ACC NR: AT6021505 (N) SOURCE CODE: UR/2531/66/000/0187/0013/0043

AUTHOR: Bortkovskiy, R. S.; Orlenko, L. R.; Tseytin, G. Kh.

ORG: none

TITLE: Calculation of wind and tangential stress above a water surface

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 187, 1966. Fizika pogranichnogo sloya atmosfery (Physics of the atmospheric boundary layer), 13-43

TOPIC TAGS: micrometeorology, atmospheric turbulence, wind speed, tangential stress, atmospheric boundary layer, near water boundary layer, wind velocity, ocean dynamics, ocean current, surface tension

ABSTRACT:
A procedure is presented for calculating wind and tangential stress over the open sea using a given baric field and known temperature stratification. The procedure is based on theoretical investigations made at the Department of the Physics of the Boundary Layer, Main Geophysical Laboratory. Since the roughness of the water surface is regarded as known, the problem is reduced to solving the usual equations of motion for air with a given horizontal baric gradient over a moving surface

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ACC NR: AT6021505

(except that the underlying surface is not motionless). Horizontally homogeneous conditions are assumed. In selecting boundary conditions, the presence of surface water currents and the temperature stratification in the boundary layer are characterized by the difference between the water-surface temperature and the air temperature at the upper limit of the boundary layer. The influx of radiant heat is assumed to be a linear function of height, a model in which there is a jump at height h is accepted in determining the turbulence coefficient k, and the Laykhtman model is accepted in determining wind velocity.

General solutions are obtained for the layers $z_0 \leq z \leq h$ and $z \geq h$. The solution for the first case is simplified so that the wind-velocity components are computed rapidly with auxiliary tables and nomograms. A scheme is given for finding wind velocity, tangential stress, the modulus of the wind velocity, and the angle of "friction" at a height of about 10 m above the sea. A simplified procedure is presented for calculating wind velocity and tangential stress under equilibrium conditions. The procedure was tested with limited experimental data. The applicability of the procedure is discussed, and the errors are estimated. For instance, with a time interval of 2 hr, the error in the component of the tangential stress

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ACC NR: AT6021505

τ_{0x} = 8% for V_g = 15 m/sec and ΔV_g = 5 m/sec (the velocity of the geostrophic wind and the jump in the geostrophic wind); τ_{0x} = 12% when ΔV_g = 10 m/sec; errors of 12% and 20% were noted in τ_{0y} under like conditions. The error in the wind velocity due to advection should not exceed 15%. [WA-50; CBE No. 11]

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 018/ OTH REF: 012/

Card 3/3

L 43992-66 EWT(1) GW

ACC NR: AT6021516 (N) SOURCE CODE: UR/2531/66/000/187/0163/0166

AUTHOR: Bortkovskiy, R. S.

ORG: none

TITLE: Estimate of the error of measuring the wind velocity by an anemometer installed on a buoy

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 187, 1966, Fizika pogranichnogo sloya atmosfery (Physics of the atmospheric boundary layer), 163-166

TOPIC TAGS: wind velocity, wind measurement, anemometer, error approximation

ABSTRACT: The error of determining the mean wind velocity arising as a result of vertical oscillations of an anemometer is examined in a logarithmic profile. It is assumed that the anemometer is installed on a buoy and undergoes vertical harmonic oscillations, that the anemometer does not have inertia, and the instantaneous velocity is recorded. The anemometers were installed at heights of 1.0, 2.0, 3.5, and 5.0 m above the water line of the buoy. The calculations showed that a deviation from the true wind velocity was noticeable only for the lowest anemometer, whereas for those located higher this error was less than the calibration accuracy of the contact anemometer (0.1 m/sec). The adjusted error for the anemometer

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L 43992-66

ACC NR: AT6021516

at a height of 1 m above the waterline (corrected for the consciously overestimated rocking of the buoy) amounted to 1% or 0.08 m/sec. Consequently, the vertical oscillations of the buoy for the gradient observations cannot introduce substantial distortions in the mean velocity profile. Rocking of the buoy can have an effect only on the readings of an anemometer established very close to the water surface and which is flooded in a high sea. Orig. art. has: 2 tables and 11 formulas.

SUB CODE: 14/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 001

Card 2/2 ULR

L 33542-66

ACC NR: AP6023472 SOURCE CODE: CZ/0038/66/000/003/0088/0092

AUTHOR: Dlouhy, Frantisek; Bortlik, Jiri

ORG: Energoprojekt, Prague

TITLE: Utilization of nuclear sources in district heating

SOURCE: Jaderna energie, no. 3, 1966, 88-92

TOPIC TAGS: nuclear reactor power, heating engineering, thermal reactor

ABSTRACT: The general questions connected with the utilization of nuclear reactors in district heating are shown. Separate sections of the work were devoted to the problems of positioning the nuclear district heating installations, delivery of heat to the consumer, and economic questions. The advantages and disadvantages of district heating by nuclear installations in comparison with heating installations using conventional fuels were reported. The design of the basic thermal circuit of nuclear district heating power plants was given. A list of the present nuclear sources for district heating is reported. The paper was presented by J. Vlach. Orig. art. has: 2 figures. [NA]

SUB CODE: 13, 18 / SUBM DATE: none / ORIG REF: 005 / SOV REF: 002
OTH REF: 007

Card 1/1

UDC: 621.039.576

L 37250-66 EWT(m)

ACC NR: AP6027866 SOURCE CODE: CZ/0038/66/000/003/0088/0092

AUTHOR: Dlouhy, Frantisek--Dlougi, F.; Bortlik, Jiri--Bortlik, Y. 3.2 E

ORG: Energoprojekt, Prague

TITLE: Questions and problems in the utilization of a nuclear source in centralized heating system engineering

SOURCE: Jaderna energie, no. 3, 1966, 88-92

TOPIC TAGS: heating engineering, nuclear reactor technology, nuclear reactor power

ABSTRACT: The article examines general questions connected with the utilization of nuclear reactors in centralized heating system engineering -- the placement of the nuclear equipment, the delivery of heat to the user, and economic questions. The advantages and disadvantages of the use of nuclear equipment are discussed. Designs of such nuclear equipment are presented, and cases of this application to date are listed. This paper was presented by J. Vlach. Orig. art. has: 2 figures.
[JPRS: 36,845]

SUB CODE: 13, 18 / SUBM DATE: none / ORIG REF: 005 / SOV REF: 002
OTH REF: 008

Card 1/1 UDC: 621.039.576

BORTLIK, J.

Good production of foundations and posts of prestressed concrete for high and low-tension electric lines. p. 283.
(Energetika, Vol. 6, no. 6, June 1956. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions. (EEAL) LC. Vol. 6, No. 6, June 1957. Uncl.

BORTLIK, J.

Inspection, maintenance and the use of some protective apparatus in networks having a very high voltage.

P. 328. (ENERGETIKA.) (Praha, Czechoslavakia) Vol. 7, No. 6, June 1957

SO: Monthly Index of East European Accession (EEAI) LC. Vol. 7, No. 5, May 1958

BORTLIK, Jan

The problem of the number of workers on electric networks. Energetika Cz 11 no.6:306-308 Je '61.

BORTLIK, Jan

Operation and maintenance of electrical equipment on farms.
Energetika Cz 12 no.8:407-408 Ag '62.

1. Zapadoslovenske energeticke zavody, Bratislava.

BORTLIK, Jan

Importance of insulators for reduction of defects and operating stress in extra high-voltage networks. Energetika Cz 13 no.10:545-546 O '63.

1. Zapadoslovenske energeticke zavody, Bratislava.

BORTLIK, L.; JANOVSKY, M.; ADAM, M.

Experience with a prototype of a new smoking installation. p. 163.
(PRUMYSL POTRAVIN, Vol. 7, No. 4, 1956, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

E-28

COUNTRY : Czechoslovakia
CATEGORY : Chemical Technology - Food Industry

ABS. JOUR. : RZKhim., No. 24 1959, No. 88212

AUTHOR : Adam, M.; Bortlik, L.; Suchy, J.
INST. :
TITLE : Electrostatic Smoking - Aromatizing of Food Products

ORIG. PUB. : Prumysl potravin, 1958, 9, No 5, 233-238

ABSTRACT : Electrostatic smoking is not well adapted for the production of boiled sausages, herrings, hot smoked products and other items in which the temperature during smoking should reach approximately 70°. It is better suited for the production of bacon, smoked meats, smoked cheeses, and other products the smoking of which is primarily intended to effect aromatization. The use of electrostatic smoking is particularly advantageous in the production of canned fish in oil (anchovies, etc.). Bibliography 18 references. -- From authors' summary.

CARD:

246

BORTLIK, V.

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application. Treatment of Solid Mineral Fuels. H-22

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 26400

Author : Bortlik V.
Inst : -
Title : Investigation of the Effect of Mineral Humic Substances and Bitumens on Water-Stability of Briquettes.

Orig Pub : Sbirka praci vyzkum. ust., 1957, A8, No 17-26, 135-162.

Abstract : From coal intended for making of briquettes, were removed by extraction with HCl, NH_3 or C_6H_6, respectively, a portion of mineral substances, humic acids or bitumens, and a determination was made of the effect of such preliminary treatment on water-stability of briquettes. It was found that on decrease of content of mineral substances properties of briquettes are substantially improved,

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CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application. Treatment of Solid Mineral Fuels. II-22

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 26400

while on removal of humic substances and bitumens the results differ depending on nature of the coal.

Card 2/2

SEBOR, G., inz. CSc; BORTLIK, V.

Flocculants in coal preparation. Paliva 44 no.3:69-75 Mr '64.

1. Institute of Mining, Czechoslovak Academy of Sciences.

BORTMAN, E. S.

