SMOLOV, V.B.; BALASHOV, Ye.P.

Electronic computer for acoustical logging. Izv. vys. ucheb. zav.; prib. 8 no.2:80-85 '65. (MIRA 18:5)

1. Leningradskiy elektrotekhnicheskiy institut imeni Ul'yanova (Lenina). Rekomendovana kafedroy schetno-reshayushchey tekhniki.

L 8797-66 EWT(d)/EWP(1) IJP(c) GG/BB

ACC NR: AP5026965 SOURCE CODE: UR/0103/65/026/010/1818/1823

AUTHOR: Petrov, B.K. (Leningrad); Smolov, V.B.; Tarasov, Yu. A.; Ugryumov, Ye. P. (Leningrad)

ORG: None

TITLE: A precision transistorized pulse-time multiplication and division unit

SOURCE: Avtomatika i telemekhanika, v. 26, no. 10, 1965, 1818-1823

TOPIC TAGS: computer component, arithmetic unit, computer circuit, analog system, transistorized circuit

ABSTRACT: The authors describe a four-quandrant multiplier and divider based on the widely known principle of pulse-time multiplication. A block diagram of the device is shown and its operation is explained. The device has a maximum relative error of 0.1% in an ambient temperature range from 0 to +60C. A schematic diagram is given for the electronic part of the device together with a detailed description of its operation. The circuit of the device is divided into two sections. The first section contains a sawtooth voltage generator, common collector amplifier, Schmitt trigger circuit, and two pulsed voltage dividers. The operation of the voltage dividers is illustrated by time diagrams. This first section is used for pdm and pam of the square-wave voltage. The second section of the multiplier-divider is a d-c amplifier. This unit has a voltage amplification factor of 20,000, input impedence of 5 KΩ, and a maximum zero drift at the output of 0.4 mv from +20 to +60C. Data are given on error

Card 1/2 UDC: 681.142.642.3/4

L 8797-66

ACC NR: AP5026965

analysis of the device. The unit has a passband of 10 cps in one channel and 8.5 cps in the other. Results of experimental tests are given. Orig. art. has: 2 figures and 13 formulas.

SUB CODE: 09 / SUBM DATE: 18Mar65 / ORIG REF: 001 / OTH REF: 002

jw

Card 2/2

ACC NR: AP6026457 SOURCE CODE: UR/0410/66/000/002/0090/0098

AUTHOR: Korshever, I. I. (Novosibirsk-Leningrad); Smolov, V. B. (Novosibirsk-Leningrad); Tverdokhleb, P. Ye. (Novosibirsk-Leningrad); Fomichev, V. S. (Novosibirsk-Leningrad)

ORG: none

TITLE: One possibility for construction of digital analog functional converters

SOURCE: Avtometriya, no. 2, 1966, 90-98

TOPIC TAGS: digital analog converter, circuit design, mathematic analysis

ABSTRACT: A method is described for the construction of digital-analog functional converters based on preliminary expansion of the function into a series by Walsh functions. It is shown that the elements of the digital-analog converter are interpreted easily by the category of this expansion. Examples are presented of the realization of some digital-analog functional converters. The limitations within which the application of this method will give a gain in comparison with known methods are determined. The advantages of converters constructed using Walsh function expansion are simplicity of the analog portion of the circuit and the constant output impedance of the analog portion of the circuit, which allows them to be used with any load without disrupting the nature of the dependence reproduced. Orig. art. has: 2 tables, 7 formulas, and 4 figures.

SUB CODE: 09,12/ SUBM DATE: 27Nov65/ ORIG REF: 003

Card 1/1 UDC: 681.142.621

SMOLOV, V.B.; BARASHENKOV, V.V.

Functional time interval-to-digit converter. Izm.tekh. no.6:33-36 Je '64. (MIRA 17:12)

BODUNOV, V.P., prepod.; DUBININ, Ya.I., prepod.; LEBEDEV, A.N., prepod.; MARKOV, V.G., prepod.; SAPOZHKOV, K.A., prepod.; SMIRNOV, N.A., prepod.; SMOLOV, V.B., prepod.; UGRYUMOV, Ye.P., prepod.; YATSENKO, V.P., prepod.; BURLAK, M., red.

[Laboratory work on a course in "Electronic analog computers"] Laboratornye raboty po kursu "Vychislitel'nye mashiny nepreryvnogo deistviia." Moskva, Vysshaia shkola, 1965. 211 p. (MIRA 18:5)

1. Kafedra vychislitel'noy tekhniki Leningradskogo elektrotekhnicheskogo instituta im. V.I.Ul'yanova (for all except Burlak).

L 44773-65 EED-2/EWT(d)/EWP(1) Pg-4/Pq-4/Pk-4 IJP(c) GG/BB

ACCESSION NR: AP5011738 UR/0146/65/008/002/0080/0085

34
32
B

AUTHOR: Smolov, V. B.; Balashov, Ye. P.

TITLE: Electronic computer for acoustic core sampling

166

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 2, 1965, 80-85

TOPIC TAGS: geological surveying, computer design, digital analog computer, mine core sampling, acoustic core sampling, seismic sampling

ABSTRACT: In the development of automatic equipment for acoustic core sampling in mine shafts, the basic output parameter of which is the velocity of propagation of elastic oscillations with depth $V_{form}$, it is also advisable to have a computer unit for the automatic computation of the sum transit time $t_\Sigma$ of the elastic oscillations in depth. The presence of the second yield parameter $t_\Sigma$ permits a matching of the data of acoustic core sampling with information derived from seismo-sampling. thus providing a more complete picture of the geological section under study. The problems involved in the determination of the sum transit time $t_\Sigma$ are discussed, and it is pointed out that the difficulties of designing highly stable and sufficiently accurate electronic (vacuum-tube and semiconductor) DC

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L 44773-65

ACCESSION NR: AP5011738

differentiating and integrating amplifiers and electronic dividers operating in a broad voltage range are such as to make it impossible to solve this problem with an error on the order of several percentage points of $(t_{\xi})_{max}$ and that, consequently, despite high operating speed, an electronic version using continuous-action devices seems hardly feasible. A variety of reasons point to the advisability of employing digital-analog computers to provide $V_{form}$ and $t_{\xi}$ in the form of continuously changing voltages of direct or alternating current. In this article, the authors describe a digital-analog computer for geological survey operations, designed by the Kafedra schetno-reshayushchey tekhniki LETI im. V. I. Ul'yanova (Department of Computer Engineering of the Leningrad Institute of Electrical Engineering) jointly with the Leningradskiy filial NII geofiziki (Leningrad Branch of the Scientific Research Institute of Geophysics) in 1958. The purpose of the device is to calculate the velocity of propagation, and it is based on a method of digital integration according to Euler's formula. Largely transistorized, tests have shown that this type of computer may be considered optimal for the specific purposes for which it was designed. A detailed diagram of this sum transit time computer is given in the article and explained, together

Card 2/3

L 44773-65

ACCESSION NR: AP5011738

with a schematic representation of the input circuitry of the device. The computer has provided a stable accuracy in the determination of $t_E$ not worse than 0.5% of $(t_E)_{max}$. Weighing 1.5 kg and measuring 600 X 350 X 100 mm, the device draws only 6 watts. Orig. art. has: 3 figures and 4 formulas.

ASSOCIATION: Lendngradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Leningrad Institute of Electrical Engineering)

SUBMITTED: 19Jun64 ENCL: 00 SUB CODE: DP, ES

NO REF SOV: 001 OTHER: 000

Card 3/3

LUVISHIS, L.A., kand. tekhn. nauk; SMOLOVA, L.N., mladshiy nauchnyy sotrudnik

"Manra" vibroscope for determining the thinness of fibers.
Tekst. prom. 23 no.9:87 S '63. (MIRA 16:10)

1. Rukovoditel' kontrol'no-ispytatel'noy laboratorii TSentral'nogo nauchno-issledovatel'skogo instituta sherstyanoy promyshlennosti (TsNIIShersti) (for Luvishis). 2. TSentral'nyy nauchno-issledovatel'skiy institut sherstyanoy promyshlennosti (for Smolova).
(Textile fibers--Testing)

S/191/62/000/006/011/016
B110/B138

AUTHORS: Kreshkov, A. P., Bykova, L. N., Smolova, N. T.

