VOROB'YEV, Grigoriy Abramovich, doktor fiz.-matem. nauk prof.;
MESYATS, Gennadiy Andreyevich. Prinimali uchastiye:
USOV, Yu.P.; KREMNEV, V.V.; MELESHKO, V.K., red.;
MAZEL', Ye.I., tekhn. red.

[Technique for generating high-voltage pulses] Tekhnika formirovaniia vysokovol'tnykh impul'sov. Moskva, Gosatomizdat, 1963. 166 p. (MIRA 17:1)
(Pulse techniques (Electronics))

MESYATS, G.A.; USOV, Yu.P.; GOLYNSKIY, A.I.

Some data concerning the effect of electrode shapes and breakdown voltage on the commutation time of a spark gap. Izv.vys.ucheb.zav.;fiz. no.2:38-41 '63. (MIRA 16:5)

1. Tomskiy politekhnicheskiy institut imeni S.M.Kirova.
(Electric switchgear) (Breakdown, Electric)

L 11395-63 EWP(q)/EWT(m)/BDS AFFTC/ASD Pq-L WH
S/120/63/000/002/039/041

AUTHOR: Usov, Yu. P. and Vorob'ev, G. A.

TITLE: Selection of material for windows in chambers used for investigation of discharges in gases under pressure

PERIODICAL: Pribory i tekhnika eksperimenta, March-April 1963, v. 8, no. 2, 177-178.

TEXT: The article describes tests performed on various ultraviolet-transmitting materials in order to find out whether they could be used as windows in apparatus for investigation of discharges in gases under pressure. Test results show that the best material for 0-50 atm pressure is crystalline LiF, while quartz glass is best at higher pressures. Quartz glass is best under all conditions when maximum ultraviolet-transmission is not necessary. There are four figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernykh issledovaniy elektroniki i avtomatiki pri TPI (Scientific-Research Institute for Nuclear Research, Electronics and Automation at the Tomsk Polytechnic Institute)

SUBMITTED: January 16, 1962
Card 1/1 ja/cl

L 22277-66 EWT(1)

ACC NR: AR6005194 SOURCE CODE: UR/0058/65/000/009/G019/G019

AUTHOR: Usov, Yu. P. 64

TITLE: Spark-light triggering of discharge gaps in gases at different pressures B

SOURCE: Ref. zh. Fizika, Abs. 9G153

REF. SOURCE: Sb. Proboy dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 79-82

TOPIC TAGS: spark gap, gas discharge, pressure effect, ignition, dielectric breakdown, cascade

TRANSLATION: Data are presented on the investigation of spark-light ignition of a discharge gap in air, N_2, O_2, Ar, H_2, and He for different pressures and different parameters of the igniting flash. The delay of the triggering was recorded with accuracy $\pm$ 1.5 nsec. The results show that in order of magnitude the delay of the triggering is equal to the time of flight of the electron through the gap, and

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L 22277-66

ACC NR: AR6005194 O

no noticeable ion current is necessary to complete the breakdown. The difference between the delay and the travel time of the electrons increases with increasing gas pressure. The character of the dependence of the delay on E/p is the same for all gases. The range of delay with respect to E/p becomes smaller with increasing gas pressure. I. Popov

SUB CODE: 20

Card 2/2 nst

USOV, Yu.P.

Delayed breakdown of a nonirradiated spark gap at large overvoltages. Izv. vys. ucheb. zav.; fiz. no.1:81-83 '64. (MIRA 17:3)

1. Tomskiy politekhnicheskiy institut imeni Kirova.

AUTHOR: Usov, Yu. P.

TITLE: [illegible] from the cathode of a spark discharge gap

TOPIC TAGS: spark discharge, photocurrent, discharge time, ionization cascade, [illegible]

[illegible]

If $t_{st} \gg t_f$, the plot of [illegible] time against the field intensity is a [illegible] and a current-voltage characteristic deter-

ACCESSION NR: AP4047367

mined from this plot makes it possible to determine the photocurrent

art. has: 2 figures.

SUB CODE: EM

Card 2/2

ACCESSION NR: AP4038649 S/0109/64/009/005/0882/0887

AUTHOR: Mesyats, G. A.; Usov, Yu. P.; Korshunov, G. S.

TITLE: Investigation of the spark lag in irradiated gaps for use in nanosecond pulse work

SOURCE: Radiotekhnika i elektronika, v. 9, no. 5, 1964, 882-887

TOPIC TAGS: spark gap, spark lag, irradiated spark gap, pulse work, nanosecond pulse work

ABSTRACT: R. C. Fletcher's investigations (Phys. Rev., 1949, 76, 10, 1501) were continued with a view toward using the results in nanosecond pulse work. From a surge generator with a sealed gap K (see Fig 1 of the Enclosure), pulses were applied to an auxiliary 0.5-mm gap G whose spark irradiated the main gap G. The latter was either of an open type or a quartz-window sealed type (at 360 torr). A positive 15-kv peak was used in all the experiments. The irradiation time was varied by altering the length of the G_a supply cable. The effect of the intensity and time of irradiation on the 10^{-9}-sec-front-pulse lag was studied. Also,

Card 1/3

ACCESSION NR: AP4038649

the effect of the electrode shape and pressure on the spark-formation time was investigated. A multigap delay system is suggested for h-v pulse work. Tests with a 5-gap, 15-kv system showed that, with 2-mm-diameter electrodes and 166-pf capacitors, the time lag could be continuously adjusted within 60-1,000 nanosec. Orig. art. has: 5 figures, 3 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 14Mar63 ENCL: 01 SUB CODE: EC

NO REF SOV: 006 OTHER: 003

Card 2/3

ACCESSION NR: AP4038649

ENCLOSURE: 01

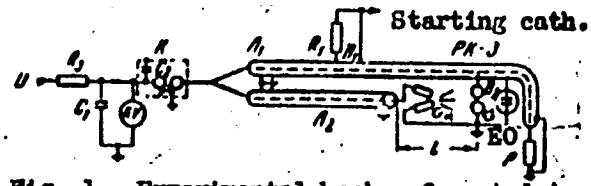


Fig. 1. Experimental hookup for studying the effects of irradiated-gap spark lag

D_1 D_2 - capacitive dividers; K - coaxial chamber; EO - Event-recording oscillograph

Card 3/3

L 6493-66 EWT(1)/EWA(h)

ACC NR: AP5026493 SOURCE CODE: UR/0286/65/000/019/0026/0026

INVENTOR: Usov, Yu. P.

TITLE: Device for triggering discharge tubes in a high-voltage pulse generator. Class 21, No. 175085 [Announced by the Scientific Research Institute of Nuclear Physics, Electronics, and Automation at Tomsk Polytechnic Institute im. S. M. Kirov (Nauchno-issledovatel'skiy institut yadernoy fiziki, elektroniki i avtomatiki pri Tomskom politekhnicheskom institut)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 26

TOPIC TAGS: pulse generator, discharge tube

ABSTRACT: The proposed device (see figure) is designed to trigger discharge tubes

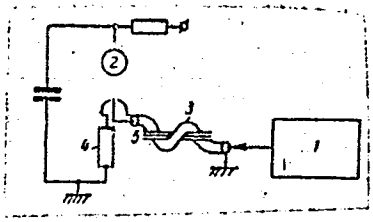


Fig. 1. Triggering device

1 - Trigger-pulse generator; 2 - electrodes of the firing discharge tube; 3 - section of coaxial cable; 4 - load resistance; 5 - ferromagnetic core.

in a high-voltage pulse generator. To avoid shunting of the load resistance of the generator by the firing circuit and to protect the trigger-pulse generator against

Card 1/2 UDC: 621.373.43

0901 1725

L 6493-66

ACC NR: AP5026493

high-voltage effects, the coaxial cable section along which the trigger pulse is transmitted to the firing discharge tube is wound around a ferromagnetic core; the sheath of the cable is grounded on the side of the trigger-pulse generator. Orig. art. has: 1 figure. [DW]