USSR/Radio Communications

Nov 1947

"Inventors of the National Techniques of Communications," N. U. Polyak, Chief, Technical Section, Ministry of Communications, E. S. Bortman, Senior Engr, Bureau of Inventions, 1 p

"Vestnik Svyazi - Elektrosvyaz'" No 11 (92)

Lists the various Russian scientists who have been contributors to the development of radio techniques in the Soviet Union.

PA 29T92

S/190/62/004/002/003/021
B110/B101

AUTHORS: Stepukhovich, A. D., Rafikov, E. A., Bortnichuk, A. L.

TITLE: Effect of colloidal platinum on kinetics and mechanism of initial block polymerization of styrene. II

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 2, 1962, 182 - 187

TEXT: To clarify the effect of Pt on the initial rate of styrene polymerization (Ref. 1: Vysokomolek. soyed., 4, 85, 1962) the authors tried to generalize the quantitative theory of the braking effect of inhibitors (A. D. Stepukhovich, Dokl. AN SSSR, 89, 889, 1953). A start is made from the empirical equation $1/(W_p - W_\infty) = A + Bc_{inh}$ (1). Neglecting the initiation rate of radicals as compared with the reaction rate of chain growth, $W_p = k_g[M][\dot{R}]$; $2k_{in}[M] = k_v[\dot{R}] + k_w[\dot{R}] + k_{inh}c_{inh}$ (2)

is obtained for $d[\dot{R}]/dt = 0$, where $[\dot{R}]$ = total concentration of polymer radicals in steady state; k_{in}, k_g, k_v, k_w, k_{inh} = rate constants of

initiation, growth, and chain termination in the volume, on the walls and inhibitor particles, respectively, and $[M]$ = monomer concentration. This gives: $1/(W_p - W_\infty) = k_w/2k_{in}k_g[M]^2 + (k_{inh}/2k_{in}k_g[M]^2)\cdot c_{inh}$ (6).

The coefficients A and B are: $A = k_w/2k_{in}k_g[M]^2$; $B = k_{inh}/2k_{inh}k_g[M]^2$ (7). As the polymerization degree increases, Eq. (6) becomes: $1/(W_p - W_\infty) = Bc_{inh}$. For $c_{inh} = 0$, (1) becomes: $A \approx 1/ kg[M][\dot{R}]$ (9). The steady condition for $c_{inh} = 0$ is: $2k_{in}[M] = k_o[\dot{R}]^2$. After solution with respect to $[\dot{R}]$ and substitution into Eq. (9): $A = k_o^{1/2} / (\sqrt{2k_{in}}^{1/2} k_g[M]^{3/2})$ (10). The ratio of B coefficients for the temperatures T_1 and T_2 is: $B_1/B_2 = [(k_{inh})_1\cdot(k_{in}k_g)_2]/[(k_{inh})_2\cdot(k_{in}k_g)_2]$ (11). $E_{inh} = (E_{in} + E_g) - [RT_1T_2\cdot\ln(B_1/B_2)]/(T_2-T_1)$ (13) is calculated from the experimental value for B_1/B_2. $(k_{inh})_1/(k_{inh})_2 = [(k_w(B/A)_{T_1}]/[(k_w(B/A)_{T_2}]$ (15). The capture energy of radicals by the walls is:

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Effect of colloidal platinum...

$E_w = (E_{in} + E_g) - [RT_1T_2\ln(A_1/A_2)] /(T_2-T_1)$ (16), where for styrene: E_{in} = 29.6 kcal/mole; E_g = 7.25 kcal/mole. Eqs. (13) and (16) hold at 80 and 95°C for 60 min polymerization. Radical recombination prevails in the volume in this case. Since the value of E_{inh} (800 cal/mole) extrapolated for the zero polymerization degree is less than the activation energy E_o (1500 cal/mole) of the recombination of polymer radicals of styrene, the inhibition reaction is faster than the recombination. The ratio of the coefficients A at 80 and 95°C is constant with 5.55 for polymerization up to $\leq$60 min, and decreases to 3 with increasing polymerization degree. According to Eq. (16): E_w = 7250 cal/mole, which corresponds to E_g. According to Eq. (7): $A_1/A_2 = (k_w/k_{in}k_g)_{T_1} \cdot (k_w/k_{in}k_g)_{T_2}$ (17). Since $E_w = E_g$, $k_w \approx k_g$, and (17) gives: $A_1/A_2 \approx \exp[(E_{in}/R)\cdot(1/T_1-1/T_2)]$ (18). A transition of the initially bimolecular inhibition of styrene polymerization to a trimolecular mechanism is assumed. The change of the negative activation energy with increasing polymerization degree is probably due to

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a gradual valence increase until coordination complexes of Pt are formed. The positive activation energy with zero polymerization degree is probably due to the bimolecular character of the reaction because of low radical concentration and pure surface of colloid particles. There are 1 figure and 4 Soviet references.

ASSOCIATION: Saratovskiy gosudarstvennyy universitet im. N. G. Chernyshevskogo (Saratov State University imeni N. G. Chernyshevskiy)

SUBMITTED: February 1, 1961

Card 4/4

3820
S/190/62/004/004/006/019
B119/B138

5.1190
15.8100

AUTHORS: Stepukhovich, A. D., Bortnichuk, A. L., Rafikov, E. A.

TITLE: Effect of colloidal gold and thallium on the kinetics and mechanism of initial polymerization of styrene in block and in solution. I

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 4, 1962, 516-522

TEXT: Styrene was polymerized (: . ing point 75.5°C) in block and in toluene solution in the presence .. lloidal gold at 60, 80, and 95°C. The Au content was varied between $0.37 \cdot 10^{-4}$ and $11.84 \cdot 10^{-4}$ gram-atoms/liter. The rate of polymerization was determined from the time variations in specific viscosity. Results: In very small amounts Au acts as initiator, and in larger amounts, as inhibitor, of block polymerization. The Au-content/reaction-rate curve has a maximum which shifts to lower Au content with increasing temperature. In the range of inhibiting Au concentrations the curve obeys the Stepukhovich equation

$\left(\frac{1}{W_p - W_\infty}\right) = A + Bc_{inh}$; W_p = polymerization rate appropriate for the

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concentration c_{inh} of inhibitor, W_r = residual rate). No limiting inhibition value was observed with respect to Au concentration. Because of its low solubility experiments with Tl were made with minimum amounts (it was added as $Tl(NO_3)_3$ or oxidized filings), and had qualitative character only. Tl inhibited the polymerization of styrene. There are 5 figures and 2 tables.

ASSOCIATION: Saratovskiy gosudarstvennyy universitet im. N. G. Chernyshevskogo (Saratov State University imeni N. G. Chernyshevskiy)

SUBMITTED: March 9, 1961

X

26291

S/190/62/004/004/007/019
B119/B138

5.1190
15.8100

AUTHORS: Stepukhovich, A. D., Bortnichuk, A. L., Rafikov, E. A.

TITLE: Effect of colloidal gold and thallium on kinetics and mechanism of initial polymerization of styrene in block and in solution. II

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 4, 1962, 523-527

TEXT: This is a quantitative evaluation of the experimental results obtained in the previous paper (Vysokomolek. soyed., 4, 516, 1962). The initiating effect of minimum amounts of colloidal gold in styrene block polymerization is explained by the reaction:
styrene peroxide + $Au \cdots Au^{+}$ + active radicals. This also explains the drop in the height of the maximum on the Au concentration/polymerization rate curve when the reaction temperature is raised. The activation energy for the inhibition of chain growth by colloidal gold particles is calculated from the temperature dependence of the coefficients A and B (in the equation $\frac{1}{W_p - W_\infty} = A + Bc_{inh}$; W_p = polymerization rate appropriate

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for the concentration c_{inh} of inhibitor, W_r = residual rate). The activation energy is around, -14 to -17 kcal/mole, and varies with the degree of polymerization. The inhibition is probably due to a trimolecular reaction in which the excess recombination energy of two radicals is released to a colloidal Au particle. There are 1 figure and 1 table.

ASSOCIATION: Saratovskiy gosudarstvennyy universitet im. N. G. Chernyshevskogo (Saratov State University imeni N. G. Chernyshevskiy)

SUBMITTED: March 9, 1961

ACC NR: AR6025710 SOURCE CODE: UR/0196/66/000/004/N002/N002

AUTHOR: Bortnichuk, N. I.; Volokhonvskiy, L. A.; Gogol', V. B.; Smelyanskiy, M. Ya.

TITLE: Investigation of stability of high-power arc discharge in vacuum

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 4N11

REF SOURCE: Elektrotermiya. Nauchno-tekhn. sb. vyp. 46, 1965, 33-36

TOPIC TAGS: vacuum furnace, arc furnace, melting furnace

ABSTRACT: To improve the explosion safety of vacuum arc furnaces, a system of stabilization of arc discharge is necessary which would prevent the arc from throwing over to the crystallizer wall and would cope rapidly enough with such a throw-over if it occurs. Peculiarities of vacuum arc discharge were investigated which permits recommending measures for improving the explosion safety of vacuum arc furnaces withoutresorting to any basic change in their design. A solenoid constantly on during the melting and producing a 60-oe vertical field is recommended. To eliminate the solenoid fringe effect, an additional solenoid connected in series with the main one and producing a vertical field in the same direction should be placed at the bottom of the crystallizer, under its tray. To eliminate side discharges, a field of 100 oe is needed. Also, shorter arcs are recommended. Five figures. Bibliography of 3 titles. I. Kaganovskiy [Translation of abstract]

SUB CODE: 13, 09

Card 1/1 UDC: 621.365.91:537.523.5:533.5.001.5

KATSEVICH, Leonid Savvich. Prinimal uchastiye BORTNICHUK, N.I., inzh.. TSISHEVSKIY, V.P., red.; LARIONOV, G.Ye., tekhn.red.

[Design and construction of electric furnaces] Raschet i konstruirovanie elektricheskikh pechei. Moskva, Gos.energ.izd-vo, 1959. 439 p. (MIRA 13:2)
(Electric furnaces)

BORTNICHUK, N. I.

