SMIRNOV, V.P.; YAKOVLEV, A., kand.tekhn.nauk; PCHELINTSEV, V., kand. tekhn.nauk; BUSHEV, V., inzh.; FEDORENKO, V., inzh.

Fire-testing of large-panel houses. Pozh.delo 6 no.8: 7-11 Ag '60. (MIRA 13:8)
(Fire-testing)

NESOV, V.D., inzh., red.; SMIRNOV, V.P., inzh., red.; ESTROV, Z.I., kand. tekhn. nauk, red.; STRASHNYKH V.P., red. izd-va; RODIONOVA, V.M., tekhn. red.

[Construction specifications and regulations]Stroitel'nye normy i pravila. Moskva, Gosstroiizdat. Pt.2. Sec.L, ch.2. [Public buildings and structures; basic principles of design] Obshchestvennye zdaniia i sooruzheniia; osnovnye polozheniia proektirovaniia. (SNiP II-L. 2-62). 1962. 7 p.
(MIRA 15:10)

1. Russia (1923- U.S.S.R.)Gosudarstvennyy komitet po delam stroitel'stva. 2. Gosudarstvennyy komitet Soveta Ministrov SSSR po delam stroitel'stva (for Nesov, Smirnov). 3. Nauchno-issledovatel'skiy institut obshchestvennykh zdaniy i sooruzheniy Akademii stroitel'stva i arkhitektury SSSR (for Estrov).
(Construction industry--Standards)

SMIRNOV, V.P., inzh., red.; CHERNIKOV, I.A., kand. tekhn.nauk, red.; KLIMOVA, G.D., red.izd-va; MOCHALINA, Z.S., tekhn.red.

[Construction specifications and regulations] Stroitel'nye normy i pravila. Moskva, Gosstroiizdat. Pt.2. Sec.L. ch.14. [Laundries; standards of design] Prachechnye; normy proektirovaniia (SNiP II-L. 14-62) 1963. 12 p. (MIRA 16:9)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Gosudarstvennyy komitet Soveta Ministrov SSSR po delam stroitel'stva. (for Smirnov). 3. Akademiya kommunal'nogo khozyaystva im. K.D.Pamfilova (for Chernikov). (Laundries)

SMIRNOV, V.P., inzh., red.; SHERMAN, L.N., arkh., red.

[Construction specifications and regulations] Stroitel'nye normy i pravila. Moskva, Gosstroiizdat. Pt.2. Sec.M.ch.3. [Auxiliary buildings and installations for industrial enterprises; specifications for planning] Vspomogatel'nye zdaniia i pomeshcheniia promyshlennykh predpriiatii; normy proektirovaniia (SNiP II-M. 3062). 1963. 21 p. (MIRA 17:3)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Gosstroy SSSR (for Smirnov). 3. TSentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut promyshlennykh zdaniy i sooruzheniy (for Sherman).

NESOV, V.D., inzh., red.; SMIRNOV, V.P., inzh., red.; KLIMOVA, G.D., red.izd-va; PUL'KINA, Ye.A., tekhn. red.

[Sanitation specifications for the designing of industrial enterprises] Sanitarnye normy proektirovaniia promyshlennykh predpriiatii (SN 245-63). Moskva, Gosstroiizdat, 1963. 75 p. (MIRA 17:2)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva.

SMIRNOV, V.P., inzh., red.; KULAKOV, L.V., arkhit., red.;
VINOGRADOV, G.M., inzh., red.

[Construction specifications and regulations] Stroitel'-
nye normy i pravila. Moskva, Stroiizdat. Pt.2. Sec.L.
ch.10. [Sanatoriums,; specifications for designs] Sana-
torii; norm proektirovaniia (SNiP II-L. 10-62). 1964. 15 p.
(MIRA 17:10)

1. Russia 1923- U.S.S.R.) Gosudarstvennyy komitet po delam
stroitel'stva. 2. Gosstroy SSSR (for Smirnov) 3. Gosudar-
stvennyy komitet po grazhdanskomu stroitel'stvu i arkhitek-
ture pri Gosstroye SSSR (for Kulakov). 4. Proyektnyy institut
Ministerstva zdravookhraneniya RSFSR (for Vinogradov).

SMIRNOV, V.[illegible], [illegible], red.

[Instructions on designing office and employees' service buildings and premises, public eating places and health centers for construction and assembly organizations] Ukazaniia po proektirovaniiu bytovykh zdanii i pomeshchenii, punktov pitaniia i zdravpunktov stroitel'no-montazhnykh organizatsii. Moskva, Stroiizdat, 1964. 15 p.
(MIRA 18:8)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva.

ACC NR: AT7002117 (N) SOURCE CODE: UR/0000/66/000/000/0323/0329

AUTHOR: Bugakov, I. I.; Shikhobalov, S. P.; Smirnov, V. P.; Smirnova, S. V.

ORG: none

TITLE: Stress-concentration in turbine discs with apertures and in T-head blade mounts in the discs

SOURCE: Vsesoyuznaya konferentsiya po polyarizatsionno-opticheskomu metodu issledovaniya napryazheniy. 5th, Leningrad, 1964. Polyarizatsionno-opticheskiy metod issledovaniya napryazheniy (Polarizing-optical method of investigating stresses); trudy konferentsii. Leningrad, Izd-vo Leningr. univ., 1966, 323-329

TOPIC TAGS: turbine, turbine blade, contact stress, stress analysis, turbine disc, creep mechanism

ABSTRACT: The authors describe the results of a systematic investigation, using plastic models, of creep in the critical parts of steam and gas turbines. Problems of elasticity, which approximately describe the condition of parts at the moment of turbine start up, can be solved either theoretically or experimentally using the technique of "freezing" flat models made of polyester resin. The problems of creep are investigated utilizing photographic methods on models prepared from transparent celluloid. These models were subjected to a constant external load. The measurements of

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ACC NR: AT7002117

the optical variables commenced immediately after the loading and were carried out in certain intervals right up to the onset of the steady creep. The stress concentration coefficient is derived from the rheological expression for material creep. For discs with small apertures the stress concentration factor was determined from the experimental data. The dependence of the stress concentration factor from the load was also determined experimentally and plotted for T-head mounts of the turbine blades, both for a perfect fit and the presence of a gap. The investigations showed that the greatest tensile stress occurs in the tail end of the blade and in the rim of the disc. Orig. art. has: 8 figures.

SUB CODE: ~~13,17~~ 10/ SUBM DATE: 14Jun66/ ORIG REF: 005/ OTH REF: 001

Card 2/2

L 20385-66 EWT(1)/ETC(f)/EPF(n)-2/EWG(m)/ETC(m)-6 IJP(c) WW/AT
ACC NR: AT6001560 SOURCE CODE: UR/3136/65/000/911/0001/0020

AUTHOR: Kovan, I. A.; Podgornyy, I. M.; Rusanov, V. D.; Smirnov, V. P.; Spektor, A. M.; Frank-Kamenetskiy, D. A. 72

ORG: Institute of Atomic Energy im. I. V. Kurchatov (Institut atomnoy energii) 68 BH

TITLE: Magnetosonic heating of a plasma

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-911, 1965. Magnitnozvukovoy nagrev plazmy, 1-20

TOPIC TAGS: magnetoacoustic effect, magnetoactive plasma, plasma resonance, plasma waveguide, plasma oscillation, plasma heating, magnetic trap/ Vega

ABSTRACT: The authors present results of a study of excitation, propagation, and absorption of oblique magnetic-sound waves in a hydrogen or helium plasma at 10--30 Mcs. More attention than in the past is paid to the excitation of magnetic-sound waves, and particularly magnetic-sound resonance in a confined plasma. Various experiments with direct magnetic-sound waves are discussed and experiments aimed at heating plasma with the aid of oblique waves and magnetic-sound resonance are described. A "Vega" adiabatic trap with high frequency source of cold plasma, designed for this purpose is briefly described. The plasma in these experiments was produced by high frequency discharge, using generators operating at 20--50 Mcs

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ACC NR: AT6001560 4

with a nominal power of ~200 kw. The transverse field was produced by discharging a capacitor through a solenoid. The magnetic-field pulse was 20 msec. The investigations have shown that when beyond-cutoff plasma-waveguide conditions are produced resonance accumulation of energy is possible in the plasma column when the magnetic sound wave propagates almost transverse to the static magnetic field. This phenomenon is treated as magnetic-sound resonance at lower radial modes. The spatial amplification obtained in strong magnetic fields corresponds to a resonator Q ~ 15, assuming that only transverse waves are excited in the resonator. This value of Q is limited by dissipative mechanisms, particularly nonlinear processes. The study of the oblique magnetic-sound waves has shown that the dissipative processes can be more intense here and that in the case of nonstationary waves of large amplitude a nonlinear dissipation, connected with collective mechanisms, can arise. The experiments have also shown that such a wave can be used to transfer energy effectively to the electronic component. The two plasma heating methods considered (resonant and shock-wave) can be particularly promising for the production of hot plasma in toroidal traps. The authors thank Ye. K. Zavoyskiy, M. A. Leontovich, B. B. Kadomtsev, and V. D. Shafranov for numerous discussions.
Orig. art. has: 11 figures and 11 formulas.

SUB CODE: 20/ SUBM DATE: none / ORIG REF: 028/ OTH REF: 003

Card 2/2 BK

L 22004-66 EWT(d)/EWT(m)/EWP(c)/EWP(v)/EWP(j)/T/EWP(t)/EWP(k)/EWP(l)/ETC(m)-6
IJP(c) JD/HM/RM

ACCESSION NR: AP5024510 UR/0191/65/000/010/0052/0055
678.029.43.01:539

54
53
B

AUTHOR: Smirnov, V. P.

