

ZORIN, Vladimir Samsonovich; WEDROVA, T.V., red.; ROZHANOVA, Z.A.,
tekhn.red.

[Learn how to work] Uchis' rabotat'. Moskva, Gos.izd-vo
med.lit-ry Medgiz, 1960. 38 p. (MIRA 14:4)
(Home accidents--Prevention)

MESHCHANKIN, Aleksandr Aleksandrovich; ZORIN, Vladimir Samonovich;
KUZNETSOV, G.A., red.; ZAYTSEVA, L.A., techn. red.

[New developments in the service industries] Novoe v bytovom
obslyuzhivani naselenia. Moskva, Vses.koop.izd-vo, 1960.
101 p. (ICRA 14:4)

(Service industries)

ZORIN, Vladimir Semsonovich; YAKTSEV, N., red.; YAKOVLEVA, Ye.,
tekhn.red.

[Traffic safety manual for the automobile driver] Shoferu-
liubiteliu o merakh bezopasnosti. Moskva, Mosk. rabochii,
1960. 117 p. (MIRA 14:2)
(Traffic safety) (Automobile drivers)

ZORIN, Vladimir Samsonovich; FRAKHTMAN, Ya.N., red.; KHEL'CHIKOVA, Yu.S.,
tekh.red.

[Remember: gas is dangerous!] Pomite: gas nebezopasen! Moskva,
Medgis, 1958. 7 p. (MIRA 13:5)
(Gas--Safety measures)

ZORIN, V.S.

Danger -- electricity! Zdorov'e 4 no.5:12 My '58. (MIRA 11:4)
(ELECTRIC APPARATUS AND APPLIANCES--SAFETY MEASURES)

ZORIN, V.S. (Moskva)

Know how to handle electricity; material for talks. Fol'd. 1 akush.
23 no.4:50-54 Ap '58. (MIRA 11:4)
(ELECTRIC APPARATUS AND APPLIANCES--SAFETY MEASURES)

"APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420017-4

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"APPROVED FOR RELEASE: 03/15/2001

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APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420017-4"

ZORIN, V.V.; KOLESNICHENKO, B.V.

Voltage regulator for low-voltage networks. Energ. i elektrotekh. prom. no.2:11-15 Ap-Je '62. (MIRA 15:6)

1. Kiyovskiy politekhnicheskii institut.
(Electric power distribution)
(Voltage regulators)

ZORIN, V.V.

Voltage control on plant substation bus bars, feeding the welding current. Avtom. svar. 15 no.2:32-38 F '62. (MIRA 15:1)

1. Ordena Lenina Kiyevskiy politekhnicheskij institut.
(Electric welding--Equipment and supplies)

ZOLIN, V.V., inzh.

Study of voltage conditions in the electrical networks of welding
machines. Energ. i elektrotekh. prom. no.2:24-27 Ap-Je '64.

(MIRA 17:10)

ZORIN, V.V.

Compensation of the reactive power of contact machines by
consecutive condensers. Avtom.svar. 13 no.6:28-36
Je '60. (MIRA 13:7)

1. Kiyevskiy ordena Lenina politekhnicheskij institut.
(Electric welding--Equipment and supplies)
(Electric capacitors)

89429

S/125/60/000/006/008/009/XX
A161/A030

1.5400

AUTHOR: Zorin, V.V.

TITLE: Compensating the Reluctance of Resistance Welders by Series Capacitors

PERIODICAL: Avtomaticheskaya svarka, 1960, No. 6, pp. 28-36

TEXT: Compensation of the reluctance power of resistance welding machines by static capacitors connected in series with the welding transformer is discussed. The experimental part of the work had been carried out at Institut elektrosvariki im. Ye.O. Patona AN USSR (Electric Welding Institute imeni Ye.O. Paton of the Academy of Sciences of the UkrSSR) in view of insufficient data on some compensation aspects available in Soviet and foreign literature (Refs. 5, 7, 8). The effect of parallel and series capacitors is compared, and the effect of the ignition angle of ignitrons on series compensation is discussed. It is pointed out that ignition angle change from 0 to 90° results in a $\cos \varphi$ drop of 70-75%, and it is advisable to limit the smooth

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A161/A030

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Compensating the Reluctance of Resistance Welders by Series Capacitors

power regulation range by 20-25^o. The short-time power of MTT (MTP) and MMTT (MShP) welders may be raised by using series capacitors, and these welders may be then used for welding metal of greater thickness, or for welding light metals. The short-time power may be raised by raising the voltage per one turn of the primary transformer winding (Ref. 5), i.e., by reducing the number of turns of primary winding by 20%, or by raising the voltage on the welder terminals by 16-18% by means of a booster transformer. The article includes a circuit diagram showing the capacitors connection principle (Fig. 6) and calculation formulae for the capacitors parameters. Automatic discharge of capacitors is provided for in the circuit; for safety purposes when the welder is disconnected from the network. It is advised to connect the ignitron discharger control circuits directly to the network. The example calculation is made for a MTP-300 welder (300 kva). It is stated in conclusions that: 1. Compensation by series capacitors reduces 1.5 - 2.5 times current consumption from network, improves voltage regulation, eliminates blinking in lighting network and relieves the supply lines; series

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A161/A030

Compensating the Reluctance of Resistance Welders by Series Capacitors

capacitors required for full compensation have a lower capacity than parallel capacitors. 2. Smooth control by changing the ignition angle drastically reduces $\cos \varphi$ of the welder, and it is advisable to regulate power mainly by switching over the welding transformer stages; it is better to limit smooth regulation by ignition angle change by 20-25°. 3. Capacitors connected in series with the primary winding of the welding transformer reduce the resistance of the welding machine and hence make the quality of welded joints more stable. Using series capacitors thicker metal may be welded than stipulated in the machine data certificate. There are 6 figures and 7 references of which 5 are Soviet and 2 English. X

ASSOCIATION: Kiyevskiy ordena Lenina politekhnicheskii institut (Kiyev "Lenin Order" Polytechnical Institute)

SUBMITTED: January 12, 1960

Card 3/4

L 46707-66 ENT(1)/ENT(m)/ENF(w)/T/ENP(t)/ETI IJF(c) JD/GS/GD

ACC NR: AT6020706

(N)

SOURCE CODE: UR/0000/65/000/000/0084/0090

AUTHOR: Zharikov, G. P.; Zorin, V. V.; Litvishko, Z. V.ORG: Institute of Cybernetics, AN UkrSSR (Institut kibernetiki AN UkrSSR)

TITLE: Effect of technological parameters on the magnetic properties of permalloy films obtained by condensation of the vapor of an alloy in vacuum

SOURCE: AN UkrSSR. Fizika metallicheskih plenok (Physics of metal films). Kiev, Naukova dumka, 1965, 84-90

TOPIC TAGS: magnetic thin film, permalloy, magnetic property, crystallization, phase transition, temperature dependence, magnetic domain boundary, magnetic coercive force, magnetic anisotropy

ABSTRACT: The purpose of the investigation was to determine the optimal condensation conditions under which the uncontrolled substrate heating and heat release of the vapor-crystal phase transition are reduced to a minimum. The tests were made with a specially developed evaporator and the substrate temperature was measured with a Cu-Ni thermocouple in the form of a film deposited directly on the substrate. Measurements were made of the substrate heat rise and phase transition heat release against the time, of the coercive force and the displacement of the domain boundaries against the film thickness, and of the relative change in the coercive force as a function of the uniaxial anisotropy of the films. The test consisted of checking the influence of different condensation parameters on the magnetic properties of the

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ACC NR: AT6020706

films. The results show that the substrate temperature is noticeably increased by the thermal radiation of the evaporator and by the heat released in the phase transition. This temperature rise can be reduced by increasing the condensation rate or by using an evaporator with smaller heating area. Comparison of data obtained for different condensation rates, residual gas pressures, and substrate temperatures shows that the magnetic properties are most influenced by the substrate temperature. With increasing temperature, the coercive force of films of thickness 300 - 900 Å increases, and since this is the thickness range in which the anisotropy energy constitutes a major fraction of the domain-boundary energy, it is concluded that at least one of the causes of this increase is the inhomogeneity of the uniaxial-anisotropy field. Orig. art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 16Dec64/ OTH REF: 003

Card 2/2 iv

ZHARIKOV, G.P. [Zharikov, H.P.]; ZDRIN, V.V.; ANPILOGOVA, A.Ia. [Anpilohova, A.IA.]

