigation was made of the reduction reaction of HfO_2 with graphite in the temperature range 1743-2003°K at a pressure of 70-1000 torr, by means of an electrical vacuum furnace (Ref 10). Temperature was measured with an optical pyrometer of type OPPIR-45 which was calibrated with a standard lamp designed by G. S. Popov. Pressure of the carbon monoxide was measured with a mercury gauge with the aid of a microscope. Equilibrium values of pressure and respective temperatures are given (Table) as well as the X-ray line patterns (Fig 4). As may be observed from the latter, the following phases are found in equilibrium: carbide

Card 1/2

...Hard Alloys) (All-Union Nauchno-

Investigation of Equilibrium in the Reaction of the Reduction of Hafnium Dioxide by Carbon at High Temperatures SOV/76-33-9-16/37

phase (cubic face-centered lattice), HfO_2 (monoclinic lattice), graphite and CO. The lattice periods of carbide are the following: a = 4.627$_2$kX for 2003°K and a = 4.626$_6$kX for 1743°K. The reaction by which the equilibrium is brought about is: $HfO_2 + (x-y+2)C \rightleftarrows HfC_xO_y + (2-y)\,CO + Q_p$. From the diagram of lgP as a function of $10^4/T$ (Fig 3), the heat effect of reaction was computed with Q_p = -132 ± 3 kcal for the temperature range 1743-2003°K and Q_{-p} = constant. Further investigations of the carbide phase are in progress. There are 4 figures, 1 table, and 10 references, 4 of which are Soviet.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute imeni L. Ya. Karpov), Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov (All-Union Scientific Research Institute of Hard Alloys)

SUBMITTED: February 22, 1958

Card 2/2

AUTHORS: Zhelankin, V. I., Kutsev, V. S., Ormont, B. F. 78-3-5-31/39

TITLE: Investigations of the Equilibrium in the Reduction Reactions of ZrO_2 and V_2O_3 by Carbon at High Temperatures (Issledovaniye ravnovesiya v reaktsiyakh vosstanovleniya ZrO_2 i V_2O_3 uglerodom pri vysokikh temperaturakh)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol 3, Nr 5, pp 1237-1240 (USSR)

ABSTRACT: Oxycarbides are formed as well as carbides, from zirconium oxide and vanadium oxide with carbon at higher temperatures. The equilibria in the systems ZrC_xO_y-C-CO and VC_xO_y-C-CO, at a constant pressure of CO = 760 mm in the temperature interval 1900 to 2500°C, were investigated.
The produced carbide preparations were submitted to both chemical and X-ray analysis.
The carbon content bound in zirconium carbide increases, for a rise of temperature from 1900 to 2500°C, from 7.5% to 8.9%, and in vanadium carbide, according to the rise of temperature from 1900 to 2500°C, from 16,7% to 17,6%. $ZrC_{0,77}$ exists below 2300°C, and zirconium-carbide

Card 1/2

Investigations of the Equilibrium in the Reduction Reactions of ZrO_2 and V_2O_3 by Carbon at High Temperatures 78-3-5-31/39

free from oxygen is obtained at 2300°C. Vanadium carbide free from oxygen is obtained at 2250°C.
There are 4 figures, 2 tables, and 9 references, 5 of which are Soviet.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova, Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov (Physicochemical Institute imeni L. Ya. Karpov, All-Union Scientific Research Institute for Hard Alloys)

SUBMITTED: May 15, 1957

AVAILABLE: Library of Congress

1. Zirconium oxide—Reduction reactions 2. Vanadium oxides—Reduction reactions 3. Carbon—Reduction reactions

Card 2/2

ZHELANKIN, V.I.; KUTSEV, V.S.; ORMONT, B.F.

Study of equilibrium in the reduction of HfO_2 by carbon at high temperatures. Part 2. Zhur.fiz.khim. 35 no.11:2608-2610 N '61. (MIRA 14:12)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.
(Hafnium oxide)
(Reduction)

ZHELANKIN, V.I.; KUTSEV, V.S.

Composition and structure of hafnium carbide. Zhur.strukt.khim. 4 no.6:865-867 N-D '63. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh reaktivov i osobo chistykh veshchestv.

ACCESSION NR: AP4005255 S/0192/63/004/006/0865/0867

AUTHOR: Zhelankin, V. I.; Kutsev, V. S.

TITLE: Composition and structure of hafnium carbide

SOURCE: Zhurnal strukturnoy khimii, v. 4, no. 6, 1963, 865-867

TOPIC TAGS: high temperature material, refractory carbide, hafnium carbide, hafnium carbide composition, lattice constant, homogeneity limits, refractory, hafnium carbide structure

ABSTRACT: In connection with the considerable interest in hafnium carbide as the most refractory binary compound, the homogeneity range and the lattice parameter a of HfC_x preparations were determined. Preparations of varied composition were synthesized from 99.5% Hf metal and spectroscopically pure graphite at 1800—2100C in vacuum or from 99.8% hafnium dioxide and graphite under conditions of bivariant equilibrium at 2100C. The powdered starting materials were compacted, then sintered. Chemical analysis and x-ray powder patterns established that hafnium carbide forms an oxygen-free homogeneous phase in the

Card 1/3

ACCESSION NR: AP4005255.

$HfC_{0.58}$—$HfC_{0.99}$ composition range. The plot a versus x, shown in Fig. 1 of the Enclosure, shows a positive deviation from the Vegard law. The value of a for stoichiometric HfC was found to be 4.629 kx, regardless of the starting materials used. Comparison of the present data with earlier data (V. I. Zhelankin, V. S. Kutsev, B. F. Ormont. Zh. fiz. khimii, 33, 9, 1988 (1959)) (point 3 in Fig. 1) showed that the values of a for both oxygen-free $HfC_{0.95}$ and $HfC_{0.95}O_{0.05}$ were nearly identical. The lower value from the literature suggests the effect of the Zr impurity in the starting Hf and of O and N from the atmosphere. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Vsesoyuzny*y nauchno-issledovatel'skiy institut khimicheskikh reaktivov i osobo chisty*kh veshchestv (All-Union Scientific Research Institute of Chemical Reagents and Extrapure Substances)

SUBMITTED: 12May62 DATE ACQ: 20Jan64 ENCL: 01

SUB CODE: MA NO REF SOV: 002 OTHER: 004

Card 2/3

21.2500

29986
S/076/61/035/011/009/013
B110/B147

AUTHORS: Zhelankin, V. I., Kutsev, V. S., and Ormont, B. F.

TITLE: Study of the equilibrium in the reduction reaction of HfO_2 with carbon at high temperatures. II

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 11, 1961, 2608-2610

TEXT: The results of a study of chemical and phase compositions, the calculation of heats and free energies of formation over a wide temperature range are given, and some equilibrium-pressure values of the reaction $HfO_2 + (x-y+2)C = HfC_xO_y + (2-y)CO + Q_p$ (1) are calculated. Four equilibrium preparations corresponding to the conditions of monovariant equilibrium in Eq. (1) were prepared in the temperature range from 1743 to 2003°K. The method had been developed by the authors (Zh. fiz. khimii 33, 1988, 1959). C_{total}, C_{free}(graphite), Hf_{total} and unreacted HfO_2 were determined. The graphite content was determined by heating 0.2 to 0.25 g of hafnium oxycarbide with a mixture consisting of 7 to 8 milliliters of HNO_3 and 1 to 2 milliliters of HF for 15 minutes, and filtering

Card 1/4

Study of the equilibrium ...

off the residue which is burned in O_2 stream. CO_2 is determined by absorption with dry alkali. HfO_2 was determined by keeping the preparation with a mixture of chromic and sulfuric acids at 140°C for 1 hr. Insoluble HfO_2 was calcined and weighed, and the oxygen contained in the oxycarbide was determined from the difference between total oxygen and TiO_2 oxygen. X-ray analysis was performed after $CuK\alpha_1$ irradiation in an PKY-86 (RKD-86) chamber. The lattice constant and the composition of the oxycarbide phase remained constant from 1743 to 2003°K and between 70 and 1000 mm Hg: $HfO_2 + 2.9C \rightleftharpoons HfC_{0.95}O_{0.05} + 1.95\ CO + Q_p$ (2). Free-energy changes ΔG as a function of temperature were calculated from the equation $\Delta G = -RT\ln 1.95$. It was established that $\Delta S^o_{1750\text{-}2000} = 66$ entropy units; $\Delta H_{1750\text{-}2000} = 132{,}300$ cal. The specific heat was calculated from the Debye equation: $C_v = 3C_D(\theta/T)$, where $x = \theta/T$. The Lindemann equation $\theta = 135\sqrt{T_f/MV^{2/3}}$ was used to estimate the characteristic temperatures; T_f is the melting temperature of the compound, M is the atomic (molecular) weight, and V = atomic (molecular) volume. It was found that

Card 2/4

29986
S/076/61/035/011/009/013
B110/B147

Study of the equilibrium ...

$C_p(HfC) = 11.73 + 0.78 \cdot 10^{-3}T - 5.27 \cdot 10^{5}T^{-2}$;
$C_p(CO) = 6.60 + 1.2 \cdot 10^{-3}T$ ($T = 273 - 2500^{\circ}K$);
$C_p(HfO_2) = 17.39 + 2.08 \cdot 10^{-3}T - 3.48 \cdot 10^{5}T^{-2}$ ($T = 298 - 2300^{\circ}K$);
$C_p(\text{graphite}) = 4.10 + 1.02 \cdot 10^{-3}T - 2.10 \cdot 10^{5}T^{-2}$ ($T = 298 - 2300^{\circ}K$);
$\Delta C_p = -4.68 - 1.914 \cdot 10^{-3}T + 4.3 \cdot 10^{5}T^{-2}$;
$\Delta H_T = \Delta H_o^o - 4.68T - 0.957 \cdot 10^{-3}T^2 - 4.3 \cdot 10^{5}T^{-1}$. From $\Delta H_T = 132{,}000$ at $T = 1875^{\circ}K$ one obtains $\Delta H_o^o = 144{,}700$ cal and $\Delta H^o_{298.1} = 141{,}800$ cal, and from $\Delta G_T = 0$ at $2005^{\circ}K$, $\Delta S^o_{298.1} = 75$ entropy units. Heat of formation and entropy of $HfC_{0.95}O_{0.05}$ were calculated from (2): $Q^o_{298.1} = 73{,}700$ cal and $S^o_{298.1} = 1$ entropy unit. The entropy values agreed with those calculated by the Eastman equation. There are 1 figure, 2 tables, and 14 references: 10 Soviet and 4 non-Soviet. The three references to English-language publications read as follows: L. Brewer, Chem. Revs, 52, 1, 1953; C. H. Prescott, W. B. Hincke, J. Amer. Chem. Soc., 49, 2774, 1927; C. H. Prescott,

Card 3/4

Study of the equilibrium ...

29986
S/076/61/035/011/009/013
B110/B147

J. Amer. Chem. Soc., 48, 2534, 1926.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: August 1, 1960

Card 4/4

ACC NR: AT6033685 SOURCE CODE: UR/3231/66/000/001/0010/0030

AUTHOR: Vartanova, L. Yu.; Zhelankina, T. S.; Mebel', S. S.; Pyatetskiy-Shapiro, I. I.