TITLE: Controlling plastic welded seams

SOURCE: Plasticheskiye massy, no. 10, 1965, 52-55

TOPIC TAGS: synthetic material, quality control, nondestructive test, seam welding, weld evaluation, x ray application, fluoroscope

ABSTRACT: This review of methods for evaluating the strength of plastic welded seams includes a tabulation of the most characteristic weld defects, their causes, and means for correcting them. The following methods for determining the presence of imperfections in seams are discussed, with emphasis on the conditions under which they may, or may not, be applicable: simple air blowing aginst an article whose opposite side has been soaped; hydraulic penetration of seams; galvanometric indication of penetration by an electrolyte; insulating properties;

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L 22004-66

ACCESSION NR: AP5024510

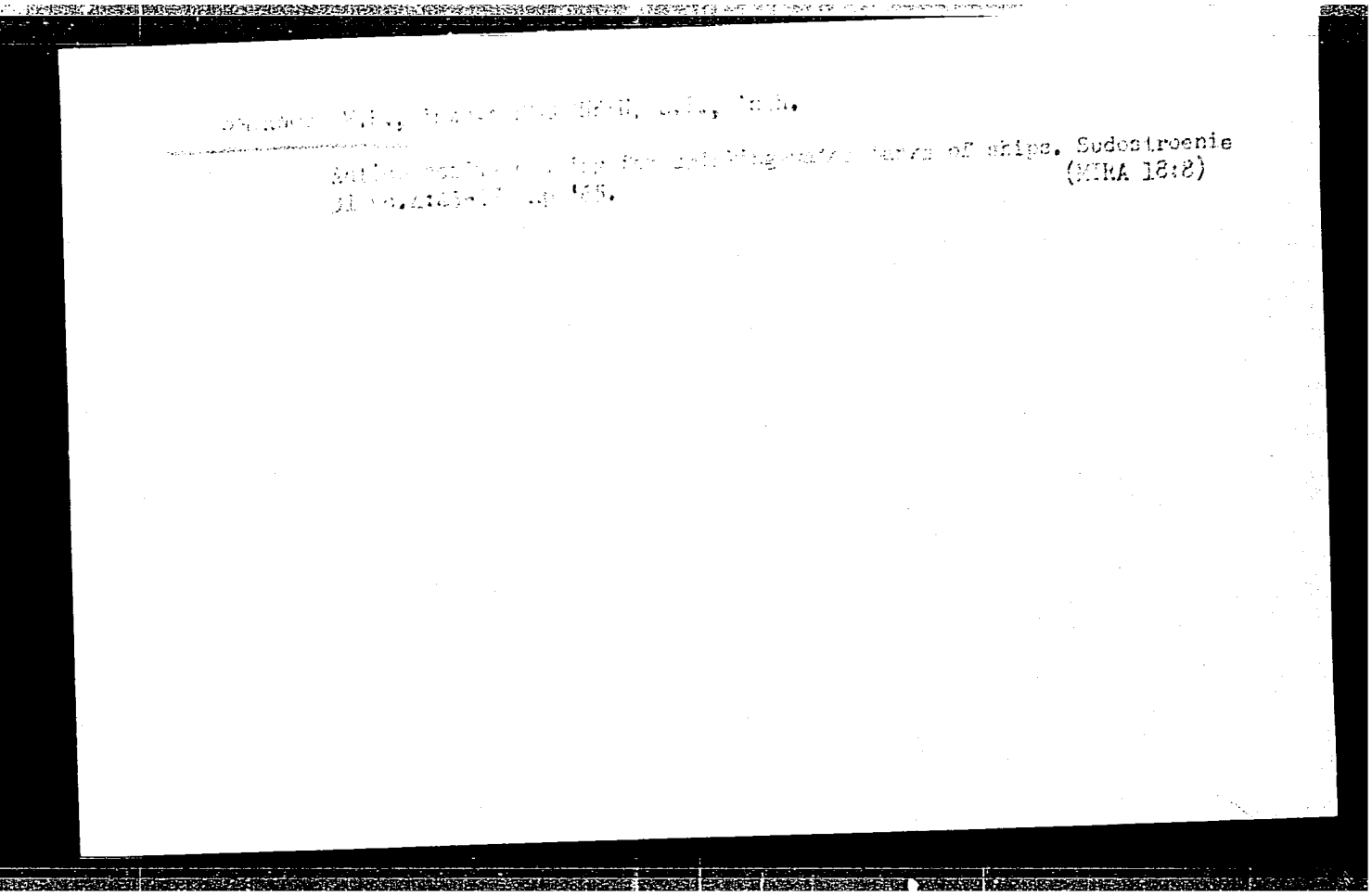
roentgenography; fluoroscopy; and electrostatic flaw detection of surface cracks. Selection of a method for checking the compactness and strength of a welded plastic seam depends on the operating requirements of the welded article. Orig. art. has: 1 table and 3 figures

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: //

NR REF SOV: 000 OTHER: 000

Card 2/2 BK



Sudostroenie
(MIRA 18:8)

SMIRNOV, V.[illegible]; ZHAVORON[illegible], [illegible] (Moskva)

Conference of the Institute of Human Morphology of the A[illegible] Medical Sciences of the U.S.S.R. and the plenum of the All-Union Society of Pathoanatomists dedicated to problems of geographical pathology. Vest. AMN SSSR [illegible] no.[illegible] [illegible].

([illegible]RA [illegible])

KHUDYAKOV, P. ..., SHIRNOV, V.S.

Automobiles

Gas-generator automobile Ural-Zis 352 Avt. trakt. prom. no. 4, April 1952

Monthly List of Russian Accessions, Library of Congress August 1952. Unclassified

KAPUSTIN, I.N.; KOTKIN, B.A.; SMIRNOV, V.S.; FRANTSUZ, E.T.

Some ideas about the design and circuit of a neutron monitor. Geomag. i aer. 3 no.6:1108-1114 N-D '63. (MIRA 16:12)

1. Polyarnyy geofizicheskiy institut Kol'skogo filiala AN SSSR.

SMIRNOV, V. S.

S/120/62/000/004/029/047
E039/E420

AUTHORS: Vladimirskiy, V.V., Borisov, V.S., Smolyankina, T.G., Gorbik, V.K., Kurdyukova, Z.A., Moskovtsev, V.A., Smirnov, V.S.

TITLE: Calculation and construction of pole piece correction coils in the proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 153-158

TEXT: Preliminary tests with model magnets showed that the field configuration required correction at the beginning and end of the acceleration cycle. Deviations which are constant in time can be corrected by a small geometrical displacement of the magnet blocks but transient deviations have to be corrected by coils on the pole faces. In the present article calculations are made on the form of these coils. As the radius of curvature of the magnet is large by comparison with the chamber dimensions the problem can be solved for the plane case. In a region limited by two hyperbolas $xy = \pm p$ and a straight line $x = 0$ the surface distribution of the currents is determined for the general case. Suitable positions for the conductors are then selected and the

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Calculation and construction of ...

sum of the magnetic fields produced by these conductors is calculated on a computer. The construction of the coils is described in detail. A completely rigid construction is obtained by embedding the conductors in epoxy-resin. The average gradient produced by the gradient coils in the region ± 3 cm relative to the equilibrium orbit is -8.01 Oe/cm and the nonlinear coils on the edge produce a field H = -316 Oe with a mean square deviation of 10.8 Oe. The calculated and experimental values of the fields produced by gradient and nonlinear coils are compared and show reasonable agreement. There are 5 figures.

ASSOCIATIONS: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE): Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury GKAE (Scientific Research Institute of Electrophysical Apparatus GKAE)

SUBMITTED: March 29, 1962

Card 2/2

S/0203/63/003/006/1108/1114

ACCESSION NR: AP4001834

AUTHORS: Kapustin, I. N.; Kotkin, B. A.; Smirnov, V. S. Frantsuz, E. T.

TITLE: Some considerations of the design and plan of a neutron monitor

SOURCE: Geomagnetizm i aeronomiya, v. 3, no. 6, 1963, 1108-1114

TOPIC TAGS: neutron monitor, cosmic ray nucleon component, cosmic ray intensity variation, neutron monitor construction, nuclear physics, neutron counter, neutron monitor parameters, neutron detector, cosmic ray neutron, neutron energy spectrum, gas stabilitron, neutron monitor voltage standard, cosmic ray intensity, cosmic ray counter, cosmic radiation, nuclear particle

ABSTRACT: The basic parameters for a neutron monitor for measuring cosmic rays have been discussed and their individual accuracies evaluated. These entail first the change in the sensitivity of the detector defined by $A = \sum M_k a_k$, where a_k - counter sensitivity in the k-th pocket cross section, M_k - sensitivity of this pocket relative to cosmic rays, given within an accuracy of 1%. Second, a voltage regulator suitable for 2000-volt applications for which a gaseous stabilizer is considered with an accuracy of 0.05%. Thirdly, the transmission coefficient of

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ACCESSION NR: AP4001834

the amplifier track, which is considered to be a function of input impedance, input capacity, noise level, and amplifying coefficient of the amplifier. The latter is set at a limit of 4 to 8 x 10^3. Finally, the monitor includes a zero shift stabilizer with better than 10% accuracy and dead time limit of 200 to 1000 μ sec and a recorder of type STA-2M or LTA-57. Orig. art. has: 3 figures.

ASSOCIATION: Polyarnyy geofizicheskiy institut, Kol'skogo filiala AN SSSR (Institute of Polar Geophysics Kola Department AN SSSR)

SUBMITTED: 22Feb63	DATE ACQ: 17Dec63	ENCL: 00
SUB CODE: AS	NO REF SOV: 005	OTHER: 001

Card 2/2

ACCESSION NR: AP4012543 S/0056/64/046/001/0182/0186

AUTHORS: Kazantsev, A. P.; Smirnov, V. S.

TITLE: Resonance interaction between radiation and a medium

SOURCE: Zhurnal eksper. i teoret. fiz., v. 46, no. 1, 1964, 182-186

TOPIC TAGS: radiation interaction with matter, resonance interaction, electrodynamics, stimulated emission, spontaneous emission, two level quantum system, collective processe , Maxwell's equation , electromagnetic radiation, non equilibrium radiation system

ABSTRACT: A self-consistent solution is obtained for several particular cases of Maxwell's equations, in which the radiation energy is commensurate with the excitation energy of the medium and is affected by the reaction of the medium to the radiation. It is shown that this reaction leads to modulation of the electromagnetic field. Only physically meaningful and mathematically manageable cases are

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ACCESSION NR: AP4012543

considered, viz., a medium with weak absorption, an unbounded and sufficiently rarefied medium, a two-level system, a nondissipative medium, and a plane electromagnetic wave. The de-excitation time of a spontaneously emitting non-equilibrium medium is considered for the case when the de-excitation is determined by the vibrational properties of the medium. It is shown that the initially spontaneous radiation soon turns into stimulated emission because of the large density of the atoms in the medium. "The authors are grateful to V. L. Pokrovskiy for a useful discussion." Orig. art. has: 26 formulas.

ASSOCIATION: Institut radiotekhniki i elektroniki Sibirskogo otdeleniya AN SSSR (Institute of Radio Engineering and Electronics, Siberian Department, AN SSSR)

SUBMITTED: 17Jan63 DATE ACQ: 26Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 003 OTHER: 000

Card 2/2

ASHEKO, S.M.; VEKSLER, V.M.; KLAUZ, P.L.; SOKOLOV, K.A.; IGNATOVICH, A.M., prof., retsenzent; SMIRNOV, V.S., kand. tekhn. nauk, retsenzent; KRIVICH, P.S., inzh., retsenzent; ABRAGAM, S.R., inzh., red.; VOROTNIKOVA, L.F., tekhn. red.

[Operation of road, construction, and loading and unloading machines] Ekspluatatsiia putevykh, stroitel'nykh i pogruzochno-razgruzochnykh mashin. [By] S.M.Asheko.i dr. Moskva, Transzheldorizdat, 1963. 302 p. (MIRA 16:10)
(Construction equipment)

POSPELOV, P.N., akademik; SMIRNOV, V.S.; LAVRENT'YEV, M.A., akademik; GAFUROV, B.G.; KEDROV, B.M.; DUBROVSKIY, S.M., doktor istor.nauk; KONSTANTINOV, F.V.