PHASE I BOOK EXPLOITATION SOV/3762

Konferentsiya po magnitnoy gidrodinamike. Riga, 1958.

Voprosy magnitnoy gidrodinamiki i dinamiki plazmy; trudy Konferentsii. (Problems in Magnetohydrodynamics and Plasma Dynamics; Transactions of a Conference) Riga, Izd-vo AN Latviyskoy SSR, 1959. 343 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Akademiya nauk Latviyskoy SSR. Institut fiziki.

Editorial Board: D.A. Frank-Kamenetskiy, Doctor of Physics and Mathematics, Professor; A.I. Vol'dek, Doctor of Technical Sciences, Professor; I.M. Kirko, Doctor of Physics and Mathematics; V.Ya. Veldre, Candidate of Physics and Mathematics; V.G. Vitol, Candidate of Physics and Mathematics; Ya.M. Krumin'; and V.Ya. Kravchenko.

Ed.: A. Teytel'baum; Tech. Ed.: A. Klyavinya

PURPOSE: This book is intended for physicists working in the field of magnetohydrodynamics and plasma dynamics.

COVERAGE: This volume contains the transactions of a conference held in Riga, June 1958, on problems in applied and theoretical magnetohydrodynamics. The objects of the confefence were the investigation of the basic trends in theoretical and applied magnetohydrodynamics, establishing contact between the people doing research in different branches of magnetohyirodynamics, and promoting the participation of theoretical physicists in problems in applied magnetohydrodynamics. More than 160 persons from different parts of the Soviet Union took part in the conference, and 55 papers were read. Similar conferences are to be held regularly in the future; the next such conference is scheduled to be held in Riga in June 1960. In this present collection of the transactions of the conference, most of the papers and comments on papers are presented by the authors themselves in an abridged form. The book is divided into two parts: the first part deals with problems in theoretical magnetohydrodynamics and plasma dynamics, and consists of 35 articles on such aspects of the problem as the application of magnetohydrodynamics in astrophysics (D.A. Frank-Kamenetskiy), magnetohydrodynamics and the investigation of cosmic-ray variations (L.I. Dorman), acceleration of plasma in a magnetic field (G.V. Gordeyev and A.I. Gubanov), stability of shock waves and magnetohydrodynamics (A.I. Akhiyezer). The second part, consisting of 33 articles, deals with problems of experimental magnetohydrodynamics, including the application of physical simulation for investigation of electromagnetic processes in liquid metals (I.M. Kirko) and the development of electromagnetic pumps (P.G. Kirillov), at the Institute of Physics of the Academy of Sciences, Latvian SSR. Several articles are devoted to induction pumps, electromagnetic crucibles, electromagnetic stirrers for molten metals, and their application in the metallurgical industry including schematic diagrams of their power-supply systems. References are given at the end of most of the articles.

AVAILABLE: Library of Congress

JA/mas
6-20-60

Card 12/12

Bortnichuk, N.I

Voprosy Magnitnoy Gidrodinamiki i Dinamiki Plazmy. Trudy Konferentsii Po Magnitnoy Gidrodinamike, Riga, 2-10 Iyulya 1958 g. (Problems of Magnetohydrodynamics and Plasma Dynamics. Works of the Conference On Magnetohydrodynamics, Riga, 2-10 July 1958), Riga, 1959, 339 pp

The majority of the texts of the 55 conference reports and discussions of reports are presented in the source in abridged form. Previously published reports are included there as brief abstracts only. The material published there for the first time (abridged and unabridged) are as follows:

"On Certain Problems in the Designing of Linear Induction Pumps," by A. I. Vol'dek, Tallin, pp 273-277; discussion of the report by L. A. Verte, Moscow, pp 277-278

"The Problem of the 'Electromagnetic Crucible,'" by R. P. Zhemberin, Leningrad, pp 279-294 (illustrations)

"On the Turbulent Flow of a Liquid Metal Under the Influence of a Traveling Magnetic Field," by I. M. Kirko and O. A. Liyelausis, Riga, pp 295-302

"The Use of Diffused-Field Pumps for Moving Liquid Metals," by A. E. Mikel'son, Riga, pp 305-311

"Design of the Arc Stator For Stirring the Metal in an Arc Furnace by Means of Induction," by M. G. Rezin, Sverdlovsk, pp 313-321

"Feed Circuits of Installations for the Electromagnetic Mixing of a Metal in Electric Arc Furnaces," by Ya. I. Drobinin, Sverdlovsk, pp 323-333

"On the Choice of an Optimal Stator Current Frequency for the Mixing of a Liquid Metal by Means of a Traveling Electromagnetic Field," by N. I. Bortnichuk and M. M. Krutyanskiy, Moscow, pp 337-339

OSTROUMOV, Georgiy Andreyevich; BORTNICHUK, N.I., red.; ROZENTSVEYG, Ya.D., red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[Physicomathematical principles of the magnetic mixing of melts] Fiziko-matematicheskie osnovy magnitnogo peremeshivaniia rasplavov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 63 p. (MIRA 13:5)
(Metals--Magnetic properties)

BORTNICHUK, N.I., inzh.; BRUKOVSKIY, I.P., inzh.

Effect of the dimensions of the jacket of an induction furnace on its electrical parameters. Vest. elektroprom. 31 no.8:27-30 Ag '60. (MIRA 15:5)
(Electric furnaces)

SMELYANSKIY, Matvey Yakovlevich; BORTNICHUK, Nikolay Iosifovich; TSISHEVSKIY, V.P., red.; FRIDKIN, L.M., tekhn. red.

[Short networks in electric furnaces]Korotkie seti elektricheskikh pechei. Moskva, Gosenergoizdat, 1962. 93 p (Biblioteka elektrotermista, no.13) (MIRA 16:4)
(Electric furnaces)

L 57527-65 EWT(m)/EWP(t)/EWP(b) JD

ACCESSION NR: AR5015150 UR/0137/65/000/005/V046/V046

SOURCE: Ref. zh. Metallurgiya, Abs. 5V302

AUTHOR: Nikulin, A. A.; Volokhonskiy, L. A.; Bortnichuk, N. I.; Nikol'skiy, L. Ye.; Gladkiy, D. F.

TITLE: Application of the method of similarity to the calculation of the electrical parameters of installations for melting consumable electrodes for an ingot

CITED SOURCE: Elektrotermiya. Nauchno-tekhn. sb., vyp. 39, 1964, 30-31

TOPIC TAGS: consumable electrode, electric parameter, melting, electric furnace, metal bath, slag

TRANSLATION: A method is advanced for calculation of the electrical parameters of a projected melting furnace; the method is based on determination of the optimum technological conditions in an actual industrial installation for melting of electrodes under a flux during melting of analogous brands of steel. In the design, identical relationships between the linear dimensions of the slag bath must exist: $d_{sl1}/d_{sl2} = d_{el1}/d_{el2} = h_{sl1}/h_{sl2} = l_{sl1}/l_{sl2} = k = \text{const}$, where d_{sl} is the diame-

Card 1/2

ter of the bath, d_{el} is the diameter of the electrode, h_{sl} is the total depth of the bath, l_{sl} is the distance between the face of the electrode and the surface of the metal (here and in what follows, subscripts 1 and 2 refer respectively to the projected and the actual furnaces). The power, the resistance of the slag bath, and the working current of the projected furnace are determined by the formula

$$P_1 = kP_2;\ R_1 = \frac{1}{k} R_2;\ I_1 = k \cdot I_2.$$

The pressure drop between the face of the electrode and the surface is a constant quantity and is determined by the formula $U_{sl} = I_1 \cdot R_1 = I_2 \cdot R_2 = \text{constant}$.
(from R. Zh. Elektrotekhnika)

SUB CODE: MM, EE ENCL: 00

L 27690-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AR6004305 SOURCE CODE: UR/0276/65/000/009/G009/G009

AUTHOR: Volokhonskiy, L. A.; Nikulin, A. A.; Bochkov, D. A.; Bortnichuk, N. I.

TITLE: Study of melting hydrodynamics in a vacuum arc furnace by the stimulating method

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 9G75

REF SOURCE: Tr. Vses. n.-i. in-ta elektroterm. oborud., vyp. 1, 1965, 66-77

TOPIC TAGS: vacuum arc furnace, vacuum melting, hydrodynamics, molten metal, magnetic field, solenoid

ABSTRACT: The distribution of a current in the molten metal of a vacuum arc furnace is studied, and the forces responsible for the metal rotation: the vertical magnetic field of solenoid and the horizontal component of the arc current. The measurement of hydrodynamic pressures on the molten metal model permitted determination of their distribution along the bath diameter and depth and determination of the melt rotation rate. The most effective stirring of metal is observed in the zone of the anodic spot. Some redistribution of pressures and rates of rotation due to friction forces takes place. As far as the intensity of mixing in presence of a solenoid is concerned, the best effect is obtained when the current cable is attached to the upper edge of the crystallizer, in which case the horizontal component of the current has the highest magnitude. In melting steel tending to ghost, it is advisable to use

Card 1/2 UDC: 66.047.2: 621.365.2.001.5

L 27690-66

ACC NR: AR6004305

0

a bifilar cable with an attachment to the upper flange of the crystallizer. In this case, in the absence of a solenoid there is no rotation of the metal. It is possible to use a solenoid on a steel crystallizer. In designing them correction for the screening effect, which is determined by modeling, should be made. O. Prove

SUB CODE: 11/ SUBM DATE: none

Card 2/2 0C

L 46776-66 EWT(d)/EWT(m)/EWP(v)/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l) JD/WW/JG

ACC NR: AR6014548 SOURCE CODE: UR/0196/65/000/011/N003/N003

35
13

AUTHOR: Volokhonskiy, L. A.; Nikulin, A. A.; Bochkov, D. A.; Bortnichuk, N. I.