Magnetic properties of superthin permalloy films. Ukr. fiz. zhur.
9 no.8:911-912 Ag '64. (MIRA 17:11)

1. Institut kibernetiki AN UkrSSR, Kiyev.

ORNATSKIY, P.P.; ZOZULYA, V.I.; ZORIN, V.V.

Integrating voltmeters and their use in municipal electric
power distribution networks. Energ. i elektrotekh. prom.
no.3:10-14 J1-S '62. (MIRA 18:11)

1. Kiyevskiy politekhnicheskii institut.

ZORIN, V.V., kand. tekhn. nauk; KOMLACH, V.I., inzh.

Technical and economic calculation of new municipal 6-10-20
kv. power distribution networks using the "Ural-2" digital
computer. Energ. i elektrotekh. prom. no.3:11-12 J1-S '65.
(MIRA 18:9)

ZORIN, Vasilii Vasil'yevich; SELIVERSTOVA, A.I., red.

[Mathematical textbook for persons entering schools
of higher education] Posobie po matematike dlia postu-
paiushchikh v vuzy. Moskva, Vysshaia shkola, 1965.
177 p. (MIRA 18:9)

S/270/63/000/001/013/024
A001/A101

AUTHORS: Yesipenko, A. Ye., ~~Zorin, V. Ye.~~

TITLE: An investigation of the TB-1 (TB-1) optical theodolite

PERIODICAL: Referativnyy zhurnal, Geodeziya, no. 1, 1963, 33, abstract 1.52.217
("Sb. nauchn. tr. Krivorozhsk. gornorudn. in-t", 1962, no. 12,
221 - 227)

TEXT: The authors present the principal technical characteristics of the TB-1 theodolite and report on the results of investigating the value of division of its cylindrical level on the horizontal circle, micrometer scale, precision of sighting and superposition of images of the limb lines, as well as accuracy of measuring horizontal and vertical angles. The following values of rms error have been obtained: superposition of limb lines $\pm 0''53$; sighting $\pm 1''2$; measuring a horizontal direction by one observation $\pm 2''6$, measuring a vertical angle by one observation $\pm 4''8$. In order to test the possibility of using the TB-1 theodolite for the three-stand observational method, three polygons were run with the same number of vertices but different lengths of sides (3, 10 and

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A001/A101

An investigation of the...

20 m). In the first polygon the misclosure turned out to be 20"7, in the second - 4"7 and in the third one - 4"6. The conclusion has been drawn that the TB-1 theodolite can be used in running polygonometric traverses of all classes, forming triangulation networks of the 3rd and 4th classes and surveys in underground conditions.

V. Sinyagina

[Abstracter's note: Complete translation]

Card 2/2

S/194/61/000/012/072/097
D273/D301

AUTHORS: Grishin, A. P. and Zorin, V. Yu.
TITLE: Ultrasonic apparatus for extracting resinous substances
PERIODICAL: Referativnyy zhurnal, Avtomatika i radicelektronika, no. 12, 1961, 17, abstract 12E93. ("Tr. Groznensk. neft. in-t", 1961, 3, no. 25, 59-62)

TEXT: It is shown that the process of extracting resinous substances from mixtures of borehole coal and alkaline bath is 20 times more rapid when using an ultrasonic set-up. An ultrasonic apparatus was used with a power of 600 volts with a magnetostrictive transmitter at a frequency of 14 - 28 Kc/s. Construction of the ultrasonic apparatus of an industrial type is described for obtaining resinous reagents. From the capacitance of the mixture containing brown coal in a fragmented state, alkali and water, the mixture is extracted by a pump БД (VD) type 9-ГР (9-GR) with a filter circuit for suppressing the hydrodynamic vibrator as it is more

Card 1/2

Ultrasonic apparatus for ...

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D273/D301

economical, and is then applied in an operative capacity, where
suppression is continued, circuiting in the course of 20 - 30 mi-
nutes along a circulation line until complete extraction of the re-
sinous substances is obtained. / Abstractor's note: Complete trans-
lation. 7 ✓

Card 2/2

ZORIN, Ya.A., inzh.

Review of "Mechanization and automation of the manufacture of radio parts" by N.V.Kashin. Mekh. i avtom.proizv. 14 no.11:61 H '60.

(ICIRA 13:11)

(Radio--Apparatus and supplies) (Automation)

UZDENIKOV, A.; ALYUSHIN, M.T.; ZAYTSEV, V.; IVANOVA, V.M.; ZORIN, Ye.

Resumes. Apt. delo 11 no.2:83-85 Mr-Ap '62.
(PHARMACY--ABSTRACTS)

(MIRA 15:5)

UZDENIKOV, A.; ZAYTSEV, V.; GUSEVA, L.; ZORIN, Ye.

Abstracts. Apt. delo 11 no.4:72-73 JI-Ag '62.

(MIRA 17:11)

GRINKEVICH, N.I.; IGNAT'YEVA, N.S.; L'VOVA, I.L.; ZORIN, Ye.A.

Examination of some vitamin-containing plants for their
manganese content. Apt. delo. 11 no.5:41-43 5-0 '62.

(MIRA 17:5)

1. Farmatsevticheskiy fakul'tet I Moskovskogo ordena Lenina
meditsinskogo instituta imeni Sechenova.

ZORIN, Ye.B., mladshiy nauchnyy sotrudnik

Identification of platyphylline tartrate in medicinal mixtures.
Sbor. nauch. trud. TSANLI 3:129-132 '62. (MIRA 16:11)

1. Laboratoriya farmatsevticheskogo analiza (rukovoditel' labora-
torii - dotsent, kand.khim.nauk M.I.Tarasenko) Tsertral'nogo apteoh-
nogo nauchno-issledovatel'skogo instituta.

ZAYTSFV, V.A., ZORIN, Ya.S.

Methodology for quantitative analysis of pharmaceutical preparations containing tertiary nitrogen. Report No.2: Turbidimetric titration. Apt. delo 13 no.2:31-35 My-Je '64. (MIRA 1813)

1. Tsentral'nyy apotchnyy nauchno-issledovatel'skiy institut, Moskva.

ZORIN, Ye.B.

Identification of proserine in medicinal mixtures. 'Apt. delo 10
no. 2:54-56 Mr-Ap '61. (MIRA 14:4)

(FROSTIGMINE)

KORENMAN, I.M.; ZORIN, Ye.I.

