L 18129-63 EWP(j)/EWT(m)/BDS AFFTC/ASD Pc-4 RM/MAY

ACCESSION NR: AP3004571 S/0032/63/029/008/0968/0970

AUTHORS: Pechkovskaya, K. A.; Pavlova, I. P.; Sinyayeva, O. A.; Daghevskiy, M. I.

TITLE: Use of electron microscopy for evaluation of carbon black distribution in rubber mixtures

SOURCE: Zavodskaya laboratoriya, v. 29, no. 8, 1963, 968-970

TOPIC TAGS: electron microscopy, carbon black distribution, rubber mixture, tear surface, cast, aggregate

ABSTRACT: Carbon black samples were prepared from the same batch, deaggregated on a vibrator, hydrated, or treated with graphite, and then incorporated into rubber. Investigation by an electron microscope was conducted on ultra-thin slices of the rubber as well as on casts made from torn surfaces of vulcanized rubber discs. The cast method was preferred, since in making slices it was necessary to encase a small band of the sample rubber in methylmetacrylate with benzoyl peroxide as polymerization initiator, followed by incubation at 49C. This resulted in a distortion of the original structure of the sample. It was found that an increase in the surface activity of channel carbon black by

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hydration results in an increase in the average size of the carbon black aggregates, while pre-treatment with graphite has the opposite effect, due to a lowering of its surface activity. Orig. art. has: 2 pictures and 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promy*shlennosti (Scientific Research Institute of the Rubber Industry)

SUBMITTED: 00	DATE ACQ: 26Aug63	ENCL: 00
SUB CODE: CH	NO REF SOV: 001	OTHER: 000

Card 2/2

[redacted], K.A.; PAVLOVA, I.P.; [redacted], G.A.; [redacted], I.V.

Effect of the structure and nature of the carbon black surface on its dispersion in synthetic diene rubbers. Kauch. i rez. 24 no.7:33-35 Jl '65. (MIRA 18:8)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

PAVLOVA, I.P.; SINYAYEVA, O.A.; PECHKOVSKAYA, K.A.

Methodology for determining the dispersion degree of carbon black in raw compounds and vulcanizates. Kauch. i rez. 24 no.2:47-49 F '65. (MIRA 18:4)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

SINYAYKIN, I.N.

Vibrator screen for sifting sand at the rate of 8-10 cubic meters per hour. Rats. i izobr.predl. v stroi. no.70:24-25 '53. (MLRA 7:10)

(Sieves) (Sand)

SINYGINA, M. I.

"Preliminary Conclusions on investigations of vertical movements of the earth's crust from evidence of repeated leveling" (Section II) - papers submitted at 11th General Assembly of International Union of Geodesy and Geophysics, 3-13 Sep 57., Toronto, Canada.

C-3,800,146

MIKHIREV, P.A.; SINYUGIN, G.M.; KHRUSTALEV, A.A.

MPDR-0.12 loading and hauling machine. Gor. zhur. no.9:54-55 S '62. (MIRA 15:9)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR (for Mikhirev). 2. Rudnik "Emel'dzhak" kombinata Aldanslyuda (for Sinyugin). 3. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy nikelevoy promyshlennosti (for Khrustalev).
(Mining machinery)

SINYUGIN, V.M., starshiy nauchnyy sotrudnik

Advantage of mine development by long pillar method retreating on the strike. Ugol' Ukr. 5 no.1:19-22 Ja '61. (MIRA 14:1)

1. Donetskiy ugol'nyy institut.
(Coal mines and mining)

SINYUGIN, V.M.

Experience in longwall mining on strike with twin entry development. Ugol' 37 no.7:19-22 Jl '62. (MIRA 15:7)

1. Donetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Coal mines and mining)

MEDYANTSEV, A.N., kand. tekhn.nauk; KUKLIN, B.K., kand. tekhn. nauk; FILIMONOV, A.F., inzh.; BAKHTIN, A.F., inzh.; SHUSHKOV, A.M., inzh.; SINYUGIN, V.M., inzh.; CHERNYAYEV, V.I., inzh.; BEYLIN, V.Ya., inzh.; ZEL'VYANSKIY, A.Sh., inzh.; ZHIZLOV, N.I., otv. red.

[Selecting systems of multiple-horizon mining of flat seams in the Donets Basin] Vybor skhem sovmestnoi razrabotki pologikh plastov Donbassa. Moskva, Gosgortekhizdat, 1963. 106 p. (MIRA 17:5)

1. Donetsk. Donetskiy nauchno-issledovatel'skiy ugol'nyy institut. 2. Donetskiy nauchno-issledovatel'skiy ugol'nyy institut (for Kuklin). 3. Ukrainskiy filial Vsesoyuznogo nauchno-issledovatel'skogo marksheyderskogo instituta (for Medyantsev).

SINYUGIN, V.M., gornyy inzh.; USKALOV, K.A., gornyy inzh.; KORSHUNOV, V.D., gornyy inzh.; SUKHOMLINOV, I.,., gornyy inzh.

Separate conduction of stoping and development operations. Ugol' Ukr. 7 no.11:24-25 N '63. (MIRA 17:4)

SINYUGIN, V.M., gornyy inzh.; LAVRUKHIN, V.N., gornyy inzh.

Efficiency of using cutter-loaders in longwalls with a record load. Ugol' Ukr. 10 no. 1:11-14 Ja '66. (MIRA 18:12)

SOV/32-25-3-34/62

25(2)
AUTHORS: Garf, M. E., Sinyuk, I. I.

TITLE: Programmation of the Load Conditions for Tests in the Case of Crank Excitations of Dynamic Loads (Programmirovaniye silovogo rezhima ispytaniy pri krivoshipnom vozbuzhdenii dinamicheskikh nagruzok)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 3, pp 346-349 (USSR)

ABSTRACT: A machine was constructed which can be applied to programmed tests of flexure or torsion of large samples (Fig 1). It will be used in the case of tests in which for the destruction of the sample no big stress is necessary and where crank exciters can be used which automatically change the amplitude of dynamic load according to a previously chosen program. The amplitude of the excited dynamic motions is fixed by the rotation of a crankshaft, in the eccentric opening of a spindle, rotating in an immobile casing. The moments of flexure and of torsion are determined according to the deformation of a dynamometer and recorded by a microscope. The operational conditions depend on the position of a handle, directing a double gear which itself is automatically directed by an electromechanical

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Programmation of the Load Conditions for Tests in the Case of Crank Excitations of Dynamic Loads

device (Fig 2) according to a program fixed in advance. The electric control of the arrangement is regulated by a rotary drum. Precision and uniformity of the operation of the device are tested in connection with bending tests of the crankshaft of the tractor Diesel engines D-54. It is stated that the construction of the program-device permits a very rapid change of the program. Any changes with respect to tension can be carried out. The machine works steadily so that within 24 hours no variation in its operation was to be observed. There are 3 figures and 1 Soviet reference.