TITLE: Investigation of the hydrodynamics of a melt in a vacuum arc furnace by a simulation method

18 14

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 11N10

REF SOURCE: Tr. Vses. n.-i. in-ta elektroterm. oborud., vyp. 1, 1965, 66-77

TOPIC TAGS: arc furnace, vacuum furnace, melt hydrodynamics

ABSTRACT: Current distribution in a liquid bath of a vacuum arc furnace has been studied, and the causes of metal rotation have been determined; they are: vertical magnetic field of solenoid and horizontal component of arc current. By measuring hydrodynamic pressures in a liquid-metal model, the pressure distribution over the diameter and depth of the bath were found and the melt rotation speeds were determined. The metal is agitated particularly vigorously in the anode-spot zone, some redistribution of pressures and velocities being effected by the forces of friction. From the viewpoint of intense mixing, in a solenoid-type design, the current-supply conductor to the upper flange of the crystallizer is more efficient because the horizontal current component is greater. Twelve figures. Bibliography of 4 titles. O. Provs [Translation of abstract]

SUB CODE: 13, 09

Card 1/1 UDC: 621.365.22.001.5:66.041.82:538.12:532.5:54-143

BORTNICHUK, N.Ya., inzh.; BRONSHTEYN, A.M., kand.tekhn.nauk; BYSTRITSKIY, Kh.Ya., inzh.; DUBROVSKIY, Z.M., inzh.; KATKOV, B.S., inzh.; KRASKOVSKAYA, S.N., inzh.; OSIPOV, S.I., inzh.; PERTSOVSKIY, M.L., inzh.; RAKOV, V.A., inzh.; REBRIK, B.N., kand.tekhn.nauk; SUYETIN, T.A., kand.fiziko-matem.nauk; KHITROV, P.A., tekhn.red.

[Electric locomotives operating on alternating current with ignitrons] Elektrovozy peremennogo toka s ignitronami. Pod obshchei red. V.A.Rakova. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 286 p. (MIRA 12:10)

(Electric locomotives)

AUTHOR: Bortnik, A., (Odessa) SOV/107-58-2-27/32

TITLE: An Amplifier for the "MP-1" Attachment (Usilitel' k pristavke "MP-1")

PERIODICAL: Radio, 1958, Nr 2, p 52 (USSR)

ABSTRACT: For increasing the power, a small amplifier may be added to the tape recorder attachment "MP-1" which is composed of tubes "6Zh7" and "6P6S" according to a given diagram. There is one circuit diagram.

1. Power amplifiers---Applications 2. Recording devices --Operation

Card 1/1

BORTNIK, G., inzhener

Pneumatic transportation in an artel. Prom.koop. 13 no.6:28-29 Je '59. (MIRA 12:9)

1. Konstruktorsko-tekhnologicheskoye byuro oblpromsoveta, g.Bogorodsk, Gor'kovskoy oblasti.
(Pneumatic-tube transportation)

S/0057/64/034/004/0731/0736

ACCESSION NR: AP4028963

AUTHOR: Bortnik, I.M.

TITLE: Contribution to the justification of Pik's formula

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.4, 1964, 731-736

TOPIC TAGS: corona, corona onset conditions, Pik's formula, first Townsend coefficient

ABSTRACT: Pik's formula (F.Pik,Dielektricheskiye yavleniya v tekhnike vy*sokikh napryazheniy [Dielectric Phenomena in High Voltage Engineering],Gosenergoizdat.L.1934) $E = E_0(p/p_0)(1 + (p_0a/pr_0)^{1/2})$, gives the electric field at the surface of the inner conductor at the onset of corona discharge between two coaxial cylindrical conductors in air. Here r_0 is the radius of the inner conductor, p is the pressure, p_0 is one atmosphere, $E_0 = 31$ kV/cm is the dielectric strength of air at atmospheric pressure, and $a = 0.0139$ cm. It is shown that this formula is equivalent to the condition that an avalanche discharge between the inner conductor and a (fictitious) electrode located where the field strength reaches the value E_0 be self-sustaining, provided the first Townsend coefficient is given as a function of pressure and field

Card 1/2

ACCESSION NR: AP4028963

strength by $\frac{\alpha}{p} = n\left(\frac{E}{p}\right)^2 + b$, where n and b are appropriate constants (b is negative).

The values of the Townsend coefficient given by this equation are compared with the experimental data of P.H.Sanders (Phys.Rev.41,667,1932; 44,1020,1933). Good agreement is obtained over a considerable range of E/p. It is concluded that formulas similar to Pik's can be derived for other gases for which the Townsend coefficient depends similarly on E/p. Pik's formula was tested against calculations based on Paschen's law and experimental data. It is concluded that the formula is not valid at atmospheric pressure for $r_0 < 3 \times 10^{-4}$ cm, nor at a pressure of 0.1 atm for $r_0 < 3 \times 10^{-3}$ cm. Orig.art.has: 28 formulas and 6 figures.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Engineering Inst.)

SUBMITTED: 04Mar63 DATE ACQ: 28Apr64 ENCL: 00

SUB CODE: PH NR REF SOV: 003 OTHER: 003

Card 2/2

L 15053-65 EWT(1)/EWT(m)/EPF(c)/EPA(w)-2/EEC(t)/EWP(b)/EWA(m)-2 Pz-4/Pab-10
AS(mp)-2/ESD(gs)/ESD(t) JD
ACCESSION NR: AP4045290 B/0057/64/034/009/1683/1687

AUTHOR: Bortnik, I.M.

TITLE: Investigation of a positive corona discharge in helium 21 27

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.9, 1964, 1683-1687

TOPIC TAGS: corona discharge, helium, ion motion

ABSTRACT: Corona discharges in helium between an 0.03 or 0.05 cm diameter molybdenum wire anode and a coaxial 1.5 cm radius cylindrical cathode of copper, zinc or nickel were investigated at pressures from 20 to 760 mm Hg. The cylindrical cathode was provided with an 0.5 cm diameter opening for visual and photographic observation of the corona sheath about the anode. Helium of 99.98% purity was employed; the impurity was mostly nitrogen. The following results were obtained: 1) the potential for initiating a corona discharge in helium was less by nearly a factor 10 than in air under similar conditions. The product of the critical field strength and the radius of the anode was a function of the product of the pressure and the radius over the full range investigated. The values obtained for this function agreed with those given by L.G.H.Huxley (Phil.Mag.8,731,1928) for the range covered by both investi-

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L 15053-65

ACCESSION NR: AP4045230

gations. 2) The relation between the anode potential and the current was given by Townsend's formula with the value 9000 cm^2 mm Hg/V sec for the product of the ion mobility and the pressure. It is concluded that the helium ions are predominately atomic rather than molecular. 3) The radius of the corona sheath about the anode was practically constant from initiation of the corona to breakdown. This is ascribed to the fact that the high mobility of the ions reduces the distortion of the field by space charge effects. 4) The luminous intensity of the corona sheath was directly proportional to the current. 5) Within the limits of the experimental error the cathode material had no influence on the discharge. 6) The luminosity of the corona sheath was uniform. The absence of streamers is ascribed to the fact that the initial electrons were produced at a considerable distance from the region within which they become capable of ionizing by collision. "In conclusion, the author expresses his sincere gratitude to V.P.Larionov for constant support in the work." Orig.art. has: 7 formulas and 3 figures.

ASSOCIATION: Moskovskiy ordena Lenina energeticheskiy institut (Moscow Order of Lenin Power Institute)

SUBMITTED: 18Jul63

ENCL: 00

SUB CODE: EM

NR REF SOV: 002

OTHER: 003

2/2

L 18841-65 EPF(c)/EPA(w)-2/EWT(1)/EWT(m)/EEC(t)/EWP(b)/EWA(m)-2/EWP(t) Pr-4/
Pab-10 SSD(b)/AFETR/ASD(f)-2/AS(mp)-2/SSD(c)/SSD/AEDC(a)/SSD(a)/ASD(a)-5/
AEDC(b)/RAEM(a)/AFWL/ESD(gs)/IJP(c) JD
ACCESSION NR: AP4049033 S/0057/64/034/011/1939/1949

AUTHOR: Bortnik, I.M.

TITLE: Ignition potential of an electric discharge in helium at moderate values of the pressure-distance product

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.11 1964, 1939-1949

TOPIC TAGS: plasma, discharge plasma, plasma charged particle distribution, ionization, excitation, helium

ABSTRACT: The electron velocity distribution in weakly ionized helium is calculated for values of the ratio E/p of the electric field to the pressure from 3 to 80 V/cm mm Hg with both elastic and inelastic collisions taken into account. From these distribution functions the electron drift velocity, the ionization and excitation coefficients, and the second Townsend coefficient were calculated, and they are compared with experiment. Good agreement is shown. The Paschen curve for helium was calculated for values of the product pd (pressure x distance) up to 700 cm mm Hg with the effect of resonance radiation treated by the method of A.V. Phelps (Phys.Rev.117,619,1960). Good agreement with experiment was obtained after correc-

1/3

tion for a kinetic effect that is important at small pd values. The kinetic equation is simplified by expanding the distribution function in a series of Legendre polynomials in the direction of the velocity and retaining only the first two terms. The inelastic scattering cross section is assumed to be a linear function of the electron velocity above the threshold, and the elastic scattering cross section is assumed to be constant for electron velocities less than 1.33×10^8 cm/sec, and to decrease smoothly at higher velocities. The calculated distribution functions are compared with functions previously calculated by other authors, and slight differences are discussed. The expectation value of the electron energy was found to be almost independent of E/p. The Paschen curve calculated with resonance radiation taken into account was found to be in good agreement with experiment for large pd values, but near the minimum the calculated values are too low. When a correction was applied for the finite distance that an electron ejected from the cathode must travel before it acquires the equilibrium velocity, however, good agreement with experiment was obtained. In spite of this agreement, the author does not consider the theory to be fully satisfactory because some of the parameters have been chosen arbitrarily. Further knowledge of the role of excited atoms is desirable. Orig.art.has: 35 formulas, 9 figures and 1 table.