ORG: none

12

TITLE: Determining the focal depth of an earthquake with the aid of a digital electronic computer

SOURCE: AN SSSR. Institut fiziki Zemli. Vychislitel'naya seysmologiya, no. 1, 1966. Analiz seysmicheskikh nablyudeniy na elektronnykh mashinakh (Use of electronic computers in the analysis of seismic observations), 10-30

TOPIC TAGS: earthquake, seismic modeling, computer application, seismic wave

ABSTRACT: This work is a continuation of a previous investigation (I. I. Pyatetskiy - Shapiro et al. DAN SSSR, 1963, 151, no. 2, 323) with the difference that it deals with an iterative process of the successive automatic identification of the pP and sP waves, determination of the corresponding values of the focal depth, and more precise pinpointing of the epicenter, given the time of the first few arrivals (up to five) recorded at a certain number of stations and the travel-time curves of the P-group waves. It is shown that the problem reduces to the

Card 1/2 UDC: 550.34-517:681.142.35

ACC NR: AT6033685

simple selection of matching values and corresponding computer flow charts are presented. The computerized experimental verification of data on 121 earthquakes indicates that the problem of determining the focal depth h from among all the normally possible values (from 0 to 790 km) does not always have a unique solution. Hence, further calculations must also be regarded as experimental with the principal purpose of accumulating data for elaborating the criterions for the selection of the optimal solution. Even in its present state, however, this method produces more complete, and hence also more reliable results than manual calculations. The authors are deeply indebted to N. V. Kondorskaya for assistance in selecting the data of the USSR Seismological Service and for valuable suggestions. Orig. art. has: 8 tables, 4 figures, and 15 formulas.

SUB CODE: 08, 09, 17/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 002
ATD PRESS: 5106

Card 2/2

PYATETSKIY-SHAPIRO, I.I.; ZHELANKINA, T.S.; KEYLIS-BOROK, V.I.; PAVLOVA, L.G.; REZNYAKOVSKIY, P.T.

Use of electronic computers in locating earthquake epicenters. Dokl. AN SSSR 151 no.2:323-325 Jl '63. (MIRA 16:7)

1. Institut fiziki Zemli im. O.Yu.Shmidta AN SSSR. Predstavleno akademikom Ye.K.Fedorovym.

(Electronic computers) (Seismometry)

SOBAN'SKI, Ya. [Sobanski, J.]; DOMZHAL, V. [Domrzal, W.]; SULAT, T.; ZHELAVSKA-RYBUS, Ye. [Zelawska-Rybus, E.]

Development of "primitive vision", fixation and binocular vision in man. Uch.zap. GNII glaz.bol. no.7:201-202 '62. (MIRA 16:5)

1. Iz kliniki glaznykh bolezney (rukovoditel' - prof. Ya. Soban'ski) Meditsinskoy akademii v Lodzi, Pol'skaya Narodnaya Respublika.
(VISION)

SOBAN'SKI, Ya. [Sobanski, J.]; SHOSLAND, V. [Szosland, W.]; ZEYDLER, L. [Zejdler, L.]; ZHELAVSKA-RYBUS, Ye. [Zelawska-Rybus, E.]

Causes of the development of astereoscopy, its clinical symptoms and treatment. Uch.zap. GNII glaz.bol. no.7:203-207 '62. (MIRA 16:5)

1. Iz kliniki glaznykh bolezney (rukovoditel' - prof. Ya. Soban'ski) Meditsinskoy akademii v Lodzi, Pol'skaya Narodnaya Respublika.
(STRABISMUS)

ZHELAVSKIY, V.F., inzh.; GODE, R.B., inzh.; IOFFE, B.A., inzh.

Multiple electrode welding tip for the welding of parts with a small spacing of spots. Svar. proizv. no.1:27-29 Ja '64. (MIRA 17:1)

1. Rizhskiy elektromashinostroitel'nyy zavod.

IOFFE, B.A.; ZHELAVSKIY, V.F.

Semiautomatic machine for the bending of copper armature section heads. Kuz. shtam. proizv. 4 no.11:32-34 N '62. (MIRA 15:11)

(Electric machinery industry)
(Metalworking machinery)

REPESHKO-KRAVCHENKO, S.I., inzh.; ZHELAVSKIY, V.F.; KUZNETSOV, V.A.

Welding of electric contacts on magnetic starters. Svar. proizv. no.4:27-29 Ap '61. (MIRA 14:3)

1. Rizhskiy elektromashinostroitel'nyy zavod (for Zhelavskiy). Institut metallurgii im. Baykova An SSSR (for Kuznetsov).
(Electric contactors—Welding)

1.2310

S/135/61/000/004/008/012
A006/A101

AUTHORS: Repeshko-Kravchenko, S. I., Engineer, Zhelavskiy, V. F., Kuznetsov, V. A.

TITLE: Welding of Electric Contacts of a Magnetic Starter

PERIODICAL: Svarochnoye proizvodstvo, 1961, No. 4, pp. 27 - 29

TEXT: Investigations were made to develop improved methods of joining the contacts to the adapters of magnetic starters and it was found that the best method for this purpose was the spot welding process. VNIIESO designed in 1957 together with the "Elektric" plant a spot welding machine МТПК -25 (MTPK-25) intended for the welding of contacts. This machine became operative at the Riga Plant of Electrical Machinebuilding and was used for the welding of three types of silver contacts. Savings in silver amounted to 1500 kg in 1960 and were achieved by a modified design of the contact, i.e., smaller dimensions of its stem. (Fig. 1) During welding only the stem is fused. Small silver contacts are welded to 0.25 mm thick БрОФ 6.5 - 0.15 (BrOF6.5-0.15) bronze bridges (2a) using the following procedure: Stage - II; compression 0.28 sec; welding 0.22 sec; forging -0.22 sec; pulse 0.04 - 0.06 sec; heating 5 - 14 graduation marks;

Welding of Electric Contacts of a Magnetic Starter

S/135/61/000/004/008/012
A006/A101

pressure -80 - 100 kg. Silver contacts are welded to zinc-plated "2" and "10" grade incised steel bridges (Fig. 2b) as follows: stage VI-VIII; compression 0.28 sec; welding 0.1 - 0.28 sec; forging - 0.05 - 0.1 sec; pulse 0.04 - 0.06 sec; heating 10 - 14 graduation marks; pressure 80 - 100 kg. Silver contacts can be welded to steel contact bolts under analogous conditions. Welding of contacts on the MTPK-25 machine is highly efficient, namely 1250 - 1300 spots per h. A new design of a magnetic starter ПМР-2 (PMR-2) developed in 1959 at the REZ called for a technology of welding cermet contacts with bronze and steel. At the Institute of Metallurgy imeni A.A. Baykov AS USSR together with REZ investigations were made on the ultrasonic welding of СН -40 (SN-40) cermet contacts (40% nickel, 60% silver) and ОК-15 contacts (15% cadmium oxide, 85% silver) with bronze and silver on the УЗСМ-1 (UZSM-1) ultrasonic machine with УЗГ -10 (UZG-10) oscillator. Two systems investigated - 1) transmission of oscillations through the contact; 2) transmission of oscillations through the bridge (Fig. 4a,b) - the second method proved more satisfactory. Welding was performed at 12 - 14 micron amplitude; 100 kg contact force; 0.6 sec welding time. The small cermet contacts welded to bronze bridges showed high strength characteristics exceeding those prescribed by technical specifications. On the basis of results obtained the ultrasonic welding of these parts can be recommended for extended industrial use. A device was developed

S/135/61/000/004/008/012
A006/A101

Welding of Electric Contacts of a Magnetic Starter

for the welding of small contacts (Fig. 6) in whose race simultaneously 24 contacts can be placed. Ultrasonic welding was also successfully applied for welding large-size bridges with cermet contacts and cermet contacts with steel. The REZ is now organizing a department for the welding of small cermet contacts by ultrasonic process. There are 7 figures and 1 table.

ASSOCIATIONS: Rizhskiy elektromashinostroitel'nyy zavod (Riga Plant of Electric Machinebuilding) (Respeshko-Kravchenko and Zhelavskiy); Institut metallurgii imeni Baykova AN SSSR (Institute of Metallurgy imeni Baykov AS USSR) (Kuznetsov)

20229

Welding of Electric Contacts of a Magnetic Starter

S/135/61/000/004/008/012
A006/A101

Figure 1:

Silver contacts: a - for riveting; (previous method) b - for spot welding.

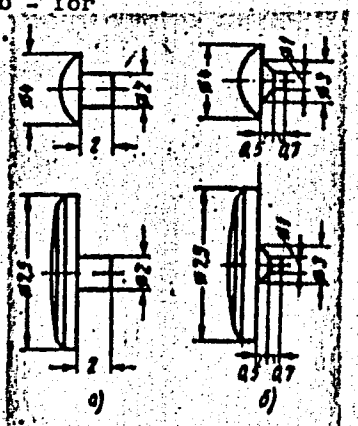


Рис. 1. Серебряные контакты: а — для клепки; б — для точечной сварки.

Figure 2:

Bridges for silver contacts in spot welding

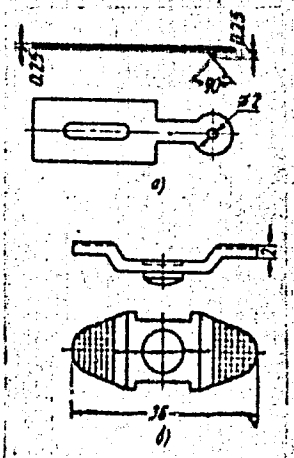


Рис. 2. Мостики под серебряные контакты при точечной сварке.

Card 4/6

Welding of Electric Contacts of a Magnetic Starter

8/135/61/000/004/008/012
A006/A101

Figure 3:

Bridges and contacts of PMR-2 magnetic starter

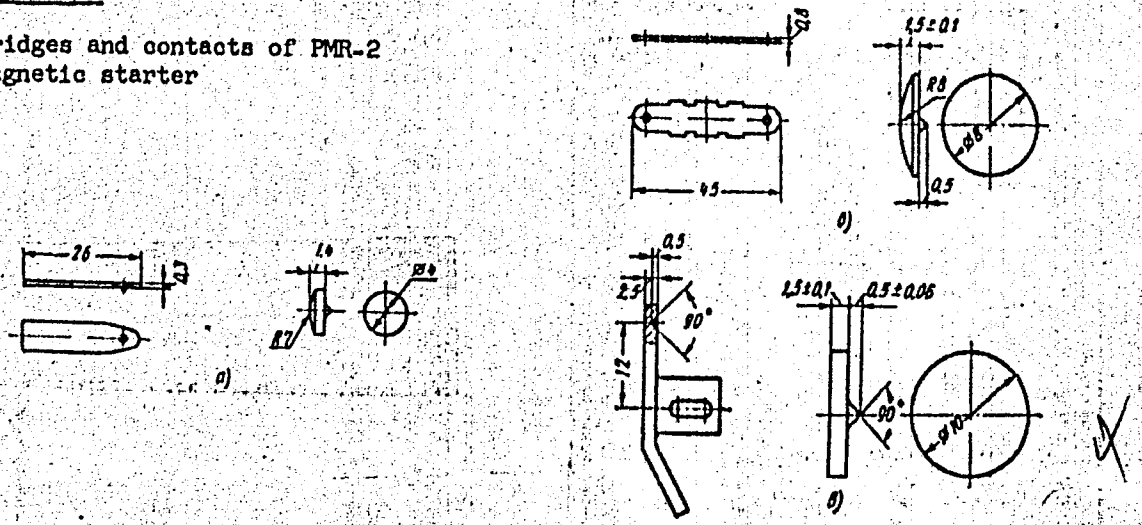


Рис. 3. Мостики и контакты магнитного пускателя ПМР-2.

