

I 22121-66

ACC NR: AP6004921

300 Mcs by the coaxial-line method. Other specific properties of BiFeO_3 in addition to the large internal fields and large spontaneous polarization, were a high Curie temperature (850C), and the absence of nonlinear properties at room temperature. An analysis of all the published data and the present results shows that in spite of the fact that the spontaneous electric polarization of BiFeO_3 is very high, so that no dielectric hysteresis loops could be obtained, this substance is ferroelectric. Various reasons for this conclusion are discussed. An analysis of the magnetic properties below the Neel temperature (370C) also shows that BiFeO_3 has compensated ferromagnetism in addition to ferroelectricity. Orig. art. has: 5 figures.

SUB CODE: 20,07/ SUBM DATE: 17Aug65/ ORIG REF: 022/ OTH REF: 002

Card 2/2 BK

SECRETARY OF DEFENSE

MEMORANDUM FOR THE SECRETARY OF DEFENSE
SUBJECT: [Illegible]

PETROV, Vitaliy Nikolayevich; KHEZIN, Grigoriy Sergeevich;
FAYNBOYM, I.B., red.

[Radio communication in outer space] Kosm' neskaja radio-
svyaz'. Moskva, Izd-vo "Znanie," 1964. 43 p. (Novoe v
zhizni, nauke, tekhnike. Ia seriya: Fizika, matematika,
astronomiya, no.13) (MIRA 17:7)

KRAVTSIV, V.I.; PETROVA, G.M.

Galvanostatic investigation of the processes involved in
the charge exchange of chloride complexed of iridium.
Dokl. AN SSSR 154 no.2:433-436 Ja'64. (MIRA 17:2)

1. Leningradskiy gosudarstvennyy universitet im. A.A.
Zhdanova. Predstavleno akademikom A.N. Frumkinym.

500/13 40-1-1-21

AUTHORS: I. B. Petro, V.I. Petro, V.M. Petro, S.V. Petro, S.I. Petro, V.F. Petro, V.I. Petro

TITLE: Study of the Kinetics and Mechanism of Reaction in the Reaction of Magnesium Concentrate with Fluorinated-Red Oxide (Inorganic compound) and Polyvinyl Chloride (PVC) and Chloride Radical Polymerization

PERIODICAL: Technology of Metals, No. 11, 1980 (USSR)

ABSTRACT: The reaction mechanism in some polymeric materials... composition... (total) C. 7.8% H. 2.0% S. 0.0% SiO2. 0.0% H2O. 2.2%... The reaction mechanism... (total) 0.0% S. 0.0% H. 0.0% SiO2. 0.0% H2O. 2.2%... distribution of radium in

001/13 1/22

Study of the Behavior and Recovery of Radium in the Reactor
Molybdenum Catalyst

... 10% ...
 ... VSTU ...
 ... (Fig. 1) ...
 ... (Fig. 2) ...
 ... 30-40 ...
 ... 0.30 ...
 ... The ...
 ... (Fig. 2) ...
 ... recovery ...
 ... enters ...
 (28.5% M, 17.5% S (total), 2.31% SiO₂, 4.0% Ca)

Cont 2/3

307/25 0-41-3/21

Study of the Behavior and Recovery of Elements in the Roasting of
 Molybdenite Concentrates in a Fluidized-Bed Roaster
 3.50% CaO, 7.15% Fe, 0.21% W, 0.04% Re) at 590-630°C
 and an air velocity in the range of 2-3 m/sec (giving
 an hourly productivity of 75-80 kg/m² of reactor area).
 The materials balance (table 3) for a 12 hour run shows
 that the method is feasible with such concentrates;
 the distillation of mercury will be 0.2% of the quantity
 in the concentrate. There are 2 figures and 3 tables.

Card 3/3

MOISEYEV, Aleksey Grigor'yevich; PETROV, Viktor Mikbaylovich; VOLKOV, I.V., retsenzent;
VERBITSKAYA, Ye.M., red.; SHUB, L.S., spets.red.; SHVETSOV, S.V., tekhn.red.

[Manual for engraving of textile patterns] Rukovodstvo po
gravirovaniu tekstil'nogo risunka. Moskva, Izd-vo nauchno-
tekhn.lit-ry RSFSR, 1961. 147 p. (MIRA 15:2)
(Textile printing) (Engraving)

24770

S/070/62/007/003/008/026
E132/E460

AUTHOR: Petrov, V.M.

TITLE: Dielectric and nonlinear properties of Rochelle salt
at superhigh frequencies

PERIODICAL: Kristallografiya, v.7, no.3, 1962, 403-407

TEXT: The results of measuring the reversible characteristics ϵ (dielectric constant) and $\tan \delta$ (loss) of Rochelle salt crystals at frequencies of 1000 to 3000 Mc/s and the nonlinearity at 200 Mc/s in the temperature interval 18 to 36°C are given. Other measurements have been made in this range of frequencies by H. Akao and T. Sasaki (J. Chem. Phys., v.23, no.12, 1955, 2210-2214) and W. Jackle (Z. angew. Phys., v.12, no.4, 1960, 148-155) and attention was, therefore, concentrated on the SHF dependence of ϵ and $\tan \delta$ on the displacing voltage (reversible characteristic) and on the nonlinear properties. Graphs are given of the temperature dependence of the initial ϵ at various frequencies; the reversible characteristic of ϵ and $\tan \delta$ at 20°C at 1 and 3 Gc/s; the temperature dependence of ϵ and $\tan \delta$ at 3 Gc/s for different displacement fields; the dependence of the mean
Card 1/2

Dielectric and nonlinear properties ... S/070/62/007/003/008/026
susceptibility over a period on the amplitude of the electric E132/E460
field at 200 Mc/s for different temperatures. There are
5 figures. /c

ASSOCIATION: Moskovskiy gosudarstvennyy universitet
im. M.V.Lomonosova (Moscow State University imeni
M.V.Lomonosov)

SUBMITTED: June 19, 1961

Card 2/2

YEVFIMENKO, I.M.; PETROV, V.M.

Basic features of the magmatic activity and metallogeny of the
Zirabulak-Ziaetdinskiye Mountains in western Uzbekistan. Zakonom.
razm. polezn. iskop. 5:229-250 '62. (MIRA 15:12)

1. Sredno-Aziatskiy nauchno-issledovatel'skiy institut geologii i
mineral'nogo syr'ya.
(Uzbekistan—Ore deposits)

L 10110-63

SSD Ps-1/Pab-1/P1-1/Pol-1 AT/IJP(G) EWG(k)/EWT(1)/ERC(b)-2/ES(w)-2/RDS AFFTC/ASD/ESD-3/AFWL/
ACCESSION NR: AP3001172 E/0089/63/014/005/0443/0445

AUTHOR: Bayborodov, Yu. T.; Ioffe, M. S.; Petrov, V. M.; Sobolev, R. I.

TITLE: Adiabatic trap with combined magnetic field

SOURCE: Atomnaya energiya, v. 14, no. 5, 1963, 443-445

TOPIC TAGS: adiabatic traps, combined magnetic fields, confinement of plasma

ABSTRACT: Results are presented of experiments in plasma confinement by means of a PR-5 adiabatic trap with magnetic mirrors, in which the magnetic field grows in longitudinal and radial directions. The concept behind such a trap is that the growth of the field in a radial direction prevents the development in the plasma of convective instability, which provokes the escape of plasma across the magnetic field. Such a stabilizing field was generated by means of stabilizing windings added to the longitudinal field coils. At a sufficiently large stabilizing-field intensity, the lifetime of plasma in the trap increases considerably. The intensity of the longitudinal field in the central part of the trap and of the stabilizing field reached 5000 and 4500 oe, respectively, and the preliminary

82
81

Card 1/2

L 10110-63
ACCESSION NR: A-001172

pressure in the chamber reached 1×10^{-6} mm Hg. A differential system of evacuation by means of titanium pulverized directly on the inner surface of the chamber kept the pressure in the central part of the chamber at 5×10^{-8} mm Hg with a steady admission of hydrogen at 500 cm³/hr into the plasma source. "Magnetronic" injection was used to fill the trap with plasma. In these experiments n is approximately equal to 10^9 cm⁻³, $T_{sub i}$ is approximately equal to 5 kev, and $T_{sub e}$ is approximately equal to 20 ev. The effect of the stabilizing field on the confinement features of the trap was determined from the dependence of plasma-decay-time variation on the field. It was found that plasma decays 35 times slower when the field equals 1500 oe than when it equals zero. The absolute value for plasma decay during a stabilized mode was 3.5 millisecc, as compared with 0.5 millisecc obtained in previous experiments. This difference is associated with the different pressure of the neutral gas in the chamber and proves that the decay is due to charge exchange. The maximum decay time obtained with this device (at still lower pressure) reached 10--15 millisecc. "The authors express thanks to L. A. Artsimovich for his continuing interest in the work, his contribution to its execution, and his extremely valuable discussion of the results." Orig. art. has: 3 figures.