Discussion of the report. Vest. AN SSSR 33 no.8:29-39 Ag '63. (MIRA 16:8)

1. Chleny-korrespondenty AN SSSR (for Smirnov, Gafurov, Kedrov, Konstantinov).

(No subject heading)

KOSOVICH, Vasiliy Luk'yanovich; SMIRNOV, Viktor Sergeyevich, retsenzent; STEPUN, Aleksey Oskarovich, retsenzent; DOROKHIN, Nikolay Georgiyevich, otv. red.; LOMILINA, L.N., tekhn. red.

[Basic technical and economic calculations on mining operations and mining systems] Osnovnye tekhniko-ekonomicheskie raschety po provedeniiu vyrabotok i sistemam razrabotki. Moskva, Izd-vo "Nedra," 1964. 154 p. (MIRA 17:3)

SMIRNOV, V.S.

Late dermal porphyria. Vest. derm. i ven. 38 no.11:22-26 N '64.
(MIRA 18:4)

1. Kafedra kozhnykh i venericheskikh bolezney (nachal'nik - chlen-korrespondent AMN prof. S.T.Pavlov, nauchnyy rukovoditel' raboty - doktor med. nauk Yu. F. Korolev) Voyenno-meditsinskoy ordena Lenina akademii imeni Kirova, Leningrad.

6(5) SOV/112-59-1-2065

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 1, p 298 (USSR)

AUTHOR: Smirnov, V. S.

TITLE: Disk-Type NDD-54 Dictaphone

PERIODICAL: Tr. Vses. n.-i. in-ta zvukozapisi, 1957, Nr 2, pp 87-89

ABSTRACT: A dictaphone is described that records speech on a ferromagnetic disk. The instrument was developed in the Vsesoyuznyy institut zvukozapisi (All-Union Scund-Recording Institute) in 1954; a portable case houses the mechanism, a turntable, a record-playback amplifier, a rectifier, a magnetic head secured to a tone arm, a dynamic speaker, and a demagnetizing magnet. The ferromagnetic disk is a multilayer plate whose surface layer contains a magnetic powder. Spiral grooves are cut in the disk; the magnetic head slips along the bottom of the grooves; the same head is used for both recording and playback. A recording AGC is provided. Continuous recording duration on one side of the disk is 20 min. The frequency-response irregularity, within

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Disk-Type NDD-54 Dictaphone

the 300-3,000 cps band (without the speaker), is ± 3 db. The dynamic range is over 30 db. The instrument weighs 14.5 kg. A photograph of the dictaphone is presented.

V.S.V.

SMIRNOV, V.S.

The MKTM-1 machine for simultaneous contact copying of magnetic tapes. Trudy VNAIZ no.2:90-92 '57. (MIRA 12:3)
(Magnetic recorders and recording--Equipment and supplies)

SMIRNOV, V.S.

Portable MIZ magnetic tape recorder for news reporting. Trudy VNAIZ no.5:30-33 '59. (MIRA 15:4)
(Magnetic recorders and recording)

42811

S/194/62/000/011/056/062
D413/D308

AUTHOR: Smirnov, V. S.

TITLE: The M-154 (M-154) multi-track magnetic recorder

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 11, 1962, 86, abstract 11-7-171e (Tr. Vses. n.-i. in-ta zvukozapisi, no. 9, 1961, 103-108)

TEXT: A 13-channel magnetic recorder has been developed with high mean-speed stability. The record is made on perforated 35-mm tape, 13 channels on 13 tracks. The frequency range is 300 - 3500 c/s for equalization within 5 dB. The signal-to-noise ratio is 30 dB, and crosstalk attenuation between channels is 30 dB. The nonlinear distortion (Klirr) factor is 6%; tape speed 9.5 cm/sec + 0.2%; phase fluctuation of the output signal + 2 ms relative to the input signal phase; duration of continuous recording 50 min using a 300-meter tape spool; supply voltage 3-phase power unit generating a voltage with stable frequency. The equipment weighs 270 kg. [Abstracter's note: Complete translation.]

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SMIRNOV, V.S.

The ITMS-2 system for measuring the thickness of the magnetic layer of a tape. Trudy VNAIZ no.9:109-117 '61. (MIRA 15:9)
(Magnetic recorders and recording—Equipment and supplies)
(Electronic industries—Quality control)

L 22149-66

ACC NR: AP6012968 SOURCE CODE: UR/0143/65/000/007/0130/0131

AUTHOR: Smirnov, V. S.; Kostenko, M. P.; Neyman, L. R.; Kostenko, M. V.; Domanskiy, B. I.; Zalesskiy, A. M.; Usov, S. V.; Ayzenberg, B. L.; Dubinskiy, L. A.; Aleksandrov, G. N.; Gribov, A. N.; Gruzdev, I. A.; Levinshteyn, M. L.; Mikirtichev, A. A.; Mikhaylova, V. I.; Ruzin, Ya. L.; Stefanov, K. S.; Khoberg, V. A.; Shcherbachev, O. V.

ORG: none

TITLE: Honoring the 80th birthday of Mikhail Davidovich Kamenskiy

SOURCE: Izvestiya vysshikh uchebnykh zavedeniy. Energetika, no. 7, 1965, 130-131

TOPIC TAGS: electric power engineering, electric engineering personnel, hydroelectric power plant, thermoelectric power plant

ABSTRACT: On 19 April 1965 Prof. Dr. Techn. Sci. Mikhail Davidovich Kamenskiy celebrated his 80th birthday and the 55th anniversary of his active work as a power expert. Mikhail Davidovich is a 1909 graduate of the Petersburg Polytechnic Institute - since his graduation he has been associated with this institue, now renamed Leningrad Polytechnic Institute, as an instructor. He is a major scientist and specialist in electric power grids and systems. He has been a major contributor to the establishment of the Leningrad Power Grid and various large thermal and hydro-

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L 22149-66

ACC NR: AP6012968

electric power stations and an active participant in the design and construction of high- and low-voltage power systems in many cities of the Soviet Union. During the Siege of Leningrad in World War II he was a member of the Municipal Party Defense Committee. Since the war Mikhail Davidovich has been head of the Chair of Electric Power Grids and Systems at the Leningrad Polytechnic Institute and has been working on the methods of calculating the economic regimes of power system operation and on the problems of the present-day development of urban power systems. M.D. Kamenskiy has published more than 80 works, including both original studies as well as textbooks that are popular in the Soviet Union and abroad. He is the chairman of the Section on Power Systems and Grids under the Leningrad Division of the Scientific and Technical Division of the Power Industry and organizer of and participant in many scientific-technical conferences and meetings. His merits as an educator of a new school of Soviet power engineers are equally large. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 10 / SUBM DATE: none

Card 2/2 dla

L 28463-66 EWT(1)/FCC/EWA(h) GW

ACC NR: AP6012056 SOURCE CODE: UR/0203/65/005/005/0809/0816

AUTHOR: Asaulenko, L. G.; Dorman, L. I.; Smirnov, V. S.; Tyasto, M. I. 44 15

ORG: Polar Geophysical Institute, Kola Branch, AN SSSR (Polyarnyy geofizicheskiy institut Kol'skogo filiala AN SSSR)

TITLE: Effect of limitation of the geomagnetic field on cosmic rays

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 5, 1965, 809-816

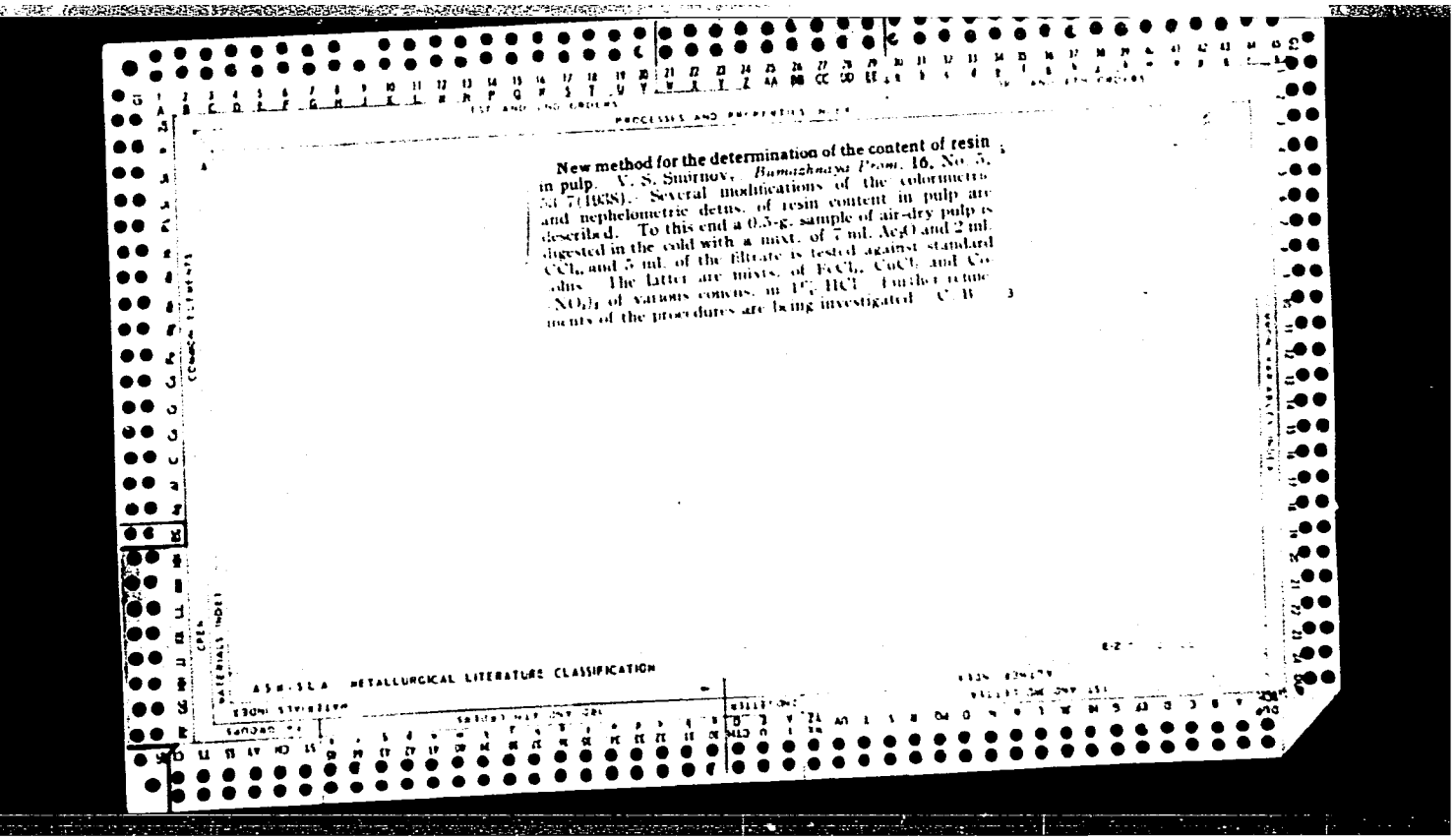
TOPIC TAGS: geomagnetic field, cosmic ray, solar wind, magnetic storm

ABSTRACT: The earth's magnetic field, at least in the direction of the sun, is limited and its extent is dependent on the density and energy of particles in the solar wind. This article discusses the effect of compression of the magnetosphere caused by the solar wind on the cutoff rigidities and asymptotic directions of cosmic rays. Limitation of the magnetosphere influences cosmic rays not only in the period of the initial phase of a magnetic storm, but also when the magnetic field is quiet. It is demonstrated that the compression leads to intensification of the influence of the magnetic field on cosmic rays and that the joint effect of limitation of the magnetosphere and the westerly current system leads to attenuation of the influence of external sources both on cutoff rigidity and on asymptotic directions. The authors thank the workers of the Computer Center, Kola Branch, AN SSSR for programming the problems and calculations on the electronic computer. Orig. art. has: 3 figures, 9 formulas, and 3 tables.