ASSOCIATION: Institut liteynogo proizvodstva Akademii nauk Ukrainskoy SSR (Institute of Foundry Industry of the Academy of Sciences, UkrSSR)

8(2) SOV/32-25-3-42/62

AUTHORS: Sinyuk, I. I., Filatov, E. Ya.

TITLE: Protection of Wire Pick-up Units Against the Influence of Moisture of the Surrounding Medium (Zashchita provolochnykh datchikov ot vliyaniya vlagi okruzhayushchey sredy)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 3, pp 360-361 (USSR)

ABSTRACT: A method is described for the purpose of protecting pick-up units against the influence of moisture and changes in temperature. This method consists in sticking a rubber foil onto the element and then this rubber protection is vulcanized. The above mentioned elements are used in the case of dynamic testing of the terrain on frames of combine harvesters S-4, plows PL5-25, and tractors DT-54. In order to secure a good electric insulation rubber mixtures with a 3% soot content must be used. The following working technique is recommended: as basis for the element a rubber foil is glued by using the gluer 88 or BF-4 (the former has a particular adhesiveness). Then the wire pick-up unit is glued to the basis by means of the gluers BF-2 or BF-4 (Fig 1), and finally the element is covered by rubber under consideration of the wires. The

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Protection of Wire Primary Elements Against the Influence of Moisture of the Surrounding Medium

elements thus insulated are put into an oven and the rubber insulation is vulcanized (Fig 2). The tests of the wire pick-up units thus protected had under the most different conditions in all cases positive results. There are 2 figures.

ASSOCIATION: Institut mashinovedeniya Akademii nauk Ukrainskoy SSR (Institute of Mechanical Engineering of the Academy of Sciences, UkrSSR)

SINYUK, I.I., inzh.; FILATOV, E.Ya., inzh.

Strain measurement of frame structures. Trakt.i sel'khozmash. 31 no.2:27-28 F '61. (MIRA 14:7)

(Strain gauges) (Agricultural machinery)

SINYUK, I.I.

Electronic apparatus for programming and stabilization of a load in machines with crank excitation. Zav.lab, 29 no.2:235-236 '63. (MIRA 16:5)

1. Institut liteynogo proizvodstva AN UkrSSR.
(Fatigue testing machines) (Electronic control)

1. SINYUKHIN, A. M.

2. USSR (600)

4. Barley

7. Characteristics of ontogenic development of the growing conus cells in barley. Izv. AN SSSR Ser. biol. no. 5, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

Nov/Dec 52

Sinyukhin, A. M.

USSR/Biology - Formation of Cells

"The Ontongenesis of Vegetative Cells," A. M. Sinyukhin, Chair of Darwinism, Moscow State U

Agrobiol, No 6 pp 80-91

Detailed description of expts conducted by the author who observed formation of cells from noncellular matter in the tissues of callous growths on the stems of plants in spots where peduncles were removed. Further observations will be conducted to study the mitosis frequently seen in cells adjacent to nonnuclear cells. Numerous drawings and photographs are appended.

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SINYUKHIN, A.M.

Appearance of a new ortanism within the old. Izv. Akad. nauk SSSR; Ser. Biol. no.5:16-38 Sept-Oct 1953. (CIML 25:5)

1. Department of Darwinism, Moscow State University imeni M. V. Lomonosov.

1. A. M. SINYUKHIN

2. USSR (600)

4. Barley

7. Cytological and physiological analysis of the growing point of barley. Dokl. AN SSSR 88 no. 2. 1953.

9. Monthly List of Russian Accessions, Library of Congress, ~~April~~ 1953, Uncl.

SINIUHIN, A.M. [Sinyukhin, A.M.]

Appearance of a new organism in the interior of an old organism. Analele biol 9 no.2:16-42 Ap-Je '54.

SINYUKHIN, A. M.

SINYUKHIN, A. M. --"The Changes of Cellular Properties during the Process of Callous Formation and Its Continued Growth." Moscow Order of Lenin and Labor Red Banner State U imeni M. V. Lomonosov, Faculty of Soil Biology, Moscow, 1956
(Dissertation for the degree of candiate in Biological Sciences.)

KNIZHNAY LETOPIS
No 41, October 1956

SINYUKHIN, A.M.

Nature of the variation in bioelectric potentials in the process of plant regeneration [with summary in English]. Biofizika 2 no.1: 51-66 '57. (MLRA 10:3)

1. Kafedra biofiziki Moskovskogo gosudarstvennogo universiteta im M.V.Lomonosova.
(REGENERATION (BIOLOGY)) (ELECTROPHYSIOLOGY)
(BOTANY--PHYSIOLOGY)

Sinyukhin, A.M.

20-3-43/52

AUTHOR: Sinyukhin, A. M.

TITLE: Nature of the Physiological Processes in the Callus Tissues of the Tomato Plant in the Course of Formation of the Secondary Meristem (Kharakter fiziologicheskikh protsessov v tkanyakh kallyusa tomata pri obrazovanii v nikh vtorichnoy meristemy)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 3, pp. 511-514 (USSR)

ABSTRACT: Very little examined are the physiological reactions which precede directly the formation of the secondary meristem in the callus of higher plants (Ref. 1). To effect the formation of the callus the top of the stem was cut-off above a certain leave. According to the author the intensity of the physiological processes increases in the course of the formation of the callus. At the beginning of the first stage of formation the callus increases and the bioelectric as well as the oxydative-reductive potential, rH_2 and the activity of the hydrogen ions reach their maximum (Fig. 1, Tab. 1). As compared to the original cells of the stem the buffer capacity and the capacity of the oxydative-reductive system reach maximum values (Fig. 2). In the course of the second stage of formation the cited factors have smaller

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Nature of the Physiological Processes in the Callus Tissues of the Tomato Plant in the Course of Formation of the Secondary Meristem

values and the buffer capacity as well as the capacity of the oxydative-reductive system decreases. In the course of the third stage of formation of the callus, when the inner foci of the secondary meristem are formed, the physico-chemical values, which characterise the intensity of the processes and the degree of the system-capacity, increase. The physiological changes of the tissue can be judged from the intensity of the respiration of the cells. At all experiments it was found without any exception, that at the beginning of the formation of the callus the intensity of respiration increases 14-fold. It increases untill the climax is reached (Tab. 1); then the respiration-intensity goes down again. In the course of the formation and the differentiation of the stages of growth the energy of the oxydative transformations increase again. An analogue rhythm can be observed also on the changes of the reductive activity (Fig. 3). One pecularity in the course of formation of the callus needs be pointed out specially: during the period preceding the formation of the callus life-activity of the

Nature of the Physiological Processes in the Callus Tissues of the Tomato Plant in the Formation of the Secondary Meristem

cells decreases. In the course of the primary formation of the callus the processes are very intensive, and even more intensive are the reactions during the formation of the focus of the meristem. But, to be sure, a period of minor activity as regards the physiological processes occurs between these stages. This leads to the assumption that during this period a change of the assimilation takes place. The weak life-activity of the tissue during this change is necessary for the adaption of the plant from the formation of the callus to the formation of foci of the secondary meristem, i.e. it is the bases for the differentiation of the tissues. There are 3 figures, 1 table, and 16 references, 9 of which are Slavic.

