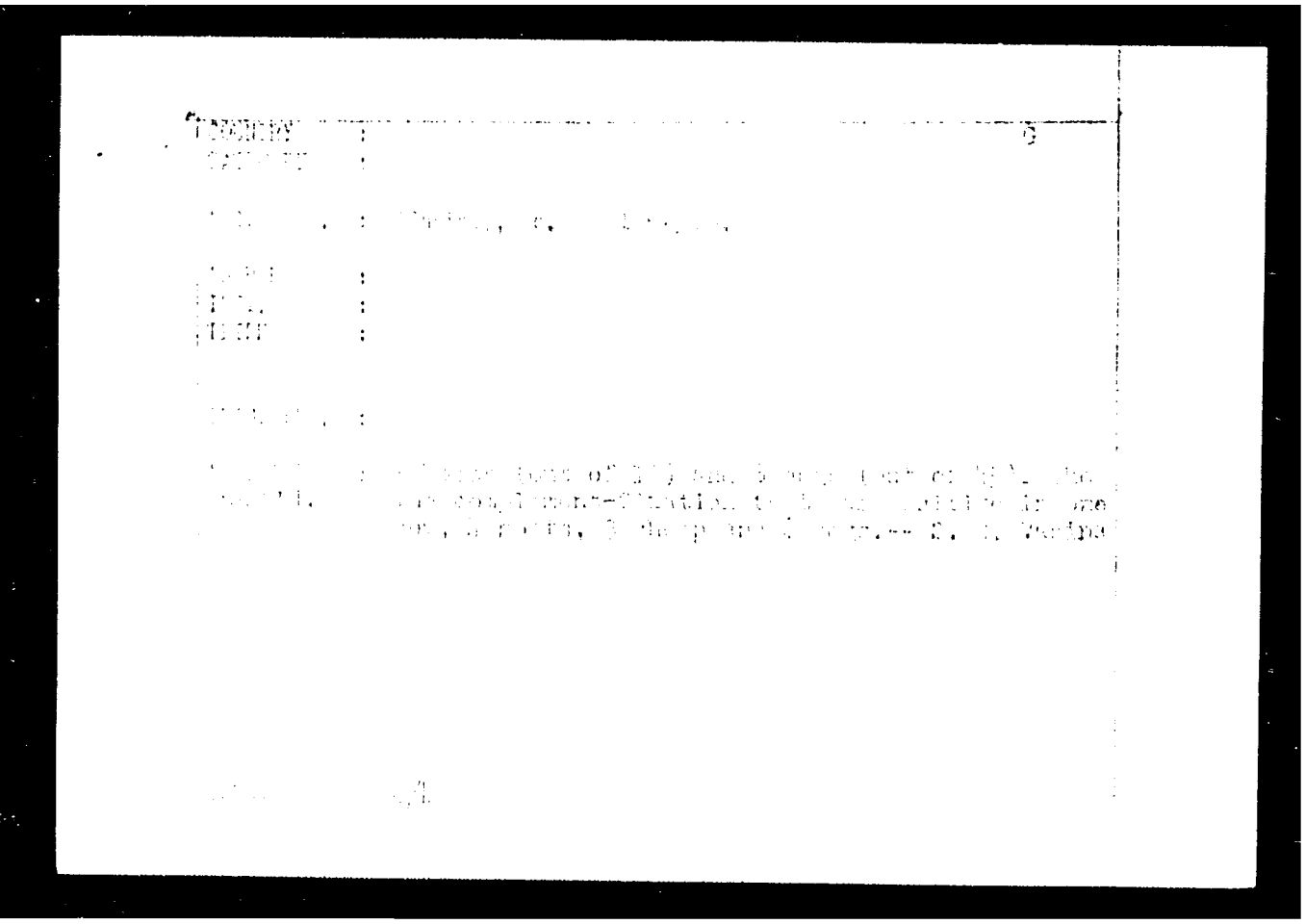

ANGELOV, S.; GULOBOV, S.; GIGOV, A.; NIKOLOV, P.

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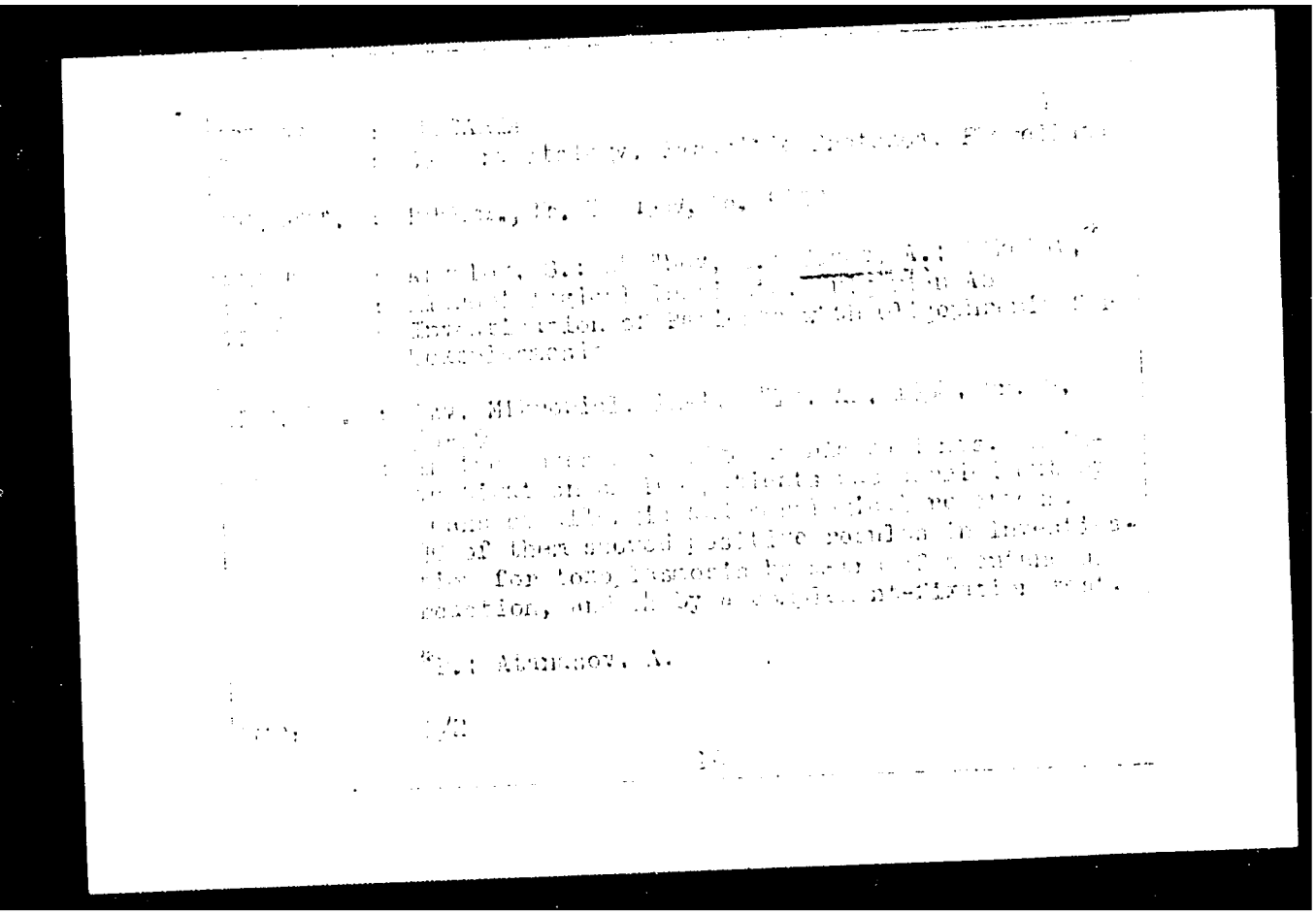
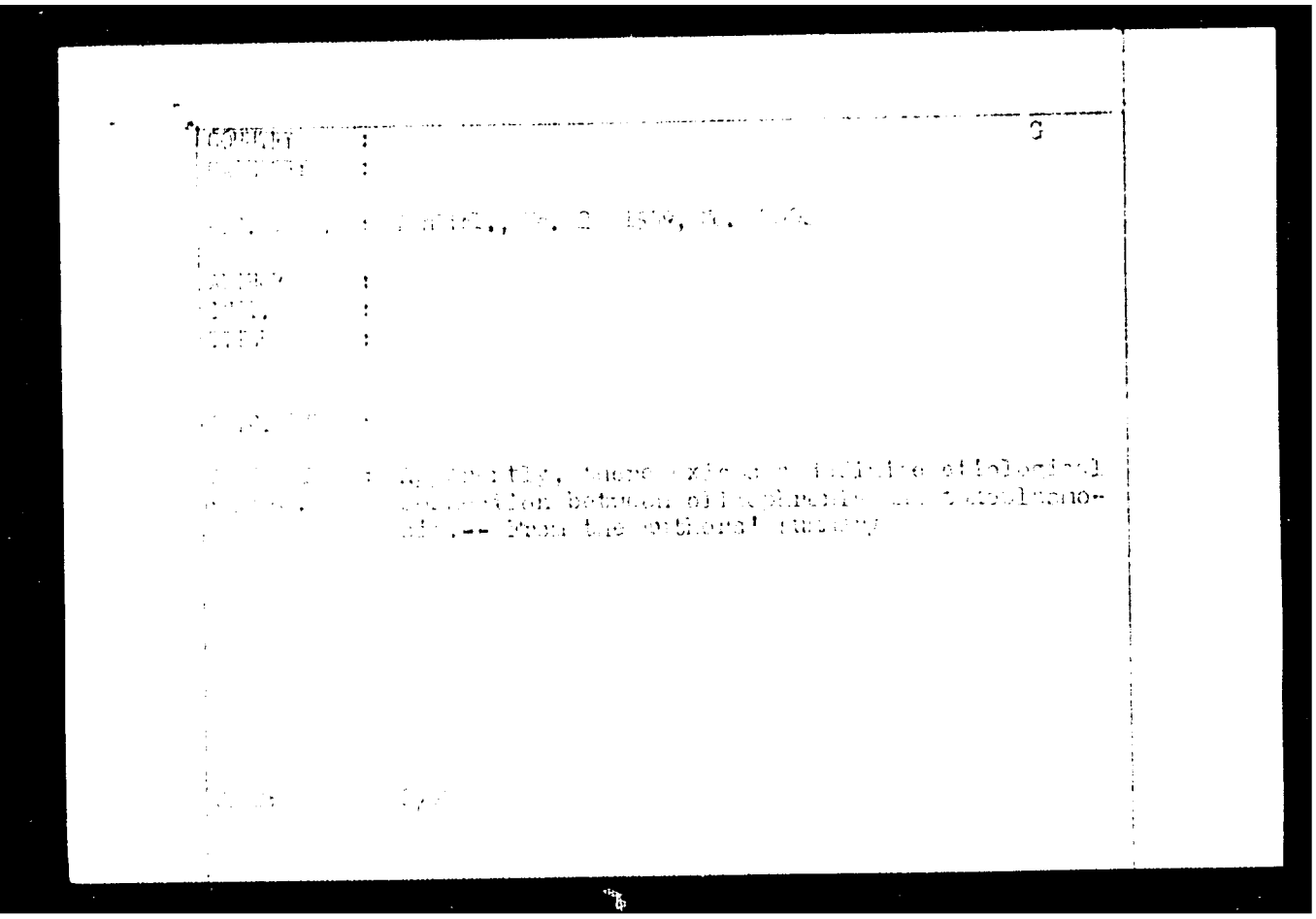
(TOXOPLASMOSIS, epidemiology, in Bulgaria (Bul))





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1. Iz Nauchniia institut po malariia i meditsinska parazitologiia (Direktor: D. Dimchev).
(AMEBIASIS, epidemiol.
in Bulgaria (Bul))

GIGOV, Aleksandar; NIKOLIC, Vojislav

Results of the analysis of pollen on some peaty soils in Croatia.
Glas Prir mus B no.15:3-26 '60.

GIGOV, Aleksandar; MILOVANOVIC, Darinka

Paleobotanical microanalysis of the sediment of Semetesko jezero on Kopaonik. Zbor Biol inst Beograd 3 no.2:1-17 '60.

GIGOV, A.

Comparative study of toxoplasmosis by the complement fixation reaction and the skin test. Trudy epidemiol mikrobiol 8:18-183 '61 [publ.'62].

KHADZHIYEVA, Y.; GIGOV, A.

Epilepsy and toxoplasmosis. Zhur. nevr. i psikh. 64 no.7: 1080-1085 '64. (MIRA 17:12)

1. Nauchno-issledovatel'skiy institut nevrologii i psikhiatrii, Sofiya (direktor G. Ganev) i Institut epidemiologii i mikrobiologii (direktor S. Rodopska), Sofiya.

GIGOV, A.; BOGDANOVIC, M.

Peat bogs and peats of Yugoslavia. [illegible]
173,83-88 Ja-F '63.

1. Institute of Biology, Belgrade, and Agricultural Faculty of the University of Belgrade, Belgrade

BOGDANOVIC, M.; GIGOV, A.; VOLKANOVSKI, I.; BOGDANCVIC, J.

Peat bogs and peats of the environs of Lake Ohrid. Zemljiste biljka 12 no.1/3:89-94 Ja-D '63.

1. Agricultural Faculty of the University of Belgrade, Belgrade.

SMIT, S.; MILETIC, B.; GIGOV, A.; BOGDANOVIC, M.; DANON, J.; JANKOVIC, [illegible]; [illegible]INA, I.; MILOSEVIC, R.; JANKOVIC, M.; POPOVIC, R.; STAVRIC, S.; DRAKULIC, M.; MATONICKIN, I.; PAVLETIC, Z.

Review of periodicals; biology. Bul sc [illegible] no.4/5:138-139 Ag-O '64.

