BOGDANOV, Ye.I., inzh.

New conveyer on a trestle. Makh. i avtom. proizv. 15 no. 5:36-39 My '61. (MIRA 14:5)

(Conveying machinery)

BOGDANOV, Ye.I., inzh.

Comparative efficiency of dumpers and waste-pile skips. Mekh.i avtom.proizv. 14 no.12:38-41 D '60. (MIRA 13:12)
(Earthmoving machinery)

BOGDANOV, Ye.I.

Introduction of sectional revolving belt conveyor-stackers. Gor. zhur. no.6:46-53 Je '60. (MIRA 14:2)

1. Nachal'nik TSentral'nogo konstruktorskogo byuro Magadanskogo sovnarkhoza.

(Mining machinery) (Conveying machinery)

SOV/137-59-1-414

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 52 (USSR)

AUTHOR: Bogdanov, Ye. I.

TITLE: Modernization of the MPD-4 Washing Equipment (Modernizatsiya promyvochnogo pribora MPD-4)

PERIODICAL: Kolyma, 1958, Nr 5, pp 7-9

ABSTRACT: Upon recognition of losses of coarse Au during the washing of sand in the MPD-4 equipment a modernization of the equipment (thereupon designated the MPD-4-M) was undertaken. The essence of the changes performed consists in the elimination of the head sluice at the scrubber of the auxiliary drum grizzly (trommel screen) for the screening off of the coarse fraction and the addition of a special sluice for the separate dressing of the coarse sand fraction. A modernization kit designated OMMPD-4 was designed to bring MPD-4 equipments of the 1956 and 1957 series operating in the field up to date. The MPD-4-M washing equipment still does not ensure capture of nuggets larger than 50x50 mm, for the capture of which the author proposes an electronic nugget catcher.

M. Z.

Card 1/1

S/137/62/000/002/025/144
A006/A101

AUTHOR: Bogdanov, Ye. I.

TITLE: A new machine for the concentration of coarse-grade loose materials and for the collecting of native metal

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 5, abstract 2G37 ("Gornyy zh.", 1961, no. 9, 68-71)

TEXT: At the central experimental designing office of the Magadan Sovnarkhoz a new OMT type jigging machine was developed with mechanical transportation of material. The design of the machine, its characteristic features and operation are described. The new machine makes it possible to reduce water consumption and deliver dehydrated tails which are suitable for transportation on a belt conveyer. Results are given from testing the OMT machine on the gold-containing sands of the Magadan and Yakutsk Sovnarkhozes. The machines will be widely used on dredges for the collection of native metal and fine Au, drifted from the sprocket chains. The OMT machines have already been introduced to the apparatus line of a 600-liter dredge, being designed by the Irkutsk Plant

Card 1/2

A new machine for the concentration ...

S/137/62/000/002/025/144
A006/A101

of Heavy Machinebuilding. The author presents schematic drawings of the machine, and of the washing unit line with the OMT machine.

G. Shakhnovskaya

[Abstracter's note: Complete translation]

Card 2/2

BOGDANOV, Ye.I.

New machine for dressing lump placer material and blanketing nuggets. Gor. zhur. no.9:68-71 S '61. (MIRA 16:7)

1. Nachal'nik TSentral'nogo opytno-konstruktorskogo byuro Magadanskogo soveta narodnogo khozyaystva.
(Ore dressing--Equipment and supplies) (Gold ores)

BOGDANOV, Ye.I.; LIMANOV, Ye.A.

Effect of the parameters of electric current transformers on introduced error during oscillographic recording of transient processes. Izv. NIIPT no.5:255-272 '60. (MIRA 14:1)
(Electric transformers) (Oscillograph)
(Transients (Electricity))

BOGDANOV, Ye.I.

Methodology for studying the characteristics of visual perception under conditions of inadequate information. Trudy Gos. nauch.-issl. inst. psikh. 43:279-287 '65. (MIRA 18:9)

1. Institut psikhiatrii AMN SSSR (direktor - prof. A.V.Snezhnevskiy).

SOV/124-58-8-8958 D

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 90 (USSR)

AUTHOR: Bogdanov, Ye.P.

TITLE: An Investigation of the Thermal Conditions Prevailing During the Process of Reverse Gasification (Issledovaniye teplovogo rezhima obrashchennogo protsessa gazifikatsii)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the In-t energ. AN KazSSR (Power Institute, Academy of Sciences of the Kazakh SSR), Alma-Ata, 1958

ASSOCIATION: In-t energ. AN KazSSR (Power Institute, Academy of Sciences of the Kazakh SSR), Alma-Ata

Card 1/1

BOGDANOV, Ye. P.

10(2) SOV/1871

Soveshchaniye po prikladnoy gazovoy dinamike. Alma-Ata, 1956

Trudy (Transactions of the Conference on Applied Gas Dynamics) Alma-Ata, Izdatel'stvo Akademii nauk Kazakhskoy SSR, 1958. 232 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Kazakhskiy gosudarstvennyy universitet imeni S.M. Kirova.

Ed.: V.V. Aleksandriyskiy, Tech. Ed.: G.P. Rorokina; Editorial Board: L.A. Vulis (Resp. Ed.), V.P. Lashkarev, T.P. Lesnichyeva, and B.P. Ustimenko.

PURPOSE: This book should be of interest to scientists and engineers working on problems of applied gas dynamics and may be of use to students.

COVERAGE: This book presents reports and brief summaries of the discussions which took place at the Conference on Applied Gas Dynamics in Alma-Ata in October 1956. The conference was subdivided into three areas of applied gas dynamics: jet flows of fluids and gases, the aerodynamics of heating processes, and the discharge of a fluid. The practical value of the "Transactions of the Conference" consists in the development of theory, methods of technical calculation and methods for systematic measurement applied to heating, furnace, and other industrial processes, for which, in most cases, aerodynamic phenomena are decisive factors.

AVAILABLE: Library of Congress

REZNYAKOV, A.B.; BOGDANOV, Ye.P.

Courses for a radical solution of the roblem of usirg Ekibastuz coal. Vest.AN Kazakh.SSR 16 no.10:38-45 O '60. (MIRA 13:10)
(Ekibastuz Basin--Coal)

BOGDANOV, Ye.P.; PAVLOV, O.V.

Concerning the thermal conditions of a gasification process. Trudy Inst. energ. AN Kazakh. SSR 2:333-341 '60. (MIRA 15:1)
(Coal gasification)

BOGDANOV, Ye.P.

Some results of investigating the coking of Ekibastuz coal dust under conditions of unhindered fall. Trudy Inst.energ.AN Kazakh. SSR 3:68-73 '61. (MIRA 14:12)
(Ekibastuz Basin—Coal)
(Coke)

BOGDANOV Ye. S.

YUSHKOV, A.V., kandidat tekhnicheskikh nauk; BOGDANOV, Ye.S.

Profile of the drawhole. Izv. AN BSSR no.1:185-196 Ja-F'51.
(Drawing (Metalwork)) (MLRA 8:10)

