KAGAROV, I.

"Application of electronics in industry. Tr. from the Russian." Elektrotechnika, Budapest, Vol. 47, No. 4, Apr. 1954, p. 116.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, L.C.

KAGANOV, Izrail' L'vovich, professor, doktor tekhnicheskikh nauk;
ANTIK, I.V., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor.

[Electronic and ionic converters (fundamentals of industrial electronics)] Elektronnye i ionnye preobrazovateli; osnovy promyshlennoi elektroniki. Moskva, Gos.energ.izd-vo. Pt. 2, [Ionic appratus] Ionnye pribory 1955. 456 p. (MLRA 9:1)
(Electric current rectifiers)

KAGANOV, Izrailʹ Lʹvovich, professor, doktor tekhnicheskikh nauk; ANTIK, I.V., redaktor; MEDVEDEV, L.Ya., tekhnicheskiy redaktor; FRIDKIN, L.M., tekhnicheskiy redaktor

[Electronic and ionic converters; the foundation of industrial electronics] Elektronnye i ionnye preobrazovateli; osnovy promyshlennoi elektroniki. Moskva, Gos. energ. izd-vo. Pt.3. [Feed and control circuits for ionic instruments] TSepi pitaniia i upravleniia ionnykh priborov. 1956. 528 p. (MLRA 10:2)
(Electronic instruments)

ALEKSANDROV, A.G., dots; ARONOVICH, I.S., inzh.; BABIKOV, M.A., doktor tekhn.nauk; BATUSOV, S.V., kand.tekhn.nauk; BEL'KIND, L.D., doktor tekhn.nauk; VENIKOV, V.A., doktor tekhn.nauk; VESELOVSKIY, O.N., kand.tekhn.nauk; GOLOVAN, A.T., doktor tekhn.nauk; GOLUBTSOVA, V.A., doktor tekhn.nauk; GREYNER, L.K., inzh.; GRUDINSKIY, P.G., prof.; GUSEV, S.A., inzh.; DMOKHOVSKAYA, L.F., kand.tekhn.nauk; DROZDOV, N.G., doktor tekhn.nauk; IVANOV, A.P., doktor tekhn.nauk [deceased]; KAGANOV, I.L., doktor tekhn.nauk; KERBER, L.L., inzh.; KOCHENOVA, A.I., kand.tekhn.nauk.; LARIONOV, A.N.; MINOV, D.K., doktor tekhn.nauk; NETUSHIL, A.V., doktor tekhn.nauk; NIKULIN, N.V., kand.tekhn.nauk; NILENDER, R.A., prof.; PAMTYUSHIN, V.S., prof.; PASYNKOV, V.V., doktor tekhn.nauk; PETROV, G.N., doktor tekhn.nauk; POLIVANOV, K.M., doktor tekhn.nauk; PRIVEZENTSEV, V.A., doktor tekhn.nauk; RADUNSKIY, L.D., inzh.; RENNE, V.T., doktor tekhn.nauk; SVENCHANSKIY, A.D., doktor tekhn.nauk; SOLOV'YEV, I.I., doktor tekhn.nauk; STUPEL' F.A. kand.tekhn.nauk; TALITSKIY, A.V., prof.; TEMNIKOV, F.Ye., kand.tekhn. nauk; FEDOROV, L.I., inzh.; FEDOSEYEV, A.M., doktor tekhn.nauk; KHOLYAVSKIY, G.B., inzh.; CHECHET, Yu.S., doktor tekhn.nauk; SHNEY-BERG, Ya.A., kand.tekhn.nauk; SHUMILOVSKIY, N.N., doktor tekhn.nauk; ANTIK, I.B., red.; MEDVEDEV, L.Ya., tekhn.red.

[The history of power engineering in the U.S.S.R. in three volumes] Istoriia energeticheskoi tekhniki SSSR v trekh tomakh. Moskva, Gos. energ. izd-vo. Vol. 2 1957

(Continued on next card)

ALEKSANDROV, A.G.--(continued) Card 2.

Vol.2. [Electric engineering] Elektrotekhnika. Avtorskii kollektiv toma: Aleksandrov i dr. 1957. 727 p. (MIRA 11:2)

1. Moscow. Moskovskiy energeticheskiy institut. 2. Chlen-korrespondent AN SSSR (for Larionov)
(Electric engineering)

KAGANOV, I.L.; OBUKHOV, S.G.

Analytic determination of nonlinear distortions in semiconductor power amplifiers. Nauch.dokl.vys.shkoly; radiotekh. i elektron,no.1:255-263 '58. (MIRA 12:1)

1. Kafedra promyshlennoy elektroniki Moskovskogo energeticheskogo instituta.
(Transistor amplifiers)

KAGANOV, I.L.; LUKIN, A.A.

Semiconductor power amplifiers fed by an alternating tension. Nauch.dokl.vys.shkoly; radiotekh. i elektron. no.1:264-274 '58. (MIRA 12:1)

1. Kafedra promyshlennoy elektroniki Moskovskogo energeticheskogo instituta.

(Transistor amplifiers)

current amplification stage with current and potential coupling, with various triodes and various loads are investigated and checked experimentally. The range of linear operation, found experimentally, corresponds fairly exactly to the computed value. 2) For amplifiers with transformer coupling also two circuit diagrams are given. Firstly the transformation ratio n is computed. In the first variant the resistances can be adapted to the input and to the output if two separate transformers are available. The subsequent stages have a common coupling transformer. Hence an adaption is only possible either to the output of the preceding or to the input of the subsequent stage. For the circuit elements the formula derived in part 1 holds. A.A.Lukin, S.G.Obukhov and L.S.Sokolov, Collaborators at the Chair of Industrial Electronics at the MEI assisted in the work. There are 12 figures, 1 table, and 7 references, 5 of which are Soviet.

GAL'PERIN, Grigoriy L'vovich; KAGANOV, Il'ya Lipovich; KASHTANOV, F., red.; KALECHITS, G., tekhn.red.

[Make greater use of the potentialities of automotive transportation; from the practices of automotive unit No.12 of the Minsk City Motor Vehicle Trust] Shirs ispol'zovat' rezervy avtotransporta; iz opyta raboty avtobazy No.12 Minskogo gorodskogo avtotresta. Minsk, Gos.izd-vo BSSR, Red. proizvodstvennoi lit-ry, 1960. 58 p. (MIRA 14:3)

(Minsk--Transportation, Automotive)

PETROV, G.N.; ROZENFEL'D, V.Ye.; KAGANOV, I.L.; PETROV, I.I.; STAROSKOL'SKIY, N.A.; TARE, B.M.

Vasilii Aleksandrovich Iz"iurov. Elektrichestvo no.7:93 Jl '60. (MIRA 13:8)
(Iz"iurov, Vasilii Aleksandrovich, 1885-)

S/105/60/000/06/17/023
B014/B011

AUTHORS: Bapat, Ya. N., Kaganov, I. L.

TITLE: A Quick-acting Semiconductor Switch and Trigger for Electronic Computers

PERIODICAL: Elektrichestvo, 1960, No. 6, pp. 76-81

TEXT: In the introduction the acceleration of the computing process is referred to as one of the principal problems facing electronic computers. The velocity of such process depends on the duration of the pulse fronts of input and output voltages. The duration of the fronts depends on the saturation of the triode bases, and a circuit with acceleration capacities was suggested (Ref. 1), which does not permit saturation. With a view to preventing saturation, a circuit operating on an unsaturated basis was suggested. This circuit is shown in Fig. 1. Here, the triodes, T_1 and T_2 are linked with the current source by way of the emitter circuit. This circuit was developed by H. S. Yourke (Ref. 2). The function of this circuit is discussed and it is stated that due to the

Card 1/3

A Quick-acting Semiconductor Switch and Trigger for Electronic Computers

S/105/60/000/06/17/023
B014/B011

in Fig. 11. Its advantages are briefly discussed. There are 11 figures and 4 references: 2 Soviet and 2 American.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineering)

SUBMITTED: March 10, 1960

/c

Card 3/3

GUBENKO, T.P.; DEVYATKOV, N.D.; DOMANSKIY, B.I.; DONSKOY, A.V.; YEFREMOV, I.S.; ZHEZHERIN, R.P.; KAGANOV, I.L.; MANDRUS, D.B.; NETUSHIL, A.V.; PODGURSKIY, Ye.L.; ROZENFEL'D, V.Ye.; SVENCHANSKIY, A.D.; CHUKAYEV, D.S.; SHLYAPOSHNIKOV, B.M.

Professor G.I. Babat; obituary. Elektrichestvo no.1:94 Ja '61. (MIRA 14:4)

(Babat, Georgii Il'ich, 1911-1961)

31827
S/194/61/000/010/029/082
D222/D301

9,7100

AUTHORS: Bapat, Ya.N. and Kaganov, I.L.

TITLE: Current-switching logical elements

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 32, abstract 10 B210 (Tr. Mosk. energ. in-ta, 1961, no. 34, 5-15)

TEXT: Typical logical units, triggers and half-adders built with transistors of the alloyed and drift types are described. The calculation of these circuits is given. Experimental investigation of these elements have shown that the supply voltages can vary within ± 15% individually, without influencing the duration of the front or the delay, if the other voltages are kept constant. The parameters of elements have been found which can give high stability and speed in computers, enabling a switching speed of 5-10 mc/s to be reached when П-402 (P-402)-type transistors are used,

Card 1/2

31827
S/194/61/000/010/029/082
D222/D301

Current-switching logical elements

and 500 kc/s with the П-11 (P-11) and П-15 (P-15) transistors. 6 figures. 6 references. [Abstracter's note: Complete translation]

Card 2/2

S/194/61/000/010/031/082
D222/D301

9.4310

AUTHORS: Kaganov, I.L., Starostin, A.N. and Shustov, S.S.

TITLE: The base resistance of transistors in pulse operation

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 32, abstract 10 B213 (Tr. Mosk. energ. in-ta, 1961, no. 34, 16-23)

TEXT: In the analysis of pulse operating conditions of elements in transistorized digital computers it is necessary to take into account the time variation of base resistance. An investigation into the course of base resistance variation in a number of transistor types (П-13 (P-13), П-15 (P-15)) is described. Oscillographic studies are compared with the results of a mathematical analysis. The method used enables the time constant of carrier life in the saturation regime to be found. 3 figures. 4 references.
[Abstracter's note: Complete translation]

VB

Card 1/1

STEPANENKO, Igor' Pavlovich; KAGANOV, I.L., prof., retsenzent; KOSTIYENKO, A.I., red.; LARIONOV, G.Ye., tekhn. red.

