

ACC NR: AT6008841 SOURCE CODE: UR/0000/65/000/000/0035/0040

AUTHOR: Akshanov, B. S.; Volkolupov, Yu. Ya.; Sinel'nikov, K. D.

ORG: none

TITLE: Investigation of charged particle energy in a magnetic trap

SOURCE: AN UkrSSR. Magnitnyye lovushki (Magnetic traps). Kiev, Naukova dumka, 1965, 35-40

TOPIC TAGS: magnetic trap, plasma diagnostics, charged particle, plasma injection

ABSTRACT: Experimental investigation of the energy distribution of charged particles in a plasma formed by beam injection is described. The study is based on observation of the particles ejected from the magnetic trap and their energy determination and on the correlation with the high frequency oscillations induced by beam-plasma interaction. A brief description and results of the diagnostic methods (electrostatic analyzer, time of flight mass spectrometer, scintillation detectors) are given. The electrostatic analyzer (developed by the authors) can measure electron and ion energies and provides integrated results. The experiments were conducted with pulsed injection of particles. The lifetimes of resulting plasmas were measured as a function of injection energy. The measurement of electron energy provides their distribution up to 30 kev. The electron absorption method indicates that electrons with 100 kev energies

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are generated in the magnetic trap employed in the experiment. It is believed that the generation of such energetic electrons is intimately connected with the observed high frequency oscillations of the beam-plasma system. Orig. art. has: 6 figures.

SUB CODE: 20/ SUBM DATE: 200ct65/ ORIG REF: 002/ OTH REF: 002

Card 2/2 *TV*

L 28391-66 EPF(n)-2/EWT(1)/ETC(f)/EWG(m)/T IJP(c) AT

ACC NR: AP6013112

SOURCE CODE: UR/0057/66/036/004/0595/0602

AUTHOR: Akshanov, B.S.; Volkolupov, Yu.Ya.; Sinel'nikov, K.D.

ORG: none

TITLE: Investigation of injection and capture of charged particles in a magnetic mirror trap

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no.4, 1966, 595-602

TOPIC TAGS: hydrogen plasma, plasma confinement, plasma oscillation, electron beam, magnetic mirror,

ABSTRACT: The earlier investigations of two of the authors and collaborators (Sb. "Fizika plazmy i problem upravlyayemogo termoyadernogo sinteza", IV, 403-410; IV, 388-402, Kiyev, 1965) on production of helical electron beams and their injection into magnetic mirror traps have been continued. The magnetic mirrors of the trap were 18 cm apart, and the magnetic field strength could be varied from 0 to 1 kOe. Near one of the magnetic mirrors and outside the region of the trap there was produced with the aid of a third (opposing) winding a cusped magnetic field, in which the low pitch helical electron beams were produced by off-axis injection as discussed in the reference cited above. In the present work a 2 cm diameter ring-shaped cathode was employed as electron source in order to increase the beam current; the electron trajectories, therefore, were not a set of coaxial helices, but a family of helices whose

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ACC NR: AP6013112

axes were generators of a 2 cm diameter cylinder, the axis of which coincided with the symmetry axis of the system. The pitch of the helical trajectories was such that the electrons traveled more than 1 km in traversing the 18 cm between the magnetic mirrors. Accelerating potentials up to 5 kV and beam currents up to 1 A were employed. The plasmas were probed with an axial electron beam which was modulated at high frequency so that its signal could be distinguished from the currents produced by escaping plasma particles. The apparatus contained hydrogen at pressures up to 10^{-2} N/m². When the gas pressure was below 10^{-4} N/m² the injected electrons accumulated until the resulting space charge was sufficient to cut off a 1-1.5 keV probe beam. When the gas pressure exceeded 10^{-3} N/m² the gas became highly ionized and there was produced a well compensated plasma. The lifetime of the plasma after cut off of the injected beam increased rapidly with increasing beam current and under some conditions was as long as 0.1sec. Plasmas with charged particle densities as high as 10^{12} cm⁻³ were obtained. Intense high frequency oscillations developed as a result of the interaction of the plasma and the electron beam. When the power in the electron beam was increased to a critical value a cascade process was triggered, resulting in rapid increase of the intensity of the high frequency oscillations, "burning out" of the neutral gas in the trap, and increase of the plasma density until it reached the initial density of the neutral gas in the apparatus. Orig. art. has: 9 figures.

SUB CODE: 20 SUBM DATE: 18Jul64 ORIG. REF: 004

Card

2/2 CC

L 00489-50 EPT(n)-2/EWT(1)/EIC(f)/EIG(m)/T IJP(c) AT

ACC NR: AP6013113

SOURCE CODE: UR/0057/66/036/004/0603/0607

AUTHOR: Aksharov, B.S., Volkolupov, Yu.Ya.; Sinel'nikov, K.D.

59
B

ORG: none

TITLE: Capture of charged particles injected pulsewise into a constant field trap

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 4, 1966, 603-607

TOPIC TAGS: hydrogen plasma, plasma confinement, plasma oscillation, electron beam, magnetic mirror,

ABSTRACT: The authors have continued their investigation of injection and entrapment of helical electron beams in a magnetic mirror trap, employing the apparatus described in the preceding paper (ZhTF, 36, 595, 1966/see Abstract AP6013112/). Experiments performed with pulsed beams are discussed in the present paper. Preliminary experiments with square pulses of different durations showed that plasma could be accumulated in the trap within times of the order of 100 microseconds. Experiments with saw-tooth and sinusoidal pulses were accordingly undertaken. With sinusoidal pulses of several milliseconds duration there were frequently observed two moments of maximum plasma density, a maximum occurring each time the electron energy passed through the critical value for formation of a low pitch helical trajectory. The plasmas produced by pulsed beams were very similar in density and other characteristics

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UDC: 533.9

L 28489-66

ACC NR: AP6013113

to those obtained with continuous injection. The plasmas decayed slowly (sometimes very slowly) for a considerable time (tens of milliseconds), after which they frequently suddenly collapsed. This behavior may be due to the presence in the plasma of high energy electrons, the confinement time of which, as the authors have shown (ZhTF, 36, 608, 1966/ see Abstract AP6013114/), increases with their energy and which, for unknown reasons, escape from the plasma with anomalous rapidity under certain conditions. The confinement time of the plasma increased with increasing pressure of the working gas. This may be due to the influence of the high frequency oscillations that were observed in the plasmas at high pressures and high beam currents and covered a very wide range of frequencies extending up to 11 500 MHz, the highest frequency that could be recorded with the available instrument. The process of "burning out" the neutral gas, previously observed with continuous injection, was also observed with pulsed injection. Plasma densities of the order of 10^{12} cm⁻³, as determined from the cutoff of 3 cm microwaves, were obtained. Orig. art. has: 5 figures.

SUB CODE: 20 SUBM DATE: 18Jul64 ORIG, REF: 004

Card 2/2

L 28488-66 EPF(n)-2/ENT(1)/ETC(E)/EAG(m)/I IJP(c) AT

ACC NR: AP6013114

SOURCE CODE: UR/0057/66/036/004/0608/0811

AUTHOR: Akshanov, B.S.; Volkolupov, Yu. Ya.; Sinel'nikoy, K.D.

68
B

ORG: none

TITLE: Investigation of the energy distribution of charged particles in a magnetic trap

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 4, 1966, 608-611

TOPIC TAGS: hydrogen plasma, plasma confinement, electron beam, magnetic mirror, electron energy

ABSTRACT: The authors' investigations of injection and entrapment of helical electron beams in a magnetic mirror trap (ZhTF, 36, 595, 604, 1966/ see Abstracts AP6013112 and AP6013113/) have been continued. To the apparatus described in the preceding papers has been added an electrostatic analyzer similar to that described by H.P. Eubank and T.D. Wilkerson (Rev. Sci. Instr. 34, No. 1, 14-21, 1963). With the aid of this analyzer the energy distribution of charged particles escaping from the magnetic trap was investigated. The energies of electrons beyond the range of the analyzer (30keV) were measured with a scintillator and aluminum absorbers. Ions with energies above 250 eV and electrons with energies up to 100 keV were observed. Higher energy electrons remained confined in the trap longer than did lower energy ones. Under

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L 26488-66

ACC NR: AP6013114

conditions in which 10 keV electrons were confined for 38 millisecc, 30 keV electrons remained confined for 85 millisecc. The presence of electrons with energies much higher than the energies of the injected electrons (5keV) is ascribed to interaction with the plasma oscillations that were observed to develop (loc.cit.supra). These oscillations decreased in amplitude and the numbers of high energy electrons simultaneously decreased when the pitch of the injected electron trajectories was increased. During the process of "burning out" of the neutral gas, discussed in the preceding papers, the spectrum of the high frequency oscillations became nearly continuous and extended beyond 10^{10} Hz, with maxima near the Langmuir and Larmor frequencies. Orig. art. has: 6 figures.