TITLE: Quantitative determination of monomeric unsaturated carboxylic acids by the titration method in nonaqueous solutions

PERIODICAL: Plasticheskiye massy, no. 6, 1962, 51-53

TEXT: A simple and quick method has been developed for the quantitative determination of individual monomeric and dibasic unsaturated acids (maleic and fumaric acid) and their mixtures. They are potentiometrically titrated in isopropyl alcohol by means of 0.1 N benzene-methanol solution of tetramethyl ammonium hydroxide. ~0.3 mg-equiv. acid in isopropyl alcohol was mixed with 40 ml isopropyl alcohol, the electrodes inserted, stirred, and mixed with tetramethyl ammonium. The following monobasic unsaturated acids were titrated: crotonic, undecylenic, oleic, elaidic, erucic, sorbic, and linoleic acids. The acids insoluble in water with the exception of crotonic acid corresponded to the acidity of crotonic acid ($2.04 \cdot 10^{-5}$). The error of the

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quantitative determination is $\leq 1\%$. In addition, the following dibasic unsaturated acids were titrated: maleic, fumaric, itaconic, and citraconic acids. In isopropyl alcohol, each carboxyl group of dibasic acids is titrated individually, which is characterized by two breaks in the titration curves. The relative error in the quantitative determination of dibasic unsaturated acids is $\leq 1\%$. In isopropyl alcohol, the determination of mixtures of both dibasic acids alone, and of dibasic with monobasic acids is possible. Three breaks in the titration curve were found when a mixture of maleic and fumaric acid was titrated. The first break corresponds to the first step of neutralization of maleic acid, the second to the complete neutralization of fumaric acid, and the third to the second step of neutralization of maleic acid. Maleic acid was titrated with $V_m = 2(V_3 - V_2)$. The volume used for the neutralization of fumaric acid is determined from $V_F = V_3 - 2(V_3 - V_2)$. When maleic and itaconic acid are mixed, the first break corresponds to the first step of neutralization of maleic acid, the second to the first step of neutralization of itaconic acid, and the third to the combined neutralization of the second carboxyl groups of both acids. For the

neutralization of itaconic acid, $V_{It} = 2(V_2 - V_1)$ was used, and for the neutralization of maleic acid, $V_M = V_3 - 2(V_2 - V_1)$. For mixtures of dibasic and monobasic acids, the neutralization of dibasic acid requires $V = 2(V_3 - V_2)$, and the neutralization of monobasic acid, $V = V_3 - 2(V_3 - V_2)$. The relative error of the quantitative analysis is here $\leq 2\%$. There are 3 figures and 2 tables.

KRESHKOV, A.P.; BYKOVA, L.N.; SMOLOVA, N.T.

Methods of analysis of dicarboxylic acids and their mixtures. Lakokras.mat.i ikh prim. no.1:45-51 '63. (MIRA 16:2)
(Acids, Organic) (Resins, Synthetic)
(Chemicsty, Analytical)

[illegible]

[illegible] the [illegible] of [illegible] and their mixtures by the method of [illegible] [illegible] [illegible]. Fiat. [illegible] 14. (MIRA [illegible])

KRESHKOV, A.P.; BYKOVA, L.N.; SMOLOVA, N.T.

Potentiometric method for determining dicarboxylic acids used for the manufacture of synthetic resins. Lakokras. mat. i ikh prim. no.3:50-54 '63. (MIRA 16:9)
(Resins,Synthetic) (Acids) (Potentiometric analysis)

KRESHKOV, A.P.; BYKOVA, L.N.; SMOLOVA, N.T.

Differentiating properties of organic solvents toward dicarboxylic acids. Izv.vys.ucheb.zav.; khim. i khim.tekh. 7 no.2:189-193 '64. (MIRA 18:4)

1. Kafedra analiticheskoy khimii Moskovskogo khimiko-tekhnologicheskogo instituta im. D.I.Mendeleyeva.

KRESHKOV, A.P.; BYKOVA, L.N.; SMOLOVA, N.T.

Analysis of polycomponent mixtures of dicarboxylic acids by titration in nonaqueous solutions. Zhur. anal. khim. 19 no.2:156-162 '64. (MIRA 17:9)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

SMOLOVIK, A.

Need for more precise specifications in the all-Union and state standards for leather. Kozh.-obuv.prom. 2 no.6:38 Je '60. (MIRA 13:9)

1. Nachal'nik laboratorii Stanislavskogo kozhevenno-obuvnogo kombinata.

(Leather--Standards)

SMOLOVIK, A.

Means of increasing the labor productivity of analysts in industrial laboratories. Kozh.-obuv.prom. 3 no.4:37 Ap '61. (MIRA 14:5)

1. Nachal'nik laboratorii Stanislavskogo kozhevenno-obuvnogo kombinatu.

(Leather industry)
(Testing laboratories)

124-57-1-853 D

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 113 (USSR)

AUTHOR: Smolovik, I.I.

TITLE: Application of the Maxwell Stress Functions to the Solution of Problems of the Three-dimensional Theory of Elasticity (Primeneniye funktsiy napryazheniy Maksvella k resheniyu zadach prostranstvennoy teorii uprugosti)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Physical and Mathematical Sciences), presented to the Tomskiy un-t (Tomsk University), Tomsk, 1956.

ASSOCIATION: Tomskiy un-t (Tomsk University), Tomsk

1. Elasticity--Theory--Bibliography 2. Maxwell stress functions --Applications

Card 1/1

SOV/124-57-8-9258

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 8, p 98 (USSR)

AUTHOR: Smolovik, I. I.

TITLE: On the Solution of the Equations of the Spatial Theory of Elasticity by Means of Three Maxwell Stress Functions (O reshenii uravneniy prostranstvennoy teorii uprugosti pri pomoshchi trekh funktsiy napryazheniy Maksvella)

PERIODICAL: V sb.: Tr. nauch. konferentsii Stalinskogo ped. in-ta. Nr 1. Kemerovsk. kn. izd-vo, 1956, pp 296-301

ABSTRACT: The equations of static equilibrium and the Beltrami relationships are satisfied if the stresses are expressed by three biharmonic Maxwell stress functions. The author, however, fails to note that the stress functions so introduced are not independent; therefore, sections 2 and 3 of the paper under review are erroneous. For example, a comparison of expression (2.3) and formulae (1.6) would lead to the (erroneous) conclusion that the deflections in a spatial problem of the theory of elasticity do not depend upon Poisson's number.

Card 1/1

A. I. Lur'ye

16(1) SOV/155-58-3-24/37

AUTHOR: ~~Smolovik, I. I.~~

TITLE: Solution of a Problem of the Spatial Theory of Elasticity for a Circular Cylinder (Resheniye odnoy zadachi prostranstvennoy teorii upruگosti dlya krugovogo tsilindra)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 3, pp 127-130 (USSR)

ABSTRACT: On the cylinder jacket r=1 let $u_r$, $\tau_{rz}$, $\tau_{r\theta}$, on the areas $z = \pm 1$ let the tensions $u_z$, $\tau_{rz}$, $\tau_{\theta z}$ be given by certain very special boundary conditions, e.g.

$$u_r\Big|_{r=1} = \sum \lambda_{mn} f_{1mn} \cos \frac{m\pi z}{1} \cos n\theta$$

$$\tau_{rz}\Big|_{z=\pm 1} = \pm \sum \varphi_{2s} I_1(\alpha_s r),$$

where $\alpha_s$ are the positive zeros of the Bessel function I(x) and $\lambda_{mn} = \frac{1}{4}$ for m = n = 0, $= \frac{1}{2}$ for m = 0 or n = 0, = 1 for $m \neq 0$, $n \neq 0$. The author determines the displacements according to the

Card 1/2

~~16(1)~~ 16 7300

AUTHOR: Smolovik, I.I. SOV/155-58-4-19/34

TITLE: On the Deformation Problem of a Cylindrical Beam (K zadache o deformatsii tsilindricheskoy balki)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 4, pp 119 - 122 (USSR)

ABSTRACT: The author considers the deformation of a solid or hollow circular cylinder ($R_1 \leq r \leq R$, $-l \leq z \leq l$) for arbitrary stress symmetric to $z = 0$ of the surface. The boundary conditions on the front walls are satisfied in the sense of Saint-Venant. For the displacements the author uses the Galerkin solutions in cylindrical coordinates. Only the case of a simple bending under influence of normal stress is calculated in detail. There is 1 Soviet reference.