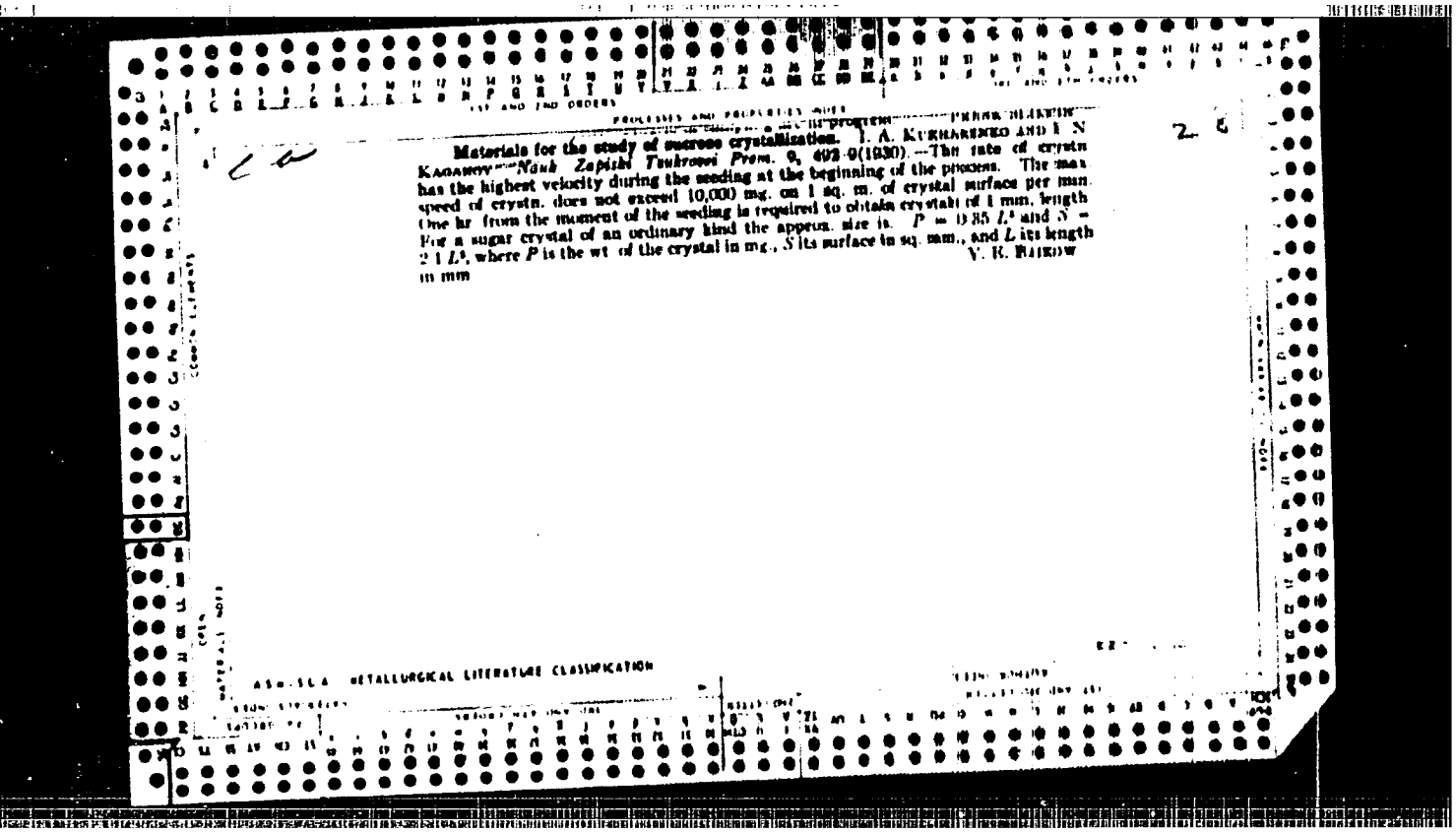
[Principles of transistor theory and transistor circuits] Osnovy teorii tranzistorov i tranzistornykh skhem. Moskva, Gosenergoizdat, 1963. 375 p. (MIRA 17:3)

KAGANOV, I.L.; KALNIBOLOTSKIY, Yu.M.

Effectiveness construction of the parameter system of large power rectifiers. Elektrichestvo no.7:70-74 Jl '65. (MIRA 18:7)

KAGANOV, I.L., doktor tekhn. nauk, prof., laureat Leninskoy premii

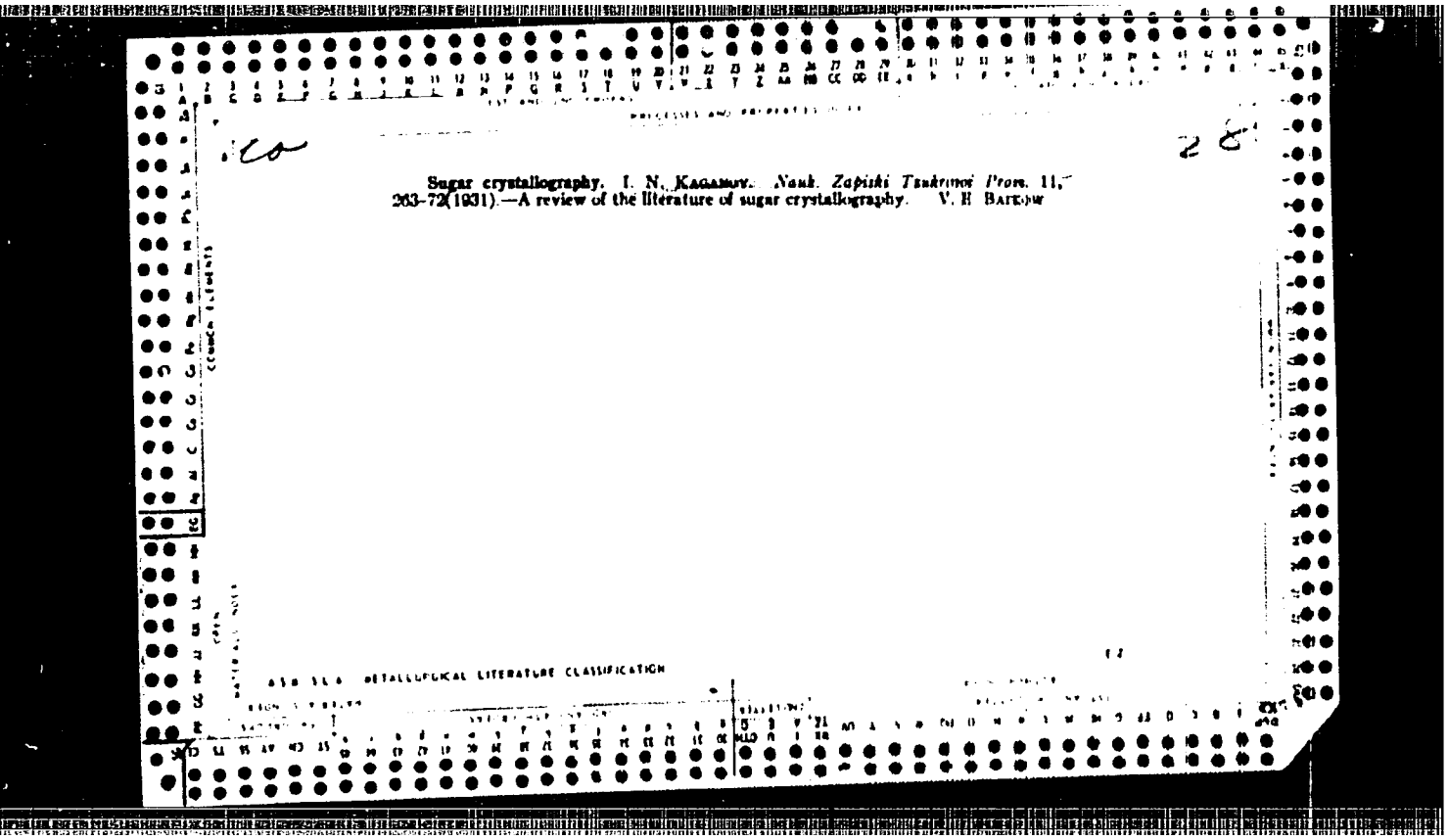
Pedagogical and scientific work of the department of industrial electronics of the Moscow Power Engineering Institute. Trudy MEI 55:5-10 '65. (MIRA 18:10)



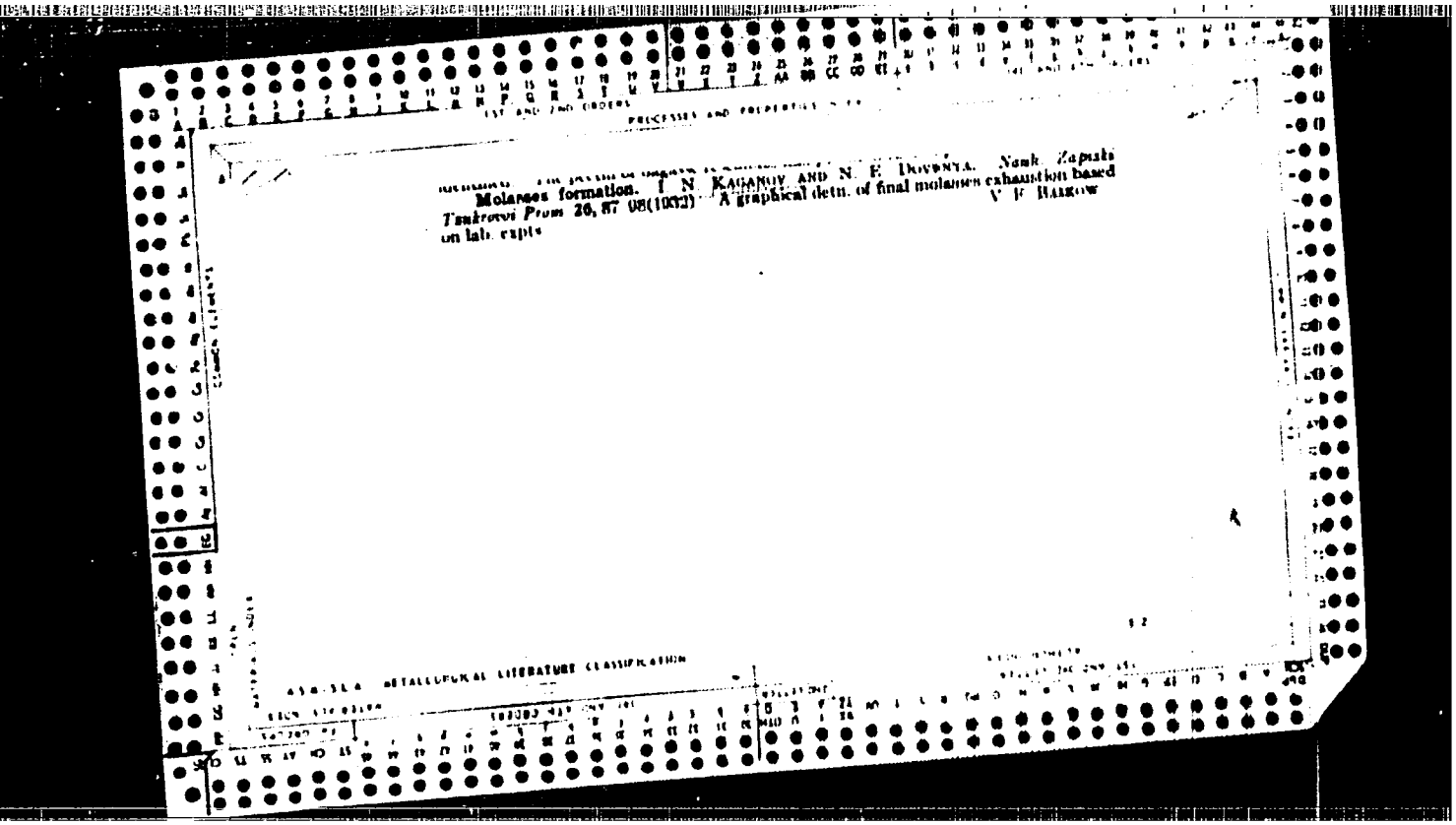
Materials for the study of sucrose crystallization. I. A. KUKHARENKO AND I. N. KAGANOV. *Nauk. Zapiski Tsukrovoi Prom.* 9, 493-9(1930).—The rate of crystn has the highest velocity during the seeding at the beginning of the process. The max. speed of crystn. does not exceed 10,000 mg. on 1 sq. m. of crystal surface per min. One hr. from the moment of the seeding is required to obtain crystals of 1 mm. length. For a sugar crystal of an ordinary kind the approx. size is $P = 0.85\ L^3$ and $S = 2.1\ L^2$, where P is the wt. of the crystal in mg., S its surface in sq. mm., and L its length in mm.

V. K. BAIKOW

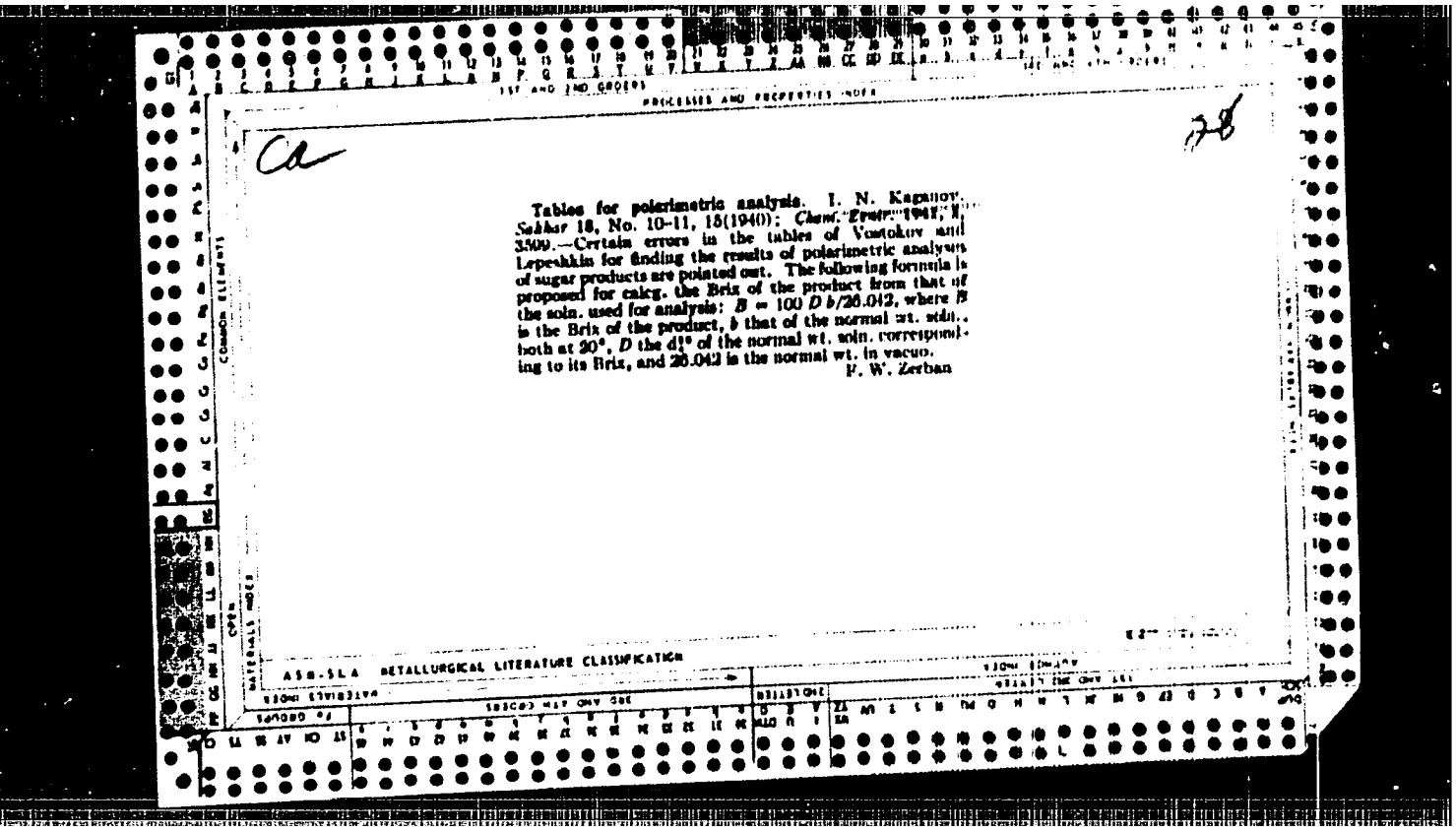
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Sugar crystallography. I. N. Kagamov. *Nauk. Zapiski Tsukrovoi Prom.* 11, 263-72(1931).—A review of the literature of sugar crystallography. V. H Barrow

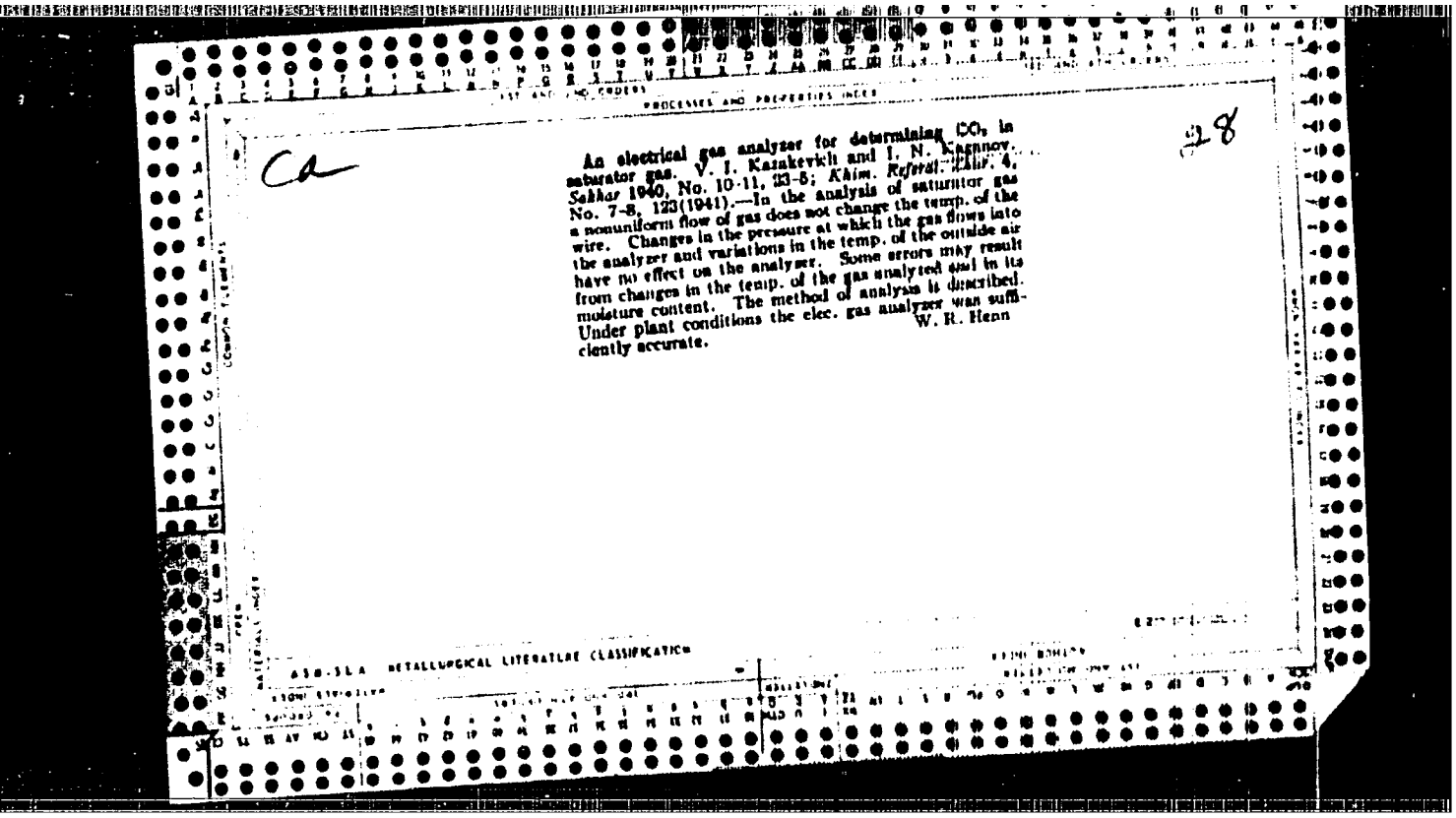


Molasses formation. T. N. KAGANOV AND N. E. DOVGNYA. *Nauk. Zapiski Tsukrovoi Prom.* 26, 87-98(1972). A graphical detn. of final molasses exhaustion based on lab. expts.



Tables for polarimetric analysis. I. N. Kapanov. *Sakhar* 18, No. 10-11, 15(1940); *Chem. Zentr.* 1941, II, 3509.—Certain errors in the tables of Vostokov and Lepeshkin for finding the results of polarimetric analysis of sugar products are pointed out. The following formula is proposed for calcg. the Brix of the product from that of the soln. used for analysis: $B = 100\,D\,b/26.042$, where B is the Brix of the product, b that of the normal wt. soln., both at 20°, D the d_4^{20} of the normal wt. soln. corresponding to its Brix, and 26.042 is the normal wt. in vacuo.

P. W. Zerban

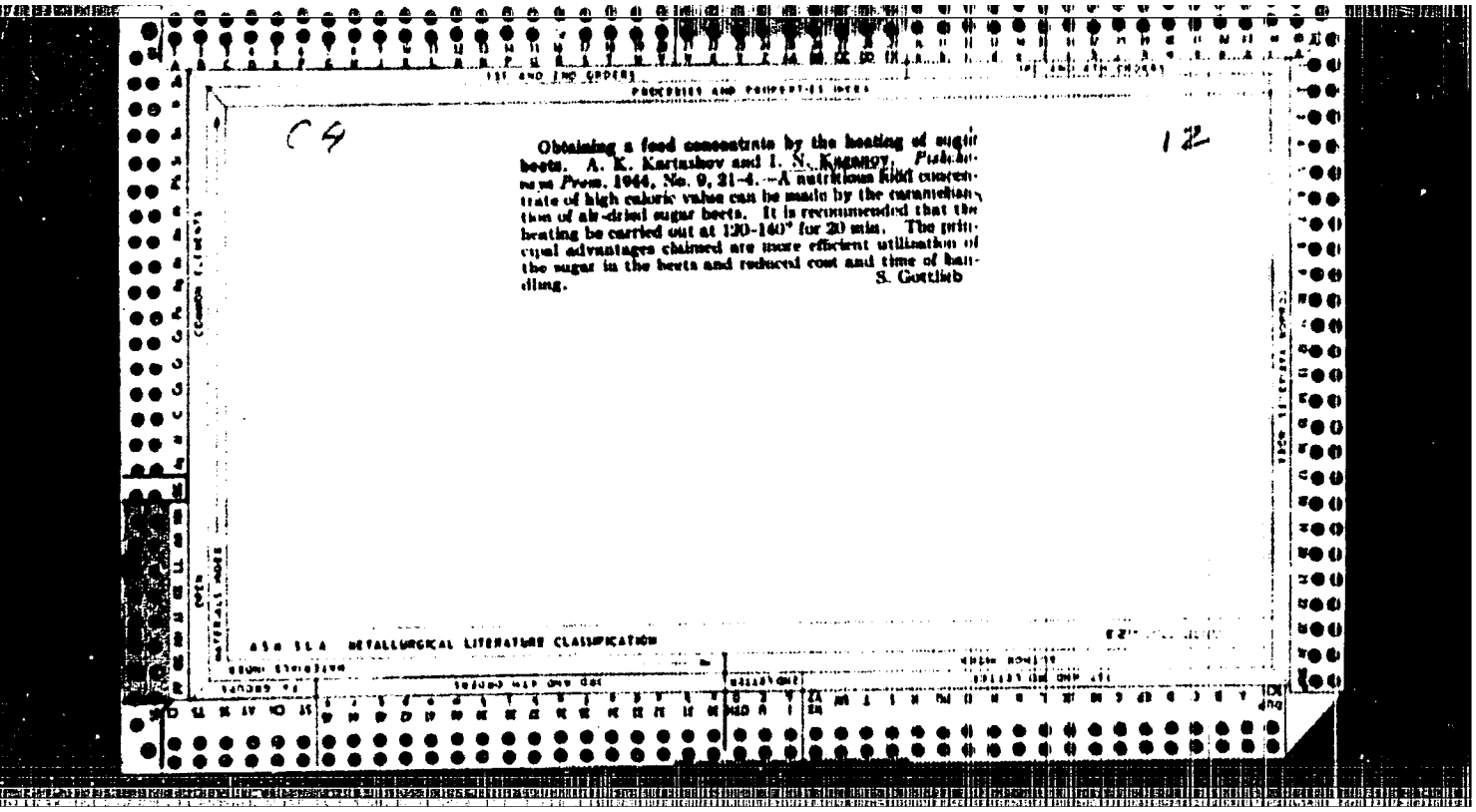


Ca

28

An electrical gas analyzer for determining CO_2 in saturator gas. V. I. Kazakevich and I. N. Kagnov. *Sakhar* 1940, No. 10-11, 33-8; *Khim. Referat. Zhur.* 4, No. 7-8, 123(1941).—In the analysis of saturator gas a nonuniform flow of gas does not change the temp. of the wire. Changes in the pressure at which the gas flows into the analyzer and variations in the temp. of the outside air have no effect on the analyzer. Some errors may result from changes in the temp. of the gas analyzed and in its moisture content. The method of analysis is described. Under plant conditions the elec. gas analyzer was sufficiently accurate.

W. R. Henn

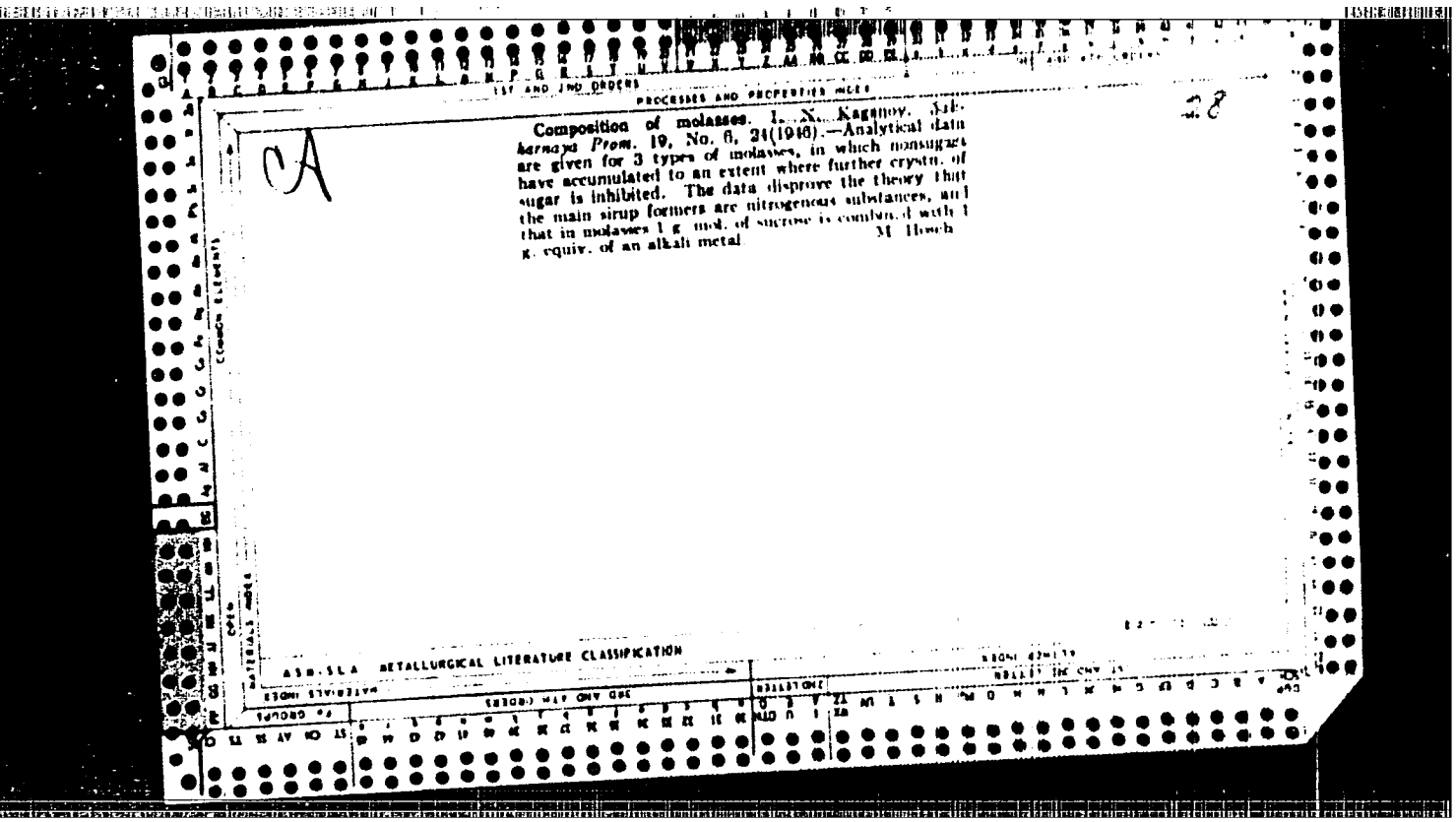


C 9

12

Obtaining a feed concentrate by the heating of sugar beets. A. K. Kartashov and I. N. Kuganov. *Pishchevaya Prom.* 1944, No. 9, 21–4.—A nutritious feed concentrate of high caloric value can be made by the caramelization of air-dried sugar beets. It is recommended that the heating be carried out at 120–140° for 20 min. The principal advantages claimed are more efficient utilization of the sugar in the beets and reduced cost and time of handling.
S. Gottlieb

ASTIA METALLURGICAL LITERATURE CLASSIFICATION

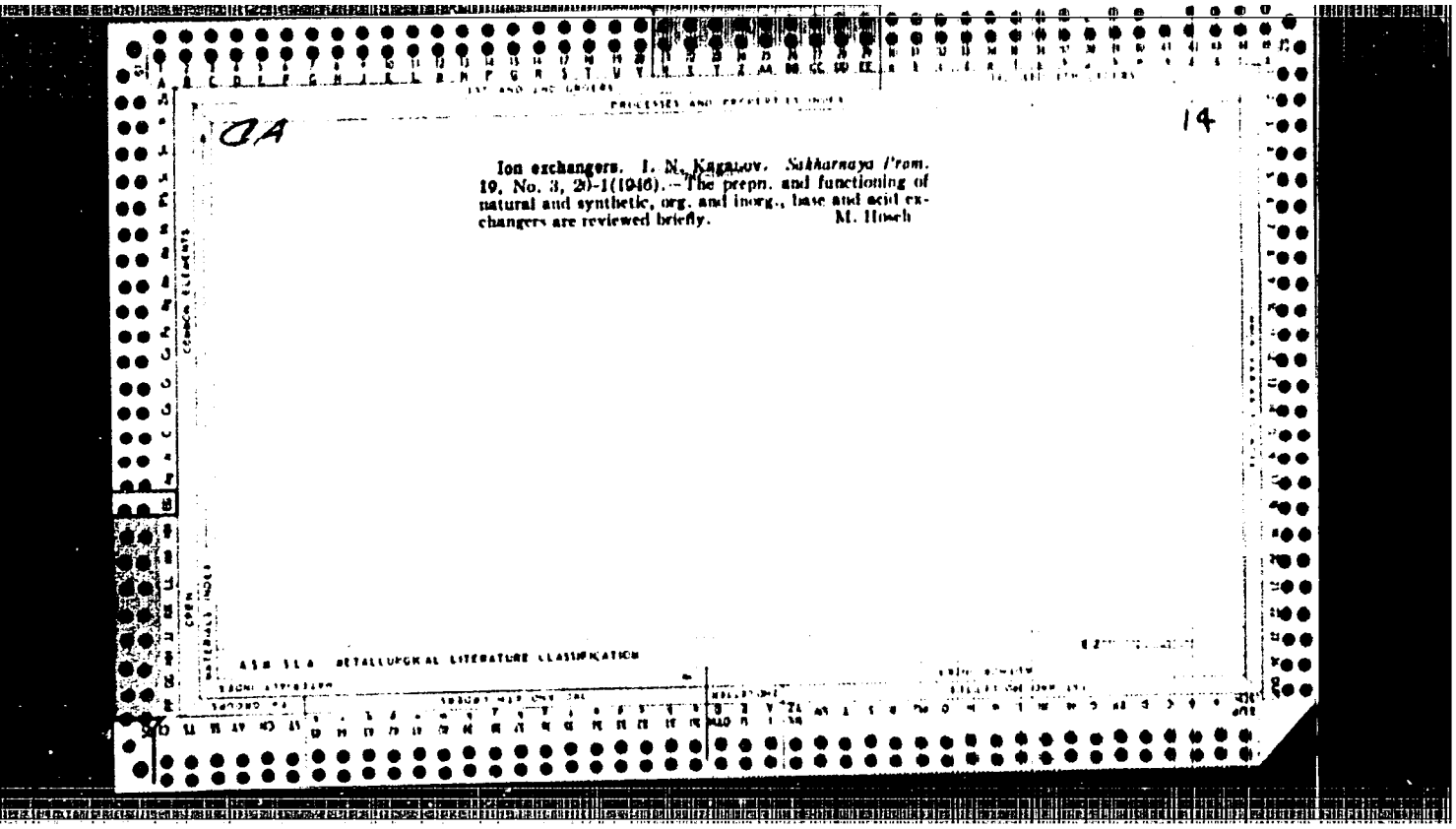


CA

28

Composition of molasses. I. N. Kagannov. Sakharnaya Prom. 19, No. 6, 21(1946).—Analytical data are given for 3 types of molasses, in which nonsugars have accumulated to an extent where further crystn. of sugar is inhibited. The data disprove the theory that the main sirup formers are nitrogenous substances, and that in molasses 1 g. mol. of sucrose is combined with 1 g. equiv. of an alkali metal. M. Hoch

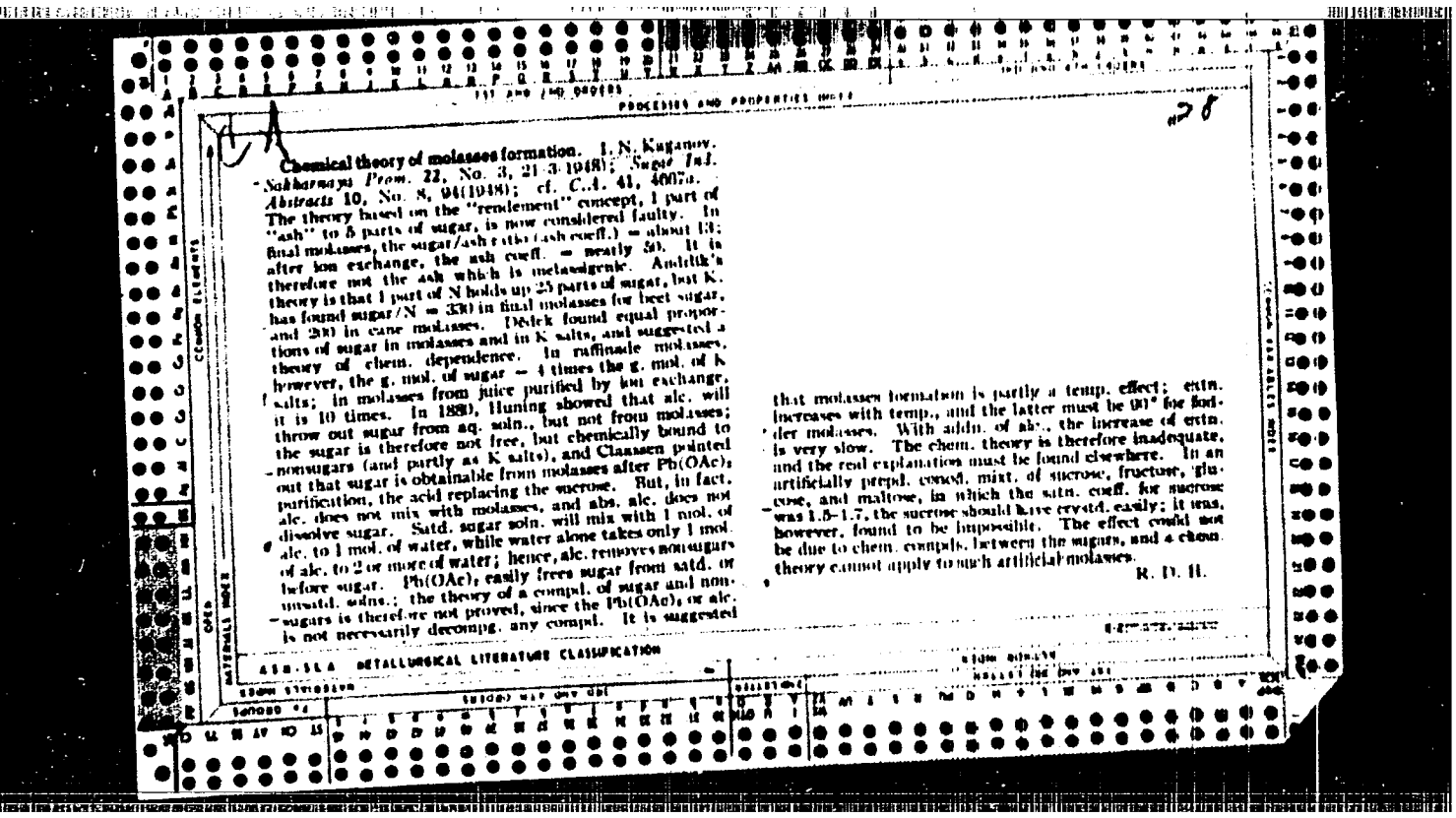
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



OA

14

Ion exchangers. I. N. Kagan.ov. *Sakharnaya Prom.* 19, No. 3, 29-1(1946).—The prepn. and functioning of natural and synthetic, org. and inorg., base and acid exchangers are reviewed briefly. M. Hosch



28

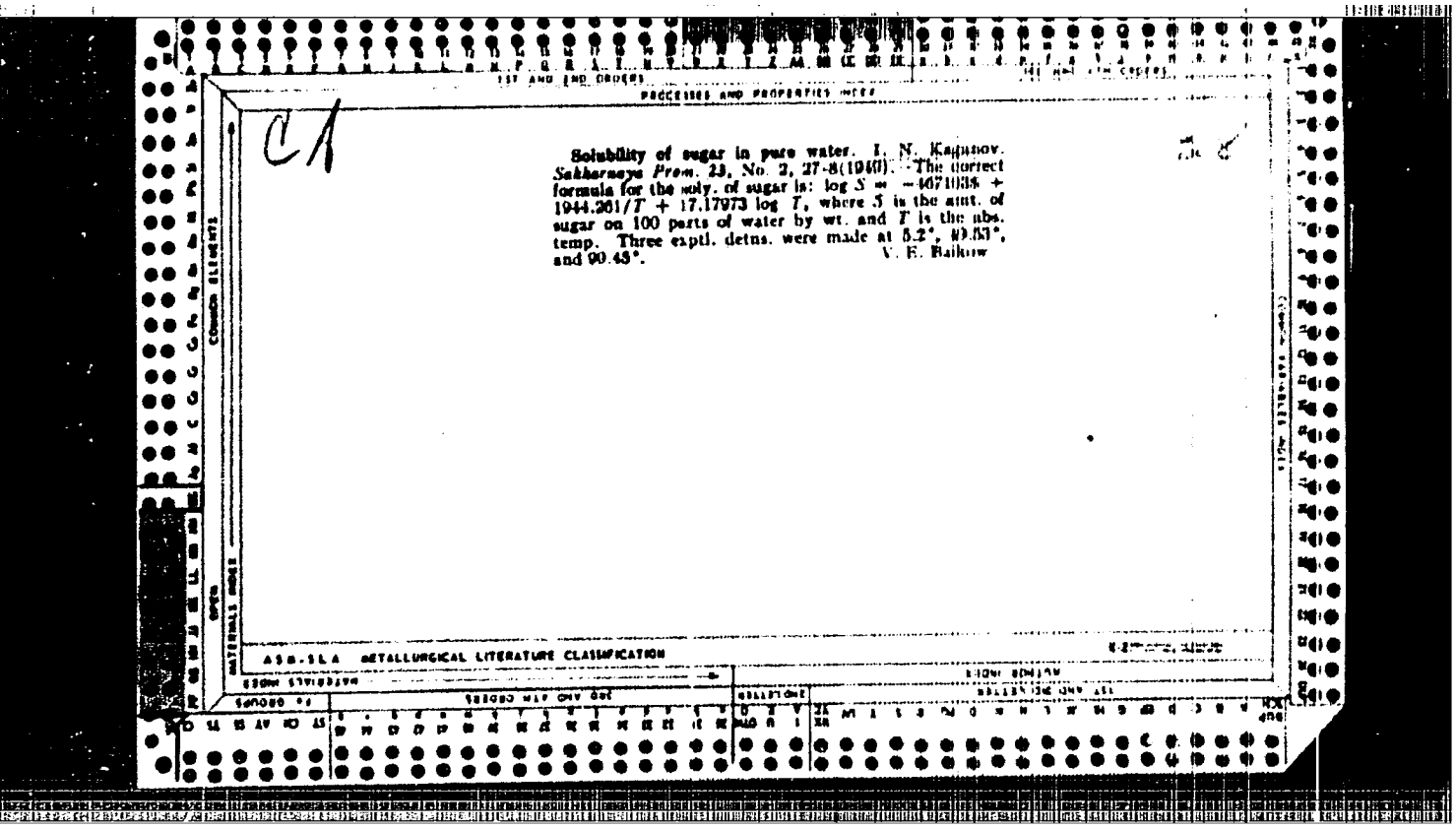
Chemical theory of molasses formation. I. N. Kuganov. *Sakharnaya Prom.* 22, No. 3, 21-3 (1948); *Sugar Ind. Abstracts* 10, No. 8, 94(1948); cf. *C.A.* 41, 4007a. The theory based on the "rendement" concept, 1 part of "ash" to 5 parts of sugar, is now considered faulty. In final molasses, the sugar/ash ratio (ash coeff.) = about 13; after ion exchange, the ash coeff. = nearly 50. It is therefore not the ash which is melanogenic. Andrlik's theory is that 1 part of N holds up 25 parts of sugar, but K has found sugar/N = 330 in final molasses for beet sugar, and 230 in cane molasses. Dedek found equal proportions of sugar in molasses and in K salts, and suggested a theory of chem. dependence. In raffinade molasses, however, the g. mol. of sugar = 4 times the g. mol. of K salts; in molasses from juice purified by ion exchange, it is 10 times. In 1880, Huning showed that alc. will throw out sugar from aq. soln., but not from molasses; the sugar is therefore not free, but chemically bound to nonsugars (and partly as K salts), and Claassen pointed out that sugar is obtainable from molasses after $Pb(OAc)_2$ purification, the acid replacing the sucrose. But, in fact, alc. does not mix with molasses, and abs. alc. does not dissolve sugar. Satd. sugar soln. will mix with 1 mol. of alc. to 1 mol. of water, while water alone takes only 1 mol. of alc. to 2 or more of water; hence, alc. removes nonsugars before sugar. $Pb(OAc)_2$ easily frees sugar from satd. or unsatd. solns.; the theory of a compd. of sugar and nonsugars is therefore not proved, since the $Pb(OAc)_2$ or alc. is not necessarily decomp. any compd. It is suggested that molasses formation is partly a temp. effect; extn. increases with temp., and the latter must be 90° for fodder molasses. With addn. of alc., the increase of extn. is very slow. The chem. theory is therefore inadequate, and the real explanation must be found elsewhere. In an artificially prepd. comod. mixt. of sucrose, fructose, glucose, and maltose, in which the satn. coeff. for sucrose was 1.5–1.7, the sucrose should have crystd. easily; it was, however, found to be impossible. The effect could not be due to chem. compds. between the sugars, and a chem. theory cannot apply to such artificial molasses.

R. D. H.

KAGANOV, I. N.

29102-Sakharoza kak Pi Shchevoy Produkt. Sakhar. Prom-st', 1949, No.8, S. 16-17

SO: Letopis' Zhurnal'nykh Statey, Vol. 39, Moskva, 1949



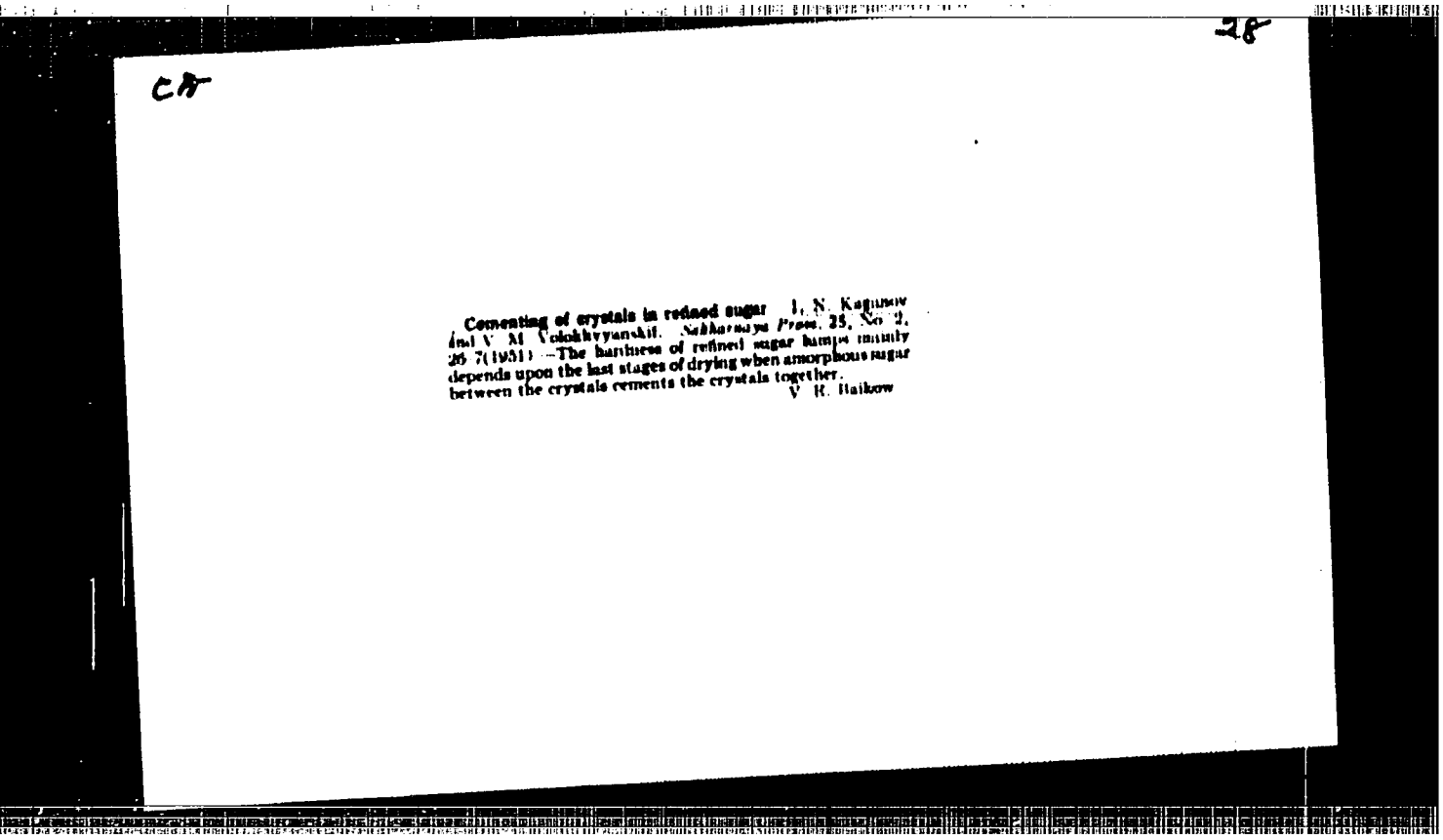
C1

Solubility of sugar in pure water. I. N. Kapunov. *Sakharnaya Prom.* 23, No. 2, 27-8(1949).—The correct formula for the soly. of sugar is: $\log S = -4071085 + 1944.201/T + 17.17973 \log T$, where S is the amt. of sugar on 100 parts of water by wt. and T is the abs. temp. Three exptl. detns. were made at 5.2°, 49.53°, and 90.45°.
V. E. Raikow

KAGANOV, I.N.

Chemical Abst.
Vol. 48
Apr. 10, 1954
Sugar, Starch, and Gums

Viscosity of sugar solutions. I. N. Kaganov. *Sakhar. Prom.* 23, No. 3, 23(1949).—By using the equation $\eta = Ae^{E/RT}$ where η is viscosity, A a const., E the molecular energy of activation of the soln. in poises, R the gas const., and T the abs. temp., a chart is constructed for computing the viscosity of sugar solns. in terms of dry substance.
O. W. Willcox



CA

28

Cementing of crystals in refined sugar. I. N. Kagunov and V. M. Volokhvyanskii. *Sakharnaya Prom.* 25, No. 2, 26-7(1951).—The hardness of refined sugar lumps mainly depends upon the last stages of drying when amorphous sugar between the crystals cements the crystals together.
V. R. Haikow

KARAVAY, I. N.

Sugar - Manufacturing and Refining

Kinetics of dissolution in concentrated sugar solutions. Sakh. prom. 26 No. 2, 1952

Monthly List of Russian Accessions, Library of Congress, June, 1952. UNCLASSIFIED.

Kaganov I. M.

The coefficient of saturation, I. M. Kaganov and [illegible] S. Tverdokhlebov. *Sakharnaya Prom.*, 33, No. 5, 53–4 (1959).—A discussion in which it is shown that the coeff. of sat., is equal to one when the ratio of nonsugars to water equals 1.32. V. E. Bakin

MTIPP

KAGANOV, I.N.

Improved centrifuge cover. Sakh. prom. 32 no. 6:75 Je '58. (MIRA 11:7)

(Centrifuges)

KAGANOV, I.N.

Coupling in a suspended centrifuge. Sakh. prom. 32 no. 6:76 Je '58.
(MIRA 11:7)

(Couplings)
(Centrifuges)

KAGANOV, I.N.; TVERDOKHLEBOV, L.S.

Exhaustion of feed molasses with an increase in its concentration. Sakh. prom. 32 no.2:22-25 F '58. (MIRA 11:3)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti (for Kaganov). 2. Stalinskaya gruppovaya laboratoriya (for Tverdokhlebov).
(Molasses) (Sugar manufacture)

TVERDOKHLEBOV, L.S.; KAGANOV, I.N.

Rate of exhaustion of concentrated feed molasses. Sakh. prom. 32 no. 7:20-22 Jy '58. (MIRA 11:8)

1. Stalinskaya gruppovaya laboratoriya (for Tverdokhlebov).
2. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti (for Kaganov).