Card 5/6

Welding of Electric Contacts of a Magnetic Starter

S/135/61/000/004/008/012
A006/A101

Figure 4:

System of ultrasonic welding of contacts and bridges: a--oscillations are transmitted through the contact; b-oscillations are transmitted through the bridge; 1-bridge; 2-contact; 3-instrument; A-oscillation amplitude.

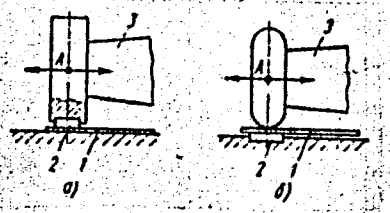


Figure 6:

Installation for ultrasonic welding of small cermet contacts

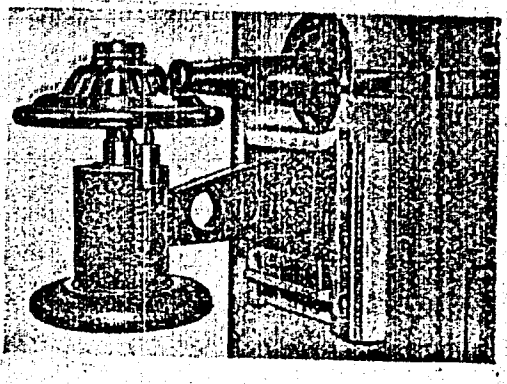


Рис. 6. Приспособление для ультразвуковой сварки малых металло-керамических контактов.

Card 6/6

ZHELAVSKIY, V.F., inzh.; REPESHKO-KRAVCHENKO, S.I., inzh.;
VAL'KOVSKIY, K.A., inzh.

Resistance welding in the manufacture of washing machines.
Svar. proizv. no.1:33-34 Ja '65. (MIRA 18:3)

1. Rizhskiy elektromashinostroitel'nyy zavod.

ZHELDAK,B.D.,fel'dsher.

How we organize medical service on state grain farms.. Fel'd. i akush. no.1:43-47 Ja '56 (MLRA 9:4)

1. Sosnovskaya uchastkovaya bol'nitsa.
(PUBLIC HEALTH, RURAL)

ZHELDAK, B.G., Fel'dsher (Smolevichi Minskoy oblasti)

My participation in referring leading groups of agricultural workers to preventive and therapeutic clinics. Fel'd.i akush. no.7:53-54 Jl '55. (MLRA 8:10)

(PUBLIC HEALTH,
in Russia, med.exam. of agricultural workers)
(RURAL CONDITIONS
in Russia, med.exam. of working population)
(PHYSICAL EXAMINATION
of agricultural workers in Russia)

ZHELDAK, B.G., fel'dsher

Treating food poisonings and first-aid measures. Fel'd. i akush. 21 no.11:39-41 N '56. (MLRA 9:12)

1. Sosnovskaya uchastkovaya bil'nitsa Kustanayskoy oblasti.
(FOOD POISONING) (FIRST AID IN ILLNESS AND INJURY)

ZHELDAK, B.G., fel'dsher (Smolevichi Minskoy oblasti) DUBMANENKO, I.V. fel'dsher (Prudishchi Vladimirskoy oblasti) YAVTUSHENKO, I.N. SAUTIN, I.G., fel'dsher(Megrino Vologodskoy oblasti)

How I improve my professional qualifications and boraden my ideological and political outlook; from articles submitted for the contest. Fel'd. i akush. no.6:55-58 Je '55. (MLRA 8:8)

1. Khalturinskaya sel'skaya bol'nits Poltavskoy oblasti (for Yavtushenko).
(Nurses and nursing)

ZHELDAK, B.G.

External application of sulfathalidine in the treatment of skin diseases. Vest.ven. i derm. no.4:52 Jl-Ag '55 (MLRA 8:12)

1. Iz Minskogo kozhno-venerologicheskogo dispansera.
(PHTHALANILIC ACID) (SKIN--DISEASES)

ZHELDAK, B.G., Fel'dsher (Smolevichi Minskoy oblasti)

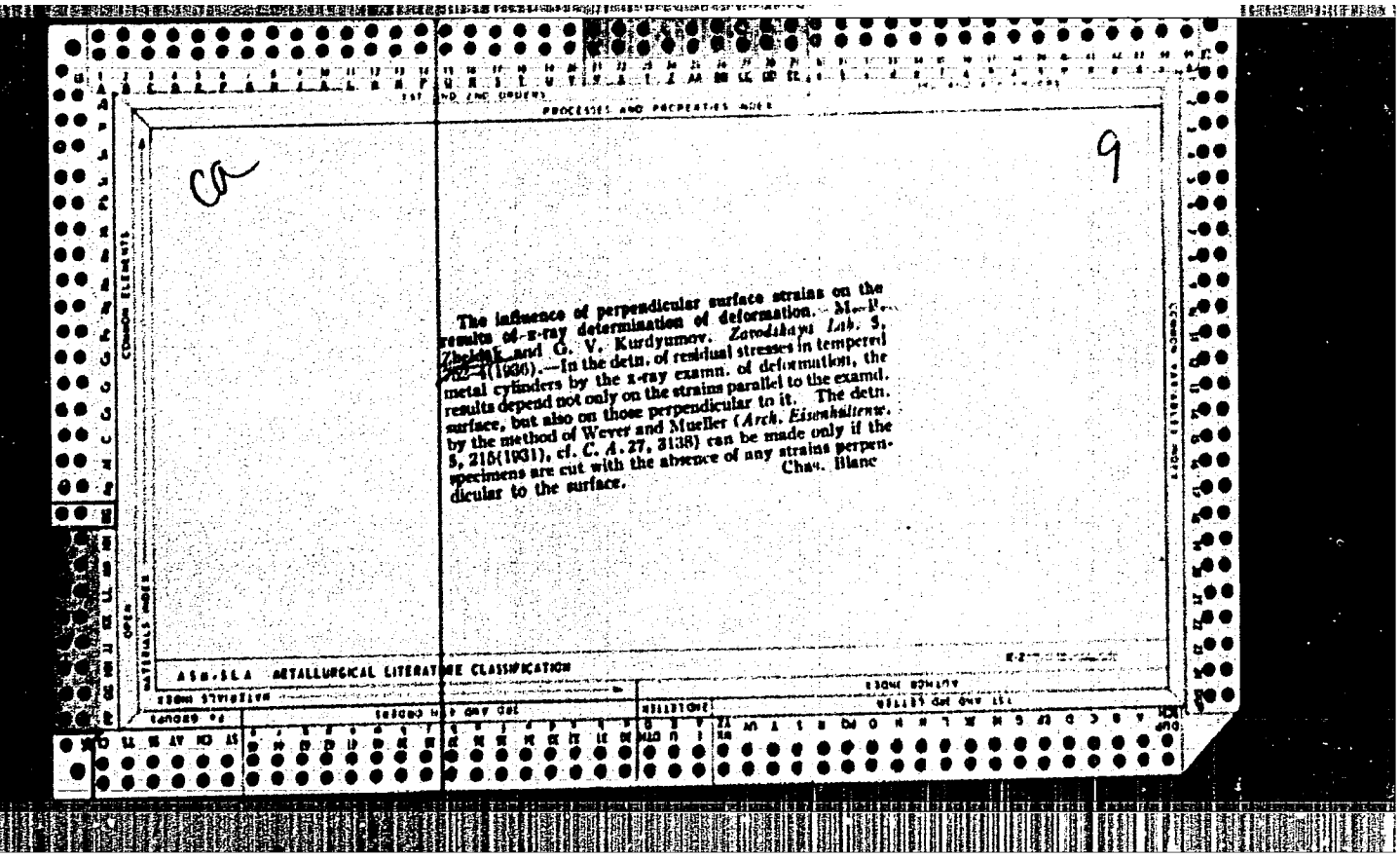
My participation in referring leading groups of agricultural workers to preventive and therapeutic clinics. Fel'd.i akush. no.7:53-54 Jl '55. (MLRA 8:10)

(PUBLIC HEALTH,
in Russia, med.exam. of agricultural workers)
(RURAL CONDITIONS
in Russia, med.exam. of working population)
(PHYSICAL EXAMINATION
of agricultural workers in Russia)

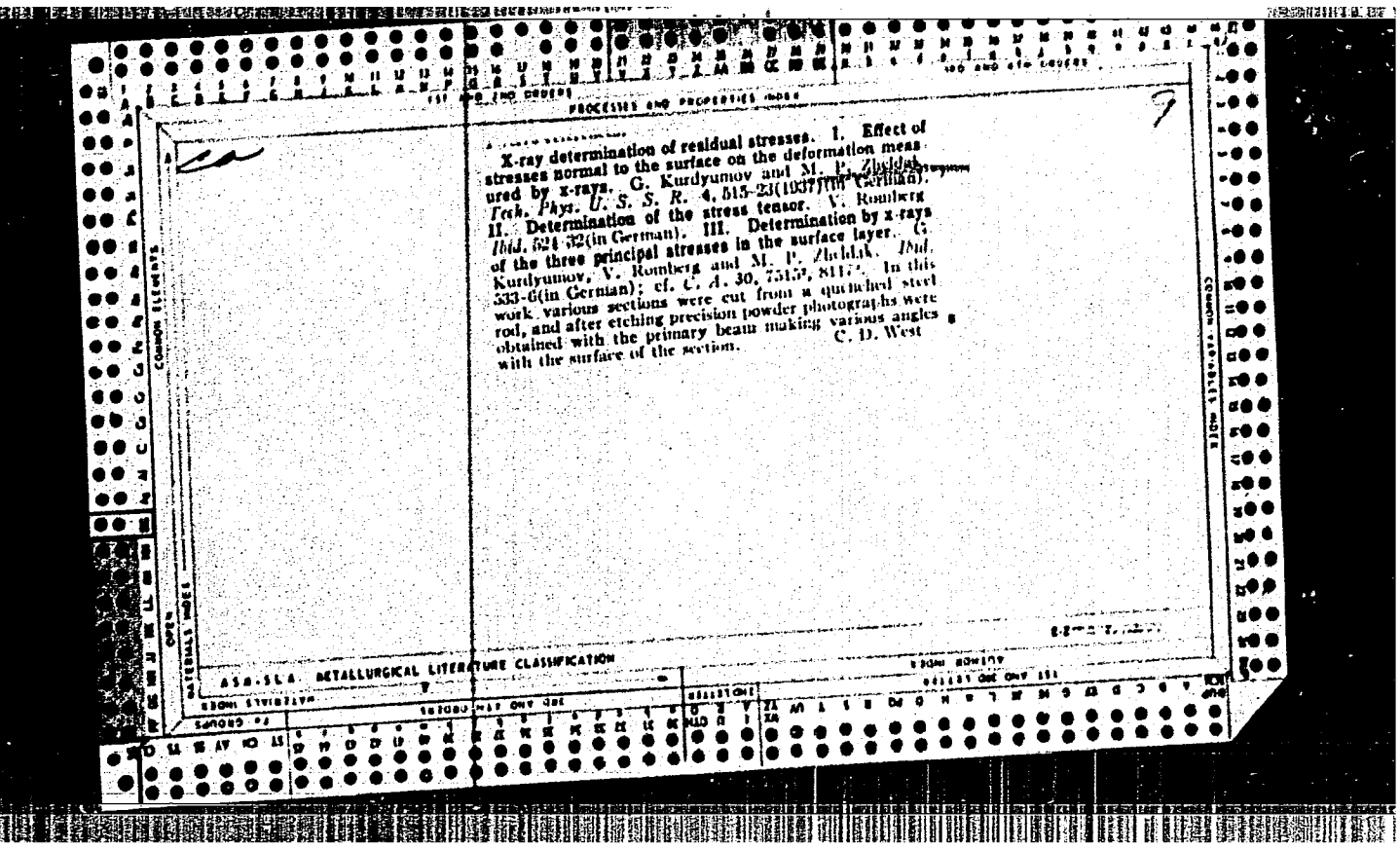
ZHELDAK, B.G., Fel'dsher (Smolevichi Minskoy oblasti)