[JPRS]

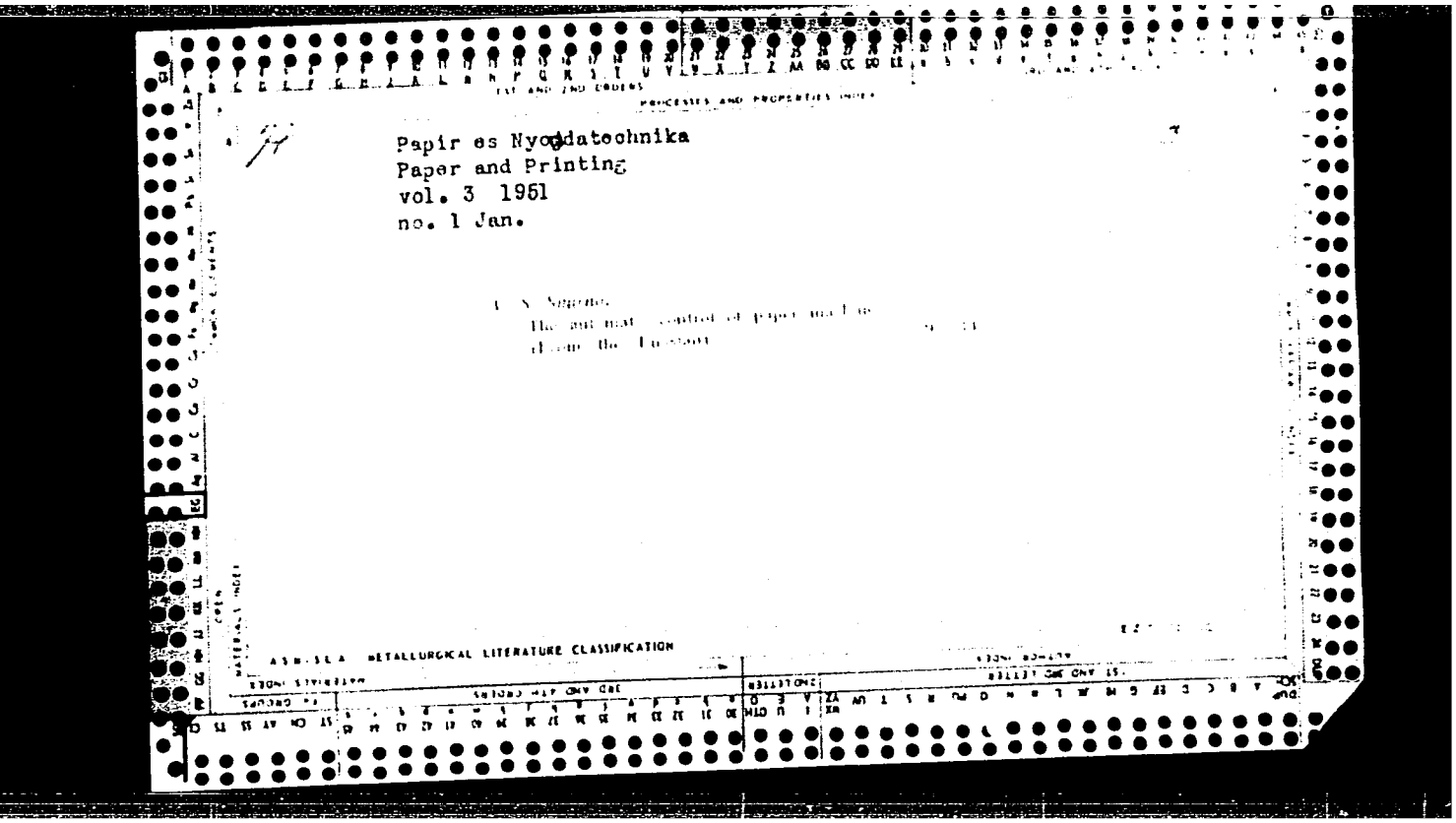
SUB CODE: 08, 03, 04 / SUBM DATE: 14Sep64 / ORIG REF: 004 / OTH REF: 013

Card 1/1



New method for the determination of the content of resin in pulp. V. S. Smirnov. *Bumazhnaya Prom.* 16, No. 5, 5-7 (1938). Several modifications of the colorimetric and nephelometric detns. of resin content in pulp are described. To this end a 0.5-g. sample of air-dry pulp is digested in the cold with a mixt. of 7 ml. AcOH and 2 ml. CCl_4 and 5 ml. of the filtrate is tested against standard solns. The latter are mixts. of $FeCl_3$, $CuCl_2$ and $Co(NO_3)_2$ of various concns. in 1% HCl. Further refinements of the procedures are being investigated. C. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



SMIRNOV, V.S.

Handy information charts for enterprises of the pulp and paper industry. Bum.prom. 29 no.6:32 Je '54. (MLRA 7:8)
(Paper industry) (Wood-pulp industry)

SMIRNOV,V.S., inzhener

Review of A.V.Zhitkov's book "Equipment for lumberyards." Mekh. trud.rab.9 no.9:47 S'55. (MIRA 8:12)
(Lumberyards) (Zhitkov,A.V.)

SMIRNOV,V.S.

Lumberyard equipment. ("Equipment for lumberyards." A.V.Zhitkov, Reviewed by V.S.Smirnov). Bum.prom.30 no.8:31 Ag'55.
(MLRA 8:11)
(Lumberyards--Equipment and supplies) (Zhitkov,A.V.)

SMIRNOV, V.S., inzhener.

To design an automatic papermaking machine. Bum.prom. 31 no.5: 14-15 My '56. (MLRA 9:8)

(Papermaking machinery)
(Machinery, Automatic)

SMIRNOV, V.S., inzhener.

Mechanization of minor hard and labor-consuming tasks. Bum.prom. 31 no.6:24-25 Je '56. (MLRA 9:8)
(Papermaking machinery)

SMIRNOV, V.S., inzhener.

Small-scale mechanization of hard and labor consuming tasks.
Bum.prom.31 no.8:22-23 Ag '56. (MLRA 9:10)
(Papermaking machinery)

SMIRNOV, V.S., inzh.

Speed up the development of an apparatus for the automatic measuring and regulating of the moisture content of paper. Bum. prom. 33 no.5: 19-21 My '58. (MIRA 11:6)
(Paper) (Automatic control)

SMIRNOV, V.S., inzh.

Automatization of the woodpulp and paper manufacturing. Bum.prom. 34 no.1:13-14 Ja '59. (MIRA 12:1)
(Woodpulp industry--Equipment and supplies)
(Papermaking machinery) (Automatic control)

SMIRNOV, V.S., inzh.

Speed up the adoption of automatic control in the woodpulp and paper industry. Bum.prom. 34 no.9:2-4 S '59.
(MIRA 13:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut tsellyulozno-bumazhnoy promyshlennosti.
(Woodpulp industry) (Paper industry)
(Automatic control)

SMIRNOV, V.S.

Speeding up the automation of the woodpulp and paper industry. (MIRA 13:12)
Bum.prom. 35 no.12:3-4 D '60.
(Paper industry)

SMIRNOV, V.S.

Conference on paper quality at the Krasnogorodskaya factory.
Bum. prom. 36 no.11:20 N '61. (MIRA 15:1)
(Paper industry)

SMIRNOV, Vyacheslav Sergeyevich; AVERICHEV, Yu.P., red.; TATURA, G.L., tekhn. red.

[From fir tree to newspaper]Ot elki do gazety. Moskva, Uchpedgiz, 1962. 57 p. (MIRA 16:1)
(Newsprint)

SMIRNOV, V.S.

PHASE I BOOK EXPLOITATION 1001

Opyt ekspluatatsii vysokovol'tnykh setey Mosenergo' sbornik statey (Operating Experience of the Mosenergo High-voltage Networks, Collection of Articles) Moscow, Gosenergoizdat, 1957, 79 p. 4,000 copies printed.

Gen. Ed.: Klement'yev, D.P., and Baumshteyn, I.A.; Ed.: Alekseyev, S.V.; Tech. Ed.: Medvedev, L.Ya.

PURPOSE: This collection of articles is intended for engineers and technicians engaged in the operation and repair of high-voltage equipment of power systems. It may also be useful to designers of H-V installations.

COVERAGE: The reports are the result of experience gained in the operation, preventive maintenance, repair and development of electrical equipment in substations and H-V networks. They also contain the first account of the application of telemechanics in network regions of Mosenergo (Moscow Regional Power System Administration). There are no references.

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Operating Experience (Cont.) 1001

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Operating Experience (Cont.)

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Professor L.M. Piotrovksii; on his 70th birthday and 45th anniversary of scientific and pedagogical activities. Elektrichestvo no.2:93 F '57. (MLRA 10:3)
(Piotrovskii, Liudvik Mar'ianovich, 1886-)

SMIRNOV, V.S., inzh.

Experience in building trucking roads covered with sectional reinforced concrete plates. Energ.stroi. no.4:59-60 '58. (MIRA 12:2)

1. Moskovskiy filial instituta "Orgenergostroy."
(Road construction)

GRISHIN, B.M., inzh.; SMIRNOV, V.S., inzh.

Layout of the construction site of a large state-owned regional electric power station. Elek. sta. 29 no.4:2-7 Ap '58.
(Electric power plants) (MIRA 11:8)

SMIRNOV, V.S., inzh.

Building supply bases for 1200 thermoelectric power plants. Energ. stroi. no.2:12-15 '59 (MIRA 13:3)

1. Moskovskiy filial instituta "Oregenergostroy".
(Electric power plants)
(Construction industry)

SMIRNOV, V.S., inzh.