(Sugar manufacture)
(Molasses)

KAGANOV, I.N.; TVERDOKHLEBOV, L.S.

Value of the coefficient of saturation. Sakh.prom. 33 no.3: 15-16 Mr '59. (MIRA 12:4)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti (for Kaganov). 2. Stalinskaya gruppovaya laboratoriya (for Tverdokhlebov).
(Sugar manufacture)

KAGANOV, I.N.

Calculation of the yields of sucrose and theoretical molasses.
Sakh.prom. 35 no.4:34 Ap '61. (MIRA 14:3)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
(Sucrose) (Molasses)

TUZHILKIN, V.I.; KAGANOV, I.N.

Calculating machines in the sugar industry. Sakh.prom. 37 no.7: 31-37 Jl '63. (MIRA 16:7)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
(Sugar industry) (Calculating machines)

KAGANOV, I.N.

Optimum concentration of molasses. Sakh.prom. 37 no.11:18-21 N '63. (MIRA 16:11)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.

KAGANOV, Isaak Natanovich; MIKHATOVA, Galina Nikolayevna; VOYKOVA, A.A., red.

[Chemical and technical calculations and accounting in sugar manufacture] Khimiko-tekhnicheskie raschety i uchet v sakharnom proizvodstve. Moskva, Pishchevaia promyshlennost', 1964. 330 p. (MIRA 18:4)

L 42791-66 EWT/EWP(t)/ETI IJP(c) JD/JG/WB/JH

ACC NR: AP6029076 SOURCE CODE: UR/0413/66/000/014/0132/0132

37
B

INVENTOR: Kaganov, I. R.; Andreyev, A. S.

ORG: none

TITLE: Method of obtaining protective oxide films on the surface of alloy steels and alloys. Class 48, No. 184097 [announced by the Design and Planning Technological Scientific Research Institute of Machine Building (Nauchno-issledovatel'skiy proyektno-konstruktorskiy institut tekhnologii mashinostroyeniya)]

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 132

TOPIC TAGS: alloy steel, ~~alloy steel protection, alloy protection~~, protective ~~oxide film~~ coating, oxide ~~film~~ formation

ABSTRACT: This Author Certificate introduces a method of forming protective oxide films on the surface of alloy steel and alloy parts. To increase the film resistance to the molten media and to facilitate the formation of films on inner surfaces of parts, the process is carried out in a powder mixture containing 10—15% vanadium pentoxide, 70—80% aluminum oxide, 10—15% chromium oxide, and 3—5% copper oxide at 750—950C for 2—4 hr. [ND]

SUB CODE: 13/11/ SUBM DATE: 16Nov64. ATD PRESS 5067

UDC: 621.793.6: 669.15-194.691.2

Card 1/1

KAGANOV, L.

Precision formula. Mest.prom.i khud.promys. 2 no.5:3-6 My '61.
(MIRA 14:5)

(Moscow--Electric shavers)

KAGANOV, L.

Important problem. Mest. prom. i khud. promys. 2 no.6:30-33 Je '61. (MIRA 14:7)

1. Spetsial'nyy korrespondent zhurnala "Mestnaya promyshlennost' i khudozhestvennyye promysly", Orekhovo-Zuyevskiy rayon, Moskovskoy oblasti.
(Service industries)

KAGANOV, L. (Riga)

Meeting people's requirements. Mest.prom. i khud.promys. 2 no.9:28-31 S '61. (MIRA 14:11)

1. Spetsial'nyy korrespondent zhurnala "Mestnaya promyshlennost' i khudozhestvennye promysly".
(Riga—Service industries)

KAGANOV, L. (selo Petrovskoye, Stavropol'skogo kraya); FRANTS, V.
(selo Petrovskoye, Stavropol'skogo kraya)

The service industries of a district. Mest.prom.i khud.promys.
3 no.7:24-28 Jl '62. (MIRA 15:8)

1. Spetsial'nyye korrespondenty zhurnala "Mestnaya promyshlennost'
i khudozhestvennyye promysly".
(Stavropol Territory—Service industries)

L 8348-66 EWP(c)/EWP(k)/EWT(d)/EWT(m)/EWP(h)/EWP(b)/EWP(l)/EWP(v)/EWP(t) JD

ACC NR: AP5025757 SOURCE CODE: UR/0286/65/000/018/0121/0121

AUTHORS: Kaganov, L. B.; Kaganov, V. L.; Finkler, S. Ye.

ORG: none

TITLE: Device for automatically advancing the electrode-instrument during electrochemical machining of holes. Class 49, No. 174935

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 121

TOPIC TAGS: electrochemical machining, electrode, METAL MACHINING

ABSTRACT: This Author Certificate presents a device for automatically advancing the electrode-instrument during electrochemical machining of holes with pressurized electrolyte supply. The device consists of a cylindrical body with the electrode-instrument moving axially inside the body (see Fig. 1). To simplify construction and to provide continuous electrode-instrument advance during the hole machining, the electrode-instrument is spring-loaded in the axial direction. Its front end is closed by a dielectric disk held on a shoulder with openings for the electrolyte, while its back end is closed by a throttling disk.

Card 1/2 UDC: 621.9.047
621.3.035.2-589.33

KAGANOV, L.M.

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957 112-3-5791
Nr 3, p. 106 (USSR)

AUTHORS: Kaganov, L. M., Kolosova, K. D.

TITLE: Experience in Using Organo-silicon Insulation (Opyt primeneniya kremniyorganicheskoy izolyatsii)

PERIODICAL: Inform.-tekhn. sb. M-vo elektrotekhn. prom-sti SSSR, 1956, Nr 1 (85) pp. 3-8

ABSTRACT: A large group of insulating materials based on organo-silicon compounds has been developed. They possess good dielectric and mechanical properties, which they retain when subjected to high temperature, moisture and oil. The use of organo-silicon materials for insulating motor windings results in greater reliability and provides a longer period of service, with an increase in power in certain cases. The following organo-silicon materials are used in the manufacture of electric motors: 1) lacquers ЭФ-3 and ЭФ-5 (TY MXП 2300 - 53); 2) enamel ПКЭ - 14; 3) elastic vitreous micanite on lacquer ЭФ-5 with a thickness of 0.3 mm; 4) glass-and-mica band on lacquer ЭФ-5 with a thickness of 0,17 mm, and others. The technique for manufacturing electric motors with organo-silicon insulation is basically the

Card 1/2

KAGANOV, Lev Mendelevich; KLOKOV, B.K., nauchnyy red.; KULIKOV, V.N., red.; BARANOVA, N.N., tekhn. red.

[Technology of random windings] Tekhnologiia vsypnykh obmotok. Moskva, Proftekhizdat, 1962. 139 p. (MIRA 15:8)
(Electric machinery--Windings)

KAGANOV, Lev Mendelevich; VINOGRADOV, N.V., red.

[Technology of rigid stator coils] Tekhnologiia zhestkikh statornykh obmotok. Moskva, Energiia, 1965. 93 p. (Tekhnologiia elektromashinostroyeniia, no.1)

(MIRA 18:12)

33552
S/135/62/000/002/008/010
A006/A101

12300 1573

AUTHORS: Balkovets, D. S., Doctor of Technical Sciences, Kaganov, L. N., Khudyshev, A. F., Engineers

TITLE: The effect of the welding-speed on ductility of weld joints in some refractory alloys

PERIODICAL: Svarochnoye proizvodstvo, no. 2, 1962, 31-32

TEXT: It was assumed that ductility of weld joints could be raised by eliminating brittle structure components at grain boundaries, with the aid of high speed welding, predetermining least values of linear energy and a short-term effect of the thermal cycle. To check this assumption, weld joints were produced by roller and electron-beam welding. Molybdenum alloy plates, 1 + 1 mm thick, containing about 0.25% Zr and 0.25% Ti, were roller welded at 36 m/hour, 0.16 sec pulse duration, and 0.44 sec time interval between the pulses. Specimens so welded could be bent up to 180°. This high ductility is explained by the short-time effect of the thermal-cycle. The effect of the welding speed was tested on 0.5 and 1 mm thick plates, electron-beam welded at various speeds. At 9 m/hr welding speed the bend angle was close to zero at room test temperature;

Card 1/2

BALKOVETS, D.S., doktor, tekhn.nauk; KAGANOV, L.N., inzh.

Some characteristics in the welding of niobium and its alloys.
Svar.proizv. no.10:10-12 O '63. (MIRA 16:11)

LIFSHITS, I. [Lifshyts', I.]; KAGANOV, M. [Kahanov, M.], doktor fiz.-matem.nauk (Khar'kov)

Quantum mechanics and solids. Nauka i zhyttia 12 no.4:21-23 Ap '62. (MIRA 15:8)

1. Chlen-korrespondent AN SSSR i AN UkrSSR.
(Wave mechanics) (Solids)

KAGANOV, M.A.; ROZENSHTOK, Yu.L.

Accuracy of measurements of heat fluxes with variously shaped thermometers. Izv. AN SSSR. Ser.geofiz. no.10:1397-1398 O '62. (MIRA 16:2)

1. Agrofizicheskiy nauchno-issledovatel'skiy institut.
(Temperature—Measurement)

ACCESSION NR: AT4037535 S/2563/63/000/224/0203/0216

AUTHOR: Chudnovskiy, A.F.; Babanov, A.A.; Kaganov, M.A.; Lazarev, A.I.; Chernyakova, M.A.

TITLE: Equipment for measuring the heat capacity and thermal conductivity of metals at high temperatures, and data for some heat resistant alloys

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy*, no. 224, 1963. Liteyny*ye svoystva zharoprochny*kh splavov (Castability of heat-resistant alloys), 203-216

TOPIC TAGS: castability, heat resistant alloy, iron based alloy, nickel based alloy, Nichrome alloy, austenitic steel, cast steel, high alloy steel, alloy composition, cast alloy steel, alloy No.3, alloy Khl, alloy Kh32, alloy No. 6, steel 10KhSND, steel 15KhSND, steel 65 G, steel 1Kh18N9, transformer steel, alloy heat capacity, alloy thermal conductivity, hollow sphere measuring procedure, alpha calorimeter measuring procedure, heat capacity measurement, heat conductivity measurement

ABSTRACT: Special equipment (see Fig. 1 in the Enclosure) was designed and constructed to measure the heat capacity and thermal conductivity of metals at

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ACCESSION NR: AT4037535

temperatures up to 1000C and to obtain curves for the dependence of these parameters on temperature. The hollow sphere procedure was used to measure thermal conductivity, while heat capacity was determined by means of a technique involving two samples, one of which acts as a calorimeter and the other as a so-called "alpha calorimeter". Metals tested included a number of heat resistant alloys (see Nekhendzi, Yu. A., p. 9-23, this same book, for compositions) and other cast alloy steels. The results indicate that the specific heats coincide closely at similar temperatures for alloys of widely varying composition. Sharp peaks in the gamma to alpha conversion range were noted for 10KhSND, 15KhSND and 65 G. Similar peaks, but at varying temperatures, were noted for ferritic steels with 5% Si, steel 1Kh18N9 and heat resistant alloys not subject to such conversions. Thermal conductivity values ranged from about 55-65 cal/m·degrees at 100C to about 25-35 at 800C, except for 65 G (about 42 at 200C to about 25 at 800C) and alloy No. 3 (about 10 at 150C to about 5 at 850C). Orig. art. has: 12 graphs and 6 formulas.

ASSOCIATION: Leningradskiy politekhnicheskiy institut im. M.I. Kalinina (Leningrad Polytechnical Institute)

Card 2/4

ACCESSION NR: AT4037535

SUBMITTED: 00 DATE ACQ: 04Jun64 ENCL: 01

SUB CODE: MM NO REF SOV: 003 OTHER: 000

Card 3/4

ACCESSION NR: AT4037535

ENCLOSURE: 01

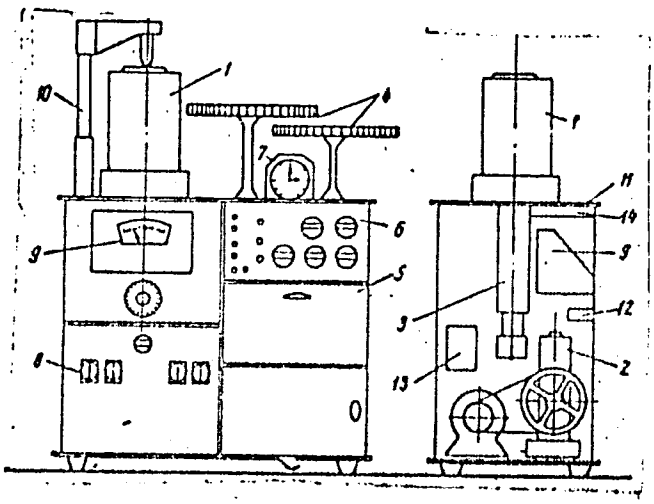

Fig. 1 Overall view of the measuring equipment.

1 - vacuum furnace 2 - fore-pump PVN-20 3 - diffusion oil pump MM40A 4 - scales 5 - hinged leaf bench 6 - potentiometer PPTN1 7 - clock with timer 8 - pump, heater, transformer and other switches 9 - vacuum gage dial window 10 - rotating hoist 11 - upper frame plate 12 - adjustable cock 13 - transformer (127/12 v), two parallel wired auto transformers LATR-1, thermocouple vacuum gage VT-2 14 - fuse box

Card 4/4

30866. KAGANOV, M. A. and CHUDNOVSKIY, A. F.

Opredeleniye koeffitsienta temperaturoprovodnosti pochvy po dannym srochnykh izmereniy temperatury. Izvestiya Akad. nauk SSSR, Seriya geogr. i geofiz., 1949, No. 5, s. 428-33. -- Bibliogr: 5 nazv.

KAGANOV, M.A.

Use of thermistors in measuring temperature. Sbor.trud.po agron. fiz. no.5:62-72 '52. (MIRA 11:7)
(Thermometry) (Thermistors)

KAGANOV, M.A.; CHUDNOVSKIY, A.F.

Device for measuring the temperature of the soil surface.
Sbor.trud.po agron. fiz. no.5:81-85 '52. (MIRA 11:?)
(Soil temperature--Measurement)

KAGANOV, M.A.

Device for determining thermal characteristics of soil under natural conditions. Sbor.trud.po agron. fiz. no.5:90-96 '52. (MIRA 11:7)

(Soil temperature--Measurement)

KAGANOV, M.A.; CHUDNOVSKIY, A.F.

Using semiconductor thermistors for measuring microclimate.
Sbor.trud.po agron.fiz. no.5:102-113 '52. (MIRA 11:7)
(Thermistors) (Microclimatology)

Kayumov, M. A.

5.4-228

Kayumov, M. A., Khvoika, S. B. and Chudnovskii, A. F., Vliianie orosheniia na mikroklimat pochvy i prizemnogo sloia vozdukha. [Influence of irrigation on the microclimate of the soil and on the air layer near the ground.] *Gidrotekhnika i Melioratsiia*, Moscow, No. 1:52-63, 1953. 10 figs., 7 tables, 5 refs. DLC. A number of graphs shows microclimatic differences between an irrigated and an nonirrigated field (wheat and timothy), observed in the Saratov district. Absolute and relative humidity at different heights, as well as air temperature are compared for selected days. Furthermore, the diurnal variation of soil temperature is discussed. *Subject Headings*: 1. Microclimate of fields 2. Irrigation 3. Saratov District, European U.S.S.R. — I.L.

631.4:551.584.42

KAGANOV, M. A.

Meteorological Abst.
Vol. 5 No. 1
Jan. 1954
Part 1
Radiation and Temperature

5.1-182

Kaganov, M. A. and Chudnovskii, A. F., Ob opredelenii koeffitsienta temperaturo-provodnosti pochvy. [Determination of the coefficient of temperature conductivity of soil.] Akademiia Nauk, S.S.S.R., Izvestiia, Ser. Geograficheskaia, No. 3:183–190, 1953. 3 tables, 10 refs., 23 eqs. DLC—Methods for determining the coefficient of heat conductivity of the soil based upon the fact that it has a periodic character are surveyed. The coefficient of heat conductivity is determined by measuring soil temperatures at two depths for the diurnal, semiannual or annual periods. Equations for calculating the coefficient of heat conductivity in homogeneous and nonhomogeneous soil and examples of the calculation of this coefficient are given. *Subject Headings:* 1. Soil temperatures 2. Heat conductivity of soil 3. Heat conductivity coefficient.—*I.I.D.*

551.525.4:536.4

KAGANOV, M.A.; RYABOVA, Ye.P.; CHUDNOVSKIY, A.F.

Soil temperature of fields between strips of forest. Sbor.trud. po agron.fiz. no.6:96-104 '53. (MIRA 11:7)
(Soil temperature) (Forest influences)

KAGANOV, M.A.

"Methods of Determining Meteorological Elements With the Aid of Semiconductor Thermal Resistances." Cand Phys-Math Sci, Main Geophysical Observatory imeni A.I. Voyeykov, Leningrad, 1955. (KL, No 15, Apr 55)

SO: Sum.No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

KAGANOV, M.A.

High-sensitivity conditions for unbalanced bridge circuits.
Izm.tekh.no.2:36-39 Mr-Ap '56. (MLRA 9:7)
(Electric measurements)

KAGANOV, M.A.; KOROBOCHKIN, I.V.; SHLIMOVICH, B.M.

Measuring instruments based on the utilization of semiconducting thermistors. Priborostroenie no.8:10-12 Ag '56. (MLRA 9:10)

(Electric instruments) (Thermistors)

USSR/Atomic and Molecular Physics - Heat, D-4

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34393

Author: Kaganov, M. A.

Institution: None

Title: On the Problem of Utilization of the Method of "Instantaneous" Source of Heat to Determine the Thermal Characteristics of Heat Insulators

Original Periodical: Zh. tekhn. fiziki, 1956, 26, No 3, 674-677

Abstract: The method of "instantaneous" source of heat (see, for example, Referat Zhurnal fizika, 1955, 21549), which makes it possible to determine all the thermal coefficients with a single experiment, is generalized to include the case of a constant-power source, acting during any time interval. To determine the thermal characteristics, simple equations are obtained, which take into account the actual time during which the heater is effective. The results of the work make it possible to dispense with pulse heating during the above experiment and therefore to simplify the experimental procedure, with simultaneous increase in accuracy. It is shown that connecting the source of heat for approximately 2 seconds, in the case of the setup described above (see reference cited above) cannot be considered "instantaneous."

SOV-120-58-1-41/43

AUTHOR: Kaganov, M. A.

TITLE: On the Application of a Thermoelectric Method of Measuring Temperature Differences in Electrically Conducting Bodies (O primenenii termoelektricheskogo metoda izmereniya raznostey temperatur v elektroprovodnykh telakh)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 1, p 145 (USSR)

ABSTRACT: The direct measurement of small temperature differences is usually carried out by means of a differential thermocouple. In measuring temperature differences by this method in bodies having appreciable electrical conductivity (metals, semiconductors), it is necessary to insulate electrically one of the working joints of the thermocouple from the body. The presence of the insulation may lower the accuracy of the measurements as a result of the appearance of an additional temperature difference. A simple method is described (Ref.1) of using a thermocouple without the additional disadvantage. The temperature difference is measured using two thermocouples in direct contact with the medium in which the temperature difference is being measured. The thermocouples are in parallel with the measuring device (indicator) and thus form opposite arms of a bridge. The electrical resis-

Card 1/2

KAGANOV, M.A.

Theoretical analysis of the method proposed by A.V. Ioffe and A.F. Ioffe for measuring the thermal conductivity of semiconductors. Zhur. tekh. fiz. 28 no.11:2364-2367 N '58. (MIRA 12:1)
(Semiconductors--Thermal properties)

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24.7600

SOV/58-59-7-15756

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 157 (USSR)

AUTHORS: Bass, F.G., Kaganov, M.I.

TITLE: On the Theory of Galvanomagnetic Phenomena in Semiconductors

PERIODICAL: Uch. zap. Khar'kovsk. un-ta, 1958, Vol 98, Tr. fiz. otd. fiz.-matem. fak., Vol 7, pp 57 - 60

ABSTRACT: The authors derive an expression for the tensor of the mobilities of free electrons (holes) in a semiconductor in a magnetic field H. The calculation is carried out with the aid of the classical kinetic equation, which is valid for $\mu H \ll kT$ (where μ is the Bohr magneton, k is the Boltzmann constant, and T is the absolute temperature). In this equation the collision operator is expressed through the tensor of the relaxation times, which makes allowance for the anisotropy of charge carrier scattering. In the case of scattering of carriers with an anisotropic effective mass on acoustic lattice vibrations, Herring and Vogt's expression for the tensor of mobilities in the absence of a

Card 1/2

KAGANOV, M.A.

9(4) PHASE I BOOK EXPLOITATION SOV/2773

Poluprovodnikovyye termosoprotivleniya; sbornik statey (Thermistors; Collection of Articles) Moscow, Gosenergoizdat, 1959. 229 p. 13,000 copies printed.

Ed. (Title page): B. S. Sotskov, Doctor of Technical Sciences, Professor; Ed. (Inside book): V. A. Petrov; Tech. Ed.: G. I. Matveyev; Editorial Board: B. S. Sotskov, Doctor of Technical Sciences, Professor (Chief Ed.), N. P. Udalov, Candidate of Technical Sciences, N. S. Zaytsev, Engineer, Ye. N. Shmogorev, Engineer, and V. I. Turkulets, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical personnel of plants, OKB, NII and also instructors and students of vuzes.

COVERAGE: The book contains articles dealing with problems of manufacture of thermistors and determining thermistor parameters and characteristics. The authors also discuss problems of indu trial application of thermistors as control elements. The book is an eff rt of cooperation by scientists of a number of vuzes, members of NII and engineers of one of the plants (name is not given) of Mosgorsovnarkhoz. No personalities are mentioned. References appear at the end of some articles.

KAGANOV, M.A.; LISKER, I.S.; MUSHKIN, I.G.

Measurement of the thermoelectric properties of semiconductors.
Fiz. tver. tela 1 no.6:988-990 Je '59. (MIRA 12:10)
(Semiconductors) (Thermoelectricity)

SOV/96-59-7-24/26

AUTHOR: Kaganov, M.A., Candidate of Physical and Mathematical Sciences

TITLE: A Method of Determining the Thermal Coefficients of Heat-insulating Material (Ob odnom metode opredeleniya termicheskikh koeffitsiyentov teploizolyatorov)

PERIODICAL: Teploenergetika, 1959, Nr 7, p 95 (USSR)

ABSTRACT: In Teploenergetika, Nr 1, 1958, Kanter published an article on the use of instantaneous heat sources to determine the thermal characteristics of heat-insulating materials. A number of objections are raised against the theoretical basis of the procedure described; it is shown how to overcome these objections and to make the calculations more accurately.
There are 3 references all of which are Soviet.

Card 1/1

9(3), 24(3) SOV/115-59-8-19/33

AUTHOR: Kaganov, M. A.

TITLE: The Problem of the Sensitivity of Unbalanced Bridge Circuits

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 8, p 37 (USSR)

ABSTRACT: When analyzing the power sensitivity of an unbalanced four-arm direct current bridge, G. K. Nechayev considers those parameters as the best, at which the P_2/P_1 ratio is a maximum. Here, P_2 is the power received by the galvanometer and P_1 the power scattered by the transducer with a given (maximum) unbalancing of the bridge. In this case, a fact has been ignored which was discussed in detail by the author in [Ref 2]. The maximum power to be dissipated by the transducer may occur not with its ultimate resistance value, but at a value located within the measuring range. In this way, the recommendations given by G. K. Nechayev in [Ref 1] are not suitable. The author states that his method, which he established previously for estimating the sensitivity of unbalanced bridge circuits, is more general and corresponds to the task of selec-

Card 1/2

The Problem of the Sensitivity of Unbalanced Bridge Circuits

ting the optimum parameters of the bridge circuit. He bases his method on the ratio P_g^x/P_0^x. Here, P_g^x is the power which is to be transmitted to the measuring instrument during deflection of its indicator, while P_0^x which is the greatest value of power which is to be dissipated by the transducer within a measuring interval. There are 2 Soviet references.

Card 2/2

SOTSKOV, B.S., doktor tekhn.nauk, prof.; VOROB'YEVA, T.M.; kand.tekhn. nauk; CHUDNOVSKIY, A.F., doktor fiz.-mat.nauk, prof.; KAGANOV, M.A., kand.fiz.-mat.nauk.

Review of I.F.Volshin, A.S.Kasperovich, and A.G.Shashkov's book "Semiconductor thermistors." Inzh.-fiz.zhur. no.1:124-126 Ja '60. (MIRA 13:4)

(Thermistors) (Voloskin, I.F.) (Kasperovich, A.S.) (Shashkov, A.G.)

9(6)

S/119/60/000/03/003/017
B014/B007

AUTHORS: Kaganov, M. A., Candidate of Physical and Mathematical Sciences, Rozenshtok, Yu. L., Engineer

TITLE: The Determination of the Characteristics of Semiconductor Thermoresistors Used in Measuring Techniques

PERIODICAL: Priborostroyeniye, 1960, Nr 3, pp 5-7 (USSR)

ABSTRACT: In the introduction, the dissipation constant C and the time constant τ are mentioned as the characteristics of electric thermometers, and the necessity of knowing these quantities in the construction of resistance thermometers from semiconductors is pointed out. The determination of C by means of a bridge circuit and a potentiometer is discussed. For the determination of τ equation (2) is given, and the wiring diagram shown in figure 1 is discussed. Measurement of τ was carried out in such a manner that the thermal resistor was immersed into media with constant temperature. During cooling of the thermal resistor the light beam of the galvanometer moved towards the photoresistor F_1 (Fig 1), by which counter Sb was regulated using the relay R_1. The summated error in the

Card 1/2

[redacted]
9,4320

30105
S/194/61/000/007/007/079
D201/D305

AUTHORS: Kaganov, M.A. and Rozenshtok, Yu.L.

TITLE: Time and dissipation constants of semiconductor thermistors used in measuring devices

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1961, 28-29, abstract 7 A179 (Sb. tr. po agron. fiz., 1960, no. 8, 244-247)

TEXT: The method is described of determining the time and dissipation constants of externally heated thermistors. In order to determine the dissipation constant, numerically equal to the power dissipated in the thermistor increasing its temperature by 1°C, the thermocouple under test was connected to one arm of a bridge circuit and the bridge supply voltage adjusted by means of a potentiometer. The power dissipated in the thermistor was determined from the value of current, measured by a milliameter, and the resistance determined by the balance of the bridges. The temperatures which correspond t[redacted]

Card 1/2

9.4174 (1043,1114,1482)
17.1200

29747
S/194/61/000/006/004/077
D201/D302

AUTHOR: Kaganov, M.A.

TITLE: The use of semi-conductor thermo-resistances for automatic compensation of thermocouple errors

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1961, 22, abstract 6 A165 (Sb. tr. po agron. fiz., 1960, no. 8, 248-255)

TEXT: A description is given of the possible applications of semi-conductor thermo-resistances (STR) for the compensation of thermocouple errors introduced by a changing temperature of the cold junction. The compensation is achieved by connecting, in parallel to the measuring instrument, a bridge circuit, one of whose arms has an STR at the temperature of the cold junction. The parameters of the compensating circuits are evaluated by the method of point by point interpolation, so as to make the current in the detector circuit of the bridge dependent on the STR temperature in

Card 1/2

The use of semi-conductor...

correspondence with the temperature law of change of the thermocouple emf. Owing to the high input impedance of the bridge circuit the compensating network does not practically introduce thermocouple power loss. Data are given as obtained when applying the above method of compensating for measuring the average surface temperature of the soil by means of a set of thermocouples. [Abstracter's note: Complete translation]

Card 2/2

S/058/62/000/006/084/136
A057/A101

AUTHORS: Kaganov, M. A., Lisker, I. S.

TITLE: Determination of some physical characteristics of semiconductors under non-stationary conditions

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1962, 32, abstract 6E262 ("Byul. nauchno-tekhn. inform. po agron. fiz.", 1960, no. 8 - 9, 27 - 31)

TEXT: A device is described for complex determination of the electric conductivity σ, the thermal emf α, the value $z = \alpha^2\sigma/\chi$ and the thermal conductivity χ of various semiconductor materials. The device is used for the measurement of parameters of intermetallic compounds of the $Bi_2Te_3 \cdot Sb_2Te_3$ type. The time necessary for the determination of α, σ, z and χ of one sample is about 15 minutes.

K. Glinchuk

[Abstracter's note: Complete translation]

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by the dimensions of the instrument upon measuring accuracy that the error is reduced by an increase in the ratio between the diamter of the disk of the heat-flow meter and its thickness. When determining the heat flow by means of a heat-flow meter in a depth h calculated from the surface of the respective medium, the heat-flow meter must be considered to be an infinitely extended disk with the thickness l. Formula (3) is given for the measuring error in this case, and formula (4) is given for the relative error. From these formulas it may be seen that the error may be reduced by decreasing the thickness l and by a sufficiently great thermal conductivity of the disk. It is shown in the course of an investigation of the sensitivity of the heat-flow meter that, with given sensitivity for the reduction of the error, such a material must be chosen for the heat-flow meter, the product of which from the coefficient of heat conductivity and heat capacity is sufficiently small. For the case in which the heat characteristics of the medium and of the heat-flow meter are equal, formula (7) is given for

the measuring error. On the basis of these deliberations, the authors investigated an instrument developed by Gir and Dankl. The maximum error as guaranteed by the firm was found to have frequently been considerably exceeded. Furthermore, the measuring error of an instrument was investigated, which had been suggested by A. G. Kolesnikov and A. A. Speranskaya (Ref. 7). Also in this case, disturbances of the temperature field of up to 60% and measuring errors of up to 40% were found. The authors thank Professor A. F. Chudnovskiy for his valuable advice. There are 2 figures and 8 references: 3 Soviet, 1 German, and 4 English.

The Accuracy of the Measurement of Heat Flows by Means of Heat Flow Meters

S/170/60/003/03/26/034
B014/B007

ASSOCIATION: Agrofizicheskiy nauchno-issledovatel'skiy institut, g. Leningrad
(Scientific Research Institute of Agricultural Physics, City of Leningrad)

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24.7700 1143, 1143, 1559
15.8500 also 2209

85381

S/032/60/026/010/009/035
B016/B054

AUTHORS: Kaganov, M. A. and Lisker, I. S.

TITLE: An Unsteady Probing Method for Measuring the Electrical Conductivity and the Contact Resistance of Semiconductor Materials

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 10, pp. 1118-1120

TEXT: The authors suggest a method of measuring the electrical conductivity and the contact resistance of semiconductor materials, which permits a checkup in limited volumes. This method can be used, for instance, to study the electrical properties of substances under the action of ionizing radiation, high and low temperatures, and the like. Direct current has been used hitherto to determine the electrical conductivity (probing method). An error arises here, since the thermo-emf at the points of contact between the probes and the sample is recorded along with the voltage drop between the probes. To reduce this error, it is necessary to use relatively massive current-supply contacts which, on their part, reduce the tem-

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An Unsteady Probing Method for Measuring the Electrical Conductivity and the Contact Resistance of Semiconductor Materials

S/032/60/026/010/009/035
B016/B054

perature gradient along the sample. The measurement of electrical conductivity with alternating current eliminates the effect of the thermo-emf at the contacts, but complicates the accurate measurement of small voltage values of alternating current. The method suggested by the authors is based on measuring the electrical conductivity in case of free heat evolution. It permits a determination of the electrical conductivity of materials having high thermo-emf coefficients. Fig. 1 shows the principal scheme of measurement. Fig. 2 shows curves for the voltage variations on the probes and on the sample. This voltage drop on the probes and at the ends of the sample is measured by a self-recording high-speed potentiometer (e.g. ЭПП-09 (EPP-09)). There are 2 figures and 1 Soviet reference.

ASSOCIATION: Agrofizicheskiy nauchno-issledovatel'skiy institut Akademii sel'skokhozyaystvennykh nauk (Agrophysical Scientific Research Institute of the Academy of Agricultural Sciences)

KAGANOV, M.; ROZENSHTOK, Yu.

Scale of nocturnal temperatures. Znan.sila 35 no.1:6 Ja '60. (MIRA 13:5)
(Meteorology, Agricultural)

KAGANOV, M.A.; ROZENSHTOK, Yu.L.

Measurement of heat flux by the use of heat meters. Izv. AN ESSR. Ser. geofiz. no.8:1174-1178 Ag '61. (MIRA 14:7)

1. Agrofizicheskiy nauchno-issledovatel'skiy institut.
(Temperature--Measurement)

KAGANOV, M.A.; ROZENSHTOK, Yu.L.

Using thermistors for the correction of differential circuits for measuring temperature differences. Izm.tekh. no.9:22-25 S '61. (MIRA 14:8)

(Thermometry)

BARDEYEVA, S.P.; IOFFE, I.A.; KAGANOV, M.A.; CHUDNOVSKIY, A.F.

Semiconductor cooler of circulating liquids. Biul.tekh.-ekon.inform. no.11:46-48 '61. (MIRA 14:12)

(Liquids--Cooling)

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S/170/61/004/003/010/013
B117/B209

24.7600 (1043, 1158, 1143)

AUTHORS: Kaganov, M. A., Lisker, I. S., Chudnovskiy, A. F.

TITLE: A method of rapidly determining the heat conductivity of semiconducting materials

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 3, 1961, 110-112

TEXT: The authors suggest an improved version of the method developed by A. V. Ioffe and A. F. Ioffe for determining the heat conductivity of semiconductors within a narrow range of temperatures near room temperature (10 - 15°C). The test device consists of two copper blocks, between which the specimen is placed. In order to determine the heat conductivity, one has to adjust the temperature gradient at the specimen, $\Delta T = T_2 - T_1$, and the temperature variation with time, T_2, of the upper block by means of two individual differential thermocouples. The authors suggest to determine the heat conductivity of the specimen from the rate of cooling of the upper block. It is evident that the temperature drop over the specimen varies according to the same law as does the temperature of the upper block. This may be

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A method of rapidly ... S/170/61/004/003/010/013
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concluded from the fact that the rate of cooling of all parts of the system is equal under normal conditions. The rate of cooling of many semiconductive materials may be found from the graph thermo-electromotive force at the boundary of the specimen versus time in semilogarithmic co-ordinates. The heat conduction coefficient λ as determined from the function $\ln \Delta T = f(\tau)$ was $(3.31 \pm 0.02) \cdot 10^{-3}$ cal/cm · sec. deg for molten quartz (Fig. 2, curve 3). According to published data, it amounts to $3.33 \cdot 10^{-3}$ cal/cm · sec. deg at 20°C. The heat conduction coefficient of $Bi_2Te_3 \cdot Sb_2Te_3$, as measured by means of a differential thermocouple, was $4.48 \cdot 10^{-3}$ kcal/cm · sec. deg, and determination of by a measurement of the thermo-electromotive force yielded $4.73 \cdot 10^{-3}$ kcal/cm · sec. deg (Fig. 2, curves 1 and 2). The somewhat lesser inclination of curve (1) as compared to curve (2) may be explained by an additional thermal resistance which is due to a thin mica plate between the lower block and the specimen. An insulating intermediate layer is necessary for the elimination of the shunting effect of the specimen and its thermo-electromotive force upon the indications of the thermocouple. The suggested version of the method by A. V. Ioffe and A. F. Ioffe offers the advantage that the entire curve of temperature drop may be used in the

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place of single points only. Besides, only one instrument is required instead of two. The use of the thermo-electromotive force of the specimen as a temperature indicator allows to employ less sensitive instruments and to record automatically the variation of the temperature gradient. Moreover, an insulating layer is superfluous in this case. There are 2 figures and 5 Soviet-bloc references.

ASSOCIATION: Agrofizicheskiy institut, g. Leningrad (Institute of Agrophysics, Leningrad)

SUBMITTED: June 28, 1960

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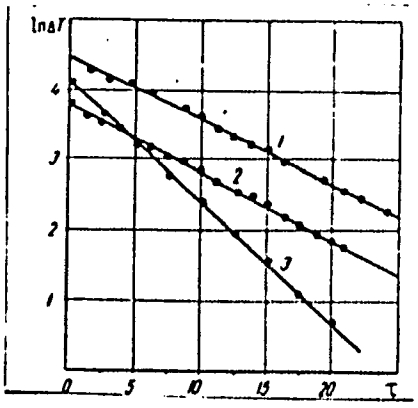

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BARDEYEVA, S.P., inzh.; IOFFE, I.A., kand.tekhn.nauk; KAGANOV, M.A., kand.fiziko-matematicheskikh nauk; CHUDNOVSKIY, A.F., doktor fiziko-matematicheskikh nauk

Semiconductor equipment for milk cooling. Mekh.i elek.stos. sel'khoz. 19 no.5:41-44 '61. (MIRA 14:10)

1. Agrofizicheskiy nauchno-issledovatel'skiy institut.
(Milk preservation)
(Refrigeration and refrigerating machinery)