My participation in referring leading groups of agricultural workers to preventive and therapeutic clinics. Fel'd.i akush. no.7:53-54 Jl '55. (MLRA 8:10)

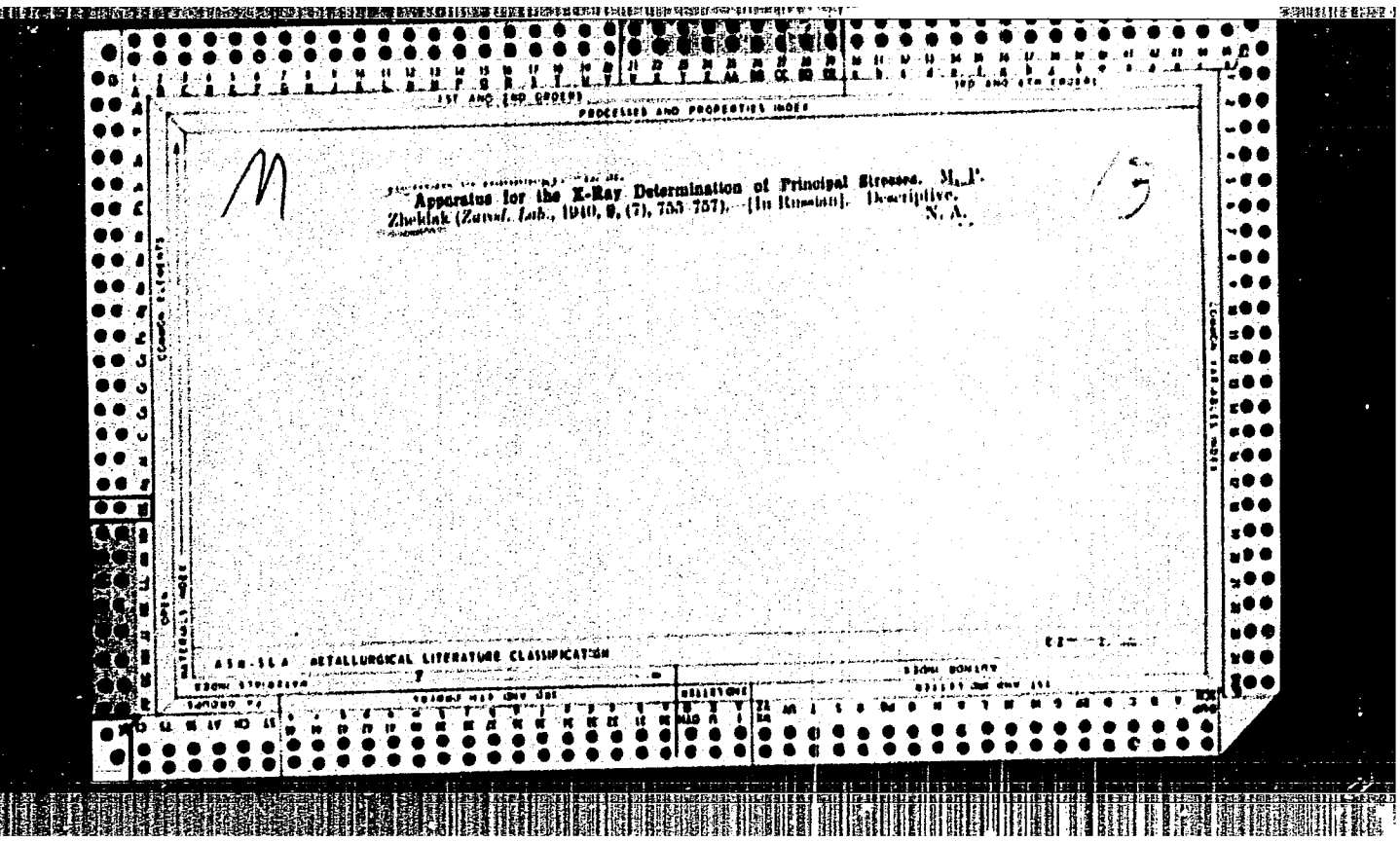
(PUBLIC HEALTH,
in Russia, med.exam. of agricultural workers)
(RURAL CONDITIONS
in Russia, med.exam. of working population)
(PHYSICAL EXAMINATION
of agricultural workers in Russia)



The influence of perpendicular surface strains on the results of x-ray determination of deformation. M. P. Zhelnak and G. V. Kurdyumov. *Zavodskaya Lab.* 5, 1062–4(1936).—In the detn. of residual stresses in tempered metal cylinders by the x-ray examn. of deformation, the results depend not only on the strains parallel to the examd. surface, but also on those perpendicular to it. The detn. by the method of Wever and Mueller (*Arch. Eisenhüttenw.* 5, 215(1931); cf. *C. A.* 27, 3138) can be made only if the specimens are cut with the absence of any strains perpendicular to the surface. Chas. Blanc



X-ray determination of residual stresses. I. Effect of stresses normal to the surface on the deformation measured by x-rays. G. Kurdyumov and M. P. Zhdanov. *Tech. Phys. U. S. S. R.* 4, 515-23(1937)(in German). II. Determination of the stress tensor. V. Romberg *Ibid.* 524-32(in German). III. Determination by x-rays of the three principal stresses in the surface layer. G. Kurdyumov, V. Romberg and M. P. Zhdanov. *Ibid.* 533-6(in German); cf. *C. A.* 30, 7515, 8117. In this work various sections were cut from a quenched steel rod, and after etching precision powder photographs were obtained with the primary beam making various angles with the surface of the section. C. D. West



Engr., Scientific Research Pipe Institute, -c1948-.

"Activated lubricants for cold drawing of tubes", Stal', No. 2, 1948

INA

Journal of the Iron and Steel Inst.
June 1954
Properties and Tests

Testing Pipes by the Method of Ring Specimens. M. P. Zheldak. (*Zavodskaya Laboratoriya*, 1950, 16, (10), 1237–1241). [In Russian]. The following conclusions are drawn from a study of the mechanical properties of pipes made from different steels subjected to various heat-treatments: For soft steels in the annealed state, tensile strength values obtained with ring specimens and flat specimens agree. For high-strength pipes, ring specimens normally give high tensile strength values, but the divergence can be reduced by adjusting the test conditions. Ring specimens lead to greatly reduced values for relative elongation with both annealed and normalized steel. The reduction of area at the neck of ring specimens in the normalized state does not give a true indication of plasticity. The use of ring specimens in conjunction with conversion factors experimentally determined for each type of steel is recommended.—S. K.

10-4-54
djp

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7

X-ray method to determine residual strains of the first kind. M. P. Zheldak (Nauch.-Issledovatel. Trubnyi Inst., Dnepropetrovsk). *Izvest. Akad. Nauk S.S.S.R., Ser. Fiz.* 15, 114–18(1951).—The sum of the strains in the plane of the cut is $\sigma = -32(l - l_0)$ kg./sq. mm., where l is the diam. of the Debye ring from the [310] face of α-Fe in a strained condition and l_0 in an unstrained condition. Steel cylinders contg. 0.25, 0.4, and 0.8% C (250 mm. long and 80 mm. outside diam.) were heated to 680° for 30 min. and quenched with H_2O. Disks, 10 mm. thick, were cut and the deformed surface layers were removed by etching 0.5–0.6 mm. away with HNO_3. The strains, detd. by mech. and x-ray methods, are a function of the distance from the center of the disk for all 3 steels. The influence of surface strains is discussed. The compression strains in rails cooled in H_2O are twice as big as in rails cooled in air. There are no strains in normalized railroad-car axles.

S. Pinkwer

PA 193T86

ZHELDAK, M. P.

USSR/Metals - Nitrided Steel Oct 51

"X-Ray Study of Structure of Nitrided Steel Layer (Mark EI-69)," M. P. Zheldak

"Zhur Tekh Fiz" Vol XXI, No 10, pp 1240-1243

It was found that structure of nitrided steel layer E-69 consists of Fe_4N and CrN, enclosed in grains of solid nitrogen soln in austenite. Its magnetic permeability depends on amts of iron and chrome nitrides, which add strength to the alloy. A magnetic method for detg width of nitrided layer is introduced into industry. Work performed in 1938.

193T86

USSR/Metals - Nitrided Steel (Contd) Oct 51

cooperation with L. V. Altshuler and P. F. Agafonov. Submitted first 29 Jul 48, later 20 May 51.

193T86

USSR/Metals - Steel, Impact Testing Apr 52

"X-Ray Investigation of the Fracture Surface of Impact Test Specimens," M. P. Zheldak, Sci Res Pipe Inst, Dnepropetrovsk

"Dok Ak Nauk SSSR" Vol LXXXII, No 6, pp 843-845

Studies mechanism of metal failure. Analysis of X-ray photographs presented shows that in case of brittle destruction, disregarding whether test specimen is in brittle state or its metal acquires brittle condition as result of stresses developed in testing, the failure process is similar: crystals are reduced to smaller blocks in limits of elastic stressed state with crack formation in sep largest crystals. Further destruction proceeds along these cracks. Submitted by I. P. Bardin 23 Feb 52.

223T51

ZHELDAK M. P.

223rd

Chemical Abst.
Vol. 48 No. 3
Feb. 10, 1954
Metallurgy and Metallography

X-ray investigation of breaks in samples of cold-breaking steels. M. P. Zheldak (Sci. Research Tube Inst., Dnepropetrovsk). *Zavod. Lab.* 19, 352-8(1953).—The breaks are of 3 kinds: bright, crystalline, mat fibers, and 2 zone breaks. All 3 types can be obtained in the same steel piece by a change in temp. Cryst. breaks (brittle) have a characteristic microstructure resembling leaves; fibroid breaks are a conglomeration of shapeless blocks of all sizes. X-ray photographs were taken from a half ferrite steel EI 428 after breaks were produced at normal temp. (fibroid breaks) and at −80° (cryst. breaks), a ferrite steel EI 430, and a C-contg. steel no. III (I) for wheels. They show that in bright breaks the interference spots remain present but become sometimes split. If the breaks are made in a fibrous condition the spots diffuse into a band of low intensity. I gave partially bright, partially mat breaks with a special x-ray pattern at −100°. It is concluded that the mechanism of breaks does not only consist in a decrease of the size of the grains and blocks but also in a change in structure due to a decompn. of the solid soln. in steels.

H. Pakawer

ZHELDAK, , M. P.