ASSOCIATION: Moscow State University im. M.V. Lomonosov, (Gosudarstvennyy universitet im. M. V. Lomonosova)

PRESENTED: June 28, 1957, by A. L. Kursanov, Academician

SUBMITTED: October 19, 1956

AVAILABLE: Library of Congress

Card 3/3

SINYUKHIN, A.M.

Role of oxidation-reduction potential variations during regenerative processes in plants [with summary in English]. Biofizika 3 no.3:295-305 '58 (MIRA 11:6)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(REGENERATION (BOTANY))
(OXIDATION-REDUCTION REACTION)
(ELECTROPHYSIOLOGY OF PLANTS)

SINYUKHIN, A.M.

Physiological characteristics of the development of nidi of secondary meristem [with summary in English]. Fiziol.rast. 5 no.6:481-487 N-D '58. (MIRA 11:12)

1. Kafedra biofiziki Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.

(Callus (Botany))

SINYUKHIN, A.M.

Jagadis Chunder Bose and Kliment Arkad'evich Timiriazev. Zhur. ob.biol. 19 no.5:320-328 S-O '58 (MIRA 11:10)

1. Laboratoriya Iskusstvennogo klimata Moskovskoy sel'skokhozyastvennoy akademii imeni K.A. Timiryazeva.
(BOSE, SIR JAGADIS CHUNDER, 1858-1937)
(TIMIRIAZEV, KLIMENT ARKAD'EVICH, 1843-1920)

GUNAR, I.I.; SIHYUKHIN, A.M.

Electrophysiological characteristics of irritability in plants. Report 1: Principles, history and methods of research. Izv.TSKhA no.4:7-22 '59. (MIRA 12:11)
(Electrophysiology of plants)
(Plants--Irritability and movements)

GUNAR, I.I.; SINYUKHIN, A.M.

Effect of action current on the circular movement of protoplasma in the cells of nitella (Nitella flexilis Ag). Izv. TSKhA no.3:7-17 '60. (MIRA 14:4)
(Nitella) (Protoplasm)

SINYUKHIN, A. M.

"Active Role of Protoplasm in the Creation of Membrane Potential."

Paper submitted for International Biophysics Congress Stockholm
31 Jul - 4 Aug. '61

Timiryazev Agricultural Acad, Moscow.

GUNAR, I.I.; SINYUKHIN, A.M.; SALNA, L.Ya.; TSAREVA, L.A.

Electrophysiological characteristics of irritability in plants [with summary in English]. Izv. TSKhA no.2:7-19 '61. (MIRA 14:8)

(Plants--Irritability and movements)
(Plants, Effect of electricity on)

SINYUKHIN, A.; SALMA, L.

Electorphysiological characteristics of the response of plants to electric stimulation [in Latvian with summaries in English and Russian]. Vestis Latv ak no.12:113-118 '61.

1. Latvijas PSR Zinatnu akademija, Mikrobiologijas instituts

SINYUKHIN, A. M.[Sinyukhin, A.M.]; SALNA, L. I.

Electrophysiological characteristics of response reactions of the plants to the action of external factors. Studii cerc biol veget 13 no.3:337-355 '61.

1. Academia agricola "K. A. Timireazev (i.e. Timiriazev)", Moscova. Comunicare presentata de N. Salageanu, membru corespondent al Academiei R.P.R., redactor responsabil "Studii si cercetari de biologie, Seria biologie vegetala."

SINYUKHIN, A.M.

M.V.Lomonosov and subsequent development of the natural science; on the 250th anniversary of his birth. Zhur. ob. biol. 22 no.5: 392-397 S-O '61. (MIRA 14:9)
(LOMONOSOV, MIKHAIL VASIL'EVICH, 1711-1765)
(SCIENCE)

SINYUKHIN, A.M.; STOLYAREK, Ya.

Changes in the rhythmic variations of bioelectric potentials in the ontogenesis of the corn coleoptile. Dokl. AN SSSR 137 no.3: 725-727 Mr '61. (MIRA 14:2)

1. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A.Timiryazeva. Predstavleno akademikom A.L.Kursanovym.
(Electrophysiology of plants) (Seedlings)

SINYUKHIN, A.M., starshiy nauchnyy sotrudnik; PETERBURGSKAYA, Ye.A.

Effect of adenosine triphosphate on the maintenance of circular movement of protoplasm in the damaged cells of Nitella. Izv. TSKHA no.2:200-205 '62. (MIRA 15:9)
(Adenosine triphosphate)
(Plants--Irritability and movements)

GUNAR, I.I.; SINYUKHIN, A.M.

The propagating wave of excitation in higher plants. Dokl. AN SSSR 142 no.4:954-956 F '62. (MIRA 15:2)

1. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A.Timiryazeva. Predstavleno akademikom A.L.Kursanovym.
(Electrophysiology of plants)

SINYUKHIN, A.M., kand.biolog. nauk; TSAREVA, L.A., starshiy laborant

Alternation of local and spreading stimulations in the rhythmic activity of a plant cell [with summary in English]. Izv. TSKHA no.3:83-93 '63. (MIRA 16:9)
(Electrophysiology of plants)

SINYUKHIN, A.M., kand. biolog. nauk

Bioelectric potentials of a plant cell. Izv. TSKHA no.5:29-36 '63. (MIRA 17:7)

GUNAR, I.I.; SINYUKHIN, A.M.

Functional significance of action currents affecting the gas exchange of higher plants. Fiziol. rast. 10 no.3:265-274 My-Je '63. (MIRA 16:6)

1. Kafedra fiziologii rasteniy i laboratoriya iskusstvennogo klimata Moskovskoy sel'skokhozyaystvennoy akademii imeni Timiryazeva.
(Electrophysiology of plants) (Plants--Respiration)

SINYUKHIN, A.M., starshiy nauchnyy sotrudnik, kand. biolog. nauch.

Electrophysiological study of phloem cells in higher plants.
Izv. TSKHA no.3:59-70 '64. (MIRA 17:11)

1. Kafedra fiziologii rasteniy Moskovskoy sel'skokhozyaystvennoy akademii imeni Timiryazeva.

L 34555-65

ACCESSION NR: AR5003961 S/0299/64/000/023/R036/R036

SOURCE: Ref. zh. Biologiya. Sv. t., Abs. 12R270

AUTHOR: Gunar, I. I.; Sinyukhin, A. M.; Ozolina, I. A.

