SOV/136-59-6-3/24

AUTHORS: Gurevich, R.I. and Berlinskiy, I.I.

TITLE: An Evaluation of the Work of Ore-dressing Plants (K otsenke raboty obogatitel'nykh fabrik)

PERIODICAL: Tsvetnyye metally, 1959, Nr 6, pp 20 - 23 (USSR)

ABSTRACT: In 1949-1951, there was a discussion in Tsvetnyye metally on the question of technological and commercial balances. This work was never completed so it seemed expedient to define the terms. The technological balance is given by:

$$M_p + M_{HH} = M_K + M_X ;$$

$$M_p = Q_p . \alpha_p ; \quad M_{HH} = \sum_1^i Q_{HH} \cdot \beta_{HH} ;$$

$$M_K = (M_p + M_{HH}) \cdot E^H_{TEX} ;$$

$$M_X = M_p + M_{HH} - M_K$$

where M_K is the weight of metal in the concentrate,

Card1/4

calculated from chemical analysis, M_X is the loss of metal in the tailings, Q_p, Q_{HH} are the weight of ore and weight of uncompleted production, respectively, α_p, β_{HH} are the metal content in the respective products. E^H_{TEX} is the technological extraction of metal in the concentrate. The technological extraction is given by:

$$E_{TEX} = \frac{(Q_p \cdot \alpha_p + \sum_1^i Q_{HH} \cdot \beta_{HH}) \cdot E^H_{TEX}}{Q_p \cdot \alpha_p + \sum_1^i \frac{Q_{HH} \cdot \beta_{HH}}{E''_{HH}}} \cdot 100\% \quad .$$

The commercial balance is given by:

Card2/4

An Evaluation of the Work of Ore-dressing Plants

$$M_p + M_{HH} = M_{KK} + M_{HK} + M_X + M_\Pi ;$$

$$M_{KK} = Q_{KK} \cdot \beta_{KK}; \quad M_{HK} = Q_{HK} \cdot \beta_{HK};$$

$$M_\Pi = M_p + M_{HH} - M_{KK} - M_{HK} - M_X$$

where M_{KK} is the weight of metal in the final concentrate, M_{HK} is the weight of metal in the incompleted product, M_Π is the weight of metal in the mechanical losses, Q_{KK}, Q_{HK} are the weights of the final concentrate and the incompleted product, respectively, β_{KK}, β_{HK} are the weights of the metal content in the above. The commercial extraction is given by:

An Evaluation of the Work of Ore-dressing Plants

$$E_{TOB} = \frac{Q_{KK} \cdot \beta_{KK}}{Q_p \cdot \alpha_p + \sum_1^i \frac{Q_{HH} \cdot \beta_{HH}}{E''_{HH}}} \cdot 100\% .$$

These equations may be used for a comparison of ore-dressing Plants. There are 5 Soviet references.

Card 4/4

TALMUD, S.L.; ZEL'DINA, A.Ye.; GUREVICH, R.I.

Preparation of sulfite viscose. Zhur. prikl. khim. 33 no.9:2112-2118 S '60. (MIRA 13:10)

1. Leningradskiy tekhnologicheskiy institut tsellyulozno-bumazhnoy promyshlennosti.

(Viscose)

GUREVICH, R.I.

Unit for the preparation of anthracite in a water-sand suspension. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekh.inform. no.6:13-15 '62. (MIRA 15:7)
(Coal preparation)

GUREVICH, R.M, kandidat veterinarnykh nauk.; YAKOVLEVA, A.G.

Immunity in sheep following brucellosis. Dokl.Akad.sel'khoz. 21 no.8:7-11 '56. (MLRA 9:10)

1. Saratovskaya nauchno-issledovatel'skaya veterinarnaya opytnaya stantsiya. Predstavleno sektsiyey veterinarii Vsesoyuznoy orden Lenina akademii sel'skokhozyaystvennykh nauk imeni V.I. Lenina.

(Brucellosis in sheep) (Immunity)

LOKHOV, M.G.; GUREVICH, R.M.

Results of attempts to eradicate brucellosis in sheep and goats. Zhur.mikrobiol.epid. i immun. 28 no.9:16-21 S '57. (MIRA 10:12)

1. Iz Saratovskogo instituta "Mikrob" i Saratovskoy veterinarno-opytnoy stantsii.

(BRUCELLOSIS, prevention and control,
in goats & sheep (Rus))
(GOATS, diseases,
brucellosis, eradication (Rus))
(SHEEP, diseases,
same)

GUREVICH, R.M., kand.veterinarnykh nauk

Brucellar animals with varying immunobiological reactions as a source of infection. Sbor.nauch.rab.Sar.NIVS 4:24-28 '60.
(MIRA 15:7)

(Brucellosis in sheep)

GUREVICH, R.M., kand.veterinarnykh nauk; YAKOVLEVA, A.G., nauchnyy sotrudnik

Postinfection immunity in brucellosis in sheep. Sbor.nauch.rab. Sar.NIVS 4:5-9 '60. (MIRA 15:7)
(Brucellosis in sheep)

GUREVICH, R.M., kand.veterinarnykh nauk

Antigenic and immunogenic properties of a semiliquid brucellosis vaccine. Sbor.nauch.rab.Sar.NIVS 4:10-11 '60. (MIRA 15:7)
(Brucellosis in sheep) (Vaccines)

ACC NR: AP7005608 SOURCE CODE: UR/0413/67/000/002/0048/0048

INVENTOR: Anfilov, Ye. A.; Govorkov, I. T.; Gurevich, R. V.; Zhuchkin, I. A.; Kuznetsov, V. D.; Olifin, L. K.

ORG: None

TITLE: A cophased antenna array with electrical scanning. Class 21, No. 190433

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1967, 48

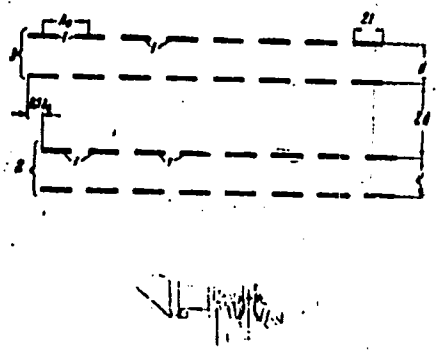
TOPIC TAGS: dipole antenna, antenna array, antenna directivity

ABSTRACT: This Author's Certificate introduces a cophased antenna array with electrical scanning. The installation is made in the form of center-fed dipoles arranged in groups and equipped with an aperiodic or tuned reflector. In order to reduce the level of side lobes of the directional pattern in the horizontal plane, the lower group of dipoles is shifted horizontally with respect to the upper group in the plane of the array by one-half the distance between the adjacent dipoles in the group.

Card 1/2

UDC: 621.396.677.32

ACC NR: AP7005608



1--center-fed dipoles; 2--lower group of dipoles; 3--upper group

SUB CODE: 09/ SUBM DATE: 27Aug65

GUREVICH, Roman Vladimirovich; SERGEYEV, O.V., redaktor; GOROKHOVSKIY, A.V., redaktor; SOKOLOVA, R.Ya., tekhnicheskiy redaktor.

[Measurement and tuning of shortwave transmitter antennas] Izmereniia i nastroika peredaiushchikh korotkovolnovykh antenn. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1955. 35 p. (Radio, Shortwave--Antennas) (MLRA 9:5)

GUREVICH, R.V., inzhener.

The use of feed inserts for the adjustment of shortwave sending antennas. Vest.sviazi 15 no.11:10-12 N '55. (MLRA 9:2)
(Radio, Shortwave--Antennas) (Electric transformers)

KOSAR', A.V.; red.; VOLOSHIN, A.N., red.; GUREVICH, R.V., red.; KROPACHEV, N.G., red.; PARENCHENKO, N.S., red.; PLEKHANOV, P.S., red.; SUSKOV, I.A., red.; SHAROV, G.V., red.; OGAREV, A.P., tekhn.red.

[First in Siberian metallurgy] Pervenets Sibirskoi metallurgii. Kemerovskoe knizhnoe izd-vo, 1957. 289 p. (MIRA 12:4)

1. Sekretar' partkoma Kuznetskogo kombinata (for Parenchenko).
2. Nachal'nik tekhnicheskogo otdela Kuznetskogo kombinata (for Sharov).
(Kuznetsk Basin--Metallurgical plants)

GUREVICH, R.V.

USSR/Miscellaneous - Radio

Card 1/1 : Pub. 133 - 5/20

Authors : Gurevich, R. V., Engineer

Title : On the pattern of rotation of SG-antennas

Periodical : Vest. svyazi 7, 10-12, July 1954

Abstract : A method of rotating directional diagrams of short wave SG-type antennas, based on changing the length of distribution feeders, is discussed. The non-uniformity in power distribution between half-wave antennas, at a traveling wave coefficient in the distributing feeders of less than one, and its effect on the performance of antennas, is explained. Formulas determining the phase displacement on a section of the feeder, at a traveling wave coefficient different from one, are included. Graphs; drawings.

Institution : ...

Submitted : ...

[illegible], A. I., [illegible], A. I., SOKOLOV, K. Ye. and KHEYMETS, A. M.
(Leningrad Plant "Krasnyy Khimik")

"Utilization of Radioactive Isotopes in the Development of Processes for Obtaining and Purifying Chemical Reagents"

Isotopes and Radiation in Chemistry, Collection of Papers of 2nd All-Union Sci.Tech. Conf. on Use of Radioactive and Stable Isotopes and Radiation in National Economy and Science, Moscow, Izd-vo AN SSSR, 1958, 300pp.

This volume publishes the reports of the Chemistry Section of the 2nd All Sci Tech Conf on Use of Radioactive and Stable Isotopes and Radiation in Science and the National Economy, sponsored by Acad. Sci. USSR and Main Admin for Utilization of Atomic Energy under Council of Ministers (GUAE), Moscow, 9-12 April 1957.

GUREVICH, S.