Radiometric determination of potassium. Zav.lab.21 no.12:1419-1421
'55. (MLRA 9:4)

1.Institut khimii pri Ger'kevskom gosudarstvennom universitete.
(Potassium--Analysis)

"APPROVED FOR RELEASE: 03/15/2001

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APPROVED FOR RELEASE: 03/15/2001

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L 26620-66

A. C. H. 2300000

1. The first part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order and the addresses are given in full. The list is as follows:

Mr. J. Edgar Hoover, Director, Federal Bureau of Investigation, Washington, D. C.
Mr. W. A. Rorer, Chairman, Senate Select Committee on Assassinations, Washington, D. C.
Mr. J. Lee Rankin, Chairman, House Select Committee on Assassinations, Washington, D. C.
Mr. J. Lee Rankin, Chairman, House Select Committee on Assassinations, Washington, D. C.
Mr. J. Lee Rankin, Chairman, House Select Committee on Assassinations, Washington, D. C.

L 15977-66 ENT(1)/ENT(1)/T/REF(L) ICP(c) JD/AT
ACC NR: AF5021276 SOURCE CODE: UR/0020/65/163/005/1128/1130

AUTHOR: Pavlov, P. V.; Zorin, Ye. I.; Tatal'baum, D. I.; Popov, Yu. S.

ORG: Gorki Physicotechnical Research Institute of the Gorki State University in
Gorkovskiy gosudarstvenny universitet)

TITLE: Donor properties of nitrogen injected into silica and germanium by ion bombardment

SOURCE: AN SSSR. Doklady, v. 163, no. 5, 1965, 1128-1130

TOPIC TAGS: ionizing radiation, nitrogen, arpa, ion current, ion density, silica, crystal structure

ABSTRACT: The silica plate samples, having a resistivity of 1 ohm.cm., were cit

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L 15977-66

ACC NR: AP5021276

perpendicular to the crystallographic direction $[111]$, polished mechanically and chemically to a microscopically smooth surface, and subjected to bombardment by atomic nitrogen ions in an accelerator with a magnetic analyzer at an energy

of 100 eV. The ions were incident on the surface at an angle of 45 degrees to the normal. The vacuum chamber was maintained at a pressure of 10^{-6} torr. The surface temperature was maintained at 300 K. The ions were incident on the surface for a period of 10 minutes. The surface was then analyzed by X-ray photoelectron spectroscopy (XPS) using a Mg K-alpha source. The XPS spectra were recorded at a resolution of 0.5 eV. The binding energy scale was calibrated using the C 1s peak at 285 eV. The XPS spectra were recorded at a resolution of 0.5 eV. The binding energy scale was calibrated using the C 1s peak at 285 eV. The XPS spectra were recorded at a resolution of 0.5 eV. The binding energy scale was calibrated using the C 1s peak at 285 eV.

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AGC NR: AP5021276

ccoulomb/sq.cm. after prolonged annealing at 450C. The annealing at lower temperatures was evidently insufficient for removal of radiation defects. The thermocurrent occurred at temperatures of 100C. (See also figure 1 figure.)

SUB CODE: 20 SUBM DATE: 06Jun68/ ORIG REF: 001/ OTH REF: 006

Card 3/3

with source - No

17
SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 750-752

et de, en fonction, baron.

"APPROVED FOR RELEASE: 03/15/2001

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APPROVED FOR RELEASE: 03/15/2001

CIA-RDP86-00513R002065420017-4"

ACC NR: AR001B941

SOURCE CODE: UH/01B1/66/008/006/1791/1795

AUTHOR: Pavlov, P. V.; Zorin, Ye. I.; Tetel'baum, D. I.

ORG: Gor'kiy State University im. N. I. Lobachevskiy (Gor'kovskiy gosudarstvennyy universitet)

TITLE: Inversion layers produced on n-type germanium bombarded with boron and aluminum ions

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1791-1795

TOPIC TAGS: germanium semiconductor, surface property, ion bombardment, boron, aluminum, impurity conductivity

ABSTRACT: To check whether the inversion layer produced on the surface of germanium by ion bombardment depends on the type of ion used, the authors bombarded germanium with 50-kev ions of several elements (B, Al, Ne, Ar, C). The irradiation procedure was described before (FIT v. 6, 3222, 1964). The ion current was $\sim 5 \mu\text{A}/\text{cm}^2$ and the dose ranged from 0.01 to 1000 Coul/cm². The presence of the inversion layer was determined by a procedure described in the earlier paper, and the resistivity of the inversion layer was measured both directly after irradiation and after annealing; in the latter case the dependence on the annealing temperature was also measured. In addition, a study was made of the depth distribution of the acceptors (Al and B) introduced by ion bombardment. The results show clearly that the surface resistance depends in a complicated manner on the type of bombarding ion, the irradiation dose,

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L 41589-66

ACC NR: AF6018541

and the annealing temperature, and that in the case of bombardment with boron and aluminum ions, the latter behave like ordinary acceptors. Consequently, the introduction of active impurities by ion bombardment is applicable not only to silicon but also to germanium. The effect of other elements on the inversion layer of germanium calls for additional study. Zh. Verevkina participated in the work. Orig. art. has: 4 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 03Nov65/ ORIG REF: 004/ OTH REF: 007

Card 2/2

L 01049-67 EWT(d)/EWT(m)/EWP(t)/ETI IJP(e) JD/GG

ACC NR: AP6030968

SOURCE CODE: UR/0181/66/008/009/2679/2687 ⁸¹
_B

AUTHOR: Pavlov, P. V. ; Temel'baum, D. I. ; Zorin, Ye. I. ; Alekseyev, V. I.

ORG: Gorkiy State University im. N. I. Lobachevskiy (Gor'kovskiy gosudarstvennyy universitet)

TITLE: Distribution of atoms and ¹⁹radiation defects introduced in ion bombardment of silicon (Calculation by the Monte-Carlo method)

²¹SOURCE: Fizika tverdogo tela, v. 8, no. 9, 1966, 2679-2687 ¹⁶

TOPIC TAGS: silicon, ion bombardment, ion energy, Monte Carlo method, atom, impurity atom, atom distribution, radiation defect

ABSTRACT: The results are presented of calculation (by the Monte-Carlo method) of the distribution of the impurity atoms introduced during silicon bombardment by boron ions with energies of 20—60 kev and by aluminum, phosphorus and arsenic ions with the energies of 25—150 kev. In addition, the distribution of radiation defects in the bombardment by boron and aluminum ions is computed. The results obtained are analyzed from the viewpoint of dependence on the energy and mass of

Card 1/2

L 01049-67

ACC NR: AP6030968

bombarding ions. Possible results are discussed for silicon alloying by the ion-beam method. Orig. art. has: 4 figures, 4 formulas, and 1 table. [Based on authors' abstract] [NT]

SUB CODE: 20/ SUBM DATE: 03Feb66/ ORIG REF: 004/ OTH REF: 023/

awm

Card 2/2

ACC NR: AP7007169

SOURCE CODE: UR/0070/67/012/001/0155/0157

AUTHOR: Pavlov, P. V.; Tetel'baum, D. I.; Zorin, Ye. I.; Kudryavtseva, R. V.