TITLE: Role of bivalent cations in excitation of a single plant cell

CITED SOURCE: Izv. Timiryazevsk. s.-kh. akad, no. 3, 1964, 82-86

TOPIC TAGS: nitella, plant, cell, ion concentration, excitation, protoplasm flow, calcium ion, magnesium ion, substitution reaction

TRANSLATION: The possibility of substituting Mg^{2+} for Ca^{2+} in a medium was investigated with action currents generated by single nitella cells. Change in Mg^{2+} concentration from 0 to 0.006 n. had little effect on the rest potential of the cells. With the substitution of Ca^{2+} by Mg^{2+} the cells were capable of generating action currents which were expanded in form and of long duration. The cation substitution affected the excitation threshold. Mg^{2+} also affected structural changes of the protoplasm: at the moment of action current passage, the circular flow of the protoplasm did

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ACCESSION NR: AR5003961

not stop as under normal conditions, but only slowed down by 50% as compared to the movement rate for protoplasm at rest. With a tenfold reduction of K^+ in the medium and Mg^{2+} concentrations of 0 and 0.0002 n., the circular flow of protoplasm stopped in all cases when action currents were generated, but with a Mg^{2+} concentration of 0.0006 n. the flow stopped only in some of the cells. With high Mg^{2+} concentrations and a decreased K^+ level, no stoppage occurred. L. Tsofina.

SUB CODE: LS ENCL: 00

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SINYUKHIN, A.M.

Bioelectric potentials of a plant cell. Trudy MOIP. Otd. biol. 9:83-97 '64. (MIRA 18:1)

1. Laboratoriya iskusstvennogo klimata Moskovskoy sel'skokhozyaystvennoy akademii imeni K.A.Timiryazeva.

TSAREVA, L.A.; SINYUKHIN, A.M.

Alternation of local and propagating excitation in rhythmical activity of a plant cell. Trudy MOIP. Otd. biol. 9:138-147 '64. (MIRA 18:1)

L 34076-65

ACCESSION NR: AR5002997 S/0299/64/000/021/R019/R019

SOURCE: Ref. zh. Biologiya. Svodnyy tom, Abs. 11R144

AUTHOR: Sinyukhin, A. M.; Ozolina, I. A.

TITLE: Ion flows in resting and excited single plant cells

CITED SOURCE: Dokl. Rossiysk. s.-kh. akad. im. K. A. Timiryazeva, vyp. 99, 1964, 383-388

TOPIC TAGS: Nitella flexilis, plant, cell, ion flow, radioisotope, calcium, bromine, potassium

TRANSLATION: The kinetics of ion flows was studied in single cells of Nitella flexilis during rest and excitation by means of K^{42}, Ca^{45}, and Br^{82}. Thirty cells of the same age were taken for the experiment and 10 cells were placed in each Petrie cup 24 hrs before the experiment. The flow of ions in resting cells was investigated in the first 10 cells, the flow of ions was investigated in the second 10 cells, and the remaining cells were killed with 4% dinitrophenol. Square pulses with an amplitude of 1 v and 0.3 sec duration were used

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ACCESSION NR: AR5002997 0

as stimuli. In all variants of the experiments the experimental solution consisted of: $1 \cdot 10^{-3}$ n. KCl, NaCl, $CaCl_2$ and $MgCl_2$. It was shown that during excitation a redistribution of K^+, Ca^{2+} and Br^- takes place between the cells and the medium. At the same time the flows of Na^+ do not change. The outward flow of K^+ and the flow of Ca^{2+} into the cells increased during excitation. Simultaneously an increased outflow of Cl^- was observed. V. Antonov.

SUB CODE: LS ENCL: 00

Card 2/2

GUNAR, I.I.; SINYUKHIN, A.M.; OZOLINA, I.A.

Action potential of Nitella flexilis cells filled with artificial salt solutions. Dokl. AN SSSR 160 no.4:956-959 F '65.
(MIRA 18:2)

1. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A. Timiryazeva.
Submitted March 21, 1964.

GUNAR, I.I., SINYUKHIN, A.M.; OZOLINA, I.A.

Rest potential of cells of Nitella flexilis filled up with artificial salt solutions. Dokl. AN SSSR 158 no.6:1430-1433 O '64. (MIRA 17:12)

1. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A. Timiryazeva. Predstavleno akademikom A.I. Kursanovym.

[illegible], I.I., prof.; [illegible], A.M., starshiy nauchnyy sotrudnik, kand. biolog. nauk; [illegible], I.A., kand. biolog. nauk

Ionic and structural changes in excited plant cells. Izv. [illegible] no.2:68-86 '65. (MIRA 18:9)

2. Kafedra fiziologii rasteniy Moskovskoy akademii sel'skokhozyaystvennykh nauk imeni Timiryazeva.

SINYUKHIN, A.M.; OZOLINA, I.A.

Electrophysiological study of the Nitella flexilis plasmalemma. Report No.2. Electric activity of the cytoplasmic surface layer of N. flexilis cells filled with synthetic salt solutions. Biofizika 10 no.3:454-462 '65. (MIRA 18:11)

1. Laboratoriya iskusstvennogo klimata Moskovskoy sel'skokhozyaystvennoy akademii imeni Timiryazeva. Submitted Jan. 1, 1964.

BULANOV, V.Ya.; GRUSHENKO, V.K.; KRIMITSA, G.I.; MOKSHANTSEV, G.F.; PLUZHNIKOV, V.S.; SINYUKHIN, A.V.; TENYAKOV, P.T.

Preparing iron powder from alloyed scale reduced by converted natural gas. Poroshk. met. 5 no.10:2-4 O '65.
(MIRA 18:11)

1. Orenburgskiy filial Kuybyshevskogo politekhnicheskogo instituta.

SINYUKHIN, V.

New developments into production. Inform.biul. VDNKH no.4:16 Ap '65. (MIRA 18:5)

1. Glavnyy metodist pavil'ona "Lesnaya i derevoobrabatyvayushchaya promyshlennost', lesnoye khozyaystvo" na Vystavke dostizheniy narodnogo khozyaystva SSSR.

SINYUKHIN, V.Ye., inzh.

Work of women and juveniles in communication enterprises. Vest. sviazi 24 no.4:31-32 Ap '64. (MIRA 17:9)

1. Otdel truda i zarabotnoy platy Ministerstva svyazi SSSR.

SINYUKHIN, V.Ye., inzh.

Decision of the higher judicial organizations in cases concerning the wrongful dismissal of employees. Vest. sviazi 22 no.11:31-32 N '62. (MIRA 16:12)

1. Otdel truda i zarabotnoy platy Ministerstva svyazi SSSR.

SINYUKHIN, Yu. A.

SINYUKHIN, Yu. A.: "Investigation of the effect of some design factors on the service life of automobile springs". Moscow, 1955. Min Higher Education USSR. Moscow Automotive Mechanics Inst. (Dissertation for the Degree of Candidate of TECHNICAL Sciences)

SO: Knizhnaya Letopis' No. 51, 10 December 1955

SINYUKHIN, Yu.A., kandidat tekhnicheskikh nauk.