BULGARIA

GIGOV, A. and STOILOV, L., Scientific Research Institute of Epidemiology and Microbiology (Nauchno-izsledovatelski institut po epidemiology i mikrobiologiya), Director, S. Kangelova

"On the Diagnostic Value of the Complement-Fixation Test in Brain Cysticercosis"

Sofia, Nevrologiya, Psikhiatriya i Nevrokhirurgiya, Vol 5, No 3, 1966, pp 177-180.

Abstract [Authors' Russian and English summaries, modified]: The article discusses the diagnostic value of the complement-fixation test for cysticercosis in some neurological conditions. The patients were divided into five groups: 1) epileptic symptomatology; 2) processes occupying intracranial space; 3) neuroses; 4) probable brain cysticercosis; 5) inflammatory processes in the CNS. The total number of investigated patients was 376, of whom 125 (33.2%) had positive results for cysticercosis. The incidence of positive serological reactions was 41.6% in group 4, 33.8% in group 1, 28.8% in group 2, 29.2% in group 3 and 13.4% in group 5; the last-mentioned did not

1/2

GEORGIEV, Zdr.; RASHKOV, R.; ANATKOV, At.; VELIZAROVA, K.; IORDANOVA, Evg.; DIMITROV, Tsv.; GIGOVA, D.

The frequency and the distribution of leukoses in Bulgaria. (Preliminary communication). Suvrem med., Sofia no.4:3-15 '60.

1. Iz Nauchnoizsledovatelskiia institut po khematologiia i kruvoprelivane (Direktor: kand. med. nauki V.Serafimov-Dimitrov)
(LEUKEMIA statist.)

GEORGIEV, Z.; ANATKOV, At.; GIGOVA, D.; VELIZAROVA, K.; GORANOV, Em.; TANKOVSKI, Iv.; DOBREVA, An.; NOEV, K.

On clinico-hematological forms of neoplastic leukemia. Suvr. med. (Sofiia) 15 no.12:13-22 '64.

SAEV, St.; DAVIDOV, S.; BOVIANSKI, A.; TENEV, K.; GIGOVA, R.; MARINOVA, M.; VASILEVA, L.; RUSEV, R.; IVANEI, V.

20 years of experience at the Institute of Post-Graduate Training of Physicians in anesthesia and reanimation in operative surgery in aging subjects. Khirurgiia 17 no.2: 185-187 '64.

1. Iz katedrite po bolnichna khirurgiia, urologiia, ortopediia i travmatologiia, nevrokhirurgiia, akusherstvo i ginekologiia pri ISUL [Institut za spetsializatsiia i usuvurshenstvuvane na lekarite].

GIGOVA, Veneta, inzh.

Determining the hydrograph of high waves. Khidrotekh i melior 8 no. 2:52-55 '63.

GIKOVSKIY, B. Ye.

Dissertation: "Single-Channel Method of Formation of Artificial Radiants from the Sigmoic Color." Dr Tech Sci, First Moscow Order of Lenin Medical Inst, 19 May 54. Vechernyaya Moskva, Moscow, 7 May 54.

SO: SUM 284, 26 Nov 1954

GIGOVSKIY, Ye.Ye.

Method of suture of dissected ureters. Khirurgiia, Moskva no.9:69-70 Sept 1953. (CIML 25:5)

1. Of the Fourth Division of Medsantrud Clinical Hospital.

GIGOVSKIY, Ye.Ye.

Surgery of anus vestibularis. Akush.i gin. no.1:66 Ja-F '54. (MLRA 7:6)

1. Iz ginekologicheskogo otdeleniya (zaveduyushchiy Ye.Ye.Gigovskiy) Klinicheskoy bol'nitsy im. Medsantrud.
(Anus--Surgery)

GIGOVSKIY, Ye.Ye., doktor meditsinskikh nauk.

One-sleeve colpopoiesis technique using the sigmoid colon.
Akush. i gin. no.5:48-51 S-O '55. (MLRA 9:1)

1. Iz klinicheskoy bol'nitsy No. 23 imeni Medsantrud (i.o. glavnogo vracha A.F. Timofeyeva)

(VAGINA, surg.
reconstruction with sigmoid colon, one-sleeve method)
(COLON, transplantation
reconstruction of vagina, one-sleeve method)
(TRANSPLANTATION
colon, reconstruction of Vagina, one-sleeve method)

GIGOVSKIY, Ye.Ye., doktor med.nauk; MISHUYEVA, N.A.

Treatment of urogenital fistulas in women [with summary in English]. Akush. i gin. 34 no.1:75-78 Ja-F '58. (MIRA 11:4)

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(UROGENITAL SYSTEM, fistula
in women, surg., technics (Rus))

GIGOVSKIY, Ye.Ye.

Intestinal plastic surgery in Russian urogynecology. Urologiia 25 no.2:3-7 Mr-Ap '60. (MIRA 13:12)
(INTESTINES—TRANSPLANTATION) (BLADDER—SURGERY)
(VAGINA—SURGERY)

GIGULA, I.O., professor (Kiyev)

Epileptic paroxysms of stomatogenic origin. Probl. stom. 3:273-275 '56 (MLRA 10:5)

(TEETH--DISEASES) (EPILEPSY)

Country : [illegible]
Category : [illegible]
Abs. Jour : [illegible]

Author : [illegible]
Institut. : Not given
Title : [illegible]

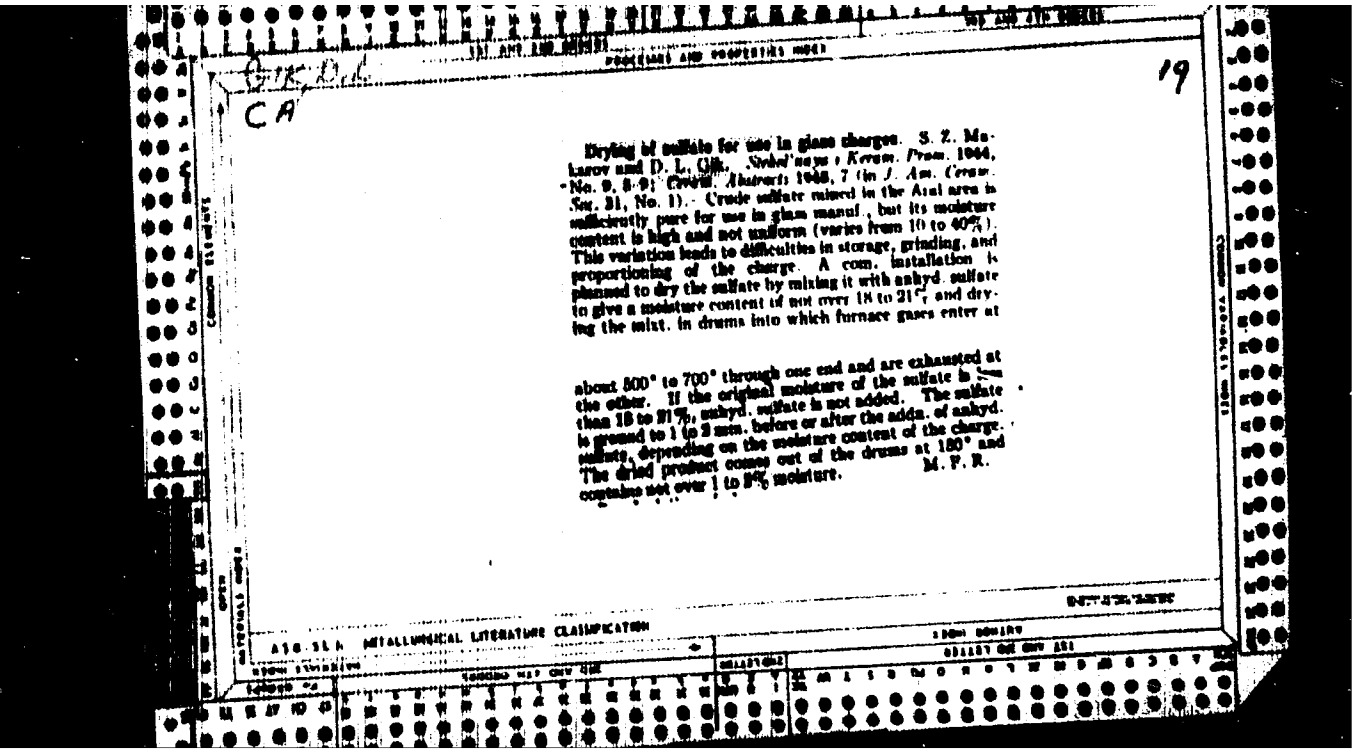
Orig. Pub. : [illegible]

Abstract : [illegible]

* [illegible]tions.