ACCESSION NR: AP4049033

ASSOCIATION: Moskovskiy ordena Lenina energeticheskiy institut (Moscow Order of Lenin Power Engineering Institute)

SUBMITTED: 18Feb64

ENCL: 00

SUB CODE: ME, EM

NR REF SOV: 006

OTHER: 009

3/3

MOSTINSKAYA, R.Z. (Dzerzhinsk) ; BORTNIK, L.I.(Dzerzhinsk)

Calculating air exchange in electrolytic shops. Vod. i san. tekh. no.9:36-37 S '58. (MIRA 11:10)
(Factories--Heating and ventilation)

5 (2)

AUTHORS: Yudelevich, I. G., Shelpakova, I. R., SOV/32-25-8-21/44
Sosnovskaya, T. I., Bortnik, L. S.

TITLE: Spectrographic Control of the Production Process of Rare Metals

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 8, pp 959 - 961 (USSR)

ABSTRACT: To control the extraction of rare elements from semi-finished products and wastes of the lead-zinc production, a spectrographic determination method has been developed for In, Tl, and Te in the semi-finished products, and for the determination of the impurities in metallic Tl, Te, and Se. The determinable concentrations are for powder 0.001 - 20% and for solutions 8 - 300 mg/l. For lower concentrations (0.001 - 0.5%) an arc PS-39 is used, at higher concentrations (0.5 - 20%) a spark IG-2. A "fulgurator" is used for the analysis of solutions (Ref 1). The article contains a description of the working conditions with the arc and with the spark. The simultaneous determination of In and Tl in lead dust and lead products was partly effected according to the method reference 2. The article contains the conditions of analysis for the final deter-

Card 1/2

mination (Table). N. T. Alontseva developed the method for the determination of Na and other impurities. It was effected according to reference 4 with a for Na relative accuracy of ± 10%. The determination method for Se and Te was developed in collaboration with V. N. Vardugina and occurred under conditions differing from the above. A method for the determination of Fe, Te, and As in Se was also developed at which an arc PS-39 was used. There are 1 table and 4 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy gorno-metallurgicheskiy institut tsvetnykh metallov (All-Union Scientific Mining-metallurgical Research Institute of Non-ferrous Metals)

L 15625-65 EWT(m)/EWP(t)/EWP(b) ASD-3/AFFTC/ESD-3/IJP(c) JD/JG
ACCESSION NR: AR3010281 S/0081/63/000/012/0151/0151

SOURCE: RZh. Khimiya, Abs. 12G69

AUTHOR: Bortnik, L. S.

TITLE: Determination of high content components in lanthanum products

CITED SOURCE: Sb. Tr. Vses. n.-i. gorno-metallurg. in-t tsvetn. met., no. 7, 1962, 401-405

TOPIC TAGS: Nd, Pr, La, spectrography, analysis

TRANSLATION: An emission spectrograph method for determining Nd (2-40%) and Pr (1-20%) oxides in the presence of 40-97% La_2O_3 is described. For analytic purposes, the following lines were chosen: Pr 3908.43 and 4225.33 (less intense), Nd 3973.27, La 4025.88 A. A DFS-13 spectrograph with a grid of 600 lines/mm was used. Determination error was 5%.

SUB CODE: IC, OP ENCL: 00

Card 1/1

BORTNIK, L.S.

Determination of rare earth elements in ores. Sbor.trud. VNIITSVETMET no.9:199-203 '65.

(MIRA 18:11)

ACC NR: AP6036960 (A,N) SOURCE CODE: UR/0181/66/008/011/3213/3217

AUTHOR: Yukhnevich, A. V.; Tkachev, V. D.; Bortnik, M. V.

ORG: Belorussian State University im. V. I. Lenin, Minsk (Belorusskiy gosudarstvennyy universitet)

TITLE: Annealing of bands of impurity recombination radiation in silicon irradiated with gamma quanta

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3213-3217

TOPIC TAGS: recombination radiation, radiative recombination, semiconductor carrier, gamma irradiation

ABSTRACT: The isochronous annealing of infrared radiation bands arising in silicon from the radiative recombination of excess carriers across the levels of radiation defects was studied. In the 25-600°C range, the successive appearance and disappearance of various bands was observed, indicating a complex character of the rearrangement of defects during annealing. The results obtained show an important role of oxygen in the formation of recombination centers in silicon upon irradiation with gamma quanta. On the other hand, this recombination radiation is a good indicator of low oxygen concentrations, and can be used to determine the latter. Thus, recombination radiation can be used as a means of studying the radiation defects of silicon and processes of their rearrangement during heat treatment. Nine different "radiating" radiation defects were observed, and the kinetics of their annealing showed the struc-

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ACC NR: AP6036960

ture of stable radiation defects to be complex. Oxygen atoms are an integral part of most of the radiation defects responsible for the observed bands of impurity recombination radiation. Phosphorus atoms participate in the formation of centers radiating D and E bands, and boron atoms take part in the formation of centers radiating F and I_3 bands. The majority recombination centers (determining the lifetime of excess carriers) are annealed at 400-500°C. They are also linked to oxygen and are centers of nonradiative recombination. The intensity and energy distribution of the various bands of recombination radiation of silicon containing radiation defects and subjected to heat treatment permit an analysis of the content of chemical impurities in the initial single crystals. Both active (boron, phosphorus) and inactive impurities (oxygen) can thus be analyzed. Authors thank Z. M. Afanas'yev and P. S. Solov'yev for their systematic assistance in the course of the experiments. Orig. art. has: 1 figure and 1 table.

SUB CODE: 20/ SUBM DATE: 21Mar66/ ORIG REF: 006/ OTH REF: 008

Card 2/2

WIZESNIOWSKI, Kazimierz; BORSUKOWSKI, Wladyslaw; BORTNIK, Pawel

Method of neuroplegia and controlled hypothermia at an air force hospital. Polski tygod. lek. 11 no.38:1617-1620 17 Sept 56.

1. Z oddzialu chirurgicznego Szpitala Lotniczego).
(HIBERNATION, ARTIFICIAL,
(Pol))

WRZESNIOWSKI, Kazimierz; BORSUKOWSKI, Wladyslaw; BORTNIK, Pawel; ZAKRZEWSKI, Tadeusz

Application of neuroplegic drugs and of physical hypothermia in a case of severe cerebrocranial injury. Polski tygod. lek. 11 no.39:1675-1678 24 Sept 56.

1. (Z Oddzialu Chirurgicznego Wojskowego Szpitala Lotniczego) adres: Warszawa, al. Na Skarpie 65 m. 9.

(HIBERNATION, ARTIFICIAL, in head inj. (Pol))
(HEAD, wounds and injuries, ther., artif. hibernation (Pol))

KATS, F.; BORTNIK, S.

Results of effective control. Fin.SSSR 20 no.10:69-71
O '59. (MIRA 12:12)

1. Nachal'nik otdela gosdokhodov Odesskogo gorfinotdela (for Kats). 2. Starshiy inspektor gosdokhodov Odesskogo gorfinotdela (for Bortnik)
(Odessa Province--Finance)

BORTNIK, S.

Study helps to improve economic work. Fin. SSSR 21 no.9:66-68 S '60.
(MIRA 13:9)

1. Starshiy ekonomist Odesskogo gorfinotdela.
(Odessa--Finance--Study and teaching)

BORTNIK, S. [Bortnyk, S.]

Design details of cow barns using precast reinforced concrete. Bud. mat. i konstr. 4 no.3:45-49 My-Je '62. (MIRA 15:5)

1. Glavnyy inzh. Ukrainskogo nauchno-issledovatel'skogo i proyektnogo instituta sel'skogo khozyaystva.
(Ukraine--Dairy barns) (Precast concrete construction)

YERSHOV, L.D., kand.tekhn.nauk; CHERNYSHEV, G.S., inzh.; LUKASHENKO, I.A., inzh.; UDOVIK, L.N., inzh.; LESHCHINA, A.S., inzh.; SAS, Ye.Ya., inzh.. Prinimali uchastiye: BORTNIK, S.P., inzh.; EPEL'BOYM, P.L., inzh.; INOSOVA, N.A.. LUKASHENKO, I.A., inzh., red.

[Instructions for manufacturing three-step blocks for arched roofs made without forms] Instruktivnye materialy po proizvodstvu trekhstupenchatykh blokov dlia bezopalubochnykh svodchatykh pokrytii. Kiev, Biuro tekhn.informatsii NIISK ASiA USSR, 1958. 35 p. (MIRA 12:4)

1. Akademiya budivnytstva i arkhitektury URSR. Instytut budivel'nykh materialiv i vyrobiv.
(Building blocks) (Roofs)

BORTNIK, T.A.

Number of thrombocytes and thrombocytograms of normal persons in the city of Frunze. Sov. zdrav. Kir. no.1:48-50 Ja-F '62. (MIRA 15:4)

1. Iz Kirgizskogo nauchno-issledovatel'skogo instituta onkologii i radiologii (dir. - prof. A.I.Sayenko).
(FRUNZE—BLOOD PLATELETS)

PRISHIVOYT, G.N.; BORTNIK, T.A.

Some hematological indicators of healthy people in the City of Frunze. Sov. zdrav. Kir. no.3:10-14 My-Je '63. (MIRA 16:9)

1. Iz Kirgizskogo nauchno-issledovatel'skogo instituta onkologii i radiologii (dir. - prof. A.I.Sayenko)
(FRUNZE—BLOOD—ANALYSIS AND CHEMISTRY)

BORTNIK, T.L.; KALANDARISHVILI, A.S.