Organization of construction of an open electric power plant. (MIRA 13:8)
Energ.stroi. no.4:22-25 '59.

1. Moskovskiy filial instituta "Orgenergostroy".
(Electric power plants)

SMIRNOV, V. S., inzh.

Using mobile units in the construction area of the Ali-Bayramly State Regional Electric Power Plant. Prom. stroi. 38 no.9:57-59 '60. (MIRA 13:9)

(Ali-Bayramly--Electric power plants)
(Buildings, Prefabricated)

SMIRNOV, V.S.; KAMENSKIY, M.D.; PODPORKIN, V.G.; DUKEL'SKIY, A.I.; NEYMAN, L.R.; ZALESSKIY, A.M.; KOSTENKO, M.V.; RAVDONIK, V.S.; SHCHERBACHEV, G.V.; LOPATIN, I.A.; MAMONTOVA, A.N.; FILARETOV, S.N.; KRYUKOV, K.P.; SINELOBOV, K.S.; BOSHNYAKOVICH, A.D.; BURGSDORF, V.V.; NOVGORODTSEV, B.P.; GOKHBERG, M.M.; STEFANOV, K.S.

Nikolai Pavlovich Vinogradov; obituary. Elektrichestvo no.10: 91-92 O '61. (MIRA 14:10)
(Vinogradov, Nikolai Pavlovich, 1886-1961)

SMIRNOV, V.S., inzh.

Organization of the preparatory period in construction of the Ali-Bairamly State Regional Electric Power Plant. Energ. stroi. no.22:15-24 '61. (MIRA 15:7)

1. Moskovskiy filial Vsesoyuznogo instituta po proyektirovaniyu organizatsiy energeticheskogo stroitel'stva.
(Buildings, Portable)
(Ali-Bairamly—Electric power plants)

SMIRNOV, V.S.

Construction of the first open-type thermal power plant. Prom. stroi. 39no.3:12-16 '61. (MIRA 14:4)
(Ali Bayramly—Electric power plants)
(Precast concrete construction)

SMIRNOV, V.S.; KOSTENKO, M.P.; NEYMAN, L.R.; SHRAMKOV, Ye.G.; KOSTENKO, M.V.; KAMENSKIY, M.D.; ZAYTSEV, I.A.; KUKEKOV, G.A.; DONSKOY, A.V.

A.M. Zalesskii on his 70th birthday. Elektrichestvo no.2:94 F '63. (MIRA 16:5)

(Zalesskii, Aleksandr Mikhailovich, 1892-)

SMIRNOV, V.S., inzh.

Assembly of elements during preparatory operations in construction of the machine room of a state regional electric power plant using gantry cranes. Prom. stroi. 40 [i.e. 41], no.5:14-17 '63. (MIRA 16:5)

(Konakovo--Electric power plants--Design and construction)
(Precast concrete construction)
(Cranes, derricks, etc.)

AYZENBERG, B.L.; ALEKSANDROV, G.N.; GRIBOV, A.N.; GRUZDEV, I.A.; DOMANSKIY, B.I.; DUBINSKIY, L.A.; ZALESSKIY, A.M.; KOSTENKO, M.P.; KOSTENKO, M.V.; LEVINSHTEYN, M.L.; MIKIRTICHEV, A.A.; MIKHAYLOVA, V.I.; NEYMAN, L.R.; RUZIN, Ya.L.; SMIRNOV, V.S.; STEFANOV, K.S.; USOV, S.V.; KHOBERG, V.A.; SHCHERBACHEV, O.V.

Professor M.D.Kamenskii; on his 80th birthday. Elektrichestvo no.7: 92-93 Jl '65. (MIRA 18:7)

L 44123-66 EWT(1)/FCC GW/GS

ACC NR: AT6026926 SOURCE CODE: UR/0000/66/000/000/0094/0101

47
45
8+1

AUTHOR: Smirnov, V. S.; Fedchenko, K. K.

ORG: none

TITLE: Anisotropy of the Forbush effect and electromagnetic conditions in interplanetary space

SOURCE: AN SSSR. Kol'skiy filial. Polyarnyy geofizicheskiy institut. Vysokoshirotnyye issledovaniya v oblasti geomagnetizma i aeronomii (High-latitude studies in geomagnetism and aeronomy). Moscow, Izd-vo Nauka, 1966, 94-101

TOPIC TAGS: Forbush effect, interplanetary space, ~~cosmic ray~~, geomagnetic storm, interplanetary magnetic field, solar atmosphere, ~~chromospheric~~ solar flare, magnetic plasma, ionospheric blackout, magnetic anisotropy

ABSTRACT: The present review article summarizes the earlier results of the Forbush-effect events observed furing the IGI period. The coincidence of Forbush-effect events is compared with the geomagnetic storms of sudden commencement. The structure and strength of the interplanetary magnetic field can be studied from the duration of anisotropy of the Forbush effect and processes in the solar atmosphere during chromospheric flares. All Forbush-effect events can be divided into two types: the first type has short anisotropy and unclear dependence of the duration of anisotropy upon the heliographic longitude of flares, and the other type has long-

Card 1/2

ACC NR: AP7002996 SOURCE CODE: UR/0413/66/000/024/0098/0099

INVENTORS: Smirnov, V. S.; Lamoko, L. N.; Pogodin, N. M.; Kucherevich, O. V.; Bublikov, G. P.

ORG: none

TITLE: A four-stroke three-position liquid distributor. Class 47, 189654

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 98-99

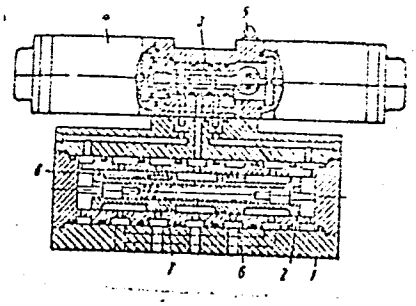
TOPIC TAGS: flow distribution, liquid flow, valve, electromagnetic effect

ABSTRACT: This Author Certificate presents a four-stroke three-position liquid distributor with an electromagnetic drive. The distributor contains a casing within which are mounted a distributing and a guiding valve, two driving electromagnets of the pusher type, and a dual manual control (see Fig. 1). To prevent the working liquid from entering the openings of the acting mechanisms after it escapes through the sealing straps of the distributing valve in its neutral position, annular grooves are cut on the central sealing straps of the distributor valve. These grooves are connected through ducts in the body of the valve to the external end surfaces of the central sealing straps.

Card 1/2 UDC: 621.646.657-368

ACC NR: AP7002996

Fig. 1. 1 - casing; 2 - distributing valve; 3 - guiding valve; 4 - electromagnet; 5 - manual control; 6 - sealing strap; 7 - annular groove; 8 - duct



Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 26Oct64

Card 2/2

SMIRNOV, V. S.

"The Teleut Squirrel (Sciurus Vulgaris Exalbidus) of the Trans-Ural Forest Steppe and the Possibilities of Its Utilization." Cand Biol Sci, Inst of Zoology, Acad Sci Kazakh SSR, Alma-Ata, 1954 (KL, No 3, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13) SO: Sum 59?, 29 Jul 55

GNUCHEVA, Vera Vladimirovna; SMIRNOV, V.S., redaktor

[Raising young farm animals and poultry; a bibliography] Vyrashchivanie molodnyaka sel'skokhozyaystvennykh zhivotnykh i ptitsy; rekomendatel'nyi ukazatel' literatury. Leningrad, 1956. 18 p. (MIRA 9:9)

1. Leningrad. Publichnaya biblioteka.
(Bibliography--Poultry)
(Bibliography--Stock and stockbreeding)

ORLOVA, Anna Kirillovna, SMIRNOV, V.S., redaktor

[Advanced methods of caring for livestock; a bibliography] Peredovye metody soderzhaniia skota; rekomendatel'nyi spisok literatury. Leningrad, 1956. 21 p. (MLRA 9:11)

1. Leningrad. Publichnaya biblioteka.
(Bibliography--Stock and stockbreeding)

SMIRNOV, V. S.

3

Accumulation of vitamin A in muskrat under natural conditions. S. S. Shvarts, V. S. Smirnov, and L. G. Krotova. *Doklady Akad. Nauk S.S.S.R.* 109, 236–7(1956).—Embryos and young muskrats lack vitamin A in the liver. The vitamin begins to accumulate during lactation and accumulates most rapidly when the animals transfer to a vegetable-plant diet. Young animals in any case show very little vitamin A in the liver during the winter (2–3 mg.%). Thus, early spring is a crit. period during which addnl. vitamin A should be supplied for satisfactory health. Vitamin A deficiency under natural conditions tends to increase the sensitivity of the tissues of the sex glands of the animals to the gonadotropic hormone of hypophysis. The increase of dimensions of hypophysis in muskrat is thus regarded as a natural compensating factor. —G. M. Kosolapoff

SMIRNOV, Vasiliy Savvat'yevich

[Shepherd's handbook] Pamiatka chabanu. Novosibirskoe knizhnoe izd-vo, 1957. 63 p. (MIRA 12:3)
(Novosibirsk Province--Sheep)

USSR / Human and Animal Physiology (Normal and Pathological). Metabolism.

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 59993

Author : Shvarts, S. S.; Smirnov, V. S.; Krotova, L. G.
Inst : AS USSR
Titlo : The Regularity of Vitamin A Storage in the Muskrat in its Natural Habitat

Orig Pub : Izv. AN SSSR, Ser. Biol., 1957, No 3, 343-351

Abstract : The storage of vitamin A in the liver of the muskrat (M) in its natural habitat fluctuates within <1 - 26 mg.%. There is no stored A in the newborn. The storage of A begins in the nursing period and increases with the transition to the green food, not reaching, however, the level peculiar to the adult M. During the summer, the males have a larger reserve of A in the liver than the females, which is due to larger expenditure in the females

Card 1/2

SMIRNOV, V.S.

Teleutca squirrel in the Transural forest steppe [with summary in English]. Zool. zhur. 36 no.6:933-937 Je '57. (MLRA 10:8)

1, Laboratoriya zoologii Instituta biologii Ural'skogo filiala Akademii nauk SSSR.
(Siberia, Western--Squirrels)

20-6-38/48

AUTHORS: Smirnov, V.S., Shvarts, S.S.