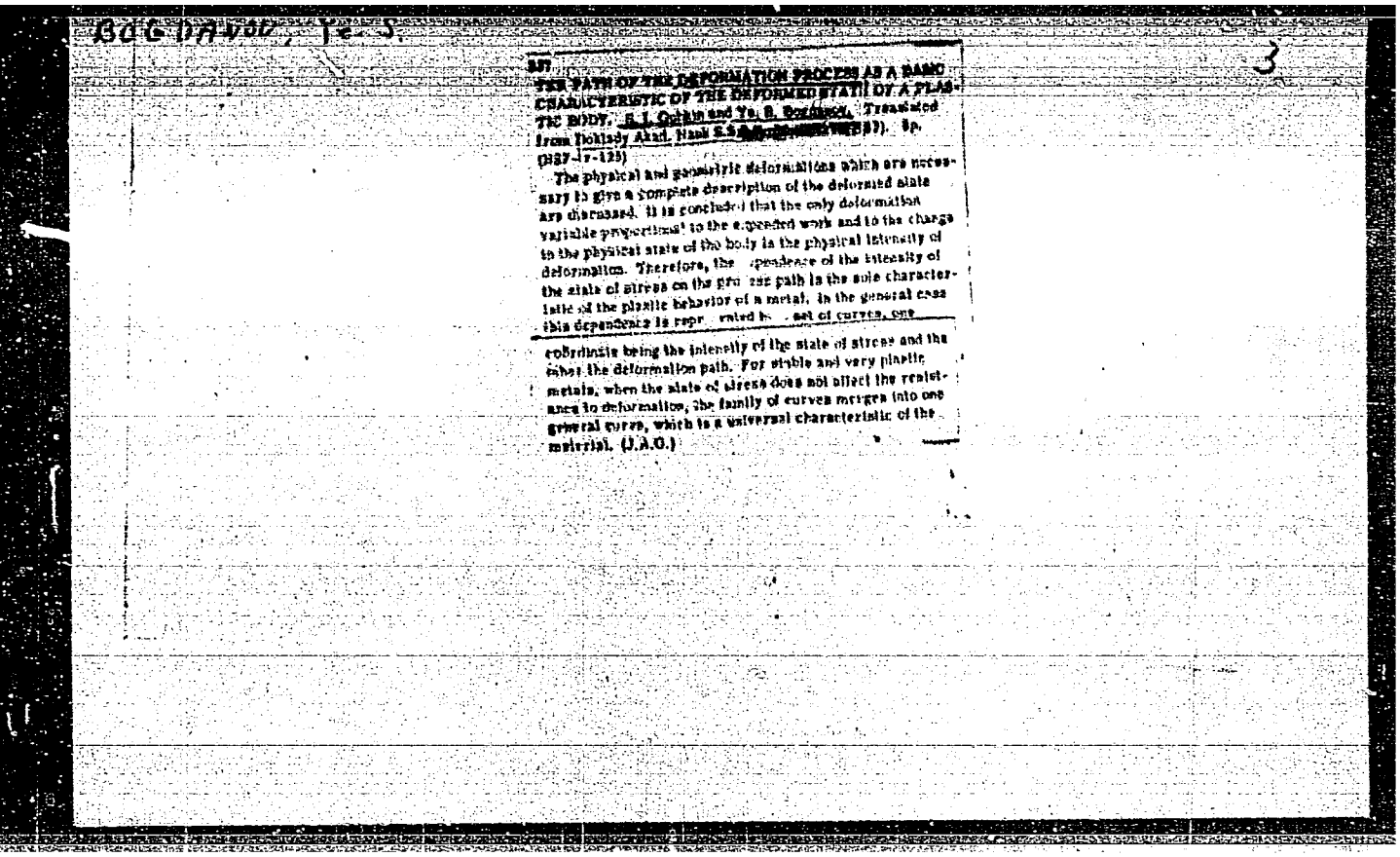
BOGDANOV, Ye.S.

Tormoznye ustroistva kranov
(Braking systems for cranes). Moskva, Mashgiz,
1952. 272 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 1, April 1953

BOGDANOV, Ye, S.; YUSHKOV, A.V.

Speed of deformation in the various processes of plastic deformation. Izv.AN BSSR. no.3:141-154 My-Je '53. (MLRA 9:1)
(Deformations (Mechanics))



3

...THE PATH OF THE DEFORMATION PROCESS AS A BASIC CHARACTERISTIC OF THE DEFORMED STATE OF A PLASTIC BODY. A. A. Ilyushin and Yu. N. Rabotnov. Translated from Doklady Akad. Nauk S.S.S.R. (1937). 8p. (MT-7-125)

The physical and geometric deformations which are necessary to give a complete description of the deformed state are discussed. It is concluded that the only deformation variable proportional to the expended work and to the change in the physical state of the body is the physical intensity of deformation. Therefore, the dependence of the intensity of the state of stress on the greatest path is the sole characteristic of the plastic behavior of a metal. In the general case this dependence is represented by a set of curves, one coordinate being the intensity of the state of stress and the other the deformation path. For stable and very plastic metals, when the state of stress does not affect the resistance to deformation, the family of curves merges into one general curve, which is a universal characteristic of the material. (U.A.G.)

BOGDANOV, Ye. S.

Bogdanov, Ye. S. and Kalachev, M. I.

"Forging in a Die With a Permanent 'Flash Saddle' for the Outlet of Excess Metal", pp 81-90, Sbornik Nauchnykh Trudov, Vol 2, Minsk, Izd.-vo. Akademii Nauk B.S.S.R., 1955, 250 pp.

BOGDANOV, Ye.S.; KALACHEV, M.I.

Stamping with dies having a permanent hole for the removal of excess metal. Sbor.nauch.trud. Fiz.-tekh.inst. AN BSSR no.2:81-90 '55.
(MLRA 10:1)

(Sheet-metal work) (Dies (Metalworking))

AKIMOVA, K.I.; BAZHENOV, M.F.; BAKHVALOV, G.T.; BEZKIJBENKO, N.P.; BERMAN,S.I.; BOGDANOV, Ye.S.; BODYAKO, M.N.; BOYKO, B.B.; VINOGRADOV, S.V.; GAGEN-TORN, K.V.; GLEK, T.P.; GOREV, K.V.; GRADUSOV, P.I.; GUSHCHINA,T.N.; YEMEL'YANOV, A.K.; YESIKOV, M.P.; ZDZYARSKIY, A.V.; ZAKHAROV, M.V.; ZAKHAROVA, M.I.: KARCHEVSKIY, V.A.; KOMAROV, A.M.; KORZHENKO, O.T.; LAYNER, V.I.; MAL'TSEV, M.V.; MILLER, L.Ye.; MILOVANOV, A.I.; MIRONOV, S.S.; NIKONOROVA, N.A.; OL'KHOV, N.P.: OSIPOVA, T.V.; OSOKIN, N.Ye.; PERLIN, I.L.; PLAKSIN, I.N.: PROKOF'YEV, A.D.; RUMYANTSEV, M.V.; SEVERDENKO, V.P.; SEREDIN, P.I.; SMIRYAGIN, A.P.; SPASSKIY, A.G.; TITOV, P.S.; TURKOVSKAYA, A.V.; SHAKHNAZAROV, A.K.; SHPICHINETSKIY, Ye.S.; YURKSHTOVICH, N.A.; YUSHKOV, A.V.; YANUSHEVICH, L.V.

Sergei Ivanovich Gubkin. TSvet.met. 28 no.6:60-61 N-D '55. (MIRA 10:11)
(Gubkin, Sergei Ivanovich, 1898-1955)

BOGDANOV, Ye. S.

137-1958-3-5042

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 84 (USSR)

AUTHORS: Gubkin, S. I., Sidorenko, Yu. A., Bogdanov, Ye. S.

TITLE: On the Causes of Variations in the Flow of Metal During Die Forging in Mechanical Punch Presses and Drop Hammers (O prichinakh razlichnogo techeniya metalla pri shtampovke na mekhanicheskikh pressakh i na molotakh)

PERIODICAL: Sb. nauchn. tr. fiz.-tekhn. in-ta AN BSSR, 1956, Nr 3, pp 7-19

ABSTRACT: Experiments were performed in order to establish the causes of nonuniform filling of the deep pattern recesses in both the upper and lower die in the process of die forging (F) in a press or in a drop hammer. Pb specimens were employed in order to simulate the process of hot die forging under conditions in which the temperature of both the blank and the instrument is practically constant and uniform. The F was carried out in machines capable of subjecting the blank to rates of deformation (D) ranging from 0.5 m/min to 9.38 m/sec. It was established that under such conditions the extent of the filling of the pattern on both the upper and the lower die is practically identical and that it does not

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On the Causes of Variations in the Flow of Metal During Die Forging (cont.)

depend on the initial velocity of D. The role of the temperature history of the D was investigated by means of an oscillograph which recorded the temperature variations in the lower and the upper part of the forged piece in the process of press- and drop-hammer forging of steel and Al blanks. It is established that the difference in the nature of the metal flow during F of metal in drop-hammers and mechanical forging presses is determined by the difference in the temperature history of the D of metal in the two cases. Compared with press forging, drop forging offers more favorable conditions for the filling in of the upper die pattern; this is explained by the combined action of the Joule effect and the fact that the lower and upper regions of the metal blank establish dissimilar thermal contacts with the surfaces of the dies.

V. Ya.

BOGDANOV, Ye.S.; KALACHEV, M.I.

Determining the average pressure of metal flow to the flash pan and impression cavities of the die. Sbor. nauch. trud. Fiz.-tekh. inst. AN BSSR no.3:20-34 '56. (MLRA 10:6)
(Forging) (Rheology)

SOV/137-57-10-19108

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 97 (USSR)

AUTHORS: Bogdanov, Ye.S., Kalachev, M.I.

TITLE: Metal Flow in Trimmers and Methods of Calculation for Hot Trimming in Presses (Techeniye metalla v obloynom shtampe i metodika rascheta goryachey obloynoy shtampovki na pressakh)

PERIODICAL: Sb. nauchn. tr. Fiz.-tekhn. in-t AN BSSR, 1956, Nr 3, pp 35-47

ABSTRACT: An examination is made of the conditions for the filling of the cavity and the flash pan of an open die. A chart is compiled for determination of the amounts of metal entering the pan and the sunk portions of the die. Equations are developed for determining resistance to deformation in the flash pan and the die cavity, also for other purposes, and these are recommended for analysis of the open-die drop-forging process.

Ya.O.

Card 1/1

SOV/137-57-10-19126

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 99 (USSR)

AUTHORS. Bogdanov, Ye.S., Kalachev, M.I., Sidorenko, Yu.A.

TITLE: Engineering Analysis of Hot Stamping on Presses That are Round and Elongated in the Plane of the Forgings (Tekhnologicheskiy raschet goryachey ob"yemnoy shtampovki na pressakh kruglykh i udlinennykh v plane pokovok)

PERIODICAL: Sb. nauch. tr. Fiz.-tekhn. in-t AN BSSR, 1956, Nr 3, pp 48-67

ABSTRACT: A new method of analysis of hot stamping processes performed on crank presses is suggested. It permits theoretical determination of the optimum dimensions of the gutter, the minimum blank volume required, the deforming stress needed, etc. Special features of analysis of forgings of various types are examined and specimen analyses are adduced. A comparison of the results of calculation by the existing and the new methods on the one hand and factory data on the other is made, and this confirms the validity of the method proposed. M. Ts.

Card 1/1

137-58-4-7108

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 115 (USSR)

AUTHORS: Bogdanov, Ye. S., Sidorenko, Yu. A.

TITLE: Special Features of Metal Flow on Stamping in Power Presses and by Hammers (Osobennosti techeniya metalla pri shtampovke na mekhanicheskikh pressakh i molotakh)

PERIODICAL: V sb.: Materialy konferentsii po usoversh. tekhnol. goryachey shtampovki. Minsk, AN BSSR, 1957, pp 12-18

ABSTRACT: An experimental investigation confirms the fact that the difference in the nature of the metal flow in stamping (S) on the hammer (H) and on drop-forging crank presses (DFCP) is determined by the difference in the conditions of temperature during deformation, and this depends upon the time and quality of the heat contact between the hot metal and the relatively cold surface of the die, and upon the influence of the thermal effects upon the change in temperature. The action of these factors during S on the H produces more favorable conditions for filling the punch than are produced in work on a press. The results of an oscillographic study of the temperature during S on a fast DFCP for a single cycle shows that the cooling effect of the tool in this case is insignificant in

137-58-4-7108

Special Features of Metal Flow (cont.)

view of the small S time (0.01 sec). The drop in the temperature of the blank is altogether 100°C at a depth of 0.7 mm from the contact surface between metal and tool, and therefore the filling of the die in single-blow F will be identical on the H and the DFCP. The difference in metal flow during S on the H and on the DFCP is evidenced in multiple-pass and multiple-blow S. As the number of blows and passes in S is diminished, this difference tends to disappear.

G. F.

1. Metals--Flow 2. Metals--Forging--Processes

Card 2/2

SOV/137-58-11-22426

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 84 (USSR)

AUTHORS: Yushkov, A. V., Bogdanov, Ye. S.

TITLE: Rate of Deformation on Upsetting by Impact (Skorost' deformatsii pri udarnom osazhivanii)

PERIODICAL: V sb.: Materialy konferentsii po usoversh. tekhnol. goryachey shtampovki, Minsk, AN BSSR, 1957, pp 44-51

ABSTRACT: More precise light is shed on rate of deformation (RD) when forces are applied by impact. An analysis is presented of the processes of change in RD by free impact. It is pointed out that in order for the results of testing in hot forging to be comparable, it is necessary to determine the characteristic RD values, initial, maximum, and mean. A velocity coefficient for determination of forging stress can then be determined with greater accuracy. Formulas are suggested for determining maximum and average RD. It is shown that the RD is at a maximum at the onset of the process if the strain is less than 0.5, and when the height of the upset specimen is 1.65 h_n (h_n being the height of the sample at the terminal instant of the process) if the strain is over 0.5. The results of the experiments conducted

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Rate of Deformation on Upsetting by Impact

show these equations to reflect the actual course of the process with adequate accuracy.

V. O.

Card 2/2

BOGDANOV, I.S.

Cast-welded and combined constructions for metallurgical cranes.
Sbor.st.UZTM no.1:205-211 '58. (MIRA 11:12)
(Cranes, derricks, etc.) (Steel castings--Welding)

L 33519-65 EWG(j)/EWT(l)/EWT(m)/EPF(c)/EPR/EWA(d)/EWP(t)/EWP(b) Pr-4/Ps-4
IJP(c) MJW/JD

ACCESSION NR: AR5005693 S/0276/64/000/009/V039/V040

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 9V254

AUTHOR: Bogdanov, Ye. S.; Yanskiy, S.N.; Perkov, V.M.; Shchegolevatykh, V.D.

TITLE: Analysis of the effects of processing factors on the strength of seams produced while extruding aluminum

CITED SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 17, 1963, 27-37

TOPIC TAGS: aluminum extrusion, clinched seam, buttless extrusion, extrusion pressure, extrusion temperature, contact surface, deformation level, sampling technique, container pocket volume/ A-1 aluminum

TRANSLATION: The article describes the results of a qualitative analysis of seams (i.e., longitudinal seams while extruding hollow profiles and transverse seams between billets in buttless extrusion) obtained while extruding A-1 aluminum, in relation to deformation level, temperature, pressure, and type and degree of surface contamination. A procedure was evolved for obtaining samples with seams which allow one to carry out a large number of mechanical tests on such samples. Billet splits of defined length,

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L 33519-65

ACCESSION NR: AR5005693

insuring a given level of deformation, were inserted into sleeves, covered by back-up plates and placed in a container, so that their free ends protruded from the sleeves and abutted in the center of the container. The entire jig was heated in a shaft furnace to an assigned temperature, the sleeves were then drawn together on a tester, clinching the free ends of the splits. The sleeves were withdrawn after the operation was concluded and the seam sample was removed. In studying effects of deformation level on quality of the seam, the free-space pocket volume between sleeves and container walls was selected in such a manner that it did not become entirely filled. In analyzing the effects of pressure, the selection of pocket volume and length of free ends of the splits were calculated to produce total filling of the entire pocket volume. Pressure in the container depended, in this case, on the force generated by the tester. Samples for mechanical tests were made from the seamed pieces. Temperature and level of deformation are the principal factors affecting quality of the seam. Seams with strength characteristics entirely equal to the basic metal form in A-1 aluminum at 350C and deformation levels of 23 or greater, or at 400-450C and deformation levels of 20 or greater. An increase in pressure from 10 to 74 kg/mm^2 exerted no significant effects on seam quality within the accepted extrusion temperature range of 350-450C, since there was no apparent restoration of the contact surface. Values for $\tilde{\sigma}_i$ decrease

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L 33519-65

ACCESSION NR: AR5005693

to 1/2, those for δ to 1/20th, when the faces of a split are contaminated by a thin layer of graphite dust. Hence, freedom from even insignificant contamination of contact surfaces of a split comprises a basic condition for obtaining quality seams in buttless extrusion. Bibl. with 3 titles; 6 illustrations.

SUB CODE: MM, IE ENCL: 00

Card 3/3

L 33521-65 EWT(d)/EWT(l)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l) Pf-4 AJW/JD

ACCESSION NR: AR5005694 S/0276/64/000/009/V040/V040

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya. Svodnyy tom, Abs. 9V255

AUTHOR: Bogdanov, Ye. S.; Yanskiy, S.N.; Penkov, V.M.; Shchegolevatykh, V.D.

TITLE: Effect of processing factors on the mechanical properties of the seam in tongue-and-groove die extrusion of D-1 alloy

CITED SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 17, 1963, 39-49

TOPIC TAGS: hollow profile extrusion, tongue-and-groove die, weld seam strength, basic metal strength, deformation level, extrusion pressure, extrusion temperature, extrusion rate, critical reduction level/D-1 alloy

TRANSLATION: The authors describe the results of a study on the effects of extrusion pressure, rate, temperature, heat treatment and level of deformation on mechanical properties of a seam in tongue-and-groove die extrusion of hollow profiles from D-1 alloy. The work was carried out on a 2000-ton press, extruding from a container with ϕ=170 mm and from strips measuring 100 x 7, 10, 11.5, 13 or 15 mm. The width of the die's contact element was varied from 2 to 20 mm, hence allowing a variation of pressure level in the deformation area. Samples used in tensile tests of weld seams and of the entire metal were prepared from pieces cut out of the center and ends of a

Card 1/2

L 33521-65
ACCESSION NR: AR5005694

strip. The strength of a seam increased somewhat as pressure increased. At the same time, the strength of the entire metal increased as well. An increase in the extrusion rate from 0.75 to 3 cm/min. improved the strength of the seam and the metal by 10 to 12%. A rise in extrusion temperature also improved the strength of seam and metal. Heat treating, i.e., hardening followed by aging, improved σ_b of the seam and entire metal, decreasing at the same time the gap between the two values. The reduction level is a basic factor influencing the formation of a seam at a given temperature. The minimal reduction (critical reduction) for alloy D-1 equalled 20 at an extrusion temperature of 430C. A seam does not form at reduction levels below critical value, while its strength at levels above critical averaged 4% below that of the basic metal. Ten illustrations.
V. Volkovitskiy

SUB CODE: IE ENCL: 00

Card 2/2

KOMAROV, Andrey Alekseyevich; BOGDANOV, Ye.S., red.;
PETROPOL'SKAYA, N.Ye., red.

[Principles of designing power elements] Osnovy proektirovaniia silovykh konstruktsii. Kuibyshev, Kuibyshevskoe knizhnoe izd-vo, 1965. 86 p. (MIRA 18:10)

BOGDANOV, Ye.P.

PHASE I BOOK EXPLOITATION SOV/5290

Soveshchaniye po prikladnoy gazovoy dinamike. Alma-Ata, 1956

Trudy Soveshchaniya po prikladnoy gazovoy dinamike, g. Alma-Ata, 23-26 oktyabrya 1956 g. (Transactions of the Conference on Applied Gas Dynamics, Held in Alma-Ata, 23-26 October 1956) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1959. 253 p. Errata slip inserted. 900 copies printed.

Sponsoring Agency: Akademiya nauk Kazakhskoy SSR. Kazakhskiy gosudarstvennyy universitet imeni S.M. Kirova.

Editorial Board: Resp. Ed.: L.A. Vulis; V.P. Kashkarov; T.P. Leont'yeva and B.P. Ustimenko. Ed.: V.V. Aleksandriyskiy. Tech. Ed.: Z.P. Borokina.

PURPOSE: This book is intended for personnel of scientific research institutes and industrial engineers in the field of applied fluid mechanics, and may be of interest to students of advanced courses in the field.

Transactions of the Conference (Cont.) SOV/5290

COVERAGE: The book consists of the transcriptions of 31 papers read at the conference on gas dynamics which was convened under the initiative of the Kazakhskiy gosudarstvennyy universitet imeni S.M. Kirova (Kazakh State University imeni S.M. Kirov) and the Institut energetiki Akademii nauk Kazakhskoy SSR (Institute of Power Engineering of the Academy of Sciences Kazakhskaya SSR) and held October 23-26, 1956. Three branches of applied gas dynamics were discussed, namely: jet flow of liquids and gases, aerodynamics of furnace processes, and the outflow of liquids. The practical significance of the Transactions of the conference consists in the adaptation of theory to methods of technical computation and measuring methods related to industrial furnaces and other industrial processes in which aerodynamic processes play a predominant role. Eight papers read at the Conference are not included in this collection for various reasons. The authors of the missing papers are: L.D. L'vov (Thermal and Aerodynamic Characteristics of Pulverized Coal Flame Burners) and A.A. Goleyevskiy (Outlines and Physical Models of the Jet Motion Mechanics of Fluids), E.I. Akatnov, Ye. P. Bogdanov, E.V. Bukman, T.K. Mironenko, A.B. Berngardt, and G.T. Yankov, L.G. Loytsyanskiy is mentioned as being in charge of a department of the Kazakh State University, and I.D. Malyukov, Candidate of Physical and Mathematical Sciences, Docent, as a member of the same university. References are found at the end of

Session of October 24, 1956 (Morning)

Transactions of the Conference (Cont.) SOV/5290

Card 5/5

BOGDANOV, E. V., KISLOV, V. Y. and CHERNOV, Z. S.

"Interaction of Electron Flow with Plasma,"

report presented (by Chernov) at the 9th Symposium on Millimeter Waves, 31 March - 2 April 1959, Brooklyn Polytech. Inst, New York.

Inst. for Radioelectricity and Electronics, USSR

Abst: The problem of interaction of a limited electron flow with plasma is considered. The dispersion ralationship is derived and conditions for an increase of microwave signal are analyzed. The main requirements on the system for producing effective interaction in a high frequency region of microwave bands are determined.

Experimental investigations of the system in which modulated electron flow interacts with gas dischagre plasma are described. Frequency characteristics of the system and dependence of the microwave signal of electron density in plasma defined by a discharge current are given

20418
S/109/60/005/012/016/035
E192/E382

9.4230

AUTHORS: Kislov, V.Ya. and Bogdanov, Ye.V.

TITLE: Interaction Between Slow Plasma Waves and an Electron Beam

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol. 5, No. 12, pp. 1974 - 1985

TEXT: The system considered consists of two regions; I and II . The internal region is in the form of a cylinder having a radius a and this is filled with a plasma through which passes a beam of electrons having the same radius. The external region is in the form of an infinite plasma having a concentration different from the concentration of the internal region. The magnetic field is directed along the axis of the system. The electron beam is focused by the magnetic field and has only longitudinal components of the alternating quantities, i.e. the electron velocity v_e and current density j_e ; these are assumed to be much smaller

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than the corresponding average quantities. It is assumed that all the alternating quantities vary sinusoidally and that the system of the field equations is in the form:

$$(\mathrm{rot}\,\vec{H})_i = i\omega\varepsilon_{ik}E_k + j_{ei}, \qquad (1)$$
$$\mathrm{rot}\,\vec{E} = -i\omega\mu_0\vec{H}.$$

On the other hand, the equations of continuity and motion give:

$$j_{ei} = \frac{\rho_0\eta E_z}{i\omega\left(1-\frac{\tau}{\tau_e}\right)^2}, \qquad (2)$$

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where ρ_0 is the charge density,
γ_e is the electron wave number and
η is the ratio of the electron charge to its mass.

By introducing an active component in the tensor ε_{ik}, the equation system becomes homogeneous and can be written as:

$$(\text{rot } \vec{H})_i = i\omega\varepsilon_{ik}E_k \,, \qquad (3)$$

$$\text{rot } \vec{E} = -i\omega\mu_0\vec{H}$$

where the tensor components are in the form (Ref: 1)

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$$\varepsilon_{ik} = \varepsilon_0 \begin{pmatrix} \varepsilon_r & \varepsilon_\varphi & 0 \\ -\varepsilon_\varphi & \varepsilon_r & 0 \\ 0 & 0 & \varepsilon \end{pmatrix} = \varepsilon_0 \begin{pmatrix} 1-\frac{b}{1-\alpha^2}; & \frac{-ib\alpha}{1-\alpha^2}; & 0 \\ \frac{ib\alpha}{1-\alpha^2}; & 1-\frac{b}{1-\alpha^2}; & 0 \\ 0; & 0; & 1-b-\frac{b_e}{\left(1-\frac{\gamma}{\gamma_0}\right)^2} \end{pmatrix}, \qquad (4)$$

where:

$$b = \frac{\omega_p^2}{\omega^2}; \qquad b_e = \frac{\omega_{pe}^2}{\omega^2}; \qquad \alpha = \frac{\omega_H}{\omega}$$

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in which ω_p is the plasma frequency,
ω_{pe} is the plasma frequency of the electron beam,
ω_H is the cyclotron frequency of the electrons.

Angularly symmetrical solutions of Eqs. (3) are found and it is shown that the coupling between E- and H-waves is realised by means of ε_φ. For $\varepsilon_\varphi = 0$:

$$T_E^2 = \gamma^2 \frac{\varepsilon_z}{\varepsilon_r} - k_o^2 \varepsilon_z \qquad (14)$$

$$T_H^2 = \gamma^2 - k_o^2 \varepsilon_z$$

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The expression for determining T is in the form:

$$\underbrace{\left[T^2-\left(\gamma^2\frac{\varepsilon_z}{\varepsilon_r}-k_0^2\varepsilon_z\right)\right]}_{\text{E-волны — E-waves}}=-\gamma^2\frac{\varepsilon_z}{\varepsilon_r}\frac{\varepsilon_\varphi^2}{\varepsilon_\varphi^2+\varepsilon_r\underbrace{\left[\varepsilon_r+\frac{T^2-\gamma^2}{k_0^2}\right]}_{\text{H-волны — H-waves}}} \qquad (15)$$

The criterion for the separation of the slow E- and H-waves is expressed by the inequality:

$$\frac{k_0^2}{\gamma^2}\frac{\omega_p^2}{\omega^2-\omega_H^2}\ll 1 \qquad (17)$$

By comparing the tangential components of the fields at the boundary $r = a$, it is possible to derive the scattering equation for the slow E-waves. This is in the form of:

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$$\frac{\varepsilon_{z1}}{\tau a}\,\frac{I_1(\tau a)}{I_o(\tau a)} = -\frac{\varepsilon_{z2}}{\tau a}\,\frac{K_1(\tau a)}{K_o(\tau a)} \qquad (18)\ .$$

The equation has two groups of solutions. The first group corresponds to the increasing space-charge density waves while the second group corresponds to the amplification of the slow travelling waves which can propagate in the system also in the absence of the electron beam. The first group of the solutions is investigated analytically and the results are shown in a figure. The problem was also studied experimentally by using the device illustrated in Fig. 2; the device consisted of: 1 - an electron gun; 2 - magnetic coils; 3 - cathode; 4 - anode; 5 - an attenuator; 6 - collector; 7 - high-frequency input; 8 - modulating helix; 9 - plasma; 10 - electron beam; 11 - demodulating helix and 12 - high-frequency output. The experimental results are shown in two

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figures. The second group of the solutions was also studied analytically and experimentally. The experimental tube is shown in Fig. 7; this consisted of: 1 - electron gun; 2 - discharge cathode; 3 - discharge anode; 4 - plasma; 5 - electron beam passing through plasma; 6 - helical matching devices; 7 - helical attenuator or absorber and 8 - collector. The calculated and experimental results are shown in four figures. It was found that the calculations were in good agreement with the experiments. The two solutions of the scattering equation correspond to two different interaction mechanisms. In the first case, the amplification of the space-charge waves is produced as a result of the deceleration of the electron bunches in the field of the induced charges. In the second mechanism, an interaction between the travelling wave and the electron beam is achieved. Two types of waves (surface and volume waves) can exist. The amplitude of the volume waves has a maximum on the axis

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of the system and this type of slow wave has no analogue in the normal slow-down structures. For both types of waves there exist regions with normal and anomalous scattering. There are 9 figures and 6 references: 1 non-Soviet and 5 Soviet.

SUBMITTED: January 8, 1960

Fig. 2:

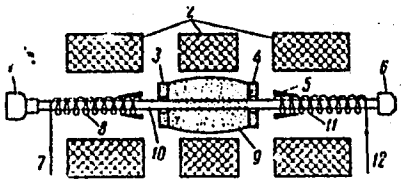

Рис. 2. Схематическое изображение экспериментального устройства:
1 — электронный прожектор; 2 — магнитные катушки; 3 — катод; 4 — анод; 5 — поглотитель; 6 — коллектор; 7 — ВЧ-вход; 8 — модулирующая спираль; 9 — плазма; 10 — поток электронов; 11 — демодулирующая спираль; 12 — ВЧ-выход

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Fig. 7:

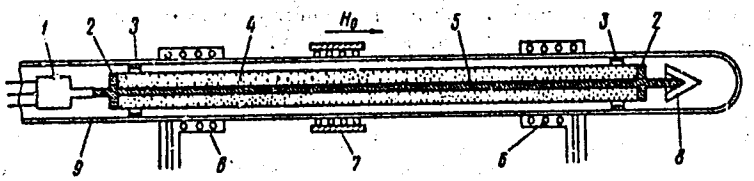

Рис. 7. Схематическое изображение экспериментального устройства для исследования взаимодействия потока электронов с бегущей плазменной волной:
1 — электронный прожектор; 2 — катод разряда; 3 — анод разряда; 4 — плазма; 5 — поток электронов, проникающий плазму; 6 — спиральные согласователи; 7 — спиральный поглотитель; 8 — коллектор

Card 10/10

ACC NR: AM6006280 Monograph UR/

Bernashevskiy, G. A.; Bogdanov, Ya. V.; Kislov, V. Ya.; Chernov, Z. S.

Plasma and electron amplifiers and superhigh frequency oscillators (Plazmennyye i elektronnyye usiliteli i generatory SVCh) Moscow, Izd-vo "Sovetskoye radio", 65. 0094 p. illus., biblio. 10,300 copies printed.

TOPIC TAGS: ionized plasma, electron plasma, microwave plasma, plasma electromagnetic wave, plasma beam interaction, plasma device, plasma electron oscillation, plasma waveguide, traveling wave tube, backward wave tube, superhigh frequency, SHF amplifier, SHF oscillator, electron beam

PURPOSE AND COVERAGE: Some new methods for amplification and generation of superhigh frequency (SHF) oscillations using electron-ion plasma penetrated by an electron beam and also using a rotating electron beam are considered. In contrast to the usual SHF devices, where the electron beam interacts with electromagnetic fields which are channeled by metallic structures, in plasma SHF devices plasma having a number of new properties is used as the medium channeling the electromagnetic oscillations. The physical principles in utilizing plasma for the generation and amplification of SHF oscillations and the interaction of plasma oscillations with an electron beam are considered in the first part of the book.

Card 1/3 UDC: 621.385.6

ACC NR: AM6006280

The basic properties of the interaction which can be used for constructing plasma amplifiers and oscillators are developed. The results of theoretical and experimental studies of plasma amplifiers and oscillators are presented. In the second part centrifugal-electrostatic focusing (CEF) of rotating electron beams is considered. New SHF amplifiers and oscillators, constructed on the basis of this focusing and having a number of advantages over other electron SHF devices, are also discussed. The stability of an electron beam when utilizing CEF is analyzed and the current limit is determined. Experimental studies of traveling-wave tubes (TWT) and backward-wave tubes (BWT) with central electrostatic focusing are described. The processes of high frequency bunching in a rotating electron beam are considered in linear and nonlinear approximations and it is shown that space-charge self-bunching of the electrons is possible. The book is intended for scientific workers and engineers working in the field of construction and study of electron SHF devices and for graduate and other advanced students of the corresponding specialties. [Abstracter's note: There are 95 references listed on pp. 55-58.]

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ACC NR: AM6006280

[Abstracter's note: There are 95 references listed on pp. 55-58.]

SUB CODE: 20, 09/ SUBM DATE: 08Jul65/ ORIG REF: 010/ OTH REF: 016

Card 3/3

ASTVATSATUROV, Kh.S.; BOGDANOV, Ye.V.

Electroosmotic method of drying buildings during over-all repair. Gor.khoz.Mosk. 36 no.7:40-41 Jl '62. (MIRA 16:1)

1. Masterskaya No.5 instituta "Mosshilproyekt".
(Dampness in buildings)

BERNASHEVSKIY, G.A.; BOGDANOV, Ye.V.; KISLOV, V.Ya.; CHERNOV, Z.S., prof.; MASHAROVA, V.G., red.