Some variants of remission in the clinical aspects of schizophrenia during aminazine therapy. Zhur. nevr. i psikh. 63 no.2:263-268 '63 (MIRA 16:11)

1. Moskovskaya gorodskaya psikhonevrologicheskaya bol'nitsa No.12 "Streshnevo" (glavnyy vrach A.S. Kalandarishvili) nauchnyy rukovoditel' - dotsent T.K.Tarasov).

L 32844-66 EWT(d)/EWP(c)/EWP(v)/T/EWP(k)/EWP(l) IJP(c)
ACC NR: AP6009160 (A) SOURCE CODE: UR/0002/65/000/011/0014/0023

23
B

AUTHOR: Bortnik, Ye.

ORG: None

TITLE: The problems connected with the statistical study of production quality 14

SOURCE: Vestnik statistiki, no. 11, 1965, 14-23

TOPIC TAGS: quality control, industrial statistic, statistic analysis

ABSTRACT: The quality of machines is determined by the totality of various properties not all of which can be subjected to quantitative estimates. To develop a statistical approach to the quality of machine operation, the author investigates the ways and means for evaluating the quality of a self-propelled combine harvester. The coefficient of technical servicing of the machine and the coefficient of the technological servicing of the combine are defined. On the basis of statistical data the exploitation reliability of the unit is discussed. A comprehensive survey of the cost of operation and general productivity of the machine is given. No attempt is made to generalize these specific calculations to larger classes of problems. Orig. art. has: 14 formulas and 5 tables.

SUB CODE: 13 / SUBM DATE: none
05/

LS
Card 1/1

[redacted]

[illegible]ENKO, V.G., kand.tekhn.nauk; BORTNIK, Ye.M., inzh.

Economic evaluation of the increase in the quality of an electric locomotive. Vest.mashinostr. 44 no. 2:71-73 F '64. (MIRA 17:7)

BORTNIK, Yu.F., inzh.

Eighty tons of soap per shift. Masl.-zhir. prom. 23 no.9:37-38 '57. (MIRA 10:12)

1.UNIIPP.

(Soap industry)

MORTNIK, Yu.F., inzh.

Fractioning of animal fats. Masl.-zhir. prom. 29 no.10:36 O '63. (MIRA 16:12)

1. Ukrainskiy nauchno-issledovatel'skiy institut maslozhirovoy promyshlennosti.

L 29671-66 EWT(1)/ETC(f) IJP(c) AT
ACC NR: AT6012691 SOURCE CODE: UR/3136/65/000/988/0001/0022

AUTHOR: Bortnikov, A. V.; Brevnov, N. N.; Zhukovskiy, V. G.; Romanovskiy, M. K. 37

ORG: State Committee on Use of Atomic Energy SSSR, Institute of Atomic Energy im. I. V. Kurchatov, Moscow (Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii, Institut atomnoy energii)

TITLE: Investigation of plasma in the "AS" installation

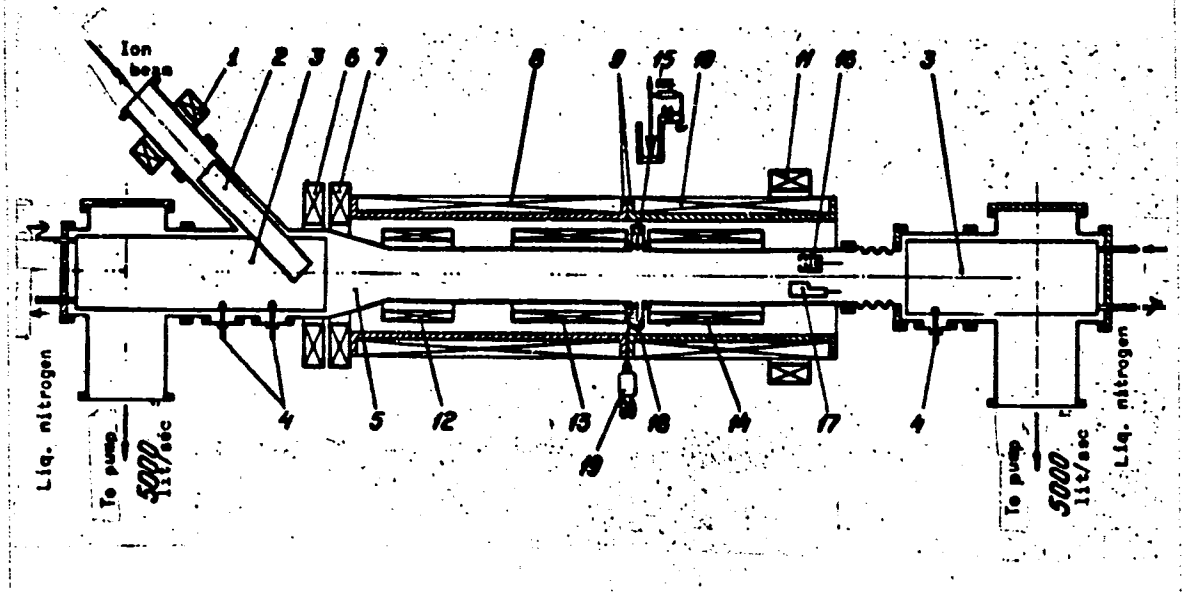
SOURCE: Moscow. Institut atomnoy energii. Doklady, no. 988, 1965. Issledovaniye plazmy v ustanovke AS, 1-22

TOPIC TAGS: plasma research, plasma compression, plasma injection, plasmoid acceleration, plasma stability, cyclotron resonance, magnetic mirror

ABSTRACT: The authors describe the "AS" (adiabatic compression) apparatus for the study of a plasma produced by injection of fast ions. An axially-centered cylindrical plasmoid is detached from the injector by means of a pulsed magnetic mirror, is accelerated toward a stationary magnetic mirror, and is compressed by a time-increasing magnetic field of mirror configuration. The initial ion energy can reach 10 kev. The article contains a description of the installation (Fig. 1), the auxiliary apparatus, and the measurement details. Measurements were made of the density and potential of the plasma, the lifetimes of the fast ions, and the

Card 1/3

L 29671-66
ACC NR: AT6012691



Card 2/3

Fig. 1. Schematic diagram of "AS" installation. 1 - Magnetic lens, 2 - channel, 3 - azotite, 4 - titanium evaporators, 5 - chamber, 6,7,8,10,11 - stationary magnetic field coils, 9 - copper screen, 12 - detachment coil, 13,14 - compression coils, 15 - neutral particle detector, 16 - secondary ion energy spectrum analyzer, 17 - current receiver, 18 - rod probe, 19 - palladium leak valve.

onset and development of oscillations at the ion-cyclotron frequency. The initial plasma density was found to be proportional to the injection current and amounted to 10^{18} cm^{-3} fast ions at a current of 5 ma. In the absence of injection-current pulsations, the plasma potential did not exceed +30-40 v and was independent of the injection current or of the neutral-gas pressure. Cyclotron instability with an increment time of 20-30 μsec developed in the plasma after detachment from the sourse, lasted for about 100 μsec, after which it decreased exponentially, apparently as a result of self-stabilization. The lifetime of the fast ions depended only on the charge exchange with the neutron molecules. The development of cyclotron instability did not cause additional ion losses. The plasma decayed after compression with a characteristic time of 500 μsec. This is several times smaller than the charge exchange time, and the reason for this behavior is not yet clear. The experimental plasma lifetime of the fast ions increased approximately in proportion to the pressure. Orig. art. has: 11 figures and 8 formulas.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 005/ OTH REF: 005

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206530003-2"

L 45588-65 EWT(l)/EPF(n)-2/EWG(m)/EPA(w)-2 Pz-6/Po-4/Pab-10/Pi-4 IJP(c)
VW/DM/AT

ACCESSION NR: AP5009119 S/0089/65/018/003/0256/0257 51 B

AUTHOR: Bortnikov, A. V.; Brevnov, N.N.; Zhukovskiy, V.G.; Romanovskiy, M.K.

TITLE: Adiabatic compression of a plasma with hot ions (Description of installation and first experiments)

SOURCE: Atomnaya energiya, v. 18, no. 3, 1965, 256-257

TOPIC TAGS: plasma compression, plasma ion, adiabatic compression, plasma injection, magnetic mirror

ABSTRACT: The adiabatic compression apparatus is intended for an investigation of the behavior of plasma with hot ions in a magnetic field that increases with time. A diagram of the installation is shown in Fig. 1 of the Enclosure. The plasma is produced by injecting atomic hydrogen ions with energy 10 keV (or molecular ions with energy 7 keV). The ions move in a homogeneous magnetic field around the axis of the installation almost perpendicular to the axis, are reflected by a magnetic mirror, and are trapped by azotite. The growing magnetic field detaches the ions from the channel and compresses them to a stationary magnetic mirror, after which further

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L 45588-65

ACCESSION NR: AP5009119

radial and longitudinal plasma compression is produced by the compression coils. The stationary field is 2000 Oe, the maximum rising field and the field of the compression coil in the mirrors is 30 kOe, and the mirror ratio is 3. The ion current (1--5 mA) is injected in pulses whose duration can be varied from 1 to 500 msec. The initial gas pressure prior to injection of the ions is 10^{-8} mm Hg. Experiments are reported on the dependence of the ion charge exchange time on the flux of fast neutral atoms and on the dependence of the plasma potential on the amplitude of the ac component of the injection current. Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 13Aug64 ENCL: 01 SUB CODE: ME

NR REF SOV: 000 OTHER: 000

Card 2/3

PEVZNER, M.L., PERFIL'YEV, O.G., POCHIVALOV, I.N., BORTNIKOV, A.V., [illegible], A.S.

Industrial test in pebble mill grinding of gold containing ores at the S Ordzhonikidze plant in the Baleyzoloto Combine. Tsvet. met. 38 no.6:6-11 Je '65. (MIRA 18:10)

BORTNIKOV, M.G.