Investigating additional load on the front springs of automobiles. (MLRA 10:5)
Avt.i trakt.prom. no.4:24-27 Ap '57.

1.Moskovskiy avtomekhanicheskiy institut.
(Automobiles--Springs)

SINYUKHIN, Yu.A., kandidat tekhnicheskikh nauk.

Method of orthogonal foci used in determining deformations of leaf springs. Avt. i trakt. prom. no.5:12-16 My '57. (MLRA 10:6)

1. Moskovskiy avtomekhanicheskiy institut.
(Automobiles--Springs) (Deformations (Mechanics))

L 29204-66 EWT(1)
ACC NR: AP6007592 SOURCE CODE: UR/0119/66/000/002/0004/0006

AUTHOR: Sinyukhin, Yu. A. (Candidate of technical sciences); Skugorov, V. N. (Candidate of technical sciences)

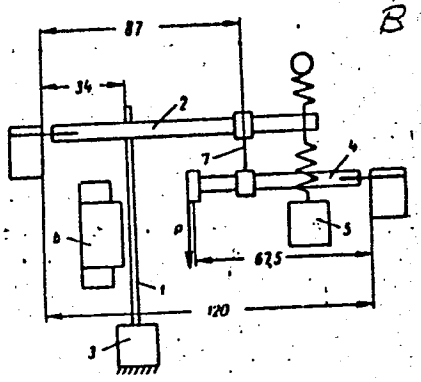
ORG: none

TITLE: Bar-type frequency transducers

SOURCE: Priborostroyeniye, no. 2, 1966, 4-6

TOPIC TAGS: frequency transducer, frequency sensor

ABSTRACT: A bar-type force-to-frequency transducer (see figure) is explored theoretically and experimentally. The frequency of the unloaded bar and the critical force at temperature t are given by these formulas: $f_{0t} = f_0\left[1+\frac{1}{2}(\alpha_E+\alpha_l)\Delta t\right]$; $P_{kt} = P_k[1+(\alpha_E+2\alpha_l)\Delta t]$. The transducer comprises steel bar 1, whose ends



Bar-type force-to-frequency transducer

UDC: 621.317.39:531.78

Card 1/2

L 29204-66
ACC NR: AP6007592

are constrained in lever 2 and frame 3; to adjust the transducer characteristic, levers 2 and 4 are provided that transform the measured force P and tension device 5 is provided that causes initial compression of the bar; magnetic unit 6 excites bar vibrations and transforms them into electric oscillations. Ribbon 7 can travel along the levers changing the force transmission ratio. An experimental model had these characteristics: measurement span, 0—1.4 kg; frequency range, 612—314 cps; basic error, ± 0.3%; temperature-caused error, 0.2% per 20C. By adapting a manometer tube, this device was turned into a pressure-to-frequency transducer for 0—4 kg/cm, 617—475 cps. Orig. art. has: 6 figures and 13 formulas.

SUB CODE: 09 / SUBM DATE: none

Card 2/2 cc

S/191/61/000/006/004/005
B101/B215

11.2320

AUTHORS: Lapshin, V. V., Sinyukhina, A. A., Koroleva, N. A.

TITLE: Determination of the casting properties of thermoplastic materials in die casting

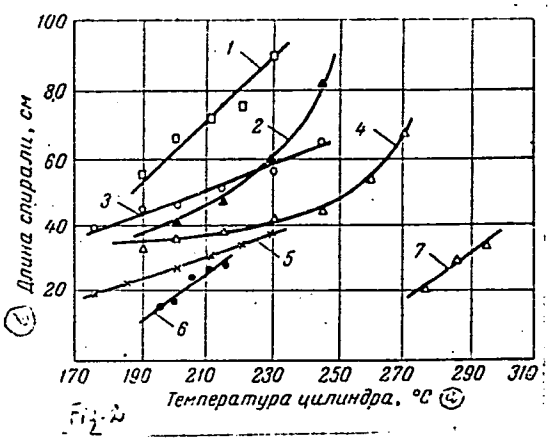
PERIODICAL: Plasticheskiye massy, no. 6, 1961, 29-33

TEXT: The conditions of the flow of polymers in die casting differ considerably from those under which viscosity is studied, since (a) the flow in die casting changes in time, and (b) the temperature of the mold is lower than that of the polymer. This is the subject of the present paper which deals with the casting properties under conditions similar to those of die casting. A mold with a semicircular channel and a radius of 2.5 mm was used. The channel had the shape of the Archimedean spiral. Besides, the mold had channels for cooling or heating, and also openings for thermocouples and thermometers. The length of the cast spiral attained in die casting was measured for various polymers. The experiments were conducted by an ЛМ-50 (LM-50) casting machine. The following experimental series were conducted: (1) constant pressure (1200 kg/cm^2), duration of casting:

90 sec; temperature of the mold: 25°C; varied temperature of the cylinder of the casting machine; (2) constant temperature of the cylinder, duration of casting: 90 sec; temperature of the mold: 25°C; pressure varied between 600 and 1500 kg/cm^2; (3) constant pressure (1200 kg/cm^2); duration of casting: 90 sec; constant temperature of the cylinder; varied temperature of the mold. The mean values of Figs. 2,3 were obtained under the experimental conditions of (1). In the case of block polystyrene, the length of the spiral increased as pressure and temperature of the cylinder increased, but did not depend on the mold temperature. Addition of calcium stearate to styrene acrylonitrile copolymer yielded longer spirals. In the case of polyethylene, the length of the spiral and the dependence on the cylinder temperature decreased as the molecular weight increased whereas it increased with an increase in the temperature of the mold and in pressure. The results could easily be reproduced. Testing requires little material since the weight of one spiral is approximately 13 g. There are 9 figures, 3 tables, and 4 non-Soviet-bloc references.

Determination of the casting ...

Fig. 2: Length of the spiral as a function of the cylinder temperature at a piston pressure of 1200 kg/cm^2 and a mold temperature of 25°C.



Legend: (1) Block polystyrene; (2) polypropylene; (3) high-pressure polyethylene; (4) low-pressure polyethylene; (5) СНТ (SNP) impact-resistant polystyrene; (6) ПММА-ПТ (PMMA-PT) polymethyl methacrylate; (7) polycarbonate; (a) temperature of the cylinder; (b) length of the spiral, cm.

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Determination of the casting ...

Fig. 3: Length of the spiral as a function of the cylinder temperature at a piston pressure of 1200 kg/cm^2 and a mold temperature of 25°C.