SUB CODE: 20

SUBM DATE: 18Jul64

ORIG. REF: 004 OTH REF: 003

Card 2/2 CC

ACC NR: AP6028707

SOURCE CODE: UR/0185/66/011/008/0825/0828

AUTHOR: Synel'nykov, K. D. -- Sinel'nikov, K. D.; Honcharenko, V. P. -- Goncharenko, V. P.; Honcharenko, D. K. -- Goncharenko, D. K.

ORG: Physico-Technical Institute, AN UkrSSR, Khar'kov (Fizyko-tekhnichnyy instytut AN URSR)

TITLE: Motion of a plasma jet across a nonuniform transverse magnetic field

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 8, 1966, 825-828

TOPIC TAGS: plasma jet, plasma flow, transverse magnetic field, magnetic field plasma effect

ABSTRACT: It is shown by using the equations of E. N. Parker (Phys. Rev., 107, 924, 1957.) that the motion of a plasma jet across a nonuniform magnetic field is decelerated if ∇B is positive and is accelerated in decreasing fields. The equation for the square of the drift velocity, which is proportional to linear field changes, is given. This jet motion is one of the simplest effects in plasma physics. The theory holds that, depending on conditions, a plasma jet must move as a whole across the magnetic field with a magnetic field of nearly zero in the jet if temperature of two components of the jet is small compared to the jet's kinetic energy of

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ACC NR: AP6033417

SOURCE CODE: UR/0057/66/036/010/1819/1825

AUTHOR: Demidenko, I.I.; Lomino, N.S.; Padalka, V.G.; Rutkevich, B.N.; Sinol'nikov, K.D.

ORG: none

TITLE: Investigation of the motion of a plasma burst in a nonuniform transverse magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 10, 1966, 1819-1825

TOPIC TAGS: hydrogen plasma, plasma magnetic field, transverse magnetic field, nonhomogeneous magnetic field, plasma injection

ABSTRACT: This paper begins with a brief theoretical discussion in the drift approximation of the adiabatic motion of a plasma in a nonuniform transverse magnetic field. It is shown that the plasma is decelerated on entering a region of high transverse magnetic field strength and accelerated on leaving such a region, owing to the transformation of kinetic energy of forward motion into kinetic energy of rotation and vice versa. If the magnetic field becomes strong enough the plasma can be reflected. The authors tested their theoretical conclusions by firing plasmas from a conical plasma gun through an 80 cm long 7 cm diameter drift tube across a transverse magnetic field of up to 0.2T produced by a solenoid in a 12 cm diameter transverse tube. The magnetic field gradient was adjusted with the aid of soft iron shields within the plasma drift tube; these shields were covered with glass tubes to prevent the plasma from coming

UDC: 533.9

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in contact with them. The plasma gun was powered by the 15 kV discharge of a 15 microfarad capacitor and produced plasmas containing 70% hydrogen ions with densities of about 10^{14} cm^{-3} and velocities of about 2.5×10^8 m/sec. The theoretical linear relation between the square of the plasma velocity and the strength of the transverse magnetic field was confirmed by the experiments. Plasmas with densities as low as 10^{12} cm^{-3} were obtained with the aid of an iris mounted in the drift tube. These plasmas did not conform to the adiabatic theory, but were to a considerable extent entrapped in the transverse magnetic field, particularly when the field gradient was high. It is concluded that low density hydrogen plasmas can be entrapped by a transverse magnetic field of considerable strength. The authors thank B.G.Safronov and N.A.Khizhnyak for valuable discussions. Orig. art. has: 10 formulas and 6 figures.

SUB CODE: 20

SUBM DATE: 11Oct65

ORIG.REF: 006

OTH REF: 004

Card 2/2

SINEL'NIKOV, K.I.

Our methods of removing glazed frost. Vest.sviazi 16 no.2:23-24
P '56. (MIRA 9:7)

1.Nachal'nik Saranskogo lineyno-tekhnicheskogo uzla Merdevskoy
ASSR.
(Telegraph lines--Ice prevention)

SINE, INIKOV, G. M., *Effect of industrial blasting on the preservation of buildings and structures. Zhakht, stroi. i no. Zhakht* 1964.

Effect of industrial blasting on the preservation of buildings and structures. Zhakht, stroi. i no. Zhakht 1964.

(MIRA 27 12)

1. Kombinat upol'nykh predpriyatiy Kuznetskogo komsobmuna i nogo basseyna (for Sine, Inikov, Zhakhtov i z. Kuznetsov) razrez tresta Temisaug. (for Kuznetsov, M. M. M.).

SINEL'NIKOV, L. S., Cand Tech Sci -- "On the efficient use
of ^a waste-gas ^{of device} ~~heater~~ construction in the fuel ^{with plus} equipment of
gas-cylinder automobiles." Gor'kiy, 1961. (Min of Higher
and Sec Spec Ed RSFSR. Gor'kiy Polytech Inst im A. A. Zhdanov)
(KL, 8-61, 249)

- 308 -

ZHALYBIN, V.I.; SINEL'NIKOV, M.I.; MININZON, R.D.; MOSHKEVICH, Ye.I.;
MURINA, K.N.; CHERNYAVSKAYA, S.G.; KHRISTOFOROVA, L.I.; POTAPOVA, V.P.

Nature of spiderlike pitting corrosion cracks of steel,
and ways for their elimination. Stal' 25 no.10:941-944 0 '65.
(MIRA 18:11)

1. Institut "UkrNIISpetsstal'" i zavod "Dneprospetsstal'".

L 04189-67
ACC NR: AT6026545

The number of hot twists to fracture increased as a function of temperature. After fracturing, the samples were water quenched to retain the high temperature structure and then examined metallographically. The amount of austenite as a function of heat treatment for each steel is given. Micrographs of each treatment are shown for representative steel samples. The quantity of ferrite increased with rise in temperature or increase in time at temperature, with the most intense $\alpha \rightarrow \gamma$ conversion occurring in the 1200-1300°C range; by holding for 10 hrs in this range almost all of the structure became ferritic. The plasticity at different temperatures depended on the ratio of α - and γ -phases in the structure at the given temperature. Maximum plasticity resulted for γ -phase contents less than 25-30%. It was recommended that the ingots of EI811 steel be soaked at higher temperatures throughout rolling than is normally typical, i. e., at 1290 to 1310°C instead of 1250 to 1270°C. Orig. art. has: 1 table, 6 figures.

SUB CODE: 11/ SUBM DATE: none

Card

2/2

LC

AUTHOR: Sinel'nikov, M.V. SOV/109-3-12-13/13
TITLE: ~~Electron Emission~~ from Pure Metal Surfaces at Room
Temperature (Elektronnaya emissiya s poverkhnosti chistogo
metalla pri komnatnoy temperature)
PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 12,
pp 1523 - 1524 (USSR)

ABSTRACT: The work reported in this paper deals with the investigation of electron emission which occurs at the surfaces of some metals at room temperature; metals are neither subjected to irradiation nor to the action of an electric field. The effect is sometimes referred to as the exo-electronic emission. The main problem consisted of determining whether it was possible to obtain this type of emission from pure metal surfaces or whether the emission took place only in the presence of surface impurities. Surfaces of magnesium, aluminium and copper electrodes were investigated. Prior to the investigation, the electrodes were subject to a strong cathodic pulverisation in a glow discharge in hydrogen. It was found that at a pressure of 10^{-6} mmHg, magnesium and aluminium produced currents of 10^{-4} A, and these could be observed over intervals of

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SOV/20-126-3-26/69

24(5)

AUTHOR:

Sinel'nikov, M. V.

