"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.I.; YELINSKIY, M.P.

Treatment of facial neuritis with the subcutaneous administration of oxygen. Vop. psikh. i nevr. no.9:257-260 '62. (MIRA 17:1)

1. Kafedra nervnykh bolezney Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

NIKITENKO, M.D., inzh.; PLYUSNIN, N.A., inzh.; LOMAKA, N.F., inzh.; LEVIN, L.I., inzh.; FEDOROV, Z.G., inzh.

Amount of manganese used in the making of E21 dynamo steel. Stal' 25 no.8:809 S '65. (MIRA 18:9)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.L.

Machine for placing concrete conduit segments. Rats.i izobr.predl. v stroi. no.90:18-21 '54. (MLRA 8:10)
(Concrete conduits)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

KABANOV, S.I.; LEVIN, L.I., redaktor; KRASIL'SHCHIK, S.I., redaktor: TOKER, A.N., ~~tekhnicheskiy~~ redaktor

[Booklet on safety measures for steel workers on high buildings] Pamiatka po tekhnike bezopasnosti dlia verkholazov-montazhnikov. 2. izd. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954. 23 p. (MLRA 7:8)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva. Otdel tekhniki bezopasnosti i promyshlennoy sanitarii.
(Building, Iron and steel--Safety measures)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L. I.

FD-2906

USSR/Nuclear Physics - Atomic levels

Card 1/1 Pub. 146 - 6/19

Author : Bolotin, A. B.; Levinson, I. B.; Levin, L. I.

Title : Two-configurational approximation in the case of atoms of the carbon type

Periodical : Zhur. eksp. i teor. fiz., 29, October 1955, 449-453

Abstract : The authors present the values of the parameters of the analytic one-electron wave functions for C, N^{+}, O^{++}, F^{3+}, Ne^{4+} in the configurations $1s^2 2s^2 2p^2$, $1s^2 2s 2p^3$, and $1s^2 2p^4$. They determine the corrections to be added to the energy for the two-configurational approximation in the case of the ground configurations of the above enumerated atoms in the two-configurational approximation $1s^2 2s^2 2p^2$-$1s^2 p^4$. They compare the obtained theoretical values of the energy with experimental data. They determine the total forces of the dipoles and the probabilities of the transitions $1s^2 2s 2p^3$-$1s^2 2p^2$ both in the one-configurational and also in the two-configurational approximations. The authors thank Professor A. P. Yutsis for proposing the theme. Eight references: e.g. A. B. Bolotin and A. P. Yutsis, ibid., 24, 537, 1953; A. P. Yutsis, ibid., 19, 565, 1949.

Institution : Vilnus State University

Submitted : May 29, 1954

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

USSR/Atomic and Molecular Physics - Physics of the Atom, D-1

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34267

Author: Levinson, I. B., Bolotin, A. B., Levin, L. I.

Institution: None

Title: Two-Configuration Approximation in the Case of the Nitrogen-Type Atoms

Original Periodical: Mokslo darbai. Vilniaus valst. univ. Mat. fiz. ir chem. mokslu ser., 1956, 5, 49-55; Lithuanian resumé

Abstract: The values of the parameters of the analytic single-electron wave functions are given for the N, O^{+}, F^{2+}, and Ne^{3+} atoms in the configuration $1s^2\ 2s^2\ 2p^3$, $1s^2\ 2s\ 2p^4$, and $1s^2\ 2p^5$. The energy correction for the 2-configuration approximation $1s^2\ 2s^2\ 2p^3$ - $s^2\ 2p^5$ is determined for all the above atoms. The theoretical values of the energy obtained are compared with the experimental data. The total strengths of the dipoles and the transition probabilities $1s^2\ 2s\ 2p^4$ - $1s^2\ 2s^2\ 2p^3$ were determined in both the single as well as in the 2-configuration approximations. A general expression was obtained for the total dipole strength in the 2-configuration approximation in terms of the dipole integrals in the case of transitions between the s and p shells.

1 of 1

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.I.

KITAYEV, B.I., professor, doktor tekhnicheskikh nauk; KOKAREV, N.I., dotsent, kandidat tekhnicheskikh nauk; ZAOSTROVSKIY, F.P., dotsent, kandidat tekhnicheskikh nauk; ZAMOTAYEV, S.P., inzhener; CHIKIL'DIN, A.A., inzhener; MOROZOV, N.A., inzhener; LEVIN, L.I., inzhener.

Prolonging the life and improving the performance of Martin furnace regenerators. Trudy Ural.politekh.inst. no.53:42-55 '55. (MLRA 9:5)

(Open-hearth furnaces)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

MATVEYEV, Semen Grigor'yevich; ROGITSKIY, S.A., doktor tekhn. nauk, retsenzent; ANDREYEV, Ye.T., kand.tekhn.nauk, retsenzent; LEVIN, L.I., retsenzent; SHMELEV, A.I., red. izd-va; BOLDYREVA, Z.A., tekhn. red.; PROZOROVSKAYA, V.L., tekhn. red.

[Mine buildings] Rudnye sooruzheniia. Moskva, Gosgortekhizdat, 1962. 579 p. (MIRA 15:7)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury (for Rogitskiy).

(Mine buildings)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

AYDAROV, G.A., inzh.; BELYAYEV, B.I., inzh.; LEVIN, L.I., inzh.; RYABOV, A.F., inzh.; SAKHNOVSKIY, M.M., kand. tekhn. nauk; CHESNOKOV, A.S.; SHILOVTSEV, D.P.; GAY, A.F., kand. tekhn.nauk, nauchn. red.; GORDEYEV, P.A., red.; GOL'BERG, T.M., tekhn. red.; RODIONOVA, V.M., tekhn. red.

[Manufacture of steel structures] Izgotovlenie stal'nykh konstruktsii. Moskva, Gosstroiizdat, 1963. 401 p. (MIRA 16:8)

(Steel, Structural)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

DANCHENKO, K.V., inzh., red.; KALININ, B.P., inzh., red.; KOPP, L.M., inzh., red.; KORNIYENKO, V.S., inzh., red.; LEVIN, L.I., inzh., red.; STRASHNYKH, V.P., red.izd-va; MOCHALINA, Z.S., tekhn. red.

[Construction specifications and regulations] Stroitel'nye normy i pravila. Moskva, Gosstroiizdat. Pt.3. Sec.V.ch.5. [Regulations for production, erection and acceptance of metal structures] Metallicheskie konstruktsii; pravila izgotovleniia, montazha i priemki (SNiP III-V. 5-62). 1963. 92 p. (MIRA 16:12)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Gosudarstvennyy komitet Soveta Ministrov SSSR po delam stroitel'stva (for Danchenko). 3. Mezhduvedomstvannya komissiya po peresmotru Stroitel'nykh norm i pravil (for Kalinin). 4. Proyektnyy institut Glavnogo upravleniya po proizvodstvu i montazhu stal'nykh konstruktsiy Ministerstva stroitel'stva RSFSR (for Kopp, Korniyenko). 5. Gosudarstvennyy institut po proyektirovaniyu, issledovaniyu i ispytaniyu stal'nykh konstruktsiy i mostov (for Levin).
(Building, Iron and steel)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.L., vrach

Control of traumatic shock in Yuzhno-Sakhalinsk. Vop. travm. i ortop. no.13:93-94 '63. (MIRA 18:2)

1. Travmatologicheskoye otdeleniye Sakhalinskoy oblastnoy bol'nitsy.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.M.

Gluing threads instead of knotting in preparatory and weaving shops. Biul.tekh.-ekon.inform. no.12:57-58 '61. (MIRA 14:12)
(Rug and carpet industry)
(Gluing)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.M.

Automatic line for painting and drying wheels. Mashonostroitel' no.1:10-13 Ja '63. (MIRA 16:2)
(Painting, Industrial—Equipment and supplies)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

YASNYY, Vadim Kononovich, inzh.; PANKRAT'YEV, Aleksandr Fedorovich, TULIN, V.S., doktor tekhn. nauk, prof., glav. red. toma; KOLESNIKOVA, V.G., red.; LEVIN, L.M., red.; PROSTIN, V.F., red.; TEREKHOV, S.D., red.; FOKINA, I.V., red.; OSVAL'D, E.Ya., red.izd-va; SABITOV, A., tekhn. red.