ORG: Gor'kiy Physicotechnical Research Institute (Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut)

TITLE: The amorphism in polycrystalline germanium films resulting from irradiation with argon ions

SOURCE: Kristallografiya, v. 12, no. 1, 1967, 155-157

TOPIC TAGS: amorphous polymer, semiconducting film, polycrystalline film, germanium semiconductor, thin film semiconductor, irradiation effect, argon, ion

ABSTRACT: An investigation was made of the transition of crystalline germanium into the amorphous state as the result of irradiation. The experiment was performed with thin polycrystalline germanium films. The films were obtained by the vacuum coating of an NaCl backing heated to 400°C. The film thickness varied from 200 to 500 Å, which meant that it was smaller than the mean free path of the ions. Bombardment with 50-keV argon ions was performed in an accelerator with a magnetic analyzer. The density of the ion current was 2 to 4 $\mu\text{amp}/\text{cm}^2$. The irradiation doses were 1, 10, 100, 1000, and 5000 $\mu\text{curie}/\text{cm}^2$. The vacuum in the

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UDC: 548.74

ACC NR:AP7007168

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vicinity of the target was 2×10^{-5} mm Hg. During bombardment, the specimens were heated to 90°C in order to reduce organic vapors. At a dose of $1 \mu\text{curie}/\text{cm}^2$ no changes were observed in the specimens. However, at doses of $10 \mu\text{curie}/\text{cm}^2$ and larger, the electronograms clearly indicated the transformation of the germanium into the amorphous state: the sharp lines disappeared and were replaced by two or three diffusion rings. The location of the intensity maxima did not coincide with the location of the interference rings of the crystalline germanium, except for the first maximum, which was located at the position of the (111) line. This showed that the structure obtained was not microcrystalline, but amorphous. Two basic mechanisms of amorphism are proposed. First, a gradual accumulation of Frenkel defects during irradiation can lead to the displacement of atoms to new positions and, consequently, to the disruption of proper order. The second mechanism consists in the generation of regions of local fusion (thermal peaks) inside the germanium by means of retarded ions. These peaks harden in a short time

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(10^{-11} — 10^{-12} sec). Crystallization cannot occur in such a short time. As a result, a liquid structure or some intermediate state (partial crystallization) appears. The first mechanism is considered more probable. Orig. art. has: 1 table.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 011 [WA-95]
[JA]

Card 2/2

1. The first part of the document discusses the importance of maintaining accurate records of all activities and the need for a systematic approach to data collection and analysis.

2. It is noted that the current procedures are outdated and do not take into account the latest developments in the field. A comprehensive review of the existing protocols is being conducted.

3. The second section outlines the proposed changes to the data management system, including the implementation of a new database and the standardization of reporting formats.

4. It is emphasized that these changes are essential for ensuring the integrity and reliability of the information used in decision-making processes.

5. The document concludes by stating that the proposed modifications will significantly enhance the efficiency and effectiveness of the organization's operations.

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ZORIN, Ye.N.

ASEYEV, D.D., professor; BERLIN, I.I., professor; VOZNESENSKIY, A.N., professor; SOROKIN, I.E., professor; UGRYUMOV, B.P., professor; TOPCHAN, A.B., professor; AGAPKIN, I.N., kandidat meditsinskikh nauk; AGRACHEV, G.I., kandidat meditsinskikh nauk; AL'TSHULSER, N.S., kandidat meditsinskikh nauk; BERNZON, Ya.Ye., kandidat meditsinskikh nauk; ZORIN, Ye.N., kandidat meditsinskikh nauk; KOROVINA, Yu.P., kandidat meditsinskikh nauk; KOSITSKIY, G.I., kandidat meditsinskikh nauk; MANDEL'SHTAM, F.M., kandidat meditsinskikh nauk; MOCHALOVA, T.P., kandidat meditsinskikh nauk; OBLOGINA, Ye.Ya., kandidat meditsinskikh nauk; PATSKHVEROVA, A.G., kandidat meditsinskikh nauk; FOKOTILOV, K.Ye., kandidat meditsinskikh nauk; ROZANOVA, M.D., kandidat meditsinskikh nauk; SAKHAROV, A.N., kandidat meditsinskikh nauk; YASHCHENKO, T.N., kandidat meditsinskikh nauk

"Tuberculosis"; handbook for physicians edited by Z.A.Lebedeva and N.A.Shmelev. Reviewed by D.D.Azeev and others. Probl.tub. 34 no.2: 76-80 Mr-Apr '56.

(MLR 9:8)

(TUBERCULOSIS) (LEBEDEVA, Z.A.) (SHMELEV, N.A.)

ZORIN, YE. N.

USSR/Medicine - Tuberculosis
Silicosis

Aug 49

"Role of Antituberculosis Organizations in the Control of Silicosis and Silicotuberculosis",
M. S. Plavnik, Third Therapeutic Dept, Moscow Oblast Sci Res Inst of Tuberculosis,
1 1/4 pp

"Sov Med" No 8

Silicosis has been classified as: "suspected silicosis," primary stage (compensation process A), secondary stage, and tertiary stage (subcompensation B and decompensation C process), with the proper differential diagnosis for silicosis and tuberculosis. To control these diseases, Min of Pub Health requires preliminary examination of new underground miners and regular examinations, including X-rays, thereafter, with provisions for care and transfer of those affected to surface jobs. These measures must be supplemented by participation of phthisiologists in examinations of workers; isolation, greater attention to transfer, care, etc., of sick; improvement in laboratory methods of dust elimination; organization of antisilicotuberculosis measures and seminars for doctors in medical and sanitation departments by expert phthisiologists; arrangements in institutions to allow doctors to take such courses. Chief, Third Therapeutic Dept: Ye. N. Zorin. Dir, MOHITI: Prof N. N. Grinchar (deceased).

FDD

PA 152T63

ZHUKOV, Pavel Konstantinovich; KAZANIN, Yuriy Ivanovich; KATUFOV, Aryktay Kayupovich; MURSALIMOV, Khakim Ibragimovich; FIGULEVSKIY, Nikolay Arsen'yevich; SHLYGIN, Artem Yevgen'yevich. Prinsipialni uchastiye: BAYKENEV, Sh.A.; BAYNAZAROVA, G.; SERIN, Ye.S.; KRIKUNOVA, N.P.; SHUMKOV, N.N.; BOK, I.I., akademik, otv. red.; NESTEROVA, I.I., red.; ALFEROVA, P.F., tekhn. red.

[Basic features of the geology and metallogeny of the Koksutekeli area of the Dzungarian Ala-Tau]Osnovnye cherty geologii i metallogenii Koksutekeliiskogo raiona Dzhungarskogo Alatau. Alma-Ata, Izd-vo Akad. nauk Kazakhskoi SSR, 1962. 123 p. (MIRA 15:11)

1. Institut geologicheskikh nauk (for Zhukov, Kazanin, Kayupov, Figulovskiy, Shlyginin). 2. Yuzhno-kazakhstanskoye geologicheskoye upravleniye (for Mursalimov). 3. Akademiya nauk Kazakhskoy SSR (for Bok).
(Dzungarian Ala-Tau--Geology, Economic)

ZORIN, Yevgeniy Timofeyevich; TINYAKOV, Yuriy Mikhaylovich;
ROMADIN, A.G., red.; LIFEROVA, A.I., red.; izd-vo; FOMICHEV,
P.M., tekhn. red.

[Assembly, operation and repair of bakery equipment] Montazh,
ekspluatatsiia i remont khlebopekarnogo oborudovaniia, Mo-
skva, Izd-vo Tsentrsoiuzza, 1963. 251 p. (MIRA 16:12)
(Bakeries--Equipment and supplies)

ACC NR: AT6021752

SOURCE CODE: UR/0000/66/000/000/0244/0250

AUTHOR: Morachevskiy, V. L.; Zorin, Ye. V.