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

SUBMITTED: June 20, 1958

Card 1/1

SMOLOVIK, I.I. (g.Novokuznesk, Kemerovskoy oblasti); SHCHEPETEV, A.N. (g.Novokuznets, Kemerovskoy oblasti)

Problem of an arbitrary compression of a hollow circular cylinder under arbitrary loading on the lateral surface. Inzh.zhur. 1 no.3: 176-181 '61. (MIRA 15:2)

(Cylinders)

REMOROV, N.B. (Novokuznetsk); SMOLOVIK, I.I. (Novokuznetsk)

Some problems of the deformation of a sector of a finite shallow cylinder. Izv. AN SSSR. Mekh. i mashinostr. no. 2: 147-149 Mr-Ap '64. (MIRA 17:5)

L 01490-66 EWT(d)/EWT(m)/EWP(w) EM

ACCESSION NR: AR5019373 UR/0124/65/000/007/V007/V007

23
B

SOURCE: Ref. zh. Mekhanika, Abs. 7V41

AUTHOR: Smolovik, I.I.; Chispiyakov, M.N.

TITLE: A plane problem of the elasticity theory in permutations for a finite circular sector and an infinite sector with a vertex sheared along a circular arc

CITED SOURCE: Dokl. 3-y Sibirsk. konferentsii po matem. i mekhan., 1964. Tomsk, Tomskiy un-t, 1964, 341-343

TOPIC TAGS: elasticity theory, elastic deformation, Lame equation, wedge body

TRANSLATION: The authors discuss the plane deformation of a circular sector with elastic permutations assigned at its boundary. Employing solutions to Lame equations in series and integrals, the authors reduce the problem to fully regular and infinite algebraic systems. It is pointed out that a solution for the case of an infinite wedge with a vertex sheared along a circular arc can be obtained in the same manner. Ya. S. Uflyand

SUB CODE: AS, MA ENCL: 00

Card 1/1

SHIRSHOV, N.M.; SMOLOVIK, I.K.

Results of an individual method of treating chronic alcoholism in a somatic infirmary. Sov. med. 25 no.11:122-123 N '61. (MIRA 15:5)

1. Iz bol'nitsy No.4 Novoshakhtinska Rostovskoy oblasti.
(ALCOHOLISM--TREATMENT)

VOLKOVA, L.V.; SHVETS, V.I.; RYZHENKOVA, S.F.; VARVARINA, N.B.; SHOLOVIK, I.V.; PREOBRAZHENSKIY, N.A.

Lipides. Part 10: Synthesis of mixed $\alpha,\beta$-diglycerides containing residues of higher acids of the aliphatic series. Zhur.ob.khim. 32 no.6:1764-1768 Je '62. (MIRA 15:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova.

(Glycerides) (Acids, Fatty)

SHVAB, V.A.; SMOLOVIK, V.A.; KAPUSTIN, A.M.; GAYNUTDINOV, G.G.

High-pressure pneumatic transportation of finely dispersed materials. Izv. SO AN SSSR no.10:94-103 '63. (MIRA 17:11)

1. Tomskoye otdeleniye Omskogo instituta inzhenerov zheleznodorozhnogo transporta.

VOKHMYANIN, N.S.; SHVAB, V.A.; GAYNUTDINOV, G.G.; SMOLOVIK, V.A.

Pneumatic conveying of rubber compound ingredients. Kauch. i rez. 24 no.10:15-19 '65. (MIRA 18:10)

1. Nauchno-issledovatel'skiy konstruktorsko-tekhnologicheskiy institut shinnoy promyshlennosti, g. Omsk, i Tomskiy gosudarstvennyy universitet.

ACC NR: AP7001390 (A,N) SOURCE CODE: UR/0413/66/000/0[illegible]/0059/0059

INVENTOR: Smolovik, V. S.

ORG: none

TITLE: Quasi-optical attenuator. Class 21, No. 187851

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 59

TOPIC TAGS: microwave attenuator, beam waveguide, waveguide element

ABSTRACT: This Author Certificate presents a quasi-optical attenuator for beam waveguides, which consists of quasi-optical lenses spaced by double the focal length. For fine control of the attenuation, the attenuator has two short focal length lenses placed close to the focal surface of the two adjacent beam waveguide lenses and shifted relative to each other along the beam waveguide axis (see Fig. 1).

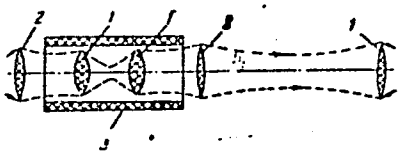

Fig. 1. 1 - attenuator lenses; 2 - beam waveguide lenses; 3 - absorbing cylinder

The short focal length lenses are placed inside an absorbing cylinder. Orig. art. has 1 diagram.

SUB CODE: 09/ SUBM DATE: 09Dec64

Card 1/1 UDC: 621.372.852.3

KONONENKO, V. G., kand. tekhn. nauk; SMOLOVIK, V. V., inzh.; STEL'MAKH, V. A., inzh.; BOZHKO, V. P., inzh.

Explosion briquetting of steel shavings. Mashinostroenie no.5:19-21 S-O '62. (MIRA 16:1)

1. Khar'kovskiy aviatsionnyy institut.

(Briquets)

L 8741-65 EWT(1)/EWT(m)/EWP(k)/EWP(b) Pf-4 ASD(m)-3 JD/HW

ACCESSION NR: AP4045811 S/0182/64/000/009/0030/0033

AUTHOR: Kononenko, V. G.; Smolovik, V. V. B

TITLE: Equipment and method for impact compacting of metal chips

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 9, 1964, 30-33

TOPIC TAGS: chip compacting, explosive chip compacting, explosive forming, high energy rate forming, HERF

14

ABSTRACT: The Khar'kovskiy aviatsionny*y institut (Khar'kov Aviation Institute) has developed a method and designed an experimental unit for explosive compacting of metal chips. The unit, a kind of horizontal hammer (see Fig. 1 of the Enclosure), operates as follows: A portion of chips 4 is charged into the container 5 rigidly connected to the rear plate 8. The explosive charge, or a mixture of gas and air, is fed into the explosion chamber 1. When the charge is exploded, the hot explosion products propel the projectile 3 along the barrel 2 and into the container 5. At the same time the barrel moves under the effect of the explosion and pulls the container in the opposite direction through connecting rods. This increases the force with which the

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L 8741-65

ACCESSION NR: AP4045811

projectile hits the chip charge. The compacted chips are ejected and the projectile is returned to the barrel by the hydraulic cylinder 10. With a combustion-chamber volume of 17.5 l, the unit produces an impact with an energy of 18,000 m-kg, which is sufficient to compact 10—14 kg of chips to a density of 4.5—5.5 g/cm$^3$. The density could be increased to 6.0—6.5 g/cm$^3$ by preheating the chips to 400—450C, which also eliminates the oil sticking to the chips. The unit capacity is 200 kg/hr. A special advantage of the unit is that all the energy is absorbed within the system; no heavy foundation is needed. Orig. art. has: 5 figures.