[The coal industry of capitalist countries] Ugol'naia promyshlennost' kapitalisticheskikh stran. Moskva, Gosgortekhizdat. Vol.4. Pt.1.[Electric supply, communication, signalization and lighting] Elektrosnabzhenie, sviaz', signalizatsiia i osveshchenie. 1963. 314 p. (MIRA 16:10)
(Electricity in mining) (Mine communications)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L. M.

C A

Temperature dependence of the index of refraction and the Raman scattering of the second order. L. M. Levin. *Bull. acad. sci. U. R. S. S., Ser. phys.* 4, 111-13(1940).—From the theory of polarizability, as proposed by Placzek, an expression is derived for the deriv. of the index of refraction with respect to the temp. at const. density and its connection with the ratio of the intensity of Rayleigh scattering and Raman scattering of the second order is given. A semiquant. comparison of the theoretical results with available exptl. data shows that the latter do not contradict theory. Roksalana Gamow

Sci. Res. Inst. of Physics, Moscow State U.

(CA 35-1319/2)

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

Levin, L. M.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L. M.

Gantmacher, F. R., and Levin, L. M. Equations of motion of a rocket. Tech [illegible]
no. 1255, 21 pp. (1956)
Translated from Appl. [illegible]
Prikl. Mat. Mech. [illegible]

[illegible] Mathematical Reviews,

11 10

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L. M.

USSR/Geophysics - Cloud Drops 21 Aug 53

"The Precipitation of Particles From a Flow of Aerosol Against Obstacles," L. M. Levin, Geophys Inst of Acad Sci USSR

DAN SSSR, Vol 91, No 6, pp 1329-1332

States that investigations of the microstructure of clouds have been made mainly by applying the method of collecting cloud droplets on an obstacle which is covered by a thin layer of oil and is situated in air stream [A. M. Borovikov, Tr. TsAO, v. 3, 3(1948)]. Introduces a coef of capture for

275T64

detg the quantity of droplets of a given size that are precipitated on the obstacle. Acknowledges the advice of Ye. K. Federov, Cor Mem Acad Sci USSR. Presented by Acad O. Yu. Shmidt 22 Jun 53.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L. M.

Levin, L. M. and Starostina, R. E. Nekotorye rezul'taty issledovaniia struktury oblakov. [Some results of the investigations on the structure of clouds.] *Akademiia Nauk SSSR, Doklady*, Moscow, 93(2):253-256, Nov. 11, 1953. 2 figs., 5 refs., 7 eqs. DLC—Some results of a complex investigation of the microstructure of clouds by means of collecting cloud drops with the aid of a cloud drop "trap" carried out during June-Nov. 1951 as part of the Elbrus high-mountain expedition of the Geophysical Institute of U.S.S.R. are presented and discussed. They concern: the number of drops with diameter exceeding 4μ which varied (depending on the types of the clouds) from less than 100 to 1000 in m³; the size of the drops; their average cubic diameter, etc. *Subject Headings:* 1. Cloud structure 2. Cloud droplets 3. Drop size data.—*A.M.P.*

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

3461 DIMENSION DISTRIBUTION [illegible]
RAIN DROPS [illegible]
Dokl. Akad. Nauk SSSR Vol 84 [illegible]

A logarithmically normal [illegible] distribution law is verified [illegible] cloud drops. Some of the other [illegible] distribution [illegible] shown to be approximations of [illegible]

Geophys Inst. AS USSR

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L. M.

6

Vul'fson, N. I. and Levin, L. M. Istata mezhduvedomstvennaia konferentsiia po voprosam issledovaniia oblakov, osadkov i grozovogo elektrichestva. [Fifth interdepartmental conference on cloud precipitation and thunderstorm electricity.] Vestnik Akademii Nauk SSSR, Izvestiia, Ser. Geofiz., No. 6:735-739, June 1956. DLC. This conference was held during Feb. 6-11, 1956 at the Central Geophysical Observatory. Some sixty reports were presented on work carried out during the first three years. Brief summaries are given of about thirty of the papers that were presented. *Subject Headings:* 1. Conferences. 2. Cloud. 3. Thunderstorm electricity.—*I.L.D.*

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.M.

Random electrification of cloud and rain drops. Izv. AN SSSR.Ser. geofiz. no.11:1358-1360 N '56. (MLRA 10:1)

1. Akademiya nauk SSSR Institut prikladnoy geofiziki.
(Atmospheric electricity)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.M.

LEVIN, L.M.

~~KONDRATYEV, K.Ya.~~

3(7) PHASE I BOOK EXPLOITATION SOV/1685

Akademiya nauk SSSR. Komitet po geodezii i geofizike.

Tezisy dokladov na XI General'noy assamblyee Mezhdunarodnogo geodezicheskogo i geofizicheskogo soyuza. Mezhdunarodnaya assotsiatsiya meteorologii (Abstracts of Reports at the 11th General Assembly of the International Union of Geodesy and Geophysics. The International Association of Meteorology) Moscow, 1957. 38 p. /Parallel texts in Russian and English or French/ 1,500 copies printed. No additional contributors mentioned.

PURPOSE: This booklet is intended for meteorologists.

COVERAGE: These reports cover various subjects in the field of meteorology. Among the specific subdivisions discussed are: the heat balance of the Earth's surface, jet streams, transference of heat radiation, electric coagulation of cloud particles, turbulent diffusion, cloud studies, and others. Abstracts of all the articles are translated into either French or English. There are no references given.

TABLE OF CONTENTS:

Budyko, M.I. The Heat Balance of the Earth's Surface 5

Card 1/2

Abstracts of Reports (Cont.) SOV/1685

Dugayev, V.A. Formation of a Jet Stream in the Atmosphere Under the Influence of Mountains 9

Sugam, S.Ya., N.S. Malkevich, and Ye.M. Feygel'son. Approximate Methods of Evaluating the Light Intensity for the Case of Nonspherical Scattering in the Earth's Atmosphere and the Results of Calculations 14

Kondrat'yev, K.Ya. Transference of Heat Radiation in the Atmosphere and Associated Problems 17

Levin, L.M. The Electrical Coagulation of Cloud Particles 21

Monin, A.S. Theoretical Problems of Turbulent Diffusion 24

Obukhov, A.M., and A.M. Yaglom. The Microstructure of Atmospheric Turbulence 28

Tverskoy, P.N. The Electrical State of the Atmosphere in Relation to Turbulent Mixing 32

Khrgiyan, A. Kh. Cloud Study 36

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

AUTHOR: Levin, L.M. 49-7-5/14

TITLE: On taking aerosol samples. (O zabore prob aerozolya).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1957, No.7, pp. 915-925 (USSR)

ABSTRACT: Some of the general relations governing the changes in concentration of the particles in aerosol flow are considered and using the small parameter method, the equations of motion of aerosol particles are solved for cases of drawing the aerosols into a small tube or into a narrow slot. The changes in the concentration are determined of the particles of the drawn-in aerosol as a function of the dimensions and the density of the particles, of the wind speed, of the finite speed of sedimentation and of the specific consumption of the equipment used for drawing in, disregarding the deposition of particles on the walls of the tube or slot. Relations are defined between the parameters of the phenomenon which ensure a small change of the aerosol spectrum during the process of drawing them in, eqs (21) and (31), pp.920 and 922. It is concluded that any flow of the aerosol around a barrier or drawing in an aerosol into the instrument brings about a change in the concentration and the spectrum of the aerosol particles.

Card 1/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

On taking aerosol samples. (Cont.) 49-7-5/14

During drawing in of an aerosol into a small tube or a thin slot a decrease takes place in the concentration of the particles in the tube or in the slot as compared to those in the free aerosols. With certain limitations imposed on the conditions of drawing in the aerosol, this decrease can be expressed by the eqs.(20) and (30), pp.919-922. If the distortions in the particle concentration values are to be held below 20% it is necessary to ensure a sufficiently large specific flow of the aerosols through the drawing-in apparatus, satisfying the eqs.(21) and (31), pp.920 and 922. There are 4 figures, 3 tables and 9 references, 6 of which are Slavic.