TITLE:

The Electron Emission From the Surface of Pure Molybdenum After Irradiation by Electrons (Elektronnaya emissiya s poverkhnosti chistogo molibdena posle oblucheniya elektronami)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 3, pp 554 - 556 (USSR)

ABSTRACT:

In the present paper electron emission at space temperature and in the absence of an electric field is investigated. A summary is given in the introduction of the results obtained by experiments carried out with magnesium, which were described in one of the author's earlier papers (Ref 1), following which the experimental arrangement (Fig 1) is described in which a molybdenum electrode of 0.1 mm thickness is used in a highly evacuated tube. In order to attain a high vacuum this electrode is annealed periodically. After this treatment pressure amounts to 10^{-2} mm. After a control measurement the electrode is annealed for 10 hours, after which the emission current is measured. One minute after exposure, the latter amounted to 10^{-11} a, after 30 minutes it was $1.3 \cdot 10^{-12}$ a, and after 10 hours 10^{-14} a. In the course of the discussion of results,

Card 1/2

SINELNIKOV, N.; GOL'BETS, M.; PICHKOV, K.; DRAUSAL', A.; NEKRASOV, V.
SKRINNIKOV, Yu.; POGOSTKIN, S.; GARAYEV, V.; SMIRNOV, V.;
MINOSYAN, I.

Useful details. Za rul. 15 no.5:insert p.12-14 My '57. (MIRA 10:6)
(Automobiles)

GARTENBERG, B.; SIMEL'NIKOV, N.

Gadgets for automobile touring. Za rul. 19 no. 2:20-21 Ag 1961.
MIRA 14:9

(Automobiles--Equipment and supplies)

SINEL'NIKOV, N.A. [deceased]

Formation of tissuelike pattern on the Skhodnya cranium fragment.
Uch.zap.Mosk.un. no.158:175-179 '52. (MLRA 8:8)
(Skhodnya Valley--Craniology)

SINELNIKOV, N.A.

51

8638. An experiment on the treatment of dysentery with decoctions of alhagi. Kh. I. Guterts, N. A. Sinelnikov, L. A. Vasilova, E. N. Simanovskaia, and F. B. Maizell. *Izv. Akad. Nauk, Turkmen. S.S.R.*, 1955, No. 3, 73-77; *Referat. Zh. Biol.*, 1956, Abstr. No. 79329.

Twenty patients with acute dysentery were treated with a 5% autoclaved prep. of the plant alhagi (*Alhagi persarum*) perorally, in a dose of 100 ml. 3 times a day for 6 days. At the same time the patient was given a course of 5 enemas of a prep. of *A. persarum* (100 ml.) for 2-3 days. Normalisation of functions and restoration of the morphological form of the affected part of the intestine, was accelerated 1 1/2 times, compared with sulphonamido therapy, on treatment with the prep. (Russian)

F. MCKECHNIE

SINEL'NIKOV, N.A.; POPOVA, Ye.S., dotsent, kand. med. nauk, red.; ALEKSEYEV,
S.A., tekhn. red.

[Dysentery in the Turkmen S.S.R.; etiology and bacteriological
diagnosis] Dizenteria v Turkmenskoi SSR; etiologiya i bakteriologicheskaia
diagnostika. Ashkhabad, Turkmenskii gos. med. in-t im. I.V. Stalina, 1958. 245 p.
(MIRA 14:7)

(TURKMENISTAN--DYSENTERY)

BAYEVA, I.Ye.; SILANT'YEVA, Ye.V.; GAZAL'YAN, S.I.; KRASKOVA, N.I.; SHAYKHULINA,
N.N.; SIKHEL'NIKOV, N.A.

Use of a decoction of *Alhagi camelorum* for the treatment of
dysentery. Zdrav.Turk. 3 no.3:46-48 My-Je '59. (MIRA 12:11)

1. Iz kafedry mikrobiologii (zav. - dotsent A.I.Koval'chuk)
Turkmenenskogo meditsinskogo gosudarstvennogo instituta im. I.V.
Stalina i infektsionnoy bol'nitsy Leninskogo rayona Ashkhabada
(glavnyy vrach - I.Ye.Bayeva).

(DYSENTERY)

(ALHAGI CAMELORUM--THERAPEUTIC USE)

SINEL'NIKOV, N.A. (Ashkhabad)

Manufacture of preparations from alhagi persarum and their
use in medical practice. Zdrav. Turk. 7 no.4:29-32 Ap'63.
(MIRA 16:6)

(ALHAGI---THERAPEUTIC USE)

SINEL'NIKOV, N. N.

USSR/Chemistry - Thermochemistry,
Calorimeters

11 Sep 53

"A Vacuum Adiabatic Calorimeter and Some New Data
on the $\beta \rightleftharpoons \alpha$ -Conversion of Quartz," N. N. Sinel'-
nikov, Inst of Silicate Chem, Acad Sci USSR

DAN SSSR, Vol 92, No 2, pp 369-372

Describes a new type vacuum adiabatic calorimeter
for use in studying the temp dependence of true
heat capacities in the temp interval of 30-700°.
A. G. Boganov participated in the construction of
the calorimeter. Found that there is an anomalous
increase of heat capacity in the $\beta \rightleftharpoons \alpha$ -conversion
269T21

of quartz starting at about 553° and ending at
about 577° with a max value for C_p at 574.1°. Hence,
if one speaks of the heat lost in the conversion of
quartz, it is necessary to specify the temp inter-
val. Presented by Acad A. F. Ioffe 24 Jun 53.

SINEL'NIKOV, N.

4617. Sinel'nikov, N. i Karabikhin, N. Elektrichestvo v kolkhoze. (v pomoshchv
agitatoru) rostov n/d, kn izd., 1954 20 sill. 20 sm. 3.000 ekz. 25K-(54-58021)
P 631.37: 621.3 (47.892)

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

SINEL'NIKOV, N. N.

USSR/ Chemistry - Silicates

Card 1/1 Pub. 22 - 36/62

Authors : Sinel'nikov, N. N.

Title : ~~The kinetics of quartz conversion into tridymite~~

Periodical : Dok. AN SSSR 102/3, 555 - 558, May 21, 1955

Abstract : A vacuum adiabatic calorimeter, which makes it possible to measure the smallest thermal effects connected with the conversion of internal structures of substances, was employed in determining the kinetics of quartz conversion into tridymite (hexagonal silica). The effect of quartz particle dimensions and the amount of mineralizer introduced on the kinetics of quartz conversion reaction was established. The role of the mineralizer during the first stages of quartz conversion into tridymite (formation of the first intermediate cristobalite phase) is discussed. Four references: 3 USSR and 1 USA (1941-1953). Table: graphs.

Institution : Acad. of Sc., USSR, Inst. of Silicates

Presented by: Academician A. F. Ioffe, January 8, 1955

STINER, NIKOLAI, N. N.

7 2

~~The polymorphic modifications of tridymite. N. N. Stiner. Zhur. Neorg. Khim. 1, 2409-15 (1958). Three modifications of tridymite are identifiable from thermograms. On heating, the $\gamma \rightarrow \beta$ and $\beta \rightarrow \alpha$ transformations occur at 114.5° and 182°, resp. On cooling, the $\alpha \rightarrow \beta$ and $\beta \rightarrow \gamma$ changes occur at 148.1 and 72.4°, resp. In prepn. tridymite from quartz at 1700°, the use of Na₂WO₄ (equal to 300% of the wt. of the quartz) as a catalyst produces 100% conversion in 50 hrs. The use of Li₂CO₃, Na₂CO₃, or K₂CO₃ (at 3% of the wt. of the quartz) produces 78, 75, and 68% yields, resp., in 50 hrs. Photomicrographs show the presence of cristobalite crystals among those of tridymite in samples held at 1320° for shorter periods of time. 21 references. C. H. Fuchsman~~

RM

Inst. Chem. of Siberia AS USSR

SINELNIKOV, N. N.