"Utilization of radio active cobalt-60 for X-raying welded seams in oil and gas piping", appearing in the "Detection of Defects in Metals by Gamma — Collection of Papers", (Gamma Defektoskopiya Metallov — Sbornik Statei), published by the Academy of Sciences USSR, p 100, 1955.

ZHELDAK, M. P.

"Increasing the sensitivity of gamma in lieu of filters for ray dispersal and for restricting the area of exposure", appearing in the "Detection of Defects in Metals by Gamma — Collection of Papers", (Gamma Defektoskopiya Metallov — Sbornik Statei), published by the Academy of Sciences USSR, p 106, 1955.

ZHELDAK, M.P.

137-58-3-6205

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 252 (USSR)

AUTHORS: Zheldak, M.P., Yushkevich, P.M.

TITLE: Sensitivity of a Method Employing Gamma Rays From Radioactive Cobalt for X-raying of Products Made of Thin Steel (Chuvstvitel'nost' gamma-metoda pri prosvechivanii radioaktivnym kobal'tom tonkikh izdeliy)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1957, Nr 3, pp 101-107

ABSTRACT: Investigations were performed in order to establish how the shape and size of artificially induced defects affects their detection under γ-rays, as well as to determine their effect on the sensitivity to focal length in x-raying of steel of various thickness, h. Special flaw-containing specimens of the wire type, with cylindrical openings, and with grooves, were manufactured for the purpose of determining the relationship existing between the sensitivity of the method and the geometric dimensions and shape of the defects. The x-raying process involved the employment of amplifying screens with a photosensitive coating of 120 mg/cm^2, and x-ray films of the "R-Kh" type. Co^{60} compounds, with a radioactivity

Card 1/2

137-58-3-6205

Sensitivity of a Method Employing Gamma Rays From Radioactive Cobalt (cont.)

of 0.5 and 48 g-equiv. served as the sources of the γ-rays. Experimental data corroborated the assumption that the detection of defects is influenced not only by their geometric size but by their shape as well. The authors conclude that the results of tests of the sensitivity of the gamma-method, as obtained from flaw-containing specimens accepted in the field and recommended in the literature, are higher than the actual values. Therefore, in order to obtain the correct sensitivity characteristics of the γ-method employed in the detection of natural defects, it is essential to employ specimens containing artificially induced defects which closely approximate the shape and size of the natural defects. Such artificial flaws may have the shape of cylindrical openings 1 - 1.5 mm in diameter or of channels 1.5 mm wide and 1.5 mm long. The radioactive intensity of the source does not affect the percentile or the absolute sensitivity of the method, providing the components being examined are made of thin steel. The ease of detection of defects by means of the γ-method is determined by the size of the defects. The percentile sensitivity is reduced by one-half if the distance between the γ-ray source and the component being examined is decreased from 800 to 200 mm. Regardless of the value of h, the minimum focal length which produces optimum percentile sensitivity lies in the range between 400 and 600 mm.

S.S.

Card 2/2

SOV/137-58-11-23750

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 269 (USSR)

AUTHORS: Zheldak, M. P., Yushkevich, P. M.

TITLE: Intensifying Effect of Lead Foil in Gamma-ray Examination (Usilivayushcheye deystviye svintsovoy fol'gi pri prosvechivanii gamma-luchami)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1958, Nr 4-5, pp 187-190

ABSTRACT: Investigations were carried out on the exposure time in the examination of sheet steel with γ-rays using Pb foil. The relationship between the amplification factor of the foil and its thickness was also investigated.

A. F.

Card 1/1

ZHELDAK, M.P. [deceased], kand.fiziko-matematicheskikh nauk; YUSHKEVICH, P.M., inzh.

Intensifying action of lead foil in gamma-ray examination. Biul.-nauch.-tekh.inform.VNITI no.4/5:187-190 '58. (MIRA 15:1)
(Lead) (Gamma-ray spectrometry)

ZHELDAKOV, M.Ye.; KARLOVA, I.N.

Geological and economic evaluation of the refractory clays of the eastern Donets Basin. Razved. i okh. nedr. 30 no.11: 6-8 N '64. (MIRA 18:4)

1. Voglo-Donskoye geologicheskoye upravleniye.

ZHELDAKOV, M.Ye.; KARLOVA, I.N.

Geological and economic evaluation of the refractory clays of the eastern Donets Basin. Razved. i okh. nedr. 30 no.11: 6-8 N '64. (MIRA 18:4)

1. Volgo-Donskoye geological and ec

BAREYEV, Yemel'yan Savel'yevich. Prinimali uchastiye: ZHELDAKOV, M.Ye., geolog; KARLOVA, I.N., geolog. BABAKHOVA, N.Kh., red.; MARINYUK, M.V., tekhn.red.

[Local raw materials for building materials; mineral raw material resources in Rostov Province] Mestnoe syr'e dlia stroitel'nykh materialov; mineral'nye syr'evye resursy Rostovskoi oblasti. Rostov, Rostovskoe knizhnoe izd-vo, 1960. 346 p.
(MIRA 14:2)

(Rostov Province--Mines and mineral resources)
(Rostov Province--Building materials)

ZHELDAKOV, M. Ye.

"Industrial Reserves of Concrete Sands in the Rostov Part of the Donbass," Razvedka i Okhrana Nedr, No. 4, pp 8-9, 1954

SO: W-31489, 2 Sep 55

ZHELDAKOV, Yu.N., inzh.; ALIMOV, Sh.S., inzh.

Making fibrous silicate slate. Stroi. mat. 5 no.5:9-10 My '59.
(MIRA 12:8)
(Rostov--Roofing, Slate)

ZHELDAKOV, Yu.N.

Study of the conditions of the effective reinforcement of mineral binders with vegetable fiber in sheet products. Trudy NIIAsbesttsementa no.17:103-116 '63.

(MIRA 17:10)

POLTAVSKAYA, I.A., kand. sel'khoz. nauk; ZHELDAKOVA, G.G.; NOVODERZHKINA, Yu.G.

Effect of organic-mineral fertilizers and the AMB bacterial preparation on the growth and development of woody plants. Agrobiologiia no.5:736-739 S-O '61. (MIRA 14:10)

1. Rostovskiy nauchno-issledovatel'skiy institut Akademii kommunal'nogo khozyaystva.
(Woody plants--Fertilizers and manures)

ZHELDAKOVA, G.C., mladshiy nauchnyy sotrudnik

Subsoil irrigation of city plants. Sbor.nauch.trud.RNII AKKH no.2:107-126 '63. (MIRA 18:10)

ZEMLYANITSKIY, Leonid Trankvilinovich; POLTAVSKAYA, Inessa Aleksandrovna; ZHELDAKOVA, Genriyetta Georgiyevna; DOLGOVA, K.N., red. izd-va; SALAZKOV, N.P., tekhn. red.

[Preparing urban soils for landscaping]Podgotovka gorodskikh pochvo-gruntov dlia ozeleneniia. Moskva, Izd-vo M-va kommun. khoz. RSFSR, 1962. 70 p. (MIRA 16:3)
(Landscape gardening)

COUNTRY : USSR.
CATEGORY : Zoological Parasitology. Acarids and Insects as Disease Vectors. Insects.
ABS. JOUR. : RZhBiol., No.14, 1959, No. 62690.

AUTHOR : Zheldakova, K. A.
INST. : Astrakhan Anti-plague Station.
TITLE : Concerning the Ecology of Fleas of the Genus Rhadinopsylla Jord. et Roths.

ORIG. PUB. : Sb. tr. Astrakhansk. protivochumn. st., 1955, vyp. 1, 367-378.

ABSTRACT : In 1950, on the southwestern Volga-Ural sands, 86 nests were obtained from the wintering burrows of the crested and midday gerbils. After the first selection of the ectoparasites, the nest litter was contained in the vault till the end of 1950, and the extracted fleas were picked up once a month. Flea collections from the gerbil nests, made in 1946 and 1947, also were examined. Altogether, 5 flea spe-

CARD: 1/4

COUNTRY :
CATEGORY :

ABS. JOUR. : RZhBiol., No.14, 1958, No. 62690.

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : cies were noted. Ceratophyllus laeviceps predominated. Among the females of this species, up to 15% of individuals with eggs were detected. Breeding of the imago occurred in all seasons, with the exception of the hottest period of the year. Among the flea females of the genus Rhadinopsylla (Rh. bivirgis and Rh. celestis) in January and February of 1950, 2% were with eggs. These fleas lay eggs in wintering nests in the cold time of the year. In the spring, from the eggs are hatched

CARD: 2/4

SHIRANOVICH, P.I.; ZHELDAKOVA, K.A. (Rostov-na-Donu)

Effect of burrow spraying on the micropopulations of fleas in suslik nests; an author's abstract. Med. paraz. i paraz. bol. 33 no.5:617-618 S-O '64. (MIRA 18:4)

ZHELDAKOVA, O. N.

ZHELDAKOVA, O. N.--"Hybrid (Schwiz Cattle) in the Submontane Part of Karbardia, and Methods for Improvement." *(Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Min of Higher Education, North Ossetian Agricultural Inst, Ordzhonikidze, 1955

SO: Knizhnaya Letopis' No. 25, 18 Jun 55

* For Degree of Candidate in Agricultural Sciences

DALMATSKAYA, Ye.I. Prinimali uchastiye: GONCHAROVA, L.G., mladshiy nauchnyy sotrudnik; ZHELEBOVA, V.K.; BOGDANOVA, N.V., laborant

Kinetics and statistics of the carbonization of sodium silicate solutions. [Trudy] NIOKHIM 15:83-96 '63.
(MIRA 18:2)

KROL', N.G.; ZHELEBOVA, Z.A.

Physiological indexes of the functional state of the motor appratus in hyperkinesis. Report no.2:Muscle tomus in athetosis. Biul.eksp.biol. i med.39 no.6:36-39 Je '55.(MLRA 8:10)

1. Iz laboratorii klinicheskoy fiziologii Sverdlovskogo nauchno-issledovatel'skogo instituta vosstanovitel'noy khirurgii, travmatologii i ortopedii. (dir.-chlen-korrespondent AMN SSSR prof. F.R. Bogdanov).

(ATHETOSIS, physiology,
musc.tomus)
(MUSCLES, in various diseases,
athetosis, tomus variations)

ZHELEKHOVSKIY V. A.

97-57-9-8/17

AUTHORS: Gubar', Yu. D. and Zhelekhovskiy, V. A. (Engineers).

TITLE: Electrical Curing of Coarsely/Porous Concrete. (Elektroprogrev krupnoporistogo betona).

PERIODICAL: Beton i Zhelezobeton, 1957, Nr.9. pp. 367-368. (USSR).