94-3-10/26

AUTHORS: Ivanov, G.D., Bortnikov, M.G. and Zatulovskiy, N.M.

TITLE: Modifications to the Control Circuits for Lifting Tables on a Plate Mill to Shorten the Rolling Cycle (Izmeneniye skhemy upravleniya pod"yemnykh stolov tolstolistovogo stana dlya sokrashcheniya tsikla prokatki)

PERIODICAL: Promyshlennaya Energetika, 1958, Vol.13, No.3, pp. 18 - 19 (USSR).

ABSTRACT: This is a suggestion that received fifth premium in an All-Union competition for the economy of electric power.
An important factor in determining the time required to roll a billet on a plate mill is the time required to raise and lower the tables. Lowering seldom causes delay, because the operator can commence to lower them before the work leaves the rolls. However, if the raising is commenced too soon, damage may be done.
At the works imeni Petrovskiy, the electric motors driving the table lifts were controlled by the circuit given in Fig.1. An oscillogram taken when the motor was working with this control circuit is given in Fig.2, and shows that the motor is accelerating throughout the period of lifting of the table. It was, therefore, desirable to increase the acceleration of the motor. After trying different values of starting resistance and delay

Card1/2

94-3-10/26

Modifications to the Control Circuits for Lifting Tables on a Plate Mill to Shorten the Rolling Cycle

time of the accelerating relay, the new circuit shown in Fig.3 was proposed. It contains no accelerating relay nor counter-current relay, and a few other parts are left out. An oscillogram of the operation of the motor with the new circuit is given in Fig.4. The acceleration time has been cut from 2.5 to 0.9 sec and the total time required for lifting is cut from 4.38 to 3.25 sec. The total time saved in rolling a sheet is 4 sec; thus, it was possible to roll a further 4 000 tons a year of sheet, whilst saving some 200 000 kWh of electric power.
There are 4 figures.

AVAILABLE: Library of Congress
Card 2/2

BORTNIKOV, O.G.

LOGVINENKO, P.I., kand.med.nauk; POPOV'YENTS, R.S.; BORTNIKOV, O.G.
(g. Voroshilov)

Intraperitoneal infusion of antibiotics in acute suppurative peritonitis. Khirurgiia 33 no.9:64-66 S '57. (MIRA 11:4)
(PERITONITIS, ther.
antibiotics, intraperitoneal admin. in laparotomy)
(ANTIBIOTICS, ther. use
peritonitis, intraperitoneal admin. in laparotomy)

BORTNIKOV, O.G. (Ussuriysk, Primorskogo kraya)

Case of fibroleiomyoma of the stomach. Khirurgiia 36 no.8:124 Ag '60. (MIRA 13:11)
(STOMACH—TUMORS)

BORTNIKOV, O. G.,(g. Ussuriysk Primorskogo kraya, Gospital'naya ul., d. 23, kv. 4)

Bronchoesophageal fistulae. Grud. khir. 4 no.1:112-114 Ja-F '62. (MIRA 15:2)

(FISTULA, BRONCHIAL)

BORTNIKOV, O.G.

Simultaneous perforation of the stomach and duodenum by ulcers.
Vest.khir. no.9:129 '61. (MIRA 15:3)
(PEPTIC ULCER)

POPOV'YANTS, R.S.; BONTNIKOV, G.G. (Ussuriysk Primorskogo kraya)

Pericholedochal lymphadenitis as a complication of Botkin's disease. Sov. med. 27 no.2:26-28 F '64.
(MIRA 17:10)

POPOV'YANTS R.S. (Ussuriysk); KLEYN, V.G., kand. med. nauk (Ussuriysk); BORTNIKOV, O.G., kand. med. nauk (Ussuriysk)

Surgical treatment of cryptorchism. Urologiia. 29 no.3:13-16 My-Je '64. (MIRA 18:10)

BORTNIKOV, P.

Public standardization office. Mashinostroitel' no.10:42 O '63. (MIRA 16:12)

BORTNIKOV, S.A.

Short-range weather forecast based on the solution of a complete system of thermohydrodynamic equations. Meteor.i gidrol. no.11: 12-19 N '62. (MIRA 15:12)

1. Vychislitel'nyy meteorologicheskiy tsents.
(Weather forecasting)

ACCESSION NR: AR4015478 S/0169/63/000/012/B075/B075

SOURCE: RZh. Geofizika, Abs. 12B392

AUTHOR: Bortnikov, S. A.

TITLE: Calculation of the influence of orography in short-range weather forecasting based on the solution of a complete system of hydrothermodynamic equations

CITED SOURCE: Tr. Vy*chisl. meteorol. tsentra, vy*p. 1, 1963, 53-61

TOPIC TAGS: orography, short-range forecasting, hydrodynamic equations, orographic influence, weather forecasting

TRANSLATION: A method is proposed for computing the influence of mountains in a two-level system of hydrodynamic equations. An original system of equations is presented for a "straightened" surface of the earth by means of a suitable substitution of independent variables. A solution of the indicated system of equations, which takes into consideration the influence of the unevenness of the earth's surface, is given. Author's resume.

DATE ACQ: 09Jan64 SUB CODE: AS, PH ENCL: 00

Card 1/1

L 10302-66 EWT(1)/FCC GW
ACC NR: AT5024830 UR/3118/65/000/006/0008/0018

AUTHOR: S. A. Bortnikov 44,55

TITLE: On the utilization of wind data as the initial conditions in forecasts based on the complete system of equations

SOURCE: Mirovoy meteorologicheskiy tsentr. Trudy, no. 6, 1965. Voprosy gidrodinamicheskogo kratkosrochnogo prognoza pogody i mezometeorologii (Problems in hydrodynamic short-range weather forecasting and mesometeorology), 8-18

TOPIC TAGS: weather forecasting 12,44,55 short range weather forecast, wind,

ABSTRACT: In the utilization of prognostic mathematical models for weather forecasting, the choice of initial conditions was found to be significant to the quality of weather forecasts. This paper discusses certain improvements stemming from the utilization of additional actual meteorological data, in addition to the usual geopotential initial conditions. The nature and the results of forecast computations and subsequent forecast quality evaluations are presented for a previously described two-level prognostic model of the author (Trudy VMTs, vyp. 1, 1963), utilizing real wind conditions in addition to the geopotential data as the initial conditions. The model uses an iterative process, treating the non-linear members

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ACC NR: AT5024830

initially as known quantities and utilizing an implicit finite differences shematic on time. Mountain regions are treated by a "straightening" coordinate system and the basis hydrothermodynamic equations (of movement, continuity and adiabaticity) rewritten in the new coordinates for the 700 millibars and 300 millibars levels. The initial meteorological and geophysical data are picked up and/or precomputed at a 26x22 points net (522 points. Fig. 1, of the Enclosure shows the basic net, the inner 20x16 region of forecasts and the innermost 12x10 points region of forecasts quality evaluation. The addition of the actual wind data as the initial conditons resulted in a reduction of the relative forecast errors for the geopotential of between 10% and 18%. The prognosis of wind velocity components themselves was also improved. Enlargement of forecast areas and consideration of the Coriolis parameter variability likewise improved the prognosis.

ASSOCIATION: Mirovoy meteorologicheskiy tsentr (World meteorological center) 44,55

SUBMITTED: 00 ENCL.: 01 SUB CODE: 08

NO REF SOV: 007 OTHER: 000

(18)

Card 2/3

L 10302-66
ACC NR: AT5024830

ENCLOSURE: 01

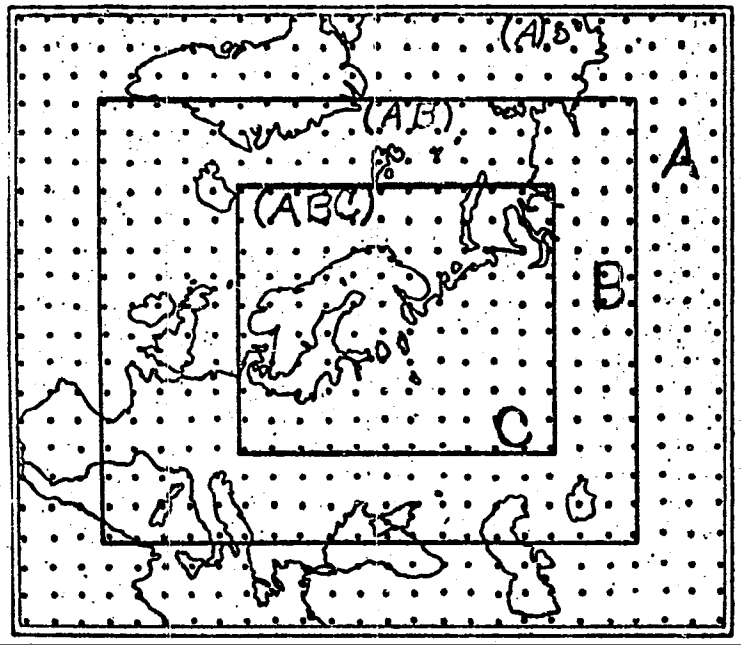

FIG. 1.