More on paying bonuses to workers. Sots. trud 7 no.10:119-123 O '62. (MIRA 15:10)

1. Nachal'nik otdela truda i zarabotnoy platy Upravleniya tekstil'noy promyshlennosti Lensovnarkhoza.

(Kalinin—Wages—Textile industry)
(Bonus system)

GUREVICH, S. A.

62/49T62

USSR/Medicine - Hygiene and Sanitation Jul 49
Medicine - Public Health

"The Reconstruction of Moscow and the Problems of Hygienists," S. A. Gurevich, 3½ pp

"Gig i San" No 7

Among measures contemplated in the decree on "Preparing a New General Plan for the Reconstruction of Moscow" are: increased water supply after the North Conduit and the Kur'yan Station for purifying sewage begin operation, scientific recommendations on drainage for industry, revision of water-consumption standards, green open spaces,

62/49T62

USSR/Medicine - Hygiene and Sanitation (Contd) Jul 49

number of fountains, etc., elimination of harmful properties in sewage, and its use on suburban agricultural land. Stresses necessity of assistance from hygienists, laboratories, and institutes in these projects.

62/49T62

ALEYNIKOV, G.I., kand. tekhn. nauk; ZENKEVICH, Yu.V., kand. tekhn. nauk; GUREVICH, S.A., inzh.; KOKOSHKIN, I.A., inzh.

Results of thermochemical tests of the PK-12 boiler and of observations on the water system of super-high parameter units under operating conditions. Energomashinostroenie 7 no.3:1-6 Mr '61. (MIRA 16:8)

(Boilers--Testing)

GUREVICH, S.B.

Potentialities in production cost reduction. Bum.prom. 27 no.12: 22-25 D '52. (MLRA 7:10)

1. Nachal'nik planovogo otdela Glavtsentrobumproma.
(Paper industry--Costs)

ALEKSEYEV, D.G.; VEYNOV, K.A.; GORCHENKOV, S.G.; GUREVICH, S.B.; DITKOVSKIY, A.S.; KAMKOV, G.I.; MORGEN, D.I.; PROKHORCHUK, I.S.; RUMYANTSEV, N.M.; UCHASTKINA, Z.V.; SHISHOV, I.A.; MOLOZHAVYY, M.M., red.; NIKOLAYEV, N.N., red.; CHISTYAKOV, N.N., red.; KHUDYAKOVA, A.V., red.; MOROZOV, Yu.V., red.izd-va; BACHURINA, A.M., tekhn.red.

[Soviet paper industry, 1917-1957] Bumazhnaia promyshlennost' SSSR, 1917-1957 gg. Pod obshchei red. K.A.Veinova. Moskva, Goslesbumizdat, 1958. 147 p. (MIRA 12:3)

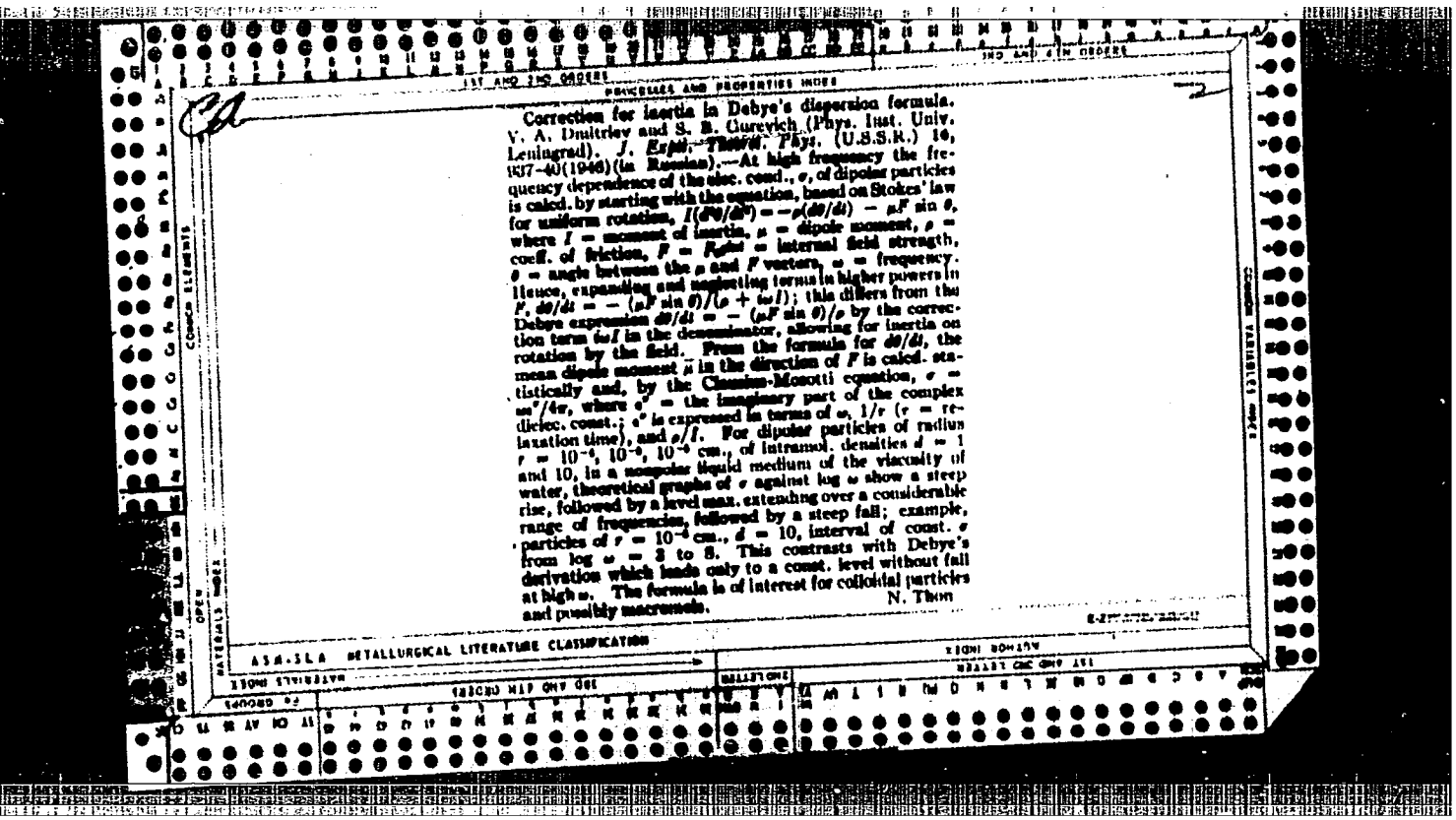
1. Nauchno-tekhnicheskoye obshchestvo bumazhnoy i derevoobrabatyvayushchey promyshlennosti. 2. Chlen Nauchno-tekhnicheskogo obshchestva bumazhnoy i derevoobrabatyvayushchey promyshlennosti (for all except Morozov, Bachurina). (Paper industry)

SOMINSKIY, Vladimir Samoylovich, dotsent, kand.tekhn.nauk; GUREVICH, Semen Borisovich, inzh.; KOGAN, Bronislava L'vovna, dotsent, kand.ekon.nauk; UCHASTKINA, Zoya Vasil'yevna, dotsent, kand. tekhn.nauk. Prinimal uchastiye: IVCHER, M.I., starshiy prepodavatel'. FEDORENKO, N.P., prof., doktor ekon.nauk, retsenzent; SARMATSKAYA, G.I., red.izd-va; BRAZHISHKO, L.V., tekhn.red.; PROKOF'YEVA, L.N., tekhn.red.

[Production organization and planning at pulp and paper mills] Organizatsiia i planirovanie proizvodstva na tselliulozno-bumazhnykh predpriiatiiakh. Moskva, Goslesbumizdat, 1958. 257 p. (MIRA 12:6)
(Woodpulp industry) (Paper industry)

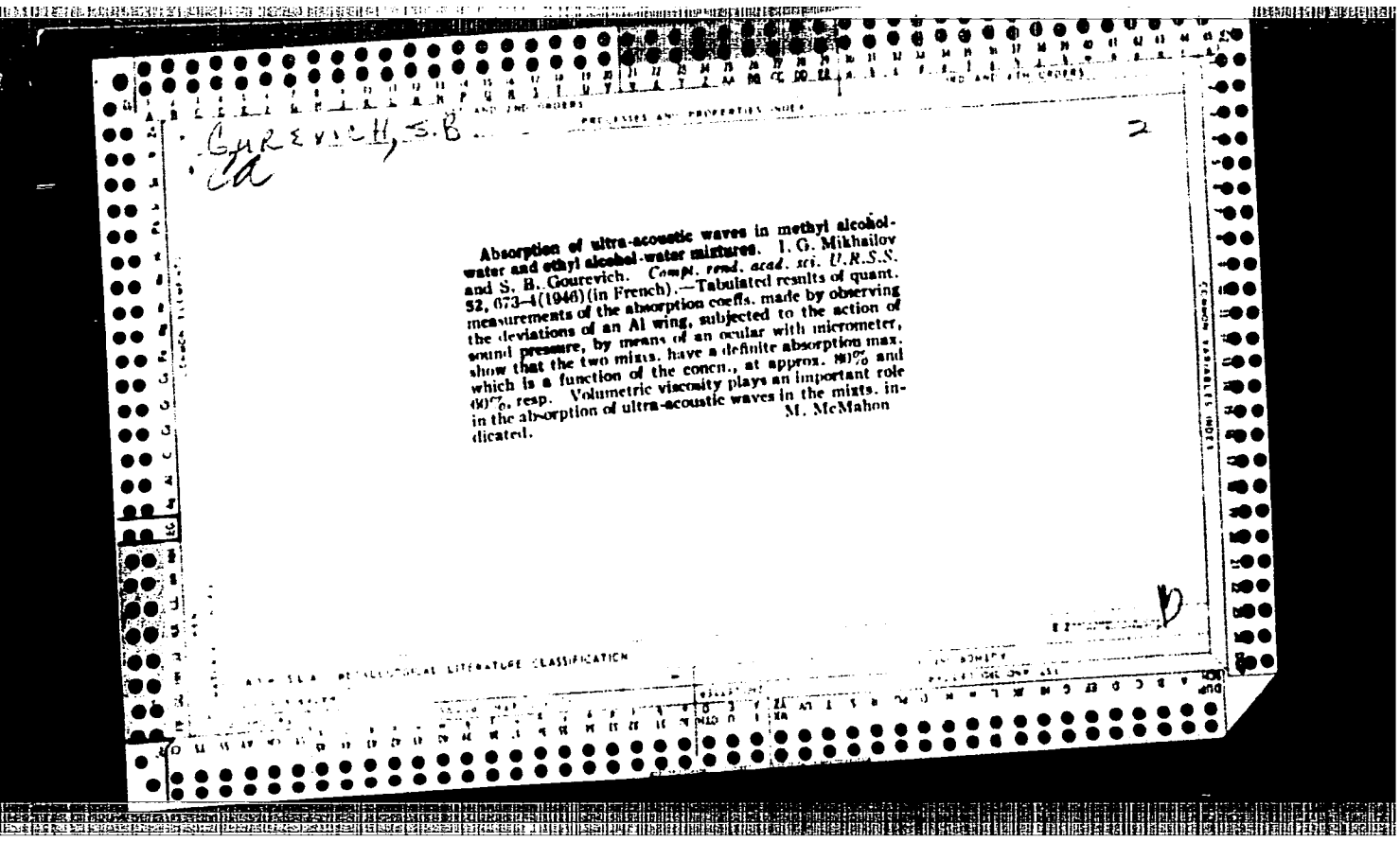
GUREVICH, S.B., inzh.

Mastering the modernized and reinstalled papermaking machines. (MIRA 15:3)
Bum.prom. 37 no.3:2-3 of insert Mr '62.
(Papermaking industry)



Correction for inertia in Debye's dispersion formula. V. A. Dmitriev and S. B. Gurevich (Phys. Inst. Univ. Leningrad). *J. Expil. Theoret. Phys.* (U.S.S.R.) 16, 837-40(1946)(in Russian).—At high frequency the frequency dependence of the elec. cond., σ, of dipolar particles is calcd. by starting with the equation, based on Stokes' law for uniform rotation, $I(d^2\theta/dt^2) = -\rho(d\theta/dt) - \mu F \sin\theta$, where I = moment of inertia, μ = dipole moment, ρ = coeff. of friction, $F = F_{applied}$ = internal field strength, θ = angle between the μ and F vectors, ω = frequency. Hence, expanding and neglecting terms in higher powers in F, $d\theta/dt = -(\mu F \sin\theta)/(\rho + i\omega I)$; this differs from the Debye expression $d\theta/dt = -(\mu F \sin\theta)/\rho$ by the correction term $i\omega I$ in the denominator, allowing for inertia on rotation by the field. From the formula for $d\theta/dt$, the mean dipole moment $\bar{\mu}$ in the direction of F is calcd. statistically and, by the Clausius-Mosotti equation, $\sigma = \omega\epsilon''/4\pi$, where ϵ'' = the imaginary part of the complex dielec. const.; ϵ'' is expressed in terms of ω, $1/\tau$ (τ = relaxation time), and ρ/I. For dipolar particles of radius $r = 10^{-6}$, 10^{-5}, 10^{-4} cm., of intramol. densities $d = 1$ and 10, in a nonpolar liquid medium of the viscosity of water, theoretical graphs of σ against log ω show a steep rise, followed by a level max. extending over a considerable range of frequencies, followed by a steep fall; example, particles of $r = 10^{-4}$ cm., $d = 10$, interval of const. σ from log $\omega = 3$ to 8. This contrasts with Debye's derivation which leads only to a const. level without fall at high ω. The formula is of interest for colloidal particles and possibly macromols.

N. Thon



GUREVICH, S.B.

2

Absorption of ultra-acoustic waves in methyl alcohol-water and ethyl alcohol-water mixtures. I. G. Mikhailov and S. B. Gourevich. *Compt. rend. acad. sci. U.R.S.S.* 52, 673–4(1946)(in French).—Tabulated results of quant. measurements of the absorption coeffs. made by observing the deviations of an Al wing, subjected to the action of sound pressure, by means of an ocular with micrometer, show that the two mixts. have a definite absorption max. which is a function of the concn., at approx. 80% and 60%, resp. Volumetric viscosity plays an important role in the absorption of ultra-acoustic waves in the mixts. indicated.
M. McMahon

GUREVICH, S. B.

USSR/Physics Jan 1947
Waves, Ultrasonic
Vibration Absorption

"Absorption of Ultra-Accoustic Waves in Liquids," S. B. Gurevich, Phys Inst, Leningrad State U, 4 pp

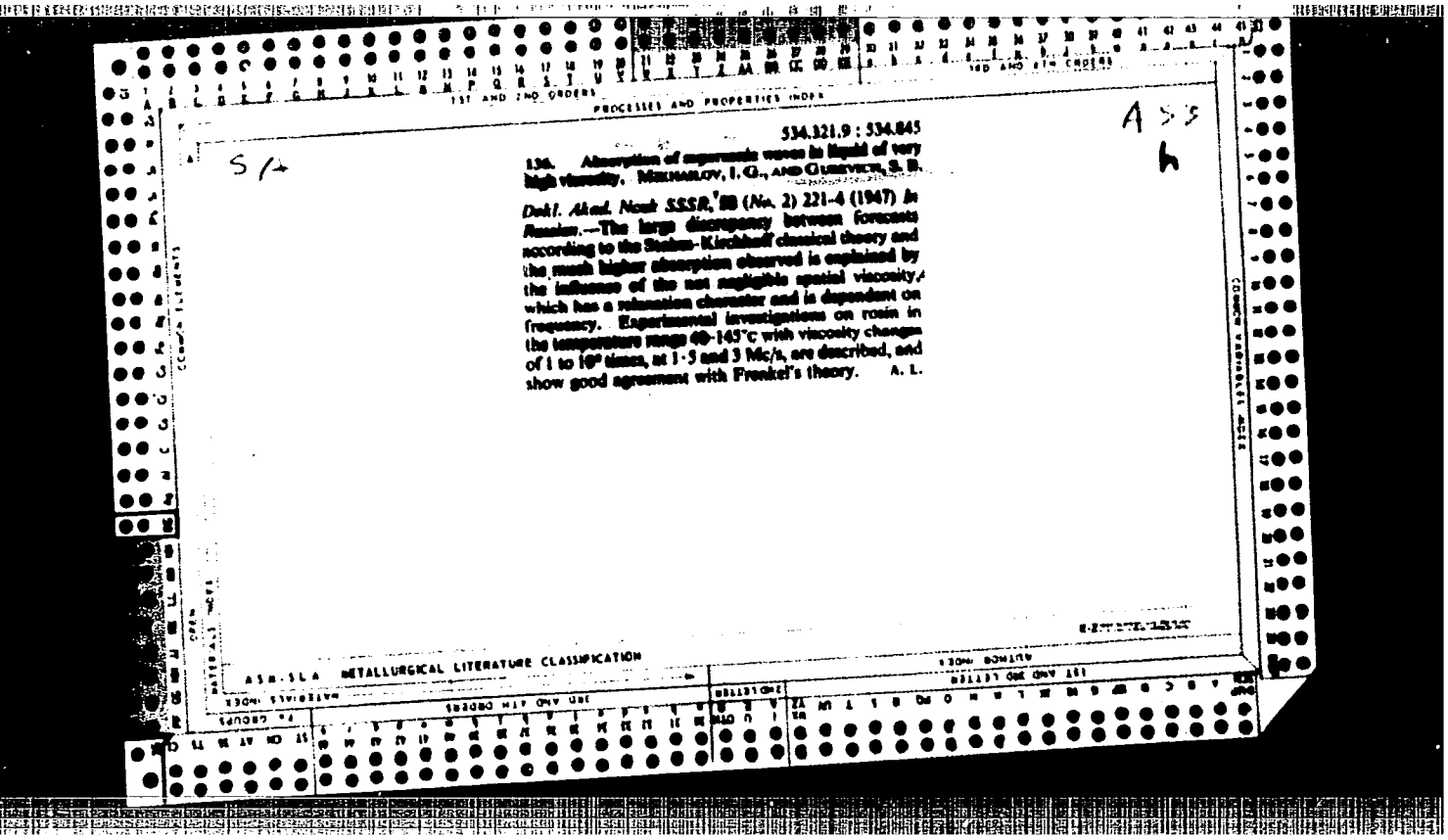
"Dok Akad Nauk SSSR, Nova Ser" Vol LV, No 1

Quotes Stokes' equation for determining absorption of ultra-acoustic waves in liquids where

$$\alpha = \frac{2\omega^2\mu}{3\rho a^3}$$

and describes experiments giving results which indicate that for every liquid the absorption is greater than those given by Stokes' equation.

58T90



534.321.9 : 534.845

136. **Absorption of supersonic waves in liquid of very high viscosity.** MIKHAILOV, I. G., AND GUREVICH, S. B. *Dokl. Akad. Nauk SSSR*, 58 (No. 2) 221–4 (1947) *In Russian.*—The large discrepancy between forecasts according to the Stokes-Kirchhoff classical theory and the much higher absorption observed is explained by the influence of the not negligible spatial viscosity, which has a relaxation character and is dependent on frequency. Experimental investigations on rosin in the temperature range 60–145°C with viscosity changes of 1 to 10^6 times, at 1·5 and 3 Mc/s, are described, and show good agreement with Frenkel's theory. A. L.

GUREVICH, S. B.

PA 11/49T102

USSR/Physics May 48
Sound, High Frequency
Sound - Absorption

"Absorption of Supersonic Waves in Liquids," I. G. Mikhaylov, S. B. Gurevich, 34 pp

"Uspekhi Fiz Nauk" Vol XXXV, No 1

Discusses Stokes-Kirchhof theory; L. I. Mandel'shtam and M. A. Leontovich's absorption theory; general relaxation theory; theory of dispersion of light; absorption in very viscous liquids; theory of absorption and relaxation processes in liquids.

11/49T102

USSR/Physics Feb 1948
Sound, High-Frequency
Wave Propagation

"Ultrasonics," S. B. Gurevich, V. G. Panchenko, 14 pp

"Priroda" Vol XXXVII, No 2

Ultrasonics is study of sound waves of frequency from 20,000 cycles to 1,000 megacycles per second. Describes methods of producing and investigating these waves. Explains mathematical equations governing their propagation. Mentions various effects of waves together with application to metallurgy, television, etc.

69T90

GUREVICH, S. B. PA 47/49T98

USSR/Nuclear Physics Jan 49
Particles, Elementary
Varitrons

"Varitrons," S. B. Gurevich, 4 pp

"Priroda" No 1

Reviews findings of Soviet physicists, especially Nikitin, the Alikhanov brothers, and Vaysenberg, in the field of cosmic rays from 1942 to 1947.

47/49T98

GUREVICH, S. B.

PA 37/49T8

USSR/Chemistry - Liquid State, Theories of Feb 49
Chemistry - Bibliography

"Contemporary Theory of Liquid States," S. B. Gurevich, V. G. Panchenko, 9½ pp

"Priroda" No 2

General review of present-day concepts of the liquid state. Bibliography includes references to the work of Ya. I. Frenkel', E. Garchek, G. Endryus, V. B. Berestetskiy, and M. V. Vol'kenshteyn. (Concludes previous article.)

[redacted] 37/49T8

GUREVICH, S.B.

28925. GUREVICH, S.B. Ultrazvukovoy Mikroskop (Sistemy S. Ya. Sokolova) Priroda, 1949 No. 9, s. 45-47.

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

GUREVICH, S.B.

Michailov, I. G. and Gurevich, S. B., The absorption and rate of ultra sound waves in some very viscous liquids and amorphous solid bodies. P. 193.

This article gives the results of measurement of the absorption of ultra sound waves in molten and solid rosin in a temperature interval from 40 to 145°C and also their absorptions and rates in polymethyl-methacrylate. It is established that in the frequency region investigated the absorption coefficient in rosin decreases at increase of viscosity, in case of great viscosity, in accordance with the relaxation theory. The investigation of the frequency dependence of the absorption coefficient in rosin at large viscosity and in polymethylmethacrylate has shown that the absorption coefficient decreases approximately propartionally to the square root of the frequency, which does not agree with the conclusions of the relaxation theory in its simplest form. The frequency dependence of absorption observed in polymehtylmethacrylate is not accompained by dispersion. The assumption is expressed that a further development of the relaxation theory may lead to the explanation of the obtained experimental results.

The Leningrad State University
July 16, 1948

SO: Journal of Experimental and Theoretic Physics (USSR) 19, No. 3 (1949)

USSR/Chemistry - Properties of Crystals Jun 50

"Surface Tension of Crystals and Its Effect on Changes of the Shape of Crystals and Caking of Crystalline Powders," S. B. Gurevich

"Fizika" No 6, pp 58-60

Gives account of work by Acad P. I. Lukirskiy ("Dok Ak Nauk SSSR" Vol LVI, 300, 1945) and by S. V. Starodubtsev and N. I. Timokhin ("Dok Ak Nauk SSSR" Vol LXII, 619, 1948) on crystals heated to a temp below their mp. Surface tension of crystals assumes different values in different crystallographic directions. A polished sphere made from a monocrystal of NaCl assumes an octahedric shape on heating to 720-600°. The atoms creep rather than evap and then condense. Cryst powders of NaCl and KI after heating at 500° were found to grow together as a result of the formation of bridges having a circular cross section. Other expts at 600° showed that conical protuberances grow from the edge of one crystal to that of the next and that the edges of the crystals become connected.

222T5

GUREVICH, S. B.

222T5

USSR/Nuclear Physics - Molecular Beam May 51

"Techniques of Molecular Bunches," S. B. Gurevich

"Priroda" No 5, pp 52-55

P. L. Kapitsa and N. N. Semenov suggested scheme for ieig experimentally the magnetic moment of atoms. 3. V. Starodubtsev (cf. "Zhur Eksper i Teoret Fiz" 19, 215, 1949) suggested the method of modulated mol bunches for investigation of absorption. B. I. Simonenko (cf. "Zhur Eksper i Teoret Fiz" 20, 395, 1950) suggested the use of ion bunches of the

211T87

GUREVICH, S. B.

material to be studied, neutralizing it by slow electrons. But M. M. Bradov, V. M. Dukelskiy and V. M. Tushkevich (cf. "Zhur Eksper i Teoret Fiz" 20, 1143, 1950) pointed out deficiencies of this method.

211T87

GUREVICH, S.B.

USSR/Physics - Ultrasonics, Recording Dec 51

"Observation of Ultrasonic Field by Means of a Fluorescent Screen," S. B. Gurevich

"Priroda" No 12, pp 38, 39

Ultrasonics have become particularly important since application to defectoscopy and construction U-S-microscope by S. Ya. Sokolov (cf. "Zavod Lab," 14, 1948; "Uspekh Fiz Nauk" No 1, 1950; Recording of U-S waves were described in "Priroda" No 2, 1948, and No 9, 1949). Gurevich describes method of observation of U-S field based on effect produced by U-S waves on intensity of luminiscence of activated phosphors.

219T74

USSR/Chemistry, Physics - Piezoelectric Substances Mar 52

"Piezoelectric Substances," S. B. Gurevich, V. G. Panchenko

"Priroda" Vol 41, No 3, pp 54-62

Outlines USSR work on "seignettoelectric" substances. Draws parallel between this type of dielectrics and ferromagnetic substances. Reviews V. L. Ginzburg's theory of the phenomena involved in the behavior of "seignettoelectric" substances and points out inherent shortcomings of any therodynamic theory attempting to explain an

230T4

GURVICH, S. B.

essentially mol mechanism. On the example of barium titanate, illustrates Mason and Matthias's theory and G. A. Smolenskiy and I. V. Kozhevnikova's modifications and extensions of this theory with particular emphasis on $BaTiO_4$ (the dielec properties of which were discovered by B. M. Vul and I. M. Gol'dman, "Dok Ak Nauk SSSR," Vol 49, 154, 1945), enumerates the following applications: construction of high capacity condensers, "multiplication" of frequencies by means of $BaTiO_4$ condensers (V. P. Vologdin), various applications of the piezoelec effect. Twelve Russian references are appended.

230T4

112-57-8-17322

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Nr 8, p 203 (USSR)

AUTHOR: Gurevich, S. B.

TITLE: Color-Transmission Distortion Due to Camera Tubes in a Color TV System (Ob iskazheniyakh tsvetoperedachi, svyazannykh s rabotoy peredayushchikh trubok v sisteme tsvetnogo televideniya)

PERIODICAL: Tekhnika televideniya (MRTP SSSR) (TV Engineering (MRTP, USSR)), 1955, Nr 9(15), pp 24-58

ABSTRACT: Three types of color-picture reproduction are possible: (1) physically accurate; (2) physiologically accurate; (3) psychologically accurate. The second type is the most suitable for color TV; its peculiar feature is that colorimetrically identical color is reproduced whether or not the spectral composition of a given element of the picture differs from that of the corresponding element of the original. A set of colorimetric equations is presented that ties the quantity of the color information at the transmitter to the quantity of linearly independent colors at the receiver. Formation of primary colors and information

Card 1/2

Gurevich, S B.

USSR/Electronics - Cathode Ray Tubes, H-6

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35135

Author: Gurevich, S. B., Baletov, V. I.

Institution: None

Title: Effect of Residual Charges on the Quality of a Color Image

Original Periodical: Tekhnika televideniya (M-vo radiotekhn. prom-sti SSSR), 1955, No 9 (15), 59-75

Abstract: An analysis of the character of the distortion introduced by the residual charge in the operation of transmitting tubes in color television systems with a single raster on the transmitting end.

Card 1/1

SOV/112-57-6-13466

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1957, Nr 6, p 264 (USSR)

AUTHOR: Gurevich, S. B., Bykov, R. Ye.

TITLE: Effect of the Contents of a Transmitted Object on the Nature of Signal Conversion by a Supericonoscope Camera Tube (Vliyaniye soderzhaniya peredavayemogo ob"yekta na kharakter preobrazovaniya signala peredayushchey trubkoy tipa superikonoskop)

PERIODICAL: Tekhnika televideniya. M-vo radiotekhn. prom-sti SSSR, 1956, Nr 11, pp 46-57

ABSTRACT: Experimental studies of the supericonoscope show that its output signal depends on the so-called "white fill" of the object transmitted. The greater the fill, the greater is the signal value. This relationship is weaker for greater illuminations of the photocathode. The quality of transmission of brightness gradations deteriorates with a low fill factor; with a very low fill, the brightness-gradation transmission is particularly poor for strong signals, i.e., near the white level. The signal value is independent of the white

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Effect of the Contents of a Transmitted Object on the Nature of Signal Conversion . . . .

distribution over the test pattern; it depends only on the fill factor. The signal-fill dependence is not so important for black-and-white TV; in color TV, however, it may impair color transmission because the fill factor may be different for various color components. An increase in the output signal with increase of the fill factor can be explained by the fact that the number of secondary electrons hitting the photocathode increases and the lower equilibrium potential decreases.

A.B.P.

6(6) PHASE I BOOK EXPLOITATION SOV/2002

Gurevich, Simon Borisovich

Fizicheskiye protsessy v peredayushchikh televizionnykh trubkakh (Physical Processes in Television Camera Tubes) Moscow, Fizmatgiz, 1958. 300 p. 20,000 copies printed. (Series: Fiziko-matematicheskaya biblioteka inzhenera).

Eds.: R.A. Gamburg, and L.I. Orlova; Tech. Ed.: R.G. Pol'skaya.

PURPOSE: This book is intended for engineering personnel and senior students specializing in television.

COVERAGE: The author discusses the physical processes in television camera tubes with storage of charges. He describes briefly the basic physical phenomena utilized in television camera tubes. He also discusses the characteristics and operation of various types of tubes. Tubes used in color television and other special devices and the manufacturing technology of tubes are not discussed. The author thanks Ya. A. Ruftin, Doctor of Technical Sciences,

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and Candidates of Technical Sciences A.M. Khalfin, A.G. Kondrat'yev, R.A. Gamburg and L.I. Orlova for reviewing the text. He also thanks D.B. Gurevich and V.G. Panchenko, Candidates of Physical and Mathematical Sciences, and graduate students R.Ye. Bykov and B.M. Pevzner for their help in preparing the text for publication. There are 224 references: 107 Soviet (including 3 translations), 78 English, 29 German, 7 French and 3 Czech.

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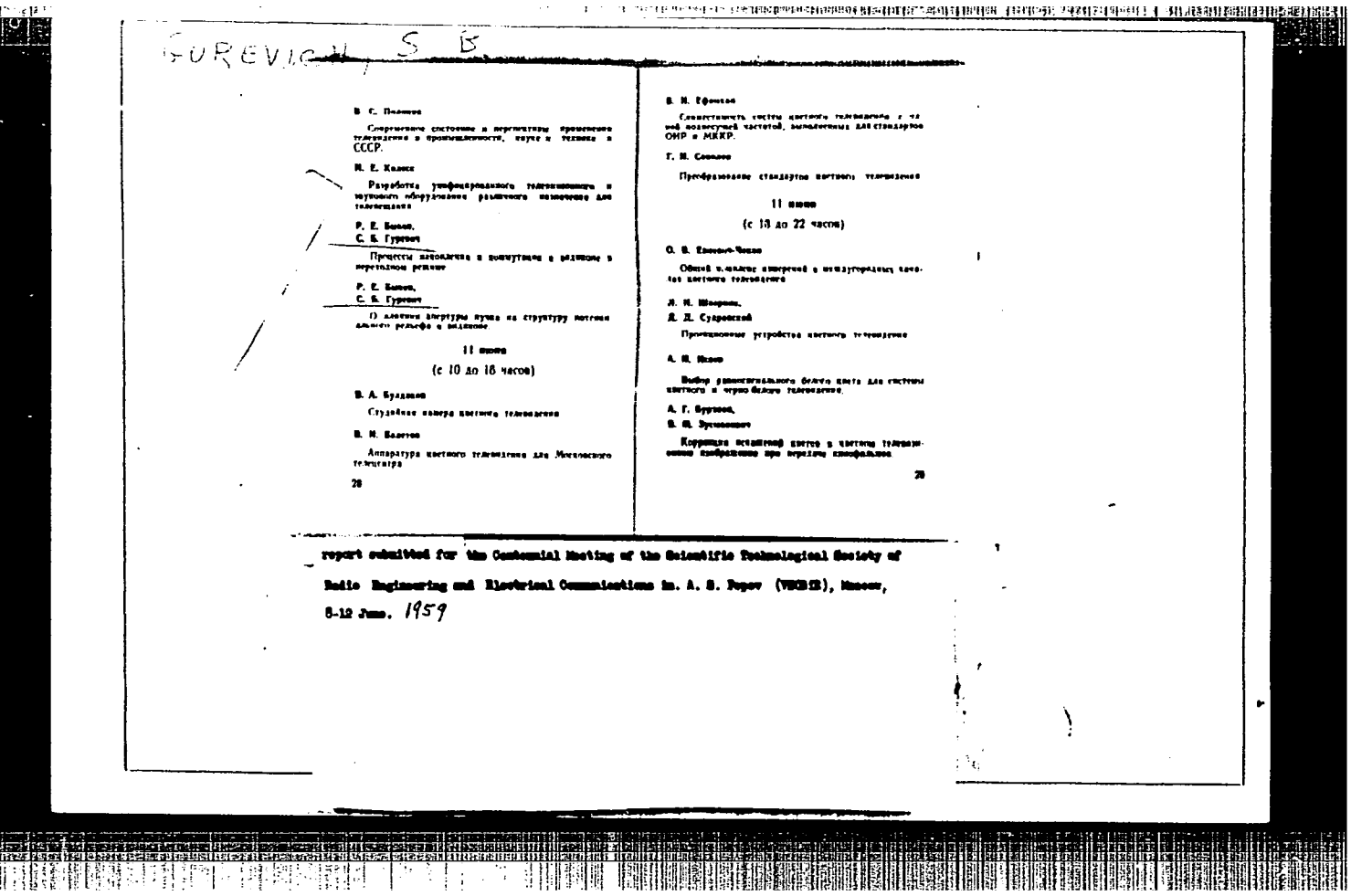

FUREVICH S B

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А. Н. Яхно

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А. Г. Фурсов,
В. Ф. Зуевский

Коррекция искажений цветов в цветном телевизионном изображении при передаче слайдфильмов

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report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNOIRE), Moscow, 8-12 June. 1959

GUREVICH, S.B.; SOKOLOV, V.I.

Effect of noise on the sharpness of the television image.
Tekh.kino i telev. 4 no.8:21-29 Ag '60.
(MIRA 13:8)

(Television--Interference)

69899

S/109/60/005/04/013/028
E140/E435

AUTHORS: Gurevich, S.B. and Bykov, R.Ye.

TITLE: The Effect of the Beam Aperture on Commutation of the Potential Relief in a Vidicon

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 4, pp 638-648 (USSR)

ABSTRACT: This paper was presented at the XIV Conference of the Scientific-Technical Society for Radio Engineering and Electrical Communications imeni A.S. Popov, Leningrad, April 21, 1959

It is shown that the effective beam aperture in a vidicon is much greater than the physical cross-sectional dimensions of the beam in the tube and is approximately 2 to 3 line widths. Nevertheless the resolution of real vidicons is approximately 500 lines horizontally and 600 lines vertically in interlaced scanning. This is explained by the time variation of commutation of a given point of the target as the beam passes over it. The author shows experimentally that the majority of the charge is removed within a time short with respect to the time in which a beam of the effective diameter

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The Effect of the Beam Aperture on Commutation of the Potential Relief in a Vidicon

passes over the point. This compensates the effect of beam broadening due to the effects of the potential relief on the target in the horizontal direction. In the vertical direction it is claimed that the mere fact of the use of interlace permits obtaining the indicated resolution but with reduced contrast since the effective accumulation time is only that of a single field and not of a frame, as the spot discharges two line widths or more. The measured potential relief at the surface of the layer corresponding to coarse picture details is 0.5 to 12 V and has substantial influence on the form, dimensions and trajectory of the commutating beam close to black-white boundaries. To improve vidicon characteristics, it is recommended to increase the capacitance corresponding to an element of the layer and improve the commutation efficiency. There are 12 figures and 6 references, 5 of which are Soviet and 1 German.

SUBMITTED: May 26, 1959
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S/187/60/000/008/002/004
27150 D053/D113

6.6000

AUTHORS: Gurevich, S.B., and Sokolov, V.I.

TITLE: On the effect of noise on the television image definition

PERIODICAL: Tekhnika kino i televideniya, no. 8, 1960, 21-29

TEXT: The paper was reported on at the 16th Scientific and Technical Conference dedicated to the 100th anniversary of A.S.Popov, which was convened on May 22, 1959 in Leningrad. The present work is a continuation of the authors' two former works on the effect of noise on the television (TV) image quality (Ref. 4: O vidnosti shumov v televidenii /On the noise visibility in television/, Tekhnika kino i televideniya, 1958, no. 3, 41-52; and Ref. 6: O vliyanii shumov na razlichimost' gradatsiy yarkosti /On the effect of noise on the discrimination of tone gradations/, Tekhnika kino i televideniya, 1958, no. 4, 18-25). In this work, an effect of noise on the image resolution is evaluated. Experience shows that it is possible to considerably increase the noise and at the same time preserve a relatively high image resolution when a sufficient modulation depth is provided by

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On the effect of noise ....

camera and picture tubes in transmitting fine details. A.M. Khalfin (Ref. 7: Osnovy televizionnoy tekhniki /Fundamentals of Television Engineering/; "Sovetskoye radio", 1955) and N.N. Krasil'nikov (Ref. 8: Vychisleniye vidimoy pomekhi v televidenii /Calculation of visible noise in television/; Tekhnika kino i televideniya, 1959, no. 4, 27-36) reported that the resolution of the TV system is little effected by the noise if the signal-to-noise ratio (Ψ) exceeds 3-5. The effect of noise on the image resolution was investigated using an experimental setup (Fig.1). It consisted of a skew noise generator (NG_2), a flat noise generator (NG_1), 2 noise level regulators (NR_1 and NR_2), 2 change-over switches (S_1 and S_2); an aperture corrector (AC), a thermistor voltmeter (TV), an oscillograph (O), a mixing unit (MU), a signal generator (SG), and a monitor (M) with a 31ЛК2Б (31LK2B) picture tube. The observations were conducted in a darkened room by 12 TV experts. Test pattern from the signal generator (SG) was first displayed on the screen of the monitor (M) and then the noise was added. The observers had to determine the specific noise level at which the test pattern was still distinguishable. Each experiment was repeated three times and the average value was taken. Measurements were taken for different spectral

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On the effect of noise ....

compositions of the noise. An analysis of the results obtained indicated that

$$\psi' = \frac{\psi}{A} \quad ; \qquad (1)$$

$$\psi_a = \psi_{a'} \quad ; \qquad (2)$$

$$\psi_a = \frac{\psi}{B} \quad ; \qquad (3)$$

$$\psi_{a'} = \frac{A}{B}\psi' \quad ; \qquad (4)$$

where ψ is the signal-to-noise ratio for coarse details; ψ' - is the signal-to-noise ratio for fine details; ψ_a and $\psi_{a'}$ is the signal-to-noise ratio with an aperture correction for coarse and fine details, respectively; A - is the factor indicating how many times the peak-to-peak

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On the effect of noise ....

signal of the fine details is less than the peak-to-peak signal of the coarse details; and B is the factor indicating how many times the noise voltage increases with the introduction of aperture correction. In conclusion, the authors state that: (1) The signal-to-noise ratio (ψ) should be from 5 to 12 for coarse details in order to avoid a decrease in the image resolution when using standard camera tubes and the current TV standard (625 lines). (2) When a full correction of aperture distortions is present, the signal-to-noise ratio (ψ) for the standard TV broadcast can be reduced to ψ =3 to 6 without a contrast loss of fine picture details. (3) The visibility of dashes or series of points on the screen, which are nearly as wide as the picture element (f = 7.3 Mc), practically does not depend on the spectral composition of noise and is determined by the ratio of the useful peak-to-peak signal to the effective noise voltage. (4) The Barstow-Christopher function (Ref. 2: Barstow J.M. and Christopher H., The Measurement of Random Monochrome Video Interference, Transaction of the AIEE, 1953, 72, P. 1; Communication and Electronics, 1954, 1, 735-741), which evaluates the noise visibility, is not suitable for solving the problems of the effect of noise spectral composition on the TV system

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resolution and upon the discrimination of picture details at high noise levels commensurable with, or exceeding, the useful signal. There are 6 figures and 9 references: 6 Soviet-bloc and 3 non-Soviet-bloc references. The two references to the English-language publications read as follows: Schade O., Image Gradation, Graininess and Sharpness in Television and Motion-Picture Systems, P. III, JSMPTE, 1953, 2, 97-763; Barstow J.M. and Christopher H., The Measurement of Random Monochrome Video Interference, Transaction of the AIEE, 1953, 72, P. 1; Communication and Electronics, 1954, 1, 735-741.

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24470
S/109/61/006/006/011/016
D204/D303

6.6000

AUTHOR: Gurevich, S.B.

TITLE: The problem of the S/N ratio as introduced by the pick-up tube in a television system

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 6, 1961, 982 - 992

TEXT: In improving the sensitivity of television transmitting systems it is essential to understand changes which both the signal and noise undergo between the input and output of a pick-up tube. In the present article the author makes an analysis of the changes in the S/N ratio within a pick-up tube and considers the use of a photomultiplier as one of the sections of the tube, whose use would permit an increase of the sensitivity very nearly up to its theoretical limit. This limit is in practice determined only by the fluctuations of radiation quanta. First the definition of sensitivity and of S/N ratio of a television system is given. The

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most adequate definition of the sensitivity of a television system is said to be a quantity inversely proportional to the minimum light energy emitted from the surface of the object which is required by the TV installation to transmit a given amount of information about this subject. This energy is determined by the number η of energy steps, by the number ν of details being discriminated and number $\varkappa$ of the states of the object. The sensitivity G of a television installation is given by

$$G = g \frac{1}{\frac{\eta}{2}(\eta + 1)\nu\varkappa}, \qquad (1)$$

where g

$$g = \frac{\xi_s^2}{\gamma^{\varepsilon}_{ob}}$$

is the intrinsic sensitivity, a quantity inversely proportional to the energy required to be transmitted by one detail of the object,

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whose amount of energy would cause a real system to detect one increment of light energy; ε_{ob} - the same amount of energy as required by an ideal system; γ - coefficient of light loss due to the lens system between the object and the mosaic. The quantity ξ_s characterizes the change in S/N ratio between input and output

$$\xi_s = \frac{\psi_{out\ s}}{\psi_{in}},$$

where ψ_{in} - S/N ratio at the input (at the photosensitive mosaic); ψ_{outs} - the same at the output. For a pick-up tube g can be expressed as

$$g = \frac{\xi_s^2}{\varepsilon_0}. \qquad (2)$$

Here $\varepsilon_0 = \gamma\varepsilon_{ob}$ - light energy falling on one element of the mosa-

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ic; $\xi = \psi_{out}/\psi_{in}$ in which ψ_{out} is the S/N ratio not at the output of the system but at the output of the television camera. Eq. (1) and Eq. (2) show that changes in S/N ratio introduced by pickup tubes and characterized by coefficient ξ are directly related to the sensitivity of both the system and of the pick-up tube. In order to analyze the S/N ratio in pick-up tubes, the author then proceeds to consider the transmission system as made of several distinct stages in every one of which the S/N ratio undergoes a certain change. He assumes that the tube has n amplifying stages with gains $\alpha_1, \alpha_2, \alpha_3 \ldots, \alpha_n$, some of these being larger and some smaller than unity. Denoting by $\xi_1, \xi_2, \xi_3, \ldots, \xi_n$ the coefficients of changes in the S/N ratio in respective stages. In order for the S/N change to be negligible every term in

$$\frac{1}{\alpha_1} + \frac{1}{\alpha_1\alpha_2} + \frac{1}{\alpha_1\alpha_2\alpha_3} + \ldots + \frac{1}{\alpha_1\alpha_2\alpha_3 \ldots \alpha_m} < \delta \qquad (10)$$

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must be very small which means that the amplifications of the front stages must be large. The other source of noise is noise introduced by electron beam scanning. The scanning is assumed to be introduced at the (m + 1)-th stage. The number of electrons from one element will be given therefore by

$$S' = \alpha_{m+1} S_m + \beta S_{beam} = \alpha_{m+1} M_m S_{in} + \beta S_{beam} \qquad (11)$$

where α_{m+1} and β - coefficients dependent on the scanning mechanism and method of output signal forming. Hence the noise in the scanning stage are determined by

$$N^2_{m+1} = \alpha^2_{m+1} N^2_m + \alpha_{m+1} S_m + \beta^2 N^2_n + \beta S_{beam} = \alpha^2_{m+1} M^2_m \left(1 + \sum_{j=1}^{m} \frac{1}{M_j}\right) S_{in} +$$

$$+ \alpha_{m+1} M_m S_{in} + \beta^2 \left(1 + \frac{1}{\beta}\right) S_{beam} = M^2_{m+1} \left(1 + \sum_{j=1}^{m+1} \frac{1}{M_j}\right) S_{in} + \beta \left(1 + \frac{1}{\beta}\right) S_{beam}$$

at the n-th stage it will be

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$$N_n^2 = M_n^2\left(1+\sum_{j=1}^{n}\frac{1}{M_j}\right)S_{pr} + \frac{M_n^2\beta^2}{M_m^2\alpha_{m+1}^2}\left(1+\frac{M_m\alpha_{m+1}}{\beta}\sum_{j=m+1}^{n}\frac{1}{M_j}\right)S_{beam} \qquad (12)$$

and for the S/N ratio

$$\psi_n = \sqrt{\frac{S_{in}}{1+\sum_{j=1}^{n}\frac{1}{M} + \frac{\beta^2 S_{beam}}{M_m^2\,\alpha_{m+1}S_{in}}\left(1+\frac{M_m\alpha_{m+1}}{\beta}\sum_{j=m+1}^{n}\frac{1}{M_j}\right)}} \qquad (13)$$

is eventually obtained. In real transmitting installations the ideal conditions when ψ of the preceding stage does not differ much from that of the following stage, are not satisfied for all stages. In supericonoscope and in vidicon tubes considerable addi-

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tional noise comes from stages following the output stage proper. Its magnitude is so considerable that the S/N ratio is actually determined as the ratio of the signal from the tube to the noise of the input and of the first stage of preamplification. A numerical example for superorthicon ЛИ-17 (LI-17) is then considered. In his remarks the author states that it is useless to use cascaded storage since as was shown, its amplification must be less than unity. Although in recent years the multiple storage and high persistence electron optical amplifiers have been advocated by, for example, I.L. Valik, and L.I. Khromov (Ref. 10: Protsessy nakopleniya v peredayushchikh televizionnykh trubkakh s neskol'kimi -nakopitelyami, Tekhnika televideniya 1958, 28, 17) with the aim of improving the output S/N ratio, the author considers it to be better if this improvement is achieved at stages related in the same manner to all, including input and output stages of the tube. The following is stated in conclusion: 1) The sensitivity of transmitting TV installations depends on a factor which determines the minimum energy of light sufficient for transmitting η graduations,

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ν elements and $\varkappa$ states of the object and on factor ξ which characterizes the change in the S/N ratio between input and output; 2) The S/N ratio of a pick-up tube which would satisfy the requirement of transmission of a given number of picture elements and states of the object can be only decreased between the input and output; 3) The S/N ratio once made smaller in a previous stage cannot be restored to its original value in any of the following stages irrespective of the amplification of these stages; 4) The sample superorthicons type L1-17 or L1-20 as used in TV practice, have the sensitivity by three orders of magnitude less than the limit sensitivity. There are 1 figure and 10 references: 9 Soviet-bloc and 1 non-Soviet-bloc [Abstractor's note: One of the Soviet-bloc references, i.e. Ref. 2 is a translation of an English-language publication]. The reference to the English-language publication reads as follows: C.A. Morton, J.E. Ruedy, The intensifier orthicon, Conference Proceedings 2nd National Convention on Military Electronics, PGME IRE, 1958, p. 113-117.

SUBMITTED: June 10, 1960

Card 8/8

GUREVICH, S.B.

Sensitivity of television systems with different scanning parameters. Radiotekh.i elektron. 6 no.7:1165-1169 Jl '61. (MIRA 14:6)
(Television)

28772

S/057/[illegible]/005/015
B104/[illegible]

9.4140 (also 1141)

AUTHOR: Gurevich, S. B.