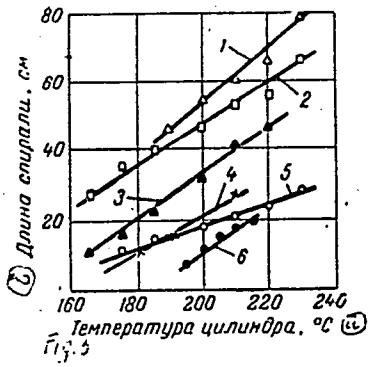

Fig. 3

Legend: (1) Block polystyrene; (2) polystyrene with nitrile rubber ПКНД-10 (PKND-10); (3) copolymer of styrene with acrylonitrile СНАК-15 (SNAK-15); (4) МСН (MSN) copolymer (a copolymer of styrene, acrylonitrile, and methyl methacrylate; (5) СНП (SNP) impact-resistant polystyrene; (6) ЛП-2 (LP-2) polymethyl methacrylate; (a) temperature of the cylinder; (b) length of the spiral, cm.

Card 4/4

LAPSHIN, V.V.; [redacted]INYUKHINA, A.A.; KOROLEVA, N.A.

Shrinkage of low-pressure polyethylene during compression molding.
Plast.massy no.2:27-30 '62. (MIRA 15:2)
(Polyethylene) (Plastics--Molding)

SINYUKHINA, L.A.

RACHINSKIY, V.V., starshiy nauchnyy sotrudnik; SINYUKHINA, L.A., nauchnyy sotrudnik.

Using tracer methods in studying the effect of light intensity on the intake of mineral substances by plants (experiments with isotopes of sulphur - 35). Izv. TSKhA no.2:83-98 '56. (MLRA 9:12)

(Radioactive tracers) (Plants, Effect of light on) (Minerals in plants)

BEZUKHOV, N.I.; BAZHANOV, V.L.; GOL'DENBLAT, I.I., doktor tekhn.nauk, prof., red.; NIKOLAYENKO, N.A.; SINYUKOV, A.M.; SINITSYN, A.P., doktor tekhn. nauk, prof., retsenzent

[Calculations for strength, stability, and vibrations at high temperatures] Raschety na prochnost', ustoichivost' i kolebaniia v usloviiakh vysokikh temperatur. [By] N.I.Bezukhov i dr. Moskva, Mashinostroenie, 1965. 566 p. (MIRA 18:3)

L 55159-65 EWT(d)/EPA(s)-2/EWT(m)/EWP(w)/EPF(c)/EWG(v)/EWP(c)/EWA(d)/EWP(v)/EPR/EWP(j)/T/EWP(t)/EWP(k)/EWP(h)/EPA(bb)-2/EWP(z)/EWP(b)/EWP(l)/EWA(h)/EWA(l) Pc-4/Pe-5/Pf-4/Pr-4/Ps-4/Pt-7/Peb IJP(c) JD/WW/HW/EM/RM

AM5013205 BOOK EXPLOITATION UR/ 621:539.4.001.24:536.4

Bezukhov, N. I.; Bazhanov, V. L.; Gol'denblat, I. I. (Doctor of Technical Sciences; Professor); Nikolayenko, N. A.; Sinyukov, A. M.

Calculations of strength, stability, and vibrations under high temperature conditions (Raschety na prochnost', ustoychivost' i kolebaniya v usloviyakh vysokikh temperatur) Moscow, Izd-vo "Mashinostroyeniye" 1965. 0566 p. illus., biblio. Errata slip inserted. 6000 copies printed.

TOPIC TAGS: structure strength, structure stability, structure vibration, thermal elasticity, thermal plasticity, creep thermal stress

PURPOSE AND COVERAGE: This book is intended for engineer-designers and scientific workers. It may also be used by students of schools of higher technical education as a supplementary text for studying the theory of thermal stresses. Methods of calculating the strength,

which are exposed to large high-temperature gradients are described.

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AM5013205

TABLE OF CONTENTS (Abridged):

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AM5013205

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PART II. BASIC EQUATIONS OF THERMAL ELASTICITY, PLASTICITY AND CREEP

PART III. NONUNIFORMLY HEATED PLATES AND TURBINE BLADES

PART IV. NONUNIFORMLY HEATED THIN-WALL ROTATION SHELLS

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AM5013205

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L 55159-65

AM5013205

Appendix 7. Fiber-glass reinforced plastics -- 553

Appendix 8. Hyperbolic circumferential functions -- 561

Bibliography -- 561

SUB CODE: MM, IE SUBMITTED: 14Dec64 NO REF SOV: 276

OTHER: 079

Card 6/6

SINYUKOV, M.I., kand. ekon. nauk.

Economic effectiveness of growing grain on virgin and idel land [with summary in English]. Izv. TSKhA no.6:203-210 '57. (MIRA 11:3)
(Reclamation of land) (Grain)

LOZA, G.M., prof.; BUZILOV, Yu.T., dots.; GROMOV, M.M., dots.; NIKIFOROV, M.A., dots.; FEFELOV, V.P., kand. ekon. nauk; SINYUKOV, M.I., dots.; SAL'KOVA, A.D., dots.; GRANDITSKIY, P.A., dots.; TIKHONOVA, Ye.M., red.

[Practical aid for the organization and planning of production on collective and state farms] Praktikum po organizatsii i planirovaniiu proizvodstva v kolkhozakh i sovkhozakh. Moskva, Kolos, 1965. 526 p. (MIRA 18:5)

S/109/62/007/008/013/015
D409/D301

9.4310

AUTHORS: Avak'yants, G.M., Pavlinov, A.B., Sablikov, V.A., Sinyukov, M.P. and Yurovskiy, A.V.

TITLE: Study of thermal effects in germanium power transistors

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 8, 1962, 1421-1426

TEXT: The dependence of the triode parameters on the heat, released at the collector junction, is studied theoretically and experimentally. The condition for the appearance of falling characteristics in the non-stationary regime, is obtained. Formulas are derived for the emitter and collector currents, the current gain α, the feedback coefficient μ, the collector conductivity g_c, and the emitter conductivity g_e. As a result of the heat release, falling characteristics appear in both the emitter and collector circuits. The experimental setup for the study of the non-isothermic current-voltage characteristics is described. The transistors П209 (P209)

Card 1/2

Study of thermal effects ...

and П210А (P210A) were used in the experiments. It was experimentally confirmed that the cooling of the transistors follows Newton's law. It was found that the current gain α depends weakly on temperature and that μ changes by almost one order of magnitude as a result of the heating. (The temperature increase amounted to 20 - 30°K). The experimental and theoretical curves for g_c were in good agreement. The conditions for the appearance of falling characteristics in the non-stationary regime, are analyzed by means of the graph W_c versus Δt (W_c denoting the power dissipated by the collector at the critical point). Conclusions: Formulas are derived for the dependence of the transistor parameters on the heat, released at the collector; these formulas can be simplified in actual conditions. The heat release at the collector junction and in the collector and emitter circuits, is accompanied by the appearance of falling characteristics. There are 7 figures.