TITLE: Seasonal Variations in the Relative Weight of Suprarenal Glands in Mammals under Natural Conditions (Sezonnyye izmeneniya otnositel'nogo vesa nadpochechnikov u mlekopitayushchikh v prirodnykh usloviyakh)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 115, Nr 6, pp. 1193 - 1196 (USSR)

ABSTRACT: Many papers deal with the great influence exerted by modifications of the hormonal activity of the adrenal cortex upon the adjustement of animals to unfavorable conditions of environment. This holds as well in laboratory test as in the open. When the density of population increases, the less favorable conditions of life lead to a hypertrophy of the adrenals. But also in a well prospering population the functional activity of the adrenals varies under the influence of seasonal variations of the conditions of the surroundings. Neither the importance of these variations themselves was correctly valued nor was the part played by the adrenals sufficiently taken into account . The topic under review was incorporated into the plan for biological investigations with the marsh-beaver (On-

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Seasonal Variations in the Relative Weight of Suprarenal Glands in Mammals under Natural Conditions

animals the hypertrophy of adrenals begins earlier and lasts longer and it is more distinct than in animals born in the same year. g) The activity of adrenals is in a certain connection with the adjustment-processes to low temperatures. h) The above-mentioned laws may clearly be seen in animals from all 3 regions, so that their reality and biological importance is not to be doubted. As a preliminary hypothesis the assumption may be uttered that the difference between old and young animals (see "f" above) is connected with the decrease in the activity of tissues in older animals in contrast to the hormonal influences. In young females the weight of adrenals does not sink in spring, as this is the case in males, but it further increases and is conserved till the winter. In winter this difference between the sexes is equalized. The increase in adrenals of the females during the period of propagation is explained by the special part played by cortico-hormones in the maintenance of a normal reproductive activity of the females. A specific placental hormone that stimulates the activity of adrenals also exists. It is true that these same laws also

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Seasonal Variations in the Relative Weight of Suprarenal Glands in Mammals und[illegible]

hold for the wood-steppe, but a small though marked increase in adrenals is evident also in young males. The propagation and the phenomena connected with it apparently make greater "demands" on the adrenals than the conditions of life during the winter. In the north the weight of adrenals of the young males is smaller. Thus the amount of hormones of the adrenal cortex plays an important part in the adaptation process of the animals to the seasonal changes of the conditions of life. This finds a different quantitative expression under various climatic conditions and manifests itself at different dates. In females the guiding factor is their participation in the propagation, in males the conditions of existence as dependent on temperature. The older animals react more abruptly than the young ones. The above-mentioned chief conclusions were confirmed in the laboratory with 3 other species of rodents. According to the authors they should therefore be extended in a general form to most species of mammals. There are 1 table and 1 Slavic reference.

Card 4/5

SMIRNOV, V.S.

Age determination and age structure of the Arctic fox population in the Yamal-Nenets National Area. Trudy Sal. stats. UFAN SSSR no.1:220-238 '59. (MIRA 14:9)
(Yamal-Nenets National Area--Arctic Fox)

SMIRNOV, V.S.

The social and the red vole in the tundra. Trudy Sal. stats. UFAN SSSR no.1:364-365 '59. (MIRA 14:9)
(Napalkovo region--Field mice)

SMIRNOV, V.S., SHVARTS, S.S.

Comparative ecologico-physiological characteristics of the muskrat in the forest steppe and arctic regions. Trudy Inst. biol. UFAN SSSR no.18:91-138 '59. (MIRA 13:8)
(Siberia, Western--Muskrats)

SMIRNOV, V. S.

Teleutka-squirrel (Sciurus vulgaris golzmajeri subsp. nova) of the Tobol'sk region and its possible acclimatization in the Ural forests. Trudy Inst. biol. UFAN SSSR no.18:139-152 '59. (MIRA 13:8)

(Ural Mountain region--Squirrels)

SMIRNOV, V.S.

Age determination and age relationships in mammals exemplified in the squirrel, the muskrat, and five carnivore species. Trudy Inst. biol.UFAN SSSR no.14:97-112 '60. (MIRA 14:6)
(Game and game birds) (Teeth)

SMIRNOV, V.S.

A new subspecies of squirrels from the forest steppe of the trans-Ural region. Zool.zhur. 39 no.2:309-310 F '60. (MIRA 13:6)

1. Institute of Biology, Ural Branch of the U.S.S.R. Academy of Sciences, Sverdlovsk.
(Kurgan Province--Squirrels)

PAVLININ, V.N.; SHVARTS, S.S.; SMIRNOV, V.S., starshiy nauchnyy sotrudnik, kand.biolog.nauk, otv.red.; SEREDKINA, N.F., tekhn.red.

[Long-range planning of acclimatization measures as exemplified in the Urals] Perspektivnoe planirovanie aklimatizatsionnykh meropriiatii. Sverdlovsk, 1961; na primere Urala. 41 p. (Akademiia nauk SSSR. Ural'skii filial, Sverdlovsk. Institut biologii. Trudy, no.24). (MIRA 16:8)

(Ural Mountain region--Animal introduction)

POKROVSKIY, A.V.; SMIRNOV, V.S.; SHVARTS, S.S.

Colorimetric study of the variability of color in rodents under experimental conditions as related to the problem of hybrid populations. Trudy Inst.biol.UFAN SSSR no.29:15-28 '62. (MIRA 16:2)

(Field mice) (Zoology—Variation) (Color of animals)

SMIRNOV, V.S.

Taxonomic characteristics of the Arctic fox on the Yamal Peninsula and in Greenland. Trudy Inst.biol.UFAN SSSR no.29: 71-80 '62. (MIRA 16:2)
(Yamal Peninsula--Arctic fox) (Greenland--Arctic fox)

SMIRNOV, V.S.; SHVARTS, S.S., otv. red.

[Methods of censusing the abundance of mammals; premises for their improvement and evaluation of the accuracy of census results.] Metody ucheta chislennosti mlekopitaiushchikh predposylki k ikh sovershenstvovaniiu i otsenke tochnosti rezul'tatov ucheta [Sverdlovsk] Srednе-Ural'skoe knizhnoe izd-vo [1964] 86 p. (Akademiia nauk SSSR. Ural'skii filial, Sverdlovsk. Institut biologii. Trudy, no.39) (MIRA 18:8)

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

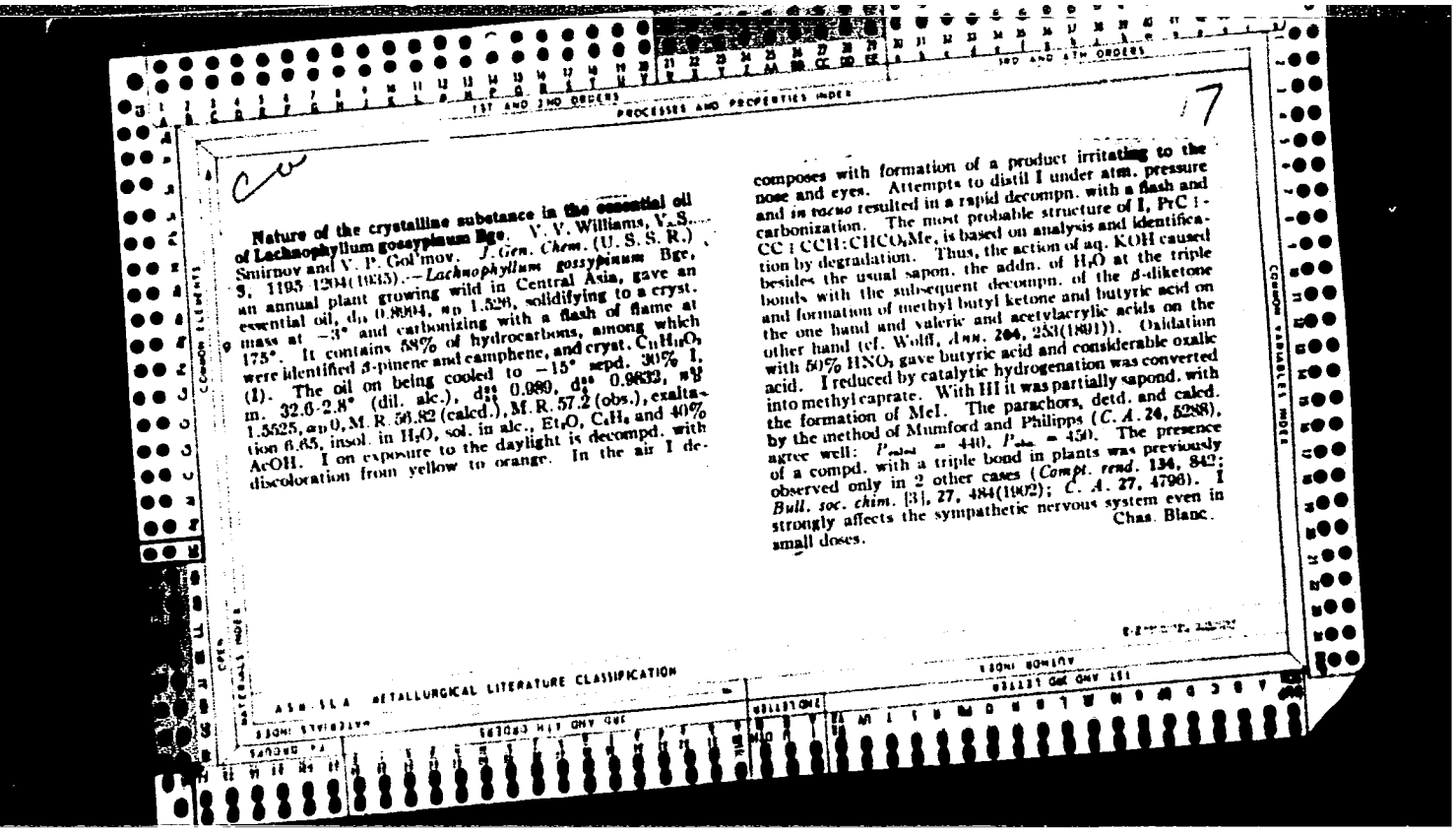
BC

B-II-5

Determination of lignin and cellulose in the same sample of plant products. V. I. Sharkov (J. Appl. Chem. Russ., 1934, 7, [illegible]).—The comminuted material is extracted with EtOH-C_6H_6 (3 hr.), dried at 105°; 1—5 g. of the product are shaken with 10—80 ml. of 72% H_2SO_4 (3 hr. at room temp.), 150—170 ml. of H_2O added, and the solution is boiled under reflux (3 hr.), filtered, and the residue washed free of SO_4'' and reducing substances, dried, and weighed (lignin). Cellulose is determined from the glucose content of the filtrate + washings.

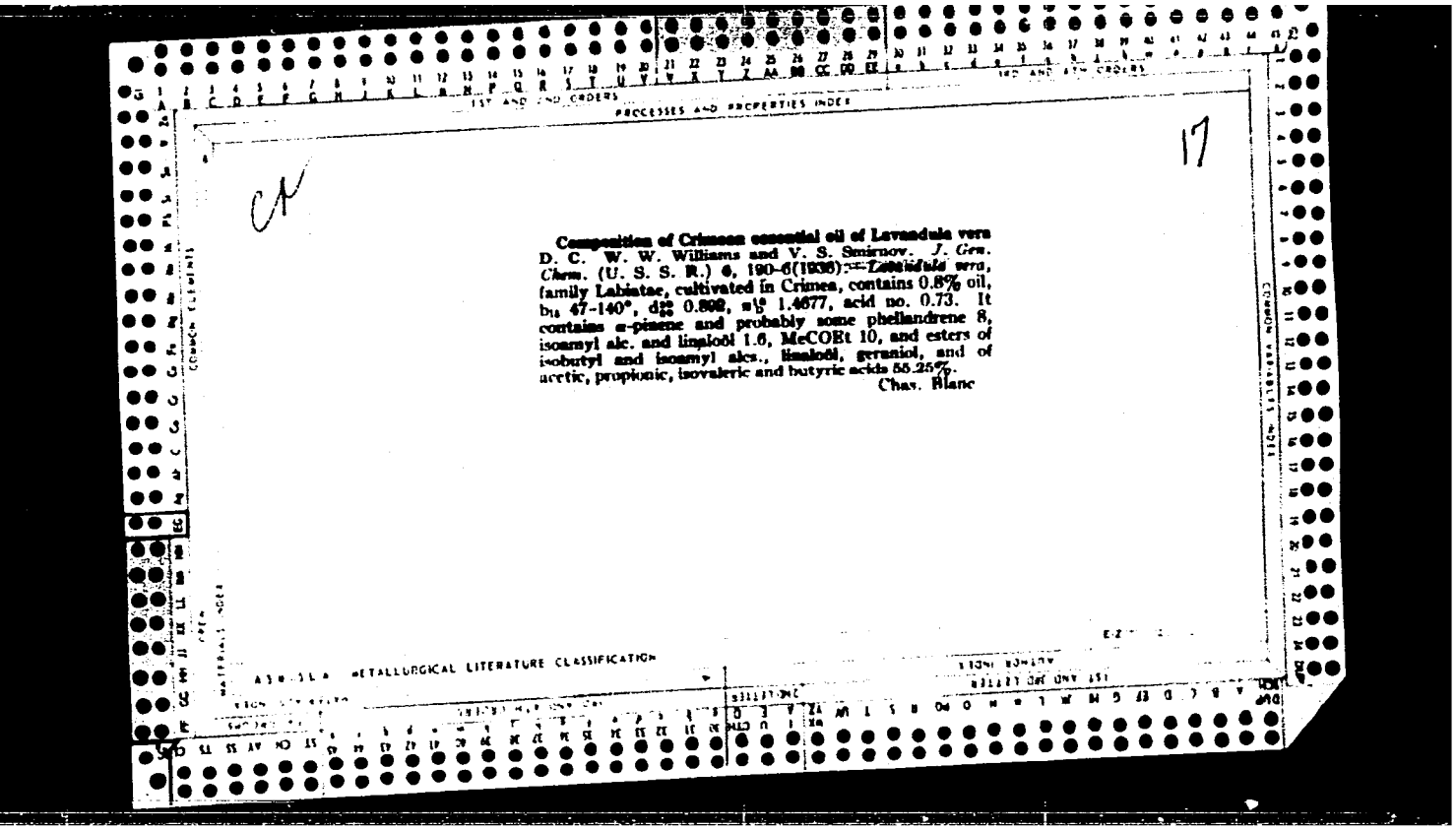
R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Nature of the crystalline substance in the essential oil of Lachnophyllum gossypinum Bge. V. V. Williams, V. S. Smirnov and V. P. Gol'mov. *J. Gen. Chem.* (U. S. S. R.) 9, 1193-1204(1935).—*Lachnophyllum gossypinum* Bge, an annual plant growing wild in Central Asia, gave an essential oil, d_{15} 0.8904, n_D 1.528, solidifying to a cryst. mass at −3° and carbonizing with a flash of flame at 175°. It contains 58% of hydrocarbons, among which were identified β-pinene and camphene, and cryst. $C_{11}H_{16}O_3$ (I). The oil on being cooled to −15° sepd. 30% I, m. 32.6-2.8° (dil. alc.), d_{25}^{25} 0.980, d_4^{25} 0.9832, n_D^{25} 1.5525, α_D 0, M. R. 56.82 (calcd.), M. R. 57.2 (obs.), exaltation 6.65, insol. in H_2O, sol. in alc., Et_2O, C_6H_6 and 40% AcOH. I on exposure to the daylight is decompd. with discoloration from yellow to orange. In the air I decomposes with formation of a product irritating to the nose and eyes. Attempts to distil I under atm. pressure and *in vacuo* resulted in a rapid decompn. with a flash and carbonization. The most probable structure of I, PrC≡CC≡CCH:CHCO$_2$Me, is based on analysis and identification by degradation. Thus, the action of aq. KOH caused besides the usual sapon. the addn. of H_2O at the triple bonds with the subsequent decompn. of the β-diketone and formation of methyl butyl ketone and butyric acid on the one hand and valeric and acetylacrylic acids on the other hand (cf. Wolff, *Ann.* **264**, 253(1891)). Oxidation with 50% HNO_3 gave butyric acid and considerable oxalic acid. I reduced by catalytic hydrogenation was converted into methyl caprate. With HI it was partially sapond. with the formation of MeI. The parachors, detd. and calcd. by the method of Mumford and Philipps (*C. A.* **24**, 5288), agree well: P_{found} = 440, $P_{calc.}$ = 450. The presence of a compd. with a triple bond in plants was previously observed only in 2 other cases (*Compt. rend.* **134**, 842; *Bull. soc. chim.* [3], **27**, 484(1902); *C. A.* **27**, 4798). I strongly affects the sympathetic nervous system even in small doses.

Chas. Blanc.



PROCESSES AND PROPERTIES INDEX

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Composition of Crimean essential oil of Levandula vera. D. C. W. W. Williams and V. S. Smirnov. *J. Gen. Chem.* (U. S. S. R.) **6**, 190-6(1936).—*Lavandula vera*, family Labiatae, cultivated in Crimea, contains 0.8% oil, b_{15} 47–140°, d_{20}^{20} 0.892, n_D^{20} 1.4677, acid no. 0.73. It contains α-pinene and probably some phellandrene 8, isoamyl alc. and linalool 1.6, MeCOEt 10, and esters of isobutyl and isoamyl alcs., linalool, geraniol, and of acetic, propionic, isovaleric and butyric acids 55.25%.
Chas. Blanc

METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

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Catalytic oxidation of cyclohexylamine. A. S. Smirnov. *J. Gen. Chem.* (U. S. S. R.) **8**, 1727-9(1938).—Continuing the work of Dem'yanov and Shuikina (*C. A.* **30**, 1032^{2}, 6337^{4}) on the catalytic oxidation of alicyclic amines, 10% cyclohexylamine in H_2O was oxidized in the presence of Cu powder and Naturkupfer C in an O current, forming 55.8% cyclohexanone. Cyclohexylamine, b. 129-34°, was prepd. in good yield from the oxime of cyclohexanone by reduction with metallic Na in alc. (cf. Hentzschel and Wislicenus, *Ann.* **275**, 314(1893)). Chas. Blanc

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CA 1D

PROCESSES AND PROPERTIES INDEX

Catalytic oxidation of cycloheptylamine. V. S. Smirnov. *J. Gen. Chem.* (U. S. S. R.) 9, 1283-5(1939); cf. *C. A.* 33, 4966[1].—The work on the catalytic oxidation of alicyclic amines was continued and 10% cycloheptylamine (I) in water was oxidized in the presence of Naturkupfer C in an O current, forming 36-64% suberone (II), whose semicarbazone m. 163°, hydrazone m. 48-9°, and dibenzal deriv., yellow, m. 106°. I, b. 165-9°, was prepd. in 22% yield from the oxime of II by reduction with metallic Na in alc. (cf. Markovnikov, *J. Russ. Phys. Chem. Soc.* 25, 365(1893)). John Livak

Lab Org. Chem., Timiryazev Agric. Acad. im Demyanov

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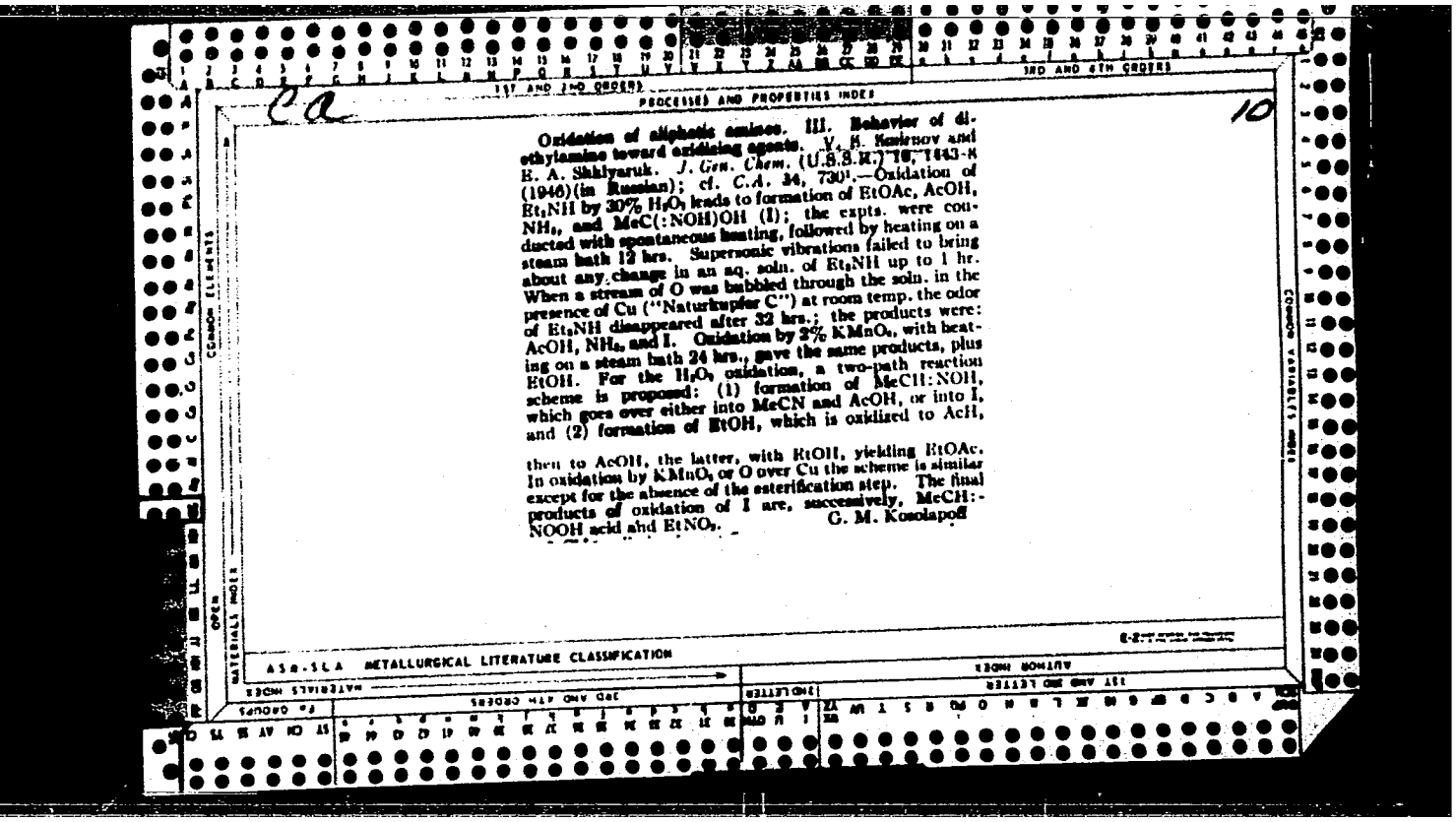