Cristobalite, and its inversion to tridymite. N. N. Sinel'nikov. *Doklady Akad. Nauk S.S.S.R.* 110, 651 (1958); *cf. C.A.* 50, 11178f. — Synthetic cristobalite produced at 1600° with addns. of 0.05–3.0% Na₂CO₃ and similar products with 3% K₂CO₃ or Li₂CO₃ at 1200° and 1400°, give identical x-ray diagrams. Spectral analysis shows only 0.01% R₂O present. The *n* for the 1600° sample is 1.480–1.489, that of the others 1.483–1.486; all are weakly birefringent. The $\alpha \rightleftharpoons \beta$ inversion temps. are distinctly affected by the traces of the mineralizers present in solid soln. and by the thermal history of the samples. The inversion into tridymite is observed between 870° and 1450°, and the amt. of the newly formed tridymite is controlled by the intensity of the $\beta \rightleftharpoons \gamma$ effect at 117°. The rate of inversion is practically const. between 1000° and 1450°, but a function of the undercooling of the cristobalite. X-ray diagrams give evidence for high cristobalite proportion at room temp. It is concluded that intergrowths of tridymite between the cristobalite grains are possible. Such intergrowths and the systematic reduction of the $\alpha \rightleftharpoons \beta$ inversion temp. which accompanies the inversion of cristobalite to tridymite are explained. Even by mere pulverization to less than 1 μ grain diam., some α may be changed to β cristobalite in the course of time. The β phase is changed into α by heating to 280° as was observed in the x-ray diagrams.

W. Eitel

Inst. Chemistry of Silicates, AS USSR

1977-1978

"Mechanism of Quartz Transformation Into Tridymite" p. 371

The transformation of quartz to tridymite is a process which has been studied extensively in the laboratory and in nature. The mechanism of this transformation is still a matter of debate. It is generally accepted that the transformation proceeds through a series of intermediate stages, but the exact nature of these stages is not known. It is believed that the transformation is a diffusion-controlled process, and that the rate of transformation is dependent on the temperature and the grain size of the quartz. The transformation is also affected by the presence of impurities and by the rate of cooling. The transformation of quartz to tridymite is a process which is of great importance in the study of metamorphism and in the study of the geology of the Earth.

AUTHORS: Sinel'nikov, N. N., Filipovich, V. N., 57-1-29/30

TITLE: Adiabatic Calorimeter - an Instrument for Simultaneous Determination of Specific Heat and Heat Conductivity (Adiabaticheskii kalorimetr - pribor dlya odnovremennogo opredeleniya teploemkosti i teploprovodnosti)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 1, pp. 218-221 (USSR)

ABSTRACT: The description of the calorimeter was given by the author already in ref.1. By means of this calorimeter the actual specific heat c of the material and its heat conductivity λ and therefore also temperature conductivity α can be determined simultaneously. The calorimeter is surrounded by a concentrically located preheater, which consists of a thin nickel band forming an adiabatic shell around the sample. The inner preheater, consisting of a molybdenum wire, is located along the axis of the cylinder. Thus, the construction of the calorimeter, from the point of view of temperature distribution on the sample practically corresponds to an infinite cylinder. The experiment for the determination of the actual specific heat consists in setting thermostating (maintenance of uniform temperature) of the sample, supply of a certain amount of heat by means of the inner preheater and temperature

Card 1/3

Adiabatic Calorimeter - an Instrument for Simultaneous Determination of Specific Heat and Heat Conductivity. 57-1-2/30

fer occurs at the cost of air convection, of heat conductivity of the air, at the cost of the heat conductivity of quartz itself and of heat transfer due to radiation. In the second case air participates in heat exchange, air convection, however, practically lacks. Heat transfer is due to radiation as well as to heat conductivity of the air and of quartz. In the latter case the air practically does not participate in heat exchange and heat transfer occurs only at the cost of radiation and of heat conductivity of quartz. Conclusively it is stated that with the rise of temperature the rôle of heat transfer due to convection decrease at the cost of an increase of the rôle of radiation. There are 4 figures, and 1 Slavic reference.

ASSOCIATION: Institute for Silicate Chemistry AN USSR Leningrad (Institut khimii silikatov AN SSSR Leningrad)

SUBMITTED: July 13, 1956

AVAILABLE: Library of Congress

Card 3/3

1. 1. 1. 1. 1.

The "Skamell" medium-tank carrier. No 4. Tankist, No 12, 1948.

The first and second series of "Soviet" ...

1941, p. 13, 14.

SIMELINEFC, F.

De Gaule's "professional army". No 12. Tankist, No 12, 1948.

SINEL'NIKOV, P.

This happened near the Halhain Gol River. Voen. znan. 25 no.5:
22 My '49. (MIRA 12:12)
(Halhain Gol, Battle of, 1939)

SINEL'NIKOV, P., otv. za vypusk; ISUPOVA, N., tekhn.red.

[Administrative and territorial division of the Crimea as of June 15, 1960] Spravochnik administrativno-territorial'nogo deleniia Krymskoi oblasti na 15 iiunia 1960 goda. Simferopol', Krymizdat, 1960. 157 p. (MIRA 16:1)

1. Krymskaya oblast'. Iсполnitel'nyy komitet.
(Crimea--Administrative and territorial divisions)

1. MAKHON'KO, A. A.; SINEL'NIKOV, F. I.
2. USSR (600)
4. Plastering
7. Mechanization of plastering work by using gypsum solutions.
Bul. stroi. tekhn. 10 No. 8, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

Medicine

(Atlas of human anatomy) M, Gos. izd-vo med. lit-ry 1952.

9. Monthly List of Russian Accessions, Library of Congress, July 1953, Uncl.
2

SINEL'NIKOV, R.D.

Results of anatomical and clinical investigation of certain local
anesthetics. Arkh. anat., Moskva 19 no.1:23-27 Jan-Feb 52.

(CJML 21:5)

1. Professor. 2. Of the Department of Normal Anatomy (Head--Prof.
R.D. Sinel'nikov), Khar'kov Medical Institute (Director--Docent I.F.
Kononenko).

SINEL'NILOV, R.D.

Scientific activities of V. P. Vorob'ev. Arkh. anat., Moskva 29 no.5:
7-13 Sept-Oct 1952. (CLML 23:2)

1. Of the Department of Normal Anatomy (Head -- Prof. R. D. Sinel'nikov),
Khar'kov Medical Institute (Director -- Docent I. F. Kononenko).

SINEL'NIKOV, R.D. (Khar'kov)

"Atlas of human anatomy" [in English] by B.I. Anson. Reviewed
by R.D. Sinel'nikov. Arkh. anat. gist. 1 embr. 33 no. 3:86-87
J1-S '56. (MIRA 12:11)
(ANATOMY, HUMAN) (ANSON, B.I.)

SINEL'NIKOV, R.D. (Khar'kov, ul. Krasina, d.5, kv.16)

The 150th anniversary of the Department of Anatomy at the Kharkov
Medical Institute. Arkh.anat.gist. 1 eabr. 33 no.4:82-85 O-D '56.
(SCHOOLS, MEDICAL, HIST. (MLRA 10:4)
in Russia, Department of anat. in Kharkov)

USSR/Human and Animal Morphology (Normal and Pathological) 5-3
Nervous System. Central Nervous System

Abstr Jour: Ref Zhur - Biol., No 19, 1958, 88386

Author : Sinel'nikov, R. D.

Inst : Institute of Experimental Morphology, AN GruzSSR

Title : Data on Macro-microscopy of the Intraneural Stem Cells

Orig Pub: Tr. In-t eksperim. morfeol. AN GruzSSR, 1957,
6, 11-13

Abstract: The intraneural nervous cells in the whole length of the brain stem were investigated by the micro-macroscopic method of preparation by V. P. Voroblyev and subsequent staining by the method of R. D. Sinel'nikov. Internal nerve ganglia of various size and form (triangular, pear-shaped, oval or chain-like and ring-like are distributed along the stem and in areas giving origin to nerve trunks. They

Card 1/2

NOVACHENKO, N.P.; KOSHKIN, M.L., prof.: SIBEL'NIKOV, R.D., prof. (Khar'kov)

With the aid of Khar'kov medical circles. Vrach.delo no.1:1241-1242
D '58. (MIRA 12:3)

1. Chlen-korrespondent AMN SSSR (for Novachenko)
(UKRAINE--MEDICINE--PERIODICALS)

ZAZYBIN, N. I. (Kiyev), SINEL'NIKOV, R. D. (Khar'kov)

Readers conferences in Kiev and Kharkov in May-June, 1955.