SUBMITTED: November 4, 1961

Card 2/2

L 12816-63 EWT(1)/EWG(k)/EWP(q)/EWT(m)/BDS/T-2/EEC(b)-2/ES(t)-2
AFFTC/ASD/ESD-3 Pz-4/Pm-4 JD/IJP(C)
ACCESSION NR: AT3003012 S/2927/62/000/000/0243/0248

78

AUTHOR: Pavlinov, A. B.; Sablikov, V. A.; Sinyukov, M. P.; Yurovskiy, A. V.

TITLE: Investigation of thermal effects in high-power germanium transistors [Report at the All-Union Conference on Semiconductor Devices, Tashkent, 2-7 October, 1961]

SOURCE: Elektronno-dy*rochny*ye perekhody* v poluprovodnikakh. Tashkent, Izd-vo AN UzSSR, 1962, 243-248

TOPIC TAGS: Ge transistor heating, high-power Ge transistor, P209 transistor, P210A transistor

ABSTRACT: Nonisothermic current-voltage characteristics of junction transistors, under static conditions and for a common-base circuit, were theoretically studied by G. M. Avakyants (Phenomenological theory of semiconductors, Tashkent, AN UzSSR, 1960). The present article reports results of experimental verification of the above theory and results of investigation of the origin of drooping characteristics under transient conditions. Extended experimentation with the P209 and P210A transistors brought the authors to the following conclusions: (1) the current gain

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L 12816-63

ACCESSION NR: AT3003012 0

depends but little on temperature; (2) the feedback factor largely depends on temperature; (3) the input-output characteristics show that the collector conductance at a certain critical point rises to infinity and then changes sign; (4) the emitter circuit has a drooping characteristic. The following characteristics were measured: (1) collector voltage vs. emitter voltage at I_{em} = 6 ma const.; (2) emitter voltage at E_{coll} = 7 v const; (3) collector current vs. collector voltage at E_{em} = 50 mv const. Orig. art. has: 8 figures and 7 formulas.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 15May63 ENCL: 00

SUB CODE: PH, GE NO REF SOV: 001 OTHER: 003

Card 2/2

BELOV, Yu.M. (Leningrad); KASHEVSKIY, N.P. (Leningrad);
Prinimali uchastiye: SINYUKOV, F.P., inzh.; MUL'KHANOV, N.I., inzh.;
LUGOVSKOY, V.M., tekhnik; TABARENKOV, K.I., tekhnik;
PETUKHOV, V.V., tekhnik

Hard facing of iron mill rolls with a ribbon electrode.
Avtom.svar. 15 no.10:71-77 O '62. (MIRA 15:11)
(Rolls (Iron mills))
(Hard facing)

SEREDIN, V.I., starshiy prepodavatel' , kand. ekonom. nauk; SINYUKOV, M.I., dotsent, kand. ekonom. nauk

Justification for the specialization and rational combination of branches on state farms in Semipalatinsk Province. Izv. TSKHA no. 1:37-47 '65 (MIRA 19:1)

1. Kafedra organizatsii sotsialisticheskikh sel'skokhozyaystvennykh predpriyatiy Moskovskoy sel'skokhozyaystvennoy ordena Lenina akademii imeni Timiryazeva.

L 17921-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AT3002441 S/2935/62/000/000/0069/0078

AUTHOR: Novototskiy-Vlasov, Yu. F.; Sinyukov, M. P.

TITLE: Effect of adsorbed polar molecules on the surface characteristics of germanium /Report at the Conference on Surface Properties of Semiconductors, Institute of Electrochemistry, AN SSSR, Moscow, 5-6 June 1961/

SOURCE: Poverkhnostny*ye svoystva poluprovodnikov. Moscow, Izd-vo AN SSSR, 1962, 69-78

TOPIC TAGS: polar molecule, germanium, germanium surface characteristics

ABSTRACT: Although the effect of H_2O molecules adsorbed by Ge was the aim of the investigation, other polar molecules (amyl alcohol, isoamyl alcohol, chlorobenzene, nitrobenzene) were used in the adsorption experiments in order to eliminate possible ambiguity of interpretation. Specimens of p-Ge with a resistivity of 28-30 ohms.cm and a volume lifetime of 500-700 microsec were tested. It was found that (1) physically adsorbed water is primarily responsible for neutralization of surface recombination centers; (2) the electric field of a polar molecule that approaches a recombination center drastically changes the capture cross section affecting but little the energy position of the center; (3) the center becomes a

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L 17921-63
ACCESSION NR: AT3002441

slow surface state; (4) the neutralization process is limited not only by diffusion of molecules through the oxide film but also by the process of fixation of the dipole near the recombination center. "The authors are thankful to A. V. Rzhanov for his constant interest in the work and useful discussion of its results." Orig. art. has: 1 formula and 1 table.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Institute of Physics, AN SSSR)

SUBMITTED: 00	DATE ACQ: 15May63	ENCL: 00
SUB CODE: PH	NO REF SOV: 006	OTHER: 000

Card 2/2

L 12830-63 EWT(l)/EWG(k)/EWP(q)/EWT(m)/BDS/T-2/EEC(b)-2/ES(t)-2
AFFTC/ASD/ESD-3 Pz-4/Pm-4 JD/IJP(C)

ACCESSION NR: AT3003026 S/2927/62/000/000/0315/0318

AUTHOR: Yurovskiy, A. V.; Sinyukov, M. P.

TITLE: Behavior of diffusion-base germanium transistors in gamma-ray field [Report at the All-Union Conference on Semiconductor Devices, Tashkent, 2-7 Oct., 1961]

SOURCE: Elektronno-dy*rochny*ye perekhody* v poluprovodnikakh. Tashkent, Izd-vo AN UzSSR, 1962, 315-318

TOPIC TAGS: germanium transistor, gamma-ray field

ABSTRACT: Effects of gamma rays on the parameters of a type P-403 germanium transistor were studied; current gain, output conductance, and reverse collector current were measured. Gamma-ray sources of 2 r/sec and 100 r/sec were used. Irradiation in the weak channel, with doses up to 76,000 r, did not change the transistor parameters. With higher doses, the current gain did not appreciably change; the output conductance sharply increased at 3 million r and up; the reverse current varied widely between 3 and 7 million r. Wide variations from specimen to specimen were also observed. Increase in the collector current is explained by the appearance of new surface channels; increase in the output conductance, by the reverse collector curret leakage.

Card 1/2

SINYUKOV, N.S.

USSR/Mathematics - Tensor analysis

Card 1/1 : Pub. 22 - 5/44

Authors : Sinyukov, N. S.

Title : On geodetic mapping of Riemannian spaces on symmetrical Riemannian spaces

Periodical : Dok. AN SSSR 98/1, 21-23, Sep 1, 1954

Abstract : Proofs of two theorems dealing with the so-called trivial and non-trivial geodetic mapping of Riemannian spaces on symmetrical Riemannian spaces are given. Definitions of trivial and non-trivial mappings are included. Three references (1948-1953).

Institution : Moscow State University im. M. V. Lomonosov

Presented by : Academician A. N. Kolmogorov, June 9, 1954

SINYUKOV, N. S.