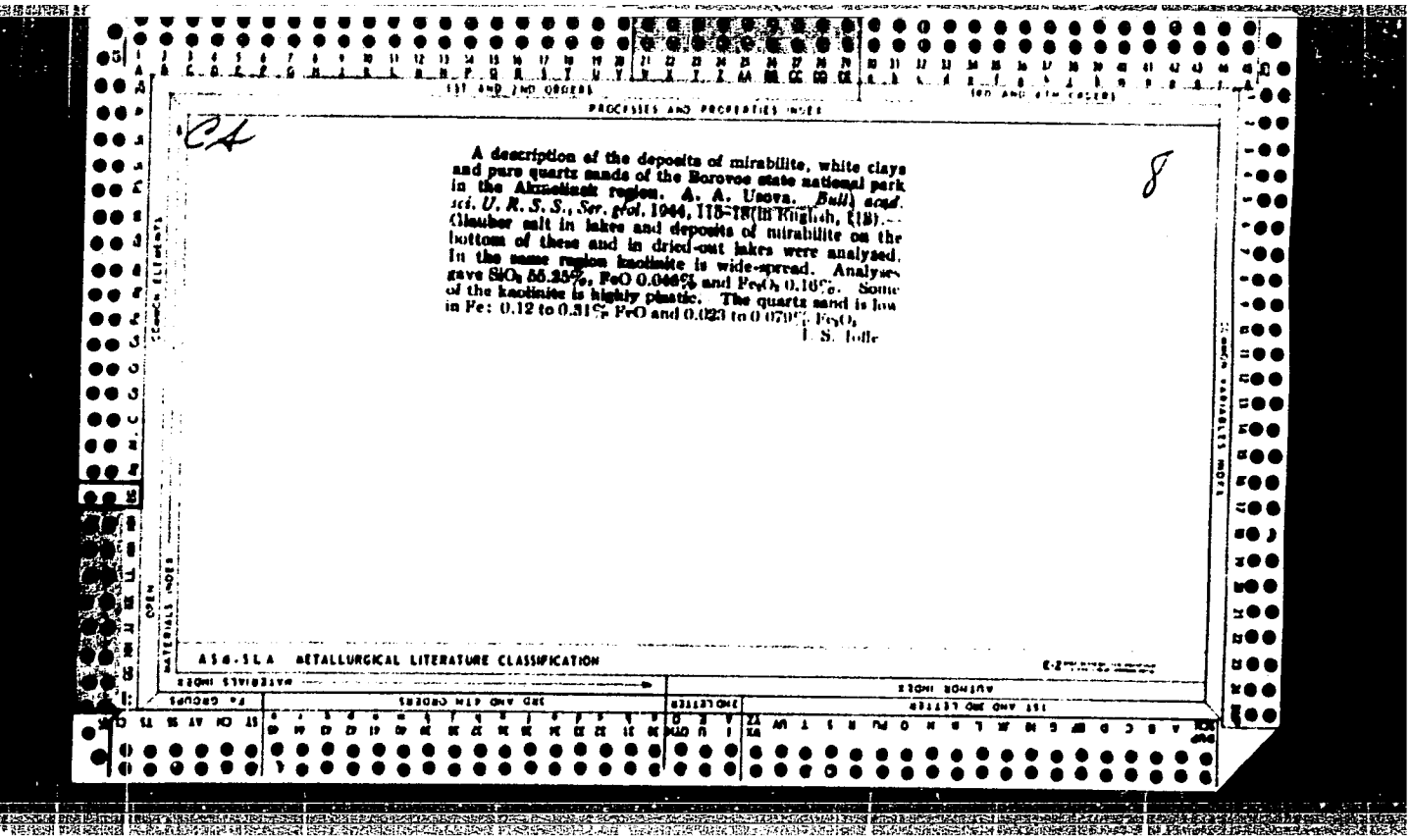
SUB CODE: EC/ SUBM DATE: 24Feb64/ ATD PRESS: 4139

nw

Card 2/2

MALINSKIY, Vladimir Davidovich; VEREVKIN, Yu.Ye., prepodavatel', retsenzent; USOV, Yu.Ye., prepodavatel', retsenzent; BASAVINA, Ye.V., red.

[Collection of laboratory papers on amplifying and radio receiving systems] Sbornik laboratornykh rabot po usilitel'nym i radiopriemnym ustroistvam. Moskva, Vysshaia shkola, 1964. 176 p. (MIRA 17:12)



CA

8

A description of the deposits of mirabilite, white clays and pure quartz sands of the Borovoe state national park in the Akmolinsk region. A. A. Usova. *Bull. acad. sci. U. R. S. S., Ser. géol.* 1944, 115–18 (in English). (18).—Glauber salt in lakes and deposits of mirabilite on the bottom of these and in dried-out lakes were analysed. In the same region kaolinite is wide-spread. Analyses gave SiO_2 55.25%, FeO 0.046% and Fe_2O_3 0.18%. Some of the kaolinite is highly plastic. The quartz sand is low in Fe: 0.12 to 0.31% FeO and 0.023 to 0.070% Fe_2O_3.

I. S. Jolle

USOVA, A.B. (Cheliabinsk); LITINSKIY, B.Ye. (Cheliabinsk)

The experiment of the teachers of Lipetsk and teaching physics.
Mat i fiz Bulg 5 no.6:39-44 N-D '62.

USOVA, A.K.

BC

a-1

[illegible] from [illegible] and its use in casting foundries. S. M. Iusupova and A. K. Usova (*Compt. rend. Acad. Sci. U.R.S.S.*, 1944, [illegible], 125—126).—Samples from deposits found near Kokand in Uzbekistan give the *X*-ray diagram and thermograph for montmorillonite, and their swelling capacity, plasticity, and the physical properties of casting sands made with them indicate suitability as a binder in moulding mixes equal to that of bentonite from Djebel, at present the only source in the U.S.S.R. R. C. M.

USOVA, A. N.

The effect of some vitamins on the biology of the oak silk worm. S. Ya. Demyanovskii, V. A. Rozhdestvenskaya, E. K. Stakhovskaya, V. K. Kondrat'eva, and A. N. Usova. *Uchenye Zapiski Gosudarst. Pedagog. Inst.* 77, No. 7, 21–91 (1953); *Referat. Zhur. Khim., Biol. Khim.* 1955, No. 16316.—A study of the effect of nicotinic acid, its amide, of vitamin B$_1$ (I), *p*-aminobenzoic acid (II) and of folic (III) and ascorbic (IV) acids on the oak silk worm was made. I and II stimulate the development of silk worm caterpillars, hasten the exudation and the winding of the silk threads, increase the wt. of the caterpillars, and enhance their resistance to the jaundice infection. B. S. Levine

IVANOVA, A.S.; SHABALIN, S.D.1 MICHURINA, I.A.; SHLENDIK, T.Ye.; PECHEN', N.G.; YATSENKO, V.A.; USOVA, A.P.; FROLOVA, P.A., otv.red.; ROGOVSKAYA, Ye.G., red.; VOLKOV, N.V., tekhn.red.

[Agroclimatic reference book on Amur Province] Agroklimaticheskii spravochnik po Amurskoi oblasti. Leningrad, Gidrometeor.izd-vo, 1960. 134 p. (MIRA 13:11)

1. Khabarovsk. Gidrometeorologicheskaya observatoriya. 2. Khabarovskaya gidrometeorologicheskaya observatoriya (for Ivanova, Shabalin, Michurina, Shlendik, Pechen', Yatsenko, Usova). 3. Nachal'nik Otdela agrometeorologii Khabarovskoy gidrometeorologicheskoy observatorii (for Ivanova).
(Amur Province--Crops and climate)

ACC NR: AP6032592 SOURCE CODE: UR/0062/66/000/008/1410/1416

AUTHOR: Andreyev, V. M.; Usova, A. V.

ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences, SSSR (Institut organicheskoy khimii Akademii nauk SSSR)

TITLE: Diene condensation of ethyl γ-ester of β-formylacrylic acid with 2,3-dimethylbutadiene and bivinyl, and reaction of the adducts with hydrazine hydrate

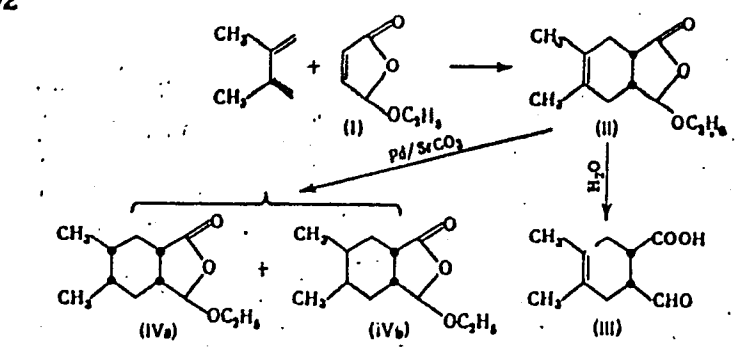
SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1966, 1410-1416

TOPIC TAGS: diene synthesis, butadiene, hydrazine compound, acrylic acid, vinyl compound

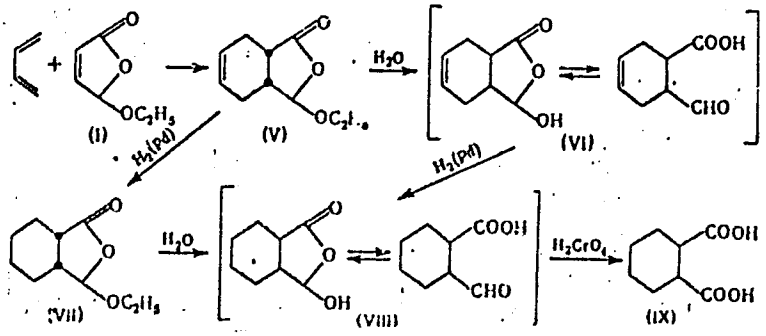
ABSTRACT: Diene condensation of ethyl γ-ester (I) with 2,3-dimethylbutadiene produced γ-ester (II), which was reacted as shown below:

Card 1/4 UDC: 542.91+547.5+541.63

ACC NR: AP6032592

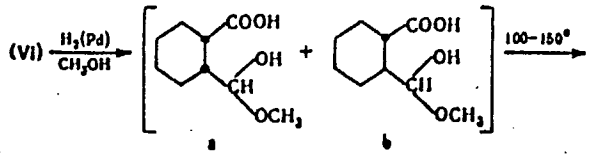


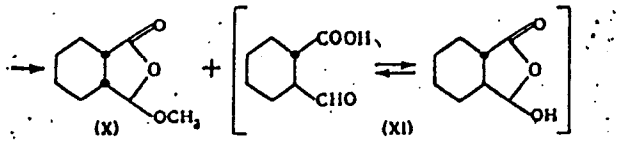
Condensation of (I) with bivinyl produced γ-ester (V), whose further reactions are included below:



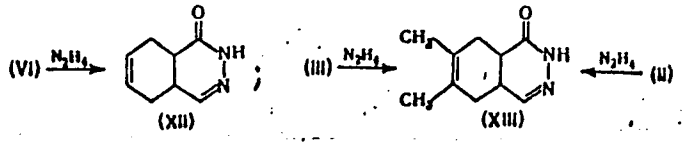
Card 2/4

Hydrogenation of (VI) in methanol involved the following reactions:



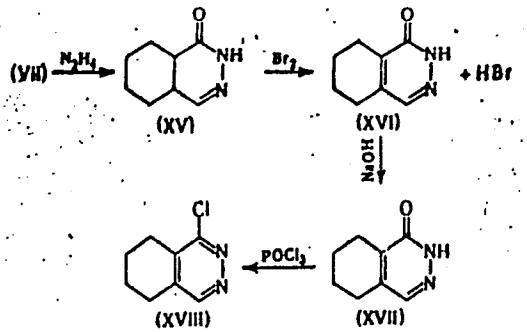


Hexahydrophthalazones (XII) and (XIII) were obtained as follows:



Chlorotetrahydrophthalazine (XVII) was synthesized as follows:

ACC NR: AP6032592



The synthesized hydrophthalazones can serve as the starting materials in the synthesis of Apressin analogs. Authors express their thanks to S. S. Yufit for assistance in evaluating the results and to M. B. Shadurova, who participated in the experimental part of this work.

SUB CODE: 07/ SUBM DATE: 13Mar64/ ORIG REF: 003/ OTH REF: 010

Card 4/4

USOVA, A.V. (g. Chelyabinsk).

Elements of agricultural mechanization and electrification in a school course on physics. Fiz. v shkole 13 no.4:18-24 Jl-Ag '53. (MLRA 6:6)
(Agricultural engineering--Study and teaching)

USOVA, A.V.

Demonstration of uniform straight-line motion. Fiz. v shkole 16 no.6:50-51 N-D '56. (MLRA 9:12)

1. Pedagogicheskiy institut, Chelyabinsk.
(Motion--Study and teaching)

USOVA, Antonina Vasil'yevna,;DROZHZHIN, Yu.N., red.; VOLCHEK, V.L.,tekhn. red.

[Studying the motion of liquids and gases in secondary schools] Izuchenie dvizheniia zhidkostei i gazov v srednei shkole. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1958. 73 p. (MIRA 11:12)

(Fluid dynamics--Study and teaching)

Usova, A.V.

AUTHOR: Usova, A.V. 47-58-1-19/35

TITLE: Demonstration of a Computer of Charged Particles (Demonstratsiya schëtchika zaryazhennykh chastits)

PERIODICAL: Fizika v Shkole, 1958, # 1, pp 55-56 (USSR)

ABSTRACT: Computers of charged particles are now available in the stores of "Glavsnabpros". They will prove useful for demonstrations in the schools. The author suggests a circuit necessary for the installation of such counter and gives a detailed description. In this installation the counter "STS-5" is used. It can work with a potencial of 250-300 v that could be supplied by an anode battery.

There is 1 diagram and 1 figure.

ASSOCIATION: Pedagogicheskiy institut, Chelyabinsk (Pedagogic Institute, Chelyabinsk)

AVAILABLE: Library of Congress

Card 1/1

USOVA, A.V. (Chelyabinsk)

Connection between the physics curriculum of rural schools and agricultural machinery. Fiz. v shkole 19 no.1:70-82 Ja-F '59. (MIRA 12:3)

1. Pedagogicheskiy institut.
(Agricultural machinery) (Physics--Study and teaching)

USOVA, A.V.(Chelyabinsk); TUSHEV, M.N.(Chelyabinsk); VOROB'YEV, S.A. (Chelyabinsk)

Organizing independent work of students in physics lessons. Fiz. v shkole 20 no.2:25-30 Mr-Ap '60. (MIRA 14:5)
(Physics—Study and teaching)

USOVA, A.V. (Chelyabinsk)

Organizing independent work of students in physics lessons. Fiz. v shkole 21 no.2:92-94 Mr-Ap '61. (MIRA 14:8)
(Physics--Study and teaching)

KUCHEROV, V.F.; SEREBRYAKOV, E.P.; USOVA, A.V.

Stereochemistry of cyclic compounds. Report No.49: Oxidation of cis-syn-Δ^7-hydrindene-4,5-dicarboxylic acid and the synthesis of isomeric trans-hydrindane-4,5-dicarboxylic acids. Izv. AN SSSR Otd.khim.nauk no.1:106-112 Ja '62. (MIRA 15:1)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Cyclic compounds) (Acids, Organic) (Stereochemistry)

USOVA, A. V. (Chelyabinsk); LITINSKIY, B. Ye. (Chelyabinsk)

Practices of the Lipetsk Province teachers and the teaching of physics. Fiz. v shkole 22 no.4:30-34 Jl-Ag '62. (MIRA 15:10)

(Physics—Study and teaching)

USOVA, A. V. (Chelyabinsk); KREMLEVA, M. A. (Chelyabinsk)

Students' work with material distributed to them in physics lessons. Fiz. v shkole 22 no.4:85-87 Jl-Ag '62. (MIRA 15:10)

(Physics—Study and teaching)

KOTOMINA, M.G. (Chelyabinsk); USOVA, A.V. (Chelyabinsk)

Practical work in physics in industrial laboratories. Fiz. v shkole 23 no.3:43-44 My-Je '63. (MIRA 16:12)

USOVA, A.V.

Development of students' interest in research work during the process of teaching physics. Fiz. v shkole 23 no.4:45-49 Jl-Ag '63. (MIRA 17:1)

1. Pedagogicheskiy institut, Chelyabinsk.

USOVA, E. P., GOLYNTS, N. G., and GNESAREV, K. A.

"Application of the analytical computation method to evaluation of errors in paper chromatography and to refining of the measurement of crystallization temperature"

Report presented at a symposium on the mathematical processing of analytical data was held on 3 March 1964 at the Institute of Geochemistry and Analytical Chemistry, Acad. Sci. USSR

(State Design and Planning Scientific Research Institute of the Nitrogen Industry)

USOVA, E.P.; SNESAREV, K.A.

Quantitative determination of amino acids with the aid of quinhydrone. Report No.1: Determination of -aminoenanthic acid. Zhur. anal. khim. 19 no.2:243-247 '64.
(MIRA 17:9)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza, Moskva.

USOVA, E.P.; SNESAREV, K.A.

Quantitative determination of amino acids with the aid of quinhydrone. Report No.2: Quantitative paper chromatography of higher ω-amino acids. Zhur. anal. khim. 19 no.3:379-382 '64. (MIRA 17:9)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza, Moskva.

USOVA, E.P.; SNESAREV, K.A.

Quantitati e determination of amino acids by means of quinhydrone. Report No.3: Reaction between ω-amino acids and p-benzoquinone. Zhur.anal.khim. 19 no.9:1147-1154 '64. (MIRA 17:10)

1. State Scientific-Research and Design Institute of the Nitrogen Industry and the Products of Organic Synthesis, Moscow.

USOVA, G.V. (Orsk)

Use of small series conveyors in multiple-style section assembly lines. Shvein. prom. no.2:28-31 Mr-Ap '63. (MIRA 16:8)

(Clothing industry)
(Assembly-line methods)

USOVA, I.N.

Determination of the center of narrow axisymmetric beams of γ-quanta by means of sectional ionization chambers. Dokl. AN SSSR 104 no.3:391-392 S '55. (MLRA 9:2)

1.Fizicheskiy institut imeni P.N.Lebedeva Akademii nauk SSSR
Predstavlena akademikom I.Ye. Tammom.
(Ionization chambers) (Gamma rays)

66379
SOV/120-59-5-32/46

21.5300

AUTHORS: Piskov, M.P. and Usova, I.N.

TITLE: A Differential Ionisation Chamber as a Monitor for the Bremsstrahlung from a Synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 5, pp 127 - 128 (USSR)

ABSTRACT: The Bremsstrahlung of a synchrotron is conveniently monitored using a thin-walled ionisation chamber placed in the photon beam in front of experimental apparatus. However, experience with the synchrotron at the Physics Institute of the Ac.Sc., USSR has shown that because of the presence of a considerable electron background which accompanies the photon beam, the monitor readings depend on the maximum energy in the spectrum of the Bremsstrahlung (Figure 1, 1). This fact, together with some instability in the maximum energy, leads to a reduction in the accuracy of such a monitor. In order to improve the accuracy of thin-walled ionisation chambers used as monitors, Veksler has suggested that a differential thin-walled chamber may be used since the sensitivity of such a chamber to the electron background can be made

Card1/3

A Differential Ionisation Chamber as a Monitor for the Bremsstrahlung from a Synchrotron

sufficiently low. The differential monitor chamber is in the form of two ionisation chambers placed directly one after another and connected so that the currents subtract. The front wall of the first chamber is a copper foil, 12 μ thick. It also serves as the high-voltage electrode. The rear wall of the first chamber is a thick collecting electrode made of aluminium, which is also the collecting electrode and the front wall of the second chamber. The rear wall of the second chamber is also made of copper foil, 12 μ thick. A voltage of -1 kV is applied to the first chamber and +1 kV to the second. In this way, the charge received by the common collecting electrode is proportional to the difference in the currents through the two chambers. As a result of the fact that the front wall of the first chamber is very thin, the current in the first chamber is mainly due to the electron background. Conversely, the current through the second chamber is mainly due to secondary electrons produced by the photons

A Differential Ionisation Chamber as a Monitor for the Bremsstrahlung from a Synchrotron

in aluminium. The contribution of the electron background to the ionisation in this chamber was determined by studying the change in the ionisation current of an identical subsidiary chamber by varying the thickness of its front wall between 15μ and 1 mm of aluminium. The contribution turns out to be about 30% of the total ionisation produced in the second chamber. The dependence of the readings of the relative monitor with the thin-walled differential chamber on the maximum energy of the Bremsstrahlung spectrum of the synchrotron mentioned above is shown by Curve 2 in Figure 1. As can be seen, the effect of the electron background is reduced. There is 1 figure.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute of the Ac.Sc., USSR)

SUBMITTED: August 21, 1958

Card 3/3

USOVA, I.M.

Absolute measurement of the intensity of high-energy gamma radiation by the method of pair difference. Zhur. tekhn. fiz. 30 no.6:665-671 Je '60. (MIRA 13:8)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR, Moskva.
(Gamma rays)

USOVA, I. N. Cand Phys-Math Sci -- "Ionization methods of absolute measurements of the intensity of high-energy gamma-radiation." Mos, 1961 (Min of Higher and Secondary Specialized Education RSFSR. Mos Phys-Engineering Inst).

(KL, 4-61, 185)

S/120/61/000/001/015/062
E032/E114

26.2246

AUTHOR: Usova, I.N.

TITLE: Application of Sector Ionization Chambers to the Absolute Measurement of the Intensity of High-Energy Gamma-Rays

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No.1, pp.53-55

TEXT: In a previous paper (Ref.1) the author described a sector ionization chamber designed for the location of the axis of the γ-ray beam of an electron accelerator to an accuracy of ± 0.1 mm. The design of the chamber is illustrated in Fig.1. Owing to the fact that the two sector-shaped cavities 1, 2, have a common collecting electrode and the high-voltage electrodes 3, 4, have opposite polarities (± 1500 V), the charge flowing to the collecting electrode 5 is proportional to the difference between the currents through the sectors 1 and 2. When this difference is zero the beam axis coincides with the axis of the chamber and the energy fluxes U_1 and U_2 passing through the transverse cross-sections of the sectors 1 and 2 are equal. This fact can be used in the determination of the energy flux due

20681
S/120/61/000/001/015/062
E032/E114

Application of Sector Ionization Chambers to the Absolute Measurement of the Intensity of High-Energy Gamma-Rays

to high-energy γ-rays by measuring the difference in the number of electron-positron pairs from thin converters 3, 4. As shown by Blocker et al. (Ref.2) this method consists in the calculation of the energy flux from the current difference $I(Z_1) - I(Z_2)$ for converters with different atomic numbers Z_1 and Z_2 but equal numbers of electrons per cm^2 of surface. Normally, plane parallel ionization chambers are employed in this method. However, sector chambers have the advantage that the current difference can be measured directly to within 1-2%. The intensity is measured as follows. The axis of the chamber is brought into coincidence (by remote control) with the beam axis. The front walls of the sectors are replaced by the converters, in which case the current difference is related to the energy flux by

$$U = \Delta I / e\, g\,(Z_1)\, R_{1-2} \qquad (1)$$

where e is the electronic charge, $g(Z_1)$ is the effective

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S/120/61/000/001/015/062
E032/E114

Application of Sector Ionization Chambers to the Absolute Measurement of the Intensity of High-Energy Gamma-Rays

depth of the chamber for electrons leaving the converter with atomic number Z_1, and R_{1-2} is given by

$$R_{1-2} = \frac{\int_0^{W_{max}} \sigma_n(W,Z_1) - \sigma_n(W,Z_2) \quad f(W)\ \overline{i(W)}\ dW}{\int_0^{W\,max} W\ f\ (W)\ dW}$$

In this expression $\sigma_n(W, Z_1)$ is the number of pairs produced in the converter with atomic number Z_1, $f(W)$ is the number of photons of energy W, $\overline{i(W)}$ is the mean number of pairs of ions produced by the electron positron pairs per unit path length and ΔI is the current difference between the two sectors which is measured directly. The ratio $g(Z_1)/g(Z_2)$ was calculated by the present author to an accuracy of 1.5-2% in Ref.3. The absolute accuracy of the intensity measurement is said to be 7%, while in

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the case of the plane parallel ionization chamber the accuracy is 10-15%. The device has been used on the synchrotron of the Fizicheskiy institut AN SSSR (Physics Institute, AS USSR) (W_{max} = 260 MeV). The results obtained were found to be in good agreement with determinations by other methods, made later by a group of physicists under the direction of V.I. Gol'danskiy.
Acknowledgements are made to V.I. Veksler and P.A. Cherenkov for interest, and to A.I. Yudin and P.A. Zaytsev who built the chamber.
There are 1 figure, 1 table and 4 references: 2 Soviet and 2 non-Soviet.

ASSOCIATION: Fizicheskiy institut AN SSSR
(Physics Institute, AS USSR)

SUBMITTED: February 16, 1960

Card 4/5

20681

S/120/61/000/001/015/062

Application of Sector Ionization..E032/E114

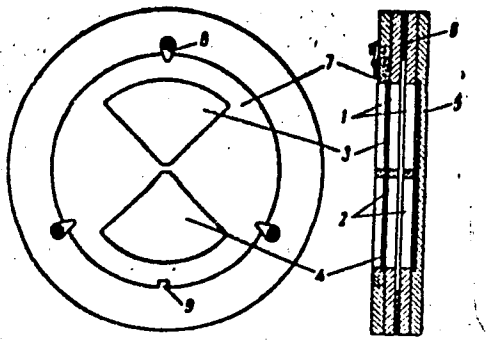

Fig. 1

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USOVA, I.N.

Determining energy flux in a high-energy photon beam by the area below the cascade curve. Prib. i tekh.eksp. 6 no.4:27-30 Jl-Ag '61. (MIRA 14:9)

1. Fizicheskiy institut AN SSSR.
(Photons)

37785

S/120/62/000/002/008/047
E039/E520

21.6000

AUTHOR: Usova, I.N.

TITLE: The absolute sensitivity of a thick-walled graphite ionisation chamber for photons with energies up to 260 MeV

PERIODICAL: Pribory i tekhnika eksperimenta, no.2, 1962, 36-42

TEXT: The method of calculating the absolute sensitivity of a thick-walled graphite chamber described in this paper is more accurate than previous calculations by other workers. The effects of density, multiple Compton scattering, radiation loss, annihilation positrons in the chamber wall, ionisation losses, the nonlinear relation between path length and energy etc. are taken into account. The expression derived for the sensitivity of the chamber is:

$$S(W_{max}) = \frac{\int_0^{W_{max}} Wf(W)\left\{\left[f_1(W)/f(W)\right]\tau(W)s_1(W) + \left[f_2(W)/f(W)\right]\tau(W)s_2(W)\right\}dW}{\int_0^{W_{max}} Wf(W)dW} \qquad (16)$$

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where $s_1(W)$ and $s_2(W)$ are the fractions of the energy of photons of energy W used in ionisation, forming secondary electrons with path lengths $R<T$ and $R>T$ respectively, where T is the thickness of the front wall of the chamber, $\tau(W)$ is the photon absorption coefficient, f(W) gives the spectrum of the synchrotron. The calculations are carried out for a chamber with a front wall thickness of 4.5 cm and depth of working volume 1.04 cm for a maximum energy of 260 MeV. This gives a value of $-(0.83\pm0.06)\cdot10^{-5}$ whereas the value obtained in the previous calculations was $-1.02\cdot10^{-5}$. The more accurate treatment giving a value ~20% lower than before. The accuracy of the formula obtained is about ±7%. This error is made up of inaccuracies in the values for the spectrum of the synchrotron, ionisation loss, the cross-section for Compton scattering and formation of pairs, the absorption coefficient for photons etc. and also by neglecting the development of cascade processes. It is noted that if the development of cascade processes is taken into account that the formula for the absolute sensitivity of the chamber remains practically unchanged for photon energies up to $W_{max} \sim$ 1 BeV. There are 5 figures and 4 tables.

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The absolute sensitivity ... S/120/62/000/002/008/047
E039/E520

ASSOCIATION: Fizicheskiy institut AN SSSR
(Physics Institute AS USSR)

SUBMITTED: June 20, 1961

Card 3/3

TSETLIN, A.L.; USOVA, K.I.

Periodicity in the excretion of intestinal protozoa. Dokl. AN Tadzh.SSR no.5:31-34 '52. (MLRA 9:10)

1. Tadzhikskiy institut malyarii i meditsinskoy parazitologii. Predstavleno chelnom-korrespondentom AN Tadzhikskoy SSR N.F. Berezkinym.

(Protozoa)

USOVA, K. K.

28009. USOVA, K. K. -- Blizhayshiye klinicheskie rezul'taty lecheniya khronicheskikh. ognestrel'nykh. Osteomielitov po materialam respublikanskogo gospitalya. (tashkent). Trudy pervoy nauch. Mezhresp. Konf-tsii po lecheniyu invalidov otechestv. Voyny v sred. Azii. Tashkent, 1949, S. 117-23.

SO: Letopis' Zhurnal'nykh Statey. Vol. 37, 1949.

USOVA, K. M.
V. M. ROSHKOV, ZhPhysiol, 1935, 12, 582-584

USOVA, K.M.
V.M. ROZHKOV, J. Physiol. USSR, 19, 1935, 582-4

USOVA, L. F.

USOVA, L. F.: "Investigation of the aging of technical iron". Moscow, 195-. Min Higher Education USSR. Moscow Order of Labor Red Banner Inst of Steel imeni I. V. Stalin. (Dissertations for the degree of Candidate of Technical Science.)

SO: Knizhnaya Letopis' No. 50 10 December 1955. Moscow.

USOVA, L.F.; FINKEL'SHTEYN, B.N.

Determining the activation energy in the aging of commercial iron. Nauch. dokl. vys. shkoly; met. no.1:163-168 '58.
(MIRA 11:9)

1. Moskovskiy institut stali.
(Iron--Hardening) (Activity coefficients)

USOVA, L. F.

137-58-4-8150

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 255 (USSR)

AUTHORS: Finkel'shteyn, B.N., Usova, L.F.

TITLE: The Aging of Technical Iron Investigated by the Internal-friction Method (Issledovaniye stareniya tekhnicheskogo zheleza metodom vnutrennego treniya)

PERIODICAL: Sb. Mosk. in-t stali, 1957, Vol 36, pp 176-190

ABSTRACT: Three grades of technical iron from different melts were investigated by measuring the extinction rate of low-amplitude torsional oscillations of wire specimens 315 mm long and 0.7 mm in diameter, and also by measurement of the shear modulus and Young's modulus of elasticity during the aging process, and microstructure investigation by optical and electron microscopy. The moduli were determined by the natural frequency of the longitudinal and torsional oscillations of specimens 250 mm long and 4 mm in diameter. The single-stage quartz method was used in making copies. Stress relief was performed by annealing for 2 hours in vacuum at 700°C and cooling in the oven. Quenching was from 700° in 10% NaCl. A study was made of the change in the low-temperature peak of internal friction during the aging

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137-58-4-8150

The Aging of Technical Iron Investigated by the Internal-friction Method

process at 60, 80, 90, 100, and 120°. The number of C and N atoms in the solid solution was calculated by the magnitude of the change in the peak. It was established that the solubility of C and N in α Fe at room temperature is lower than the values quoted in the literature. The solid solution remains oversaturated both after quenching and after annealing at 700° and cooling for 10 hours. The rate of decomposition (RD) of the solid solution increases with a rise in aging temperature and degree of oversaturation. The aging process clearly divides into three periods: 1) the RD of the solid solution is low; 2) a rapid rise in RD, attaining a maximum, followed by a rapid drop thereafter; 3) a slow decline in RD. The quantity of the precipitated phase at various moments of aging is determined. It is found that the moduli of elasticity do not change in the course of the aging process.

A. F.

1. Iron--Aging--Analysis 2. Iron--Mechanical properties--Aging effects

Card 2/2

AUTHORS: Usova, L. F., Finkel'shteyn, B. N. SOV/163-58-1-30/53

TITLE: The Determination of the Activation Energy of the Aging of Technical Iron (Opredeleniye energii aktivatsii stareniya tekhnicheskogo zheleza)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 1, pp 163-168 (USSR)

ABSTRACT: The activation energy in the aging after the hardening of the technical iron alloys Nr 5 and 6 was investigated. The course of the kinetic curves of deformed samples, which depends on the various temperatures of aging, is analogous to the course of the aging curves after hardening. The activation energy was determined from the kinetic curves by two methods:
1) For every temperature the time is determined within which part of the C and N deposited in the iron are separated from the solid solutions. In the case of iron sample Nr 6 (in hardened state) the activation energy amounts to 13500±500 cal/mole, and for sample Nr 5 (in hardened state) to 20000±500 cal/mole. The activation energy of deformed samples of the iron alloy Nr 6 amounts to 8600 cal/mole.
2) The activation energy was calculated by means of the formula

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The Determination of the Activation Energy of the Aging of Technical Iron

$$H = \frac{4,6\ T_2 T_1}{T_2 - T_1} \lg \frac{\lg C_2}{\lg C_1} \qquad (2)$$

The activation energy calculated in this way for iron alloy Nr 6 amounts to 13000 - 16000 cal/mole, for iron alloy Nr 5: 18000 - 20000 cal/mole (both in hardened state). The activation energy may also be determined by its dependence on the internal friction as well as the frequency and the temperature occurring on that occasion. Taking into account this dependence the following formula was derived:

$$H = \frac{R\ T_1 \cdot T_2}{T_2 - T_1} \ln \frac{f_2}{f_1}$$

where H denotes the activation energy, R the gas constant, T_1 and T_2 the absolute temperatures at the maximum, f_1 and f_2 the frequency.

In using this formula for iron alloy Nr 6 15500±500 cal/mole were found for the activation energy at different frequencies. As may be seen from the result obtained the activation energy for iron alloy Nr 5 differs considerably from that of Nr 6. The lattice state in the alloys influences the activation energy.

The Determination of the Activation Energy of the Aging of Technical Iron

The state of the crystal lattices is influenced by various impurities.
There are 4 figures, 1 table, and 7 references, 3 of which are Soviet.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: October 1, 1957

USOVA, L.F.

PHASE I BOOK EXPLOITATION SOV/4617

Akademiya nauk SSSR. Komissiya po analiticheskoy khimii

Analiz gazov v metallakh (Analysis of Gases in Metals) Moscow, 1960. 334 p. (Series: Its: Trudy, t. 10) Errata slip inserted. 4,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii imeni V.I. Vernadskogo. Komissiya po analiticheskoy khimii.

Resp. Ed.: A.P. Vinogradov, Academician; Ed. of Publishing House: A.L. Bankvitser; Tech. Ed.: V.V. Bruzgul'.

PURPOSE: This book is intended for laboratory personnel concerned with gas analysis in metals.

COVERAGE: This collection of articles is based on materials of the Commission on Analytical Chemistry AS USSR on problems dealing with gas analysis in metals. The articles present data on: 1) The vacuum-fusion method, developed by Euro- pean scientists and the Soviet scientists N.P. Chizhevskiy and Yu.A. Klyachko, for the analysis of gases in steel and aluminum, and now applicable to analysis of gases in other metals. 2) The research of Z.M. Turovtseva and coworkers at the Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy AS USSR, Moscow, making it possible to evaluate the practicability and fields of application of the different analytical methods. 3) The contributions of Yu.A. Klyachko and coworkers in their study of thermodynamic methods for the evaluation of suitable conditions for carrying out analysis. 4) The deter- mination of gases in metals by the sulfurous method as developed by A.K. Bab- ko. 5) The spectrum isotope method for the determination of hydrogen as developed by A.N. Zaydel' and coworkers. The authors of these articles sys- tematize and review critically the various analytical methods, describe the apparatus used in analysis, and indicate the basic trends of research. Ref- erences accompany most of the articles.

III. APPARATUS FOR GAS ANALYSIS IN METALS

AVAILABLE: Library of Congress

Card 9/9

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2/6/61

14

USOVA, L. F.

PHASE I BOOK EXPLOITATION SOV/5305

Moscow. Institut stali

Relaksatsionnyye yavleniya v metallakh i splavakh; trudy Mezhvuzovskogo soveshchaniya (Relaxation Phenomena in Metals and Alloys; Transactions of the Inter-Institute Conference) Moscow, Metallurgizdat, 1960. 326 p.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR and Moskovskiy institut stali imeni I.V. Stalina.

Ed. (Title page): B.N. Finkel'shteyn; Ed. of Publishing House: Ye.I. Levit; Tech. Ed.: A.I. Karasev.

PURPOSE: This collection of articles is intended for personnel in scientific institutions and schools of higher education and for physical metallurgists and physicists specializing in metals. It may also be useful to students of these fields.

COVERAGE: The collection contains results of experimental and theoretical investigations carried out by schools of higher education and scientific research institutions in the field of the relaxation phenomena in metals and alloys. Several articles are devoted to the investigation—by the internal-friction method—of the decomposition of supersaturated solid solutions. Also analyzed are the defects of the crystalline lattice, plastic deformations, high-temperature behavior of alloys, and creep. Problems of the relation between internal friction and temper brittleness, the use of the method of internal friction in the investigation of powder-metallurgy products, and the mechanism of impact fatigue are discussed. The collection also contains articles on the damping characteristics of materials, elastic after-effect, and the new slow-detection method. No personalities are mentioned. References follow most articles. There are 366 references: 192 Soviet and 174 non-Soviet.

2/

USOVA, L.F.

Determina ion of gases in metals by the internal friction method.
Trudy kom.anal.khim. 10:215-224 '60. (MIRA 13:8)

1. Institut stali im. I.V.Stalina, Moskva.
(Gases in metals)

USOVA, L. K., GRYAZNOV, V. M., SINAYEV, Yu. P., and FROST, A. V.

"X-ray Investigation of Palladium Catalysts on Silica Gel.," Dokl. Ak. Nauk SSSR, 65, 367-70, 1949.

In catalysts with 1.41, 1.03, and 0.49% Pd, the lattice const. of Pd is identical with that of the massive metal. From the half-widths of the lines by Scherrer's formula, the Pd particles are cubic, and the length of the side of a particle, in the 1.41% Pd catalyst, is of the order of 240 A.
(Battelle)

SOLNTSEV, N.I.; USOVA, L.V.

Separate determination of copper, chalcocite, and bornite in ores; some investigations with digenite and betekhtinite. Sbor. nauch. trud. Gintsvetmeta no.19:756-772 '62. (MIRA 16:7)

(Copper ores—Analysis)

NIKONOVA, O.S., USOVA, M.F.

Cerebral melanomas [with summary in French]. Zhur.nevr. i psikh. 58 no.5:526-528 '58 (MIRA 11:7)

1. Klinika nervnykh bolesney (zav. kafedroy - prof. N.I. Grashchenkov) TSentral'nogo instituta usovershenstvovaniya vrachey i nervnoye otdeleniye bol'nisty imeni S.P. Botkina, Moskva.
(MELANOMA, case reports,
brain (Rus))
(BRAIN NEOPLASMS, case reports
melanoma (Rus))

USOVA, M.K.; IL'INA, N.A.; MEL'NIKOVA, Ye.M.

Clinical and physiological analysis of the effectiveness of acupuncture in radiculitis; preliminary communication. Zhur.nev. i psikh. 59 no.6:723-728 '59. (MIRA 13:1)

1. Laboratoriya igloterapii (nauchnyy rukovoditel' - prof. N.I. Grashchenkov) Instituta psikhiatrii (dir. - prof. D.D. Fedotov) Ministerstva zdravookhraneniya SSSR, Moskva.
(ACUPUNCTURE, in var. dis.
radiculitis (Rus))
(NERVES, SPINAL, dis.
radiculitis, acupuncture (Rus))

GRASHCHENKOV, N.I.; KASSIL', G.N.; USOVA, M.K.; VEYN, A.M.; IL'INA, N.A.; KAMENETSKAYA, B.I.; MEL'NIKOVA, Ye.M.

Application of acupuncture in certain diseases; clinical physiological investigations. Zhur.nevr.i psikh. 59 no.10:1159-1166 '59. (MIRA 13:3)

1. Laboratoriya reflektornoy terapii Instituta psikhiatrii (direktor - prof. D.D. Fedotov) Ministerstva zdravookhraneniya SSSR, Moskva.
(ACUPUNCTURE)

OSIPOVA, N.N.; USOVA, M.K.

Changes in vascular reactions during acupuncture in practically healthy people. Sbor. trud. GMI no.9:115-123 '62. (MIRA 17:2)

1. Dotsentskiy kursigloukalyvaniya, kafedra klinicheskoy i eksperimental'noy fiziologii (zav. kafedroy Ye.F. Polezhayev) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. - M.D. Kovrigina).

USOVA, M.M., Leningrad, 67, ul. Kurakina, d. 1/3 pavil'on, kv.25.

Osteosynthesis of fractures with metal and plastic nails. Vest.khir. 76 no.5: 37-44 Je '55. (MLRA 8:10)

1. Iz fakul'tetskoy khirurgicheskoy kliniki Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.-kafedroy-prof. P.N. Kapalkov)
(FRACTURES, surgery,
intramedullary nailing)

USOVA, M. M. Cand Med Sci -- (diss) "Treatment of closed fractures of the clavicle with ~~metalplastmass~~ plastic metal osteosynthesis." Len, 1957. 8 pp (Min of Health RSFSR. Len Sanitary Hygiene Med Inst), 200 copies (KL, 45-57, 99)

USOVA, M.M., assistent (Leningrad, Kurakina ul., 1/3, 32-y pav., kv.25)

1. Metal-plastic osteosynthesis for treating closed fractures of the clavicle [with summary in English]. Vest.khir. 78 no.4:62-65 Ap '57. (MLRA 10:9)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. P.N. Napalkov) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.
(CLAVICLE, fractures,
osteosynthesis (Rus))

USOVA, M.M.

EXCERPTA MEDICA Sec 9 Vol.12/6 Surgery June 58

3108. (74C) METAL AND PLASTIC OSTEOSYNTHESIS OF CLOSED CLAVICLE FRACTURES (Russian text) - Usova M. M. - VESTN. KHIR. 1957, 78/4 (62-65) Illus. 2

Shafts of stainless steel (E Ya I T) covered with a polymethylmethacrylic sheath were used for osteosynthesis of the clavicle. These shafts are found to be 2 or 3 times more reliable than those of organic glass. Fifty patients were operated upon with excellent results in 33, good in 11, fair in 5 and poor in one patient. The outcome in patients non-surgically treated was obviously worse, and the fitness for work was sooner regained by the former than by the latter.

USOVA, M.M., kand.med.nauk

Surgery for cancer of the large intestine as revealed by data of the Mechnikov Hospital from 1946 to 1958. Trudy LSGMI 59: 244-250 '60. (MIRA 14:9)

1. Fakul'tetskaya khirurgicheskaya klinika Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. klinikoy - prof. P.N.Napalkov).

(INTESTINES--CANCER)

USOVA, M.M.

Transnasal tubage & déneure of the stomach and small intestine following resection and gastrectomy. Trudy LSNII 24:225-231 '54. (MIRA 17:10)

USOVA, Mariya Mikhaylovna; TEL'MAN, I.M., red.; ONOSHKO, N.G., tekhn. red.

[Closed injuries of the clavicle] Zakrytye povrezhdeniia kliuchitsy. Leningrad, Medgiz, 1963. 103 p. (MIRA 16:10)
(CLAVICLE--FRACTURE)

USOVA, M.M. (Leningrad, K-67, ul. Kurakina, 1/3, kv. 13)

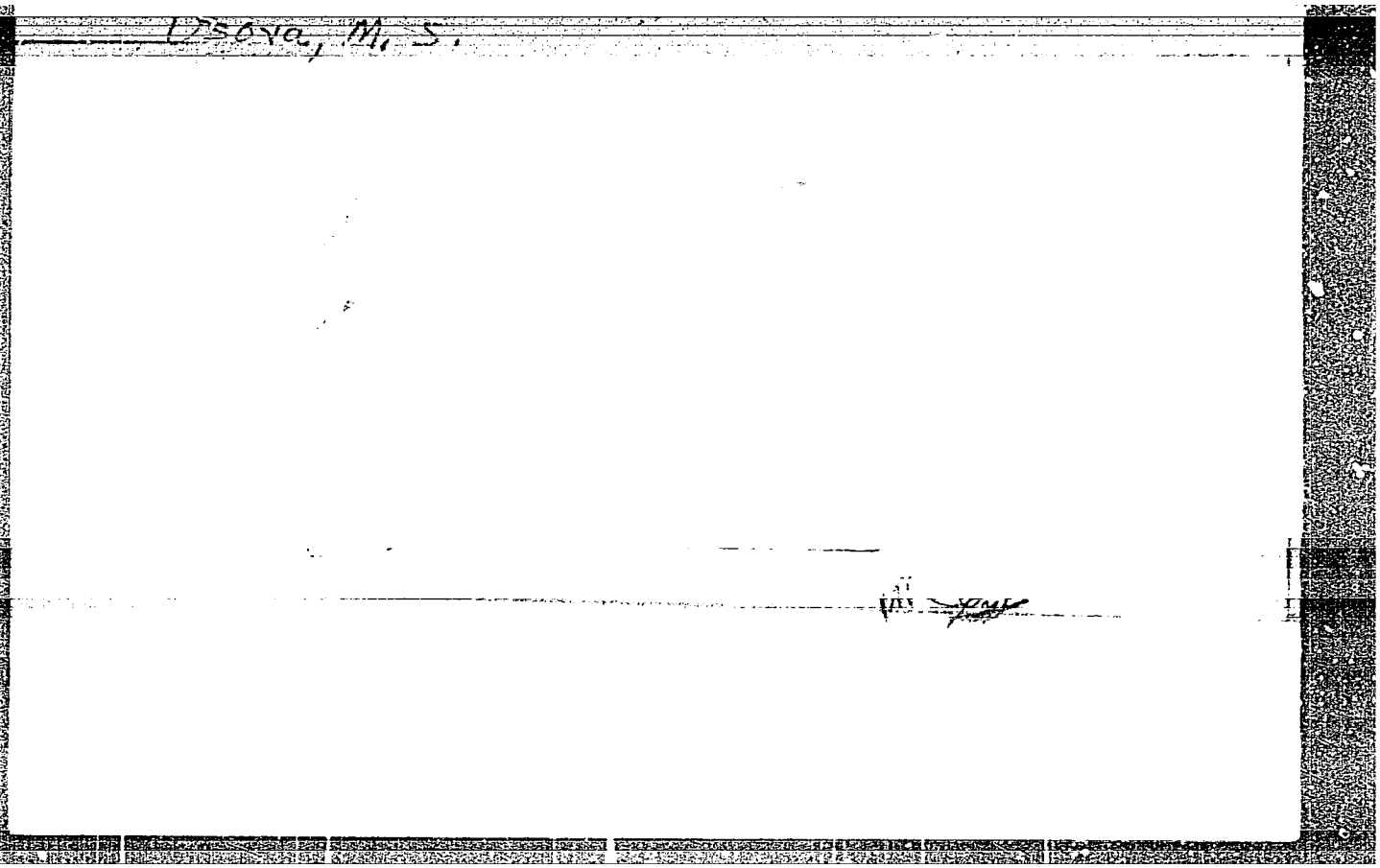
Some problems in the surgery of rectal tumors. Vop. onk. 10 no.2:111-115 '64. (MIRA 17:7)

1. Iz kliniki khirurgicheskikh bolezney Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. - zasluzhennyy deyatel' nauki prof. P.N. Napalkov).

USOVA, M.M., kand. med. nauk (Leningrad, K-17, Zabaykal'skaya ul., 12, kv.33)

Simple stand for easy application of a plaster cast to the leg.
Vest. khir. 92 no.6:107-108 Je '64. (MIRA 18:5)

1. Iz kliniki khirurgicheskikh bolezney (zav. - prof. P.N. Napalkov)
Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.



Usova, M. S.

USSR/Analysis of Inorganic Substances G-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19598

Author : Z. V. Pushkareva, M. S. Usova, O. I. Levchenko
Inst : Polytechnical Institute of Uralsk
Title : To The Question of Utilizing Organic Compounds in Analysis of Platinum Metals and Gold. Report I. Power of Series of Heterocyclic Compounds to Precipitate Platinum Metals from Solutions.

Orig Pub: Tr. Ural'skogo Politekhn. In-ta, 1956, sb. 57, 183 - 191.

Abstract: The power of 23 heterocyclic compounds (HC) - derivatives of pyridine, quinoline, acridine, phenazine, pyrimidine, sulfathiazole and phenothiazine containing Cl, NH_2, NO_2, OH, SH and OCH_3

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Abs Jour: Ref.Zhur-Khimiya, No 6, 1957, 19598

as substitutes - to precipitate platinum metals (PM) was studied qualitatively. Some sulfamides containing heterocyclic groups and complex derivatives of acridine were studied also. The study of PM precipitation was carried out at pH 0 and 2 at the indoor temperature and at 100°. It was shown that the capacity of HC to produce complexes with PM increased together with the molecule polarity. Among all the studied HC, phenothiazine produced the most stable complexes with PM and it was recommended for the quantitative determination of PM. None of the studied HC produced precipitations with non-precious metals under described conditions. Among the studied HC there was none

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19598

that would act sufficiently selectively on any individual PM.

USOVA, M.S.

Category: USSR/Analytical Chemistry - General Questions. G-1

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30932

Author : II. Usova M. S., Pushkareva Z.V., Levchenko O. I.
III. Usova M. S., Gayeva N. F.

Inst : Urals Polytechnical Institute

Title : Use of Organic Compounds in the Analysis of Platinum-Group Metals and Gold. Communication II. Precipitation Capacity of Some Noble Metals in the Urea, Thiourea and Guanidine Series. Communication III. Use of Phenothiazine for the Determination of Platinum in Alloys.

Orig Pub: Tr. Ural'skogo politekhn. in-ta, 1956, sb. 57, 192-200; 201-206.

Abstract: II. Report of the results of qualitative tests on the capacity of some substituted urea, thiourea (I) and guanidine (II) compounds, to precipitate platinum metals (PM) from solution. Introduction of phenyl- and heterocyclic residues into the molecules of I and II, clearly enhances the capacity of I and II to precipitate noble metals from solution. The introduction into the

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Category: USSR/Analytical Chemistry - General Questions. G-1

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30932

phenyl rings of diphenyl-thiourea of COOH and SO_2NH_2 groups promotes the secondary process of precipitation of common metals. The capacity of I and II to precipitate Rh increases on transition from derivatives of II to derivatives of I, while on the other hand precipitation of Ir is observed more frequently in the II series. Introduction of a third substituent into the molecule of II decreases considerably the solubility of the compounds formed with PM. The results thus obtained permit to select a number of derivatives of I and II for further study, of their properties as analytical reagents.

III. A study of the capacity of phenothiazine to precipitate specific PM (Pt, Pd, Rh and Ir), for the purposes of qualitative analysis, and also the description of a quantitative method which has been developed for the determination of Pt in solutions of pure Pt salts, in artificially produced mixtures and in silver-platinum alloys, by precipitation with phenothiazine, followed by calcination of the resulting precipitate to metallic Pt. Communication I, see RZhKhim, 1957, 19598.

Card : 2/2

-13-

UL'YANOV, Andrey Vladimirovich; KHEL'KVIST, German Avgustovich; USOVA, N., redaktor; TROFIMOV, A.V., tekhnicheskiy redaktor.

[Geology of oil and gas deposits] Geologiia neftianykh i gazovykh mestorozhdenii. Moskva, Gos.nauchno-tekhn.izd-vo neftianoi i gorno-toplivnoi lit-ry, 1955. 297 p. (MLRA 8:12)
(Petroleum geology)

TOPCHIYEV, A.V., akademik, redaktor; TROFIMUK, A.A., redaktor; TREBIN, F.A., doktor tekhnicheskikh nauk, redaktor; FEDYNSKIY, V.V., doktor fiziko-matematicheskikh nauk, redaktor; SUKHANOVA, V.P., inzhener, redaktor; POSTNIKOV, V.G., redaktor; VOL'FSON, S.I., redaktor; BEKHMAN, Yu.K., vedushchiy redaktor; KOVALEVA, A.A., vedushchiy redaktor; PERSHINA, Ye.G., vedushchiy redaktor; SAVINA, Z.A., vedushchiy redaktor; USOVA, N.G., vedushchiy redaktor; ZAMARAYEVA, K.M., vedushchiy redaktor; NOVIKOVA, M.M., vedushchiy redaktor; L'VOVA, L.A., vedushchiy redaktor; YERSHOV, P.R., vedushchiy redaktor; POLOSINA, A.S., tekhnicheskiy redaktor; TROFIMOV, A.V., tekhnicheskiy redaktor

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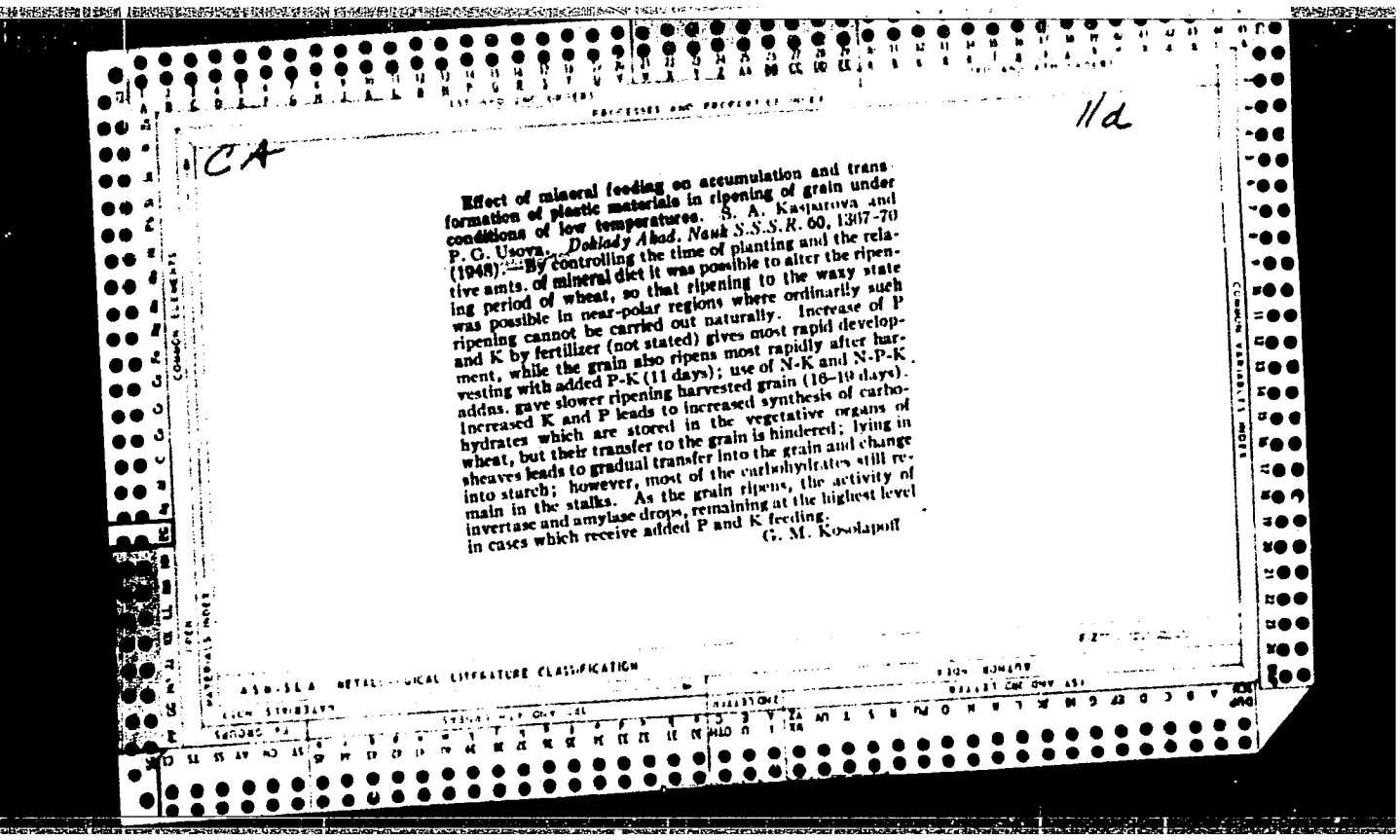
(Prospecting--Geophysical methods) (Petroleum--Refining)
(Gas, Natural)

SHCHERBAKOV, B.I.; USOVA, N.P.

Concentration of cell sap and drought resistance of plants.
Trudy Inst. bot. AN Kazakh.SSR 16:97-117 '63 (MIRA 17:8)



CA

11d

Effect of mineral feeding on accumulation and transformation of plastic materials in ripening of grain under conditions of low temperatures. S. A. Kasparova and P. G. Usova. *Doklady Akad. Nauk S.S.S.R.* 60, 1307-70 (1948).—By controlling the time of planting and the relative amts. of mineral diet it was possible to alter the ripening period of wheat, so that ripening to the waxy state was possible in near-polar regions where ordinarily such ripening cannot be carried out naturally. Increase of P and K by fertilizer (not stated) gives most rapid development, while the grain also ripens most rapidly after harvesting with added P-K (11 days); use of N-K and N-P-K addns. gave slower ripening harvested grain (16–19 days). Increased K and P leads to increased synthesis of carbohydrates which are stored in the vegetative organs of wheat, but their transfer to the grain is hindered; lying in sheaves leads to gradual transfer into the grain and change into starch; however, most of the carbohydrates still remain in the stalks. As the grain ripens, the activity of invertase and amylase drops, remaining at the highest level in cases which receive added P and K feeding.

G. M. Kosolapoff

GRAVE, N.A. [translator]; TOLSTOV, A.N. [translator]; USOVA, T.V. [translator]; CHEKOTILLO, A.M. [translator]; YEFIMOV, A.I., red.; ZNAMENSKAYA, V.K., red.; GRIBOVA, M.P., tekhn. red.

[Frozen ground of Alaska and Canada; a collection of articles] [Translated from the English] Merzlye gornye porody Aliaski i Kanady; sbornik statei. S predisl. A.I. Efimova. Moskva. Izd-vo inostr. lit-ry, 1958. 262 p. (MIRA 11:7)
(Alaska--Frozen ground) (Canada--Frozen ground)

USOVA, Valentina [Usava, Valiantsina]

Glorious and famous daughter of our country. Rab. i sial. 39 no.7:2 of cover Jl '63. (MIRA 16:11)

1. Sekretar' partiynogo kombinata "Chyrvony Perakop", g. Yaroslavl'.

KOZLOV, M.A.; USOVA, V.P.

Treatment of metastasis of a fibrosarcoma of the uterus in the greater omentum; one observation. Vop. ork. 17 no.[illegible] '55. (MLRA 10:8)

1. Iz ginekologicheskogo otdeleniya mediko-sanitarnoy chasti "Cherepovetsmetallurgstroya". Cherepovets, Vologodskaya oblast' (glavnyy vrach - D.F.Frolenko).

USOVA, V.V.; LAYNER, V.I.

Copper plating of titanium and its alloys. Izv. vys. ucheb. zav.; tsvet. met. 6 no.4:132-137 '63. (MIRA 16:8)

1. Moskovskiy institut stali i splavov, kafedra korrozii i zashchity metallov.
(Titanium—Electric properties)
(Copper plating)

L 56025-65 EWT(m)/EWP(t)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c) MJW/JD
ACCESSION NR: AP5016352

AUTHOR: Usova, V. V.; Layner, V. I.

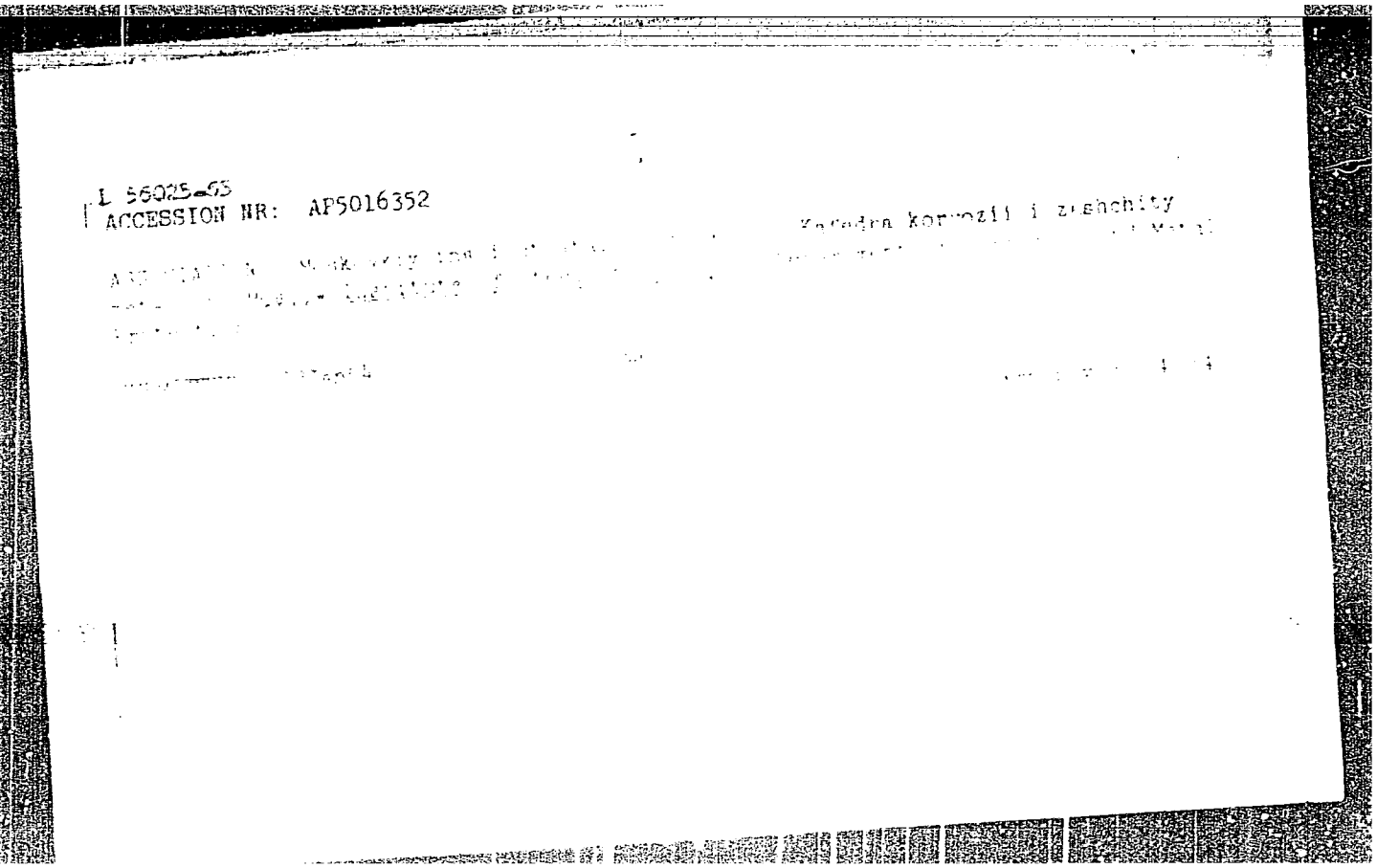
TITLE: Effect of heat treatment on the adhesion strength of electrolytic copper and nickel coatings to titanium

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 2, 1965, 147-150

TOPIC TAGS: titanium, titanium plating, electroplating, adhesion, coating adhesion, adhesion strength, copper coating, nickel coating/VT titanium

ABSTRACT: The effect of heat treatment on the adhesion strength of [illegible] kg/cm² by annealing at [illegible] 30 min increases the adhesion strength [illegible] over 350 kg/cm². This increase in adhesion strength is a result of the formation of a diffusion layer at the interface of the base metal and coating. [illegible] the annealing temperature [illegible] metallic compounds, which decrease the strength of adhesion. [illegible] 5 figures and 1 table. [ND]

Card 1/2



L 56025-65
ACCESSION NR: AP5016352

L 28067-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6015289 (N) SOURCE CODE: UR/0365/66/002/003/0331/0335

30
B

AUTHOR: Usova, V. V.; Layner, V. I.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: The activation of titanium surface prior to electroplating

SOURCE: Zashchita metallov, v. 2, no. 3, 1966, 331-335

TOPIC TAGS: titanium, titanium electroplating, titanium activation

ABSTRACT: The chemical and phase composition of the surface layer formed on titanium during activation in a mixture of ethylene glycol, 48% hydrofluoric acid, and zinc fluoride has been investigated. The investigation showed that the activated layer consists of titanium hydride and zinc hydride. The weight of the layer depends on the duration of activation and the concentration of hydrofluoric acid, and varies from 0.1—0.4 mg/cm^2. The hydrogen content of the layer depends on the temperature of activation and the concentration of the hydrofluoric acid. For instance, at a hydrofluoric acid concentration of 90 g/l and a temperature of 14 or 30C the respective hydrogen content is 0.059% or 0.017%. At an acid concentration of 70 g/l, the corresponding figures are 0.027 and 0.0084%. The optimum conditions of activation were found to be: hydrofluoric acid concentration 75—95 g/l, temperature 16—20C, maximum duration of treatment 2 min. The layer formed at 30C is rich in zinc, poor in hydrogen, and is loose to such an extent that it is washed away during

Card 1/2 UDC: 621.357.7