ORG: none

TITLE: Power parameters and dynamic behavior of a multiple stage pneumatic drive for automatic systems

SOURCE: AN SSSR. Institut avtomatiki i telemekhaniki. Pnevmoavtomatika (Pneumatic automation). Moscow, Izd-vo Nauka, 1966, 244-250

TOPIC TAGS: pneumatic device, pneumatic control system, gas compressor, air temperature, heat exchanger, expanding gas

ABSTRACT: The efficiency and response of pneumatic drives can be improved through the use of multiple stage devices. The author describes one such system, and compares its efficiency and performance with ordinary single stage drives. The pneumatic drives are frequently incorporated in automatic control system as prime movers. In this application, the piston must be capable of stopping in any position upon receiving an appropriate command. The magnitude and the direction of the displacement are determined by the magnitude and the sign of this command. Compared to ordinary reciprocating internal combustion and steam engines, this operation is quite inefficient. For isothermal expansion, the efficiency of a common single stage pneumatic drive is given by

$$\eta_T = \frac{1 - \frac{1}{\epsilon_c}}{\ln \epsilon_c}$$

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ACC NR: AT6021752

where $e_c = P_c/P_1$ are the absolute pressure of the intake and the compressed air respectively. The closer the actual operation of the drive can approximate the isothermal conditions, the better the efficiency. Fig. 1. shows a diagram of a multiple stage pneumatic drive. The air is fed through a supply line from a compressor. The multiple stage drive consists of a number of single stage piston drives (C_1, C_2, C_n), serially connected through expanders (P_2, P_3, P_n). Each stage operates at a constant pressure difference and is supplied by compressed air, which passed through the preceding stage and expanded to a predetermined pressure in the expander. The air from the compressor enters air distributor (BP_1) of the first stage. Rotating distribution valve (PO_1) admits the air to cylinder (C_1). The passive cylinder volume is connected to expander (P_2) such that the same pressure, as in the expander is maintained in this portion of the cylinder. Pressure reduction valve (PK_2) maintains the air pressure in the expander (P_2) constant. The compressed air from (P_2) feeds through distributor (BP_2) to the next cylinder (C_2), etc. Each consecutive cylinder has a larger diameter and greater piston area to generate identical force at reduced air pressure. All piston rods are connected to the same load and move synchronously. The air distributor drive operates all distributor rotating valves in synchronously, thus providing control over the direction and the magnitude of the output displacement. The efficiency of the multiple stage drive is given by

$$\eta_r = \frac{1 - e_p^{1/a}}{\ln e_p} a,$$

Cont: 2/4

ACC NR: AT6021752

where a is the number of stages and

$$C_p = \frac{P_{s+1}}{P_1}$$

The computations show that a greater efficiency, economy and faster response are possible with the new drive. Performance graphs are included. Orig. art. has: 20 formulas, 5 figures.

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ACC NR: AT6021752

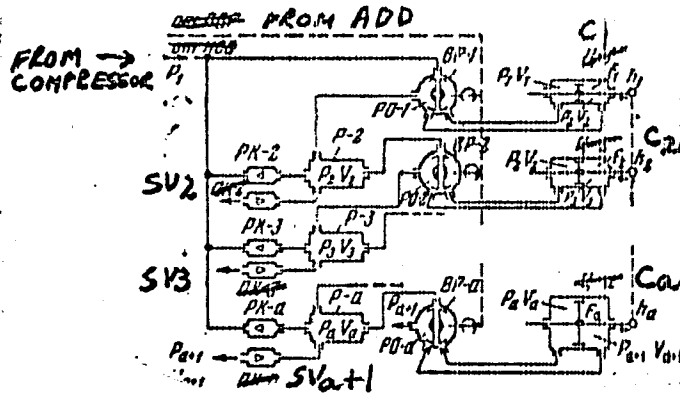


Fig. 1.

SUB CODE: 13,²⁰~~14~~ / SUBM DATE: 03Feb66/ ORIG REF: 004/ OTH REF: 000

Card 4/4

BEREZHIKOV, Yu.; ZORIN, Yu.

Welding with electron beams. IUn. tekhn. 3 no.6:24-26 Ja '59.

(MIRA 12:8)

(Electronic apparatus and appliances)
(Welding)

SOMOVA, K.T.; ZORIN, Yu.A.

Lymphoid variety of the Melkerbsson-Rosenthal syndrome. Vestn.
derm. i ven. 38 no.12:32-34 D '64. (MIRA 18:8)

1. Kafedra terapevticheskoy stomatologii (zav.- dozent R.Ya. Pekker) i kafedra khirurgicheskoy stomatologii (zav.- doktor med. nauk S.N. Pravednikov) Kemarovskogo meditsinskogo instituta.

ZORIN, Yu. A., aspirant

Clinical morphological characteristics and treatment of adamantinomas of the lower jaw. Trudy KGMI no.2:94-106 '60.
(MIRA 15:7)

1. Iz kafedry khirurgicheskoy stomatologii - sav. kafedroy dotsent P. V. Naumov.

(JAWS---TUMORS)

ZORIN, Yu.A.

Structure of the Aginskoye Paleozoic field (eastern Transbaikalia).
Sov. geol. 7 no.6:32-43 Je '64 (MIRA 18:1)

1. Chitinskoye geologicheskoye upravleniye.

ACC NR: AR6024838

SOURCE CODE: UR/0169/66/000/004/G005/G005

AUTHOR: Zorin, Yu. A.

TITLE: Geophysical data from tectonics of certain lower chalk Transbaikal depressions

SOURCE: Ref. zh. Geofizika, Abs. 4G23

REF SOURCE: Izv. Zabaykal'skogo otd. Geogr. o-va SSSR, v. 1, no. 1, 1965, 25-36

TOPIC TAGS: geologic survey, ground survey, tectonics

ABSTRACT: The depressions are tectonic hollows having a lower chalk base which is covered by chalk deposits. The density of the base material is 2.90--2.60 g/cm³; its specific electrical resistivity varies from 400 to a few thousand ohms, the velocity of propagation of elastic vibrations in it is 4,500--6,500 m/sec. The same figures for the lower chalk layer are 1.95--2.40 g/cm³; 20-25 ohms, and 2,400--3,600 m/sec, and for the effusive and effusive-sedimentary Jurassic deposits which are found in places below the lower chalk layer are 2.55--2.67 g/cm³; 250--1,000 ohms, and 3,500--4,700 m/sec. On the basis of the analysis of geophysical data (gravimetry, electro-profiling, vertical electrical sounding, tonal telegraphy, seismic survey using the method of correlating discontinuous and reflected waves) tectonics of the Turgino-Kharanovskaya, Ononskaya, and Toreyskaya depressions are presented. It is indicated that the first of these is bounded from the West and East by fault zones in which the bed is displaced by 300 to 500 m, respectively. It has three internal basins. The

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UDC: 550.311

ACC NR: AR6024838

southern basin contains a lower chalk base 1,700 m deep, and the central and the northern are about 1,400 m deep. The Ononskaya depression is also bounded from the West and East by fault zones and contains three basins: Mangushskaya, Kharalginskaya, and Narasunskaya. The extent of the lower chalk deposits in the first two are 1,300 and 1,500 m, respectively. Opposed to the described depressions extending in the sub-meridial direction the Toreyskaya depression is isometric in the plane and contains three shallower basins. The maximum thickness of the lower chalk deposits in the two northern basins is 1,000 m, and it is 250 m between these. It is 800 m in the more southern basin. In the more southern region of the depression there are two additional shallow basins with loose soil deposits whose thickness is a few hundred meters between the basins. The thickness decreases to 50 m in spots. [Translation of abstract]
G. Reysner

SUB CODE: 08

Card 2/2

ACC NR: AP7005426

SOURCE CODE: UR/0011/66/000/007/0075/0085

AUTHOR: Zorin, Yu. A.