ASSOCIATION: none
SUBMITTED: 11Apr63
SUB CODE: 100/ekm
Card 2/2

DATE ACQ: 21Jun63
NO REF SOV: 004

ENCL: 00
OTHER: 001

SMIRNOV, B.V., doktor tekhn.nauk; PETROV, V.M., inzh.

Study of square impulse transmission using 6 to 10 kv. power
distribution and a zero sequence network. Nauch. trudy VIESKH
11:231-261 '62. (MIRA 16:3)
(Electric power distribution--Communication systems)

PETROV, V.M.

Tungsten-molybdenum ore formations in the Pskov-Chatkal
region. Vop. geol. Uzb. no. 3:5-16 . . . (MIRA 16:6)

(Chatkal Range--Ore deposits)

RAYBORODOV, U. T.; IOFFE, M. S.; PETROV, V. M. and SOBOLEV, R. I. 3

Adiabatic Trapping with Combined Magnetic Fields

report presented at the Study Group on Mirror Configurations, Fontenay-aux-Roses, France, 15-19 Jul 1963.

---HABIY, L.T., kand. sel'khoz. nauk; STOLLYAR, T.A., kand. sel'khoz. nauk; ASANOV, P.M., assistent; SELYANSKIY, V.M., kand. sel'khoz. nauk; LOBIN, N.V., kand. sel'khoz. nauk; KOVIN'KO, D.A., kand. biol. nauk; MASLIYEVA, O.I., kand. sel'khoz. nauk; PETROV, V.M., kand. veter. nauk; ANAN'YEV, P.K., kand. veter. nauk; PENIONZHKEVICH, E.E., doktor biol. nauk, prof.; SERGEYEVA, A.M., kand. sel'khoz. nauk; BALANINA, O.V., kand. sel'khoz. nauk; GRIGOR'YEV, G.K., st. nauchnyy sotr.; KRIKUN, A.A., Geroy Sotsialisticheskogo Truda, kand. sel'khoz. nauk; YAROVOY, P.F., kand. veter. nauk; BELOKOBYLENKO, V.T., nauchnyy sotr.; GROMOV, A.M., kand. sel'khoz. nauk; MOSIYASH, S., red.; NAGIBIN, P., tekhn. red.

[Handbook for poultrymen] Kniga ptitsevoda. Alma-Ata, Kazsel'khozgiz, 1962. 354 p. (MIRA 16:5)
(Kazakhstan--Poultry)

PETROV, V.M.

Structure and genesis of the Unkurtash tungsten-molybdenum deposit.
Uzb.geol.zhur. no.5:24-30 '59. (MIRA 23;5)

1. Glavnoye upravleniye geologii i okhrany nedr.
(Unkurtash region (Uzbekistan)--Tungsten ores)
(Unkurtash region (Uzbekistan)--Molybdenum ores)

9.2181 (2303, 3203)
24.7800 (1144, 1162)

85882

S/O48/60/024/011/018/036
B006/B056

AUTHOR: Petrov, V. M.

TITLE: The Nonlinear Properties of Ferroelectrics on s.h.f.

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,
Vol. 24, No. 11, pp. 1372 - 1375

TEXT: The present paper is a reproduction of a lecture delivered on the 3rd Conference on Ferroelectricity, which took place in Moscow from January 25 to 30, 1960. The author first reports on measurements of ϵ and $\tan \delta$ as functions of a constant electric displacement field E at 10 cm wave length on BaTiO₃ ceramics and monocrystals as well as various variconds (Refs. 1,2), and on results obtained by others. Within the framework of these measurements the $\epsilon(E_{\sim})$ -curves of BaTiO₃ and of variconds at 3000 Mc/sec were recorded; the method of coaxial measuring lines used is described in Ref.5. For the sample dimensions it holds that $d < \lambda/2\sqrt{\epsilon}$, $r_1 < \lambda/14\sqrt{\epsilon}$ ($d = 0.5$ mm, $r_1 = 0.2$ mm). In this case, as

Card 1/4

The Nonlinear Properties of Ferroelectrics
on s.h.f.

85882

S/048/60/024/011/018/036
B006/B056

shown in Ref.6, the s.h.f.-field in the volume of the samples is homogeneous with an accuracy of up to 5%. The reciprocal value of the pulse duty factor of the field was 12,500, by which heating of the sample could be avoided. Fig.1 shows a block diagram of the measuring arrangement. The results obtained by measuring the dependence $\xi(E_{\sim})$ of BaTiO_3 showed that up to $E_{\sim} = 10$ kv/cm, ξ is constant and does not depend on the amplitude of the field, whereas ξ increases from variconds on the BaTiO_3 -basis (type BK-2 (VK-2)) at 50 cps to the 20-30-fold if E_{\sim} is changed from 0 to 0.8 kv/cm. Fig.2 shows the results obtained. Fig.3 shows $\xi(E_{\sim})$ for the more temperature-stable variconds of the type SK-4 (VK-4). The materials of these variconds were 2SZ, 0.5SZ, and 0.5SH. Finally it is found that BaTiO_3 and the most nonlinear solid solutions on a BaTiO_3 basis have no noticeable nonlinearity at 3000 Mc/sec up to field strengths of 7 kv/cm. This result agrees also with rf-measurements (see A. A. Obukhov, Ref.7). The author thanks I. V. Ivanov for valuable advice and T. N. Verbitskaya for placing the varicond samples and data on them at his disposal. There are 3 figures and 7 references:

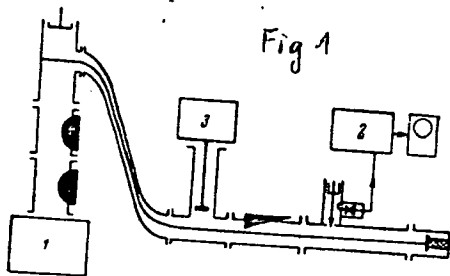
Card 2/4

The Nonlinear Properties of Ferroelectrics
on s.h.f.

S/048/60/024/011/018/036
B006/B056

5 Soviet, 1 Australian, and 1 Czechoslovakian.

ASSOCIATION: Kafedra teorii kolebaniy Fizicheskogo fakul'teta
Moskovskogo gos. universiteta im. M. V. Lomonosova
(Chair of the Theory of Oscillations of the Department of
Physics of Moscow State University imeni M. V. Lomonosov)



Legend to Fig.1: 1) Pulse generator
(80 kw, 80 cps, pulse duration 1 μsec).
2) Pulse amplifier of the type 103И
(103I), which serves as standing wave
indicator, together with the oscillo-
graph of the type VO-3 (IO-3). 3) Co-
axial attenuator of the type УУМ-10
(ИММ-10).

Рис. 1. Блок-схема установки для измерения
зависимости ε от E_0 на частоте 3000 MHz

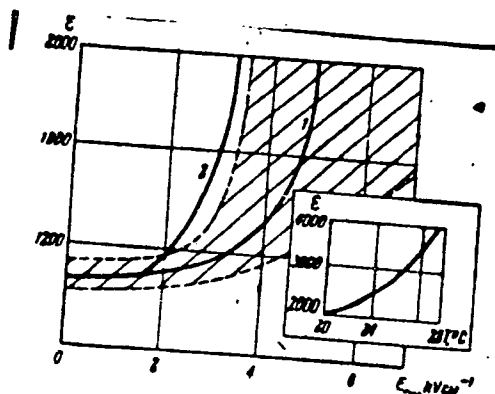
Card 3/4

P5882

S/048/60/024/011/018/036
B006/B056

Legend to Fig.2: $\sigma(E_{\sim})$ for VK-2 type material. 1) 80 cps, 2) 240 cps.

Fig.2



Card 4/4

PETROV, V. M., Cand. Tech. Sci. (diss) "Study of Roasting in Boiling Layer of Rhenium-containing Molybdenum Concentrates," Moscow, 1961, 19 pp. (Krasnoyarsk Inst. Non-Ferr. Metals) (KL Supp 12-61, 272).

PETROV, V. M., BAĬTURINA, O. Sh., PODLINOV, I. S., AĬSEN, Ye. A. and KLEYNOBK, Ya. I.