ABSTRACT: The Russian climate does not allow concreting during winter without pre-heating of all materials. Pre-heating by means of steam involves many difficulties; experience in using no-fine concrete and electrical pre-heating was obtained during the construction of Karagandinsk GRES-2 (power station). Concreting was carried out continuously from December to April. The mean monthly temperature in December was - 11.3°, in January - 15.6°, in February - 16.7°, and in March - 7.9°. The lowest temperature was - 42°. The velocity of north-west winds reached 12 m/sec. Because of concrete porosity, the formation of steam is rather exhaustive during pre-heating, which can result in over-drying. To obviate this, the maximal temperature for pre-heating no-fine concrete is lower than that of dense concrete, and should not exceed 33-35°C. The consumption of electricity per 1 m^3 of no-fine concrete is 20% lower than for dense concrete. The current

Card 1/4

Electrical Curing of Coarsely Porous Concrete. 97-57-9-8/17

used for pre-heating was 66-88 V. Fig.1 shows the temperature variation of no-fine concrete during pre-heating; it shows a continuous rise of 5-7° an hour in temperature during 5-6 hours. Six hours after the commencement of pre-heating, the temperature reached the maximum, and further increase in temperature was prevented by repeatedly switching off the current. After 14-15 hours of pre-heating, the power was finally switched off. The cooling down lasted 9-10 hours; that is, it was slower than warming up. During this cooling time, the concrete hardened sufficiently to withstand low temperatures. The graph in Fig.2 shows the increase in strength of no-fine concrete Mark 50 during pre-heating. The period during which the temperature increases corresponds with the period of initial setting. A sharp increase in the strength of the concrete occurred during the period of the highest temperature (shown on Fig.1 between the limits of the practically horizontal line). In that time the strength of the concrete reached 60% of the final strength. Later, when the temperature falls, the strength increases at a slower rate. To avoid freezing during transportation,

Card 2/4

the concrete mix leaves the mixer at a temperature of not less than 18 - 20°C. If the temperature is lower than -15°C, 2% calcium chloride (by weight of cement) is added. This lowers the freezing point, and increases the electro-conductivity of the mixture. The graph in Fig.3 represents the pre-heating temperature of the concrete mix containing calcium chloride additive. This additive shortens the time of pre-heating and also the time of hardening. The quality of pre-heating of concrete depends largely on the shape and location of the electrodes. At first, steel plates were used fixed to form-work, but these proved unsatisfactory, as the paths of concrete immediately adjacent to the plates become overheated. Rod-type electrodes proved to be better, and were made from the waste of reinforcement steel, 4-6 mm diameter. The distance between electrodes was 25-27 cm. Fig.4 gives an illustration of a wall built from no-fine concrete. In using these electrodes no over-heating of concrete was experienced. Overheating may result if the temperature reaches 40-42°, and this is obviated by switching the current off; the concrete is allowed to cool down to 20-26°, and the current is

Electrical Curing of Coarsely Porous Concrete. 97-57-9-8/17

then switched on again. Fig.5 shows a house built from no-fine concrete which had been electrically pre-heated. It is concluded that no-fine concrete can be used with efficiency in winter conditions. The temperature of the heated concrete should not reach more than 35°C. 60% of the ultimate strength is reached in 23-24 hours. There are 5 Figures.

AVAILABLE: Library of Congress.

1. Concrete-Curing methods 2. Concreting-Weather factors
3. Concrete-Heating

Card 4/4

ZHELENINA408N8 600

1. SHEYMAN, A. B., GLAVOSHKIN, Kh. S., BURISTROVA, V. F., ZHELENINA, O. N.

2. USSR (600)

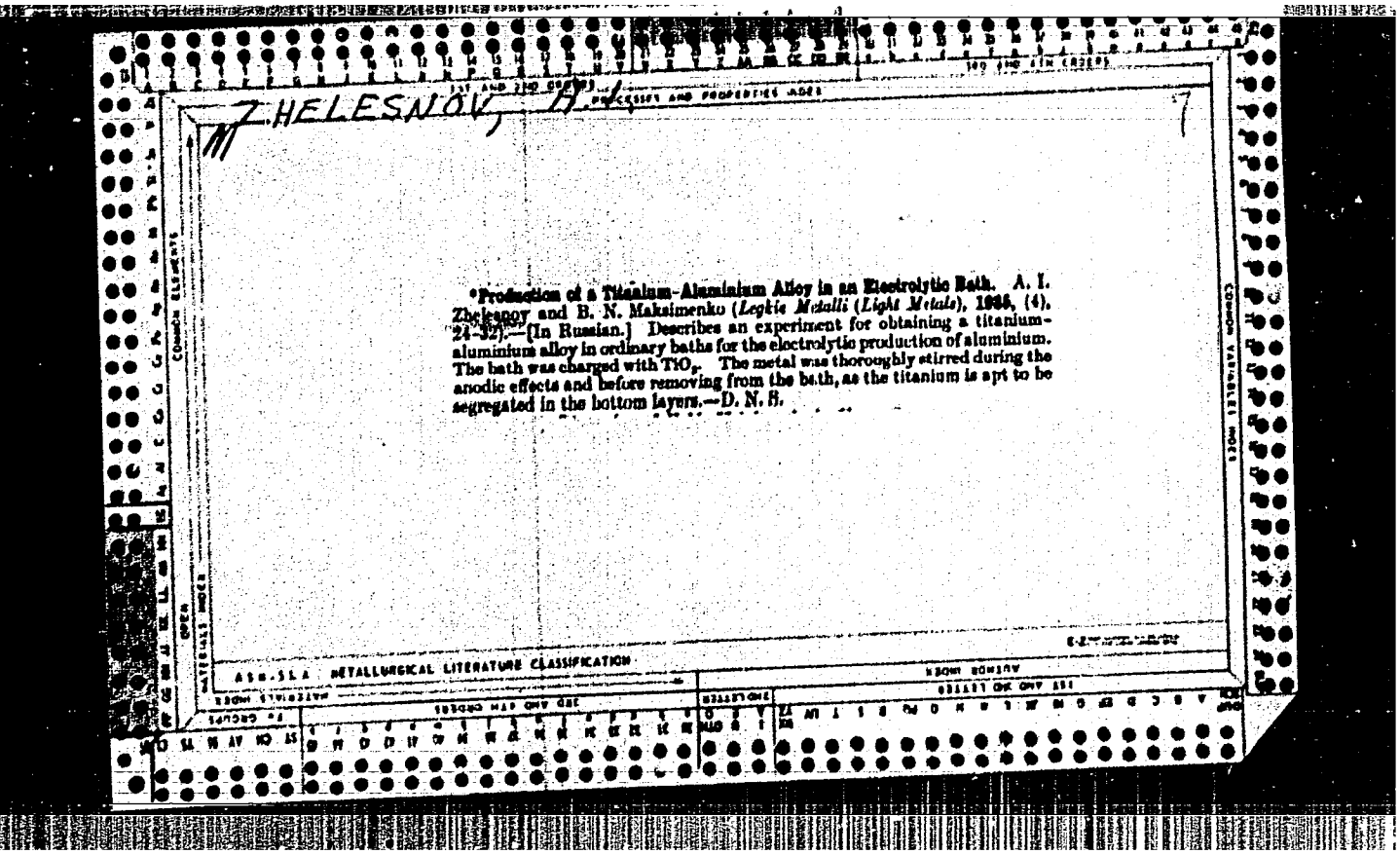
"Temperature Factor in Oil Extraction" Iz. Ak. Nauk SSSR, Otdel, Teckh, Nauk, No. 7-8, 1941. Institute of Mineral Fuels Academy of Sciences USSR, submitted 4 Jan 1941.

9. [redacted] Report U-1530, 25 Oct 1951.

ZHELENKOV, G. N.

)Protection of workers in the textile industry) Moskva, 1933. 61 p.
(54-48351)

TS1449.Z67

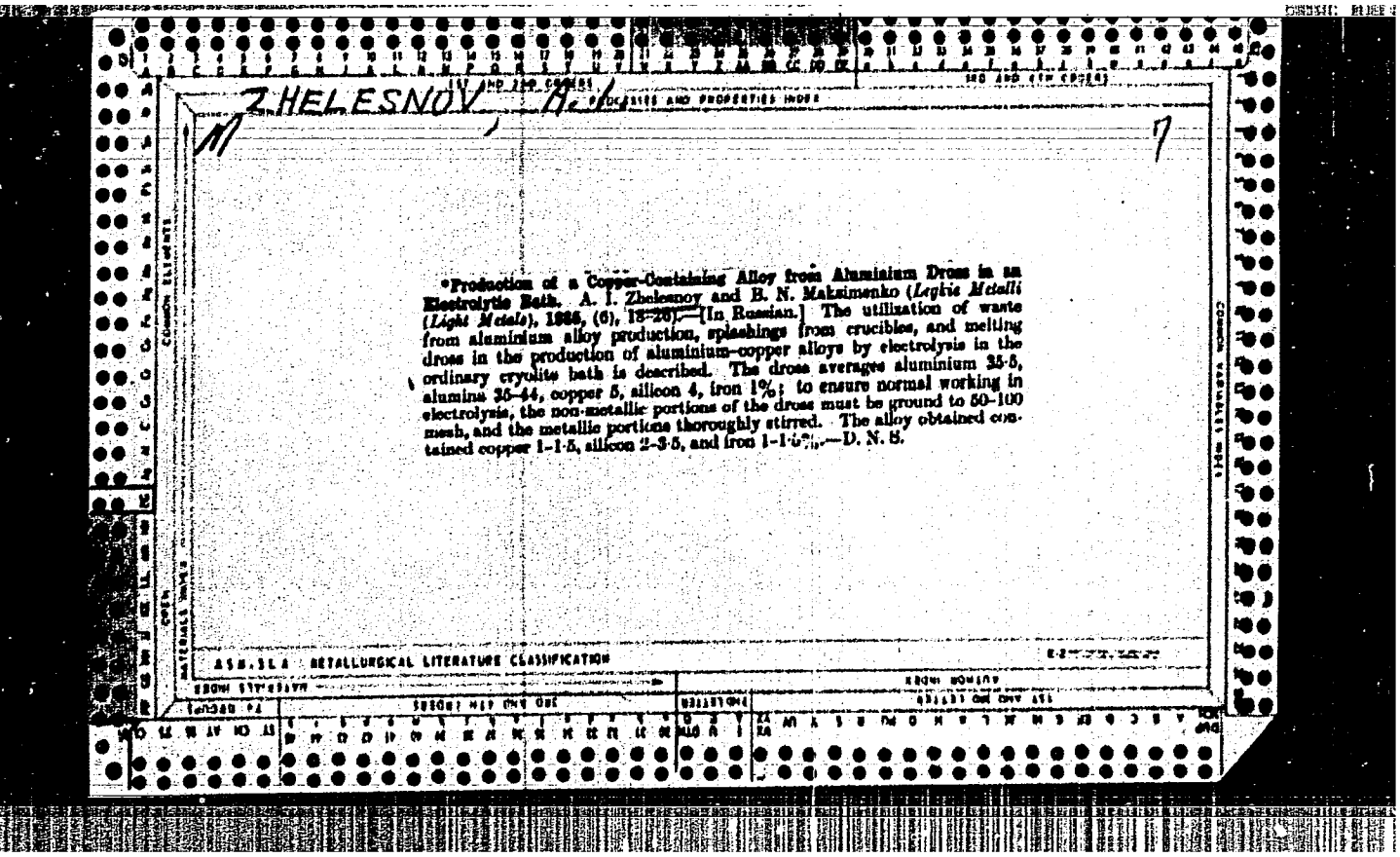


ZHELESNOV, B.

7

*Production of a Titanium-Aluminium Alloy in an Electrolytic Bath. A. I. Zhelesnov and B. N. Maksimenko (*Legkie Metalli* (*Light Metals*), 1935, (4), 24-27).—[In Russian.] Describes an experiment for obtaining a titanium-aluminium alloy in ordinary baths for the electrolytic production of aluminium. The bath was charged with TiO_2. The metal was thoroughly stirred during the anodic effects and before removing from the bath, as the titanium is apt to be segregated in the bottom layers.—D. N. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



ZHELESNOV, A. I.