ORG: Institute of the Earth's crust, SO, AN SSSR, Irkutsk (Institut zemnoy kory SO AN SSSR)

TITLE: Deep structure of the depression of Lake Baykal on the Basis of geophysical data

SOURCE: AN SSSR. Izvestiya. Seriya geologicheskaya, no. 7, 1966, 75-85

TOPIC TAGS: earth crust, upper mantle / Lake Baykal

ABSTRACT: Despite the many published studies on structure of the Lake Baykal depression, it has been necessary to review the conclusions drawn on the basis of the most recent geophysical data, especially gravimetric information. In the gravity field over the depression of Lake Baykal there are two major linear minima -- Northern and Southern, which are separated by a zone of maxima; linearly elongated maxima of different intensity are observed along the shores of the lake. These anomalies form almost continuous zones of a relatively high gravity field framing the lake. These anomalies are observed against a background of a smooth decrease of the values of the gravity field in a west to east direction. The nature of the Baykal gravity minima has been interpreted differently by a number of authors and this article re-examines the old and new evidence to determine which, if any, of the theories is valid. In particular an effort is made to evaluate the depth of the Moho and the thickness of the crust. Evidence is presented that in the region of Lake Baykal the earth's crust is far closer to a state of isostatic equilibrium than was assumed earlier. Review of the data indicates that the gravity minima are caused by a great thickness of Cenozoic

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ACC NR: AP7005426

deposits filling the depression. However, density of the crust and mantle in this region are not known precisely. Assuming a mantle density of 3.1 g/cm^3 , the amplitude of uplift of the Moho is about 15-16 km (under the depression the crustal thickness is 30 km, in the surrounding regions -- 45-46 km). If the density of the upper mantle is 3.3 g/cm^3 the crustal thickness under the depression would be 34 km. Orig. art. has: 3 figures. [JPRS: 38,460]

SUB CODE: 08 / SUBM DATE: 17Dec65 / ORIG REF: 026

Card 2/2

27804

S/549/61/000/101/001/015
D285/D304

1.2310

AUTHORS: Ol'shanskiy, N.A., Candidate of Technical Sciences,
Docent, and Zorin, Yu.N., Engineer

TITLE: Electron-beam welding of metals in vacuum

PERIODICAL: Vysshieye tekhnicheskoye uchilishche. Trudy. Svarka
tsvetnykh splavov, redkikh metallov i plastmass,
no. 101, 1961, 5 - 28

TEXT: Work on electron beam welding commenced at the MVTU in
1958 under Professor G.A. Nikolayev, Doctor of Technical Sciences.
The basis of this welding method was the conversion of the kine-
tic energy of a focussed beam of rapidly moving electrons into
heat when they bombarded the site of welding in a chamber under
high vacuum. On heating the tungsten cathode to 2300-2600°C
thermionic emission of electrons occurred which were accelerated
towards the anode (the work) by a high-voltage field, the accele-
rating force being $-eE = e \text{ grad } V$, where e - electron charge, E -
electrical field intensity, V - field potential. The energy of the
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D286/D304

Electron-beam welding of ...

electrons depended on their speed and increased with increasing potential difference between cathode and anode. Speed = $2eV/m$, where $e = 1.6 \cdot 10^{-19}$ coulomb; $m = 9.1 \cdot 10^{-31}$ k; V - potential difference in volts. Electron focussing to concentrate the released energy could be effected by: 1) Imparting a certain shape to the focussing head, giving such a formation to the electric field that the electrons became focussed in the region near the cathode; 2) Establishing an electrostatic focussing lens, in the field of which the electrons were simultaneously concentrated and accelerated; 3) Creating a magnetic field which could constrict the electrons into a beam by means of a coil set in a massive iron casing. The prototype machine ELV-1 is then described. The electron gun and welding chamber are evacuated separately. For welding the pressure in each chamber could not fall below $5 \cdot 10^{-4}$ mm Hg. At 10^{-3} mm Hg ar \odot discharges occur. Shortcomings in the design of ELV-1 became apparent on use: the location of the motor and reducing gear and also the focussing and inclining systems inside the

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27804

S/549/61/000/01/001/015
D256/D304

Electron-beam welding of ...

chamber could impair the vacuum. The ELV-2 was therefore constructed. The welding chamber was 500 mm in diameter and 1000 mm long, welded in stainless steel. To improve the vacuum the focussing and beam-deflecting systems, electric motor, and reduction gearing were removed from the chamber. The mechanical energy required for moving the welded component was transmitted by a shaft passing through the vacuum seal. The focussing and deflecting systems were located on a stainless steel sleeve surrounding the electron gun chamber (Fig. 8). The vacuum system was the same. Fig. 9 shows the electron gun, now of smaller dimensions, which could be used for welding at up to 50 kV and 3-5A. 2 and 3 were insulators, 4 the cathode holder, and 5 the focussing head. 6 was the front anode. With this arrangement a vacuum of $1 \cdot 10^{-4}$ mm Hg could be attained. This provides a much purer atmosphere in terms of content of reactive gases than would be obtained in a chamber filled with the purest argon obtainable. Those impurities which did remain were mostly ionized positively and therefore, tended to collect around the cathode away from the welding zone. The power sources wel-

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D256/D304

Electron-beam welding of ...

ding could be single or 3-phase high-voltage rectifiers or high-voltage D.C. generators. The electrical scheme is shown for supplying the electron gun from a high-voltage 3-phase rectifier. The latter is a high-voltage 3-phase transformer with delta primary connection and secondary star connection. The secondary voltage could be 0-60,000 V, and connection to six kenotrons provides current rectification. For welding metals like aluminum it is desirable to include a contact breaker in the primary circuit to give the electron beam a pulsing effect. Up to 5A current could be obtained in the secondary circuit, and thus in the anode spot on the article being welded up to 50 kW could be concentrated. At voltages above 17,000 X-rays were produced which could penetrate the chamber walls if insufficiently thick. In the ELV-1 a lead lining and leaded glass were used. For supply of power to the ELV-2 a type V-10-100 rectifier was used, working as a full-wave rectifier with four type V-236 rectifiers. Voltage smoothing was effected with a Π -shaped filter. The effect of the main welding parameters (anode voltage, beam current, power, displacement, and

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S/549/61/000/101/001/015
D256/D304

Electron-beam welding of ...

welding speed) on fusion width and depth were investigated on 5 mm thick stainless steel 1 Kh18N9T. Details of the successful welding of a number of metals in the ELV-1 apparatus are tabulated. The vacuum was 10⁻⁴ mm HG. For welding 0.75-2 mm thick zirconium or zirconium alloy without edge flanging or filler material the following conditions were used: Beam current 10-35 mA, voltage 26-38 kV, power in beam 550-900 W, welding speed 8-9 m/hr. Bead width was 3-6 mm. The current pulsing technique was necessary for Al, Mg, and their alloys (owing to the surface oxide film) and was useful for welding extremely thin metals. Welds were found to be defect-free and to possess high ductility. Weld hardness of zirconium was only half that found in a similar weld made in an argon-filled chamber and was nearly the same as that of the heat-affected parent metal. There are 23 figures, 1 table and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: J.A. Stohr and Briola, Vacuum welding of metals, Welding and Metal Fabrication, 1958, No. 10, 336-370; W.L. Wyman, High-vacuum electron-beam fusion welding, Welding Journal, 1958, V37, No. 2, 49-53; G. Burton,

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VI

Electron-beam welding of ...

27804
S/549/61/000/101/001/015
D256/D304

R.L. Matchett, Electron-beams new technique for welding, Metal
working Production, May 1959.

ASSOCIATION: Moskovskoye vissheye tekhnicheskoye uchilishche im.
Baumana (Bauman Moscow Higher Technical College)

Card 6/8

L 20544-66

ACC NR: AP5023077

measurement errors due to sinking of the arc in the base metal and to obtain a molten pool at any welding current. This method was used in determining the static volt. 0

SUB CODE: 13,09

SOJRN DATE: 22JUN64

ORIG REF: 004

Card 2/2 *LJC*

OL'SHANSKIY, N.A., kand.tekhn.nauk, dotsent; MORDVINTEVA, A.V., kand.
tekhn.nauk; Prinimali uchastiye: ZORIN, Yu.N., inzh.; KACHALOV, V.M.,
inzh.