Regions and points of:

(A) - Data acquisition
(B) - Forecast presentation
(C) - Forecast evaluation

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L 19393-66 EWT(1)/FCC GW/GS

ACCESSION NR: AT5008053 S/0000/64/000/000/0054/0062

AUTHOR: Bortnikov, S. A. 10

TITLE: Short-range operational weather forecasting using general equations 12,44,55 B+1

SOURCE: Simpozium po chislennym metodam prognoza pogody. Moscow, 1963. Trudy. Leningrad, Gidrometeoizdat, 1964, 54-62

TOPIC TAGS: weather forecasting, meteorological chart, numerical method, pressure field, atmospheric thermodynamics

ABSTRACT: Numerical methods for short-range weather forecasting are being more and more widely used in operational practice. The first operational quasigeostrophic methods for forecasting the high-altitude pressure field have shown that numerical forecasting methods are much better than synoptic methods. However, experience in working daily with the quasigeostrophic method has indicated that computational schemes based on more accurate physical models of the atmosphere are necessary for operational forecasting. From this standpoint, the use of unaltered general hydrodynamic equations can give a more reliable picture of the phenomena important to weather forecasting. Short-range forecasting methods for a two-level

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model have been developed using a general system of hydrothermodynamic equations (Bortnikov, S. A., "An Experiment in Short-Range Weather Forecasting Based on the Solution of a General System of Hydrothermodynamic Equations," *Meteorologiya i gidrologiya*, No 11, 1962; Tseng Ch'ing-ts'un, "The Use of a General System of Thermohydrodynamic Equations for Short-Range Weather Forecasting in a Two-Level Model," *Dokl. AN SSSR*, 137, No. 1, 1961). The first examples of calculation have confirmed that forecasts based on the solution of general hydrothermodynamic equations give a more accurate picture of the potential pressure field than the system based on a quasigeostrophic model. The model investigated in this article uses two equations of motion and an equation of discontinuity which are written on the assumption of quasi-static conditions on the 300 and 700 mb levels, and a heat flux equation (adiabatic conditions) for the 500 mb level:

$$\frac{\partial u_l}{\partial t}+\frac{\partial \Phi_l}{\partial x}-lv_l=-\frac{\partial u_l^2}{\partial x}-\frac{\partial u_l v_l}{\partial y}-\left(\frac{\partial uw}{\partial \zeta}\right)_l,\quad l=1,\ 3;$$

$$\frac{\partial v_l}{\partial t}+\frac{\partial \Phi_l}{\partial y}+lu_l=-\frac{\partial u_l v_l}{\partial x}-\frac{\partial v_l^2}{\partial y}-\left(\frac{\partial vw}{\partial \zeta}\right)_l,\quad l=1,\ 3;$$

$$\frac{\partial u_l}{\partial x}+\frac{\partial v_l}{\partial y}+\left(\frac{\partial w}{\partial \zeta}\right)_l=0,\quad l=1,\ 3$$

$$\left(\zeta^2\frac{\partial^2\Phi}{\partial\zeta\partial t}\right)_2+\zeta_2^2 w_2=-\left[\zeta^2\left(u\frac{\partial^2\Phi}{\partial x\partial\zeta}+v\frac{\partial^2\Phi}{\partial y\partial\zeta}\right)\right]_2,$$

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ACCESSION NR: AT5008053

0

where t is time; x and y are horizontal coordinates; reduced pressure $\zeta = p/P$ is the vertical coordinate (P = 1000 mb); Φ is the deviation of the geopotential from the standard value; u, v and ω are the velocity components along the coordinate axes; l is the Coriolis coefficient, $c^2 = \frac{\gamma_a - 1}{g} \times_1 R^2 T_1$ (R is the gas constant, g is acceleration due to gravity, γ is the vertical temperature gradient, T_1 is the average temperature and the indices 1, 2 and 3 correspond to the 300, 500 and 700 mb levels). Boundary conditions are: $\omega = 0$ at $\zeta = 0.1$ and $\zeta = 0.9$. An analytical solution of the problem is given. Preliminary analysis showed that the altitude H, obtained as the arithmetical mean of the altitudes at the isobaric surfaces of 300 and 700 mb differs from the altitude at the isobaric surface of 500 mb by an empirically determined constant average value. This also made it possible to plot the AT_{500} forecast map. The records of forecasts by this method date back to October 1962. Absolute topographic maps for the 300, 500 and 700 mb levels have been plotted as well as the 300-700 mb thickness pattern and the map for the vertical currents at the level of the isobaric surface for 500 mb for a 24 and 36 hour period. The AT_{500} map and the map of the vertical currents were used in operational practice. Since initial data were required at the 300 and 700 mb levels, the following interpolation formula was used: $\Phi_{700} = 0.624\Phi_{850} + 0.376\Phi_{500}$.

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L 19393-66

ACCESSION NR: AT5008053

Tests have shown that forecasts according to this system "catch" most of the changes in the pressure field for a forecast period of up to 36 hours. A table is given of the relative error in forecasts from AT_{500} maps. Orig. art. has: 5 figures, 1 table.

ASSOCIATION: none

SUBMITTED: 06Oct64 ENCL: 00 SUB CODE: ES

NO REF SOV: 011 OTHER: 000

Card 1/1

L 34746-66 EWT(1)/FCC GW
ACC NR: AP6025228 SOURCE CODE: UR/0362/66/002/002/0198/0201

AUTHOR: Bortnikov, S. A.

ORG: World Meteorological Center (Mirovoy meteorologicheskiy tsentr)

TITLE: Finite-differences scheme for operational short-range forecasting using primitive equations

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 2, 1966, 198-201

TOPIC TAGS: weather forecasting, atmospheric model, Poisson equation, iteration, integral calculus

ABSTRACT: This is a review of the problems involved in the use of primitive equations in short-range forecasting (15 Soviet and foreign authors are cited). Particular emphasis is on the computation of the nonlinear terms; the problem considered here is for a two-level model of an atmosphere and the use of a finite differences scheme. The author presents a refinement of one of the variants of such a finite differences approach. The presented variant, based on primitive equations, is convenient for carrying out numerical experiments for evaluation of the influence of different physical factors. The computation time on an electronic computer for a series of prognostic charts for a period of 36 hours in advance using this modified approach was about 8 minutes. The scheme is still being tested. One of the refinements is that a contour integral is introduced in the iteration process when seeking the solution of the Poisson equation. It is shown that introduction of this contour integral gives a systematic improvement of forecasting results. Similar work now is being undertaken for a three-level model of the atmosphere. Orig. art. has: 11 formulas and 1 table. [JPRS: 36,553]

SUB CODE: 12, 04 / SUBM DATE: 29Sep65 / ORIG REF: 007 / OTH REF: 008

Card 1/1 UDC: 551.509.313

L 47151-66 EWT(1) GW

ACC NR: AR6000714 SOURCE CODE: UR/0124/65/000/009/B101/B101

34
B

AUTHOR: Bortnikov, S. A.

TITLE: Experiment in short-term operative prognosis by means of generalized equations

SOURCE: Ref. zh. Mekhanika, Abs. 9B679

REF SOURCE: Tr. Simpoziuma po chislen. metodam prognoza pogody, 1963. L., Gidrometeoizdat, 1964, 54-62

TOPIC TAGS: atmospheric thermodynamics, synoptic meteorology, geostrophic wind, weather forecasting, differential equation system

ABSTRACT: The results of operative studies of a two-level system of short-term weather prognosis from generalized hydrothermodynamic equations are reported. Prognosticized elements are: heights of isobaric surfaces of 700 and 300 mbar, their relative topography, and vertical currents at the average level. The height of that level which differs from $1/2\ (AT_{100} + AT_{300})$ only by a constant is also forecast. Prognosis was given for periods of 24 and 36 hours for a territory of 22 x 18 having network span of 300 km, using as the initial data those obtained from objective analysis. Application of a finite-difference system implicit with respect to the linear terms in solving differential equations and of iteration with respect to nonlinear terms for each time span allowed the span δt to increase to 3 hours. When compared with the quality of the daily prognosis, the quality of the 36-hour

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L 47151-66
ACC NR: AR6000714

prognosis in this case is cnly slightly less accurate. Comparison of a series of 50 forecasts compiled for October 1962--May 1963 with analogous prognoses derived from the operative three-level quasi-geostrophic method has shown that they are of similar quality. However, the method of generalized equations is more satisfactory in calculations for cases with sharp rearrangements of baric fields. V. M. Kadyshnikov /Translation of abstract/

SUB CODE: 04, 12

Card 2/2 afs

BORTNIKOV, V. (Kishinev)

Business accounting in construction. Vop. ekon. no.3:147-150 Mr '61. (MIRA 14:3)
(Moldavia—Construction industry—Finance)

BOGUSHEVICH, Ye.N. (Moscow); SHEVELEV, A.P. (Moscow); BORTNIKOV, V.B. (Kishinev); NECHAYEV, G.A. (Leningrad); KARAKOV, T.T. (Kiyev); KLOPOTOVSKIY, I.S. (Leningrad); GALAKHOV, G.K.; POSYSAYEV, N.S. (Moscow).

Discussionon methods for determining the coefficient of prefabrication in construction. Stroit. prom. 36 no.6:38-45 Je '58. (Precast concrete construction) (MIRA 11:6)

BORTNIKOV, V.B., kand. ekon. nauk, red.; MEDNEK, V.P., red.; FEDOTOVA, R.D., red.; DMITRENKO, N.Z., red.; POLONSKIY, S.A., tekhn.red.

[Problems of the economics of capital construction in the Moldavian S.S R.]Voprosy ekonomiki kapital'nogo stroitel'stva v Moldavskoi SSR; materialy. Kishinev, Shtiintsa, 1962. 145 p. (MIRA 16:2)

1. Nauchno-ekonomicheskaya konferentsiya po stroitel'stvu v Moldavskoy SSR, Kishinev, 1961. 2. Zamestitel' predsedatel' Gosudarstvennogo komiteta Soveta Ministrov SSSR po delam stroitel'stva Moldavskoy SSR (for Mednek). 3. Zaveduyushchiy sektorom ekonomiki stroitel'noy industrii Instituta ekonomiki Akademii nauk Moldavskoy SSR(for Bortnikov).

(Moldavia--Construction industry--Management)

BORTNIKOV, V.B.

Ways to improve the indices of capital construction in the Moldavian S.S.R. Izv. AN Mold. SSR no.12:12-26 '63.

(MIRA 18:5)

BORTNIKOV, V.N.

Device for knocking out cutters from bushings. Mashinostroitel' no. 5:21 My '64. (MIRA 17:7)