PROCESSES AND PROPERTIES INDEX

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Oxidation of aliphatic amines. III. Behavior of diethylamine toward oxidizing agents. V. S. Kamenov and E. A. Shilyaruk. *J. Gen. Chem.* (U.S.S.R.) 16, 1443-8 (1946)(in Russian); cf. *C.A.* 34, 7301.—Oxidation of Et_2NH by 30% H_2O_2 leads to formation of EtOAc, AcOH, NH_3, and MeC(:NOH)OH (I); the expts. were conducted with spontaneous heating, followed by heating on a steam bath 12 hrs. Supersonic vibrations failed to bring about any change in an aq. soln. of Et_2NH up to 1 hr. When a stream of O was bubbled through the soln. in the presence of Cu ("Naturkupfer C") at room temp. the odor of Et_2NH disappeared after 32 hrs.; the products were: AcOH, NH_3, and I. Oxidation by 2% $KMnO_4$, with heating on a steam bath 24 hrs., gave the same products, plus EtOH. For the H_2O_2 oxidation, a two-path reaction scheme is proposed: (1) formation of MeCH:NOH, which goes over either into MeCN and AcOH, or into I, and (2) formation of EtOH, which is oxidized to AcH, then to AcOH, the latter, with EtOH, yielding EtOAc. In oxidation by $KMnO_4$ or O over Cu the scheme is similar except for the absence of the esterification step. The final products of oxidation of I are, successively, MeCH:NOOH acid and $EtNO_2$.

G. M. Kosolapoff

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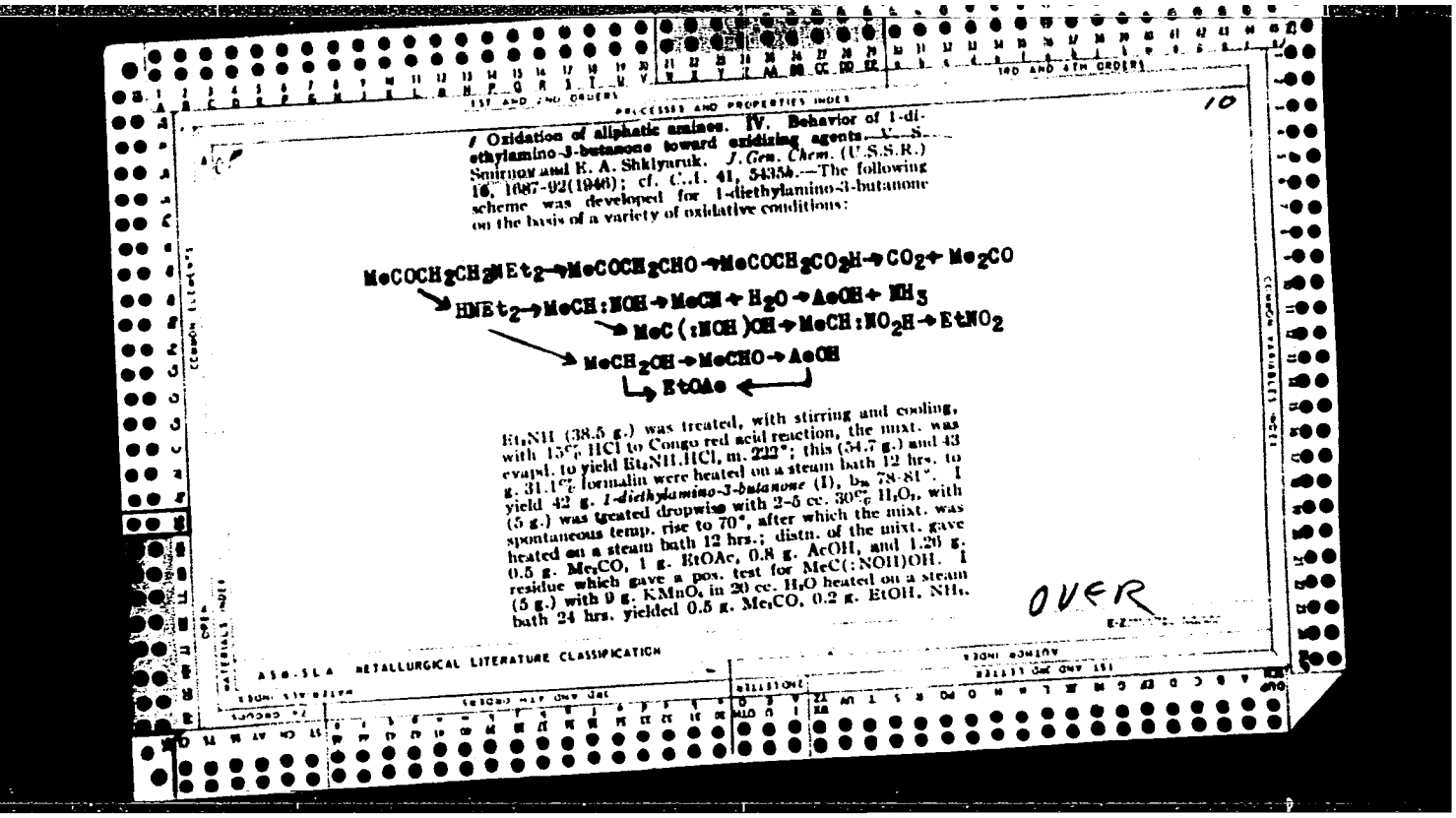

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Oxidation of aliphatic amines. IV. Behavior of 1-diethylamino-3-butanone toward oxidizing agents. V. S. Smirnov and E. A. Shklyaruk. *J. Gen. Chem.* (U.S.S.R.) 16, 1687-92(1946); cf. C.A. 41, 5435b.—The following scheme was developed for 1-diethylamino-3-butanone on the basis of a variety of oxidative conditions:

$$MeCOCH_2CH_2NEt_2 \rightarrow MeCOCH_2CHO \rightarrow MeCOCH_2CO_2H \rightarrow CO_2 + Me_2CO$$
$$\searrow HNEt_2 \rightarrow MeCH{:}NOH \rightarrow MeCN + H_2O \rightarrow AcOH + NH_3$$
$$\searrow MeC(:NOH)OH \rightarrow MeCH{:}NO_2H \rightarrow EtNO_2$$
$$\searrow MeCH_2OH \rightarrow MeCHO \rightarrow AcOH$$
$$\hookrightarrow EtOAc \leftarrow$$

Et_2NH (38.5 g.) was treated, with stirring and cooling, with 15% HCl to Congo red acid reaction, the mixt. was evapd. to yield $Et_2NH.HCl$, m. 222°; this (54.7 g.) and 43 g. 31.1% formalin were heated on a steam bath 12 hrs. to yield 42 g. *1-diethylamino-3-butanone* (I), b_{18} 78-81°. I (5 g.) was treated dropwise with 2-5 cc. 30% H_2O_2, with spontaneous temp. rise to 70°, after which the mixt. was heated on a steam bath 12 hrs.; distn. of the mixt. gave 0.5 g. Me_2CO, 1 g. EtOAc, 0.8 g. AcOH, and 1.20 g. residue which gave a pos. test for MeC(:NOH)OH. I (5 g.) with 9 g. $KMnO_4$ in 20 cc. H_2O heated on a steam bath 24 hrs. yielded 0.5 g. Me_2CO, 0.2 g. EtOH, NH_3.

OVER

SHIRNOV, V. S.

"On the Oxidation of Aliphatic Amines V., The Relation of the Diethlaminoethanol to the Oxidizers," 16, No. 10, 1946, Mbr., Lab Water Emulsion and Naptholene, Ministry of Health USSR, -1941-.

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Behavior of polymethylene oximes in oxidation. VI Behavior of cyclohexanone oxime. V. S. Smirnov and K. A. Libman. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 20, 320-30(1950); cf. C.A. 33, 19669; 41, 6202b; 44, 6389b.—Addn. of 45 ml. 30% H_2O_2 to 5 g. cyclohexanone oxime in petr. ether and warming 32 hrs. on a steam bath gave 22% cyclohexanone and some HNO_3. Similar oxidation with $KMnO_4$ for 24 hrs. gave 20% cyclohexanone. CrO_3 gave 0.9 g. cyclohexanone and 0.59 g. unreacted oxime after 24 hrs. G. M. Kosolapoff

CH

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Oxidation of aliphatic amines. VII. Behavior of 1-diethylamino-4-aminopentane with oxidizing agents. V. S. Smirnov and E. A. Shkylaruk (Ministry of Health, U.S.S.R.). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 20, 331 3(1950); cf. *C.A.* 44, 6894*h*.—Oxidation of 10 g. $Et_2N(CH_2)_3CHMeNH_2$ with 50 ml. 30% H_2O_2 for 64 hrs. on a steam bath gave EtOH, AcOH, CH_2O, hydroxamic acids (qual. test), NH_3, and $(CH_2CO_2H)_2$. Similar reaction with 18 g. $KMnO_4$ in 40 ml. H_2O gave the same products as did oxidation with CrO_3. **VIII. Behavior of butylamine and dibutylamine with oxidizing agents.** *Ibid.*, 334 7.—Heating 10 g. $BuNH_2$ with 50 ml. 30% H_2O_2 48 hrs. on a steam bath gave 2.82 g. $PrCO_2H$, the corresponding hydroxamic acid (color test with $FeCl_3$ and $CuSO_4$), and NH_3. $KMnO_4$ or CrO_3 gave similar results. The same products resulted from identical oxidations of Bu_2NH.

G. M. Kosolapoff

SMIRNOV, V.S.

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Oxidation of aliphatic amines. IX. V. S. Smirnov and A. P. Zlotnikova. *Trudy Moskov. Inst. Khimii Prom.*, Khim. 1953, No. 5, 170–2; *Referat. Zhur., Khim.* 1955, Abstr. No. 54664; cf. *C.A.* 44, 6389b.—A change of the surface tension, viscosity and pH of the reaction mixt. is observed during the oxidation of $HNBt_2$, $Et_2NCH_2CH_2OH$, $BuNH_2$, $HNBu_2$, and $Et_2N(CH_2)_2CH(NH_2)Me$ by H_2O_2, $KMnO_4$, and CrO_3. The change of the above properties makes possible a control of the amine oxidation process. N. Vasileff

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