Fusion welding of commercial-grade molybdenum. [Trudy] MTU
no.101:29-48 '61. (MIRA 14:8)
(Molybdenum—Welding)

SOV/125-58-11-4/16

AUTHORS:

Ol'shanskiy, N.A., Mordvintseva, A.V., Morin, Yu.N., and Kachalov, V.M.

TITLE:

Chambers with Controlled Atmosphere for Welding Active Metals (Kamery s kontroliruyemoy atmosferoy dlya svarki aktivnykh metallov)

PERIODICAL:

Avtomaticheskaya svarka, 1959, Nr 11, pp 32-36 (USSR)

ABSTRACT:

The MVTU and MEI welding laboratories, under the supervision of Professor G.A. Nikolayev, designed hermetic chambers filled with inert gas for the fully mechanized welding of zirconium, molybdenum, titanium, etc. The use of automatic welding heads inside the chambers ensures a most accurate control of the arc voltage, and the welding process is controlled from a special desk. The following devices are described in detail: 1) an installation for welding in controlled atmosphere consisting of a chamber, a prevacuum pump, a control desk and a vacuummeter (Fig. 1) for welding specimens up to 300 mm length; 2) an installation for the welding, in controlled atmosphere, of large-size specimens with the use of a movable welding head and a vacuum line with a pump system. Contrary to foreign

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Chambers with Controlled Atmosphere for Welding Active Metals

models, the electric motors are placed inside the chamber, thus simplifying the welding process and permitting the design of large-size chambers. Zirconium and molybdenum specimens were successfully welded in the described installations. There are 3 photos and 1 circuit diagram.

ASSOCIATION: MVTU imeni Baumana i MEI (MVTU imeni Bauman and MEI)

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I. 09961-67 EMP(e)/EMT(m)/EWP(v)/EWP(t)/ETI/EMP(k) IJP(c) JD/LW/HM/WH
ACC NR: AP6035709 SOURCE CODE: UR/0413/66/000/019/0057/0057

INVENTOR: Ol'shanskiy, N. A.; Mordvintseva, A. V.; Zorin, Yu. N.; Grigor'yev, G. A.

ORG: none

TITLE: Method of welding copper to graphite with metal inserts. Class 21, No. 186580

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 57

TOPIC TAGS: metal welding, graphite welding, copper graphite welding, welding technology

ABSTRACT: This Author Certificate introduces a method for welding copper to graphite using metal inserts. To improve the weld quality, insert materials, such as titanium, stainless steel, zirconium or nickel, are used as filler metals.

SUB CODE: 13/ SUBM DATE: 20Apr62/ ATD PRESS: 5105

Card 1/1

UDC: 621.791.7

ACC NR: AP7001837

(A)

SOURCE CODE: UR/0135/66/000/012/0009/0011

AUTHOR: Alekin, L. Ye. (Candidate of technical sciences); Zorin, Yu. N. (Candidate of technical sciences); Razzhivin, V. N. (Engineer); Guma, V. V. (Engineer); Popenko, V.S. (Engineer)

ORG: none

TITLE: Methods of determining the regulation characteristics of a low-amperage arc in argon

SOURCE: Svarochnoye proizvodstvo, no. 12, 1966, 9-11

TOPIC TAGS: motion picture camera, current source, welding inspection, arc welding, welding technology / Kiev 16S-2 motion picture camera, IP-50 current source

ABSTRACT: At present argon-arc welding by means of automatic welding machines (AWM) with a nonconsumable electrode is widely employed to weld parts of stainless steel 0.2-1.0 mm thick in argon with the aid of positive-polarity direct current with an 0.25-3.0 mm long arc. The intensity of the welding current ranges from 1.0 to 70 a. The ultimate purpose of regulation is to produce a welded joint of high quality. But since the AWM affects directly not the

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UDC: 621.701.75.01

ACC NR: AP7001837

weld but the arc, this regulation can be accomplished only if the regulation characteristic, i. e. the dependence of voltage on arc length, is known, since the AWM reacts directly not to the length but to the voltage of the arc. Normally the regulation characteristic is determined by static tests or from a recalculation of volt-ampere characteristics of the arc, but this does not reveal all the features of the regulation characteristic, particularly for the welding of parts 0.2-0.5 mm thick with the aid of a short arc with currents of less than 30 a. Of special practical interest in this connection is the part of the regulation characteristic corresponding to arcs of less than 0.5 mm in length; if in this case the voltage is either virtually independent of the arc length or increases with decreasing arc length, then even a highly sensitive feedback-type AWM cannot assure the regulation of arc length with respect to voltage. To eliminate this difficulty, the authors developed a new method of determining the regulation characteristic, based on the following considerations: Since the regulation characteristic represents the dependence of U_0 on L_0 , a continuous curve can be plotted during continuous movement of the electrode. At the same time, in order to gain the correct idea of the arc length, the position of the arc column must be checked in two mutually perpendicular planes and the plunge of the arc into the metal prevented. This new method provides for the simultaneous examination of the arc from both sides by means of two Kiev 16S-2 motion picture cameras (16 frames per second) positioned at right angles to each other so that the position of the arc column and the length of the arc can be accurately determined. A corresponding experimental setup was con-

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ACC NR: AP7001837

structed (Fig. 1): its principal components are: welding torch 1, mechanism 2 for vertical movement of welding torch, at the rate of 0.2-2.0 mm/sec, rotator 3, chuck 4 for attachment of welding heat, and table 5.

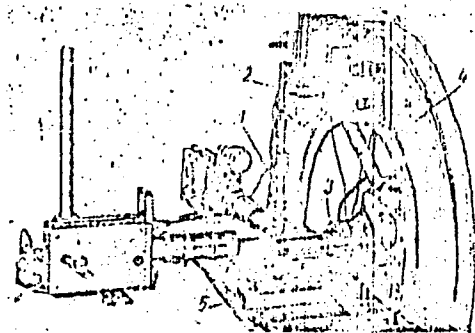


Fig. 1. Experimental setup

The double filming of the welding operation is synchronized with oscillographic recording of current and voltage by means of a time mark whose design and switching circuit are shown in Fig. 2: the connection and disconnection of the electrical circuit are assured by the closing of contacts 2 by shutter 1 of the motion picture camera, represented by a metal disk with a flare

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ACC NR: AP7001837

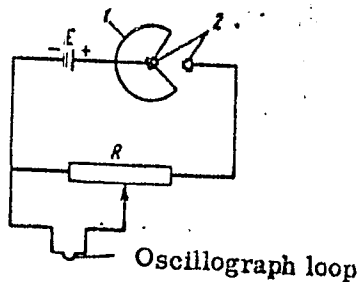


Fig. 2. Design and switching circuit of time mark

angle of 110°. Argon consumption was 140-160 liters/hr. Regulation characteristics were plotted for currents of from 0.7 to 50 a. Findings: processing of the kinograms showed that in the presence of short arcs the arc column is rarely displaced from its axis and the resulting deviation is sufficiently stable in time and readily fixed by means of the kinogram. In subsequent experiments an IP-50 current source was employed to reduce to ~3% the current deviation accompanying the change in arc length from 0.1 to 5.0 mm. It was found that when the arc length is sufficiently short the linear relationship between voltage and arc length no longer applies and the regulation characteristic becomes nonlinear. This nonlinearity clearly manifests itself when the arc length is 0.5 mm and shorter. Orig. art. has: 4 figures.