ASSOCIATION: none

SUBMITTED: 00 ATD PRESS: 3113 ENCL: 01

SUB CODE: IE NO REF SOV: 000 OTHER: 000

Card 2/3

L 8741-65
ACCESSION NR: AP4045811

ENCLOSURE: 01

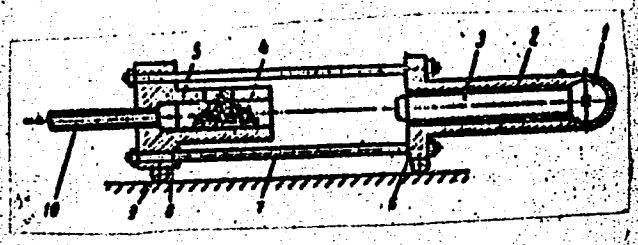

Fig. 1. Unit for explosive chip compacting

1 - Explosion chamber; 2 - barrel; 3 - projectile; 4 - chip charge; 5 - container; 6 - front plate; 7 - connecting rod; 8 - rear plate; 9 - wheel; 10 - hydraulic cylinder for back stroke.

Card 3/3

KONONENKO, V.G., kand. tekhn. nauk; PAKHOMOV, A.G.; KUDRYAVTSEV, V.P.; SMOLOVIK, V.V.

New method of briquetting metal chips. Met. i gornorud. prom. no.3:31-34 My-Je '64. (MIRA 17:10)

SOV/133-59-5-17/31

AUTHORS: Smolovikov, B.D. and Shevchenko, L.

TITLE: A Mechanism for Feeding Metal in Rolls of a Rolling Mill (Mekhanizm dlya zadachi metalla v valki prokatnogo stana)

PERIODICAL: Stal', 1959, Nr 5, pp 441 - 443 (USSR)

ABSTRACT: A mechanism for feeding metal into rolls (proposed by B.D. Smolovikov) operating on a three-high mill rolling strip for the manufacture of tubes is described and illustrated (Figures 1,2). The use of the forced feeding of the mill increased its output by 5%.
There are 2 figures.

ASSOCIATION: Dnepropetrovskiy truboprokatnyy zavod im. Lenina (Dnepropetrovsk Tube Rolling Works imeni Lenin)

Card 1/1

[illegible] Author: [illegible]LNOV, [illegible] SMOTOVICH, N.

[illegible] of our major operations performed on subjects over 60 years of age. Khirurgiia 37 no.2:[illegible] '61.

SMOLSKA, Anna

Disintegration image of mining lumber relics as well as the character of resins and their role in the disintegration. Kwartalnik geol 6 no.2:410-411 '62.

1. Zaklad Zloz Wegli, Instytut Geologiczny, Warszawa.

PROCHACKI, Henryk; SMOLSKA, Bronislawa; DOBOSIEWICZ, Ewa; HAWRYLUK, Lidia; TARCHALSKA, Ewa

Remote results of the treatment of early symptomatic syphilis with penicillin and 1 or 2 arsenobismuth cures in 1947-1957. Przegl. derm. 49:303-305 '62.

1. Z Kliniki Dermatologicznej PAM w Szczecinie Kierownik: prof. dr H. Prochacki i z W.P.S.W. w Szczecinie Dyrektor: dr B. Smolska.
(SYPHILIS) (BISMUTH ARSENIC COMPOUNDS) (PENICILLIN)

SMOLSKA, Irena

SMOLSKA, Irena (Warszawa, Szarotski 10 m.8)

Types of intestinal obstruction in children and their treatment.
Pediat. polska 29 no.4:385-395 Ap '54.

1. Z Kliniki Chirurgii Dzieciacej Akademii Medycznej w Warszawie.
Kierownik: prof. dr med. J.Kossakowski.
(INTESTINAL OBSTRUCTION, in infant and child,
*types & ther.)

SMOLSKA, Irena

Late surgery of intussusception in an infant. Polski przegl.chir. 27 no.2:155-158 Feb 55.

1. Z Kliniki Chirurgii Dziecięcej A. M. w Warszawie. Kierownik: prof. dr med. J.Kossakowski.
(INTUSSUSCEPTION, in infant and child, surg. in late state)

SMOLSKA, Irena

A case of congenital intestinal obstruction. Polski przegl. chir. 27 no.3:259-271 Mar '55.

1. Z Kliniki Chirurgii Dziecięcej A M w Warszawie. Kierownik: prof. dr J. Kossakowski. Warszawa, ul.Litewska 16.
(INTESTINAL OBSTRUCTION, in infant and child congen.,surg.)

SMOLSKA, Irena

Case of cholecystectasia in an infant. Pediat.polska 30 no.11:1085-1086 Nov. '55.

1. Z Kliniki Chirurgii Dziecięcej A.M. w Warszawie. Kierownik: prof. dr med. J. Kossakowski. Warszawa, Szarotki 10 m. 8.
(GALLBLADDER, diseases, cholecystectasia in inf.)

SMOLSKA, Irena

Cysts of the sacrococcygeal region in children. Pediat. polska 31 no.7:755-763 July 56.

1. Z Kliniki Chirurgii Dziecicej A.M. w Warszawie, Kierownik: prof. dr. med. J. Kossakowski, Warszawa, ul. Litewska 16.
(SACROCOCCYGEAL REGION, cysts,
in child. (Pol))

SMOLSKA, Irena (Warszawa, ul. Litewska 16.)

Data on mediastinal tumors in children. Pediat. polska 34 no.1: 25-36 Jan 59.

1. Z Kliniki Chirurgii Dziecięcej A. M. w Warszawie Kierownik: prof. dr med. J. Kossakowski.
(MEDIASTINUM, neoplasms, in child. (Pol))

SMOLSKA, K.

POL.

3385 626.91.001.24

Smólska K. Computation of Water Requirements and Doses for Irrigation by Inundation and Infiltration.

„Obliczenie potrzeb wodnych i dawek nawodnienia zalewowego i podsiąkowego". Gospodarka Wodna. No. 5, 1954, pp. 180–186, 4 figs., 11 tabs.

The author explains, in a thorough and methodical form, and with a practical example, the correct procedure for computing the quantity of water required for irrigation systems and the means of meeting the demand. She also gives a number of tables necessary for such computations.

POLAND/Soil Science - Cultivation, Amelioration, Erosion. J-4

Abs Jour : Ref Zhur - Biol., No 2, 1958, 5822

Author : Birecki, M., Smolska, K., Gabriel, W.

Inst : Institute of Agricultural Engineering, Fertilizers, and Soil Science of the Polish People's Republic.

Title : Surface Watering of Field Crops.

Orig Pub : Roczn. nauk rolniczych, 1956, A72, No 4, 589-619

Abstract : This is a description of the results of an investigation of the optimal times and the various norms of watering potatoes, beets, and several grains crops on turf-podzolic soils of the regions near Warsaw. The investigation was conducted by the Institute of Agricultural Engineering, Fertilizers, and Soil Science of the Polish People's Republic.

Card 1/1

SMOL'SKAYA, A. Z.

"Investigation of the Combined Work of Floor, Longitudinal Ribs and Main Beams Within the Limits of Elasticity." Sub 16 Jan 51, Moscow Order of the Labor Red Banner Construction Engineering Inst imeni V. V. Kuybyshev

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

SMOL'SKAYA, A.Z.; LEMBERG, A.Ye.; KUCHEROV, A.I., inzhener, nauchnyy redaktor; BEGAK, B.A., redaktor izdatel'stva; GUSEVA, S.S., tekhnicheskiy redaktor

[Assembling precast reinforced concrete appartment houses and industrial buildings; design and construction in the U.S.S.R. and in foreign countries] Montazh sbornykh zhelezobetonnykh konstruktsii zhilykh i prmyshlennykh zdanii; opyt proektirovaniia i stroitel'stva v SSSR i za rubezhom. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1956. 117 p. (MLRA 10:1)

(Precast concrete construction)

LEMBERG, A.Ye.; SMOL'SKAYA, A.Z.; KUCHEROV, A.I., inzhener, nauchnyy redaktor; BEGAK, B.A., redaktor izdatel'stva; GUSEVA, S.S., tekhnicheskiy redaktor

[Cranes for erecting buildings of precast concrete elements] Krany dlia montazha zdanii iz sbornykh zhelezobetonnykh elementov. Moskva, Gos. izd-vo lit-ry po stroit. i arkhit., 1957. 191 p. (MLRA 10:9)
(Precast concrete construction)
(Cranes, derricks, etc.)