SINYUKOV, N. S.: "On the geodetic reflex of Riemann space". Moscow, 1955. Moscow State U imeni M. V. Lomonosov. (Dissertation for the Degree of Candidate of Physicomathematical Sciences)

SO: Knizhnaya Letopis', No. 40, 1 Oct 55

SINYUKOV, N. S.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress (Cont.) Moscow, Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.

Card 54/80

SINJUKOV, N. S. [illegible]

SUBJECT USSR/MATHEMATICS/Geometry CARD 1/1 PG - 641
AUTHOR SINJUKOV N.S.
TITLE Normal geodesic mappings of Riemannian spaces.
PERIODICAL Doklady Akad.Nauk 111, 766-767 (1956)
reviewed 3/1957

By geometric considerations the author markes out a subclass from the totality of geodesic mappings of Riemannian spaces. The mappings of this subclass are denoted as normal geodesic mappings. In a theorem the author formulates the necessary and sufficient conditions that a Riemannian space V_n admits the introduced normal mappings. If $\overline{V}_n$ with the measure tensor $\overline{g}_{ij}$ is a geodesic mapping of V_n with the measure tensor g_{ij}, then it is stated that every non-trivial mapping of this kind is normal if the matrix $\|g g_{ij} - \overline{g}_{ij}\|$ possesses simple elementary divisors only. On the other hand therewith the class of normal mappings is not scooped. But it is smaller than the class of all non-trivial geodesic mappings at all.

SINYUKOV, N.S.

One invariant transformation of Riemann spaces having the same geodesics. Dokl.AN SSSR 137 no.6:1312-1314 Ap '61. (MIRA 14:4)

1. Odesskiy gosudarstvennyy universitet imeni I.I.Mechnikova, Predstavleno akademikom A.N.Kolmogorovym.
(Spaces, Generalized) (Transformations (Mathematics))

L 17531-63 EWT(d)/EWT(l)/FCC(w)/BDS AFFTC/IJP(C) TF

ACCESSION NR: AP3004412 S/0020/63/151/004/0781/0782

AUTHOR: Sinyukov, N. S. 59 55

TITLE: Almost geodesic transformations of affine-connected and Riemann spaces 16

SOURCE: AN SSSR. Doklady, v. 151, no. 4, 1963, 781-782.

TOPIC TAGS: geodesic transformation, Riemann space.

ABSTRACT: A necessary and sufficient condition that a transformation be linear and almost geodesic for the Riemann spaces V_n and V_n is

$$ds^2 = edx^2 + F\tilde{ds}^2$$

where $e = \pm 1$; F is an arbitrary function of $x^1, x^2, \ldots, x^n$; $\tilde{ds}^2$ is an arbitrary metric V_{n-1} in the manifolds $x^2, x^3, \ldots, x^n$.

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L 27531-63

ACCESSION NR: AP3004412

In the case of affine-connected spaces, for which the minimal dimension of the field of parallel areas E_k passing through the tangent vector is $k>2$ ($<n$), it is possible to obtain analogous generalizations of the theory of n-k projective spaces. "In conclusion, I take this opportunity to express my deep acknowledgement to professors S. P. Finikov, I. P. Yegorov and A. M. Vasil'yev for their considerations to this work." Orig. art. has: 7 formulas.

ASSOCIATION: Odesskiy gosudarstvenny*y universitet im. I. I. Mechnikova (Odessa State University).

SUBMITTED: 22Jan63 DATE ACQ: 21Aug63 ENCL: 00

SUB CODE: MM NO REF SOV: 003 OTHER: 001

Card 2/2

S/0166/63/000/005/0090/0094

ACCESSION NR: AP4002547

AUTHORS: Lyutovich, A. S.; Sinyukov, V. A.; Mamanov, O. A.; Suvorov, A. N.; Gudoshnikov, A. V.

TITLE: Investigation of purity and structural perfection of monocrystalline silicon by measuring Hall effect in whole ingots

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matem. nauk, no. 5, 1963, 90-94

TOPIC TAGS: silicon, monocrystalline silicon, silicon purity measurement, Hall effect

ABSTRACT: The crystal purity in single crystal silicon has been investigated by measuring the Hall effect in whole ingots. The study is based on the expression for the mobility μ of the charge carriers as a function of the Hall emf V_x, thus

$$\mu = \frac{V_x S}{HIpd},$$

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ACCESSION NR: AP4002547

where H - magnetic field, ρ - resistivity, d - ingot diameter, S - cross-section area, I - current in ma. The experiment was performed with bars 3-25 cm long and 1-2.5 cm in diameter. After Hall emf measurements on the complete specimen were completed several smaller specimens were cut out and the measurements repeated. The results show the possibility of Hall measurements directly on the whole specimen, without any need for cutouts or incisions (which in turn show the expected relationship between p, n and μ). The dislocation distribution shows large dislocation densities at the start of the ingot, close to the nucleus, gradually decreasing toward the end. Orig. art. has: 3 formulas and 3 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR (Physical-Technical Institute AN UzSSR)

SUBMITTED: 30Jul63 DATE ACQ: 07Jan64 ENCL: 00

SUB CODE: PH NO REF SOV: 001 OTHER: 002

Card 2/2

ACCESSION NR: AP4044797 S/0166/64/000/003/0074/0075

AUTHOR: Lyutovich, A. S., Sinyukov, V. A., Mamanov, O. A., Suvorov, A. N., Gudoshnikov, A. V.

TITLE: Controlling the quality of polycrystalline silicon by measuring its electrophysical parameters

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 3, 1964, 74-75

TOPIC TAGS: polycrystal, monocrystal, electrophysical parameter, conductivity, charge carrier, resistivity, silicon, polycrystalline silicon

ABSTRACT: The paper describes the quality control of polycrystalline silicon by measurement of electrophysical parameters such as the type of conductivity, specific resistance, concentration of charge carriers and their mobility. The method described for polycrystals is, in principle, the same as the analogous control technique for monocrystals. Studies have shown, however, that the specific resistance of polycrystals should be measured at higher current densities than with monocrystals. Figure 1 in the Enclosure shows some of the experimental results. Orig. art. has: 2 figures.

Card 1/3

ACCESSION NR: AP4044797

ASSOCIATION: Fiziko-tekhnicheskiy Institut AN UzSSR(Institute of Physics and Technology, AN Uz SSR)

SUBMITTED: 04Dec63 ENCL: 01

SUB CODE: IC NO REF SOV: 002 OTHER: 001

Card 2/3

LYUTOVICH, A.S.; SINYUKOV, V.A.; MAMANOV, O.A.; SUVOROV, A.N.; GOLOSHNIKOV, A.V.

Measuring the specific resistance of high-resistance silicon. Dokl. AN Uz.SSR. 21 no.3:14-17 '64.

(MIRA 19:1)

1. Fiziko-tekhnicheskiy institut AN UzSSR. Submitted July 31, 1963.