M

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•Production of a Copper-Containing Alloy from Aluminium Dross in an Electrolytic Bath. A. I. Zhelesnov and B. N. Maksimenko (*Legkie Metalli* (*Light Metals*), 1966, (6), 18–20).—[In Russian.] The utilization of waste from aluminium alloy production, splashings from crucibles, and melting dross in the production of aluminium–copper alloys by electrolysis in the ordinary cryolite bath is described. The dross averages aluminium 35-5, alumina 36–44, copper 5, silicon 4, iron 1%; to ensure normal working in electrolysis, the non-metallic portions of the dross must be ground to 50–100 mesh, and the metallic portions thoroughly stirred. The alloy obtained contained copper 1–1·5, silicon 2–3·5, and iron 1–1·5%.—D. N. S.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GROMOV, K.Ya.; ZHELEV, Zh.; KUN SYAN-TSZIN' [K'ung Hsiang-chin]; MUZIOL', G.; KHAN' SHU-ZHUN' [Han Shu-Jun]

Positron decay of Eu^{147}. Izv. AN SSSR. Ser. fiz. 29 no.12: 2239-2242 D '65. (MIRA 19:1)

ZHELEV, Zhelyu Tanev; PETKOV, Ivan Zhelyazkov; BULKINA, N.I., red.

[Russian-Bulgarian dictionary on nuclear physics and technology] Russko-bolgarskii slovar' po iadernoi fizike i tekhnike. Moskva, Sovetskaia Entsiklopediia, 1965. 423 p. (MIRA 18:10)

ZHELEZNYY, Bor.

Personnel for large-scale chemistry. Prof.-tekh. obr. 21 no.2:14 F '64. (MIRA 17:9)

KALEV, Liubomir, dots. d-r inzh.; ZHELEV, Aleksandr, inzh.; VELKOV, Kamen, inzh.

Properties of pressure gas welded rails, and effect of additional thermal treatment. Tekhnika Bulg 13 no.5:12-16 '64

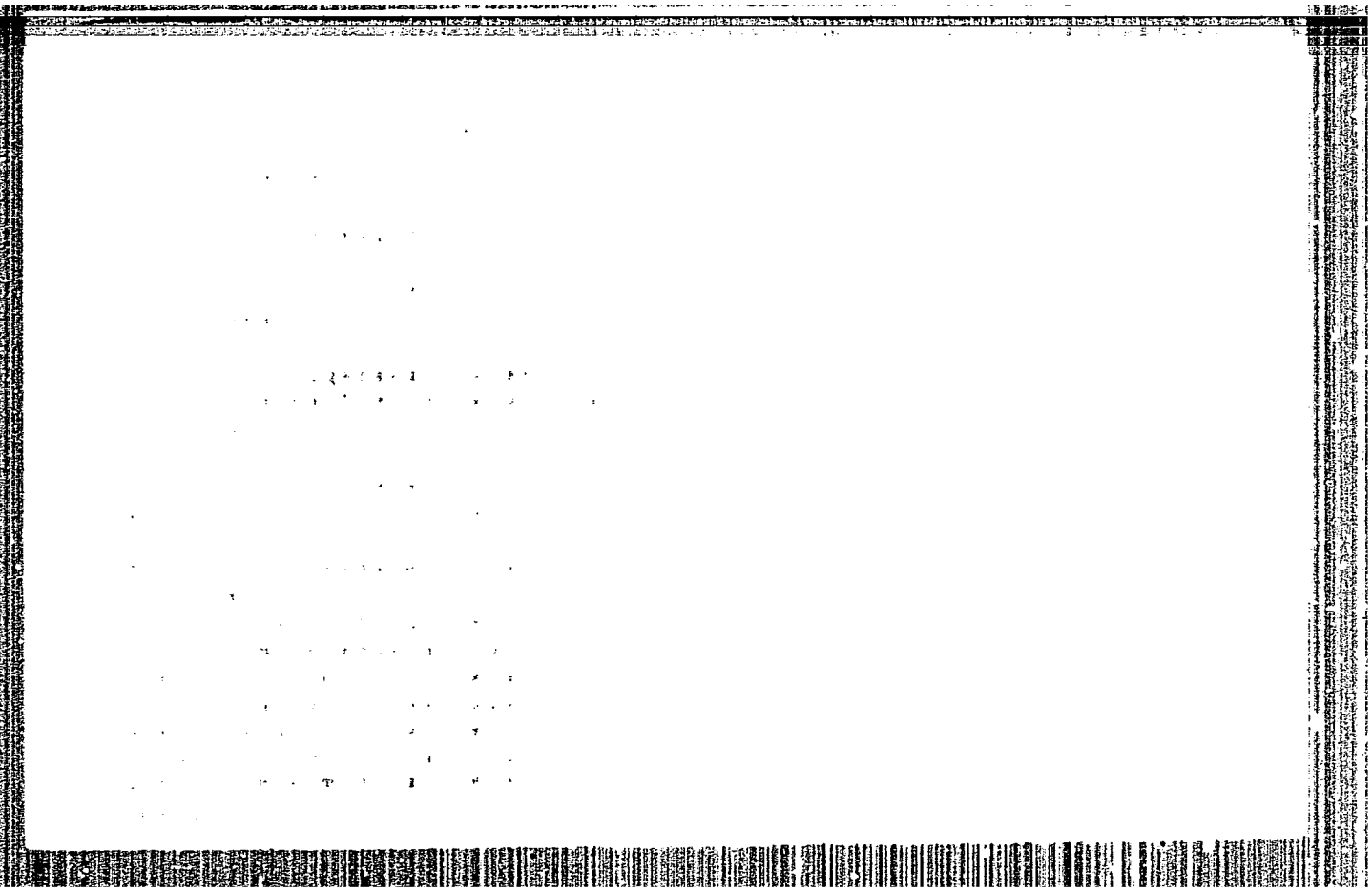
KALEV, Liubomor, dots. d-r inzh.; ZHELEV, Aleksandur, inzh.; KALKANDZHIEV, Vasil, inzh.

Thermite welding of aluminum and steel cable wires. Tekhnika Bulg 12 no. 9: 7-10, 19 '63.

ZHELEV, B.

General thermodynamical motion-equation of continua. Doklady BAN 17 no.3:235-238 '64.

1. Submitted by Academician A.Datzev [Datsev, A.].



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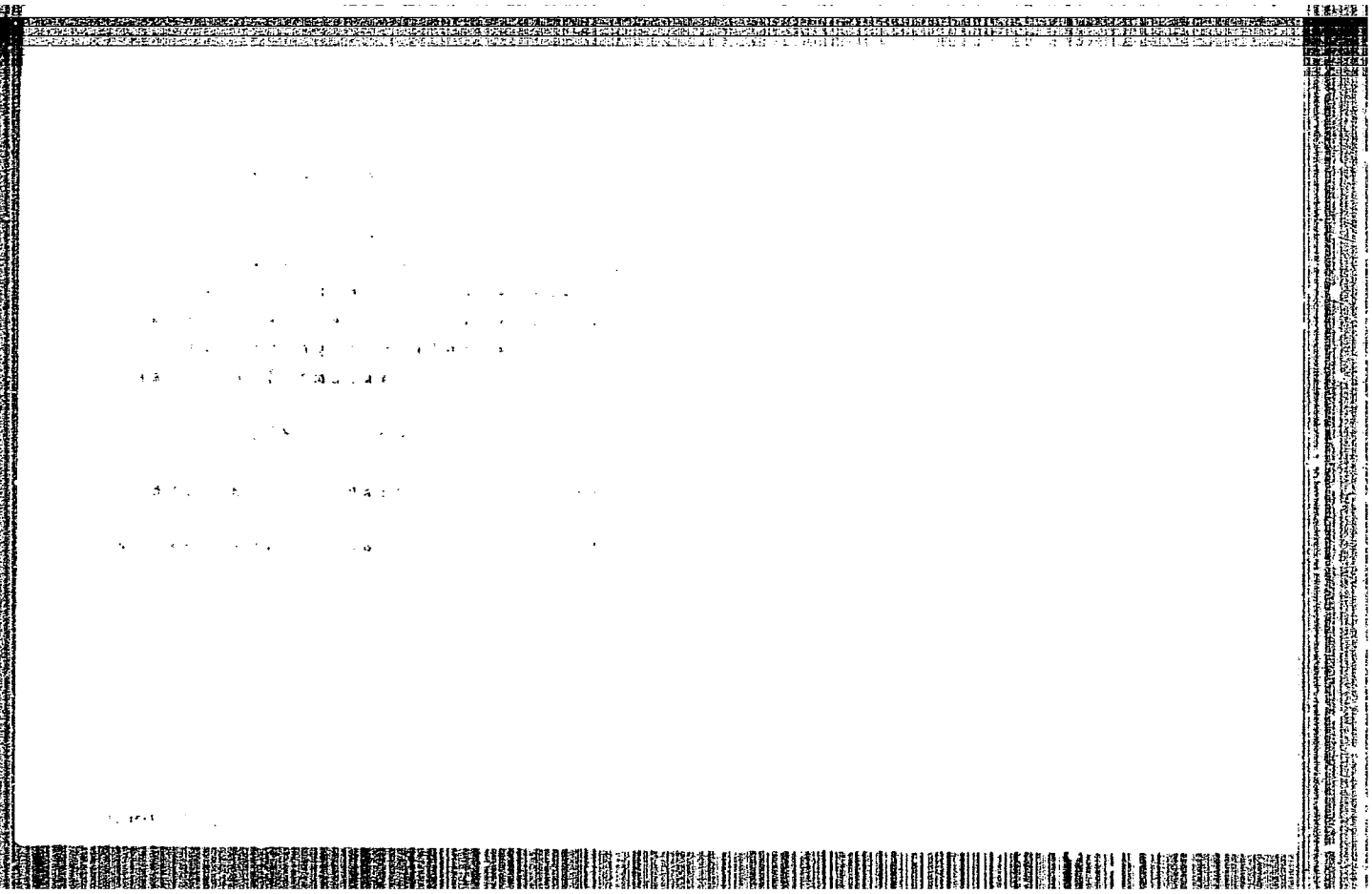

FAI, Diula [Fay, Gyula]; ZHELEV, Boris, inzh.

Bases of the theory of grinding. Elektroenergiia 13 no.8:6-11 Ag '62.

1. Toplotekhnicheski izsledovatelski institut, Budapeshta.

BOGATEV, K., dots. inzh.; ZHIVKOV, D., inzh.; ZHELEV, Iv., inzh.

Computing the dynamic stabitlity of a complex electric system with the aid of static electric model. Elektroenergiia 13 no.1: 3-8 Ja '62.

ZHELEV, Ivan, inzh.

Working characteristics of an asynchronous motor in abnormal tension according to catalogue data or its tables. Elektroenergiia 14 no.5/6:3-7 My-Je '63.

1. Energoprodukt.

ZHELEV, Ivan, inzh.

Generators in small hydroelectric power plants. Elektroenergiia 14 no.9: 16-22 S'63.

BULGARIA

[illegible] ZHELEV, Vice-Rector of Veterinary Medical College (Zamestnik rektor VMI [Visshi Veterinarni Meditsinski Institut.]

"Some Comments about Diagnostic Slaughterhouse Departments in Bulgaria."