SMOL'SKAYA, A.Z.; GURENKOV, A.V.; TUBYANSKIY, G.M., inzh., nauchnyy red.; SKVORTSOVA, I.P., red.izd-va; TEMKINA, Ye.L., tekhn.red.

[Efficient methods for assembling precast and precast-monolithic shell roofs] Ratsional'nye metody montazha sbornykh i sborno-monolitnykh svodov-obolochek. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 72 p. (MIRA 13:6)
(Roofs, Shell)

IVYANSKIY, G.B., kand.tekhn.nauk; SMOL'SKAYA, A.Z., kand.tekhn.nauk

Some problems of over-all mechanization in assembling elements made of precast reinforced concrete. Prom. stroi. 39 no.7: 5-8 '61. (MIRA 14:7)

1. Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu Akademii stroitel'stva i arkhitektury SSSSR.
(Precast concrete construction)

SMOL'SKAYA, A.Z., kand.tekhn.nauk; RUMYANTSEV, V.I., inzh.

"Instructions SN180-61 for the assembly and inspection of precast reinforced concrete elements." Prom.stroi. 40 no.8:61-62 '62. (MIRA 15:11)

(Precast concrete construction--Standards)

USTINOV, V.S.; ZOLTYINOV, E.A.; MAMLEMNIKOV, I.P.; ESELUYKO, I.M.; KULIKOV, L.P.; [redacted]; SHOL'SKAYA, I.Ya.; TITUKHINA, L.V.

Increasing magnesium recovery during the remelting of a condensate of magnesium metal and magnesium chloride. (MIRA 13:4)
IZvet. met. 37 no.11:75-78 N '64.

ANDREYEVSKIY, A.K., dotsent, kand.tekhn.nauk; IDEL'CHIK, L.T., SMOL'SKAYA, T.M.

Investigating the performance of heating systems with natural reversed circulation. Sbor. nauch. trud. Bel. politekh. inst. no.74:3-9 '59. (MIRA 13:8)

(Hot-water heating)

NESTEROVICH, N.D., akademik; IVANOV, A.F.; IVANOVA, Ye.V.; KRASNIK, A.I.; LYUBENKOV, A.A.; PONOMAREVA, A.V.; SIROTKINA, H.G.; SMOL'SKAYA, Ye.N.; TRUKHANOVSKIY, D.S.; CHEKALINSKAYA, N.I.; BULAT, O., red.izd-va; VOLOKHANOVICH, I., tekhred.

[Introduction of trees and shrubs into White Russia] Introdutsirovannye derev'ia i kustarniki v Belorusskoi SSR. Minsk. No.1. [Introduction of woody plants from the flora of the Far East and countries of Eastern Asia] Introdutsirovannye drevesnye rasteniia flory Dal'nego Vostoka i stran Vostochnoi Azii. 1959. 351 p. (MIRA 12:6)

1. Akademiya navuk BSSR. Minsk. Instytut biyalogii. 2. Akademiya nauk BSSR (for Nesterovich).

(White Russia--Trees)

NESTEROVICH, N.D., akademik; IVANOV, A.F.; IVANOVA, Ye.V.; MARGAYLIK, G.I.; PONOMAREVA, A.V.; SIROTKINA, R.G.; SMIRNOVA, V.A.; SMOL'SKAYA, Ye. N.; CHEKALINSKAYA, N.I.; BULAT, O., red. izd-va; SIDERKO, N., tekhn. red.

[Trees and shrubbery introduced to the White Russian S.S.R.] Introdutsirovannye derev'ia i kustarniki v Belorusskoi SSR. Minsk. No.3.[Introduced woody plants of Siberia, Europe, the Mediterranean, the Crimea, the Ca cas s, and Central Asia] Introdutsirovannye drevesnye rasteniia flory Sibiri, Evropy, Sredizemnomor'ia, Kryma, Kavkaza i Srednei Azii. 1961. 333 p. (MIRA 14:6)

1. Akademiya nauk BSSR, Minsk. Institut biologii. 2. Akademiya nauk BSSR (for Nesterovich)
(White Russia—Plant introduction)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720010-8"

SMOLSKI, Stefan, inz.

Delivery of a standard to geodesists-technicians in Bialystok. Przegl geod 33 no.12:474-475 '61.

[illegible], [illegible], [illegible].

[illegible] [illegible] in [illegible]. [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible].

SMOLSKI, S.

The protection of ecotypes of forest trees. p. 25.

CHRONMY PRZYRODE OJCZYSTA. (Panstwowa Rada Ochrony Przyrody) Krakow, Poland. Vol. 15, no. 5, Sept./Oct. 1959.

Monthly List of East European Accession (EEAI) LC, Vol. 9, no. 1, Jan. 1960. Uncl.

P/008/62/000/001/002/005
D269/D303

AUTHOR: Smolski, Zbigniew, Master of Engineering

TITLE: A strobophotographic method of determining the calibrated velocities of flow of fluids

PERIODICAL: Technika lotnicza, no. 1, 1962, 21

TEXT: Polish patent no. 40055, Class 42 o, 19, July 10, 1957; an extension to patent no. 55903 by the same inventor. Into a stream of fluid a solid, spherical and luminous body is introduced, its weight being low, so that it may acquire the velocity of the stream in a short time and distance. The indicating body is illuminated with a flashing light of known frequency and photographed on a single plate to allow an estimation of the velocity. In another version of the patent, the indicating body is allowed to fall freely in a stationary fluid. When the forces of gravity and resistance become equal the limiting velocity of the body is estimated as before. Knowing this limiting velocity the body can be introduced into a stream of fluid moving vertically upwards and the flow regu-

Card 1/2

NESENCHUK, A.F.; ZHMAKIN, N.I.; SEL'DIN, M.I., inzh., retsenzent; SMOLYARIY, A.M., inzh., retsenzent; GLUKHOV, B.F., kand. tekhn. nauk, retsenzent; STEPANCHUK, V.F., kand. tekhn. nauk, retsenzent; VEYNIK, A.I., prof., red.

[Course design of industrial boiler systems] Kursovoe proektirovanie kotel'nykh ustanovok promyshlennykh kotel'nykh. Minsk, Izd-vo M-va vysshego, srednego spetsial'nogo i professional'nogo obrazovaniia BSSR, 1963. 103 p. (MIRA 18:1)

AYZENVARG, Yefim Vladimirovich; GAYDENKOV, Vladimir Matveyevich; SMOL'SKIY, A.S., red.; LOBANOV, Ye.M., red.izd-va; RIDNAYA, I.V., tekhn. red.

[Manual for the driver of loader trucks and electric trucks] Posobie voditeliu avtopogruzchikov i elektrotelezhek. Moskva, Izd-vo "Rechnoi transport," 1963. 151 p. (MIRA 16:6)
(Industrial power trucks)
(Loading and unloading)

SMOL'SKIY, B., mayor

Control of service units in the attack. Tyl i snab.Sov.Voor.Sil 21 no.3:42-45 Mr '61. (MIRA 14:6)
(Attack and defense (Military science))

LYUBOSHITS, I.L.; MURASHKO, M.G.; SMOL'SKIY, B.I.; SHUL'MAN, Z.P.

Il'ia Isaakovich Paleev; on his 60th birthday. Inzh.-fiz. zhur. 4 no. 5:125-126 My '61. (MIRA 14:5)
(Paleev, Il'ia Isaakovich, 1901—)

NIKOL'SKIY, B.N.