** [illegible] Model of a [illegible] Phases (Standard [illegible]).

Card: 1/1

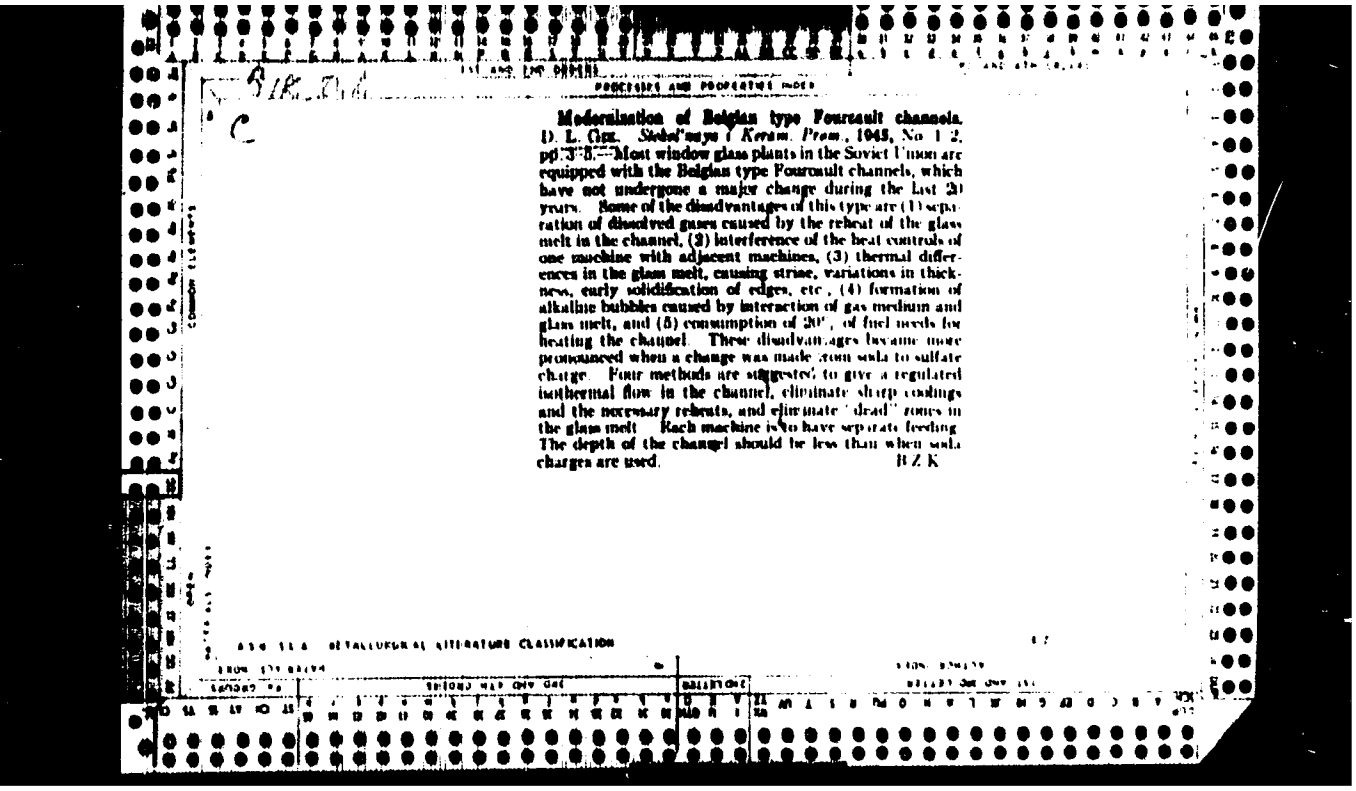


CA

19

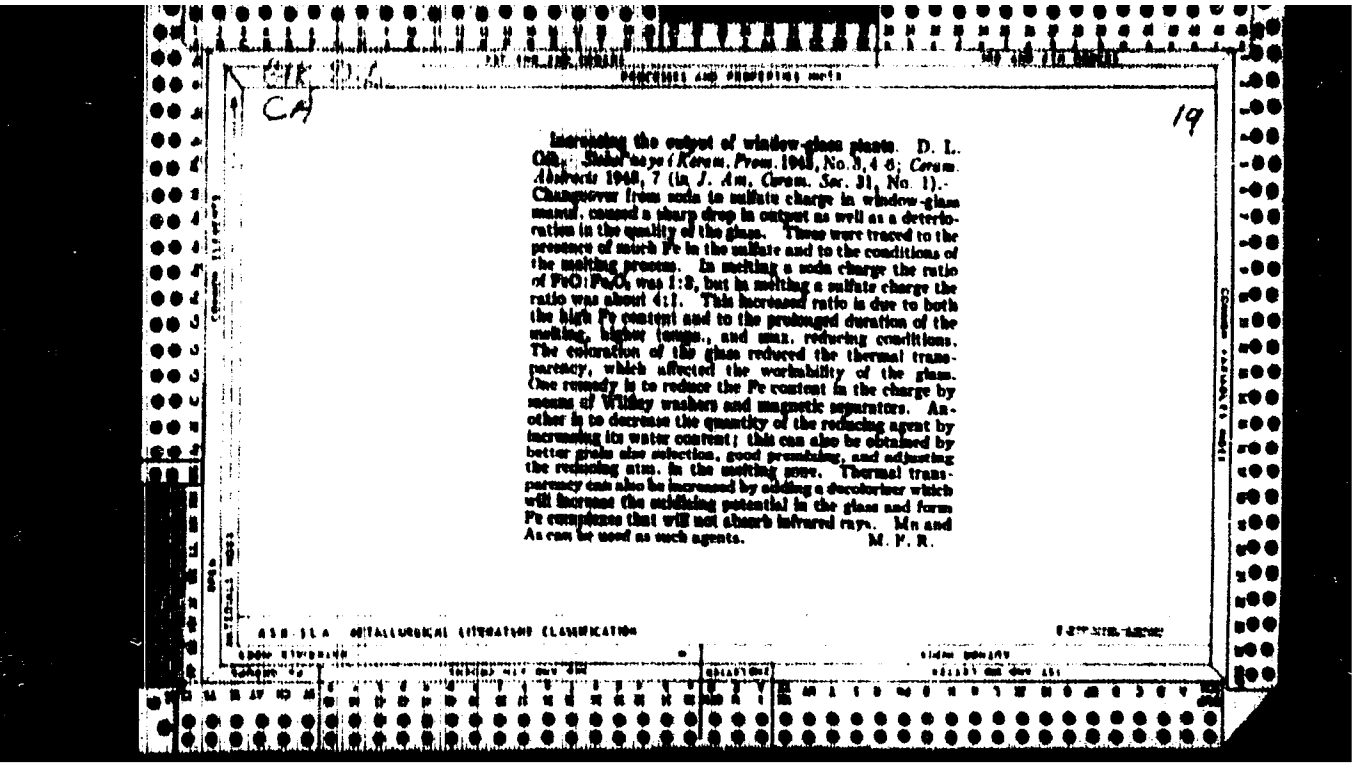
Drying of sulfate for use in glass charges. S. Z. Ma-Larov and D. L. Glik. *Stekol'nye i Keram. Prom.* 1944, No. 9, 8-9; *Chem. Abstracts* 1945, 7 (in *J. Am. Ceram. Soc.* 31, No. 1). Crude sulfate mined in the Aral area is sufficiently pure for use in glass manuf., but its moisture content is high and not uniform (varies from 10 to 40%). This variation leads to difficulties in storage, grinding, and proportioning of the charge. A com. installation is planned to dry the sulfate by mixing it with anhyd. sulfate to give a moisture content of not over 18 to 21%, and drying the mixt. in drums into which furnace gases enter at about 800° to 700° through one end and are exhausted at the other. If the original moisture of the sulfate is less than 18 to 21%, anhyd. sulfate is not added. The sulfate is ground to 1 to 2 mm. before or after the addn. of anhyd. sulfate, depending on the moisture content of the charge. The dried product comes out of the drums at 180° and contains not over 1 to 2% moisture. M. F. R.

METALLURGICAL LITERATURE CLASSIFICATION



Modernization of Belgian type Fourcault channels. D. L. Ginz. *Steklo i Keram. Prom.*, 1945, No 1-2, pp 3-8.—Most window glass plants in the Soviet Union are equipped with the Belgian type Fourcault channels, which have not undergone a major change during the last 20 years. Some of the disadvantages of this type are (1) separation of dissolved gases caused by the reheat of the glass melt in the channel, (2) interference of the heat controls of one machine with adjacent machines, (3) thermal differences in the glass melt, causing strise, variations in thickness, early solidification of edges, etc., (4) formation of alkaline bubbles caused by interaction of gas medium and glass melt, and (5) consumption of 20% of fuel needs for heating the channel. These disadvantages became more pronounced when a change was made from soda to sulfate charge. Four methods are suggested to give a regulated isothermal flow in the channel, eliminate sharp coolings and the necessary reheats, and eliminate "dead" zones in the glass melt. Each machine is to have separate feeding. The depth of the channel should be less than when soda charges are used.

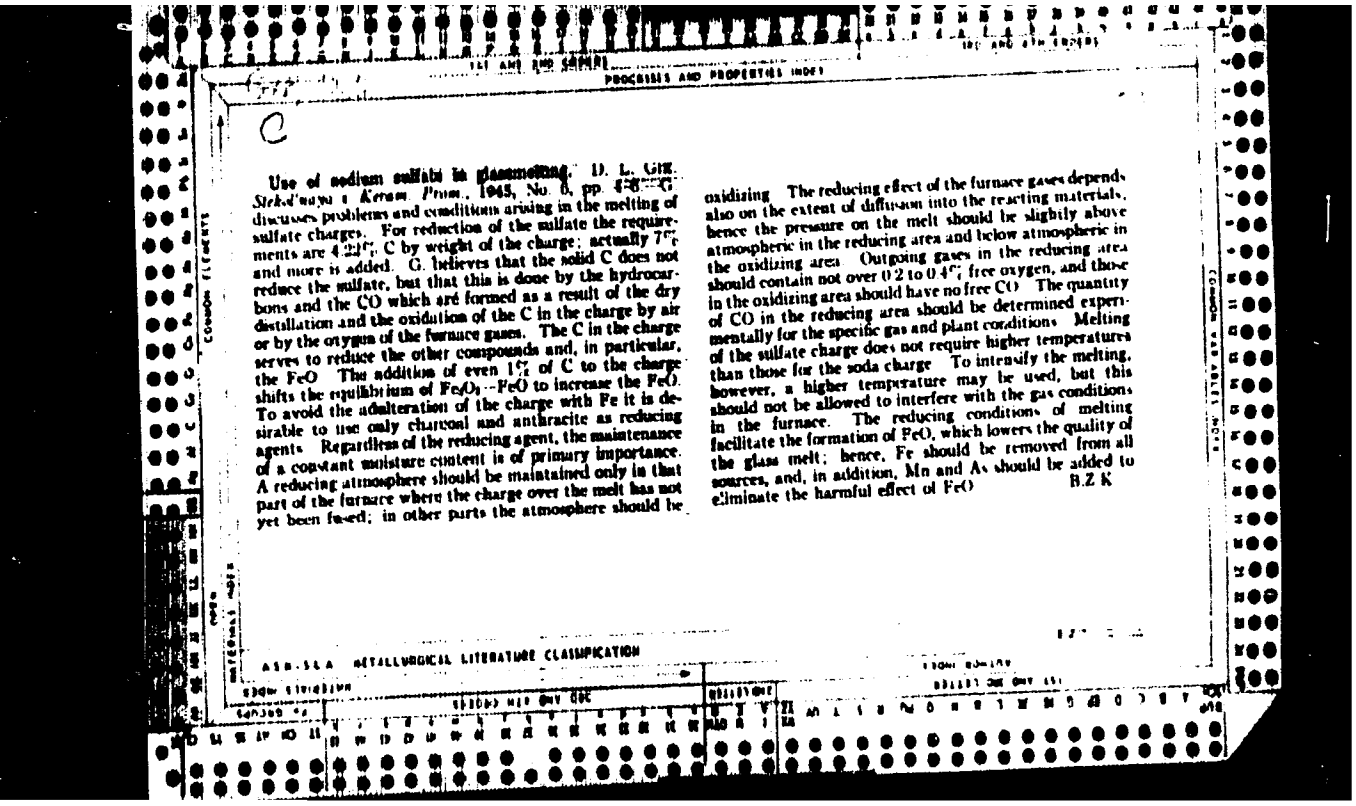
B Z K



CA

19

Increasing the output of window-glass plants. D. L. Ott. Stekol'naya Keram. Prom. 1948, No. 3, 4-6; Ceram. Abstracts 1948, 7 (in J. Am. Ceram. Soc. 31, No. 1).- Changeover from soda to sulfate charge in window-glass manuf. caused a sharp drop in output as well as a deterioration in the quality of the glass. These were traced to the presence of much Fe in the sulfate and to the conditions of the melting process. In melting a soda charge the ratio of FeO:Fe$_2$O$_3$ was 1:3, but in melting a sulfate charge the ratio was about 4:1. This increased ratio is due to both the high Fe content and to the prolonged duration of the melting, higher temps., and max. reducing conditions. The coloration of the glass reduced the thermal transparency, which affected the workability of the glass. One remedy is to reduce the Fe content in the charge by means of Wilfley washers and magnetic separators. Another is to decrease the quantity of the reducing agent by increasing its water content; this can also be obtained by better grain size selection, good premixing, and adjusting the reducing atm. in the melting zone. Thermal transparency can also be increased by adding a decolorizer which will increase the oxidizing potential in the glass and form Fe complexes that will not absorb infrared rays. Mn and As can be used as such agents. M. F. R.



PROCESSES AND PROPERTIES INDEX

C

Use of sodium sulfate in glassmaking. D. L. Gin. *Steklo i Keram. Prom.*, 1945, No. 6, pp. 4-8.—G. discusses problems and conditions arising in the melting of sulfate charges. For reduction of the sulfate the requirements are 4.22% C by weight of the charge; actually 7% and more is added. G. believes that the solid C does not reduce the sulfate, but that this is done by the hydrocarbons and the CO which are formed as a result of the dry distillation and the oxidation of the C in the charge by air or by the oxygen of the furnace gases. The C in the charge serves to reduce the other compounds and, in particular, the FeO. The addition of even 1% of C to the charge shifts the equilibrium of Fe_2O_3--FeO to increase the FeO. To avoid the adulteration of the charge with Fe it is desirable to use only charcoal and anthracite as reducing agents. Regardless of the reducing agent, the maintenance of a constant moisture content is of primary importance. A reducing atmosphere should be maintained only in that part of the furnace where the charge over the melt has not yet been fused; in other parts the atmosphere should be oxidizing. The reducing effect of the furnace gases depends also on the extent of diffusion into the reacting materials, hence the pressure on the melt should be slightly above atmospheric in the reducing area and below atmospheric in the oxidizing area. Outgoing gases in the reducing area should contain not over 0.2 to 0.4% free oxygen, and those in the oxidizing area should have no free CO. The quantity of CO in the reducing area should be determined experimentally for the specific gas and plant conditions. Melting of the sulfate charge does not require higher temperatures than those for the soda charge. To intensify the melting, however, a higher temperature may be used, but this should not be allowed to interfere with the gas conditions in the furnace. The reducing conditions of melting facilitate the formation of FeO, which lowers the quality of the glass melt; hence, Fe should be removed from all sources, and, in addition, Mn and As should be added to eliminate the harmful effect of FeO. B.Z.K.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

C

Increasing the rate of withdrawal of glass sheet in Fourcault machines. I. L. Gilko. *Steklo'naya i Keram Prom.*, 1946, No 11 12, pp 2 5. The average rate of withdrawal of sheet glass in Fourcault machines in use in the Soviet Union is only about 50 m./hr. This rate can be increased by accelerating the formation of the sheet, the annealing, and the cooling. Enlargement of the slit of the debiteuse from 60 to 80 mm will accelerate the formation of the sheet. The drop in temperature between the slit of the debiteuse and the cutter (a distance of about 7 m.) is 850° to 900°C., if the rate is to be increased to 90 m./hr., the temperature drop, assuming uniform cooling, will be 120°/m or 185°/min. Such unsafe rates of cooling can be eliminated by intensifying the cooling above and below the annealing range and slowing down the cooling within the annealing range. The actual temperature drops along the 1st, 2d, 3d, and 4th meter lengths are 400°, 120°, 110°, and 80° to 60°, respectively. Within this range, three zones are distinguished: (1) cooling down to the start of annealing, (2) annealing, and (3) cooling below the annealing temperature. In the first zone, the first 30 to 40 cm should be cooled more rapidly by means of two or more pairs of coolers arranged in a cascade manner so that the bottom of the sheet is cooled more intensively. The rate of cooling in the second zone should be reduced; this can be accomplished by good insulation and complete sealing of the first section. The cooling rate in the third zone is insufficient and can be increased by removing the insulation from the third section and admitting an air blast for cooling. Rate of withdrawal can also be increased by eliminating unsafe temperature gradients between the interior and the surfaces of the sheet, for this will improve the heat transparency of the glass which tends to equalize the cooling processes within the mass. To maintain a high heat transparency, the iron content should be at a minimum and conditions should be created which will keep it in the highest possible state of oxidation (Fe_2O_3). R.Z.K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GIK D. L.