TITLE: Sensitivity of panoramic detectors to optical radiations

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 10, 1961, 1192 - 1201

TEXT: The necessity of creating a system for estimating the sensitivity of various teleoptical devices is pointed out. In an analysis of data recorded by ideal panoramic radiation indicators, expressions are obtained, which correlate the information content with the minimum energy to be transmitted from the object to the radiation-sensitive element. These expressions are generalized to quasiideal and real panoramic radiation indicators. They express the signal-to-noise ratio required to record the radiation coming from the object. Signal-to-noise ratios for electron-optical amplifiers, television equipment, and photographic materials are studied. The sensitivities of ideal and real panoramic radiation indicators are compared. Conclusion: 1) If ψ = 10 [illegible] the sensitivity criterion, the sensitivity of an ideal detector must be 10 - 30 times higher than that of electron-optical amplifiers and "Super-optikon" tubes with one stage of an electron-optical [illegible], 300 times

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higher than that of a tube with a grid target of low ..., and 5000 times higher than that of ЛИ-17 (LI-17) and ЛИ-20[illegible] tubes. The most sensitive panchromatic films are more sensi... the two last-mentioned tubes. The sensitivity of an ЛИ-101 (... 1/30,000, and that of ЛИ-23 (LI-23) and ЛИ-404 (LI-404) vidicon... ...00, that of an ideal detector. 2) Sensitivity can be raised o... "Super-optikon" tubes of a low grid-target capacity and such ... single- or multi-stage electron-optical amplifiers. I. I. Bi... date of Physical and Mathematical Sciences, is thanked for va... rks, and Professor V. L. Kreytser for discussions. There are ... 6 references: 2 Soviet and 4 non-Soviet. The three most im... rences to English-language publications read as follows: H. ... et al., J. Opt. Soc. Am., 48, no. 12, 926 - 933; A. A. Rotow, IRE Convention Record, 3, 41 - 49, 1956; G. A. Morton et al., Confer... edings 2d National Convention of Military Electronics, PGME, IRE, ... 17, 1958.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. ... SSR Leningrad (Physicotechnical Institute im. ... Ioffe, AS USSR, Leningrad)

SUBMITTED: January 7, 1961

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GUREVICH, S.B.

"Jupiter" papermaking machine. Bum. prom. 36 no.10:25-26 O '61. (MIRA 15:1)
(Canada--Papermaking machinery)

GUREVICH, S.B.

Information approach to the evaluation of sensitivity in photography and television. Part 2. Information sensitivity of television and photography systems and materials. Zhur.nauch.i prikl.fot. i kin 7 no.3:202-208 My-Je '62.

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR.
(Photographic sensitometry) (Television--Picture tubes)

BREYDO, I.I.; GAVRILOV, G.A.; GUREVICH, S.B.

Measuring the "Signal-to-noise" ratio in photography. Zhur.nauch.i prikl.fot. i kin. 7 no.3:221-223 My-Je '62. (MIRA 15:6)

1. Glavnaya astronomicheskaya observatoriya AN SSSR i Fiziko-tekhnicheskiy institut AN SSSR imeni A.F.Ioffe.
(Photographic sensitometry)

GUREVICH, S.B.; BREYDO, I.I.; GAVRILOV, G.A.

Dependence of photographic noises on the relative amount of developed grains. Zhur.nauch.i prikl.fot.i kin. 7 no.4:306-308 Jl-Ag '62. (MIRA 15:8)

1. Fiziko-tekhnicheskiy institut AN SSSR i Glavnaya astronomicheskaya observatoriya Akademii nauk SSSR.
(Photometry) (Photographic emulsions)

L 10312-63 BDS--JXT(DE)

ACCESSION NR: AP3001455 S/0187/63/000/005/0001/0008

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AUTHOR: Gurevich, S. B.; Breydo, I. I.; Gavrilov, G. A.

TITLE: Signal-to-noise ratio measurement and gradation vs. frequency characteristic of photographic materials

SOURCE: Tekhnika kino i televideniya, no. 5, 1963, 1-8

TOPIC TAGS: photomaterial characteristics, Mikrat, Kinopositiv, AM-1 Kinonegativ, R-30 Ferrania Kinonegativ, Panchrom, Agfa Dispositiv, Agfa Isochrom, Agfa Gelb rapid, Agfa Astro, Ilford ordinary

ABSTRACT: Data on photonoise (granularity) and on signal-to-noise ratio for various photomaterials were practically nonexistent in the Soviet literature. The article offers a description of the apparatus used in experiments and the photonoise and signal-to-noise-ratio data for a number of Soviet and German films (Mikrat, Kinopositiv, Kinonegativ, Panchrom) and plates (Agfa, Ilford ordinary). Numbers of gradtions discernible on 100- and 2,500-sq.-micron areas are given. Table 2 (see Enclosure) compares characteristics of Soviet, German, and American photomaterials. From the experimental gradation-frequency curves, it was found that the panchromatic fine-grain film, Agfa Diapositiv plates, and NZ cinema positive film have the highest resolution, while the P-10 film and Agfa Astro plates,

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the lowest. It is claimed that the error associated with the method of noise measurement is 4-8 per cent. Orig. art. has: 11 formulas, 8 figures, and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiy institut imeni A. F. Ioffe AN SSSR, Glavnaya astronomicheskaya observatoriya AN SSSR (Physicotechnical Institute, AN SSSR, Main Astronomical Observatory)

SUBMITTED: 00 DATE ACQD: 17Jun63 ENCL: 01

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

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ACCESSION NR: AP3003607 S/0077/63/008/004/0284/0292

AUTHORS: Breydo, I. I.; Gavrilov, G. A.; Gurevich, S. B.; Markelova, A. A.

TITLE: Photographic noise and the signal/noise ratio of various photographic materials

SOURCE: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, v. 8, no. 4, 1963, 284-292

TOPIC TAGS: photography, noise, photographic noise, signal/noise ratio, photographic material, MF 4 microphotometer, KMVL 1 quadratic millivoltmeter, M 95 microamperemeter, Agfa photo plate, Ilford photo plate, photographic film, Mikrat film, Mikrat 200 film, Mikrat 300 film

ABSTRACT: This work was carried out in order to measure the intensity of noise and the signal/noise ratio of various photographic materials. It was assumed that noise intensity was related to the granularity of material, i.e., the number of the exposed grains in a uniformly illuminated section of the film. The experimental assembly consisted of a modernized MF-4 microphotometer, a KMVL-1 quadratic millivoltmeter, and a M-95 microamperometer. Agfa plates and Ilford plates used

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ACCESSION NR: AP3003607

in astronomy and spectroscopy, and various types of films (including Mikrat films) were studied. It was established that: 1) the noise intensity showed a 3- to 4-fold variation during the transition from fine- to coarse-grained materials; 2) the strongest noise variation was observed in the negative materials; 3) noise intensity of fine-grained negative materials differed little from that of positive materials; 4) the signal/noise ratio at a given film-blackening density depended strongly on the intensity of the fog. For this reason some materials of equal granularity had different signal/noise ratios. Orig. art. has: 3 tables and 6 figures.

ASSOCIATION: Glavnaya astronomicheskaya observatoriya AN SSSR (Main Astronomic Observatory AN SSSR); Fiziko-tekhnicheskiy institut AN SSSR (Institute of Physics and Technology AN SSSR)

SUBMITTED: 23Jul62 DATE ACQ: 02Aug63 ENCL: 00

SUB CODE: PH NO REF SOV: 006 OTHER: 008

Card 2/2

GUREVICH, Simon Borisovich; GLORIOZOV, G.L., retsenzent; GAMBURG, R.A., red.; SOBOLEVA, Ye.M., tekhn. red.

[Efficiency and sensitivity of television systems] Effektivnost' i chuvstvitel'nost' televizionnykh sistem. Moskva, Izd-vo "Energiia," 1964. 343 p. (MIRA 17:4)

GUREVICH, S.B.

Analogy of reproduction characteristics in television and photography. Usp.nauch.fot. 10:130-[illegible] '64. (MIRA 17:10)

GUREVICH, S.B.; BREYDO, I.I.; GAVRILOV, G.A.

Methodology for the measurement of the signal-noise ratio in photography. Usp.nauch.fot. 10:163-170 '64. (MIRA 17:10)

Function of the distribution of the number of developed grains and dependence of photographic noises on the optical density of blackening. Ibid.:171-174

L 10458-67 EWT(1)

ACC NR: AP6023080 SOURCE CODE: UR/0109/66/011/007/1327/1329

AUTHOR: Peknyy, L. A.; Gavrilov, G. A.; Gurevich, S. B.

ORG: Physico-Technical Institute im. A. F. Ioffe, AN SSSR (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Measuring signal-to-noise ratio in electron-optical amplifiers

SOURCE: Radiotekhnika i elektronika, v. 11, no. 7, 1966, 1327-1329

TOPIC TAGS: electron optical amplifier, electronic amplifier

ABSTRACT: To date, the noise in electron-optical amplifiers has been evaluated either qualitatively or theoretically (S. B. McLane et al., Rev. Sc. Instr., 1964, 35, 10, 1297). The present article describes the method and the results obtained in the measurement of the signal-to-noise ratio (SNR) at the amplifier output. The method is similar to that used in photography. The luminous flux at the amplifier output was varied by neutral light filters; the cell area was set by an adjustable slit; the frequency band was fixed by suitable frequency filters. This formula was used: $SNR = (i - i_d)R/\sqrt{U_n^2}$, where i - photomultiplier current proportional to the luminous flux, i_d - dark current, R - load resistance (1 Mohm), $\sqrt{U_n^2}$ - rms noise voltage indicated by an rms millivoltmeter. It was found that the slit shape does not affect the measured SNR; the SNR value essentially depends on the slit-cut area and vary slightly with this area location. An SNR = 15 was measured in an amplifier having a gain of 8.6×10^4, an input illumination of 0.005 lux, and an area of 02×04 mm^2. Orig. art. has: 1 figure and 1 formula.

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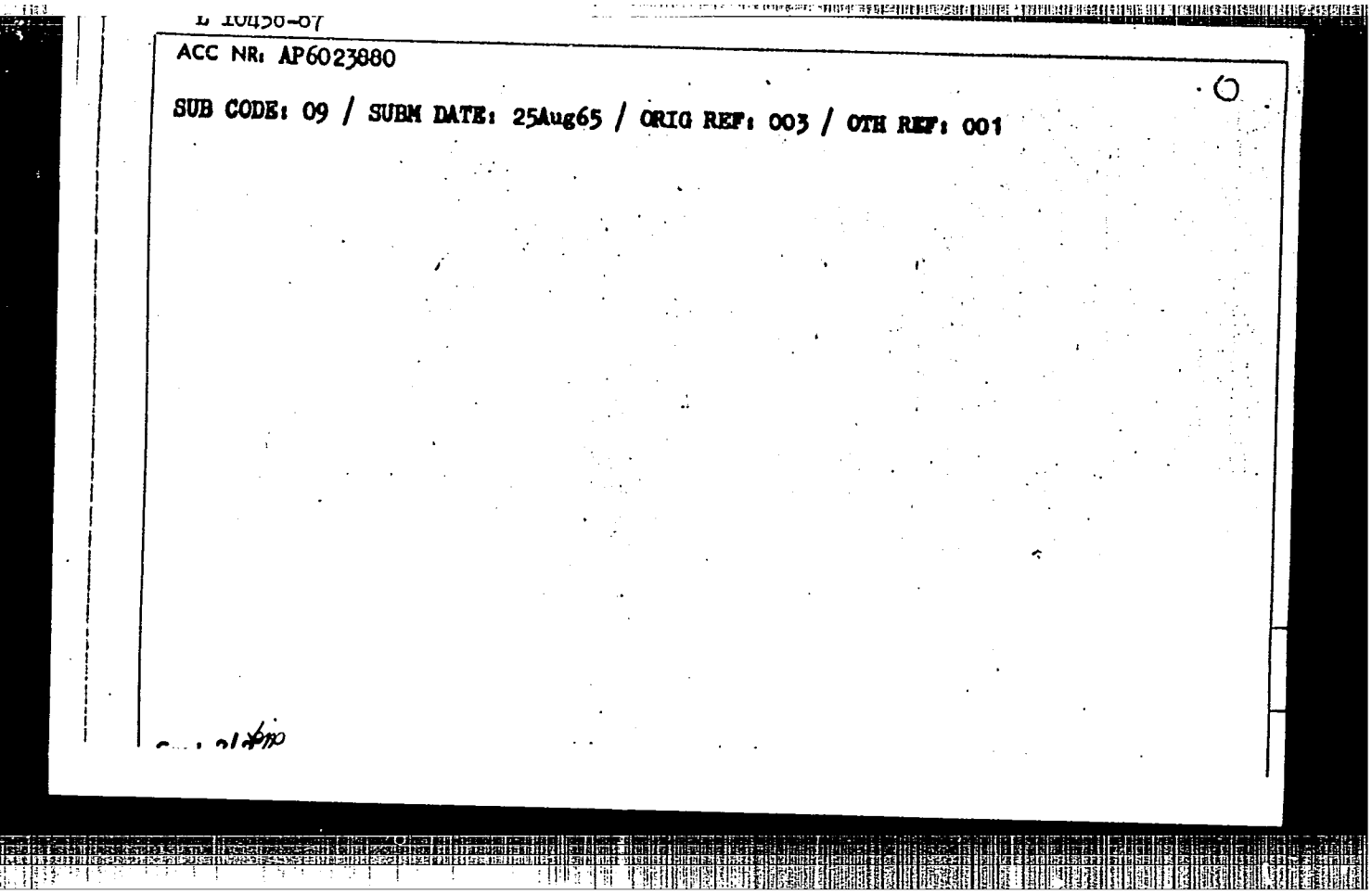
UDC: 621.317.346:621.383.8



L 10450-67

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Cand Med Sci

GUREVICH, S. D.

Dissertation: "Details of the Topography of Small Crural Nerve and its Muscular Branches. Evaluation of Operational Accesses to the Trunk of Nerve."
19/6/50

Moscow Medical Inst, Ministry of Health.

RSFSR

SO Vecheryaya Moskva
Sum 71

GUREVICH, S.D., kand.med.nauk

Effectiveness of surgical interventions in compound therapy of cold abscesses and fistulae [with summary in French]. Probl.tub. 36 no.5 75-78 '58 (MIRA 11:8)

1. Iz Moskovskoy gorodskoy tuberkuleznoy bol'nitsy No.1 (glavnyy vrach A.Ye. Lyashchenko).
(TUBERCULOSIS, SPINAL, surg.
cold abscesses & fistula (Rus))

GUREVICH, S.E.

Work of seasonal day nurseries in Genichesk District, Kherson Province, in 1957. Med.sestra 17 no.8:27-28 Ag'58 (MIRA 11:8)

1. Zamestitel' glavnogo vracha Genicheskoy rayonnoy bol'nitsy.
(GENICHESK DISTRICT--DAY NURSERIES)

GUREVICH, S.F.; MALYSHKIN, K.P.

Machining large seamless-forged crankshafts. Sbor.st.UZTM no.7:74-84 '58. (MIRA 12:6)
(Cranks and crankshafts)
(Metal cutting)

GUREVICH, S.F., inzh.; TSFASMAN, A.B., inzh.

High-speed machining of deep holes. Sbor. st. NIITIAZHMASHa Uralmashzavoda no.4:54-64 '64. (MIRA 17:12)

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A two-percent thallium plaster for treating mycoses of the scalp. Vest.derm. i ven. 31 no.4:55 Jl-Ag '57. (MIRA 10:11)

1. Iz mikologicheskogo otdela TSentral'nogo kozhno-venerologicheskogo instituta Ministerstva zdravookhraneniya, Moskovskogo mikologicheskogo dispansera, Moskovskogo gorodskogo vendispansera i mikologicheskogo kabineta Zhdanovskogo rayona Moskvy.
(THALLIUM) (SCALP--DISEASES)

GUREVICH, S.I.

Necessity of improving the utilization of machine and labor productivity potentials at enterprises of the Main Administration of the Flax and Cotton Industry. Tekst.prom. 14 no.11:12-13 N '54. (MIRA 8:1)

1. Nachal'nik otdela truda Glavlenkhlopproma.
(Cotton manufacture)

GUREVICH, S.I.

Working out a typical factory management chart. Tekst.prom. 18 no.12:57-58 D '58. (MIRA 11:12)
(Factory management)

GUREVICH, S.I.

GUREVICH, S.I.; GEL'TMAN, Ye.E.

Inspection of progressive practices in cotton enterprises of the Leningrad Economic Region. Tekst.prom. 17 no.9:53-54 S '57. (MIRA 10:11)

(Leningrad economic region--Textile industry)

GUREVICH,S.I., dotsent

General formula for profiling undercut milling cutters. Trudy MATI no.24:97-100 54. (MLRA 8:10)
(Milling machines)

GUREVICH, L.I., kandidat tekhnicheskikh nauk, dotsent.

Single formula for shaping thread chasers. Trudy MATI no.39: 147-153 '57. (MLRA 10:8)
(Cutting tools) (Screw cutting)

GUREVICH, S. I.

25(1) P. 3 PHASE I BOOK EXPLOITATION SOV/3090

Moscow. Aviatsionnyy tekhnologicheskiy institut

Issledovaniye protsessov vysokoproizvoditel'noy obrabotki metallov rezaniyem (Analysis of High-productivity Metal-cutting Processes) Moscow, Oborongiz, 1959. 130 p. (Series: Its: Trudy, vyp. 38) 3,600 copies printed.

Sponsoring Agency: Ministerstvo vysshego obrazovaniya SSSR.

Ed. (Title page): A.I. Isayev, Doctor of Technical Sciences, Professor; Ed. (Inside book): S.I. Bumshteyn, Engineer; Ed. of Publishing House: P.B. Morozova; Tech. Ed.: N.A. Pukhlikova; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: This collection of articles is intended for designers and engineers in the field of machine-tool equipment and mechanical machining. It may also be useful to workers at scientific research institutes and aspirants.

COVERAGE: This collection of articles deals with problems arising in high-productivity metal-cutting processes. Emphasis is given to grinding operations for parts made from constructional alloys. Machining regimes and methods

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Analysis of (Cont.)

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of improving machining operations are presented. No personalities are mentioned. References follow each article.

TABLE OF CONTENTS:

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Analysis of (Cont.) SOV/3090

The authors present results of an investigation on the effect of temperature and other factors on the workability of the Zl Sr M583-10 alloy.

AVAILABLE: Library of Congress

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GUREVICH, S.I., kand.tekhn.nauk, dotsent

Increasing the accuracy of spline shaft machining by slotter rams.
Trudy MATI no.45:5-26 '60. (MIRA 14:1)
(Gear-cutting machines)

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AUTHOR: Gurevich, S.I., Candidate of Technical Sciences, Docent

TITLE: Increase in the accuracy of machining of splineshafts by shaping

PERIODICAL: Moscow. Aviatsionnyy tekhnologicheskiy institut. Trudy. No.45. Moscow, 1960. Issledovaniye protsessov obrabotki metallov rezaniyem. pp.5-26

TEXT: Details of the design of splineshaft components are reviewed. In many instances, a running-out length cannot be provided so that some form of shaping is essential. Mostly, straight sided splines are used with centering on the inside or outside diameter. Failures are usually due to fatigue of the shaft and this is accelerated by the amount of clearance between the shaft spline and the hole groove. Tolerances below 0.04 mm to cover thickness and straightness of the spline are essential; in fact, 0.02 mm is desirable but difficult to achieve. Four methods of shaping are enumerated with advantages and drawbacks. In small batch aviation production, the most economical methods are the generating method on Fellows type machines and the form shaping with profiled tools on gear shaping machines. The shaping with

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generating type cutters has the advantages of high output, universality and adequate flexibility but the principal disadvantage of distorting the spline profile when the Fellows type cutter is sharpened by removing material from its conical front face. Filing by hand is often practised. The distortion of the profile in generating is analytically examined. The main reason for distortion is the change in the centre distance between workpiece and tool necessary after sharpening by grinding the front face of the tool. The determination of the tool profile is outlined. A new procedure for grinding generating shaping tools is described. The tooth flanks of the tool are ground on a gear grinding machine with a worm type grinding wheel. The grinding wheel, in turn, is profiled with a dressing roller having the profile of the basic rack conjugate to the profile of the splineshaft to be cut. This procedure ensures the correct profile of the cutting tool inspite of the change in the centre distance between the tool and the workpiece. Several details of the new procedure are discussed, including the design of the dressing roller and the setting up for the dressing of the abrasive worm wheel. Another new method developed by the author is the shaping

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with form cutters on Fellows type gear shaping machines, using sequential dividing by hand. The profile of the cutting tool corresponds to the profile of the interspline groove, taking account of the profile distortion due to the tool cutting angles. Certain modifications in gear shaping machines are discussed by which the machining of splineshafts by the form shaping process can be accelerated. There are 12 figures.

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