Using the ice psychrometer in sublimation drying installations. Sbor.nauch.rab.Bel.politekh.inst. no.55:110-121 '56. (MIRA 10:7)
(Drying apparatus) (Hygrometry)

SMOLYSKIY, B.N.

External heat and mass exchange of the medium and baking yeast in the process of drying in driers of the "SPD" system. Sbor. nauch.rab.Bel.politekh.inst. no.55:122-135 '56. (MIRA 10:7)
(Yeast--Drying)

SMOL'SKIY, B.M.

Heat and mass transfer of variously shaped bodies in a forces gas flow. Inzh.-fiz.zhur. no.5:104-113 My '58. (MIRA 12:1)

1. Institut energetiki AN BSSR, g. Minsk.
(Heat--Transmission) (Mass transfer)

SMOL'SKIY, B.M., dotsent, doktor tekhn.nauk; FAYNGOL'D, L.A., KUSOV, R.M.

Using electric hygrometers in systems for the automatic control of moisture in gas. Sbor. nauch. trud. Bel. politekh. inst. no.74:48-54 '59. (MIRA 13:8)
(Moisture--Measurement) (Automatic control)

SMOL'SKIY, B.M., doktor tekhn.nauk

Brief news. Inzh.-fiz.zhur. no.7:139-140 Jl '60. (MIRA 13:7)
(Heat--Transmission) (Mass transfer)

SMOL'SKIY, B. M.

"On Peculiarities of Heat and MAss Transfer in Vacuum at Sublimation Process."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

S/170/61/004/002/016/018
B019/B060

AUTHORS: Zabrodskiy, S. S., Smol'skiy, B. M., Shul'man, Z. P.

TITLE: Lev Gerasimovich Loytsyantskiy. On His 60th Birthday and His 40th Year of Scientific and Pedagogical Activity

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1961, Vol. 4, No. 2, pp. 116-118

TEXT: Professor L. G. Loytsyantskiy, Doctor of Physical and Mathematical Sciences, Stalin Prize winner, is an authority in the field of the boundary layer theory. Since 1922 he has been working at the Institut im. M. I. Kalinina (Institute imeni M. I. Kalinin) and was appointed professor in 1928. The Kafedra aerogidrodinamiki (Department of Aerohydrodynamics) created by him in 1934 has a very successful activity on record and under his guidance has developed novel methods of calculating the boundary layer of compressible and incompressible liquids. Some special fields of aerohydrodynamics with which L. G. Loytsyantskiy has been concerned are enumerated and his merits are pointed out. Special

Card 1/3

Lev Gerasimovich Loytsyantskiy. On His 60th Birthday and His 40th Year of Scientific and Pedagogical Activity

S/170/61/004/002/016/018
B019/B060

mention is made of his contribution to the construction of the Dneproges (Dnepr Hydroelectric Power Plant), Volzhskiy kaskad (Volga Cascade), and Bratskaya gidrostantsiya (Bratsk Hydroelectric Power Plant). His best known pupils are G. N. Kruzhilin, Corresponding Member of the AS USSR, Professor E. L. Blokh, I. L. Povkh, and others. In cooperation with A. I. Lur'ye he has published a textbook on theoretical mechanics and a number of monographs. In the years of World War II he developed partly alone and partly in cooperation with Academicians N. Ye. Kochin and A. A. Dorodnitsyn at the Tsentral'nyy aerogidrodinamicheskiy institut im. N. Ye. Zhukovskogo (Central Institute of Aerohydrodynamics imeni N. Ye. Zhukovskiy) several technical calculation methods of the boundary layer of variously shaped bodies. The importance of several publications on the mechanics of viscous liquids and gases, on the boundary layer theory, on the jet theory, etc., is pointed out, and next, the idea put forth by him in 1933 regarding the "internal similarity" of the turbulent transport mechanism is discussed. This idea made it possible to take account of the effect of viscosity upon the friction and the heat exchange in arbitrary

Card 2/3

SMOL'SKIY, B.M.

Concerning a monograph on high-efficiency utilization of fuel. (MIRA 15:3)
Inzh.-fiz.zhur. 5 no.3:134-136 Mr '62.
(Fuel--Research)

SMOL'SKIY, B.M.; EL'PERIN, I.T.

Special issue of the international journal "Heat and Mass Transfer" in commemoration of the 70th birthday of Ernst Heinrich Schmidt. Inzh.-fiz.zhur. 5 no.9:127-131 S '62. (MIRA 15:8)
(Schmidt, Ernst Heinrich, 1892-) (Heat--Transmission)
(Mass transfer)

LYKOV, A.V., akademik, red.; SMOL'SKIY, B.M., prof., red.; KUTATELADZE, S.S., prof., red.; PALEYEV, I.I., prof., red.; EL'PERIN, I.T., kand. tekhn. nauk, red.; TIMOFEYEV, L., red. izd-va; VOLOKHANOVICH, I., tekhn. red.

[Heat and mass transfer]Teplo- i massoperenos; doklady. Pod obshchei red. A.V.Lykova i B.M.Smol'skogo. Minsk, Izd-vo Akad. nauk BSSR. Vol.2.[Heat and mass transfer during phase transitions and chemical transformations]Teplo- i massoperenos pri fazovykh i khimicheskikh prevrashcheniiakh. 1962. 377 p. (MIRA 16:3)

1. Vsesoyuznoye soveshchaniye po teplo- i massoobmenu. 1st. Minsk, 1961. 2. Akademiya nauk Belorusskoy SSR (for Lykov).
(Heat--Transmission) (Mass transfer)
(Phase rule and equilibrium)

S/170/62/005/011/002/008
B104/B102

AUTHORS: Smol'skiy, B. M., Novikov, P. A.

TITLE: Mechanism of heat and mass transfer with sublimation of substances in a rarefied medium

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 11, 1962, 41 - 47

TEXT: In a previous paper (P. A. Novikov, IFZh, no. 10, 1961) a study was made of heat and mass transfer in the sublimation of naphthalene under static conditions(0.07 mm Hg up to atmospheric pressure) and with either free or forced convection. The data resulting from these studies are analyzed in detail. Four different transfer mechanisms are distinguished as functions of pressure: (1) in the range of atmospheric pressure down to 40 mm Hg the sublimation intensity is weak, the substance is transferred by molecular diffusion and convection. The experimental results for free convection can be well described by $Nu = 0.373\ Gr^{0.33}$ and $Nu' = 2.5\ Gr^{0.36}$; for the case of forced convection $Nu = 2.7 \cdot 10^{-3} ReGu^{0.17} + 0.1\ Gu^{-0.59}$ and $Nu'_{Card} = 1.56 \cdot 10^{-1}\ ReGu^{0.57} + 1.4 \cdot 10^{-1} Gu^{-0.73}$. (2) Between 40 and 0.1 mm Hg

S/170/62/005/011/002/008
B104/B102



the sublimation intensity rapidly increases as pressure decreases. At 0.5 - 1 mm Hg it attains a maximum. Heat and mass transfer are characterized by a special type of mass exchange, the hydrodynamics of which depends on the pressure and the rate at which the state of aggregation of the substance changes. With free convection $Re^* = AGu^n(\Delta p/p)^m \exp(-k\Delta p/p)$, with forced convection $Re^* = BGu^a(\Delta p/p)(w/v_a)^c \exp(-d\Delta p/p)$. (3) In the pressure range between 0.1 and 0.07 mm Hg the transfer is characterized by molecular-viscous conditions where the discrete structure of the substance becomes manifest. In a layer on the solid substance whose thickness corresponds to the mean free path, the mass is exclusively tranferred by molecular processes. With Knudsen numbers of $Kn > 0.04$ the gas velocity has no effect on the intensity of heat and mass tranfer. For free convection $Nu = 5.96 \cdot 10^{-4}\, Gu^{-5.23} Kn^{2.78}$ and $Nu' = 3.61 \cdot 10^{-2}\, Gu^{-1.86} Kn^{1.02}$. (4) The fourth variety of heat and mass tranfer is a process of free molecules in which the motion of the molecules toward a solid substance is not disturbed by collisions with molecules emitted from the surface of the solid. There are 2 figures.