TA 10T42

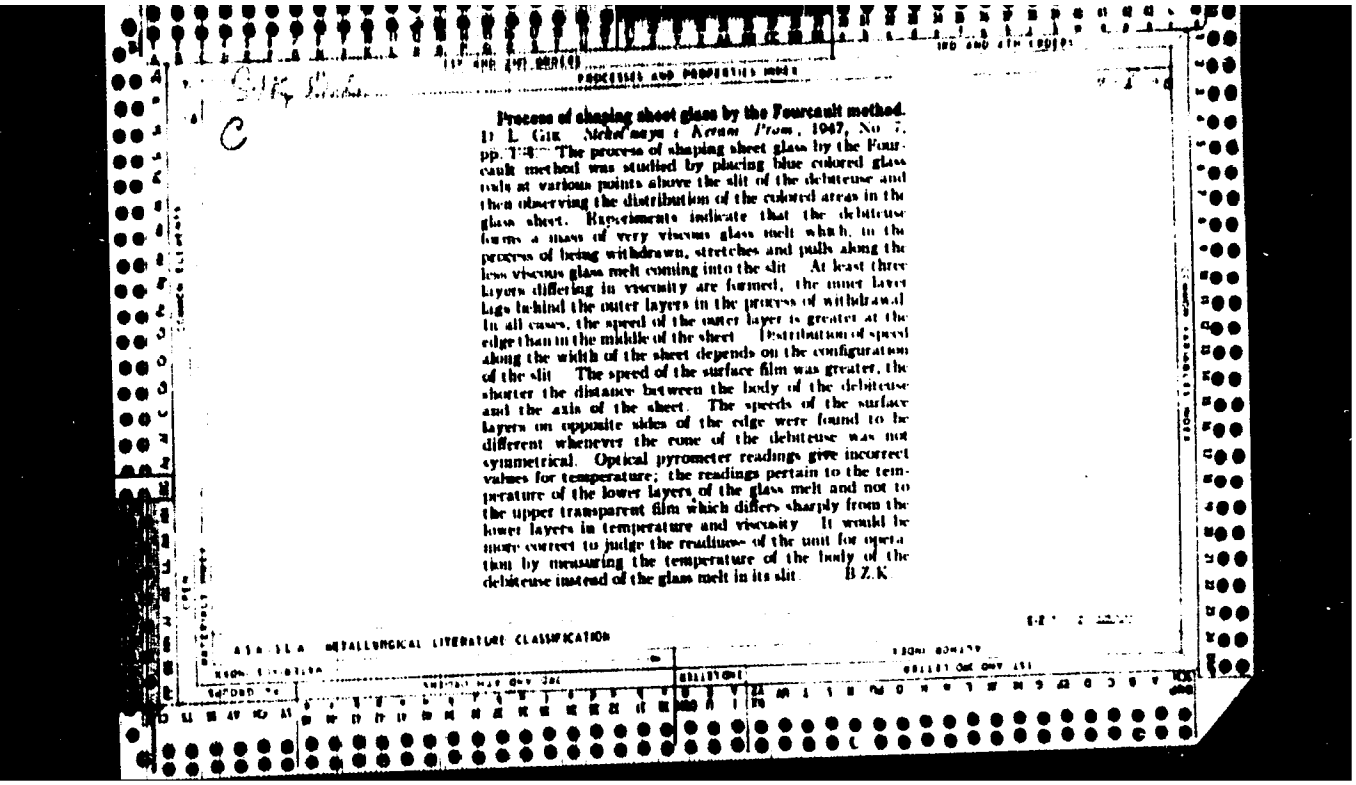
USSR/Glass - Finishing Mar 1947
Efficiency, Industrial

"The Experiment of the 'Sarkandaugava' Plant for Speed-up Glass Ribbon Drawing," D. L. Gik, M. S. Karanskiy, Candidates in Technical Sciences, 11 pp

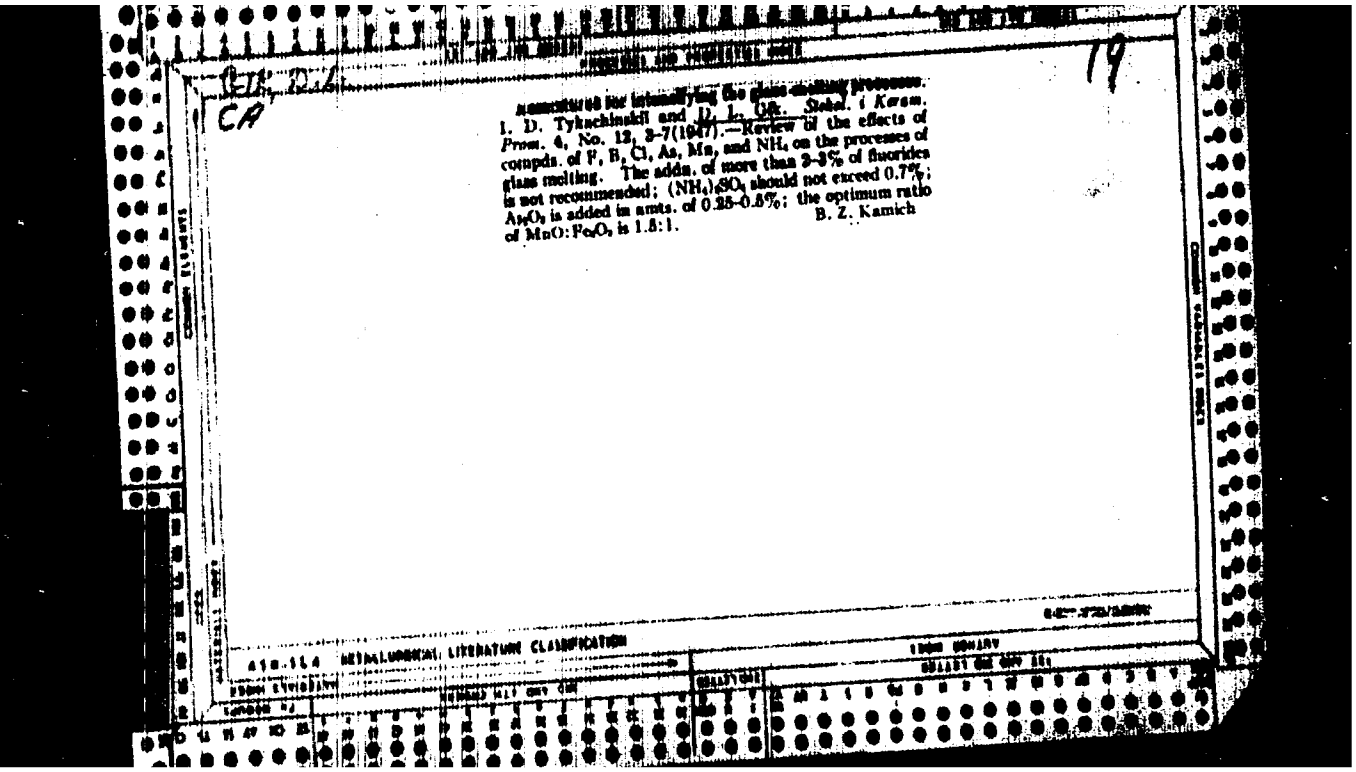
"Stekol'naya i Keramicheskaya Promyshlennost'" No 3

Technical description of equipment, working conditions, properties of glass used, and complete details of the Furko machines used in above plant which took first place in a socialist competition.

10T42



Process of shaping sheet glass by the Fourcault method.
D. L. Gin. *Steklo i Keram. Prom.*, 1947, No. 7, pp. 7-8. The process of shaping sheet glass by the Fourcault method was studied by placing blue colored glass rods at various points above the slit of the debiteuse and then observing the distribution of the colored areas in the glass sheet. Experiments indicate that the debiteuse forms a mass of very viscous glass melt which, in the process of being withdrawn, stretches and pulls along the less viscous glass melt coming into the slit. At least three layers differing in viscosity are formed, the inner layer lags behind the outer layers in the process of withdrawal. In all cases, the speed of the outer layer is greater at the edge than in the middle of the sheet. Distribution of speed along the width of the sheet depends on the configuration of the slit. The speed of the surface film was greater, the shorter the distance between the body of the debiteuse and the axis of the sheet. The speeds of the surface layers on opposite sides of the edge were found to be different whenever the cone of the debiteuse was not symmetrical. Optical pyrometer readings give incorrect values for temperature; the readings pertain to the temperature of the lower layers of the glass melt and not to the upper transparent film which differs sharply from the lower layers in temperature and viscosity. It would be more correct to judge the readiness of the unit for operation by measuring the temperature of the body of the debiteuse instead of the glass melt in its slit. B.Z.K.

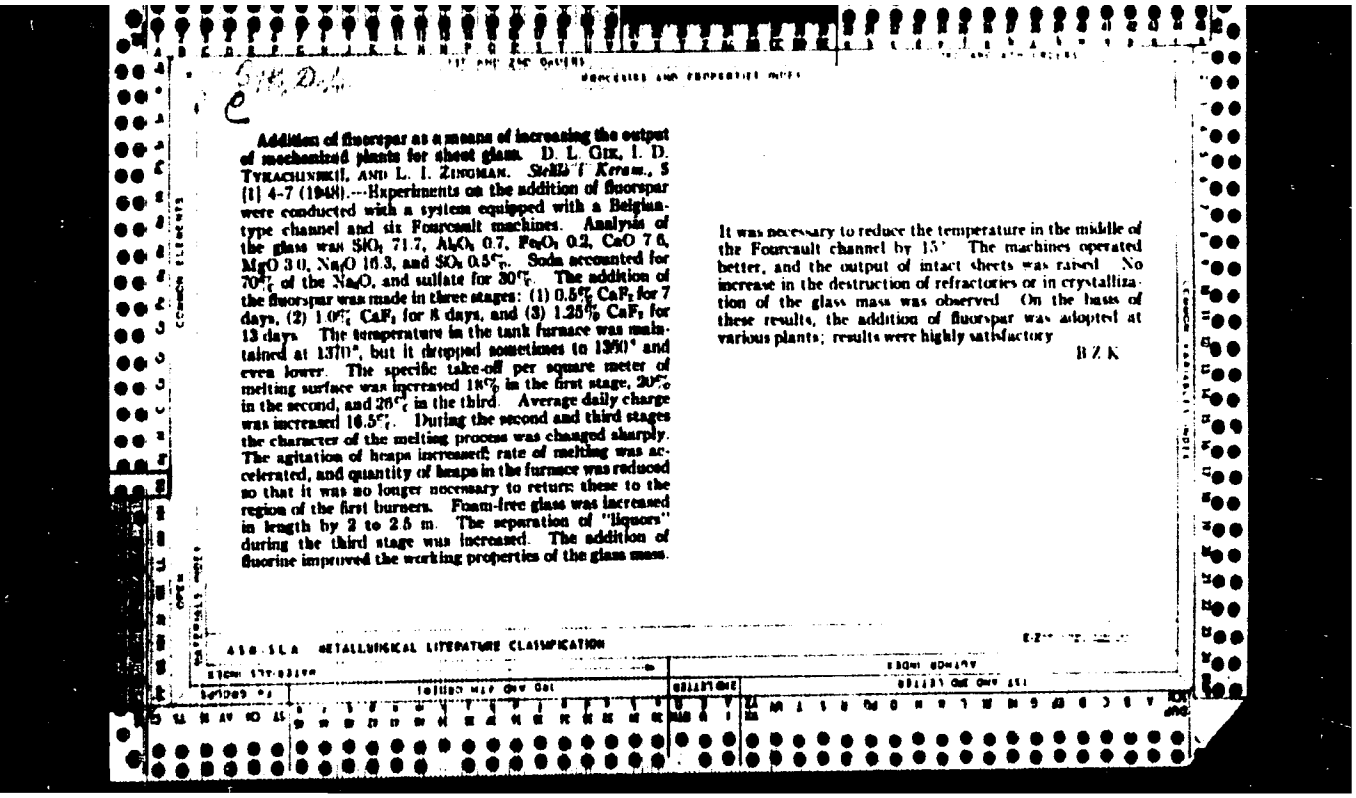


CA

19

Manufacture for intensifying the glass-melting processes.
I. D. Tykachinskii and [illegible] Glas. i Keram. *Prom.* 4, No. 12, 3-7(1947).—Review of the effects of compds. of F, B, Cl, As, Mn, and NH_4 on the processes of glass melting. The addn. of more than 3-5% of fluorides is not recommended; $(NH_4)_2SO_4$ should not exceed 0.7%; As_2O_3 is added in amts. of 0.25-0.5%; the optimum ratio of $MnO:Fe_2O_3$ is 1.5:1.
B. Z. Kamich

METALLURGICAL LITERATURE CLASSIFICATION



Addition of fluorspar as a means of increasing the output of mechanized plants for sheet glass. D. L. Gix, I. D. Tyrachinskii, and L. I. Zinoman. *Steklo i Keram.*, 5 [1] 4-7 (1948).—Experiments on the addition of fluorspar were conducted with a system equipped with a Belgian-type channel and six Fourcault machines. Analysis of the glass was SiO_2 71.7, Al_2O_3 0.7, Fe_2O_3 0.2, CaO 7.6, MgO 3.0, Na_2O 16.3, and SO_3 0.5%. Soda accounted for 70% of the Na_2O, and sulfate for 30%. The addition of the fluorspar was made in three stages: (1) 0.5% CaF_2 for 7 days, (2) 1.0% CaF_2 for 8 days, and (3) 1.25% CaF_2 for 13 days. The temperature in the tank furnace was maintained at 1370°, but it dropped sometimes to 1350° and even lower. The specific take-off per square meter of melting surface was increased 18% in the first stage, 20% in the second, and 26% in the third. Average daily charge was increased 16.5%. During the second and third stages the character of the melting process was changed sharply. The agitation of heaps increased; rate of melting was accelerated, and quantity of heaps in the furnace was reduced so that it was no longer necessary to return these to the region of the first burners. Foam-free glass was increased in length by 2 to 2.5 m. The separation of "liquors" during the third stage was increased. The addition of fluorine improved the working properties of the glass mass. It was necessary to reduce the temperature in the middle of the Fourcault channel by 15°. The machines operated better, and the output of intact sheets was raised. No increase in the destruction of refractories or in crystallization of the glass mass was observed. On the basis of these results, the addition of fluorspar was adopted at various plants; results were highly satisfactory.

B Z K

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

C

Selecting optimum method of charging glassmelting furnaces. D. L. Gin, V. V. Pollyak, and I. D. Tykachinskii. *Steklo i Keram.* 6 [8] 10-14 (1949). In selecting a method of charging a glassmelting furnace, the most important factor to be considered is the specific surface of the charge being subjected to direct action of the heat of the flame and brickwork. The value of the specific surface of the charge in relation to the melting area can be used to evaluate the effectiveness of various charging methods. On this basis, comparison was made of different methods without considering the practicability of their application. Optimum methods thus determined are (a) small heaps and (b) longitudinal layers with breaks. To meet these optimum conditions, it is proposed to (1) change the table of the Thin Layer Feeder into a manner suitable for heaps and longitudinal layers and to permit continuous and periodic operation, (2) feed the charge directly onto the glass melt in the pocket of the tank furnace instead of onto the table, and (3) arrange the feed bunkers so that their outlets will be directly over the axes of the heaps and layers of the charge. B. Z. K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

Influence of individual factors upon the rate of glassmelting.
D. I. Gik and V. V. Pollyak. *Steklo i Keram.*, 6 [10] 3-7
(1949). Soda charge briquettes (some with 25% cullet) of
various shapes and having densities of 1.72 to 2.02 gm./cc. were
made with water glass and were then subjected to experimental
melting at 1125° to 1140°C. in the end chamber of the machine
canal on a refractory plate and in the melt itself. The rate of
melting was not affected by density changes, addition of cullet,
and inclination of the briquettes at angles of 25 to 45°. The chief
factor which determined the rate of melting was the specific
active surface (cm.²/gm.) which was being developed by the
charge per unit of melting area. Active surface includes both
that which is subjected to the direct action of the heat radiation
and that which is in contact with the melt. An increase in the
weight and height of the briquettes increased the active surface
per unit melting area, raised the effectiveness of the active sur-
face per unit weight, and resulted in more effective utilization of
the melting area of the furnace. B.Z.K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GIK, D. L.