SUBMITTED: January 22, 1957.

ASSOCIATION: El'brus Expedition, Institute of Applied Geophysics, Ac.Sc., U.S.S.R. (Akademiya Nauk SSSR El'brusskaya Ekspeditsiya Instituta Prikladnoy Geofiziki).

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

SOV/49 -58-10-6/15

AUTHOR: Levin, L. M.

TITLE: On the Size Distribution Functions for Cloud Drops. Optical Density of a Cloud (O funktsiyakh raspredeleniya oblachnykh kapel' po razmeram. Opticheskaya plotnost' oblaka)

PERIODICAL: Izvestiya Akademii Nauk SSSR, seriya geofizicheskaya, 1958, Nr 10, pp 1211-1221 (USSR)

ABSTRACT: It is shown that the drop size distribution is well presented by the gamma distribution:

$$n_{\alpha,\beta}(d) = \begin{cases} \dfrac{N}{\Gamma(\alpha+1)\beta^{(\alpha+1)}} d^{\alpha} e^{-d/\beta} & \text{if } d>0 (\alpha>-1,\ \beta>0), \\ 0 & \text{if } d \leqslant 0, \end{cases} \quad (1)$$

where N is the total number of particles per unit volume, d is the diameter of a particle and $\Gamma(\alpha+1)$ is a gamma function. This function has been compared with experimental data obtained from 500 samples taken from natural and simulated clouds. In 95% of cases studied the index α exceeds 2.

Card 1/4

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

On the Size Distribution Functions for Cloud Drops. Optical Density of a Cloud

The frequency with which various values of this index occur is given in the following table:

Table 4

α	0	2	4	6	8
f in chamber, %	0	3.2	15.4	17.4	64.0
f in cloud, %	1.0	2.6	12.5	12.5	71.4

The gamma distribution has many analytical advantages since it yields simple and closed expressions for various important quantities such as the root mean square diameter, root mean cube diameter, the diameter of drops giving maximum distribution to the cross-section, etc., all of which are proportional to a power of β. The fact that this distribution is so convenient analytically, leads to the result that, if it is assumed, an expression may be obtained for the optical

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

density of a cloud in a closed form. This expression is given by Eqs.(8-10). The ratio of the optical to the geometrical cross-section is plotted in Fig.6 (using the derived expression for the optical density), and it is clear that for sufficiently large values of $\pi d/\lambda$ the form of these curves is independent of the index α. In this region, the ratio of the optical to geometrical cross-section is well described by an expression of the form:

$$\frac{S_{opt}}{S_{geom}} = 2 + 1.313a^{-(\alpha+3)} \quad . \qquad (11)$$

Thus for clouds with drops whose root mean square diameter is greater or equal to 10 μ, the optical density of clouds is independent of the wavelength. This holds provided the wavelength itself is in the range 0.4-1 μ. For clouds in which the root mean square diameter is of the order of 5, in

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

SOV/49 -58-10-6/15

On the Size Distribution Functions for Cloud Drops. Optical Density of a Cloud

the same range of wavelengths, one would expect a weak anomalous dispersion in the optical thickness, not exceeding 10 to 15%. There are 7 figures, 7 tables and 10 references; 6 of the references are Soviet and 4 are English.

ASSOCIATION: Akademiya nauk SSSR, Institut prikladnoy geofiziki, El'brusskaya ekspeditsiya (Academy of Sciences of the USSR, Institute of Applied Geophysics, El'brus Expedition)

SUBMITTED: December 16, 1957.

Card 4/4

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

SOV/ 49-58-12-11/17

AUTHOR: Levin, L. M.

TITLE: Fluctuations of Microstructure Characteristics of Clouds (Fluktuatsii mikrostrukturnykh kharakteristik oblaka)

PERIODICAL: Izvestiya akademii nauk SSSR, Seriya geofizicheskaya, 1958, Nr 12, pp 1510-1513 (USSR)

ABSTRACT: It was observed during the Elbrus expedition of the Institute of Applied Geophysics of 1954-55 that the samples of the same cloud were not uniform in their structure. Therefore, a statistical analysis was carried out in order to establish the fluctuations in the cloud microstructure. The data collected is shown in Table 1 where the following denotations are used: k - number of samples, N - concentration of droplets in cm^3, d_3 and d_2 - mean cubic and square diameters of microns, q - quantity of water in g/m^3, S - cross-section of drops in km^{-1}, h = height of the trap device above the ground level in m, $\delta(N)$, $\delta(q)$, $\delta(S)$, $\delta(d_3)$, $\delta(d_2)$ - coefficient of variability of N, q, S, d_3 and d_2 in % which is calculated $\delta = \sigma$ per μ, where μ - mathematical expectation and δ - squqre deviation of μ (Ref.4). The volume of one sample τ was calculated as $\tau = u_1 s_n t$ where s_n -

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SOV/ 49-58-12-11/17

Fluctuations of Microstructure/Characteristics of Clouds

surface of sample. It was found that $\tau = 3$ to 4 cm^3 which contained 400 to 4000 drops. Actually, the number of drops n_i in one sample should be calculated from the Poisson equation (1). As the Poisson distribution has the mathematical expectation $\mu_i = \nu_i$ and the deviation (2), therefore the coefficient of variability could be calculated from the Eq.(3). It shows that the coefficient of variability of the number of drops in a given sample increases with a decrease of E, τ, N, $f(d_i)$ and Δd. The value of δ_i can be rather large in this part of the spectrum where $f(d_i)$ is small, i.e. the drops are large, and where $E \to 0$, i.e. the diameter d_i approaches its minimum value (d_{min}). The coefficient of variability of N, q, and S can be found from the Eqs.(4) to (7) which are derived from the Eqs.(1) and (2). In order to define the values A, B, and C, it was found experimentally

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SOV/ 49-58-12-11/17

Fluctuations of Microstructure/Characteristics of Clouds

that the function f(d) can be expressed as γ-distribution with the index $\alpha = 4 - 10$ (Ref.5). Therefore, it can be defined as the Eqs.(8) and (9). The results of this calculation are shown in Table 2. The analysis of both tables shows much greater variations in the values of N_q and S than those due to the calculation error which is, according to Eqs.(5-7), not greater than 6 to 8%. This can be attributed to the greater fluctuation of these three values, caused by such factors as wind, etc. Therefore the further investigation could produce interesting results concerning the small scale turbulence in clouds. There are 2 tables and 6 Soviet references.

ASSOCIATION: Akademiya nauk SSSR Institut prikladnoy geofiziki, El'brusskaya ekspeditsiya (Academy of Sciences USSR, Institute of Applied Geophysics, Elbrus Expedition)

SUBMITTED: April 10, 1958.

Card 3/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L. M., Doc Phys-Math Sci (diss) -- "Investigation of the physics of coarse-dispersion aerosols (as applied to the microphysical processes in clouds)". Moscow, 1959, published by the Acad Sci USSR. 17 pp (Acad Sci USSR, Inst of Applied Geophys), 200 copies (KL, No 24, 1959, 124)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

21(0),24(0) PHASE I BOOK EXPLOITATIO SOV/3

Akademiya nauk SSSR. Fizicheskiy institut

Issledovaniya po eksperimental'noy i teoreticheskoy fizike: [sbornik] (Studies on Experimental and Theoretical Physics; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 304 p. Errata slip inserted. 2,300 copies printed.

Ed.: I. L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; Eds. of Publishing House: A. L. Chernyak and V. G. Berkgaut. Tech. Ed.: Yu. V. Rylina; Commission for Publishing the Collection in Memory of Grigoriya Samuilovich Landsberg: I. Ye. Tamm (Chairman), Academician; M. A. Leontovich, Academician; P. A. Bazhulin, Doctor of Physical and Mathematical Sciences; S. L. Mandel'shtam, Doctor of Physical and Mathematical Sciences; I. L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; F. S. Landsberg-Baryshanskaya, Candidate of Physical and Mathematical Sciences; and G. P. Motulevich (Secretary), Candidate of Physical and Mathematical Sciences.

PURPOSE: This book is intended for physicists and researchers engaged in the study of electromagnetic radiations and their role in investigating the structure and composition of materials.

COVERAGE: The collection contains 30 articles which review investigations in spectroscopy, sonics, molecular optics, semiconductor physics, nuclear physics, and other branches of physics. The introductory chapter gives a biographical profile of G. S. Landsberg, Professor and Head of the Department of Optics of the Division of Physical Technology at Moscow University, and reviews his work in Rayleigh scattering, combat gases, spectral analysis of metals, etc. No personalities are mentioned. References accompany each article.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L. M.

13(1) PHASE I BOOK EXPLOITATION SOV/3113

Gantmakher, Feliks Ruvimovich and Lev Mikhaylovich Levin

Teoriya poleta neupravlyayemykh raket (Theory of Unguided Rocket Flight) Moscow, Fizmatgiz, 1959. 360 p. 8,000 copies printed.

Ed.: G. I. Fel'dman; Tech. Ed.: N. Ya. Murashova.

PURPOSE: This book is intended for students of exterior ballistics. It will be of interest to military, scientific, and technical personnel concerned with unguided rocket flight.

COVERAGE: This book constitutes a systematic course in the theory of exterior ballistics of unguided rockets and presupposes a knowledge of mathematics and theoretical mechanics at the vtuz level. The book considers two major problems: rocket trajectory and rocket dispersion factors. Approach to the problem and actual execution are the result of Soviet thinking and do not reflect work of western scientists. Rocket trajectory, the "solid state principle", vertical and distance dispersion, antitank rockets, finned and rotating rockets, effect of wind and Coriolis force, and aerodynamics are discussed. Examples of computations are given. The authors thank Yu. I. Korostelev. There are 12 references: 8 Soviet, 2 English, and 2 French.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.M.

Critical deposition of aerosol particles from a viscous flow on obstacles. Izv. AN SSSR. Ser.geofiz. no.3:422-431 Mr '59. (MIRA 12:4)

1. AN SSSR, Institut prikladnoy geofiziki i El'brusskaya ekspeditsiya.

(Aerosols)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

SOV/49-59-7-18/22

AUTHOR: Levin, L. M.

TITLE: The Electrostatic Deposition of the Aerosol Particles from a Stream on a Large Body

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 7, pp 1073-1075 (USSR)

ABSTRACT: The particles are collected on a collector with an electric charge Q of the opposite sign to that of the particles q ($qQ < 0$). The equation of motion of particles in the system of coordinates containing the collector is defined as Eq (1), where R - radius-vector of the centre of gravity of the particle, v - its velocity, u - velocity of the airstream, η - coefficient of air viscosity, d - diameter of the particle, $E_э$ - electrostatic field of collector. The force of inertia can be ignored if the parameter, Eq (2), is introduced. Then the intensity of the stream can be defined from Eqs (3)-(5). The coefficient determining that part of the stream which flows in the vicinity of the collector, is defined as Eq (6), where S_m - collector's cross-section. This coefficient can be expressed as Eqs (7) and (8) for the spherical collector or as Eq (9) for the elliptic collector. The values of σ in all cases

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The Electrostatic Deposition of the Aerosol Particles from a Stream on a Large Body

should be relatively large, as expressed by Eqs (10) and (11). The latter expression shows that the deposition of cloud and rain drops on the aircraft surface can be determined by means of an inertia mechanism. There are 7 references, of which 5 are Soviet, 1 French and 1 English.

ASSOCIATION: Akademiya nauk SSSR, Institut prikladnoy geofiziki, El'brusskaya ekspeditsiya (Academy of Sciences USSR, Institute of Applied Geophysics, El'brus Expedition)

SUBMITTED: December 19, 1958.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

GINZBURG, Vitaliy Lazarevich; LEVIN, Lev Mikhaylovich; RABINOVICH, Matvey Samsonovich; SIVUKHIN, Dmitriy Vasil'yevich; CHETVERIKOVA, Yelizaveta Sergeyevna; LIVSHITS, B.L., red.; GAVRILOV, S.S., tekhn.red.

[Collection of problems for the general course in physics] Sbornik zadach po obshchemu kursu fiziki. Pod red. D.V.Sivukhina. Izd. 2., perer. i dop. Moskva, Gos.izd-vo fiziko-matem.lit-ry. Pt.2. [Optics, molecular physics, and thermodynamics] Optika. Molekuliarnaia fizika i termodinamika. Atomnaia fizika i fizika iadra. 1960. 366 p. (MIRA 13:10)

(Physics--Problems, exercises, etc.)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LAKTIONOV, A.G.; LEVIN, L.M.

Comparative measurements of the concentration and function of particle distribution in water aerosols. Izv.AN SSSR.Ser. geofiz. no.7:1056-1058 Jl '60. (MIRA 13:7)

1. Akademiya nauk SSSR, Institut prikladnoy geofiziki.
(Cloud physics)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.M., otv. red.; SULAKVELIDZE, G.K., otv. red.; KUZNETSOVA, Ye.B., red. izd-va; VOLKOVA, V.V., tekhn. red.

[Transactions of the Elbrus High-Mountain Expedition] Trudy El'brusskoi vysokogornoi ekspeditsii. Moskva, Izd-vo Akad.nauk SSSR. Vol.2(5)[Physics of clouds and precipitation] Fizika oblakov i osadkov. 1961. 204 p. (MIRA 15:2)

1. El'brusskaya vysokogornaya ekspeditsiya.
(Cloud physics) (Precipitation (Meteorology))

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

PHASE I BOOK EXPLOITATION SOV/5603

Levin, Lev Mikhaylovich

Issledovaniya po fizike grubodispersnykh aerozoley (Research in the Physics of Roughly Dispersed Aerosols) Moscow, Izd-vo An SSSR, 1961. 266 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut prikladnoy geofiziki.

Ed. of Publishing House: Ye. B. Kuznetsova; Tech. Ed.: I. V. Streletskiy.

PURPOSE: This book is intended for scientific personnel in the field of air physics, as well as in the field of fluid and gas mechanics.

COVERAGE: The book deals with the physics of coarse dispersion aerosols and includes the research results of the El'brusskaya ekspeditsiya Instituta prikladnoy geofiziki AN SSSR (Elbrus Expedition of the Institute of Applied

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Geophysics, AS USSR). The material primarily concerns inertial and electrostatic processes of coarse aerosol particle precipitation on different obstructions in a flow (particularly coagulation processes of such particles) and deals as well with aerosol aspiration processes. Problems related to the study of microphysical processes in clouds and to the microstructural characteristics of clouds are discussed in detail. Ch. II points out that electrostatic coagulation can play a significant part in the process of cloud development when the diameters of the drops are $d < 30$ mk and an insignificant part when the diameters are $d > 50$ mk. A formula is included for the capture coefficient for charged aerosol particles, captured by a large collector with a charge opposite to the charge of particles, which is applicable to collectors of all forms and to any incompressible flow of aerosol in the gaseous phase. Ch. III describes the detection, with the aid of cloud drop samplers, of space-time fluctuations in the microstructural characteristics of clouds reflecting a turbulence of average magnitude. A simple method for verifying the correspondence of experimental data with gamma distributions is introduced which makes possible the formulation of an analytical expression for the

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optical density of clouds. The effect of the various parameters of the phenomenon on the weakening of electromagnetic radiation in clouds is analyzed. Mathematical arguments relating to the entire material are included in the appendix. The author thanks Academician Ye. K. Fedorov. There are 132 references: 77 Soviet, 47 English, 6 German, and 2 French.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

VUL'FSON, N.I., doktor fiz.-matem. nauk, otv. red.; LEVIN, L.M., doktor fiz.-matem.nauk, otv. red. Prinimali uchastiye: KOMAROV, N.N., red.; PSHENAY-SEVERIN, S.V., red.; UGAROVA, K.F., red.; NIKOLAYEVA, L.K., red. izd-va; BERKGAUT, V.G., red. izd-va; VOLKOVA, V.V., tekhn. red.

[Study of clouds, precipitation, and thunderstorm electricity; reports] Issledovaniie oblakov, osadkov i grozovogo elektrichestva; doklady. Otv. red. N.I.Vul'fson, L.M.Levin. Moskva, Izd-vo Akad.nauk SSSR. 1961. 327 p. (MIRA 15:1)

1. Mezhvedomstvennaya konferentsiya po voprosam issledovaniya oblakov, osadkov i atmosfernogo elektrichestva. 6th, 1959.
(Cloud physics—Congresses)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.M.; SULAKVELIDZE, G.K.

Preface. Trudy Vysokogor. geofiz. inst. AN SSSR 2:3-4 '61.
(MIRA 14:12)
(Elbrus, Mount--Meteorological research)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.M.

Electric coagulation of cloud droplets. Trudy Vysokogor. geofiz. inst. AN SSSR 2:5-42 '61. (MIRA 14:12)
(Cloud physics)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.M.

Some problems in the theory of aerosol traps. Trudy Vysokogor. geofiz. inst. AN SSSR 2:47-67 '61. (MIRA 14:12)
(Cloud physics)
(Meteorological instruments)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

KAZANSKIY, A.B.; LEVIN, L.M.

Local capture coefficient variation across the plate. Trudy Vysokogor. geofiz. inst. AN SSSR 2:68-71 '61. (MIRA 14:12)
(Cloud physics)
(Meteorological instruments)

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ACCESSION NR: AP4048039 S/0020/64/158/006/1320/1323

AUTHOR: Vul'fson, N. I.; Levin, L. M.

B

TITLE: Descending convective currents

SOURCE: AN SSSR. Doklady*, v. 158, no. 6, 1964, 1320-1323

TOPIC TAGS: atmospheric circulation, air current, temperature gradient

ABSTRACT: The paper deals with the differences between the laws of temperature change and the rate of flow in unstable layers of air for ascending and descending currents. An unstable layer is considered, for which the vertical temperature gradient γ is larger than the dry or wet adiabatic coefficient γ_*, depending on whether a cloudless or cloudy layer is involved. In such a layer, the stationary flow along the axis of symmetry can be derived from the equation (in cylindrical coordinates):

$$u\frac{\partial w}{\partial r}+w\frac{\partial w}{\partial z}=\beta g\theta+\frac{1}{r}\frac{\partial}{\partial r}\left(K_1 r\frac{\partial w}{\partial r}\right),$$
$$u\frac{\partial\theta}{\partial r}+w\frac{\partial\theta}{\partial z}=(\gamma-\gamma_*)w+\frac{1}{r}\frac{\partial}{\partial r}\left(K_2 r\frac{\partial\theta}{\partial r}\right), \quad (1)$$
$$\frac{\partial}{\partial r}(ur)+\frac{\partial}{\partial z}(wz)=0$$

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with the boundary conditions

$$u = \frac{\partial w}{\partial r} = \frac{\partial \theta}{\partial r} = 0 \quad \text{for } r = 0;$$

$$w = \theta = K_1 r \frac{\partial w}{\partial r} = K_2 r \frac{\partial \theta}{\partial r} = 0 \tag{2}$$

and ur bounded for r = R(z). Here, u and w are the radial and vertical components of speed; θ the excess of temperature in the flow; g the acceleration due to gravity β the temperature coefficient of density; K_1 and K_2 the coefficients of turbulent friction and turbulent heat exchange; and R the radius of the flow. The authors then show how to approximate the solution to these equations. The theoretical model derived is seen to agree well with observed circumstances. It is also observed that in descending currents in thunderclouds, the intensity and change in temperature increase near the base of the cloud due to the circulation of the air, and that the speed and temperature of descending currents near the base of a cloud are actually greater than those of the ascending currents. Orig. art. has: 1 figure and 16 formulas.

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ACCESSION NR: AP4048039

ASSOCIATION: Institut prikladnoy geofiziki (Institute of Applied Geophysics)

SUBMITTED: 17Apr64 ENCL: 00 SUB CODE: ES

NO REF SOV: 006 OTHER: 003

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.M.; SEDUNOV, Yu.S.

Effect of inertia on the precipitation of aerosol particles from a flow at precritical Stokes numbers. Dokl. AN SSSR 162 no.2:316-319 My '65. (MIRA 18:5)

1. Submitted November 26, 1964.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

L 1429-66 EWT(1)/FCO GW

ACCESSION NR: AP5024212

UR/0020/65/164/003/0552/0555

AUTHOR: Levin, L. M.; Sedunov, Yu. S.
44155 44155

TITLE: Turbulent-gravitational coagulation of cloud droplets

25
B

SOURCE: AN SSSR. Doklady, v. 164, no. 3, 1965, 552-555

TOPIC TAGS: atmospheric turbulence, turbulent diffusion, cloud coagulation, gravitational cloud coagulation, turbulent cloud coagulation, electrostatic coagulation

ABSTRACT: The author investigates the combined effect of turbulent and electrostatic coagulation on the rate of growth of cloud droplets. A two-layer model is considered in which the space outside a large droplet is divided into two parts by a sphere separated from the droplet by a turbulent distance of the mean free path of a particle. The effects of the force of gravity, electrostatic attraction, and hydrodynamic reaction on droplet motion are analyzed and the coefficient of droplet capture in turbulent-gravitational coagulation is determined with the use of a system of dimensionless equations. The author concludes that turbulent diffusion, even when combined with gravitational and electrostatic coagulation, cannot induce coagulational growth of cloud droplets of a diameter R < 18 to 19 μ, and that the formation of a wide range of droplet sizes in a short period of time (20 to 30 min) is

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

ACC NR: AP6032277 SOURCE CODE: UR/0020/66/170/002/0323/0326

AUTHOR: Levin, L. M.; Sedunov, Yu. S.

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: A kinetic equation for describing microphysical processes in the clouds

SOURCE: AN SSSR. Doklady, v. 170, no. 2, 1966, 323-326

TOPIC TAGS: kinetic equation, integrodifferential equation, atmospheric cloud formation, condensation atmospheric

ABSTRACT: The authors develop a method of calculating stochastic condensation and derive a kinetic equation describing this process, along with other equations defining the formation of the cloud spectrum. There have recently appeared many publications using kinetic equations to calculate distribution functions of droplets by size in clouds. This paper continues and expands these efforts. The authors introduce the function of droplet distribution by squares of their sizes, i.e., $f(\sigma, r, t)$, where σ is the square of the particle radius, r is the radius vector, and t is time. One of the least studied processes in cloud formation is the condensation stage of development when the droplet sizes are still small and they grow by condensation of vapor. In this case when examining the unidimensional problem (model of a stratified cloud) the authors write

$$\partial f/\partial t + (u - v')\partial f/\partial z + Au\,\partial f/\partial\sigma = K\,\partial^2 f/\partial z^2 + 2AK\,\partial^2 f/\partial z\partial\sigma + A^2K\,\partial^2 f/\partial\sigma^2 + \Phi_1 + \Phi_2 \quad (1)$$

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ACC NR: AP6032277

and examine the change in the distribution function, assuming that the initial distribution depends on z (layer thickness), both the last terms are zero, A is a constant, and velocity v is neglected. Relationships are derived which give the simplest types of solution to Eq. (1) under the great restrictions imposed on the parmeters of the problem. These solutions can still give a number of qualitative results which show that the fundamental difficulties in explaining the real growth of cloud particles are eliminated by taking the stochastic nature of the condensation growth into account. Computations in greater accord with the actual processes require first that A not be considered constant; this leads to an integro-differential equation which can hardly be analytically solved. The authors intend in a future work to develop numerical methods and design several cloud models. Orig. art. has: 17 formulas.

SUB CODE: 04,12/ SUBM DATE: 08Dec65/ ORIG REF: 005

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

ACC NR: AP6031646 SOURCE CODE: UR/0020/66/170/001/0081/0084

AUTHOR: Levin, L. M.; Sedunov, Yu. S.

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Some problems in the theory of atmospheric nuclei of condensation

SOURCE: AN SSSR. Doklady, v. 170, no. 1, 1966, 81-84

TOPIC TAGS: atmospheric moisture, aerosol, atmospheric condensation, cloud formation, atmospheric kinetics

ABSTRACT: Formation of the droplet phase in the clouds is essentially determined by the properties of the nuclei of condensation. The present article establishes a relationship between the functions of nuclei distribution by size and by supersaturation and shows the change in nucleus spectrum and the parameters of the atmospheric aerosol with the change in supersaturation. The paper also examines the problem of the mechanism of droplet formation and derives relationships which determine the regular rate of drop formation and the formation rate stipulated by the fluctuation mechanism. This is done by analyzing numerous experiments and concluding that with relative humidity above 70% the nuclei of condensation are sufficiently surrounded with water. Supersaturation δ over the surface of a droplet of radius r may be represented as

$$\delta = \delta_0 - (1 - \delta_0)(Bx - Cx^3). \quad (1)$$

Here $x = 1/r$; δ_0, is supersaturation over a plane surface; $B = 2\sigma/\rho R_v T$; $1.2 \cdot 10^{-7}$ cm;

Card 1/2 UDC: 551.574:551.510

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ACC NR: AP6031645

C, a value termed the activity of the nucleus and which, with a number of assumptions, may be expressed as

$$C = Am = br_0^{2(1+\alpha)}, \qquad (2)$$

where m is mass of the soluble part of the nucleus; r_0, radius of the dry nucleus; b and α, certain parameters. Nuclei with a constant ration between their soluble and insoluble parts have α = 1/2; if this ratio is of the order of 20%, then coefficient b is 0.25. For nuclei with soluble portion proportional to their surface (the absorption case) α = 0; b = 0 for completely insoluble nuclei, and hence C also is zero. It is noted that use of C makes it possible to establish a functional connection between a number of parameters determining the process of condensation on atmospheric nuclei, and furnishes a criterion for judging the theoretically derived equations. Analysis of droplet formation rate is very important for study of the kinetics of cloud formation. This paper was presented by Academician Ye. K. Fedorov 24 Dec 1965. Orig. art. has: 19 formulas.

SUB CODE: 04/ SUBM DATE: 08Dec65/ ORIG REF: 002/ OTH REF: 002

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.N., inzh.; CHECHULIN, N.A., inzh.

Portable machine tools for parquet work. Mekh.stroi. 19 no.3:27 Mr '62. (MIRA 15:3)

(Road rollers)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.P.

Electro-vibrating machinery in ore dressing plants. Gor.zhur. no.8: 54-59 Ag '55. (Ore dressing) (MLRA 8:8)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

124-58-9-9537

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 12 (USSR)

AUTHOR: Levin, L. P.

TITLE: Problems of the Theory and Calculation of Electrically Driven Vibratory Machines (Conveyers, Sifters, and Feeders) [Voprosy teorii i rascheta elektrovibratsionnykh mashin (konveyerov, grokhotov i pitateley)]

PERIODICAL: V sb.: Mekhanika i raschet mashin vibrats. tipa. Moscow, AN SSSR, 1957, pp 19-36

ABSTRACT: Electrically driven vibratory machines are examined as dynamic systems with two degrees of freedom, which are subjected to the action of a sinusoidally varying force tuned for resonance. The case of external forces equal in magnitude and opposite in sign, acting upon each of the coordinates, which is characteristic of the inertia forces and viscous friction forces, significantly simplifies the calculation and reduces it to the examination of a system with a single degree of freedom. It is shown that the calculation of the electric portion of a system with an electric motor for a two-stroke system can also be performed without difficulty according to well-known rules. 1. Vibration mechanisms --Theory 2. Mechanics--Theory A. S. Alekseyev

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.P., kand.tekhn.nauk

Electromechanical characteristics of vibration machines devised by the Scientific Research and Planning Institute for the Mechanical Processing of Minerals. Obog. rud. 2 no.4:46-56 '57. (MIRA 11:8)
(Ore dressing--Equipment and supplies) (Electric machinery)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L. P.

24-58-3-6/38

AUTHORS: Blekhman, I. I. and Dzhanelidze, G. Yu. (Leningrad)

TITLE: Analysis of Forced Oscillations of Certain Vibrating Machines with Several Vibrators (Issledovaniye vynuzhdennykh kolebaniy nekotorykh vibratsionnykh mashin so mnogimi vibratorami)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 3, pp 51-64 (USSR)

ABSTRACT: The analysis is concerned with vibrating conveyors and similar vibrating processing machinery actuated by a number of vibrator units. The working process demands that the working element of the machine should oscillate, at least approximately, as a solid body. This has been achieved in practice by distributing many vibration exciters closely spaced along the length of the working element, such as the trough of a vibrating conveyor. The practical drawbacks of a large number of units make it desirable to achieve the maximum spacing between vibrators. In earlier work L. P. Levin (Ref.1) deals with various problems relating to the dynamics of electro-vibration machinery assuming that their working unit is an absolutely rigid body. The paper considers the forced oscillations of the working unit in vibrating machines when this unit

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

24-58-3-6/38

Analysis of Forced Oscillations of Certain Vibrating Machines with Several Vibrators.

can be represented as an elastic beam with distributed mass. This approach has made it possible to explain in theory the practical effect of distributed vibrators. The differential equations of an elastic beam with a number of equally spaced vibrators are set up to which are added the equations for the shear force and bending moment steps at the points of action of each vibrator. Assuming a sufficiently large number of vibrators, all spans between vibrators can be considered equal. The motion of each span is determined by a system of eight linear non-homogeneous equations. Their solution is laborious, but, to determine the conditions whose fulfilment makes the beam vibrate practically as a solid body and to find the largest deviations between solid body and elastic vibrations, a method of successive approximations can be used, without solving the equations. The first approximation coincides with the motion of a rigid beam (Levin, L.P. "Problems of the Theory and Design of Electrically Vibrated Machines", Academy of Sciences of the USSR, 1957 Symposium on the Mechanics and Design of Vibrating Machinery). A method is shown to obtain each subsequent approximation from the preceding step. The analysis yields the conditions under which the elastic vib-

Card 2/4

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

24-58-3-6/38

Analysis of Forced Oscillations of Certain Vibrating Machines with Several Vibrators.

rations of the beam are small compared with its motion as a solid body. The case wherein the axes of the vibrators are normal to the beam axis is considered separately and found to yield similar conditions. A numerical example illustrates the rapid convergence of the process of approximation. A special analysis is devoted to the verification of the applicability of these results, derived for beams of infinite length, to those of finite length. The results of the analysis are used to derive a simple formula (Eq.5.1) giving the maximum spacing between vibrators compatible with the condition that the amplitude of the transverse elastic vibrations of the beam does not exceed 25% of the amplitude of the transverse component of the solid vibration. In practice, inequality and dephasing between the vibrators requires closer spacing. Nevertheless, spacings found in practice are considered uneconomically close. There are 4 figures including 1 graph and 4 Soviet references.

Card 3/4

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

24-58-3-6/38

Analysis of Forced Oscillations of Certain Vibrating Machines with Several Vibrators.

SUBMITTED: October 2, 1957.

Card 4/4

1. Vibrating machines--Analysis

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.P.

Theory and design of electric vibrating machines. Trudy Mekhanobr no.125:101-138 '60. (MIRA 14:5)
(Ore dressing--Equipment and supplies)
(Conveying machinery--Electric driving)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

KOZLOV, N.P.; KRASSOV, I.M.; LEVIN, L.P.

Analysis of differential electromagnetic elements for automatic control systems. Priborostroenie no.1:5-8 Ja '64. (MIRA 17:2)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

ACC NR: AP6033520 SOURCE CODE: UR/0413/66/000/018/0150/0159

INVENTOR: Selivanov, M. P.; Turbin, B. G.; Levin, L. P.; Semenov, Yu. M.; Ugryumov, M. S.; Shvedunenko, L. A.; Sosul'nikov, G. B.

ORG: none

TITLE: Electromechanic signal converter. Class 62, No. 186296

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 18, 1966, 159

TOPIC TAGS: electromechanic converter, electromechanic signal converter, electromagnetic device, servomechanism, electrohydraulic servomechanism, electropneumatic servomechanism

ABSTRACT: The proposed electromechanical signal converter is intended primarily for electrical hydraulic and pneumatic servomechanisms. It contains a housing, a permanent-magnet electromagnetic device, pole pieces with adjustment screws, a coil and a portable system unit which includes an elastic element, an armature terminal, an operating slide element, and a magnetically permeable bushing. To improve operational reliability, ensure the possibility of operating in

Card 1/2 UDC: 629.19 629.135/138 629.132

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

ACC NR: AP6033520

corrosive liquids, and improve the dynamic properties of the converter, the operating slide element is hermetically separated from the electromagnetic device and by an air gap from the magnetically permeable bushing. The slide element and the armature are a single unit, and the sealing element also serves as the elastic element of the portable system. The adjusting screws are fixed to the poles of the permanent magnet so as to make it possible to use the converter for servo-mechanising with various output characteristics and in order to ensure the smooth tuning of converter characteristics [Translation]

SUB CODE: 09/SUBM DATE: 22Jul64/

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN L.R., inshener.

Books on planning work of industrial plants of the transport industry. Zhel.dor.transp. 37 no.1:93-96 Ja '56. (MLRA 9:3)
(Bibliography--Railroads)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.R.

Improving local cost accounting methods in transportation organizations
Zhel.dor.transp. 39 no.2:30-35 F '57. (MLRA 10:3)
(Railroads--Accounts, bookkeeping, etc.)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.R., kand.ekon.nauk

Business accounting in brigades servicing electric and diesel engine locomotives in shifts. Trudy MIIT no.119:202-210 '59. (MIRA 12:11)
(Locomotives--Maintenance and repair)
(Railroads--Accounts, bookkeeping, etc.)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LARIONOVA, Ye. ., kand.ekonom.nauk; LEVIN, L.R. ...ekonom.nauk; BERLINER, G.Sh. (Tashkent); BELEN'KIY, M.N., kan .ekonom.nauk (Tashkent); PERTSEV, V.G., kand.ekonom.nauk (Tashkent)

Book on transportation finances. Reviewed by E.V.Larionova and others. Zhel.dor.transp. 46 no.6:93-96 Je '64.

(MIRA 18:1)

1. Nachal'nik finansovoy sluzhby Sredneaz'atskoy dorogi (for Berliner).

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L. S.

EXCERPTA MEDICA Sec.2 Vol.9/10 Physiology,etc. Oct56

4549. LEVIN L.S. Magnitogorsk. *Characteristics of salivary secretion of the partially denervated parotid gland in man (Russian text) FIZIOL.Ž. 1956, 42/4 (390-397) Tables 4

In 6 patients the salivary secretion of the partially denervated parotid gland after oral application of acid was smaller than that of the intact gland. The increase of secretion after pilocarpine was greater in the denervated gland in 4 of 6 patients. The effect of small and large doses of atropine was variable; in some patients small doses increased and large doses decreased the secretion of the partially denervated gland, while in other patients small doses decreased and large doses increased the secretion.

Simonson - Minneapolis, Minn.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

GUBENKO, A.B., doktor tekhn.nauk; KOVAL'CHUK, L.M., inzh.; LEVIN, L.S., inzh.; PARINI, L.S., inzh.

Gluing wood with high-frequency heating. Der.prom. 6 no.8:3-6 Ag '57. (MIRA 10:11)

(Gluing) (Dielectric heating)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.S.; BARNYAKOVA, T.A.

Characteristics of lignite from the Southern Urals and means for its industrial utilization. Part 4: Fractional extraction of Southern Ural lignite. Trudy Ural. politekh. inst. no.59:119-138 '57. (MIRA 11:4)

(Ural Mountian region--Lignite) (Extraction (Chemistry))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

Levin, L.S.

137-58-3-5492

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 143 (USSR)

AUTHOR: Levin, L. S.

TITLE: Stepwise Tempering of Components Made of 18KhNMA Steel (O stupenchatoy zakalke detaley iz stali 18KhNMA)

PERIODICAL: Tekhnol. transp. mashinostroyeniya, 1957, Nr 8, pp 24-25

ABSTRACT: An investigation of stepwise tempering (ST) of articles made of 18KhNMA steel, which is characterized by the high stability of supercooled austenite in the pearlite range of temperatures on the C-curve. More than 20 hours are required for the incubation period of the decomposition of supercooled austenite in this range. It is established that components of complex shape are not deformed in the process of ST (heating to approximately 900°, maintaining the component at that temperature for a period of time, and then transfering it into a medium of 650°, where it is also maintained for a period of time and then allowed to cool), but that they become brittle if exposed to a temperature of 650° in excess of three hours. Apparently a process takes place in which regions adjacent to grain boundaries are gradually losing their C-atoms. When employing ST, it is recommended

Card 1/2

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137-58-3-5492

Stepwise Tempering of Components Made of 18KhNMA Steel

that components made of steel, the supercooled austenite of which is highly stable in the upper temperature range of the C-curve, be exposed to 650° for minimal periods of time.

A. B.

Card 2/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN L.S.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

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ACC NR: AP6013243 SOURCE CODE: UR/0413/66/000/008/0034/0034

49
B

INVENTOR: Levin, L. S.; Balazovskiy, M. B.

ORG: none

TITLE: Method for multichannel transmission of asynchronous binary code pulse signals in a synchronous channel. Class 21, No. 180645

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 34

TOPIC TAGS: synchronous communication, binary code, signal transmission, pulse signal

ABSTRACT: The proposed method provides for multichannel transmission of asynchronous binary code pulse signals in a synchronous channel with intermediate storage in the memory cells at the transmitting end. Reading from memory cells occurs at a high repetition frequency and utilizes a synchronization system. To increase the coefficient of linear channel utilization, a generator with a reduced repetition frequency for reading pulses is connected with the memory cells at the transmitting end. A channel error detector which determines the moment of the phase jump and a channel error distributor which distributes the phase jump in time are connected at the output of the channel distributor. [DW]

SUB CODE: 09/ SUBM DATE: 12May65/

Card 1/1 BLG UDC: 621.396.4

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.S.; SHURUPOVA, E.G.

Effect of quenching conditions during hardening on residual zonal stresses. Metalloved. i term. obr. met. no.5:21-25 My '63. (MIRA 16:5)

(Steel--Quenching) (Thermal stresses)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.S.

Measuring magnetostriction by means of wire indicators fastened at the ends of the base. Izm.tekh. no.5:22-24 '56. (MLRA 10:2)
(Magnetostriction--Measurement)
(Measuring instruments)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

AUTHORS: Levin, L.S.; Chechurina, Ye.N. SOV-115-58-4-27/45

TITLE: The UFM-1 Apparatus for Testing Magnetic Materials (Ustanovka UFM-1 dlya ispytaniya magnitnykh materialov)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 4, pp 65-68 (USSR)

ABSTRACT: The UFM-1 Universal Apparatus was designed in the Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. Mendeleyeva (The All-Union Research Institute for Metrology imeni D.I. Mendeleyev). It is used for determining the magnetic characteristics of materials under conditions of combined magnetization in a frequency range of 50 to 2,500 c, both for individual ring-type objects and for objects which constitute the cores of single-phase and three-phase magnetic amplifiers. With this apparatus, characteristics can be determined in conditions of: sinusoidal intensity of the ac field, with sinusoidal induction, or for taking measurements under conditions of a distorted current curve or induced emf. The construction, design and operation of the apparatus are described. For measuring losses in the appa-

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

The UFM-1 Apparatus for Testing Magnetic Materials SOV-115-58-4-27/45

ratus a thermo-wattmeter, produced at the VNIIM by D.I. Zorin and A.Ya. Bezikovich, is used. The definition errors under various conditions are also analysed. There are 3 circuit diagrams and 5 Soviet references.

1. Magnetic materials--Test methods

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.T., kandidat tekhnicheskikh nauk.

Vibrations in a mine-hoist cable strand and the determination of its length and angle of inclination toward the horizon. Sbor. trud.Inst.gor.dela AN URSR no.3:27-50 '56. (MLRA 9:8)
(Wire rope--Vibration)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L. YA.

Machine Parts

Spravochnik konstruktora tochnykh priborov. Moscow, Gosudarstvennoe Izdatel'stvo Oboronnoy Promyshlennosti, 1953. pp. 616, diags., tables, bibliog., 23 x 15.

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

SOV/130-58-6-4/20

AUTHORS: Levin, L.Ya., Yakubtsiner, N.M., Sholeninov, V.M. and Grigor'yevykh, G.F.

TITLE: Use of Pyrite Cinders in the Production of High-basicity Fluxed Sinter (Primeneniye piritnykh ogarkov v proizvodstve oflyusovannogo aglomerata povyshennoy osnovnosti)

PERIODICAL: Metallurg, 1958, nr 6, pp 5 - 10 (USSR).

ABSTRACT: A shortage of concentrates at the Cherepovets Metallurgical Works led to the use from the end of 1956 of pyrite cinder. Mentioning this, the authors go on to describe the development of sintering methods enabling a high proportion of this material to be used in the production of sinter with a basicity range of 1 - 1.2. The sinter plant at the works has three 75 m^2 machines and sinters a relatively high SiO_2 mix (Table 1). The pyrite cinders available from the Dorogomilovsk and Shchel'kovsk Works contain 0.3-0.4% Cu and 0.35-0.45% Zn, the sulphur content of both varying widely. Because of the paucity of published data and lack of experience in the USSR, on the sintering of pyrite cinders, experiments were first carried out on a 0.11 m^2 sinter box (Figure 2) with the participation of P.T. Krasavina, A.S. Bulatnikova and A.G. Zel'tser.

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

SOV/130-58-6-4/20

Use of Pyrite Cinders in the Production of High-basicity Fluxed Sinter

Coke and limestone were 3-0 mm, cinders, concentrates and flue-dust were screened through a 5 mm screen and returns were 12-0 mm. The results showed (Figure 3) that with a mix containing 10-30% cinders accurate control of carbon (to 4.5 and 3.5-4.0% in the box and on the full scale, respectively), was obtained. A further series of tests were made with mixes containing 33% cinder showing sinter sulphur increasing with increasing CaO-content, but this effect could be minimized by raising the carbon content of the mix. Sintering speed increased as the basicity was raised to 0.8 but was unaffected by further increases. With increasing returns, from 25 to 35% sintering rate, permeability and sinter strength increased and sulphur decreased (Figure 5). Tests with 0-40% cinders in the ore part of the mix showed that a satisfactory sinter was obtained with 20-25% cinder without appreciable slowing of sintering. Bed depths of 200, 225, 250 and 275 mm were tested (Figure 7) with 25% cinders and a basicity of 1.2: maximal sulphur was obtained with the shallowest bed, the best de-sulphurization being obtained with intermediate bed depths. Sinter strength was highest with a bed depth of

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

SOV/130-58-6-4/20

Use of Pyrite Cinders in the Production of High-basicity Fluxed Sinter

225 mm, while sintering speed decreased when the depth exceeded 250 mm. The authors' conclusion is that 250 mm is the optimal bed depth. Results of full-scale experiments (Figure 8) at the Cherepovets Works on the whole confirmed the box experiments. The main conditions for maximal desulphurization during sintering were found to be: bed-depth 240-250 mm instead of 275, carbon content of the mix 4.5 - 4.8 instead of 3.5-4% (with 20-25% cinders); good permeability, secured by 30-35% returns and an artificial hearth layer. The lower iron content of the sinter with cinders was found to have no effect on the coke rate (700 kg/t pig) or the coefficient of utilisation of useful volume (0.73). There are 8 figures and 2 tables.

ASSOCIATION: Cherepovetskiy metallurgicheskiy zavod (Cherepovets Metallurgical Works) and Leningradskiy politekhnicheskiy institut (Leningrad Polytechnical Institute)

Card 3/3 1. Sintering furnaces - Equipment 2. Pyrites - Applications 3. Sintering furnaces - Operation

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

SOV/133-58-11-2/25

AUTHORS: Levin, L.Ya., Kuz'min, I.A., Kaylov, V.D. and Shur, A.B.

TITLE: An Experience in the Operation of a Blast Furnace with a High Top Pressure of 1.5 atm (Opyt raboty domennykh pechey s davleniyem na koloshnike 1.5 atm)

PERIODICAL: Stal', 1958, Nr 11, 964 - 968 (USSR)

ABSTRACT: The operation of Nrs 1 and 2 furnaces in the Cherepovets Works under high top pressure varying up to 1.5 atm is described. Furnaces operated on a 100% sinter burden of a basicity CaO/SiO_2 = 1.13 - 1.15 producing foundry and basic iron. Main operational indices are assembled in Table 1 and mean monthly results for both furnaces in Table 2. It is concluded that with increasing top pressure by each 0.1 atm (within a range of 1.0 - 1.5 atm), the output of furnaces increases on average by 1.9%. This increase in the output is due not only to increasing driving rate but also due to a decrease in the coke rate. The main factor which permitted decreasing the coke rate was

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An Experience in the Operation of a Blast Furnace with a High Top Pressure of 1.5 atm

an increase in the blast temperature to 950 - 1 000 °C. The latter was possible due to an increase in the top pressure. There are 1 figure, 2 tables and 2 Soviet references.

ASSOCIATION: Cherepovetskiy metallurgicheskiy zavod (Cherepovets Metallurgical Works)

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GOL'MSHTOK, Ya.M.; KUZ'MIN, I.A.; LEVIN, L.Ya.; RAMM, A.N.; YAKUBTSINER, N.M.

Three years of blast furnace operation at the Cherepovets Metallurgical Plant. Trudy LPI no.212:7-23 '60. (MIRA 13:12)
(Cherepovets--Blast furnaces)

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LEVIN, L.Ya.; SOLOV'YEV, Ye.T.; KAYLOV, V.D.

Achievement of high indices in blast furnace smelting.
Stal' 22 no.7:587-592 Jl '62. (MIRA 15:7)
(Blast furnaces)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520015-8

LEVIN, L.Ya.; VANCHIKOV, V.A.; SHUR, A.B.; KAYLOV, V.D.; BYALYY, L.A.; Prinimali uchastiye: RUSAKOV, P.G.; ANTONOV, V.M.; KOSTROV, V.A.; KOTOV, A.P.; YEGOROV, N.D.; BUGAYEV, K.M.; SOLODKOV, V.I.; YASHCHENKO, B.F.; KOREGIN, A.V.; SAPOZHNIKOV, N.P.; TSUKANOV, V.N.; VITOVSKIY, V.M.

Mastering the operation of high-capacity blast furnaces. Stal' 23 no.9:773-778 S '63. (MIRA 16:10)

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BOGOPOL'SKIY, S.N.; GOLOUSHIN, N.S.; GRIGOR'YEVYKH, G.F.; LEVIN, L.Ya.; SMIRNOV, Yu.P.; TKACHEV, V.V.; CHISTYAKOV, V.I.; SHOLENINOV, V.M.; SHUR, A.B.; LOVETSKIY, L.V.

Partial replacement of coke breeze in the sinter charge by peat coke. Stal' 23 no.9:781-785 S '63. (MIRA 16:10)

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LEVIN, L.Ya.; VANCHIKOV, V.A.; SHUR, A.B.; BYALYY, A.A.; RUSAKOV, P.G.

Blowing-in the new blast furnace. Trudy LPI no.225:221-232 '64.
(MIRA 17:9)

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LEVIN, L.Ya.; VANCHIKOV, V.A.; KAYLOV, V.D.; SHUR, A.B.; BYALYY, L.A.; RUSAKOV, P.G.

Experimental blast furnace smelting with an oxygen-enriched blast. Stal' 25 no.8:676-678 Ag '65. (MIRA 18:8)

1. Cherepovetskiy metallurgicheskiy zavod i Leningradskiy politekhnicheskiy institut.

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TKACHEV, V.V., inzh.; SHOLENINOV, V.M., inzh.; Prinimali uchastiye:
KONSTANTINOV, V.G.; LEVIN, L.Ya.; GRIGOR'YEVYKH, G.F.;
ZAKHAROV, V.N.; ZHDANOV, L.A.; PUZANOV, N.A.; SUKHANOV, V.I.;
VASIL'YEV, A.N.; ZHELEZNAYA, P.T.; TUGARINOVA, Ye.A.; LEVKIN,
A.S.; MOKIYEVSKIY, N.M.; SHAKHALOV, V.; SMIRNOV, A.I.

Developing the technology of producing a high-basicity open-hearth sinter. Stal' 25 no.8:683-686 Ag '65.

(MIRA 18:8)

1. Cherepovetskiy metallurgicheskiy zavod (for Tkachev, Sholeminov).

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