SUB CODE: 13, W/ SUBM DATE: none/ ORIG REF: 002

Card 4/4

ACC NR: AR7004312

SOURCE CODE: UR/0277/66/000/071/A046/A048

AUTHOR: Volkov, N. P.; Golosovskiy, A. M.; Zorin, Yu. V.; Karpinskiy, I. P.; Mukhin, G. I.; Rudenko, L. I.; Polosin, A. V.

TITLE: Measuring outfit for automatic counting of replacable specimens with information recorded on punchtape

SOURCE: Ref. zh. Avtomat. telemekh. i vychisl. tekhn., Abs. 11A377

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T.3. Ch. 2. M., Atomizdat, 1965, 129-136

TOPIC TAGS: ~~particle counting, electronic measurement~~ *telex, computer, output unit* ~~automaton, punched paper~~ *radio transmitter / ST-2M transmitter*

ABSTRACT: The distinguishing feature of this automaton is the punchtape recording of information including the ordinal number of the specimen which is retained for further measurements. The number is composed from the disk-position number and the reel number. A readout device consists of a few standard pushbutton switches controlled by code tracks situated below the disk and the reel. The information is taken by a telegraph apparatus. The output parallel code is turned into a series code by a cam-contact mechanism of an ST-2M transmitter. The transmitter contact system and the receiver magnet, in the same apparatus, are connected in series. One of the contact bars of the ST-2M apparatus is replaced by six electrically insulated contact bars with separate leads. Three figures. Bibliography of 3 titles. B. U. [Translation of abstract]

SUB CODE: 09

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USSR/China Entry

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Card 102 Pub. 102 - 1021

Periodical : Zhur. fiz. kha. 39/10, 1954-1970, Oct 1966

ZORIN, Z. M., DERYAGIN, B. V., KARAS'YEV, V. V.

- "Properties of the Polymolecular Boundary Layers of Liquids According to Absorption and Viscosimetric Measurements," paper to be presented at the 2nd International Congress of Surface Activity, International Union of Pure and Applied Chemistry, London, 12 April 1957

Inst of Physical Chemistry, AS USSR

ZORIN, Z. M.

ZORIN, Z. M. -- "Investigation of Polymolecular Adsorption of Steam on Plane Surfaces Near the Saturation Point." Sub 25 Dec 52, Inst of Physical Chemistry, Acad Sci USSR. (Dissertation for the Degree of Candidate in Physicomathematical Sciences).

SO: Vechernaya Moskva January-December 1952

Category : USSR/Atomic and Molecular Physics - Gases

D-7

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 926

Author : Deryagin, B.V., Zorin, Z.M.

Title : Investigation of Surface Condensation and Adsorption of Vapors Near Saturation Using the Optical Micropolarization Method. I.

Orig Pub : Zh. fiz. khimii, 1955, 29, No 6, 1010-1019

Abstract : Description of a new method for investigating the adsorption on an optically polished surface of glass, based on measuring the changes in the parameters of the elliptic polarization of light reflected at an oblique angle. The glass surface was cleaned by glow discharge prior to the experiment.

Card : 1/1

ZORIN, Z.M.

Category : USSR/Atomic and Molecular Physics - Liquids

D-8

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6435

Author : Deryagin, B.V., Karasev, V.V., Zorin, Z.M.

Title : Boundary Phases as Singular Aggregate States of Liquids

Orig Pub : Sb. posvyashch. pamyati akad. F.F. Lazareva, M., AN SSSR,
1956, 65-83

Abstract : See Referat Zhur Fizika, 1956, 717.

Card : 1/1

ZORIN, Z.M.

Polymorphism of benzene films on mercury. *Koll. zhur.* 25 no.5:
624-625 S-0 '63. (MIRA 16#10)

1. Institut fizicheskoy khimii AN SSSR, Moskva.

NIKOLAYEVSKIY, G.M., kand.tekhn.nauk; SHESAREV, G.A., kand.tekhn.nauk;
BALASHOV, V.P., kand.tekhn.nauk; AKSENOV, I.P., kand.tekhn.nauk;
MEKLER, A.G., kand.tekhn.nauk; SPITSYMA, I.O., kand.tekhn.nauk;
ZORIN, Z.M., inzh.; VOROBKOV, G.H., inzh.; IVASHKOV, I.I., kand.
tekhn.nauk; OSIPOVA, L.A., red.isd-va; MODHL', B.I., tekhn.red.

[Design of crane mechanisms and parts of hoisting and conveying
machinery] Raschety kranovykh mekhanizmov i detalei pod'emno-
transportnykh mashin. Izd.2., perer. i dop. Moskva, Gos.nauchno-
tekhn.isd-vo mashinostroit.lit-ry, 1959. 493 p.

(MIRA 13:11)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut
pod'emno-transportnogo mashinostroyeniya.
(Cranes, derricks, etc.) (Hoisting machinery)
(Conveying machinery)

DEVYATYKH, G.G.; ZORIN, A.D.; DUDOROV, V.Ya.; YEZHICHEVA, A.Ye.; SMOLYAN, Z.S.

Separation of divinyl from the butane-butylene fraction by
extractive rectification. Zhur.prikl.khim. 35 no.7:1597-1601
JI '62. (MIRA 15:8)
(Butadiene) (Butane) (Extraction (Chemistry))

DEVYACHIN, G.D.; KEDYARKIN, V.M.; ZORIN, A.D.

Kinetics of the thermal decomposition of monosilane, arsine,
and monosilane with arsine admixture. Zhur. neorg. khim. 10
no.7:1528-1533 J1 '65. (MIRA 1888)

I. Gor'kovskiy gosudarstvennyy universitet imeni N.I.
Lobachevskogo.

29(4)

AUTHORS:

Dev'yatykh, G. G., Zorin, A. D.,
Danov, S. M.

05764

SOV/32-25-10-53/63

TITLE:

Automatic Laboratory Rectification Column for Low Temperatures

PERIODICAL:

Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, pp 1271-1272
(USSR)

ABSTRACT:

An automatic low-temperature rectification column was produced for laboratory purposes from molybdenum glass (Fig). The middle rectification tube (inner diameter 11 mm, length 2 m) is spiral-shaped at its lower end (length 120 mm, inner diameter 5 mm) for the purpose of compensating the extension of heat of the glass. The entire rectification tube is located in a silver-plated envelope which is evacuated to $2 \cdot 10^{-6}$ torr (at 200°). The rectification tube is filled with bodies in form of tetrahedral spirals (2×2 mm) made from constantan wire (diameter 0.2 mm). The condenser at the upper end of the rectification tube is of brass and contains ethanol, which is cooled down to the desired temperature by means of liquid nitrogen in an ultrathermostat of the type Vobser. The evaporation piston of the column is cylindrical (200 mm) and is electrically heated. The evaporation rate of the investigated

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Automatic Laboratory Rectification Column for Low
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gas is regulated by means of a contact manometer. The rectification column has an automatic sampling device which is controlled by means of an electromagnetic cock by way of an electronic time relay, which was constructed by L. T. V'yukhin and E. M. Yashin. The gas sample taken is frozen in liquid nitrogen in a collecting vessel. The column has a system for stabilizing pressure in the column. The temperature of the vapors in the column cupola is recorded by means of a thermocouple (copper-constantan) on a self-recording device of the type EPP-09-1. The efficiency of the column corresponds to 35 theoretical plates and was determined in a α -butylene-isobutylene mixture, the separation coefficient (at -7.01°) amounting to 1.042. There are 1 figure and 2 Soviet references.

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet im. N. I. Lobachevskogo (Gor'kiy State University imeni N. I. Lobachevskiy)

Card 2/2