Recent Translations of Russian Papers of Interest to Glass Industry.
Stek i Keram, vol 31, No 12, 1950, pp. 629-31.

CA

11

Melting technical glass at the L'vov glass works. D. L. Gak and V. V. Pollyak. *Steklo i Keram.* 8, No. 3, 3-6 (1951). -The quality of vertically drawn tech. glass was improved by lowering the Na_2O content to 14.5-15.0%; the required Al_2O_3 was made up by the addn. of feldspar without impairing the quality of the glass. Reduction in content of Na_2O should be compensated by the addn. of B_2O_3; it is also desirable to replace 1.0-1.5% Na_2O with an equiv. amt. of K_2O (1.32% K_2O for 1% Na_2O). Failure to add B_2O_3 results in prolongation of glassmelting. Whenever the duthermacy of the glass was increased, regardless of the means employed to attain this, the firing was impaired and boil appeared. These defects could be eliminated by resorting to higher temps. but, because of the quality of the refractories, it was necessary to operate at low temps. (1420°) in order to eliminate stones, schlieren, and cords. Surface bubbles on the sheet were eliminated by (1) firing the debituene block under conditions which exclude reaction between the gas medium and the surface of the block and (2) cooling the block (on the side on which bubbles form) by deepening the longitudinal cut-out in the block or by lowering a cooler. Such cooling of the block results in premature "aging" of the machine and in possible crystn. on the lips of the slit; at these glass works, it was necessary to renew the sheet every 70-75 hrs. For quality glass, the following compn. is recommended: SiO_2 72.0-72.5; Al_2O_3 + Fe_2O_3 1.5-1.8; CaO 7.5-8.0; MgO 3.5; B_2O_3 1; Na_2O + K_2O 14.5-15.0%. Any increase in CaO + MgO over 11.5% sharply impairs crystn. properties. In drawing glass without a debituene block, the amt. of Na_2O + K_2O can be reduced to 14%.

B. Z. Kamich

GIK, D.L., kand.tekhn.nauk; MEDVED', O.V.; GRADOV, Z.A.

The composition of glass for kinescope screens. Stek.i ker. 19 no.11:16-17 N '62. (MIRA 15:12)

1. L'vovskiy politekhnicheskiy institut.
(Cathode ray tubes) (Glass-metal sealing)

SOV/21-58-10-4/27

AUTHORS: Karandeyev, K.B., Corresponding Member of the AS USSR and AS UkrSSR, and Gik, L.D.

TITLE: The Damping of Inertia Vibrometric Devices (Uspokoyeniye inertsionnykh vibroizmeritel'nykh priborov)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 10, pp 1045 - 1048 (USSR)

ABSTRACT: When inertia vibrometric devices are designed to obtain minimum frequency errors, the values of frequency approaching the resonance value, it is necessary to increase the damping of the seismic system to a value close to the critical one. On the contrary, the damping should be of minimum value to obtain minimum phase distortions at the same frequencies. The authors derive a system of 2 equations containing two unknowns: x (the ratio of the oscillation frequency of an inertia mass to the resonance frequency) and ε (the degree of damping). Insofar as the analylitical solution of this system, in general, is complicated, the authors propose a graphic solution. For this purpose they draw a nomogram for determining the optimum damping degree and maximum possible value of the resonance frequency. The following particular cases are considered in the paper: 1) the choice of the op-

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timum value of a vibration pickup when the amplitude and phase errors of the vibrometer are not to exceed a certain value; 2) the choice of the same optimum value when the phase distortions of the vibrometer may be negelcted, and 3) the choice of the maximum natural frequency of vibration of an inertia system, at which the vibration pickup errors at the lower limiting frequency of measurement attain the permissible values. There are: 1 graph, 1 table and 1 Soviet reference.

ASSOCIATION: L'vovskiy institut mashinovedeniya i avtomatiki AN UkrSSR (L'vov Institute of Machine Study and Automation, of the AS UkrSSR)

SUBMITTED: April 18, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration

1. Vibration--Measurement 2. Machines--Control systems
3. Mathematics

SOV/21-59-5-5/25

AUTHORS: Karandeyev, K.B., Corresponding Member of the AS UkrSSR, and Gik, L.D.

TITLE: On the Principles of Correcting Vibrometer Apparatuses

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1959, Nr 5, pp 478-481 (USSR)

ABSTRACT: The authors show the possibility of applying circuit diagrams of electrical corrections of seismic vibrometers for the extension of the frequency range of measuring vibratory displacements lower than the resonance frequency. The basic equation for a seismic pick-up is expressed in the form of

$$\frac{y_1}{\xi_0} = \gamma_1 = \frac{1}{\left[1 - \left(\frac{w_1}{w}\right)^2\right] - \varepsilon_1 \frac{w_1}{w}} \qquad (1)$$

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On the Principles of Correcting Vibrometer Apparatuses

(wherein y_1 is vibratory displacement of seismic mass; ξ_0 is vibratory displacement of the point of suspension, w_1 is the circular frequency of the pick-up, w is circular frequency of vibrations at the suspension point ε_1 is a degree of damping) and is used to find out the equation of normal correlation

$$v_k' = \eta \frac{v_2}{v_1} = \eta \frac{\left[1 - \left(\frac{w_2}{w}\right)^2\right] + 2\varepsilon_2 \frac{w_2}{w}}{\left[1 - \frac{w_2}{w}\right]^2 + 2\varepsilon_2 \frac{w_2}{w}} \quad (2)$$

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On the Principles of Correcting Vibrometer Apparatuses

(wherein v_k is equiponderate of the correcting scheme; v_2 is the desired equiponderate of the correcting device; w_2 and ε_2 are the frequency of vibrations in the vibrometer and the degree of damping after correction; η is the coefficient of proportionality.) Another method based on application of a correcting scheme to a part of the pick-up's signal with a subsequent summing up with the rest of the signal is expressed by equation

$$v''_k = \frac{v_2 - v_1}{\eta v_1} = -\frac{1}{\eta} \frac{\frac{w_1^2 - w^2}{w^2} + j\frac{\varepsilon_1 w_1 - \varepsilon_2 w_2}{w}}{\left[1 - \left(\frac{w_2}{w}\right)^2\right] + j\varepsilon_2 \frac{w_2}{w}} \qquad (3)$$

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SOV/21-59-5-5/25

On the Principles of Correcting Vibrometer Apparatuses

The problem is reduced to a synthesis of schemes with frequency characteristics (2) and (3). The basic circuit diagram satisfying equation (2) is depicted in Fig. 1, whereas Fig. 2 shows the basic circuit diagram satisfying equation (3). When the pick-up's damping degree is $\xi_1 \geq$ 0.2-0.3 it is almost always possible to bring about the correction with a sufficient accuracy. Correction of the pick-up's damping degree is made with the use of equations (4) and (5). The circuit diagram in Fig. 3 is satisfactory for equation (4), that shown in Fig. 4 for equation (5). There are 4 circuit diagrams, 1 graph and 3 Soviet references.

ASSOCIATION: Institut mashinovedeniya i avtomatiki AN UkrSSR (Institute of Machinery and Automation of the AS UkrSSR)

SUBMITTED: December 22, 1958

Card 4/4

Gik L. D.

SOV/21-59-6-11/27

AUTHORS: Karandeyev, K. B., Corresponding-Member of the AS UkrSSR, and Gik, L. D. (Gik, L.D.)

TITLE: Correction of Frequency Characteristics of Accelerometers

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1959, Nr 6, pp 620 - 622 (USSR)

ABSTRACT: This article presents two experimentally-verified schemes for correcting accelerometers. The application of correction schemes after amplification of the pickup signal is shown to yield a big gain in sensitivity of the vibrometer device. Figure 1 shows a correction scheme based on the multiplication of characteristics, satisfying the equation

$$\nu_k' = \eta \frac{[1-(\omega\tau_1)^2]+ j\cdot 2\varepsilon_1 \omega\tau_1}{[1-(\omega\tau_2)^2]+ j\cdot 2\varepsilon_2 \omega\tau_2} \qquad (2)$$

where τ_2 and ε_2 are time constant and damping grade of

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arrangement obtained as a result of correcting, ω is angular frequency, τ_1 is pickup's time constant, ε_1 is grade of damping. The correction by this scheme was physically accomplished at $\varepsilon_1 \geqslant 1$. Figure 2 shows a correction scheme based on modelling the error, satisfying the equation

$$p''_k = -\frac{1}{\eta}\,\frac{\omega^2(\tau_1^2-\tau_2^2)-j\cdot 2\omega(\varepsilon_1\tau_1-\varepsilon_2\tau_2)}{[1-(\omega\tau_2)^2]+j\,2\varepsilon_2\omega\tau_2} \qquad (3)$$

by which the correction was physically accomplished at any value of ε_1 (when relation ω_2/ω_1 was sufficiently high). For this scheme, the conditions of correction and scheme parameters obtained in the result of correction at $n \geqslant 1$ have the following expression:

Correction of Frequency Characteristics of Accelerometers

$$\eta = \left(\frac{\tau_1}{\tau_2}\right)^2 - 1; \quad \frac{\eta}{\sqrt{m(m+1)}} = 2\varepsilon_1 \frac{\tau_1}{\tau_2} = 2;$$

$$\tau_2 = RC\sqrt{\frac{m}{1+m}}; \quad \varepsilon_2 \approx 1.$$

The experimental checking was done on electric models of seismic pickups, one of which is shown in Figure 3. The frequency characteristic of this model scheme is equivalent to a seismic pickup having

$$\tau_1 = \sqrt{LC} \text{ and } \varepsilon_1 = 0.5\, R\sqrt{C/L}.$$

Figure 4 shows the pickup frequency characteristic (curve 1) and the frequency characteristic obtained as a result of correction by the scheme shown in Figure 3, when $\tau_2 = 0.25\tau_1$.

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Correction of Frequency Characteristics of Accelerometers

There are 3 schemes, 1 graph and 2 Soviet references.

ASSOCIATION: Institut mashinovedeniya i avtomatiki AN UkrSSR (Institute of Science of Machines and Automation, of the AS UkrSSR

SUBMITTED: December 22, 1958

SOV/119-59-10-6/19

9(6)

AUTHORS: Gik, L. D., Engineer, Karandeyev, K. B., Doctor of Technical Sciences, Professor

TITLE: An Inert Vibration Pickup Which Is Attenuated by an Electromechanical Feedback

PERIODICAL: Priborostroyeniye, 1959, Nr 10, pp 14 - 15 (USSR)

ABSTRACT: For the measurement of vibrations it is necessary that the attenuation can be varied. However, this is usually not possible when operating with such attenuators as are based on the braking of a short-circuited coil in the magnetic field. By applying a negative electromechanical feedback, the system of mechanical oscillations is much easier attenuated. This method is explained by the equation of motion of a seismic system (1). This equation assumes form (2) when the negative feedback is taken into account. Provided the internal attenuation of the system is negligible, the degree of attenuation is defined by formula (4). The aforementioned negative feedback is used for the vibration pickup demonstrated in figure 1. The latter consists of two similar induction systems, the one being used for measuring the vibration para-

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Ar[illegible]ration Pickup Wh[illegible] Is At[illegible] by an Electron[illegible]ical Feedback

SOV/119-59-10-6/19

meters, the other for realizing the negative feedback. The electromotive force produced by the vibration pickup is increased by an electronic amplifier, and at the same time it is possible to vary the degree of attenuation within the range 0.05-2. Vibration pickup has the following advantages over those which are attenuated by liquids: Attenuation is independent of temperature; the vibration pickup need not be hermetically sealed; the degree of attenuation can be adjusted. There are 1 figure and 2 Soviet references.

Card 2/2

25 (1), 28 (1)

06184
SOV/115-59-11-12/36

AUTHOR: Gik, L.D.

TITLE: A Seismic Vibration Transducer With Coil Springs

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 11, pp 32-33

ABSTRACT: The author designed a seismic vibration transducer with a linear frequency characteristic up to 400 cps. The natural vibration frequency is 11 cps in the measuring direction and 13 cps in the transverse direction. The error of transverse vibrations does not exceed 10%. The sensitivity is around 200 mv/mm/cps. The acceleration is close to the critical value ($\xi \simeq 1$) at a temperature of 20°C. In combination with a correcting circuit the transducer was used for measuring of vibration displacements from 2 to 400 cps. As shown in a diagram, the vibration pick-up consists of a cylindrical permanent magnet with special pole ends. The magnet is suspended by eight springs in a aluminum frame which also carries the induction coils, located opposite the special magnet pole ends. The frame

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06184
SOV/115-59-11-12/36

A Seismic Vibration Transducer With Coil Springs

is enclosed in a steel housing which also serves as a magnetic circuit and shield. The interior is filled with a damping liquid. The author mentions briefly the disadvantages of other vibration pick-ups. There are 1 diagram and 1 Soviet reference.

Card 2/2

GIK, L.D.

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SOV/21-59-12-4/20

AUTHORS: Karandyeyev, K.V., Corresponding Member of the AS UkrSSR, and Hik, L.D.