Arkhnat. gist. i embr. 33 no. 1:101-102 Ja-Mr '58 (MIRA 12:1)
(ANATOMY--PERIODICALS)

SINEL'NIKOV, R.D. (Khar'kov, ul. Krasina, d.5, kv. 16)

Macro- and microscopic data on the nerves and arteries of the skeletal muscles [with summary in English]. Arkh.anat. gist. i embr. 35
no.4:14-19 J1-Ag '58 (MIRA 11:10)

1. Kafedra normal'noy anatomii (zav. - prof. R.D. Sinel'nikov)
Khar'kovskogo meditsinskogo instituta.
(MUSCLES, anat. & histol.
arteries & nerves, macroscopic & microscopic exam.
(Rus))

ZHDANOV, D.A. , red.; ZAZEBIN, M.I., red.; KAS'YANENKO, V.G., red.;
MIRNAYLOV, V.F., red.; PINEL'NIKOV, L.D. prof.,otv.red.; TORCHAYA, I.V.,
red.; SHEHELKUNOV, S.I., red.

[Transactions of the All-Union Congress of Anatomists, Histologists
and Embryologists]Trudy Vsesoyuznogo s"ezda anatomov, gistologov i
embriologov. Khar'kov, M-vo zdavookhraneniia SSSR. Vol.1. 1961.
943 p. (MIRA 15:10)

1. Vsesoyuznyy s"ezd anatomov, gistologov i embriologov. 6th, Kiev,
1958. 2. Predsedatel' Organizatsionnogo komiteta s"yezda anatomov,
gistologov i embriologov, Moskva (for Zhdanov). 3. Predsedatel'
Ukrainskogo nauchnogo obshchestva anatomov, gistologov i embriologov,
Kiev (for Kas'yanenko)
(ANATOMY—CONGRESSES) (HISTOLOGY.—CONGRESSES)

ZHDANOV, Dmitriy Arkad'yevich, doktor med. nauk, prof., red.;
ZAZYBIN, Nikolay Ivanovich, zasl. deyatel' nauki, doktor
med. nauk, prof., red.; KAS'YANENKO, Vladimir Grigor'yevich,
doktor nauk, prof., akademi, red.; MIKHAYLOV, Vladimir
Pavlovich, doktor biol. nauk, prof., red.; SINEL'NIKOV,
Rafail Davidovich, doktor med.nauk, prof., red.; TORSKAYA,
Iya Vladimirovna, kand. biol. nauk, st. nauchn. sotr., red.;
SHCHELKUNOV, Serafim Ivanovich, doktor nauk, prof., red.

[Transactions of the Sixth All-Union Congress of Anatomists,
Histologists and Embryologists] Trudy Vsesoyuznogo s"ezda
anatomov, gistologov i embriologov. Khar'kov, M-vo zdravo-
okhraneniia SSSR. Vol.2. 1961. 791 p. (MIRA 16:12)

1. Vsesoyuznyy s"yezd anatomov, gistologov i embriologov.
6th, Kiev, 1958. 2. Chlen-korrespondent AN SSSR (for Shchelkunov,
Zhdanov, Zazybin). 3. Akademiya nauk Ukr.SSR i Institut zo-
ologii AN UkrSSR (for Kas'yanenko).

(Continued on next card)

ZHDANOV, Dmitriy Arkad'yevich --- (continued). Card 2.

4. Institut eksperimental'noy meditsiny AMN SSSR (for
Mikhaylov). 5. Kafedra normativnoy anatomii Khar'kovskogo
meditsinskogo instituta (for Sinel'nikov). 6. Institut
fiziologii im. A.A.Bogomol'tsa AN Ukr.SSR (for Torskaya).
(ANATOMY--CONGRESSES)
(HISTOLOGY--CONGRESSES)
(EMBRYOLOGY--CONGRESSES)

SINEL'NIKOV, R.D. (Khar'kov, ul. Krasina, 5, kv.16)

Macromicroscopic anatomy of neurocellular formations within the trunk. Neurocellular formations in the trunk of the small intestine. Arkh.anat.gist.i embr. 40 no.4:116-121 Ap '61. (MIRA 14:5)

1. Chair of Normal Anatomy, Khar'kov Medical Institute.
(INTESTINES---INNERVATION)

~~SINEL'NIKOV, Rafail Davydovich, prof.; KUPRIYANOV, V.V., red.; KUZ'MINA,~~
~~N.S., techn. red.~~

[Atlas of human anatomy in three volumes] Atlas anatomii che-loveka v trekh tomakh. Izd.2., perer. i dop. Moskva, Medgiz. Vol.3. [Study of the nervous system, sense organs and organs of internal secretion] Uchenie o nervnoi sisteme, organakh c uvstv i organakh vnutrennei sekretsii. 1963. 411 p.

(MIRA 16:9)

1. Khar'kovskiy meditsinskiy institut (for Sinel'nikov).
(ANATOMY, HUMAN--ATLASES)

SINEL'NIKOV, Rafail Davydovich, prof.; KUPRIYANOV, V.V., red.; KUZ'MINA,
N.S., tekhn. red.

[Atlas of human anatomy in three volumes]Atlas anatomii cheloveka
v trekh tomakh. Izd.2., perer. i dop. Moskva, Medgiz. Vol.1.[Study
of the bones, joints, ligaments and muscles]Uchenie o kostiakh,
sustavakh, sviazkakh i myshtsakh. 1963. 477 p. (MIRA 16:3)

1. Khar'kovskiy meditsinskiy institut (for Sinel'nikov).
(ANATOMY, HUMAN--ATLASES)

SINEL'NIKOV, Rafail Davydovich, prof.; KUPRIYANOV, V.V., red.;
ROMANOVA, Z.A., tekhn. red.

[Atlas of human anatomy in three volumes] Atlas anatomii
cheloveka v trekh tomakh. Izd.2., perer. i dop. Moskva,
Medgiz, Vol.2. [Study of the visceta and vessels] Uchenie
o vnutrennostiakh i sosudakh. 1963. 502 p.

(MIRA 16:5)

1. Khar'kovskiy meditsinskiy institut (for Sinel'nikov).
(ANATOMY, HUMAN--ATLASES)

SINEL'NIKOV, R.D.; BOBIN, V.V.; SHAPIRO, I.I.

Some data for the study of the asymmetry of the central and peripheral nervous systems. Arkh.anat.,gist.i embr. 44 no.1:56-61 Ja '63. (MIRA 16:5)

1. Kafedra normal'noy anatomii (zav. - prof. R.D. Sinel'nikov)
Khar'kovskogo meditsinskogo instituta.
(NERVOUS SYSTEM)

SIBEL'NIKOV, S.

But at the same time... Izobr.i rats. no.6:41-43 Je '60.
(MIRA 14:2)
(Leningrad--Technological innovations)

JINEL'NIKOV, Prof. S. N.

Cand. Medical Sci. Hd. of Chair, Dnepropetrovsk Therapeutic Clinic, Khar'kov Med.
Inst., -1946-47-.

"The Clinical Aspects and Therapy of Brucellosis," Vrachebnoye Delo, No. 9, 1947.

SINEL'NIKOV, S.N., doktor meditsinskikh nauk; ZHDANOVA, M.P., kand.med.nauk

State of the cardiovascular system in rheumatic fever following
tonsillectomy. Zhur. ush. nos. i gorl. bol. 21 no.4:7-11 JI-Ag '61.
(MIRA 15:1)

1. Iz kafedry propedevtiki vnutrennikh bolezney (zav. - prof.
S.N.Sinel'nikov) i kafedry bolezney ukha, gorla i nosa (ispolnyayushchiy
obyazannosti zaveduyushchego kafedroy - dotsent D.Ye.Rozengauz)
Khar'kovskogo meditsinskogo instituta,
(RHEUMATIC FEVER) (TONSILS SURGERY)
(CARDIOVASCULAR SYSTEM)

SINEL'NIKOV, S.V.

11 1504. A SIMPLIFIED METHOD FOR DETERMINING CETANE NUMBERS OF DIESEL
FUELS. Sinel'nikov, S.V. (Nov. Neft. Tekh., Neftepererab. (News Petrol.
Tech., Izdatent, Moscow), 1956, (3), 8-11; abstr. in Ref. Zh. Khim. (Ref.
J. Chem., Moscow), 1957, (8), 28051). A formula is proposed in which cetane
number = $30.28K - 304$, where $K = 1.216 \sqrt{T/d}$. T is the mean molecular boiling
point of the product in °K; d is its specific gravity at 20°C.

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USSR /Chemical Technology. Chemical Products
and Their Application

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Treatment of natural gases and petroleum.
Motor fuels. Lubricants.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31966

Author : Sinel'nikov S.V.

Title : Production of High Grade Cable Oil.

Orig Pub: Novosti neft. tekhn. Neftepererabotka, 1956,
No 7, 3-6

Abstract: Cable oils (CO) are practically pure paraffin-
naphthenic hydrocarbons. CO of C-110 grade is
prepared by percolation purification of MS-20
aviation oil in liquid propane solution with
waste product of the synthetic aluminum silicate
adsorbent, at the temperature of the ambient

Card 1/2

SINELIVIROV, S. V.

4518. DESALINIFICATION OF PETROLEUM USING GLASS WOOL. Sinelivirov, S. V.
(Nov. Neft. Tekh. Neftepereab. (News Petrol. Tech. Treatment, Moscow), 1956,
(7), 22, 23; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1957, (6),
20389). A method used in Roumania is described. The crude is washed with
water at 120°C in order partially to dissolve the salts. The mixture of crude
and water is passed through a layer of glass wool with fibres 0.007 mm thick,
in order to coagulate the salt particles. The crude is then dehydrated.
When the petroleum contains emulsions, a demulsifier is employed in the plant.
The rate of movement of the product in the filters is 5 cm/sec or less. The
layer of glass wool is 50-60 mm thick and 90 to 95% desalination is
achieved.

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SINEL'NIKOV, S.V.

Developing resources of naphthenic acids. Azerb.neft.khoz. 36
no.7:36-38 J1 '57. (MIRA 10:10)
(Naphthenic acids)

MALININ, V.; BUDANTSEV, A., naladchik; SINEL'NIKOV, V.; KAUSTOV, V.;
KAKORINA, N.; SILIN, A.; SOKOL'SKIY, A.; LOBOV, V.;
KORTADZE, N.; SEMENOV, A.; ADAMOV, B.

Tribune of the "Communist Youth League Searchlight"
movement. Tekh.mol. 30 no.9:2,3,14,15,16 '62. (MIRA 15:9)

1. Sekretar' Tul'skogo oblastnogo komiteta Vsesoyuznogo Leninskogo kommunisticheskogo soyuza molodezhi (for Malinin).
 2. Mekhanicheskiy tsekh Tul'skogo oruzheynogo zavoda (for Budantsev).
 3. Sekretar' Khar'kovskogo oblastnogo komiteta Leninskogo kommunisticheskogo soyuza molodezhi Ukrainy (for Sinel'nikov).
 4. Sekretar' komiteta kommunisticheskogo soyuza molodezhi Khar'kovskogo traktornogo zavoda (for Khaustov).
 5. Sborochnyy tsekh zavoda priborov imeni Yu.Gagarina g. Orel (for Kakorina).
 6. KZTZ (for Silin).
 7. Zamestitel' sekretarya komsomol'skoy organizatsii Rostovskogo zavoda sel'skokhozyaystvennogo mashinostroyeniya (for Lobov).
 8. Sekretar' komiteta Kommunisticheskogo soyuza molodezhi shokhty No.1 tresta "Tkvarcheliugol'" (for Kortadze).
 9. Sekretar' komiteta Kommunisticheskogo soyuza molodezhi sela Kalinovki (for Semenov).
 10. 3-iy mekhanicheskiy tsekh Gor'kovskogo zavoda frezernykh stankov (for Adamov).
- (Communist Youth League) (Efficiency, Industrial)

SINEL'NIKOV, V., KERDMAN, F.M.

Specialized manufacture of nut wrenches. Trakt. i sol'khozmash.
32 no.2:40 F '62. (MIRA 15:2)
(Tractors--Equipment and supplies)
(Wrenches)

FAPISCV, V.K., inzh.; MALOVA, I.D., inzh.; SINEL'NIKOV, V.A., inzh.

Modification of the mashing method in chromium plating
processes. Vod.1 san.tekh. no.12:33 D '65.

(MIRA 19:1)

SINEL'NIKOV, V.A.; AFANAS'YEV, S.G.

Making electrical steel in oxygen-blown converters. Metallurg
10 no.12:17-19 D '65. (MIRA 18:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii im. Bardina.

SIMEL'NIKOV, V. F.:

Minks

On the quality of mink furs. Kar. i zver. 6, No. 1, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

СИНЕЛ'НИКОВ, В.Ф.

SINEL'NIKOV, V.F.; KERDMAN, F.M.

Wrong approach to the solution of the problem of using sheet metal.
Sel'khoz mashina no.4:27-29 Ap '54. (MLRA 7:5)
(Metal work)

L 21031-66 FSS-2/ENT(1)/PCC/ENA(4)/ENH(h) TT/19/7A

ACCESSION NR: AT5023574

UR/0000/65/000/000/0123/0138

AUTHOR: Al'pert, Ya. L. ; Sinel'nikov, V. M.

14
13
B+1

TITLE: Altitude-time electron-concentration distribution in inhomogeneous formations of the outer ionosphere

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 123-138

TOPIC TAGS: artificial earth satellite, Elektron 1, Mayak transmitter, ionosphere, electron concentration, concentration distribution, altitude time distribution, ionospheric inhomogeneity

ABSTRACT: Certain results are adduced for the determination of the ionospheric electron concentration N_c by means of the following abridged formula

$$N_c \text{ (cm}^{-3}\text{)} = \delta\dot{\phi} \text{ (cps)} \left[- \frac{z_c \text{ (km. sec}^{-1}\text{)}}{\cos\zeta_c} \right]^{-1} \frac{10^5}{5.7}$$

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ACCESSION NR: AT5023574

where $\delta\phi$ is the difference in the Doppler frequency shift, z is the vertical velocity component, and ζ_c is the angle between the line of sight and a normal to the earth's surface from a point c where an observer stands at a given instant. The values of $\delta\phi$ over Moscow, Sverdlovsk, Novosibirsk, and (partly) Tbilisi were transmitted by the "Mayak" transmitter on board the Elektron-1 artificial earth satellite. The vertical distribution curves $N_c(z,t)$ were plotted for the 430—1800 km region. During a period from 1 February to 27 March 1964, 52 curves $\delta\phi(t)$ were obtained in Moscow, 78 in Sverdlovsk, and 45 in Novosibirsk. Nearly 7000 values of ρ_0 (linear size of an inhomogenous ionospheric formation traversed by light) were obtained for an interval $\rho_0 = 1-400$ km ($\rho_0 \text{ min} = 1$ km). The corresponding processing of experimental data was completed for 41 observations in Moscow for $\rho_0 \leq 50$ km. Orig. art. has: 9 figures and 11 formulas. [YK]

ASSOCIATION: none

SUBMITTED: 02Sep65

ENCL: 00

SUB CODE: ES, SV

NO REF SOV: 009

OTHER: 005

AID PRESS: 4094

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 UR/0203/65/005/002/0209/0219 65
 58
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 ACCESSION NR: AP5010264 550.388.2:621.391.81.

AUTHOR: Al'pert, Ya. L.; Sinel'nikov, V. M.

TITLE: The altitude-time distribution of electron concentration in the outer ionosphere and its stratified inhomogeneous perturbation. I. Results of measurements by means of the artificial earth satellite "Elektron-1" 12

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 2, 1965, 209-219

TOPIC TAGS: ionosphere electron distribution, satellite measurement, ionosphere electron stratification, Doppler frequency shift, artificial earth satellite

ABSTRACT: Results are given of the first stage of the processing of the differences in Doppler frequency shifts $\delta\phi$ of coherent radiowaves from the radiostation "Mayak" of the satellite "Elektron-1" operating on 20.005, 30.0075, and 90.0225 Mc. From each $\delta\phi(t)$ curve only the point for which the component of emitter velocity $(\dot{r}_c + \dot{z}_c/\cos \psi_c) = 0$ and $\delta\phi$ does not depend on the integral values of the electron concentration N and its horizontal gradient $\partial N/\partial x$ within the incident plane is utilized (\dot{r}_c and \dot{z}_c are the radial and vertical components of the satellite velocity respectively; ψ_c is the angle between the observation direction and the earth's normal from the point c indicating the

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ACCESSION NR: AP5010264

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instantaneous position of the emitter). Data at three observation points (Moscow, Sverdlovsk, Novosibirsk) were collected during February-March of 1964 and they resulted from recordings over 2-3 hours taken around noontime. Electron concentration curves $N_c(z, t)$ as a function of altitude are established for $z = 430$ to $1,100$ km with simultaneous elimination of the influence of the horizontal gradient of N perpendicular to the incidence plane. The curves for all three observation points are in good mutual agreement and exhibit appropriate maxima and minima repeating every 120-160 km. The previously observed first maximum within the outer ionosphere found by a "Kosmos" satellite (April 1962) is above the main $N_M F^2$ maximum of the ionosphere and is in good agreement with the present curves. The electron densities within this altitude range are of the order of $(1-5) \cdot 10^{-5} \text{ cm}^{-3}$. In a note added in proof the authors report that further studies covering altitudes up to 1800 km indicate that in this 1100-1800 km domain (over Tbilisi) the electron density varies within the $(1-2) \cdot 10^4 \text{ cm}^{-3}$ limit. A brief discussion is also given containing possible explanations of the observed phenomena. "The authors thank N. M. Vol'f, A. M. Luchshev, and V. A. Rybalkin for the help during observations of the satellite, and Yu. G. Ishchuk, V. I. Krayushkina and A. A. Kharybina for

Card 2/3

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ACCESSION NR: AP5010264

help during the processing of experimental data." Orig. art. has: 5 formulas, 5 figures, and 4 tables.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, the Ionosphere, and Radio Wave Propagation, AN SSSR)

SUBMITTED: 18Dec64

ENCL: 00

SUB CODE: ES

NO REF SOV: 005

OTHER: 004

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L 65297-65 EWT(1)/FCC/EWA(h) GW
ACCESSION NR: AP5020994

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550.388.2:621.391.81

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8

AUTHORS: Al'pert, Ya. L.; Vitshas, L. N.; Sinel'nikov, V. M.

TITLE: Altitude-time distribution of electron concentration in the outer ionosphere, and its stratified-nonuniformity perturbations. 2. On nonuniform structure in the outer ionosphere

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 4, 1965, 649-657

TOPIC TAGS: ionosphere, electron concentration, nonuniform plasma, Doppler effect, ion concentration, experimental method 12

ABSTRACT: Frequency Doppler shift results are analyzed from data obtained in Moscow, Sverdlovsk, and Novosibirsk during February and March of 1964. The coherent frequencies were recorded from the artificial satellite "Electron-1" at 20.005, 30.0075, and 90.0225 Mcycles. In the analysis it was assumed that gradient terms and the unsteady term

$$\int \frac{\partial N}{\partial x} z dS, \int \frac{\partial N}{\partial y} z dS, \int \frac{\partial N}{\partial t} dS$$

are negligible in the Doppler shift equation when compared with N_0 . A linear dimension $[\rho_0 \approx V_0 T]$ was selected to determine nonuniform structures in the electron

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concentration. On the further assumption that $\rho_x = \rho_y = \rho_z = \frac{\rho_0}{y} \ll z_c$,

the Doppler shift is represented by

$$\Delta(\delta\Phi)_d = \frac{\omega}{c} \frac{2\pi e^2}{m} \left(\frac{1}{\omega_2^2} - \frac{1}{\omega_1^2} \right) N_d \left\{ -\frac{z_c}{\cos \varphi_c} + \left[\frac{\rho_0}{2\pi z_c} \frac{\cos \pi/2(x_c/z_c)}{\pm 1 \mp (x_c/z_c)^2} - (\sin \varphi_0 \cos \varphi_c)^{-1} \times \frac{(x_c/z_c) - \sin \pi/2(x_c/z_c)}{\pm 1 \mp (x_c/z_c)^2} \right] \left(\dot{r}_c + \frac{\dot{z}_c}{\cos \varphi_c} \right) \right\}.$$

The maximum variation in electron concentration in the nonuniform structures is given by $\delta N = \Delta N / N_0 = (N_d - N_0) / N_0$.

For the altitude $z_c \approx 400-1200$ km, a distribution curve was constructed in the linear dimension ρ_0

$$W(\rho_0) = \sum_{\Delta \rho_0} n_i / \Delta \rho_0 \sum_{\rho_0=0}^{400} n_i,$$

and its longitudinal variation was recorded in the interval $\Delta \lambda = 25-95^\circ E$, $\varphi \approx 43-62^\circ N$. The W spectrum shows large maxima at $\rho_M = 2-4$ km and weakly

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expressed maxima at $\rho_M = 7-10$ km. The results show further that the number of nonuniform structures is not distributed uniformly along the longitude. At times, these electron concentration nonuniformities increase considerably. Finally, very strong electron concentration perturbations were observed at 400-800 ka altitudes, corresponding to magnitudes $\rho_0 \sim 2-10$ km. "The authors express their gratitude to

N. M. Vol'f, A. M. Luchshev, and V. A. Rybalkin for their great help in conducting the observations and to Yu. G. Ishchuk, S. M. Ivanova, F. U. Mukhamadeyeva, Ye. G. Semenova, and A. A. Kharybina for reducing the data." Orig. art. has: 10 formulas, 6 figures, and 3 tables.

ASSOCIATION: Institut zemnogo magnetizma ionosfery i rasprostraneniya radiovoln, AN SSSR (Institute of Terrestrial Magnetism, Ionosphere, and Radio Wave Propagation, AN SSSR)

SUBMITTED: 05Apr65

ENCL: 00

SUB CODE: ES

NO REF SOV: 004

OTHER: 000

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S/2563/64/000/231/0065/0071

ACCESSION NR: AT4042134

AUTHOR: Basalayev, G. I., Sincl'nikov, V. P.

TITLE: Design and results of experimental tests of an axial forerunner with a small hub ratio

SOURCE: Leningrad. Politeknicheskij institut. Trudy*, no. 231, 1964. Gidromashiny* (Hydraulic machinery), 65-71

TOPIC TAGS: centrifugal feed pump, pump rotor cavitation, anticavitation forerunner, worm forerunner, axial forerunner, forerunner hub ratio, forerunner design calculation, pump power characteristic, rotor cavitation characteristic, banded forerunner

ABSTRACT: The report presents design calculations for a three-bladed wormtype forerunner with a hub ratio of 1.69, intended to improve the anticavitation properties of a centrifugal feed pump. The executed design (see Table 1. in the Enclosure) was tested and improved the critical cavitation factor of high speed operation of a stage from $C_{cr} = 1050$ to $C_{cr} = 2420$ at feed $Q = 0.032 \text{ m}^3/\text{sec}$, evaluated from comparative C_{cr} values, where $C_{cr} = \frac{5.62n \sqrt{\alpha}}{(H_{sv. \text{ min}})^{3/4}}$

Card 1/3

ACCESSION NR: AT4042134

and H_{sv} is excess head at the suction stage. Test results indicate that addition of the designed forerunner does not diminish the power characteristics, nor does it change the head pattern. A banded variant of the forerunner, while presenting more complex manufacturing problems, did not provide additional operating advantages. It is concluded that the design of the basic stage is equally important in obviating cavitation of the centrifugal rotor. Orig. art. has: 3 graphs, 1 table and 8 formulas.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 01

SUB CODE: IE

NO REF SOV: 006

OTHER: 000

Card 2/3

ACCESSION NR: AT4042134

ENCLOSURE: 01

Table 1.

Cross section	D_1 mm	α_l degrees	ξ degrees	l mm	$\frac{l}{t}$
peripheral	129.5	17°54'	6°40'	142	1,05
central	103.0	22°05'	8°09'	153	1,42
hub	76.5	28°35'	10°22'	137	1,71

α_l = tangent angle of blade chord pitch
 ξ = angle of attack
 l = length of profile chord
 $\frac{l}{t}$ = grid density

Card 3/3

SINEL'NIKOV, V. V. (Docent) Dr. Tech. Sci.

Dissertation: "On the Nature of Elasticity and Hardness of Solids." Moscow Order of Lenin Inst. of Railroad Engineers, imeni I. V. Stalin, 24 Dec 47.

SO: Vechernyaya Moskva, Dec, 1947 (Project #17836)

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 528 - I

BOOK

Call No.: AF603914

Author: SINEL'NIKOV, V. V., Professor, Doctor of Technical Sciences

Full Title: EFFECT OF THE SPEED OF STRAINING ON THE TENSILE STRENGTH

Transliterated Title: Vliyanie skorosti deformatsii na soprotivleniye rastyazheniyu

PUBLISHING DATA

Originating Agency: Moscow Institute of Railroad Transport Engineers im. Stalin (MIIT), Trudy, Issue 76, Construction Mechanics

Publishing House: State Publishing House of Railroad Transport

Date: 1952 No. pp.: 12 (5-16) No. of copies: 1,000

Editorial Staff

Editor-in-Chief: Litvin, G. A., Kand. of Tech. Sci.

Editors: Profs., Doc. of Tech. Sci. Prokof'yev, I. P.,

Pratusevich, Ya. A., and Sinel'nikov, V. V.

Others: The preface was written by Gerasimov, A. S., Chief of MIIT, General Director of Traffic III Rank

PURPOSE: A paper intended for engineering-technical and scientific workers of railroad transport.

TEXT DATA

Coverage: In this paper the author attempts to establish by theoretical

Vliyaniye skorosti deformatsii na soprotivleniye
rastyazheniyu

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considerations those changes in the diagram of elongation which can be observed when the speed of deformation is increased. The study is based on the consideration of the interdependence of intergrain forces in a solid body. Diagrams and graphs.

Facilities: None

No. of References: Russian 4, 1923-1946.

2/2

SOV/124 58 10 11586

Translation from: Referativnyy zhurnal. Mekhanika. 1958. Nr 10 p 128 (USSR)

AUTHOR: Sinevskiy, V. V.

TITLE: Experimental Determination of the Pressure of a Cohesionless Medium Upon a Model of a Buttress Wall with Elastic Tiles. (Opytnoye opredeleniye davleniya usloynoy svyuchey sredy na modeli podpornoy steny s uprugimi svyazyami)

PERIODICAL: Tr. Mosk. in-ta inzh. zh.-d. transp., 1957, Nr 91, pp 16-38

ABSTRACT: Descriptions are provided of the results of experiments for determining the pressure of a cohesionless medium upon a buttress wall by means of an equipment specially designed for this purpose. Alabaster cylinders 1 and 2 cm in diameter (the latter having two through holes 1 mm in diameter) are used as the cohesionless medium. With this equipment and the cylinders with holes, observations are made of the displacement of the conventional cohesionless medium and also of the formation of slip lines during the rotation of a retaining wall. The results of experiments in determining the pressure of the cohesionless medium on the wall are adduced. A comparison of the experimental

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SOV/124-58 10 11586

Experimental Determination of the Pressure of a Conventional (cont.)

pressure data with calculations by Coulomb's equation is made

V. Fedorov

Card 20

SINEL'NIKOV, V.V., prof.

Experimental investigation of the formation of sliding lines in
a loose medium. Trudy MIIT no.131:17-48 '61. (MIRA 14:5)
(Soil mechanics)

SINEL'NIKOV, V.V., prof.

Effect of friction forces along side walls on the rate of pressure
of a loose medium. Trudy MIIT no.131:49-56 '61. (MIRA 14:5)
(Soil mechanics)

DARKOV, Anatoliy Vladimirovich; KUZNETSOV, Vasilii Ivanovich; Prinipali
uchastiye: SINEL'NIKOV, V.V., doktor tekhn. nauk, prof.; MEYN,
G.K., doktor tekhn. nauk, prof.; SHPIRO, G.S., kand. tekhn. nauk;
BYCHOV, D.V., prof., retsenzent; REKACH, V.G., prof., retsenzent;
BOCHAROVA, Yu.F., red. izd-va; GOROKHOVA, S.S., tekhn. red.

[Structural mechanics; statics structures] Stroitel'naya mekhanika;
statika sooruzhenii. Moskva, Vysshaya shkola, 1962. 742 p.
(MIRA 16:5)

(Strains and stresses)

COLEMBIOVSKIY, Pavel Lenovich, inzh., GRES', Ivan Nitrofanovich,
inzh.; MALAKHOVSKIY, Yevgeniy Ivanovich, inzh.; MEL'NIK,
Pavel Matveyevich, kand. tekhn. nauk; SEMEL'NIKOV,
Vladimir Yakovlevich, inzh.; PETROV, S.Ya., inzh.,
relezent

(Relay protection and automatic control devices using
operative a.c.) Releinaia zashchita i ustroystva avtoma-
tiki na peremennom operativnom toke. [By P.S. Colembiovskii
i dr. Kiev, Tekhnika, 1967. 409 p. (MIRA 17:10)

SINEL'NIKOV, V. Ya., inzh.; OLYANISHIN, G. A., inzh.

Transistorized overcurrent protection unit for 6-10 kv. power lines.
Energ. i elektrotekh. prom. no. 3:10-16 Ap-Je '64. (MIRA 13110)

SINEL'NIKOV, V.Ya., tech.

Group-type maximum current protection system using transistors in
6-10 kv. power transmission lines. Energ. i elektrotekh. prom.
no.4:16-18 O-D '64. (MIRA 18:3)

Two-stage transistorized directional overcurrent protection system of

110/220 kv. lines from interphase short-circuits. Energ. i elektrotekh.
prom. no.1970:22 Ja-Mr '65. (MIRA 13:6)

SINEL'NIKOV, V.Ya., inzh.; SLAVINSKIY, A.K., inzh.

Increasing the delay of a transistorized time relay. Priboro-
stroenie no.5:8-11 My '65. (MIRA 12:5)

SINEL'NIKOV, V.Ya., inzh.

Method for group power supply of the voltage circuits of large
power directing units of transistorized line protection systems.
Energ. i elektrotekh. prom. no.2:22-23 Ap-Je '65.

(MIRA 18:8)

SINEL'NIKOV, V.Ya., inzh.; KLIMENKO, I.T., inzh.

Operation of a power directional relay with distorted current
form. Energ. i elektrotekh. prom. no.3:12-20 J1-S '65.
(MIRA 18:9)

SINEL'NIKOV, V.Ya., inzh.

Memory stages of transistorized power directional components.
Energ. i elektrotekh. prom. no.4:23-25 O-D '65.

(MIRA 19:1)

SINEL'NIKOV, V.Ye.

luminescent properties of natural waters. Priroda 54 no.1:
191-21 Ja '65. (MIRA 18:2)

1. Institut biologii vnutrennikh vod AN SSSR, Borok, Yaroslavskoy
oblasti.

SINEL'NIKOV, V. Ye. Cand Med Sci -- "Luminescent properties of water as evidence of its pollution by organic substances." Alma-Ata, 1960 (Kazakh State Med Inst). (KL, 1-61, 211)

-433-

AGEYEVA, L. S. (Junior Scientific Worker, State Scientific Control Institute of Veterinary Preparations), SINEL'NIKOV, Ya. D. (Head Veterinary Doctor of the Administration of Chicken Farms), ZUBISOVA, R. A. (Head Veterinary Doctor of the Poultry Farm of the Moscow Oblast' Council of the National Economy [SNKH]).

"Testing virus vaccines against fowl plague under conditions of chicken farms* growing chicks all year round"

*In Russian: "Chicken factories."

Veterinaryiya, vol. 39, no. 9, September 1962, p. 42