[Plasma and electronic microwave amplifiers and generators] Plazmennye i elektronnye usiliteli i generatory SVCh. Moskva, Sovetskoe radio, 1965. 94 p. (MIRA 18:9)

BOGDANOV, Yu.

Rebuilding valve springs. Avt. transp. 34 no.10:32-33 O '56.
(MLRA 9:12)

(Automobiles--Springs)

KOBRIN, M., kand. tekhn. nauk; IUNEVSKIY, I., kand. tekhn. nauk;
BOGDANOV, Yu., inzh.; LEL'CHUK, L., inzh.

Increasing the strength of frames by hammer hardening. Avt. transp. 43 no.2:26-28 F '65. (MIRA 18:6)

BOGDANOV, Yu.; KHOL'NYY, G.; SOLODUKHO, Ya.; PODOPRIGORA, D. (g. Sovetsk, Kaliningradskaya oblast').

It turns out.... IUn.nat. no.9:34-35 S '60. (MIRA 14:3)
(Animals, Habits and behavior of)
(Botany--Curiosa and miscellany)

BOGDANOV, Yu.A. (g.Rostov-na-Donu)

Experimental construction of pile foundations for apartment houses. Osn., fund.i mekh.grun. no.5:16-18 '59.
(MIRA 12:12)
(Foundations) (Piling (Civil engineering))

KRASNOKUTSKAYA, M.Ye., inzh.; BRONSHTEYN, F. V.. inzh.; LIVYY, G.V.,kand.tekhn. nauk; prinimali uchastiye; LYUBETSKAYA, A.A.; BOGDANOV, Yu.A.

Studying the properties of SKS-30 rubber preparations with high pressure polyethylene. Report No.1. Izv.vys.ucheb.zav.; tekh.leg.prom. no.1:29-33 '62. (MIRA 15:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut legkoy promyshlennosti. Rekomendovana kafedroy tekhnologii iskusstvennogo volokna Kiyevskogo tekhnologicheskogo instituta legkoy promyshlennosti.
(Rubber, Synthetic)(Polyethylene)

BOGDANOV, Yu.A.

Suspended organic matter in the waters of the Pacific Ocean.
Okeanologiia 5 no.2:286-297 '65. (MIRA 18:6)

1. Institut okeanologii AN SSSR.

BOGDANOV, Yu.A.; OVCHINNIKOVA, L.I.

Methodology of determining bituminous substances in suspension. Okeanologiia 5 no.2:366-371 '65. (MIRA 18:6)

1. Institut okeanologii AN SSSR.

L 11591-66 EWT(d)/EWT(m)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l)/EWA(h) JD

ACC NR: AP6000370 SOURCE CODE: UR/0286/65/000/021/0083/0083

AUTHORS: Bogdanov, Yu. B.; Veroman, V. Yu.; Rozanov, V. A.

ORG: none

TITLE: A method for electric arc fabrication of parts by a wire electrode-instrument on a photoduplicating machine. Class 49, No. 176172

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 83

TOPIC TAGS: electroerosion machining, metal electroforming

ABSTRACT: This Author Certificate presents a method for electric arc fabrication of parts by a wire electrode-instrument on a photoduplicating machine. To increase the accuracy of fabrication, the signal from the photodetector is shifted (with the help of a deflection system) by an amount compensating for the width of the cut.

SUB CODE: 13/ SUBM DATE: 25Jul62/

Card 1/1 UDC: 621.9.048.4

BOGDANOV, Yu.B.; VOINOV, A.S.

New data on the Proterozoic stratigraphy in northern Karelia. Vest. LGU no.24:5-16 '62. (MIRA 16:2)
(Karelia—Geology, Stratigraphic)

BOGDANOV, Yu.B.; VOINOV, A.S.

Proterozoic conglomerates in northern Karelia. Izv. vys. uchsb. zav.; geol. i razv. 7 no.6:25-35 Je '64. (MIRA 18:7)

1. Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova.

KHARITONOV, L. Ya.; BOGDANOV, Yu.B.; VOINOV, A.S.; SUKHANOV, V.A.

Stratigraphy of iron-ore formations in western Karelia. Vest. LGU no.24:35-43 '64 (MIRA 18:1)

BOGDANOV, Yu.B.; VOINOV,A.S.; SUKHANOV,V.A.; KHARITONOV,L.Ya.

Structural relations between the Karelian and the Belomorsk formations in the Kem' region of eastern Karelia. Dokl. AN SSSR 156 no. 3:550-553 '64. (MIRA 17:5)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova. Predstavleno akademikom D.V.Nalivkinym.

PROKOF'YEVA-BEL'GOVSKAYA, A.A., kand.biolog.nauk; BOGDANOV, Yu.F.

Organization of chromosomes. Zhur.VKHO 8 no.1:33-46 '63.
(MIRA 16:4)

(Chromosomes)

BOGDANOV, Yu.F.

Distribution of SO_4 —ion between the sartorius muscles of a frog and Ringer's solution. TSitologiia no.1:83-87 Ja-F'63. (MIRA 16:6)

1. Laboratoriya fiziologii kletki Instituta tsitologii AN SSSR, Leningrad.

(MUSCLE) (PERMEABILITY)

BOGDANOV, Yu.F.

Interrelationship between DNA synthesis and the types of chromosome aberrations during the germination of X-ray irradiated pea seeds. Genetika no.3:35-43 S '65.
(MIRA 18:12)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR, Moskva. Submitted March 30, 1965.

WRITE BELOW THIS LINE

POSTCARD

ACCESSION NR: AP4027985 S/0205/64/004/002/0306/0312

AUTHOR: Bogdanov, Yu. F.; Borovkova, T. V.

TITLE: Radiostimulation of cell divisions. I. Mitotic index change in roots after X-irradiation of pea seeds with relatively small doses

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 306-312

TOPIC TAGS: X-irradiation, 69 and 276 r radiation dose, irradiated pea seed, mitotic index change, cell division radiostimulation, mitotic phase, chromosome aberration, root tip meristem, increased mitotic index

ABSTRACT: Pea seeds were soaked in distilled water for a 27 hr period. After 26 hrs the seeds were removed from the water for X-irradiation (RUP-200 unit, 190 kv, 15 ma, 0.75 mm Al+0.5 mm Cu, 23 r/min) with single 46, 69, 138 and 276 r doses and soaking was resumed up to the end of the 27 hr period. Seeds were planted in Petrie cups filled with wet sand. Both soaking and sprouting of seeds took place under conditions of darkness at 22.5±0.2°C. Roots were fixed and stained at various periods for 84 hrs following radiation.

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ACCESSION NR: AP4027985

Mitotic indices were based on the number of mitotic phases per 1000 cells in the root tip meristem. Findings indicate that mitotic indices for root tip meristem of seeds irradiated with 69, 138, and 276 r doses in the first 28 hrs after irradiation are 1.2 to 1.6 times higher than in control groups. This maximum corresponds to the appearance of the first mitosis after sprouting and at the same time is the first mitosis after irradiation. Mitotic index increase appears to be the result of accelerated cell division at the expense of a decreased interphase and not the result of inhibited visible mitotic stages or compensation for retarded entry of cells into first mitosis. "The authors express their gratitude to O. I. Epifanova, N. V. Luchnik, L. S. Tsarapkin, and I. M. Shapiro for their assistance and discussion of results." Orig. art. has: 3 tables and 2 figures.

ASSOCIATION: Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR, Moscow (Radiation and Physicochemical Biology Institute AN SSSR)

SUBMITTED: 22Jan63 ENCL: 00

SUB CODE: LS NR REF SOV: 006 OTHER: 007

Card 2/2

BOGDANOV, Yu.F.; IORDANSKIY, A.B.; GINDILIS, V.M.

Problem of multistrand chromosome model. Genetika no.5:82-100 N '65. (MIRA 19:1)

1. Institut molekulyarnoy biologii AN SSSR, Moskva. Submitted August 25, 1965.

BOGDANOV, Yu. I.

USSR/Miscellaneous

Card 1/1 : Pub. 104 - 12/12

Authors : Nikonov, I. E., and Bogdanov, Yu. I.

Title : Electrical rpm counter for batch mixers

Periodical : Stek. i ker. 9, Page 32, September 1954

Abstract : An electrical rpm counter for ceramic batch-mixers and its mode of operation, are briefly described. Drawing.

Institution : ....

Submitted : ....

BOGDANOV, Yu. I.

72-12-8/14

AUTHOR: Bogdanov, Yu. I.

TITLE: Device for the Distance Measuring of the Glass Expansion Velocity (Ustroystvo dlya distantsionnogo izmereniya skorosti vytyagivaniya stekla)

PERIODICAL: Steklo i Keramika, 1957, Nr 12, pp. 20 - 21 (USSR)

ABSTRACT: Up to now all attempts to establish an automatical measuring of the glass band velocity had no success. This can be explained by the fact that the suggested devices have measured only the velocity of the machines and not of the glass band itself. The change in the weight of the band curvature and different thickness of the band and other things led to the fact that the rotation velocity of the machine rolls does not agree with the linear velocity of the glass band. In 1954 the author has constructed and introduced a device in the glass works imeni Volodarskiy which effect is based upon the measuring of the times between two electric impulses. The impulses occur during the passage of a certain fraction of length of 0,5 m through the glass band. 2 impulse donors are installed in the front of themachine at the glass band output and fixed at a precise distance of 500 mm between each other. The indicator con-

Card 1/2

FEDOSOV, A.F.; BOGDANOV, Yu.I.

Indicators of the functional state of the adrenal cortex before and after the administration of ACTH in practically healthy people. Nauch. trudy Riaz. med. inst. 15:141-143 '62. (MIRA 17:5)

1. Kafedra fakul'tetskoy terapii (zav. kafedroy - prof. I.B.Likhtsiyer, nauchnyy rukovoditel' - Ya.M.Miloslavskiy) Ryazanskogo meditsinskogo instituta imeni Pavlova.

BOGDANOV, Yu.I.

Use of thick bevelled troughs in the vertical drawing of sheet glass. Stek. i ker. 22 no.2:29-30 F '65. (MIRA 18:3)

BOGDANOV, Ya. K. Cand Tech Sci

Dissertation: "Theory and Calculation of he Elastic Pendulums and Suspension Spring Used in Time Instrume..to and Gravimeters."

20/6/50

Moscow Inst of Engineers of Geodesy, Aerial Photography and Cartography.

SO Vecheryaya Moskva
Sum 71

Bogdanov, Yuriy Mikhaylovich

PHASE I BOOK EXPLOITATION

Bogdanov, Yuriy Mikhaylovich

Nauka o prochnosti (Strength of Materials) Moscow, Gostekhizdat, 1955. 54 p. (Series: Nauchno-populyarnaya biblioteka, vyp. 77) 100,000 copies printed.

Ed.: Katrenko, D.A.; Tech. Ed.: Gavrilov, S.S.

PURPOSE: The purpose of this booklet is to acquaint the general reader with the basic properties of materials

COVERAGE: This booklet presents fundamentals on the strength of materials and their resistance to deformation under bending, tension and impact loads. Characteristics of the internal structure of solid materials, their testing, and safety considerations in engineering design are discussed.

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Strength of Materials

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Strength of Materials

AVAILABLE: Library of Congress

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GO/mas
8/18/58

BOGDANOV, Yu. M.

BELYAKOV, Ivan Semenovich; KUNAYEV, I., kandidat tekhnicheskikh nauk, retsenzent; ROMANOV, A.D., inzhener, retsenzent; BOGDANOV, Yu.M., kandidat tekhnicheskikh nauk, redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor; EL'KIND, V.D., tekhnicheskiy redaktor

[Clockworks] Chasovye mekhanizmy. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1957. 335 p. (MIRA 10:8)
(Clockmaking and watchmaking)

PHASE I BOOK EXPLOITATION SOV/5240

Bogdanov, Yuriy Mikhaylovich

Pribory tochnoy mekhaniki (Instruments for Precision Mechanics) Moscow, Mashgiz, 1960. 415 p. Errata slip inserted. 20,000 copies printed.

Reviewers: I.S. Starikov, Candidate of Technical Sciences, and A.D. Romanov, Candidate of Technical Sciences; Ed.: N.P. Zakaznov, Candidate of Technical Sciences; Tech. Eds.: V.D. El'kind and A.F. Uvarova; Managing Ed. for Literature on Instrument Construction and Means of Automatization: N.V. Pokrovskiy, Engineer.

PURPOSE: This book is intended as a training manual for students in schools of higher education who are specializing in instruments for precision measurement and may also be useful to engineers and technicians engaged in the design, production, and use of measuring instruments.

COVERAGE: The book presents general information on measuring instruments and considers basic metrological and construction characteristics and operating principles of instruments for measuring time, speed, pressure and vacuum, mass flow rate, and temperature. Information on gyroscopic instruments is also given.

Card 1/11

GRYAZNOV, V.P.; BOGDANOV, Yu.P.; RZHECHITSKAYA, G.V.; TERNOVSKIY, N.S.; GRACHEV, B.K. [deceased] MERKIN, V.G.; POLEVAYA, K.G.; AKIMENKO, I.S.

Double-flow beer rectification apparatus. Spirt. prom. 28 no.7:35-37 '62. (MIRA 17:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut spirtovoy i likero-vodochnoy promyshlennosti (for Gryaznov, Bogdanov, Rzhechitskaya, Ternovskiy). 2. Lipetskiy spirtovoy zavod (for Grachev, Merkin, Polevaya, Akimenko).

GRYAZNOV, V.P.; BOGDANOV, Yu.P.

System for the thermal processing of alcohol under hydrostatic pressure. Trudy TSNIISP no.12:22-25 '62. (MIRA 17:3)

BOGDANOV, Yu.P.; GRYAZNOV, V.P.

Studying the process of beer distillation in apparatus operating under atmospheric pressure. Ferm. i spirt. prom. 31 no.7:28-33 '65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institu fermentnoy i spirtovoy promyshlennosti.

SOKOLOV, P.V.; BOGDANOV, Ye.S.; KRECHETOV, I.V.; BAGDAT'YEV, Ye.Ye.; MARATSUTS, L.S.

Results of comparative testing of automatic systems for the drying of wood. Der. prom. 14 no. 12:3-4 D '65. (MIRA 18:12)

BOGDANOV, YU. S.

Bogdanov, Yu. S. On the theory of systems of linear differential equations. Dokl. Akad. Nauk SSSR (N.S.) 104 (1955), 813–814. (Russian)

This paper deals with the characteristic numbers of Lyapunov (=c.n.). Take the system

$$\dot{x}_i = \sum p_{ij}(t)x_j \quad (i, j = 1, 2, \cdots, n), \tag{1}$$

where the p_{ij} are continuous and bounded for $t \geq t_0$. Let $\lambda_1, \cdots, \lambda_n$ in decreasing order of magnitude be the c.n. of some normal solution in the sense of Lyapunov and set

$$S = \sum \lambda_i, \quad \sigma = -S - \liminf_{t \to +\infty} \frac{1}{t} \int_{t_0}^{t} \sum p_{ii}\, dt.$$

Bogdanov, Yu. S.

It is known that $\sigma \geqq 0$, and if $\sigma = 0$ the system is said to be regular. The following properties are stated without proof.

I. $$\sigma \leqq \limsup_{t \to +\infty} \frac{n}{2t} \int_{t_0}^{t} \sum (|p_{ii}| + |p_{ik}|)\,dt$$
$$- \liminf_{t \to +\infty} \frac{1}{t} \int_{t_0}^{t} \sum p_{ii}\,dt.$$

II. If $\lambda_1', \cdots, \lambda_n'$ are in increasing order the c.n. (for a normal solution) of the system adjoint to (1) then $0 \geqq \lambda_i + \lambda_i' \geqq -\sigma$. Hence if (1) is regular $\lambda_i + \lambda_i' = 0$. III. Consider now

(2) $$y' = \sum (p_{ij} + q_{ij}) y_j.$$

If the c.n. of the q_{ij} exceed σ then (2) has the same c.n. as (1). On the basis of III and using for (2) a piecewise linear system the author describes a construction for the c.n. λ_i.

S. Lefschetz (Mexico, D.F.).

Bogdanov, Yu. S.

Bogdanov, Yu. S. Remarks on § 81 of I. G. Malkin's monograph "Theory of stability of motion". Prikl. Mat. Meh. 20 (1956), 448. (Russian)

Take a system in an n-vector x

$$\dot{x} = P(t)x, \tag{1}$$

where $P(t)$ is continuous and bounded for $t \geq 0$. Let $X(t, \tau)$ be a matrix of solutions such that $X(\tau, \tau) = 1$. Let μ_i denote the Lyapunov number of $x_{i1}(t, 0), \cdots$. Suppose that to every positive ν there correspond a positive C_ν such that whatever t, τ:

$$|x_{ik}(t, \tau)| < \begin{cases} C_\nu \exp[(\nu - \mu_i)(t - \tau)], & \text{for } 0 \leq \tau \leq t, \\ C_\nu \exp[(\nu - \mu_i)(\tau - t)], & \text{for } 0 \leq t \leq \tau. \end{cases} \tag{2}$$

According to Malkin if (1) is regular and (2) holds then the Lyapunov characteristic numbers are stable. The author shows that conditions (2) implies regularity.

S. Lefschetz (Princeton, N.J.).

Bogdanov, Ya. S. On normal systems of Lyapunov. Doklady Akad. Nauk SSSR (N.S.) 57, 215-217 (1947). (Russian)

Following Lyapunov [Liapounoff], the author considers normal systems of solutions of the linear differential equation $dX/dt = XP$, where the elements of P are continuous and bounded functions of t for $t_0 \leq t < \infty$. A necessary and sufficient condition on C that $X_1 = CX$ be normal when X is normal is given. A canonical form for $X(t_0)$ when X is normal is also given. —*R. Bellman* (Princeton, N. J.).

Source: Mathematical Reviews, 1948, Vol 9, No. 3

BOGDANOV, Yu.S. (Leningrad)

Characteristic values of simultaneous linear differential equations.
Mat.sbor. 41(83) no.4:481-498 Ap '57. (MLRA 10:7)
(Differential equations, Linear) (Eigenvalues)

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AUTHOR BOGDANOV, YU.S.,

TITLE LYAPUNOV's Norms in Linear Spaces.
(Normy LYAPUNOVA v lineynykh prostranstvakh - Russian)

PERIODICAL Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 2, pp 255-257, (U.S.S.R.)
Received 6/1957 Reviewed 6/1957

ABSTRACT The author applies the following denotation. A - linear complex, a - the elements of A, B - an n-dimensional subspace of A, b - the elements of B, $\beta = (b^1, b^2, \ldots, b^n)$ - the base of B, A - an ordered complex, the representation of A on Δ, c - a real number, C (c_j^i) - an n-dimensional matrix (i= number of the column, j number of the row)
Definition of LYAPUNOV's norm. The conditions for λ normalizing the linear complex A in LYAPUNOV's sense are given. Then the properties of LYAPUNOV's norm are named, that result from this definition. LYAPUNOV's norm is a finite-dimensional linear spa s. Any m (m>n) elements of B are linearly dependent and therefor the complex $\{\lambda b\}$ (b being any element of B different of to nil) has not more than n elements different by pairs. The following paragraphs deal with the definition of the λ-base and the existence of the λ-base. The properties of the λ-base are also named. Further paragraphs pf this paper deal deal with the following subjects. Gradual matrices (at fixed values of m_1 all nonsingular m_1, r - step matrices form a group as to the multiplication in the sense usual for matrices), the transformation of the λ-base (the base β_2 like every other system of elements out of B can be shown in the form of $\beta_2 = \beta_1 C$, where C is a real matrix), the complexes M_i (by the author denotes the

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complex of all elements of B with the λ-norm δ_1, where M_1 does not contain 0 even if $\lambda_0 = \delta_1$), the structure of M_i, the representations of A similar to λ, the invariants of the λ-similar transfomations. Finally two examples are briefly shown.
(Without illustrations).

ASSOCIATION Leningrad Department of the Mathematical Institute "V.A.STEKLOV" of the
PRESENTED BY SMIRNOV, V.I., Member of - Academy of Science of the USSR.
SUBMITTED 3.1o.1956
AVAILABLE Library of Congress
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BOGDANOV, Yu. S.

AUTHOR: BOGDANOV, Yu.S. (Leningrad) 40-5-15/20

TITLE: A Remark on a Method for Finding Periodic Solutions (Zamechaniye k odnomu metodu otyskaniya periodicheskikh resheniy)

PERIODICAL: Prikladnaya Mat. i Mekh.,1957,Vol.21,Nr 5, p.714 (USSR)

ABSTRACT: A method for the determination of periodic solutions of systems of differential equations consists in the following: A sequence of disturbances is considered together with the given system. The disturbances are to be chosen so that the periodic solutions can be determined in any algebraic way. The sequence of the right sides of the system is to converge to the right side of the initial system. If then the sequence of the periodic solutions of the disturbed systems converges against a periodic function, then this is the periodic solution of the initial system. The subject of the present paper is the proof that the initial system really possesses a periodic solution and that a sequence of disturbed systems of differential equations can always be constructed. There are no figures, no tables, and 4 references, 2 of which are Slavic.

SUBMITTED: May 10, 1957

AVAILABLE: Library of Congress

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43-7-4/18

AUTHOR: BOGDANOV, Yu.S.

TITLE: Absolute Banach Integral and Measure (Absolyutnyye integral i mera Banakha)

PERIODICAL: Vestnik Leningradskogo Universiteta, Seriya Matematiki, Mekhaniki i Astronomii, 1958, Nr 7 (2), pp 34-37 (USSR)

ABSTRACT: In the paper, already written in 1946, the author investigates the question when the integral extended by Banach [Ref.1,2] to all bounded functions (absolute Banach integral) is determined uniquely. In order that $x(t)$ is integrable uniquely in this sense it is necessary and sufficient that there exists a number sequence $\{\alpha_k\}_{k=1}^{\infty}$ of different numbers such that the function sequence

$$\left\{\frac{1}{n}\sum_{k=1}^{n} x(t+\alpha_k)\right\}_{n=1}^{\infty}$$

converges uniformly independent of t. From the integrability in the sense of Riemann there follows the integrability in the sense of Banach. From the integrability in the sense of

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Lebesgue it does not follow.
A uniquely determined measure generalized in the sense of Banach is denoted as the absolute Banach measure. The condition for the absolute measurability in this sense is not given.
1 Soviet and 3 foreign references are quoted.

SUBMITTED: 15 February 1957
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Card 2/2 1. Mathematics 2. Functions-Theory

Bogdanov, Yu. S.

BASOV, V.P.; BOGDANOV, Yu.S.; SMIRNOV, M.M.

Nikolai Pavlovich Erugin; on the occasion of the 50th anniversary of his birth. Usp.mat.nauk 13 no.2:247-251 Mr-Ap '58. (MIRA 11:4)

(Erugin, Nikolai Pavlovich, 1907-)

AUTHOR: Andreyev, A.F., Bogdanov, Yu.S. SOV/42-13-3-4/41

TITLE: On the Continuous Dependence of the Solution of the Cauchy Problem from the Initial Conditions (O nepreryvnoy zavisimosti resheniya zadachi Koshi ot nachal'nykh dannykh)

PERIODICAL: Uspekhi Matematicheskikh Nauk, 1958, Vol 13, Nr 3, pp 165-166 (USSR)

ABSTRACT: By the functions of a family X let T = [0, 1] be mapped onto a locally compact metric space P, let T P = Q. Defining X by a continuous differential system, then from the uniqueness of the solution of the Cauchy problem in X for arbitrary initial conditions of Q there follows the continuous dependence of the curves of X on the initial conditions. Myshkis and Grinfel'd [Ref 2] showed that if P is onedimensional, then this continuous dependence exists too if X cannot be defined by a continuous system; further that this continuous dependence is satisfied also "in all natural" boundary problems where the problem is examined. At the same time for n = 2 they gave an example where this continuous dependence is no longer valid. They put the question which property of the

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"natural" boundary value problems in this special example is not satisfied and causes the discontinuity of the dependence on the initial conditions. The authors assert that this property is the local compactness of the set X.
There are 2 Soviet references.

SUBMITTED: February 12, 1957