TITLE: On a Method of Synthesis of Correcting Γ -Shaped Quadripoles

PERIODICAL: Dopovidi Akademiyi nauk Ukrayins'koyi RSR, 1959, Nr 12, pp 1312-1315 (USSR)

ABSTRACT: The authors report on a simplified method of synthesis of correcting Γ -shaped quadripoles by way of reducing it to a synthesis of bipolars. The essence of this method is as follows: If the expression of frequency characteristic of a v_k correcting circuit is comparably simple (numerator and denominator polynoms of the transit characteristic are not higher than in second power), then the correcting circuit can be in the form of a single-unit Γ -shaped circuit, such as shown in Fig 1. If the quadripole load is neglected, then the coefficient of its transmission

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On a Method of Synthesis of Correcting Γ -Shaped Quadripoles

$$K = \frac{Z_2}{Z_1 + Z_2} \qquad (1)$$

In order that this coefficient might have a desired frequency characteristic, it is necessary that $K = Sv_k$ (where S is coefficient of proportionality). Then, equation (1) can be expressed as

$$\frac{Z_1}{Z_2} = \frac{1-Sv_k}{Sv_k}$$

Thus, two impendances Z_1 and Z_2 are incorporated in one equation, in view whereof one of them may be chosen arbitrarily. Then the correcting circuit v_k

On a Method of Synthesis of Correcting Γ -Shaped Quadripoles

is much more complex, another synthesis method can be applied (Fig 2), where v_k is expressed as a series of

simple factors $v_k = v_k' \cdot v_k'' \cdot \ldots \cdot v_k^n$ (3)

This method permits readily finding a correcting filter for various electric circuits, which can be utilized for extending the passage range of various transmitters (vibrometric transmitters, for example), certain amplifiers, oscillograph loops, etc. There are 3 diagrams and 4 Soviet references.

ASSOCIATION: Instytut mashynoznavstva ta avtomatyky AN URSR (Institute of Mechanical Engineering and Automation of the AS UkrSSR)

SUBMITTED: July 13, 1959

32724
S/669/60/000/001/003/004
D299/D302

3,9300 (1019, 1109, 1327)

AUTHOR: Gik, L. D.

TITLE: Correcting frequency characteristics of seismic vibration-pickups

SOURCE: Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut avtomatiki i elektrometrii. Avtomaticheskiy kontrol' i elektricheskiye izmereniya. no. 1, 1960, 115-128

4

TEXT: Through the use of corrective networks, the frequency range of vibration pickups is enlarged. From the equation of motion one obtains the frequency-characteristic equation in dimensionless form:

$$\nu = \frac{\gamma}{\beta_0'' \tau_1^2} = \frac{1}{\left[1 - \omega^2 \tau_1^2\right] + j2\varepsilon_1 \tau_1 \omega} \qquad (4)$$

Card 1/5

Correcting frequency ...

where $\tau_1 = 1/\omega_1$ is the time constant of the seismic system. Eq. (4) is convenient for accelerometers, whereas for vibrometers it is convenient to use

$$\nu = \frac{y_1}{\xi_0} = \frac{1}{\left[1 - \left(\frac{\omega_1}{\omega}\right)^2\right] - j\,2\varepsilon_1 \frac{\omega_1}{\omega}} \qquad (5)$$

where ξ_0 is related to the displacement of the support point and ε_1 is the degree of damping. From Eqs. (4) and (5) it is evident that the seismic vibration pickup works as an accelerometer if $\omega \gg \omega_1$, and as a vibrometer if $\omega \ll \omega_1$. Normal correction of seismic vibration pickups is considered, whereby the frequency characteristic of the corrected device remains similar to that of the original de-

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Correcting frequency ...

vice (as expressed by Eqs. (4) and (5)); the natural frequency ω_2 however, as well as the degree of damping ε_2 are changed in such a way that a wider frequency range is covered. Two correction methods for the degree of damping are considered. The first, called method of frequency-characteristic multiplication, involves application of the pickup signal to the input of a quadrupole. Fig. 3 shows the general circuit diagram corresponding to this method. The second method, illustrated in Fig. 4, involves the use of RC-networks. A comparison of the 2 diagrams shows that the first (Fig. 3) is simpler and facilitates tuning, yet it requires inductances with high Q-factor, which is inconvenient at low frequencies. Hence the diagram of Fig. 3 is recommended for correction of pickups with natural frequency not below 10 - 20 cycles, whereas the diagram of Fig. 4 is for correction of pickups with lower frequencies. The second method is called correction by error-simulation. In the case of vibrometers, the frequency range can be extended down to 1 - 2 cycles. From Eq. (4) it follows that in order to extend the frequency range of vibration pickups used as accelerometers, it is

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Correcting frequency ...

necessary to increase ω_1 (to reduce τ_1). After computations, one obtains the correction conditions and the parameters of the corrected device. An experimental investigation showed good agreement between the calculated corrections and the actual results. By using corrective networks, the frequency range of vibrometers can be considerably extended in the lower range. Notwithstanding the ensuing decrease in sensitivity, the frequency range can be extended in practice down to [illegible]. 2 cycles in measuring vibration amplitudes of the order of tens of microns; hence it is possible to replace the unwieldy and heavy seismometers used for measuring vibrations of frequency below 10 cycles, by ordinary vibration pickups with corrective networks. In the case of accelerometers, the use of corrective networks inserted after preamplification of the pickup signal permits increasing the sensitivity (in relation to the noise). Thereby the gain in sensitivity is expressed by the square of the ratio of the obtained natural frequency to the natural frequency of the pickup to be corrected. Thus corrective networks can be used for extending the frequency range of vibrometers and

Card 4/5

Correcting frequency ...

for increasing the sensitivity of accelerometers. There are 11 figures and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc (in translation).

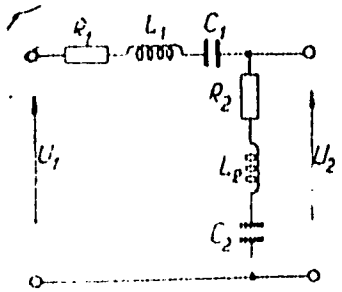

Fig. 3

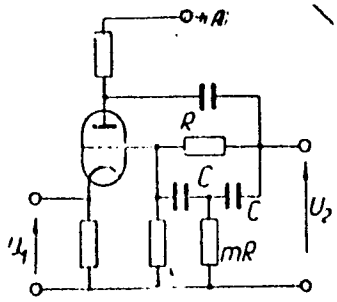

Fig. 4

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S/263/62/000/005/002/010
I007/I207

3,9300

Author: Gik, L. D

Title: CHOICE OF PROPER DAMPING OF SEISMIC VIBRATION-TRANSDUCERS

Periodical: *Referativnyy zhurnal. Mashinostroyeniye*, no. 5, 1962, 22, abstract 32 5.117 (In sb. "*Avtomat kontrol' i elektr. izmereniya*", no. 2, 1960, 97-106, Novosibirsk, Siberian Branch of AS USSR)

Text: Ways are studied for the correct choice of the damping degree for seismic vibration-transducers working in circuit with accelerometer and velocity meter. Proceeding from the formulas for the amplitude-frequency and phase-frequency characteristics of the accelerometer, applying the permissible errors for phase and amplitude, and using the expression for the frequency error of the acceleration modulus, the author derives formulas for the calculation of the minimum possible frequency of the natural oscillations of the device, in order to ensure maximum sensitivity of the device. To overcome the difficulties in the analytical solution of the problem, a diagram is presented with a family of curves for a series of values of the amplitude and phase errors. To find the intersection between two curves of given errors, the optimum damping degree ε is plotted on the abscissa, and the maximum admissible, relative frequency $X = \omega/\omega_0$, is plotted on the ordinate, thus knowing the upper limit ω of the measured frequencies, we can easily find the

Card 1/2

S/669/60/000/002/003/004
D201/D308

7.4865
3.9300

AUTHOR: Gik, L.D.

TITLE: Frequency characteristics of real seismic vibrational pick-ups and their simulation

SOURCE: Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut avtomatiki i elektrometrii. Avtomaticheskiy kontrol' i elektricheskiye izmereniya, no. 2, 1960, 107 - 121

TEXT: The author studies the problem of non-linear dependences in seismographic systems and that of design of such a system with minimum possible non-linearities. The effect of the non-linearity of the restoring force in the system is considered for the commonly used elastic elements, viz. two flat circular springs, 'cob-web' type of spring, the construction with two flat movable compressed springs and that with helical springs. The greatest non-linearity is stated to be exhibited by the 'cob-web' type of spring. In using two movable compressed springs the non-linearity is smaller, but the restoring force depends on the orientation of the system in space. The experiental analysis of the

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S/669/60/000/002/003/004
D201/D308

Frequency characteristics ...

above suspension was carried out with induction pick-ups having electromagnetic and electromechanical feedback damping. By suitable choice of the non-linearity parameters, the non-linearity could be reduced to practically zero, and it was possible to use such a system for the study of deviating of the frequency response from an ideal one. It was established experimentally that seismographic systems having the frequency response differing less than by 5 % from the ideal ones, can be realised in practice. For analysis of the seismic vibrational pick-ups electrical analogs can be used, using the 'four terminal' theory of electro-mechanical analogs. Two of such electrical analog circuits consist of a parallel or series R-L-C network with a differentiating network added; the third is the simplest of the three and consists of a twin RC-differentiating network, with the disadvantage that it cannot be used for simulating systems having damping degree less than 1. There are 11 figures.

Card 2/2

KARANDEYEV, K.B.; GIK, L.D.

Measurement of the vibration of rapidly rotating shafts. Avtom. kont.i izm.tekh. no.4:7-11 '60. (MIRA 13:8)
(Vibration--Measurement)

S/194/62/000/001/015/066
D201/D305

AUTHORS: Mizyuk, L. Ya. and Gik, L. D.

TITLE: An amplifier for electrical exploration apparatus based on the method of magnetic stabilization

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 1, 1962, abstract 1-2-22yu (V sb. Avtomat. kontrol i elektr. izmereniya, vyp. 2. Novosibirsk, sib. otd. AN SSSR, 1960, 47-54)

TEXT: The authors consider a recording apparatus for electric exploration by the method of magnetic stabilization. In the design of this apparatus an electronic amplifier with an electromechanic converter is recommended. A circuit diagram of the amplifier with one-half-period interruption of the signal at the input and synchronous rectification of the voltage at the output is offered. Theoretical foundations for principal elements of the amplifier are given. It is recommended choosing the input circuit in the form of a Γ-shaped four-terminal rheostat circuit and using a loop

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S/194/62/000/001/015/066
D201/D305

An amplifier for ...

oscillograph as the output element of the circuit. A variant of correction, obtained by the method of multiplying the frequency characteristics, is considered. The basic structure of the amplifier with a correcting circuit for the galvanometer is described. Experimental tests of the amplifier of the structure proposed ensures recording of signal in the frequency band of 0 - 15 cycles. Limit of measurements is 60 μw. The level of natural noises, reduced to input, does not exceed 1.5 μw. No zero drift with time is observed. 2 figures. 1 reference. / Abstracter's note: Complete translation. /

Card 2/2

S/169/62/000/009/005/120
D228/D307

3/7330

AUTHOR: Gik, L. D.

TITLE: Correcting the frequency characteristics of seismic vibration pickups

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 12, abstract 9A53 (In collection: Avtomat. kontrol' i elektr. izmereniya, no. 1, Novosibirsk, Sib. otd. AN SSSR, 1960, 115-130)

TEXT: A vibration pickup's frequency characteristic is corrected for the expansion of the registered frequency range. The attenuation is varied by switching on to output 10 - 20 c/s four-pole vibration pickups with an $R_1L_1C_1$ series circuit and an $R_2L_2C_2$ shunt. If $L_1 = 0$ and $C = \infty$, the attenuation increases; when $R_1 \ll R_2$ and $L_1 \gg L_2$, it decreases. A tube amplifier with a back coupling in the form of a T-shaped RC-bridge is recommended for lower-frequency

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Correcting the frequency ...

S/169/62/000/009/005/120
D228/D307

pickups. The correction is made by RC-type filters with double integration to the low-frequency side and by those of the type with double differentiation to the high-frequency side. The calculated formulas and the results of the experiments are given. [Abstracter's note: Complete translation.]

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Card 2/2

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S/020/60/132/02/23/067
B014/B007

9.3.240

AUTHORS: Karandeyev, K.B., Corresponding Member of the AS USSR,
Mizyuk, L.Ya., Gik, L.D.

TITLE: The Frequency Band of Direct Current Amplifiers With Conversion

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 2, pp. 329-332

TEXT: In the introduction it is stated that the investigation of the transmission band of a direct current amplifier with converter and the determination of the relationship between the upper limiting frequency of the signals to be amplified and the frequency of conversion is of considerable interest. Two conditions, which must be satisfied in the determination of the limiting frequency of the band, transmitted by the direct current amplifier, are mentioned. They concern the amplification coefficient and the combination-components. The authors define the half-wave and the full-wave conversion, according to whether the input signal is interrupted in dependence on the inter-connection of the modulator or whether a phase shift occurs. With equations (1) and (2), formulas are given for the calculation of the transmission coefficient of both kinds of conversion. Modulation is followed by amplification which, in turn, is followed by demodula-

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8041

The Frequency Band of Direct Current Amplifiers With Conversion

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B014/B007

tion. For the demodulator the same connecting systems exist as for the modulator, and also the transmission coefficients are calculated according to the same formulas. Further, the determination of the transmission band of the direct current amplifier with conversion at various connections of the modulators and demodulators is dealt with. The investigation showed that in the case of full wave conversion at the in- and output the output signal has no combination frequencies. By the influence of the intermediate-frequency amplifier which has feedbacks, the transmission band is limited. Fig. 1 shows the frequency characteristic of such a direct current amplifier. It is shown that the spectrum of the output voltage of a double fullwave conversion has the best properties. In conclusion, the authors investigate a direct current amplifier with a non-synchronous linear detector at the output. A half-wave conversion is assumed, and analysis shows that this amplifier is useless for the amplification of alternating voltages, but may well be used as mean-value voltmeter for a large frequency range. The mere possibility of producing broad-band direct current amplifiers with high sensitivity and stability is pointed out. There are 2 figures and 1 Soviet reference.