LYKOV, A.V., akademik, red.; SMOL'SKIY, B.M., doktor tekhn. nauk, prof., red.; GINZBURG, I.P., doktor fiz.-matem. nauk, prof., red.; ZABRODSKIY, S.S., doktor tekhn. nauk, red.; KONAKOV, P.K., doktor tekhn. nauk, prof., red.; KOSTERIN, S.I., doktor tekhn. nauk, prof., red.; SHUL'MAN, Z.P., inzh., otv. za vypusk; KORIKOVSKIY, I.K., red.; LARIONOV, G.Ye., tekhn. red.

[Heat and mass transfer] Teplo- i massoperenos. Moskva, Gosenergoizdat. Vol.3. [General problems of heat transfer] Obshchie voprosy teploobmena. 1963. 686 p. (MIRA 16:6)

1. Akademiya nauk Belorusskoy SSR (for Lykov).
(Heat--Transmission) (Mass transfer)

LYKOV, A.V., akademik, red.; SMOL'SKIY, B.M., doktor tekhn. nauk, prof., red.; KORIKOVSKIY, I.K., red.; LARIONOV, G.Ye., tekhn. red.

[Heat and mass transfer] Teplo- i massoperenos; [doklady] Pod obshchei red. A.V.Lykova i B.M.Smol'skogo. Moskva, Gosenergoizdat. Vol.4. [Heat and mass transfer in drying processes] Teplo- i massoperenos v protsessakh sushki. 1963. 271 p. (MIRA 16:7)

1. Vsesoyuznoye soveshchaniye po teplo- i massoobmenu. 1st. Moscow. 2. AN Belorusskoy SSR (for Lykov).
(Mass transfer) (Heat--Transmission) (Drying)

LYKOV, A.V., akademik, red.; SMOL'SKIY, B.M., prof., red.; SHASHKOV, A.G., kand. tekhn. nauk, red.; PLYAT, SH.N., kand. tekhn. nauk, red.; POMERANTSEV, A.A., prof., red.; ROMANENKO, P.N., prof., red.; PEREL'MAN, T.L., kand. fiz.-mat. nauk, red.; YARCSHEVICH, O.I., kand. tekhn. nauk, red.; BEL'ZATSKAYA, L., red. izd.-va; TIMOFEYEV, L., red.izd-va; SIDERKO, N., tekhn. red.; VOLOKHANOVICH, I., tekhn. red.

[Heat and mass transfer] Teplo i massoperenos. Minsk, Izd-vo AN BSSR. Vol.1.[Thermophysical characteristics of materials and methods for their determination] Teplofizicheskie kharakteristiki materialov i metody opredeleniia. Pod obshchei red. A.V. Lykova i B.M.Smol'skogo. 1962. 216 p. Vol.5. [Methods for calculating and modeling heat-and mass-transfer processes] Metody rascheta i modelirovaniia protsessov teplo- i massoobmena. 1963. 471 p. (MIRA 16:10)

1. Vsesoyuznoye soveshchaniye po teplo- i massoobmenu. 1st, Minsk, 1961. Akademiya nauk Bel.SSR (for Lykov).
(Materials--Thermodynamic properties)
(Heat--Transmission) (Mass transfer)

SMOL'SKIY, B.M.

Heat treatment of materials using commercial-frequency current. Inzh.-fiz. zhur. 6 no.8:120-124 Ag '63. (MIRA 16:10)

1. Institut teplo- i massoobmena AN BSSR, Minsk.

GARMIZO, Anna Moiseyevna; SMOL'SKIY, B.M., prof., red.

[German-Russian dictionary on heat and mass transfer] Nemetsko-russkii slovar' po teplo- i massoobmenu. Minsk, In-t teplo-i massoobmena AN BSSR, 1964. 182 p. (MIRA 18:7)

IVKOV, A.V.; [illegible]; [illegible]; [illegible]

G.A. Kurzalaev: [illegible] Elektroenergy. Inst.-Fiz. zhur. [illegible]: (MIRA 17:10)
[illegible] 1964.

SMOLSKIY, B. M.; SHUL'MAN, Z. P.

"Results of an experimental investigation of heat and mass transfer with liquid evaporation into a boundary layer."

Report submitted for 2nd All-Union Conf on Heat & Transfer, Minsk, 4-12 May 1964.

Institute of Heat & Mass Transfer, AS BSSR.

LYKOV, A.V., akademik, red.; [illegible]OL'SKIY, B.M., prof., red.

[Heat and mass transfer in capillary-porous bodies] Teplo- i massoobmen v kapilliarnoporistykh telakh. Minsk, Nauka i tekhnika, 1965. 152 p. (MIRA 18:10)

1. AN Belorusskoy SSR (for Lykov).

[illegible], A.V., [illegible], [illegible] prof., red.

[illegible] mass transfer between bodies and the ambient gaseous medium] Teplo- i massoobmen tel s okruzhaiushchei gazovoi sredoi. Minsk, Nauka i tekhnika, 1965. 181 p. (MIRA 18:10)

1. AN Belorusskoy SSR (Fed Rykov).

L 8927-66 EWT(1)/EWP(e)/EWP(m)/EWT(m)/ETC/EPF(n)-2/EWG(m)/EWP(t)/EWP(k)/EWP(z)
ACC NR: AT5027195 FCS(k)/EWP(b)/EWA(1) UR/0000/65/000/000/0070/0085
44,55 JD/WW/GS 44,55 44,55 89
AUTHOR: Smol'skiy, B. M.; Shul'man, Z. P.; Fedorov, B. I. 84
44,55

ORG? Institute of Heat and Mass Transfer AN BSSR, Minsk (Institut teplo- i massoobmena AN BSSR)

TITLE: Heat and mass transfer in a boundary layer on a porous wall 18

SOURCE: AN BSSR. Institut teplo- i massoobmena. Teplo- i massoobmen tel s okruzhayushchey gazovoy sredoy (Heat and mass exchange of bodies with the surrounding gaseous medium). Minsk, Nauka i Tekhnika, 1965, 70-85

1,55 21,44,55 21,44,55

TOPIC TAGS: boundary layer theory, heat transfer, mass transfer, turbulent boundary layer, vaporization, surface property

ABSTRACT: The article considers the thermodynamic and hydromechanical characteristics of the process of evaporation of a drop-form liquid from a porous wall. The experimental sample (illustrated in a figure) was a glass with a diameter of 0.054 meters and a length of 0.25 meters, equipped with an ice calorimeter insulated from the rest of the internal space. The experiments were carried out in an aerodynamic tube with a sealed working section. The velocity of the

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L 8927-66

ACC NR: AT5027195

air flow could be varied smoothly from 2 to 18 meters/sec, and the temperature of the flow was measured from 15 to 150°C. The experimental conditions were the following: flow temperature--70, 100, 130°C; moisture content of the medium and $\varphi$--4.1 and 0.5%, respectively; flow velocity--6, 10, 12, and 15 meters/sec. The range of Reynolds numbers, consequently, was (2-7) x $10^4$. The generalized relationship found for the whole range of experimental parameters for the front end of the surface of the cylinder had the form:

$$Nu_x = 1{,}48\left(e^{-2{,}46\bar{x}} + 0{,}2e^{-5{,}5\bar{x}}\right)\sqrt{Re_x}K^{0{,}28}. \qquad (2)$$

The coefficients and the power exponents in the above formula were found by the method of least squares. The article proceeds to consider the question of developed turbulent flow in the boundary layer. The experiments on heat and mass transfer were carried out on the evaporation of water in a turbulent boundary layer from a flat ceramic fireclay plate, in a flow of heated air with a gradient. The velocity of the air flow in the working column of the aerodynamic tube was varied from 2 to 50 meters/sec. The experimental body was a single porous plate, mounted in a box divided into 8 subchambers by partitions. Measurements were made of the velocity and the temperature of the flow, the degree of its turbulence under each set of

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temperature and velocity conditions, and the temperatures of the surface of the plate (at 16 points), the side walls of the box, the water in each chamber, and the walls of the working column. In this case, the following relationship was established:

$$\overline{Nu}_q = 0{,}036\,Re^{0.8}(1-b_T)^{2}; \quad \overline{Nu}_m = 0{,}03\,Re^{0.8}(1-b_T)^{2.1} \quad (5)$$

Orig. art. has: 6 formulas and 10 figures.

SUB CODE: ME, GC, TD/ SUBM DATE: 02Jul65/ ORIG REF: 014

OTH REF: 005

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(N) L 12116-66 EWT(1)/EWP(e)/EWP(m)/ETC(F)/EPF(n)-2/EWG(m)/ETC(m)/EWA(1)

ACC NR: AT6001768 WW/GS/RM SOURCE CODE: UR/0000/65/000/000/0105/0111

AUTHOR: Novikov, P. A.; Smol'skiy, B. M.
44,55 44,55

ORG: None

69
B+1

TITLE: The mechanism of heat and mass transfer with vibration of a subliming body under conditions of free convection in a rarefied gaseous medium

SOURCE: AN BSSR. Institut teplo- i massoobmena. Voprosy nestatsionarnogo perenosa tepla i massy (Problems of nonstationary heat and mass transfer). Minsk, Nauka i tekhnika, 1965, 105-111

44,55

TOPIC TAGS: heat transfer, mass transfer, convective heat transfer, vibration effect

ABSTRACT: The experiments described in the article were carried out under steady state conditions with free convection. The total pressure of the surrounding medium was varied within wide limits from 745 to 0.1 mm Hg. A figure shows the dependence of the heat transfer rate on the vibration rate of the subliming body for different pressures of the surrounding medium. The figure represents a plot of the Nusselt number (Nu) against the vibrational Reynolds number ($Re_v$). At total pressures

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of the surrounding medium from atmospheric to 50 mm Hg, the sections of the Nu f($Re_{\bar{v}}$) curves for values of $Re_{\bar{v}}$ above the critical value lie parallel to each other. This means that, in this pressure interval at small sublimation rates, mass transfer does not exert any considerable effect on transfer of matter in the boundary layer. With a decrease in the total pressure below 50 mm Hg, the angle of the slope of the curves to the abscissa decreases, approaching zero at a pressure of 0.1 mm Hg. At this pressure of the surrounding medium, the heat transfer rate no longer depends on the rate of vibration of the body. At values of the vibrational Reynolds number below the critical, the Nusselt number practically does not depend on the Reynolds number. With an increase in the vibrational Reynolds number above the critical value, the heat transfer rate increases sharply. With a decrease in the average rate of vibration of the body below the critical value, the heat transfer rate approaches that for conditions of free convection. The results also indicate that the rate of heat and mass transfer processes accompanied by vibration depends also on the direction of the vibrations with respect to the direction of movement of the gas. If the vibrating surface is perpendicular to the direction of movement of the gas, the boundary layer may be destroyed, which leads to an increase in heat and mass transfer rates. If the direction of the vibration coincides with the direction of the movement of the gas flow, the boundary layer may not be

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ACC NR: AT6001768

destroyed but merely reduced in thickness; in this case such a strong increase in the heat and mass transfer rates will not follow. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 02Sep65/ ORIG REF: 000/ OTH REF: 001

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L 8837-66 EWT(d)/EWT(1)/EWP(e)/EWP(m)/EPF(n)-2/ETC(m)/EWA(1) IJP(c) WW/RM

ACC NR: AT5027197 UR/0000/65/000/000/0118/0122

44,55 44,55 66 B+1

AUTHOR: Novikov, P. A.; Smol'skiy, B. M. (Professor)

44,55

ORG: Institute of Heat and Mass Transfer, AN BSSR, Minsk (Institut teplo- i massoobmena AN BSSR)

TITLE: Investigation of the distribution of the temperature field between parallel walls during sublimation under vacuum conditions

SOURCE: AN BSSR. Institut teplo- i massoobmena. Teplo- i massoobmen tel s okruzhayushchey gazovoy sredoy (Heat and mass exchange of bodies with the surrounding gaseous medium). Minsk, Nauka i Tekhnika, 1965, 118-122

21,44,55 21,44,55

TOPIC TAGS: heat transfer, temperature distribution, sublimation

ABSTRACT: The temperature field was investigated for three cases of heat and mass transfer: 1) horizontal arrangement of plates (upper position of the heating plate); 2) horizontal arrangement of the plates (lower position of the heating plate); and 3) vertical arrangement of the plates. A figure, based on experimental data, shows the distribution of the temperature between parallel plates for "pure" heat transfer, at total pressures of the surrounding medium

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ACC NR: AT5027197

from 30.6 to 533 newtons/$m^2$. The distance from the heating surface, y, was 0.02 meters between plates. When the surface temperature of the heating plate was 320°K, the thickness of the thermal boundary layer was 0.015 meters. With an increase in the temperature of the heating surface to 337°K, $sigma_t$ increased to approximately 0.017 meters. With a further increase in temperature up to 360 and 373°K, the thickness of the thermal boundary layer bridges over the distance between the plates, and exceeds a value of 0.02 meters. Thus, in the given pressure interval, the thickness of the thermal boundary layer is a function only of the temperature of the heating surface. Another figure, also based on experimental data, shows the temperature distribution between parallel plates when a phase transformation (sublimation) is taking place on the surface of one of the plates. The subliming material was ice ($H_2O$). The total pressure of the surrounding medium was 30.6 newtons/$m^2$. The subliming plate was at a distance of 0.02 meters from the heating plate. The temperature of the heating surface was varied from 315 to 363°K. Analysis of the curves shows that with sublimation of a substance under vacuum conditions, the curves for the temperature change between the objects being investigated obeys a more complicated relationship than in the case of "pure" heat transfer. Orig. art. has: 3 figures.

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L 8837-66

ACC NR: AT5027197

SUB CODE: ME, GC, TD/ SUBM DATE: 02Jul65/ ORIG REF: 000

OTH REF: 000

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L 8836-66 EWT(1)/EWP(m)/EWT(m)/ETC/EPF(n)-2/EWG(m)/EWA(d)/T/ETC(m)/EWA(1)

ACC NR: AT5027199 WW/DJ UR/0000/65/000/000/0130/0137

44,55 44,55 96

AUTHOR: Smol'skiy, B.M. (Professor); El'perin, I. T. B+1

44,55

ORG: Heat and Mass Transfer Institute, AN BSSR, Minsk (Institut teplo- i massoobmena AN BSSR)

TITLE: Effect of the lubricating property of a surface on the transfer process in systems consisting of a drop-form liquid and a solid body

SOURCE: AN BSSR. Institut teplo- i massoobmena. i massoobmen tel s okruzhayushchey gazovoy sredoy (Heat and mass exchange of bodies with the surrounding gaseous medium). Minsk, Nauka i Tekhnika, 1965, 130-137

21,44,55 1,55

TOPIC TAGS: surface active agent, heat transfer, Reynolds number, FRICTION, FLUID FLOW, HYDRODYNAMICS, LUBRICATION 1,55

ABSTRACT: A determination was made of the hydrodynamic friction resistance in the flow of a fluid in tubes. The surface of the tubes was carefully cleaned to avoid the presence of adsorbed films of foreign material. On the basis of experimental data obtained on the flow time of the fluid, determinations were made of the friction coefficients of tubes made of various materials. The walls of the tubes were rubbed previously with distilled water and with various surface active agents. The effect of the surface active agents appears gradually and reaches a maximum after a period of from 1 to 10 minutes, after which it remains con-

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