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Abstract: Discussion of the importance of these "ecarissage" stations not necessarily part of slaughterhouses but concerned with diagnosis of carcasses for utilization of all animal products, also processing. Comments about courses of study for directors and veterinarians on staff.

1/3

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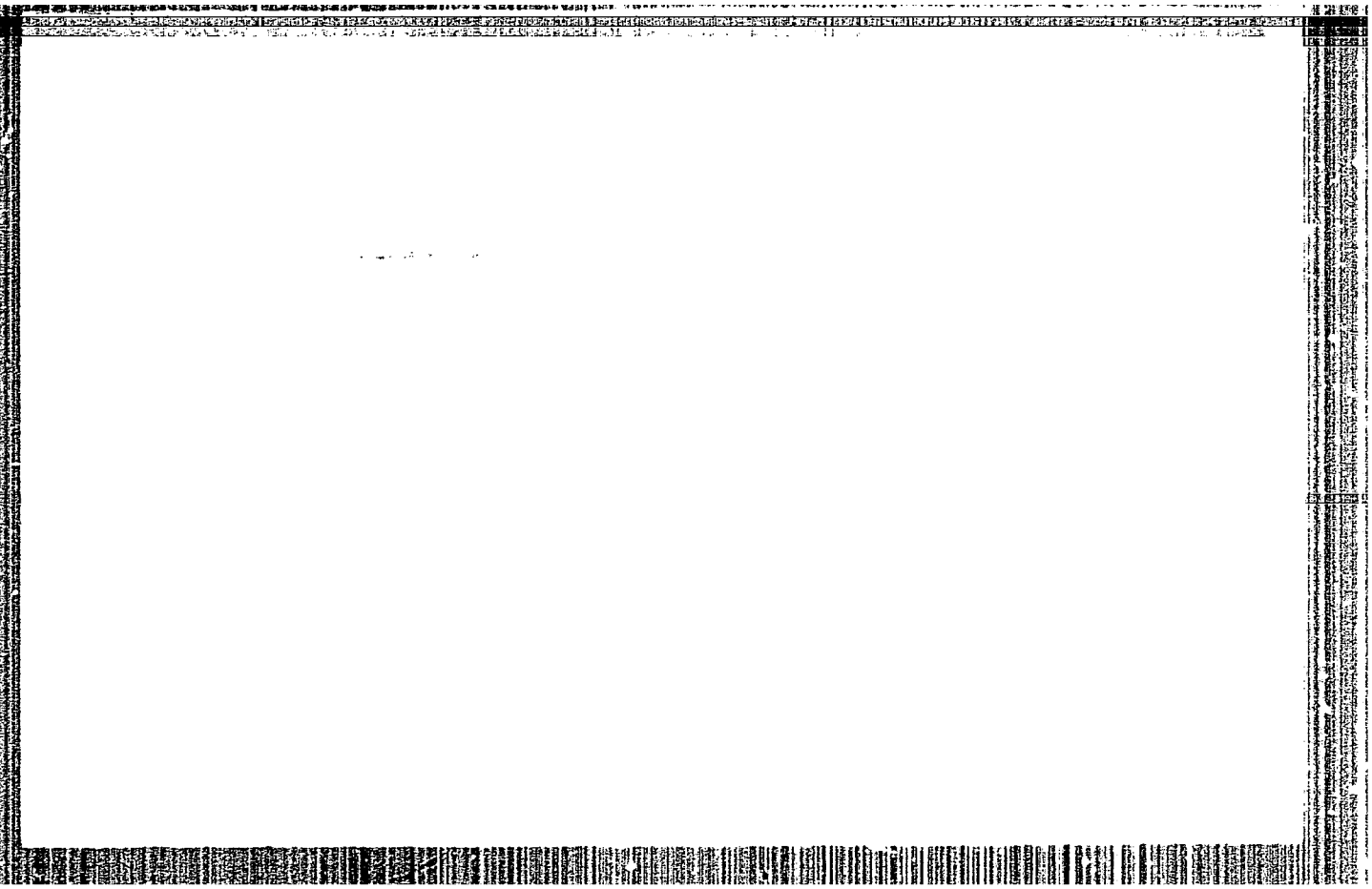
1. Institute of Physics of the Bulgarian Academy of Sciences.
Submitted July 3, 1964.



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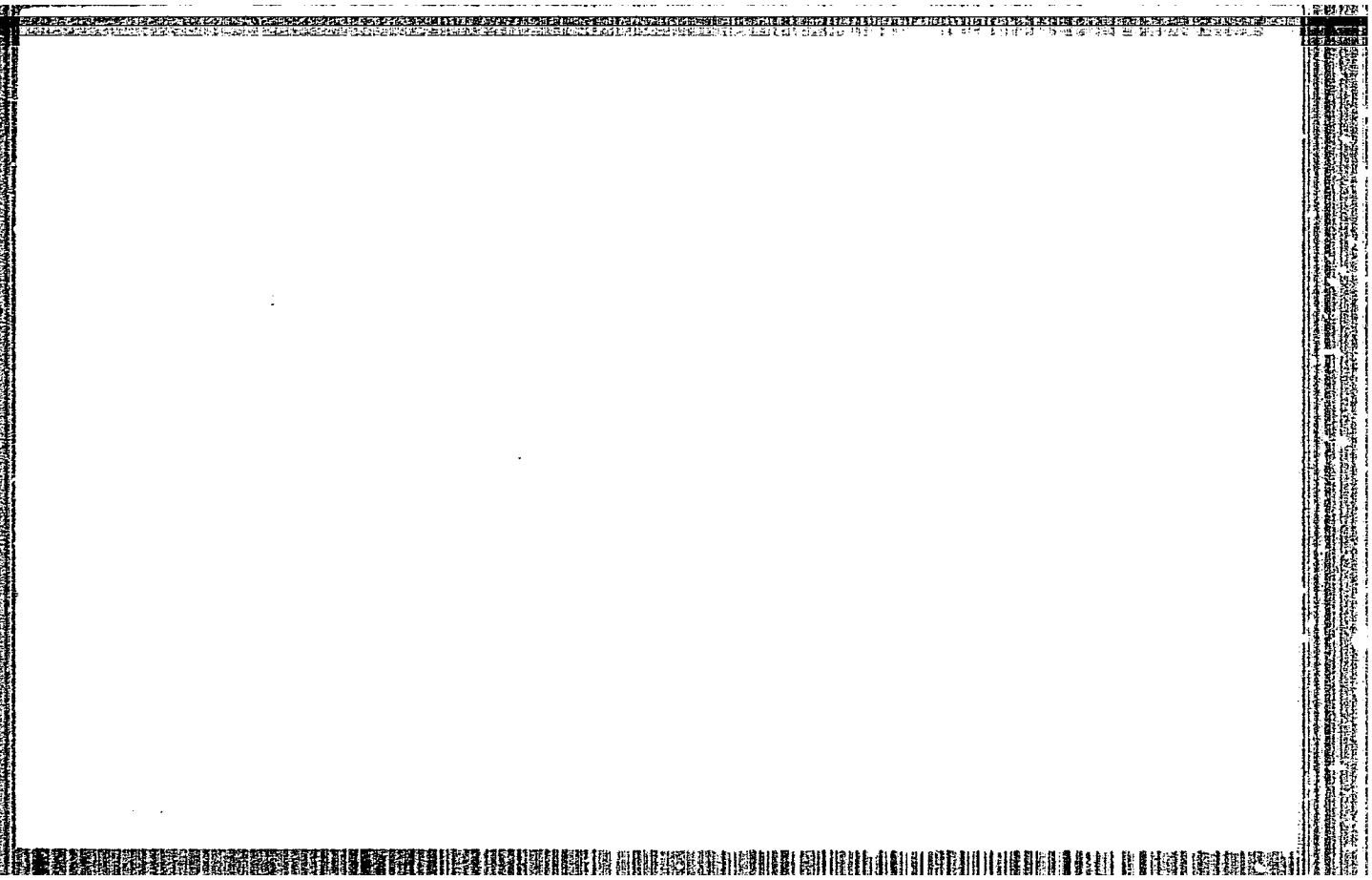

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S/048/62/026/001/011/018
B125/B102

AUTHORS: Wang Fu-chün, Visi I., Gromov, K., Dzhelepov, B., Zhelev, Zh., Kudryavtseeva, A., and Yazvitskiy, Yu.

TITLE: Eu^{149} decay scheme

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 1, 1962, 114 - 119

TEXT: The authors continued to study the spectrum of Eu^{149} conversion electrons ($T_{1/2}$ = 90 days) by means of a β-spectrometer with triple focusing of the beam (B. S. Dzhelepov et al., Preprint OIYaI, P-587. Dubna, 1960). The europium preparation was separated from a target irradiated by 660-Mev protons on the synchrocyclotron of the OIYaI. Three months after the irradiation the lines Eu^{147} ($T_{1/2}$ = 25 days), Eu^{148} (58 days), Eu^{149} (~90 days), Gd^{146} (45 days), Gd^{151} (120 days), and Gd^{153} (240 days) were observed. The specimens contained a small amount of gadolinium impurities. Besides an intense X-ray line the Eu^{149} spectrum

Card 1/3

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Eu^{149} decay scheme

shows the groups with 256 - 279, 330 - 352, and 508 - 530 kev with a half life of (90 ± 20) days. The strong conversion line with ~20 kev has a half life of ~100 days. It is mainly due to Eu^{149} and to a lesser degree to gadolinium impurities. A measurement made with a single counter after purifying the europium preparation from gadolinium showed that the relative intensity of the above lines with 20.2 kev, and the relative intensities of the additional 14.3-kev and K279 lines of Eu^{149} were the same as before the purification. This proves that the 14.3- and 20.2-kev lines (L- and M-lines of the 22-kev transition) belong to Eu^{149}. The parameters of the Eu^{149} conversion electrons are given in the Table.

Fig. 2 shows the Eu^{149} decay scheme suggested by the presence of three 22-kev transitions and that of a γ-transition with 22 kev. It was verified by studying the γ-spectrum and some spectra of the γ-coincidences on Eu^{149} decay by means of a scintillation γ-spectrometer. This instrument is based on the fast-slow recording of the coincidences with summation. The coincidence circuit БДС-1 (BDS-1) operates at close

Card 2/4

Eu^{149} decay scheme

quantum energies in the cascade to be studied when the time resolution is $2 \cdot 10^{-7}$ sec and with a considerable difference of the quantum energies when the time resolution is $6 \cdot 10^{-7}$ sec. The 180- and 350-kev γ-rays observed with a time resolution of $2 \cdot 10^{-7}$ sec in the γγ-coincidences spectrum and the lacking of coincidences of 256- and 279-kev γ-rays confirm the decay scheme shown in Fig. 2. No cascade was found to start from 352 kev. In some experiments with reduced time resolution of $6 \cdot 10^{-7}$ sec the 509 - 530, 330 - 352, 250 - 279 and 178-kev γ-rays coincide with X-rays. Besides, a coincidence of 22-kev γ-rays with X-rays was observed. Owing to the observed coincidences with the X-rays the lifetime of the excited Sm^{149} levels shown in Fig. 2 is less than 10^{-6} sec. There are 8 figures, 1 table, and 3 Soviet references.

Fig. 2. Eu^{149} decay scheme.

Table. Data on Eu^{149}, conversion lines.

Legend: (1) Conversion line observed; (2) relative intensity of conversion line; (3) results obtained by the authors.