Card 2/3

The Frequency Band of Direct Current Amplifiers With Conversion

S/020/60/132/02/23/067
B014/B007

ASSOCIATION: Institut avtomatiki i elektrometrii Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Automation and Electrometry of the Siberian Branch of the Academy of Sciences, USSR)

SUBMITTED: February 13, 1960

Card 3/3

GIK, L. D.

Cand Tec Sci, Diss -- "Electrical correction methods for seismic-type vibration transducers". Novosibirsk, 1961. 19 pp with graphics, 19 cm (Acad Sci USSR. Siberian Dept of the Joint Sci Council on Phys-Math and Tec Sci), 220 copies, Not for sale, 14 works by the author listed on pp 18-19 (KL, No 9, 1961, p 181, No 24333). /61-51105/

GIK, L.D.

Compensation of the frequency characteristics of seismic vibration transducers. Avtom.kont.i elek.izm. no.1:115-130 '60.
(MIRA 15:8)

(Seismic prospecting--Electronic equipment)

MIZYUK, L.Ya.; GIK, L.D.

Amplifier for electric prospecting apparatus using methods of magnetic developments. Avtom. kont. i elek. izm. no.2:47-54 '60. (MIRA 15:3)

(Electric prospecting--Electronic equipment)

GIK, L.D.

Selection of the degree of damping of seismic vibration transducers. Avtom. kont. i elek. izm. no.2:97-106 '60. (MIRA 15:3)
(Seismometry—Electronic equipment)

GIK, L.D.

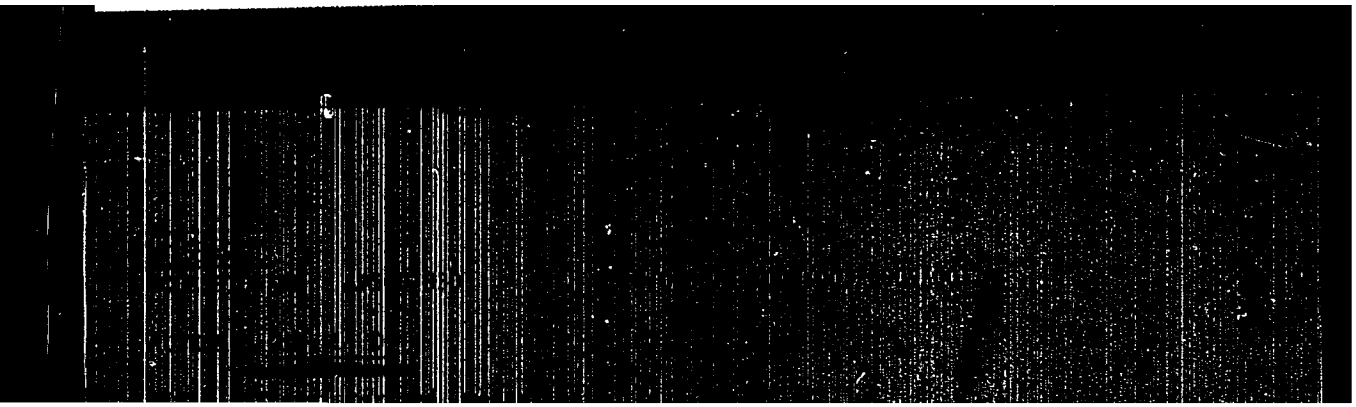
Frequency characteristics and simulation of real seismic vibration transducers. Avtom. kont. i elek. izm. no.2:107-122 '60. (MIRA 15:3)

(Seismometry--Electronic equipment)

GIK, Leonid Davidovich; KARANDEYEV, Konstantin Borisovich; SHPAKOVSKAYA, L.I., red.; YELISTRATOVA, Ye.M., tekhn. red.

[Electric correction of vibration measuring equipment] Elektricheskaia korrektsiia vibroizmeritel'noi apparatury. Novosibirsk, Izd-vo Sibirskogo otd-niia AN SSSR, 1962. 127 p. (MIRA 16:5)

(Vibration—Measurement)



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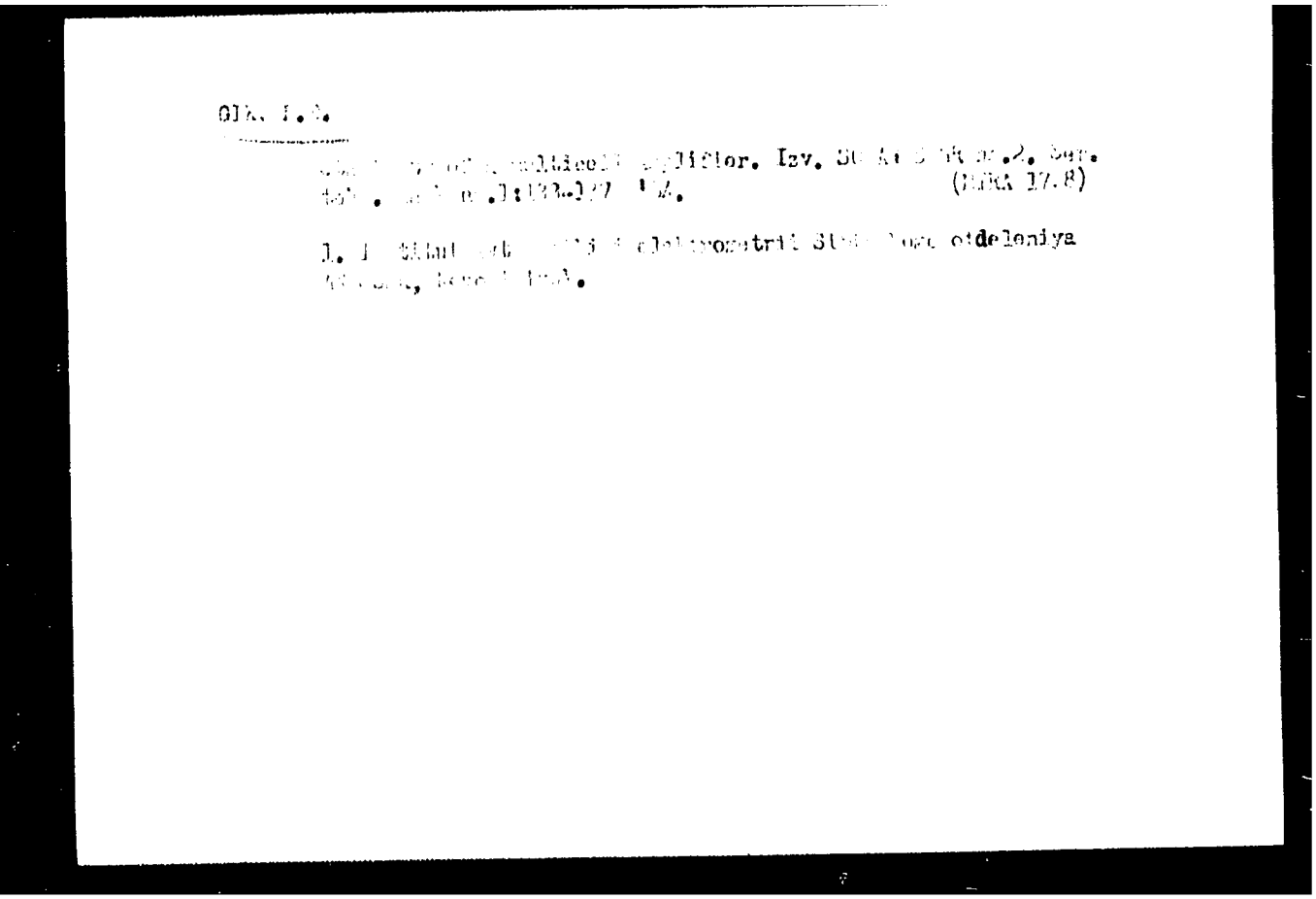

Glk, I.A.

[illegible] Izv. [illegible] (RZhKh 17.8)

[illegible] elektrometrii [illegible] otdeleniya [illegible]

GIK, I.D.

A new section of the Scientific Council on "Cybernetics" at the Presidium of the Academy of Sciences of the U.S.S.R. Avtometriia no.1:115 '65. (MIRA 18:7)

KHASHEGANU, Mikhail [Hasegamu, Mihail], prof.; GIKA, G.[Chica,G.]; KHOLAN, A.[Holan, A.]; SIMBOAN, S.[Simboan, S.]; MOKANU, K. [Mocanu, K.]; MUNTYANU, T.[Munteanu, T.]; ALEKSANDRU, D. [Alexandru, D.]; IOVENESKU, M.[Iovinescu, M.]; DZHAMO, N. [Djamo, N.]; KOZHEVNIKOVA, Ye.V.[translator]; KORNANOV , Yu.F. [translator]; LEONOV , V.N.[translator]; MOZHAROV, N.D. [translator]; ZHIRMUNSKIY, M.M., red.; TOPORKOV, G.N., red.; YANKOVICH, O.Yu., doktor, red.; BELEVA, M.A., tekhn. red.

[The economic geography of the Rumanian People's Republic] Ekonomicheskaia geografiia Rumynskoi Narodnoi Respubliki. Kniga napisana kollektivom avtorov pod rukovodstvom Mikhaila Khasheganu. Moskva, Izd-vo inostr. lit-ry, 1961. 551 p. Translated from the Rumanian. (MIRA 15:4)
(Rumania--Economic geography)

S/181/62/004/010/021/063
B108/B104

AUTHORS: Korchovey, A., Gika, G., and Greku, D.

TITLE: Distribution of displaced atoms in a solid as caused by a primary atom produced by irradiation

PERIODICAL: Fizika tverdogo tela, v. 4, no. 10, 1962, 2777 - 2790

TEXT: Neutrons or charged particles incident on a solid will displace atoms in the lattice if they impart an energy to these that exceeds a certain threshold ε_d ($\sim$25 ev). The displaced primary atoms will then also displace other atoms if their energy is still high enough. Knowing the correlation function of the distribution between the subsequent displacements for the primary atom one can calculate the distribution of all displaced atoms. This is done in the present paper. The correlation function is calculated on condition that an atom remains at its place when its energy is less than ε_d. The mean values of the products of the position vector components are calculated. These are used to calculate recurrence formulas for the n-th displacement of the atoms with respect to their (n-1)-st

Card 1/2

displacement. In the case of large n, these formulas lead to Volterra type integral equations. The distribution function of the displaced atoms calculated therefrom already in the third approximation differs very little from the Gaussian distribution function.

ASSOCIATION: Institut atomnoy fiziki, Bukharest (Institute of Atomic Physics, Bucharest)

SUBMITTED: May 19, 1962

GREBENSHCHIKOV, L.S.; GIKAL, N.K.; SHKURATOV, O.G.

The EPM-50 electric filter for removing dust from mine air. Biul. tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. no.12: 5-7 '63. (MIRA 17:3)

GREBENSHCHIKOV, L.S.; SHKURATOV, G.G.; GIKAL, N.K.; SUPRUN, A.P.

The EPM-50 mine electrostatic precipitator. Gor. zhur. no.5:64-67 My '64. (MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnoy metallurgii.

GIKALO, A.F.

Rules for the boiling out of evaporating units with acid. Sakh.prom. 37 no.2:23(103)-25(105) F '63. (MIRA 16:5)

1. Belorusskiy sovet narodnogo khozyaystva.
(Sugar machinery—Maintenance and repair)
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GIKALO, G.S.; GIKALO, E.A.; ZHUK, G.I.

New sweet pepper varieties for canning. Kons.i ov.prom. 17 no.2:25-28 F '62. (MIRA 15:5)

1. Opytno-selektsionnaya stantsiya v Krymske.
(Peppers)
(Vegetables, Canned)

GIKALO, G.S.; GIKALO, E.A.

Optimum time for harvesting the seed fruits of sweet peppers. Kon.i ov.prom. 17 no.11:33-35 N '62. (MIRA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut rasteniyevodstva (for Gikalo, G.S.). 2. Opytno-selektsionnaya stantsiya Vsesoyuznogo instituta rasteniyevodstva v Krymske (for Gikalo, E.A.)
(Peppers)

KRAMARENKO, M. P., polkovnik meditsinskoy slushby; GIKALOV, G. S., polkovnik meditsinskoy slushby; LESHCHINSKAYA, R. G.

Treatment of patients with rheumatic fever with hormones in combination with other substances. Voen.-med. zhur. no.12: 26-28 D '61. (MIRA 15:7)

(RHEUMATIC FEVER) (ADRENOCORTICAL HORMONES)

GIKALO, G.S.; GIKALO, E.A.; ZHUK, G.I.

New sweet pepper varieties for canning. Kons.i ov.prom. 17 no.2:25-28 F '62. (MIRA 15:5)

1. Opytno-selektsionnaya stantsiya v Krymske.
(Peppers)
(Vegetables, Canned)

GIKALO, G.S.; GIKALO, E.A.

Optimum time for harvesting the seed fruits of sweet peppers. Kon.i ov.prom. 17 no.11:33-35 N '62. (MIRA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut rasteniyevodstva (for Gikalo, G.S.). 2. Opytno-selektsionnaya stantsiya Vsesoyuznogo instituta rasteniyevodstva v Krymske (for Gikalo, E.A.)
(Peppers)

GIKALO, G.S.