"Bronchial pneumonia in lambs."

Veterinariya, Vol. 37, No. 8, 1960, p. 51

Petrov. Caud Vet Sci., Vet Inst, Kazakh Acad Agric Sci.

VOSKRESENSKIY, V.P., inzh.; KOROJKOVA, V.P., inzh.; BAZKHON, I.S.,
inzh.; PETROV, V.M., inzh.

Review of P.D. Dorokhin's article "Are line separators
necessary?" Elek.sta. 31 no.5:91-93 My '60.

(MIRA 13:8)

(Electric power distribution)

(Electric switchgear)

PETROV, V. M.

USSR/Fern Animals. Small Horned Cattle

Q-3

Abstr Jour : Ref Zhur - Biol., No 11, 1958, No 50038

Author : Kleynbok, Ya.I., ~~Petrov V.M.~~, Petrov K.N.
Inst : Alma-Ata Zoological Institute of Veterinary Sciences.
Title : Protein and Vitamin Deficiency in the Diet of Animals as Disease Factors.

Orig Pub : Tr. Alma-Atinsk. zoovet. in-ta, 1956, 9, 121-138

Abstract : An experimental group of cows whose diet lacked the necessary amounts of proteins and vitamins, received the following concentrates starting with the last third of their pregnancy: 480-240 mg units of vitamin A; 50 thousand units of vitamin D, and 1 mg of vitamin E. In addition to their fodder, calves from these cows received 20 thousand units of vitamin A every 5-10 days, 50 thousand units of vitamin D once every 5 days, and 100-250 gr of ascorbic acid daily for the first 7 days of their lives. Control groups did not receive any vitamins. In the experimental group calving required assistance during labor in 63.2 percent of the cases, in

Cord : 1/2

KISELEV, P.I., kand.tekhn.nauk; PETROV, V.I. inzh.; SIDOROV, P.A., inzh.;
SHIRSHOV, V.I., inzh.

Further improvement of anthracite culm grinding ball mills. Elek.
sta. 32 no.12: -5 D '61. (MIRA 15:1)
(Milling machine) (Electric power plants--Equipment and supplies)

PETROV, V.M.

Some so-called "transverse deep faults" in Central Asia. Uzb.geol.
zhur. 7 no.5:80-84 '63. (MIRA 17:3)

1. Institut geologii im. Kh.M.Abdullayeva AN UzSSR.

PETROV, V.M.; SHIROKOV, A.M.

New method for studying the repolarization of ferroelectric substances. Vest. Mosk. un. Ser. 3: Fiz., astron. 17 no.3:59-62 My-Je '62. (MIRA 15:6)

1. Kafedra teorii kolebaniy Moskovskogo universiteta. (Polarization (Electricity)) (Ferroelectric substances)

KISELEV, P.I., kand. tekhn. nauk.; KULAKOV, V.T., inzh.; PETROV, V.M., inzh.;
SIDOROV, P.A., inzh.; SHIRSHOV, V.P., inzh.

Improvements in ball mills. Elek. sta. 29 no.10:15-18 0 '58. (MIRA 11:11)
(Milling machinery)

PETROV, V. M.

81892
S/181/60/002/05/35/041
B004/B056

9.2180
24.7800

AUTHOR: Petrov, V. M.

TITLE: Some Properties of Seignette Electrics at 3,000 Mc/s

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 5, pp. 997 - 1001

TEXT: It was the aim of the present paper to test the applicability of Seignette electrics in superhigh-frequency circuits. The dependence of the dielectric constant ϵ and of $\tan \delta$ of the phase angle on a constant shifting field E_{\sim} in a weak superhigh-frequency field $E_{\sim} = 10$ v/cm was measured at $19 \pm 1^{\circ}\text{C}$. E_{\sim} was varied between 0 and 16-22 kv/cm. The measuring technique was described in an earlier paper (Ref. 5). The circuit used for measurement was similar to the ИКЛ-10М (IKL-10M) circuit. Measurements were carried out on monocrystalline barium titanate and on ceramic (polycrystalline) BaTiO_3 , as well as on BK-1 (VK-1) material which consisted of barium titanate with admixtures of lead oxide. The characteristics for ϵ and $\tan \delta$ (phase angle) are shown in Figs. 1-3. The author arrives at the following conclusions: At a frequency of

UK

Card 1/3

81892

Some Properties of Seignette Electrics
at 3,000 Mc/s

S/181/60/002/05/35/041
B004/B056

3,000 Mc/s relaxation processes occur in all substances investigated: ϵ is reduced to one-half compared to the value for low frequencies, and $\tan \delta$ is considerably higher than at radio frequencies. The losses in monocrystalline BaTiO_3 are considerably lower than in polycrystalline BaTiO_3 . When applying a constant electric field, ϵ and $\tan \delta$ are reduced, and ϵ drops to half its value. In E_{max} , ϵ and $\tan \delta$ show hysteresis phenomena. After E_{max} has been switched off, the values of ϵ and $\tan \delta$ remain lower as before E_{max} has been applied. As at low frequencies, Seignette ceramics show signs of aging also at superhigh-frequencies. In the case of fresh material, ϵ and $\tan \delta$ are higher, and the dependence of these two quantities on E_{max} is more distinctly marked than in the case of material that had been exposed to room temperature for some time. The reversible dependences of the ϵ of Seignette electrics might be used for the tuning of resonators, for the electric control of circuits, and for frequency modulation. This applicability is, however, restricted by hysteresis phenomena and heavy losses. The author thanks I. V. Ivanov for the interest he displayed in these problems, and T. N. Verbitskaya for placing the samples at his disposal and for

Card 2/3

Some Properties of Seignette Electrics
at 3,000 Mc/s

81892
S/181/60/002/05/35/041
B004/B056

discussions. There are 3 figures and 6 references: 1 Soviet, 3 British,
1 Czechoslovakian, and 1 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: January 28, 1959

LL

Card 3/3

PETROV, V.M.; ZAREVICH, I.P.

Dike intrusions in the Unkurtash ore deposit and their structural characteristics. Uzb. geol. zhur. no.6:58-64 '60. (MIRA 14:1)

1. Glavgeologiya UzSSR.
(Uzbekistan—Dikes (Geology))

DOBRYNIN, Ye.M., kand. tekhn. nauk; PETROV, V.M., inzh.; SMIRNOVA,
G.V., tekhn. red.

[Instruments for welding shops] Apparatura svarochnogo proiz-
vodstva. Moskva, Mashgiz, 1961. 62 p. (MIRA 15:5)
(Welding) (Automatic control) (Instruments)

PETROV, V.M.

Nonlinear properties of seignettelectric substances at ultrahigh frequencies. Izv. AN SSSR Ser. fiz. 24 no.11:1372-1375 N '60.
(MIRA 13:12)

1. Kafedra teorii kolebaniy Fizicheskogo fakul'teta Moskovskogo gosudarstvennogo universiteta im.M.V.Lomonosova.
(Ferroelectric substances)

PETROV, V.M., inzh.

Luminescent method of detecting water leakage in the condensers of
steam turbines. Energetik 8 no.11:23 N '60. (MIRA 13:12)
(Steam turbines)

PETROV, V. M.

Some properties of seignettoelectric materials at a frequency of
3000 megacycles. Fiz. tver. tela 2 no.5:997-1001 My '60.
(MIRA 13:10)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova,
Fizicheskiy fakul'tet.
(Ferroelectric substances)

PETROV, V.M.

Using the methods of the semicoaxial resonator and a coaxial
measuring line for measuring ϵ and $\text{tg } \delta$ of dielectrics. Prib.
i tekhn. eksp. no. 4:118-122 XI-Ag '60. (MIRA 13:9)

1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta.
(Dielectrics--Measurement)

PETROV, V. M.

PETROV, V. M.: "Investigation of some properties of concrete from autoclave hardening (Portland cements with additives)". Moscow, 1955. Min Higher Education USSR. Moscow Order of Labor Red Banner Construction Inst imeni V. V. Kuybyshev. (Dissertation for the Degree of Candidate of TECHNICAL Sciences)

SO: Knizhnaya Letopis' No. 51, 10 December 1955

USSR/Farm Animals - Large Horned Cattle.

1-2

Abs Jour : Ref Zhur - Biol., No 18, 1958, 83354

Author : Petrov, V.M.

Inst : Institute of Veterinary Medicine, Kazakh Section of the
All Union Academy of Agricultural Sciences Ineni Lenin.

Title : Metabolism Dynamics in Cows and Calves Conditioned by
Protein and Vitamin Deficiencies of Their Rations.

Orig Pub : Tr. In-ta vet. Kazakhsk. fil. VASKHNIL, 1957, 8, 254-265.

Abstract : If rations of pregnant cows are deficient in proteins and
vitamins, a decrease of bronchopneumonia occurrences in
calves and their 100 percent survival until the age of 2
months may be achieved by administering 30-40 mg of vita-
min A per 100 kg of live weight, and 25-30 thousand i.u.
units of vitamin D per head. In test cows (by adding vi-
tamins), as well as in control group cows, blood indicators

Card 1/2

KLEYNBOK, Ya.I. prof.; PETROV, V.M., kand.veterinarnykh nauk; PETROV, K.N.,
kand.veterinarnykh nauk

Protein and vitamin deficiencies as factors in animal diseases.
Trudy AZVI 9:121-138 '56.

(MIRA 15:4)

1. Iz kafedry chastnoy patologii i terapii (zav. kafedroy - chlen-
korrespondent AN KazSSR, zasluzhennyy deyatel' nauki KazSSR, doktor
prof. Ya.I.Kleynbok) Alma-Atinskogo zooveterinarnogo instituta.
(Veterinary medicine) (Proteins) (Vitamins)
(Deficiency diseases)

PETROV, V.M.; ZELIKMAN, A.N.

Study of roasting in a fluidized bed of unconditioned molybdenite concentrates. *Izv.vys.ucheb.zav.; tsvet.met.* 3 no.2:126-131 '60.
(MIRA 15:4)

1. Krasnoyarskiy institut tsvetnykh metallov, kafedra metallurgii redkikh metallov.

(Ore dressing)

(Fluidization)

KLEYNBOK, Ye.I.; RETROV, V.M., kand.veterinarnykh nauk; BAYTURINA, O.Sh.
kand.veterinarnykh nauk; PODLINOV, I.S., nauchnyy sotrudnik;
AYSEN, Ye.A., nauchnyy sotrudnik

Bronchopneumonia rate in lambs. Veterinariia 37 no.8:51-55
Ag '60. (MIRA 15:4)

1. Institut veterinarii Kazakhskoy akademii sel'skokhozyaystvennykh
nauk. 2. Chlen-korrespondent AN KazSSR (for Kleynbok).
(Kazakhstan--Lambs--Diseases and pests) (Pneumonia)

KLISHCHOK, Ya.I., doktor veterinarnykh nauk, professor, zasluzhennyy
deyatel' nauki Kaz.SSR; PETROV, K.H., kandidat veterinarnykh nauk;
PETROV, V.M., mladshiy nauchnyy sotrudnik.

Treatment of bronchopneumonia in calves by intratracheal injections
of penicillin during a special diet. Veterinariia 30 no.9:34-39
S '53. (MLRA 6:8)

1. Sektsiya veterinarii Kazakhskogo filiala Vsesoyuznoy Akademii
sel'skokhozyaystvennykh nauk imeni Lenina.

PETROV, V.M.

MOSKVIN, V.I., kandidat meditsinskikh nauk; PETROV, V.M.; VENEROVSKIY, I.S.,
professor, zaveduyushchiy; KHODKEVICH, professor, direktor.

Case of suppurative cholecystitis in a two-year old child. *Pediatriia* no.3:
67-68 My-Je '53. (MLRA 6:8)

1. Detskaya khirurgicheskaya klinika Tomskogo meditsinskogo instituta imeni
V.M.Moletova (for Vengerovskiy, Moskvin and Petrov). 2. Tomskiy meditsin-
skiy institut imeni V.M.Moletova (for Khodkevich).
(Gall-bladder--Diseases)

PETROV, V.M., inzhener.

Electric traction with single-phase alternating current. Elek. sta. 24 no. 10:
56-57 0 '53. (MIRA 6:10)
(Electric railroads)

24660

15 2120

S 076/61/035-006.017.017
B127/B203

AUTHORS: Borgman, V. A., Petrov, V. M., and Chistoserdov, V. G.
TITLE: Temperature dependence of the photochemical process in light-sensitive glass

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 6, 1961, 1383-1385

TEXT: The authors studied the properties of light-sensitive glass during irradiation with ultraviolet light from a ПРК-7 (PRK-7) irradiation lamp at temperatures of -180°C to 550°C. The composition of the glass in it was as follows: 76 SiO₂; 8Al₂O₃; 12Li₂O, 4K₂O; 0.03 CeO₂; 0.02 Ag. The Ce⁺⁺⁺ ion served as photoelectron emitter excited by light of the wavelength 300-350 mμ. When working in the heat, the Ag⁺ was reduced by the photoelectrons, and was present as colloidal Ag. Glass irradiated at 200°C changed color when heated to 450°C. At 530-550°C, the color intensified. Glass irradiated at temperatures above 220°C started changing its color during irradiation, the color intensification showed the increasing concentration of colloidal silver. Slightly above the deformation point (550°C), the sensitiveness to light stopped. The necessity of "developing"

Card 1/3

24660

S/076/61/035/006/013/013
B127/B203

Temperature dependence of the...

glass irradiated below 220°C by heating indicates that below 220°C there are capture centers catching the photoelectrons and permitting a reduction of the metal only by the release of electrons on heating. If the glass is exposed to ultraviolet light at less than 500°C, it becomes yellow due to the silver content. At 500-515°C, it was orange, at 515-530°C, mahogany, at 530-540°C, green, and at 540-550°C, brown. The specimen was placed at 17.5 cm before the lamp, and heated to 535°C: 5 min irradiation, yellow, 10 min, dark yellow, 13 min, orange, 17 min, mahogany, 25 min, green. At a temperature below 530°C, the colloidal Ag particles started growing at different rates. The thickness of the colored layer was varied at varying temperatures: at 20°C, it was 7 mm, at 510-535°C, 1 mm, and at 540°C, 0.1 mm. If the 0.02% Ag content was substituted by a 0.01% Au content, other rules were governing. The reason is that Au atoms are less mobile than Ag atoms, and therefore the colloidal particles are formed more slowly. The temperature range of the photosensitivity changes intensively with a change in the glass composition. There are 2 figures and 3 references.
2 Soviet-bloc.

Card 2/3

24660

Temperature dependence of the...

S/076/61/035/006, C13, C13
B127/B203

ASSOCIATION: Nauchno-issledovatel'skaya laboratoriya Leningradskogo zavoda
khudozhestvennogo stekla (Scientific Research Laboratory
of the Leningrad Plant for Artistic Glass)

SUBMITTED: November 19, 1960

Y

Card 3/3

SOV-91-58-4-25/29

AUTHOR: Petrov, V.M., Engineer

TITLE: A Remote Signal System Utilizing "ATS" Lines (Ustroystvo telesignalizatsii s ispol'zovaniyem provodov ATS)

PERIODICAL: Energetik, 1958, Nr 4, pp 28-30 (USSR)

ABSTRACT:

This article describes a simple remote signal system capable of producing a single signal "damage", worked out and put in to service by the author in cooperation with V.I. Sadkovskiy. This system utilizes the "ATS" line, connected with the point being supervised. The latter does not require any power supply source nor special relays. A defect in this system consists in the appearance of the fault signal simultaneously with crosstalk from the supervised point. The described design, illustrated by a circuit diagram, has been carried out on the basis of the "UATS" of the "VEF" Plant. If the remote signal system has to supervise several points, the relay must have additional contacts, one for each remote signal connection. If the signal reception point is not located on the "ATS", it must be connected with the minus electrode of the "ATS" battery and with one or two conductors of each remote signal object. One or two relays are installed at the signal reception point depending on the

Card 1/2

A Remote Signal System Utilizing "ATS" Lines

SOV-91-58-4-1/89

necessity for the signal to be picked up automatically in case of telephone talk at the supervised point. A standard telephone relay of the "RPN" type is used as a signal relay and the "KDR-5M" type delayed relay manufactured by the "Transsvyaz' " Plant is used as a cutoff relay. There is 1 circuit diagram.

1. Remote control systems--Equipment

Card 2/2

24(3)
AUTHORS:

Ivanov, I. V., Petrov, V. M.

SOV 61-12-12, 26

TITLE:

Method of Measurement of the Dielectric Loss Tangent and Angle Tangent of Dielectrics With a Homogeneous Ultra-High Frequency Fields (Range 3000 Megacycles)
(Metod izmereniya dielektricheskoy prouzhayemosti i tangensa ugla poteri segnetoelektrikov v odnorodnykh pol'nyakh SVV, diapazon 3000 MHz)

PERIODICAL:

Izvestiya Akademi. Nauk SSSR. Seriya fizicheskaya, 1976, Vol. 1, No. 1, PP 1524-1526 (USSR)

ABSTRACT:

For the measurement of the dependence of ϵ on the amplitude of the alternating field and the size of the constant field, these fields must be homogeneous throughout the entire sample volume. Difficulties arising in the formation of homogeneous fields may be overcome by using a coaxial measuring line with a condenser at the end of the load. Such a device has been described in reference 6. ϵ and $tg\delta$ are measured to determine the condenser resistance by means of a measuring line. Due to the need of a homogeneous ultra-high frequency field within the sample the following conditions are required for the dimensions of the latter:

Card 1 3

Method of Measurement of the Dielectric Constant and Loss Angle Tangent of Dielectric Materials at Ultra-High Frequencies
 Frequency Range 10¹⁰ - 10¹² Megacycles

$$a < \lambda/2\sqrt{\epsilon}, \quad r_1 \approx 0.45/k\sqrt{\epsilon}$$

where $k = 2\pi/\lambda$, d and r_1 the height and radius of the sample (Fig 1). In this case the initial resistance of the condenser adopts capacity character and the ultra-high frequency capacity can be represented with an accuracy up to 5% in the form of

$$C_{\text{eff}} = \frac{C_0 + \beta R_1}{1 + \alpha}$$

On radius increase the ultra-high frequency capacity C_{eff} is deviating more and more from the static capacity.

With $r_1 \approx 0.55/k\sqrt{\epsilon}$ C_{eff} for $\alpha \approx 3.5$ becomes infinite. With further increased r_1 the initial resistance adopts inductive character. Considerable ultra-high frequency loss of the piezoelectrics leads to intense unequal heating of the sample in strong fields. Therefore impulse generators with great damping must be used in the measurement. A measuring condenser

Card 4/7

Method of Measurement of the Dielectric Constant and Loss Tangent of Piezoelectric Wafers in Resonant Ultrasound Frequency Fields (Range 1-30 Megacycles)

is designed in figure 1. By the method described in [1] the values of ϵ' and ϵ'' of the piezoelectric wafers are measured in the ultrasonic frequency. Both the constant and the alternating electric field are used in the method. The authors express their gratitude to T. N. Khol'skaya for samples offered. There are 3 figures and 2 references, 2 tables and 3 refs.

ASSOCIATION: Khar'dskoe Vys'shnee Fizicheskoe Sakhim'noye Uchebnoye Zavedeniye (Moscow State University) M. V. Lomonosov
S. S. Universiteta imeni M. V. Lomonosova
(Chair of Oscillation Theory of the Physics Faculty of the Moscow State University) Imeni M. V. Lomonosov

Date 7/77

BORGMAN, V.A.; PETROV, V.M.; CHISTOSERDOV, V.G.

Temperature dependence of the photochemical process taking place
in light-sensitive glasses. Zhur.fiz.khim. 35 no.6:1383-1385 Je
'61. (MIRA 14:7)

1. Nauchno-issledovatel'skaya laboratoriya Leningradskogo zavoda
khudozhestvennogo stekla.
(Glass) (Photochemistry)

PETROV, V.M.

PETROV, S.M., inzhener; PETROV, V.M., inzhener.

Simple channels of communication and telemechanics for networks
with a low short-circuit to the ground. Elek. sta. 24 no.12:40-
43 D '53. (MIRA 6:12)
(Telecommunication)

KOVALEV, V.P.; PETROV, V.M.

Use of electronics for studying combustion processes in motors
with spark ignition. Trudy LPI no.187:131-136 '56. (MIRA 13:6)
(Gas and oil engines)

MEL'NIKOV, G.V.; PETROV, V.M.

Methods and equipment for evaluating the thermal properties of
spark plugs. Trudy LPI no.187:137-147 '56. (MIFA 13:6)
(Spark plugs--Testing)

8777

9,2110(1043,1145,1153)

S/120/60/000/004/015/01
E073/E435

AUTHOR: Petrov, N. M.

TITLE: On Measuring ϵ and $\text{tg}\delta$ of Dielectrics by the Semi-Coaxial Resonator and the Coaxial Measuring Line Methods

PERIODICAL: Priroda i tekhnika eksperimenta, 1960, No. 4, pp. 118-122

TEXT: For measuring the parameters of dielectrics in the metre and centimetre wave ranges, methods based on using a semi-coaxial resonator and a coaxial methods line have been used. More recently, these methods have been used also for measuring the dielectric constant ϵ and the loss angle $\text{tg}\delta$ of ferroelectrics. Generally, the dielectric specimen is placed in a discontinuity of the circuit of the central conductor of the coaxial resonator or the line. Measurement of ϵ and $\text{tg}\delta$ amounts to determining the impedance of the thus obtained measuring capacitor. In calculating the dielectric constant from the measured capacitance, usually the static formula valid for a flat condenser is used which is correct only for the quasi-static state, i.e., when the effective dimensions of the condenser are considerably smaller than the wave length. In the case of metre and particularly centimetre waves

Card 1/4

6778

S/120/60/000/001/015/028
E073/E435

On Measuring ϵ and $\text{tg}\delta$ of Dielectrics by the Semi-Coaxial Resonator and the Coaxial Measuring Line Methods

this condition is not always fulfilled, particularly if between the condenser plates a ferroelectric is placed with a dielectric constant of 10^3 . In this case a wavelength may be comparable with the radius of the plates and the field distribution inside the condenser can no longer be considered uniform. The aim of the work described in this paper was to calculate the field distribution inside a condenser which is partially filled with a dielectric and also to calculate its capacitance in the case when the conditions of the quasi-stationary state are not fulfilled. The impedance is calculated, taking into consideration the losses in the dielectric. It is shown that in the methods based on using a semi-coaxial resonator and a coaxial measuring line calculation of the capacitance of the measuring capacitance according to the static formula may lead to considerable errors even if the geometrical dimensions of the condenser are small. The errors in the static formula will become considerable in the case of

Card 2/4

87376
S/120/60/000/004/015/028
E073/E435

On Measuring ϵ and $\text{tg}\delta$ of Dielectrics by the Semi Coaxial Resonator and the Coaxial Measuring Line Methods

dielectrics with high permittivity particularly ferroelectrics. The limits of applicability have been determined. Numerical results of the dependence of the capacitance on ϵ obtained by a more accurate formula are compared with the results of the static formula for $\lambda = 10$ cm, a condenser plate radius $r_2 = 3.7$ mm and a specimen height of 0.5 mm. In the static approximation the dependence is linear, however, according to the more accurate formula, there is linearity only at low values of ϵ or for small specimen radii. These calculated results have been verified experimentally. It is stated in a postscript that measurements of Gemulla and Hall did not reveal a drop in the dielectric constant on increasing the frequency from 500 to 4000 Mc/s. According to the results of numerous authors and also the author of this paper a relaxation of the dielectric constant does take place in this frequency range and ϵ decreases by a factor of 2. Apparently relaxation occurred also in the ceramic material studied by Gemulla and Hall, as is evident from the high $\text{tg}\delta$ (0.14) obtained.

Card 3/4

BT376

S/120/60/000/004/015/0-8
E073/E435

On Measuring ϵ and $\text{tg}\delta$ of Dielectrics by the Semi Coaxial Resonator and the Coaxial Measuring Line Methods

at 1000 Mc/s. The fact that the authors did not observe any decrease in the dielectric constant is probably due to their using the static formula for calculating the capacitance of a flat condenser for determining ϵ from the measured capacitance. There are 4 figures 1 table and 10 references 8 Soviet and 2 non-Soviet

ASSOCIATION. Fizicheskiy fakul'tet MGU (Physics Department
Moscow State University)

SUBMITTED July 9, 1959

Card 4/4

S/697/61/000/000/004/018
D228/D303

AUTHORS: Zelikman, A. N., Bibikova, V. I., Petrov, V. M., Postnikova, S. V., Abashin, G. I., Pritulo, V. F. and Nikulina, L. N.

TITLE: Study of the behavior and recovery of rhenium during the roasting of Kadzhara and Koundrad molybdenite concentrates in a boiling layer

SOURCE: Akademiya nauk SSSR. Institut metallurgii im. A. A. Baykova Institut mineralogii, geokhimii i kristallografii redkikh elementov. Mezhd.vedomstvennaya komissiya po redkim metaliam. Vsesoyuznoye soveshchaniye po probleme reniya. Moscow, 1958. Reniy; trudy soveshchaniya. Moscow, Izd-vo AN SSSR 1961, 4, 110

TEXT: The authors present the results of their study of the distribution of Re in the products obtained from roasting Kadzhara molybdenite concentrates in a boiling-layer furnace. b) the recovery of Re from waste gases of a boiling-layer furnace by means

Card 1/3

Study of the behavior

3/697/01/000/000/004 010
D228/D303

of a bubbling unit, and (c) the behavior of Re during the sublimation of Koundrad concentrates in the same type of furnace and the extraction of Re with a similar bubbling unit. A tentative scheme is also suggested for reprocessing bubbler pulp to obtain metallic Re. It is noted that recent research at the Institut tsvetnykh metallov im. M. I. Kalinina (Institute of Non-Ferrous Metals im. M. I. Kalinin) has indicated the advantages of the boiling-layer furnace as compared with tubular, muffle, and reverberatory types. Diagrams illustrate the dust-collection system of the boiling-layer furnace, the bubbling unit designed by the Gintsvetmet (State Institute of Non-Ferrous Metallurgy) for the recovery of furnace gases, and the laboratory model of the boiling-layer furnace employed by the authors in their tests. The Re distribution in the roasting products of Kadzhara concentrates, the Re content of bubbler pulp, and the Re balance for both the bubbler and the furnace as a whole are given in tables. Conclusions: 1) The roasting of Kadzhara concentrates in a boiling-layer furnace ensures the fullest sublimation of Re; 90 - 95% of the Re is sublimated in this type of furnace.

Card 2/3

Study of the behavior ...

S/697/61/000/000/004.01-
D228/D303

as compared with only 50 - 60% in muffle and rotary tubular furnaces. 2) The existing dust-collection system of the boiling-lava furnace does not guarantee a satisfactory degree of Re extraction since the loss of metal in waste gases amounts to about 80%. The lowering of the temperature of the Cottrell filter to 55 - 60°C does not reduce this loss on account of the condensation of H₂SO₄.

Much better results can be obtained with the bubbling unit and the bubbler's efficiency with respect to Re is stated to equal 75 - 92% of the metal in the bubbler pulp is in solution and the concentration of dissolved Re rises as the duration of the bubbling lengthens. It is recommended that the pulp be removed from the bubbler when the Re concn. and acidity of the solution is 0.25 - 0.5 g/l and 30 - 50 g/l respectively. 4) The high degree of Re sublimation (93.2%) from the ash of Koundrad concentrate shows that the same technique can also be applied to this material; there is no difference in the behavior of Re during the roasting of both concentrates and the processing of their gaseous products in the bubbling unit. There are 3 figures and 4 tables. Abstractor's notes page of the photostat copy is illegible. 7
Card 3/3

S/081/62/001/001 015 1-7
B151/B108

AUTHORS: Petrov, V. M., Zarevich, I. P.

TITLE: Rhenium in the molybdenites of the Pskom-Chatkal region

PERIODICAL: Referativnyy zhurnal Khimiya, no. 7, 1961, 101-102, det. 2G126 (Uzb. geol. zh., no. 3, 1961, 33-35)

TEXT: The results of chemical determination of Re in 21 monomineral samples of molybdenites from 10 ore locations of various formations and types are given. The Re content varies between 0.0008 % in quartz-molybdenite ores and 0.072 % in skarn ores. The Re content within the area of one ore location, even in the molybdenites of different generations, varies within one order. Among the skarn ores the association of richer Re molybdenites with chalcopyrite is characteristic. On the whole, the Pskom-Chatkal ore region is put by the authors among the rich Re provinces. [Abstracter's note. Complete translation.]

Card 1/1

PETROV, V.M.

Frequency characteristics of triglycine sulfate. *Kristallografiia*
6 no.4:632-635 J1-Ag '61. (MIRA 14:8)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Glycines--Electric properties)

BAYBORODOV, Yu.T.; IOFFE, M.S.; PETROV, V.M.; SOBOLEV, R.I.

Adiabatic trap with a composite magnetic field. Atom. energ. 1
no.5:443-445 My '63. MIRA 100

(Plasma (Ionized gases))

L 23874-65 EWT(m)/EPF(n)-2/EPR/EWP(t)/EWP(b) Ps-4/Pu-4 IJP(c) JD/
JG/MLK

ACCESSION NR: AT5002753

S/0000/64/000/000/0030/0035

AUTHOR: Zelikman, A. N.; Petrov, V. M.; Yegorychev, K. N.

TITLE: Physicochemical principles of the behavior of rhenium during the oxidation roasting of molybdenite concentrates

SOURCE: Vsesoyuznoye soveshchaniye po probleme reniya, 2d, Moscow, 1962, Rheniy (Rhenium); trudy soveshchaniya, Moscow, Izd-vo Nauka, 1964, 30-35

TOPIC TAGS: rhenium, molybdenite concentrate, oxidative roasting, rhenium refining, rhenium oxide, rhenium sulfide, rhenium sublimation

ABSTRACT: The article analyzes the results of an experimental study of a series of reactions involving compounds of molybdenum and rhenium for the purpose of establishing the physicochemical principles governing the behavior of rhenium during the roasting of molybdenite concentrates. The following reactions are described:



Card 1/2

L 23874-65

ACCESSION NR: AT5002753



(V)



(VI)

It was found that during oxidative roasting of molybdenite concentrates, secondary reactions of rhenium sulfide and rhenium heptoxide with molybdenum trioxide and molybdenum sulfide take place with the formation of lower oxides of rhenium, ReO_3 and ReO_2 , causing a decrease in the degree of sublimation of rhenium. Re_2O_7 is not reduced by pure sulfur dioxide during the roasting. The occurrence of the above reactions accounts for the previously established lag in the degree in sublimation of rhenium as compared to the degree of oxidation of sulfur. The reaction between Re_2O_7 and MoS_2 is also confirmed by the behavior of rhenium during roasting in multihearth roasters, where an increase in the rhenium concentration of the material in the middle hearths is observed as compared to the starting material. Orig. art. has: 3 figures, 7 formulas and 2 tables.

ASSOCIATION: None

SUBMITTED: 05Aug64

ENCL: 00

SUB CODE: MM

NO REF SOV: 005

OTHER: 003

Card 2/2

KHARAKHORIN, F.F.; PETROV, V.M.

Semiconducting properties of $A_2B^{IV}C_2^{VI}$ type compounds. Fiz. tverd. tela 6 no.9:2867-2869 S '64.

(MIRA 17:11

PETRCV, Viktor Mikhaylovich, montazhnik; LEPIN, A.E., red. ;
SHERUSHENKO, T.A., tekhn. red.

[We build houses of gas concrete] Stroim doma iz gazobetonu. Leningrad, Lenizdat, 1963. 77 p. (MIRA 16:12)
(Concrete construction) (Gas concrete)

PETROV, V.N.

Inhibition of regenerative processes caused by the suturing of
skin to the wound surface. Uch.zap. KHGU 51:43-49 '54.
(MIRA 11:11)

(REGENERATION (BIOLOGY))

PETROV, V.N.

Effect of sulfanilamide on the process of regeneration. Uch.zap.
KHGU 51:51-56 '54. (MIRA 11:11)
(Regeneration (Biology)) (Sulfanilamide)

PETROV, V.N.

Influence of the nervous system on regeneration in caudate
amphibians. Report No.1. Uch.zap. KHGU 51:57-63 '54.

(MIRA 11:11)

(REGENERATION (BIOLOGY)) (NERVOUS SYSTEM) (NEWTS)

PETROV, V.N.

Influence of the nervous system on regeneration in caudate
amphibians. Report No.2. Uch.zap. KHGU 51:65-71 '54. |
(MIRA 11:11)

(REGNERATION (BIOLOGY)) (EXTREMITIES (ANATOMY)--INNERVATION)
(RESULTS)

PETROV, V.N.

**Influence of the central nervous system on regenerative processes
in amphibians. Uch. zap. KHGU 79:75-80 '57. (MIRA 11:11)**

**1. Kafedra zoologii bespozvonochnykh Khar'kovskogo gosudarstven-
nogo universiteta.**

(Newts)

(Brain)

(Regeneration (Biology))

KATAYEV, Ye.G.; PETROV, V.N.

Reactions of selenols with acetylene derivatives. Part 1:
Reactions of selenophenol with 1-hexyne, phenylacetylene,
diphenylacetylene, and 2-methyl-5-ethynylpyridine. Zhur.ob.khim.
32 no.11:3699-3703 N '62. (MIRA 15:11)

1. Kazanskiy gosudarstvennyy universitet imeni
V.I. Ul'yanova-Lenina.
(Selenophenol) (Acetylene)

PETROV, V.N.

Determining the critical speed of the fluidization of a complex
mixture of a granular materials. Khim.prom. no.11:816-819 '63.
(MIRA 17:4)

PETROV, V.N., inzh.

Work experience of efficiency promoters at the S. Ordzhonikidze
Baltic Plant. Sudostroenie 24 no.8:63-65 Ag '58. (MIRA 11:10)
(Ships--Welding)

PETROV, V.N., inzh.

Design of dynamometers used for measuring cutting forces at the
front edges of cutting tools. Sbor.st. CHPI no.9:12-19 '58.
(Metal-cutting tools) (Dynamometer) (MIRA 11:10)

84608

S/135/60/000/004/005/008
A115/A029

1.2360 only 2208, 2708

AUTHOR: Petrov, V.N., Engineer

TITLE: Argon-Shielded Arc Welding of Thin-Walled Pipes

PERIODICAL: Svarochnoye proizvodstvo, 1960, No 4, pp 25 - 27

TEXT: Argon-shielded welding of coil piping of stainless and carbon steels in heat exchanger and cooler construction is efficient, economical and advantageous, because a great part of the work can be automated. At welding of stainless steel pipes 22 x 1.5, 21 x 1.5, 15 x 1.5 and 15 - 40 m long; 1X18H9T (1Kh18NgT) steel was used. Before welding the pipes are cleaned with acetone or with white spirit. The preparation of pipe sockets for welding is done by snubbing or expansion with subsequent calibration (Fig. 1). The snubbing is done by use of a roller fixed in the support of a lathe. Expansion is carried out by a vice with special punches with the help of a pneumatic hammer (Fig. 2). For welding, the pipes are gripped in a coupled pneumatic vice, at the end of which the welding unit is fastened (Fig. 3). The welding is done by an automatic ATB15-40 (ATV15-40) infusible electrode, in one passage. If necessary, the welding is done by two passages, whereby the second passage is accompanied by the use of

Card 1/3

84608

Argon-Shielded Arc Welding of Thin-Walled Pipes

S/135/60/000/004/005/000
A115/A029

1,6 mm 1Kh18N9T wire. During the welding process the root of the weld inside the pipe is protected by first-class argon. The technical data on welding are shown in Table 1. The surface of joints is smooth, polishing is not necessary, the quality of joints is high. The manual welding of stainless steel piping is applied to the process of uniting lashes for coiling and for joining pipes during assembly of apparatus. The sockets of the pipes in accessible places are treated as shown in Figure 1. In inaccessible places, especially during assembly work, the sockets are not treated by snubbing, they are cleaned, adjusted by a screw clamp (Fig. 4) and welded, whereby an additional wire is used. A small-size (220 mm long, 40 mm high, 350 g) burner was developed for the most inconvenient places (Fig. 5). In automatic welding of pipes 12 x 1 and 22 x 2 made of steel 10 are treated by steam, then cleaned with acetone. The sockets of 12 x 1 pipes are treated like above (Fig. 1). From sockets of 22 x 2 pipes, flats are taken away under an angle of 30°. The welding proceeds automatically (Fig. 3). Instead of a burner with single argon shielding a burner with double gas shield is used i.e., the fused metal shielded by CO₂, the tungsten electrode under argon. The sockets of 12 x 1 pipes are welded by one way, without addition, the sockets of 22 x 2 pipes are welded by two ways CB-08Г2СА (Sw-08G2SA) and CB-10ГC (Sw-10GS)

Card 2/3

Argon-Shielded Arc Welding of Thin-Walled Pipes

84608
S/135/60/000/004/005/008
A115/A029

rods were used with 1.0 - 1.6 mm in diameter. The root of the weld inside is protected by CO₂ (Table 2). Manual welding of pipes made of carbon steel 10 with infusible electrode is done with double gas shielding. In inconvenient places a small-size burner is used. Seams of argon-shield welded carbon steel pipes show pores and blisters. The cause may be a small-sized melting pool. These defects can be eliminated by using a rod containing silica and manganese (pertains to size 22 x 2 only). There are 6 figures and 2 tables

ASSOCIATION: Baltiyskiy zavod im. S. Ordzhonikidze. (Baltic Plant imeni S Ordzhonikidze)

Card 3/3

PETROV, V.N.; SAVEL'YEV, A.G.; SILUKOV, G.D.

Pulse transmitter of the number of revolutions of a turbo-
compressor. Izv. tekhn. no. 3:14-15 Mr '61. (MIRA 14:2)
(Turboblowers—Testing)

S/121/61/000/006/002/012
D040/D112

AUTHORS: Proskuryakov, Yu.G., Belov, N.F., and Petrov, V.N.

TITLE: Cooling cutting tools by atomized cutting fluid

PERIODICAL: Stanki i instrument³¹, no.6, 1961, 25-29

TEXT: The authors give the results of experiments with atomized cutting fluid in boring, thread-cutting, planing and milling, carried out at the cutting laboratory of the Chelyabinskiy politekhnicheskiy institut (Chelyabinsk Polytechnic Institute). The effect of the volume and chemical composition of the atomized fluid, the method of feeding the fluid to the cutting zone, nozzle shape and air pressure was studied. The experimental machine (Fig.1) made possible different combinations of fluid components, fluid quantity and air pressure. Wear of carbide-tipped cutters was measured by the wear on the main rear tool flank with the use of an *MIR-1* (MIR-1) microscope, and wear of high-speed steel cutters by the depth of the pit forming on the cutter face. A different experimental unit was employed for milling cutters (Fig.8). The conclusion was made that the wear-preventing effect of atomized cutting fluid is higher than that of ~~atomized cutting fluid is higher than that of~~ flowing fluid. A higher quantity of cutting fluid

Card 1/4

Cooling cutting tools by atomized cutting fluid

S/121/61/005/006/002/002
D040/D112

(emulsion and "sulfofrezol" were used) had a positive effect, but 400-600 g/hr of 4% emulsion or 200 g/hr of "sulfofrezol" caused thick fog in the shop. Increased air pressure also improved the effect. The Chelyabinsk Polytechnic Institute, in conjunction with the ChTZ, developed new atomizer designs - the ЧПИ-6 (ChPI-6) and ЧПИ-7 (ChPI-7) (Fig.12) and at the same time a theoretically-based calculation method for atomizers. In the ChPI-7 (Fig.12), air from the main air pipe of the plant flows through the cock (4) and nipple (5) into the atomizer head (2) where the stream splits and some of the air flows through the duct (7) into the container (1) and exerts pressure on the surface of the fluid in it. The pressure difference causes the fluid to move through the pipe (6) into the head (2). The rest of the air flows straight through the injector where it is atomized and fed through the nipple (8) and a flexible hose to the tool edge. The flow is adjusted by the needle valve (3). The fundamental data for calculation are: the velocity (U_2) and air flow per second (Q_{air}) needed for the tool cooling; fluid flow per second (Q_{fl}); compressed air pressure (P) applied to the atomizer; the lengths of separate sections of the atomizer and the pipes. The formula for the diameter (d) of the intake pipe (6) is

Card 2/4

$$\frac{d^4}{(G + \alpha)} = - \frac{16Q_{fl}}{\pi^2 g} \frac{\Delta Q_{fl}}{\Delta H_{max}} \quad (1)$$

Cooling cutting tools by atomized cutting fluid

S/121/61/000/006/008/012
D040/D112

where ΔQ_{fl} is the permissible reduction of the fluid flow; ΔH_{max} - the maximum distance from the injector axis to the fluid level; g - the gravity acceleration; G - the resistance factor of the intake pipe; α - the kinetic energy factor (at laminar flow $\alpha_{lam}=2$, at turbulent flow $\alpha_t=1.06 \div 1.12$). The nozzle outlet diameter (d_2) is determined by Q_{air} and U_2 of the air jet by the equation

$$d_2 = 2 \sqrt{\frac{Q_{air}}{\pi U_2}} \quad (2)$$

The velocity is found by the Bernoulli equation. The calculation results prove that the main factor ensuring dependable operation (stable fluid flow) is the presence of a constant positive difference between pressure in the fluid container and in the narrow section of the double-cone pipe. The formula for this difference is:

$$\Delta P_{min} = \rho H \left(1 - \frac{1}{2} \cdot \frac{\frac{\Delta H_{max}}{H}}{\frac{\Delta Q_{fl}}{Q_{fl}}} \right) \quad (4)$$

Card 3/4

Cooling cutting tools by atomized cutting fluid

3/121/61/000/000/000/000

DO/O/D112

where γ is the specific weight of fluid and H - the distance between the axis of the double-cone pipe and the fluid level. The formula determining the initial cross-section area as well as the diameter of the double-cone pipe (assuming a continuous airflow) is:

$$d_1 = d_2 \left(\frac{P_2}{P_1} \right)^{\frac{1}{2k}} \sqrt{\frac{U_2}{U_1}}, \quad (6)$$

where k is the adiabatic curve factor and δ_1, δ_2 are the volumetric weights of the air in the initial cross-section of the two-cone pipe at entry and exit from the nozzle respectively. The dimensions of the narrow section of the double-cone pipe are determined in accordance with the pressure gradient needed for moving the fluid from the container into the main pipe, using the Bernoulli equation. Calculation confirmed that the fundamental parameters of the ChPI-6 atomizer were selected correctly, but it still needs some debugging. An improved modification, the ChPI-7 has been produced. Its technical data are: working air pressure 2-5 at; air consumption (at 3 gauge atmospheres) 4 m³/hr; cutting fluid consumption 50-900 g/hr. After the atomizers had been in use for 1 year, it was established that the wear resistance of boring tools tipped with T15K (T15K6) alloy increased 1.5 Card 4. to 2 times and cutting efficiency 50%. Surface finish improved by approximately one TOC 2789-59 (GOST 2789-59) class. There are 12 figures.

PETROV, Vladilen Nikolayevich; RYZHIK, Z.M., red.; VASIL'YEV, Yu.A.,
red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Resistance welding of steel and aluminum-magnesium alloys]
Elektrokontaktnaia svarka stalei i aliuminievo-magnievyykh
splavov. Leningrad, 1962. 22 p. (Leningradskii dom nauchno-
tekhnicheskoi propagandy. Obmen peredovym opytom. Seria:
Svarka i paika metallov, no.25) (MIRA 15:9)
(Steel--Welding)
(Aluminum-magnesium alloys--Welding)

PROSKURYAKOV, Yuriy Georgiyevich; PETROV, Vladimir Nikolayevich;
TROITSKAYA, D.N., inzh., r~~et~~shzent; DUGINA, N.A., tekhn.
red.

[Spray cooling of metal-cutting tools] Tonkoraspylennoe
okhlazhdenie rezhushchikh instrumentov. Moskva, Mashgiz,
1962. 111 p. (MIRA 15:7)
(Metal-cutting tools--Cooling)

SKOROKHODCV, N.Ye., prof. otv. red.; AGAPOV, V.F., prof. po nauchnoy rabote, dots., red.; BOYARSHINOV, M.I., prof., red.; VSELOVSKAYA, Ye.S., red.; LAGEN-CORN, A.V., red.; GOL'SHTEYN, N.A., red.; IVANOV, N.I., kand. tekhn. nauk, dots., red.; KORZH, I.D., prof., red.; PETROV, V.M., dots. kand. tekhn. nauk, red.

[30 years of the Magnitogorsk Mining and Metallurgical Institute] XXX let MGMI. Magnitogorsk, 1962. 170 p. (MIRA 17:3)

1. Magnitogorsk. Gorno-metallurgicheskiy institut.
2. Sekretar' partiynogo byuro Magnitogorskogo gorno-metallurgicheskogo instituta (for Petrov).
3. Dekan metallurgicheskogo fakul'teta Magnitogorskogo gorno-metallurgicheskogo instituta (for Ivanov).
4. Zaveduyushchiy kafedroy fiziki Magnitogorskogo gorno-metallurgicheskogo instituta (for Korzh).
5. Zaveduyushchiy kafedroy obrabotki metallov davlениye Magnitogorskogo gorno-metallurgicheskogo instituta (for Boyarshinov).

MIKITYUK, Ye.P.; BARDASHEV, S.P.; PASECHNIKOV, N.S.; APIN, L.R.; PETROV,
V.N.; DEMIDENKO, Ye.I.; MITROVICH, V.P.; FROLOV, K.V.

Author's abstracts of dissertations. Vest.mashinostr. 42
no.7:87-88 J1 '62. (MIRA 15:3)

1. Kiyevskiy politekhnicheskoy institut (for Mikityuk).
 2. Moskovskiy aviatsionnyy institut imeni Sergo Ordzhonikidze
(for Bardashev). 3. Leningradskiy sel'skokhozyaystvennyy institut
(for Pasechnikov). 4. Moskovskiy stankoinstrumental'nyy institut
(for Apin, Mitrovich). 5. Chelyabinskoy politekhnicheskoy
institut (for Petrov). 6. Gor'kovskiy politekhnicheskoy institut
imeni A.A.Zhdanova (for Demidenko). 7. Rizhskiy politekhnicheskoy
institut (for Frolov).
- (Bibliography--Mechanical engineering)

PROSKURYAKOV, Yu.G.; PETROV, V.N.; FEDOROV, G.A.

Breaking chips during the machining of steel 10. Stan.1 instr.
33 no.7:23-24 JI '62. (MIRA 15:7)

(Metal cutting)

TYUL'KOV, Mikhail Dement'yeovich; ESHA V, V.N., red.

[Diffusion bonding in a vacuum] Diffuzionnaya svarka v
vakuume. Leningrad, 1964. 31 p. 1964

I 50201-65 EWT(d)/EWT(m)/EWP(c)/EWP(r)/T/EWP(t)/EWP(k)/EWP(b)/EWP(l)/
EWA(s) Pf-4 JD/EM/HW

AM5013306

BOOK EXPLOITATION

UR/621.791

Patrov, Vladilen Nikolayevich

Welding and cutting of stainless steels (Svarka i rezka nerzhavayushchikh staley). Leningrad, Izd-vo "Sudostroyeniye", 1965. 202 p. illus., biblio.

29
24
B+

TOPIC TAGS: welding, stainless steel welding, stainless steel welding technology, weld quality control, stainless steel cutting

PURPOSE AND COVERAGE: This book is intended for theoretical and practical training of welders working in the ship-building industry and may also be useful to welding instructors, foremen, and technologists working in the field of welding and cutting stainless steels. The book reviews basic problems of arc welding and cutting of the most wide-spread types of stainless steels. Recommendations on techniques and methods of manual arc welding, submerged arc welding, manual and automatic gas-shielded arc welding are given. Certain specific features of welding techniques are discussed and unusual defects of welded joints are analyzed. The

Card 1/3

L 50201-65

AM5013306

author expresses his thanks to welders V. M. Kashpirav, N. N. Krasishchenko, G. G. Tumanov, N. P. Nikitin, S. I. Rumyantsev, to the Leader of Communist Team P. P. Podobed, Chief of TsZh E. N. Liberman, Engineer A. I. Pas', and to Candidate of Technical Sciences V. S. Golovchenko for their valuable comments and advice. There are 41 references, all Soviet.

TABLE OF CONTENTS [Abridged]:

Foreword -- 3

Ch. I. Fundamentals of physical metallurgy and brief information on stainless steels -- 5

Ch. II. Technology of welding stainless steels -- 42

Ch. III. Quality control in welding -- 157

Ch. IV. Cutting stainless steels -- 186

Card 2/3

L 50201-65

AM5013306

Appendix -- 197

References -- 200

SUB CODE: MM

SUBMITTED: 09Nov64

NO REF SOV: 041

OTHER: 000

0

ml
Card 3/3

L 50201-65 EWT(a)/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWP(l)/
EWA(c) Pr-4 JD/EM/RW

AM5013306

BOOK EXPLOITATION

UR/621,791

29
24
B+

Petrov, Vladilen Nikolayevich

Welding and cutting of stainless steels (Svarka i rezka nerzhaveyu-
shchikh staley). Leningrad, Izd-vo "Sudostroyeniye", 1965.
202 p. illus., biblio.

TOPIC TAGS: welding, stainless steel welding, stainless steel
welding technology, weld quality control, stainless steel cutting

PURPOSE AND COVERAGE: This book is intended for theoretical and
practical training of welders working in the ship-building indus-
try and may also be useful to welding instructors, foremen, and
technologists working in the field of welding and cutting stain-
less steels. The book reviews basic problems of arc welding and
cutting of the most wide-spread types of stainless steels. Recom-
mendations on techniques and methods of manual arc welding, sub-
merged arc welding, manual and automatic gas-shielded arc welding
are given. Certain specific features of welding techniques are
discussed and unusual defects of welded joints are analyzed. The

Card 1/3