Conditions causing the germination of sweet pepper [illegible] within the fruit. Sbor. trud. asp. i mol. nauch. sotr. [illegible] '64.
(MIRA 18:3)

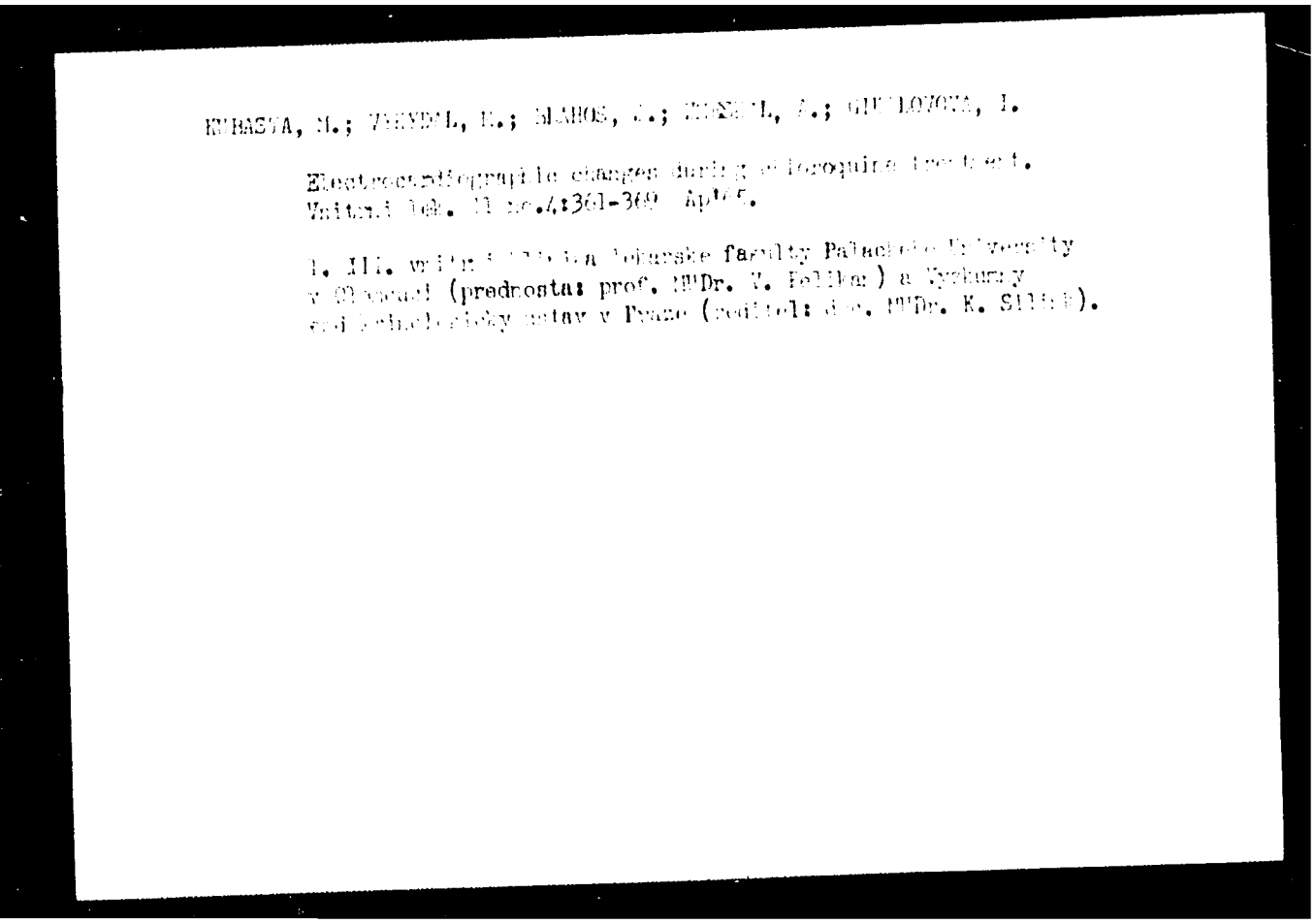
GIKALOV, G. S., and BELOV, N. A.

"Myocardial Infarct in Young Persons as a Result of Acute Physical Overexertion" p. 39

Voyenno Meditsinskiy Zhurnal, No. 10, 1962

BELOV, N.A., kand. med. nauk (Leningrad); GIKALOV, G.S. (Leningrad); KAZAKOV, N.F. (Leningrad)

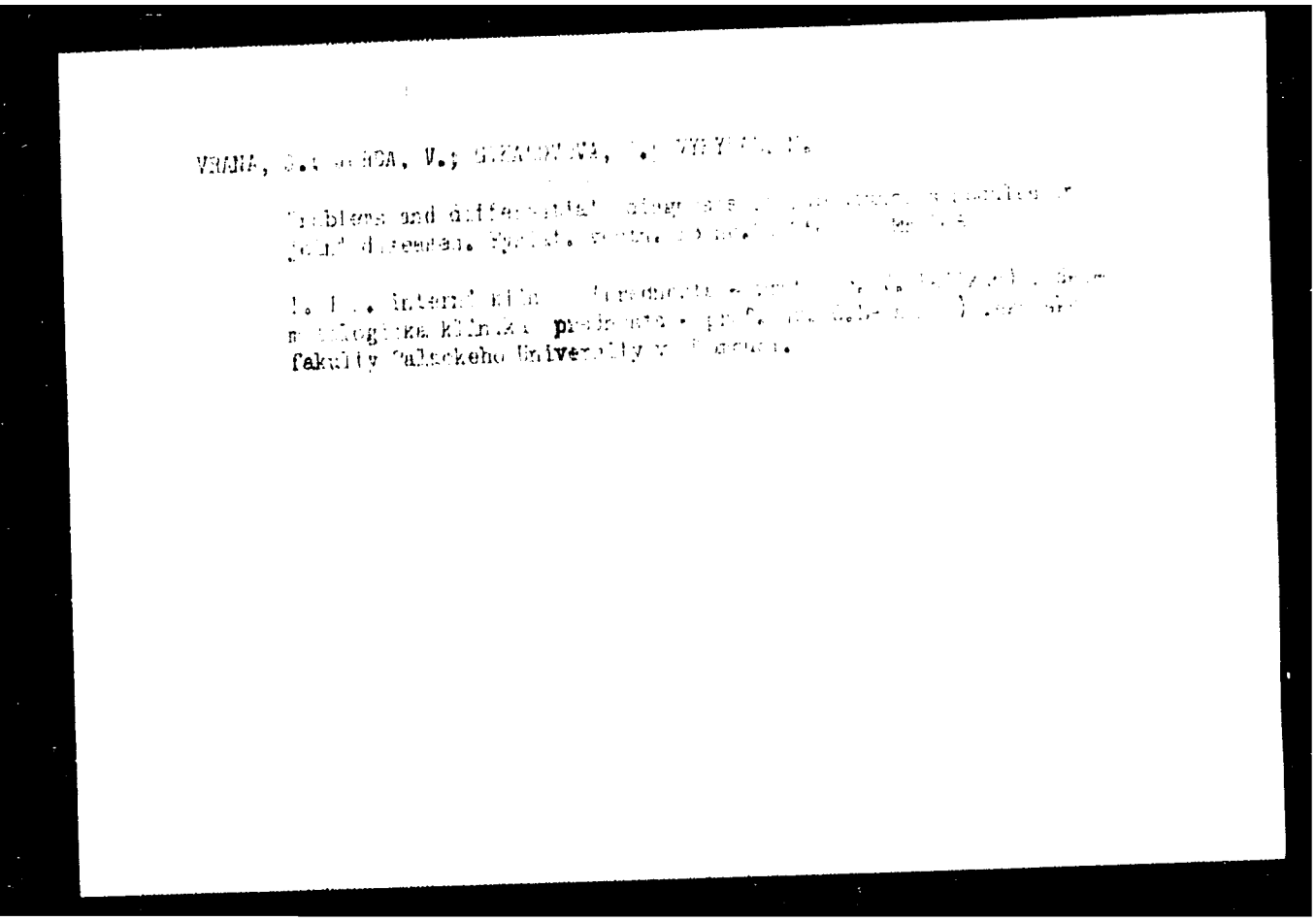
Changes in the blood system in Botkin's disease and treatment with steroid hormones. Sov. Med. 26 no. 4:48-52 S '62. (MIRA 17:4)

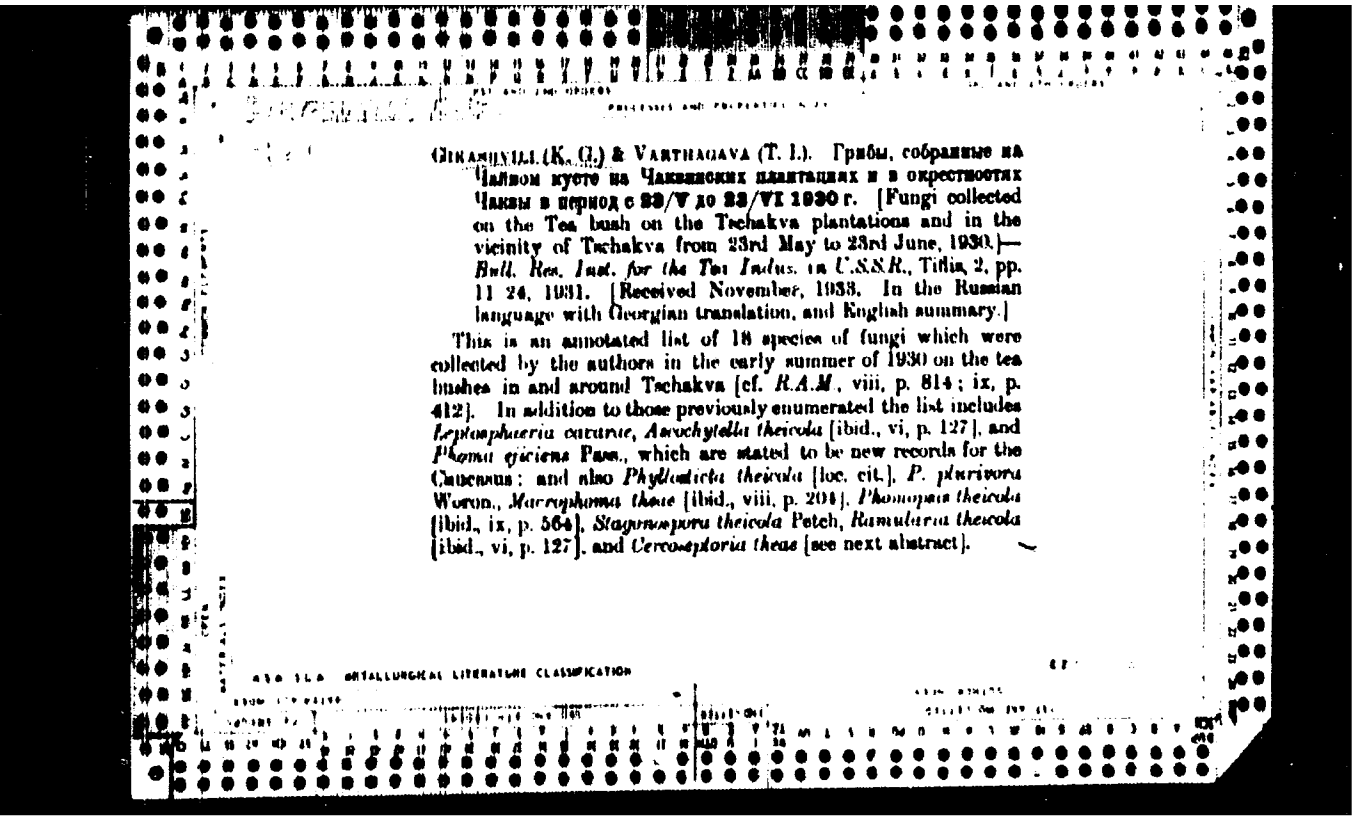


KYBASTA, M.; VENCL, E.; SLAMOS, J.; [illegible]

Electroencephalographic changes during [illegible] treatment.
Vnitřní lék. 11 no.4:361-369 Ap'65.

1. II. vnitřní [illegible] lékařské fakulty Palackého University v Olomouci (přednosta: prof. MUDr. V. Feltl, DrSc.) a Výzkumný radiologický ústav v Praze (ředitel: doc. MUDr. K. Sitař).





GHARPURAY (K. G.) & VARTHAGAVA (T. L.). Грибы, собранные на чайном кусте на Чаквинских плантациях и в окрестностях Чаквы в период с 23/V до 23/VI 1930 г. [Fungi collected on the Tea bush on the Tschakva plantations and in the vicinity of Tschakva from 23rd May to 23rd June, 1930.]—*Bull. Res. Inst. for the Tea Indus. in U.S.S.R.*, Tiflis, 2, pp. 11-24, 1931. [Received November, 1933. In the Russian language with Georgian translation, and English summary.]

This is an annotated list of 18 species of fungi which were collected by the authors in the early summer of 1930 on the tea bushes in and around Tschakva [cf. *R.A.M.*, viii, p. 814; ix, p. 412]. In addition to those previously enumerated the list includes *Leptosphaeria carunae*, *Ascochytella theicola* [ibid., vi, p. 127], and *Phoma efficiens* Pass., which are stated to be new records for the Caucasus; and also *Phyllosticta theicola* [loc. cit.], *P. pluriporo* Woron., *Macrophoma theae* [ibid., viii, p. 204], *Phomopsis theicola* [ibid., ix, p. 564], *Stagonospora theicola* Petch, *Ramularia theicola* [ibid., vi, p. 127], and *Cercosporia theae* [see next abstract].

GIKASHVILI, K. G.

Kanchaveli, I. A. and Gikashvili, K. G. -"Data for [illegible] of the cr in. of lemon trees in the Georgian SSR," Trudy In-ta [illegible] (Akad. Nauk Gruz. SSR), Vol. V, 1948, p. 1-43, - Bibliog: 23 items

SO: U-4082, 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).

BC

B3-1

PROCESSES AND PROPERTIES INDEX

Defense reactions in beet leaves attacked by *Cercospora beticola*. Ya. R. Ellengorn and E. G. Gikashvili (*C. R. Acad. Sci. U.R.S.S.*, 1948, 60, 1209—1211).—[illegible] spots on beet leaves attacked by *C. beticola* are surrounded by a zone of anthocyanin-containing cells, the plasma of which has an acid reaction. These cells act as a barrier to the spread of the mould, which can grow only in neutral or alkaline media.

R. TRUSCOE

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION