L 9834-63 EWA(h)/EPA(c)/EWT(l)/EWT(m)/BDS--AFFTC/ASD/ESD-3/AFWL/AFGC-2--
Pr-4--RM/WW/MAY S/0048/63/027/006/
ACCESSION NR: AP3001360

AUTHOR: Lukirskiy, A. P.; Yershov, O. A.; Brytov, I. A.

TITLE: Operation of proportional counters in the ultrasoft X-ray region [Report of the Sixth Conference on X-Ray Spectroscopy held in Odessa from 2 to 16 July 1962]

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v. 27, no. 6, 1963, 806-816

TOPIC TAGS: proportional counters, x-ray detectors

ABSTRACT: A proportional counter was used for the first time for detecting ultrasoft x-radiation in 1960 by J. E. Holliday (Rev. Sci. Instr., 31, 691, 1960 and Philos. Mag.,6, 801, 1961); the counter had an appreciable background and its operation was not studied. The purpose of the present work was to investigate proportional counters as detectors of ultrasoft x-rays and to evaluate their potentialities for this purpose. The test set-up consisted of the proportional counter, a power supply, a preamplifier, a main amplifier, an integral

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ACCESSION NR: AP3001360

discriminator, a differential discriminator and two recorders, as well as an oscillograph. The counter was a cylindrical one with provision for metered gas admission. The gases used were pure methane and argon-methane mixtures. Pulse height distributions for different wavelengths were determined (typical curves are reproduced). In tests of the proportional counter as a radiation detector the intrinsic background of the counter did not exceed 10 pulses per min. It is concluded that proportional counters filled with methane or argon-methane can be used as detectors of x-rays at counting rates of up to tens of thousands of pulses per second. Some design recommendations are given. Orig. art. has: 16 equations, 10 figures and 3 tables.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova, Spetsial'noye konstruktorskoye by rentgenovskoy apparatury (Leningrad State University; Special X-Ray Apparatus Design Bureau)

SUBMITTED: 00 DATE ACQ: 01Jul63 ENCL: 00

SUB CODE: PH,SD NR REF SOV: 003 OTHER: 013

ja/ee
Card 2/2

ACCESSION NR: AP4020935 S/0051/64/016/002/0310/0319

AUTHOR: Lukirskiy,A.P.; Savinov,Ye.P.; Yershov,O.A.; Shepelev, Yu.F.

TITLE: Reflection coefficients for radiation with wavelengths of 23.6 to 113 Angstrom for a number of elements and substances and determination of the refraction indices and absorption coefficients

SOURCE: Optika i spektroskopiya, v.16, no.2, 1964, 310-319

TOPIC TAGS: reflection coefficient, absorption coefficient, titanium, beryllium, carbon, aluminum, chromium, gold, silver, germanium, lithium fluoride, magnesium fluoride, strontium fluoride, potassium chloride, polystyrene

ASBTRACT: In view of the interest in reflection of ultrasoft x-radiation from different substances that can be used for coating diffraction gratings and other optical components, in the present study there were determined experimentally the values of the total external reflection coefficient R of Be,C,Al,Ti,Cr,Ge,Ag,Au,LiF, MgF_2,KCl,SrF_2, polystyrene and F-1 type glass as a function of the angle of incidence (mostly glancing angles in the range under 10°) for radiation of wavelengths 23.6, 31.4, 44, 67 and 112 Å. These are the wavelengths of the KX lines of O,N,C,B

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ACCESSION NR: AP4020935

and Be. The measurements were carried out using a modification of the setup and procedure employed earlier (A.P.Lukirskiy and Ye.P.Savinov,Opt.i spektr.,14,295,1963). The materials for the most part were in the form of 1000 A thick coatings vacuum evaporated onto glass plates; the halide layers were deposited over undercoatings of Al or Au on glass, mainly to provide the requisite conductivity for subsequent absorption measurements. The results for R are presented in the form of curves (R versus angle of incidence) and in a table. The reflection curves were then used for calculating the index of refraction and the absorption coefficient by means of the usual Fresnel formulas; the results are tabulated. To check the validity of the calculations and accuracy of the results, the absorption coefficients of some of the coatings for the same characteristic wavelengths were measured directly by the transmission method. The results are consistent, but the direct absorption values are systematically higher than the values deduced from the reflection curves. A similar divergence was obtained for copper layers by L.G.Parratt (Phys.Rev.,95,359, 1954), who attributed it to decrease in density of the substance with approach to the surface; this is also assumed to be the reason for the divergences observed in the present case. The results are discussed briefly in a final section. Orig.art. has: 17 formulas, 10 figures and 3 tables.

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Card

ACCESSION NR: AP4038775

S/0048/64/028/005/0836/0840

AUTHOR: Zimkina, T.M.; Yershov, O.A.; Lukirskiy, A.P.

TITLE: M Emission bands of zirconium, niobium and molybdenum and some chemical compounds of these elements /Report, Seventh Conference on X-Ray Spectroscopy held in Yerevan 23 Sep to 1 Oct 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.5, 1964, 836-840

TOPIC TAGS: x-ray spectrum, x-ray emission, zirconium, zirconium compound, niobium, niobium compound, molybdenum, molybdenum compound

ABSTRACT: The M emission bands of Zr, Nb and Mo and their oxides were recorded in continuation of earlier work on the M spectra of these metals (A.P.Lukirskiy and T. M.Zimkina,Izv.AN SSSR,Ser.fiz.27,330,1963). The spectrometer is described elsewhere (A.P.Lukirskiy,Ibid.25,215,1961); it has been equipped with a new gold-plated grating which makes it possible to record N, O and C lines. The oxide spectra were recorded only to assist in estimating the purity of the metal spectra. The Mo_2C spectrum was also obtained, as well as the spectrum of Nb containing 12.44% N. When the anode was operated cool (3 kV, 12 to 20 mA on the x-ray tube) lines of C, O and N

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were present and the M emission band of each metal had a double peak. When the anode was operated sufficiently hot (45 to 100 mA, temperature greater tha 1000°C) the C, O and N lines disappeared along with the double peaks. The double peak structure was traced to carbon contamination, and the Mo_2C spectrum was found to have this double peaked shape. The M emission bands of Nb and Mo showed the bends reported in the earlier paper of this series (loc.cit.supra); that of Zr was simple. The simpler structure of the Zr band is ascribed to the smaller number of 4d electrons in this metal. The band of pure zirconium (anode prepared from 99.99% zirconium iodide) was recorded with a resolution of 0.2 eV and an anode temperature of about 1000°C (C, O and N contamination less than 0.1%). The only perceptible structure was a weak line on the short wavelength side of the edge, similar to the lines reported the previous paper for Nb and Mo. The width of the M_V level was calculated from that of the short wavelength edge, but the result was lost in the corrections for instrumental broadening and temperature smearing of the Fermi surface, the final result being 0.04 ± 0.05 eV. The width of the 5s-4d band was obtained from the width of the M emission band, the long wavelength tail being eliminated by linear extrapolation. A value of 4.8 eV was found. The intensities of the lines of the M spectrum were measured relatively to M_ζ and they are tabulated for all three metals. An error is noted in the Nb and Mo line intensities as tabulated in the previous paper.

ACCESSION NR: AP4038775

The intensity ratios (intensities relative to M_ζ) of $M_{IV,V}$-Y_{II} lines of Mo, Nb and Zr were, within the 20% experimental error, equal to the ratios 5:4:2 of the numbers of 4d electrons in the respective atoms. It is concluded that the M emission bands image the p and f states in the 4d bands, and characterize their widths and shapes. Orig.art.has: 4 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 12Jun64	ENCL: 00
SUB CODE: OP	NR REF SOV: 003	OTHER: 000

Card 3/3

YERSHOV, O.A.; GOGANOV, D.A.; LUKIRSKIY, A.P.

X-ray spectra of silicon in crystalline and glasslike quartz and lithium-silicate glasses. Fiz. tver. tela 7 no.8:2355-2361 Ag '65. (MIRA 18:9)

1. Leningradskiy gosudarstvennyy universitet.

L 6458-66 EWA(k)/EWT(m)/EWP(i)/EWP(b)/EWT(l)/EWP(e) LEB/WH
ACCESSION NR: AP5019848 UR/0181/65/007/008/2355/2361

AUTHOR: Yershov, O. A.; Goganov, D. A.; Lukirskiy, A. P.

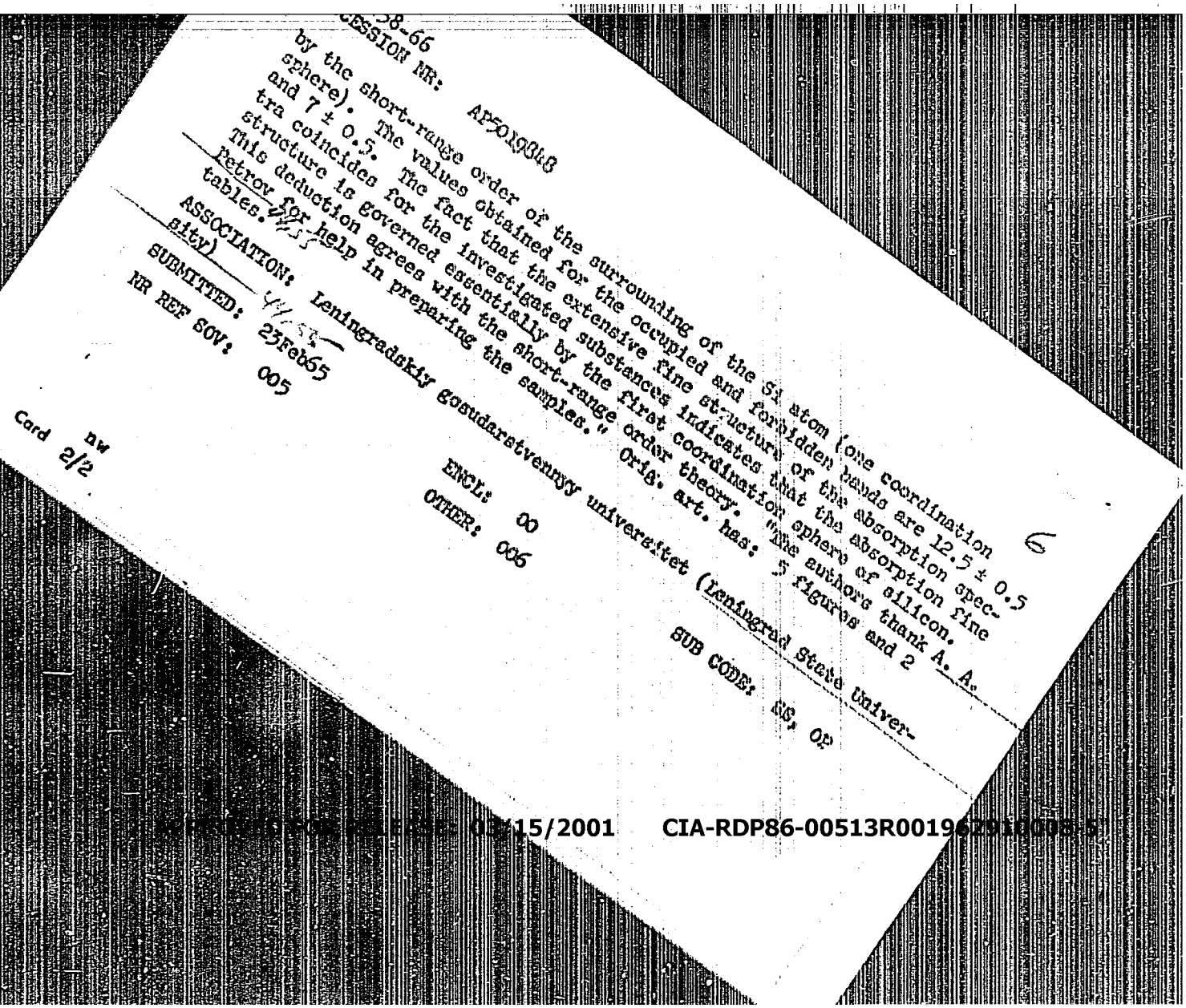
TITLE: Investigation of x-ray spectra of silicon in crystalline viterous quartz and lithium silicate glasses

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2355-2361

TOPIC TAGS: silicate glass, lithium glass, quartz, silicon, x ray diffraction study, diffraction grating, absorption spectrum, emission spectrum

ABSTRACT: The authors investigated the $L_{II, III}$ emission and absorption spectra of silicon in quartz and glass for the purpose of determining the relative changes in the state densities and estimating the bandwidths in these solids. The measurements were made with a diffraction-grating spectrometer with sufficiently high resolution (~0.2 ev), described by one of the authors earlier (Lukirskiy, Izv. AN SSSR ser. fiz. v. 25, 913, 1961). The width of the filled states of Si in SiO_2 was found to be 12.5 ± 0.5 ev. The details of the absorption and reflection spectra of the quartz and the lithium-silicate glasses are determined. The tests have shown that both the emission and the absorption spectra coincide. It is concluded from the rest that the occupied band, the forbidden band, and the conduction band of Si have the same shape and positions, and consequently are determined

Card 1/2



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ESSION NR: AP5019848

by the short-range order of the surrounding of the Si atom (one coordination sphere). The values obtained for the occupied and forbidden bands are 12.5 ± 0.5 and 7 ± 0.5. The fact that the extensive fine structure of the absorption spectra coincides for the investigated substances indicates that the absorption fine structure is governed essentially by the first coordination sphere of silicon. This deduction agrees with the short-range order theory. The authors thank A. A. Petrov for help in preparing the samples." Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: 23Feb65 ENCL: 00 SUB CODE: SS, OP

NR REF SOV: 005 OTHER: 006

aw
Card 2/2

L 9915-66 EWT(1)/EWP(e)/EWT(m)/EWP(j)/EWP(b) LHB/EWA/EWL

ACC NR: AP5022867 SOURCE CODE: UR/0051/65/019/003/0425/0433

AUTHOR: Lukirskiy, A. P. (Deceased); Savinov, Ye. P.; Yernhov, O. A.; Zhukova, I. I.; Fomichev, V. A.

ORG: None

TITLE: Reflection of x rays with wavelengths from 23.6 to 190.3 Å. Some remarks on the operation of diffraction gratings

SOURCE: Optika i spektroskopiya, v. 19, no. 3, 1965, 425-433

TOPIC TAGS: x ray diffraction, x ray filter, x ray spectrum, diffraction grating

ABSTRACT: The authors measured the angular dependence of the reflection coefficient for various substances, using the following monochromatic lines: O_K (23.6 Å), N_K (31.4 Å), C_K (44 Å), B_K (67 Å), $Sr_{M\xi}$ (108.65 Å), $Rb_{M\xi}$ (128.66 Å), $Ba_{NV-OIII}$ (164.6 Å), and $Cs_{NV-OIII}$ (190.3 Å). The measurement methods were described by the authors elsewhere (Opt. i spektr. v. 16, 310, 1963 and earlier). For lines shorter than 113 Å the radiation was detected with a flow-through proportional counter filled with methane; for longer wavelengths a Geiger counter with argon-alcohol mixture was used. The substances measured were F-1 glass, gold, titanium, and polystyrene. The method of preparing the reflectors was also described in the earlier papers. Polystyrene and titanium reflectors are found to be capable of effectively filtering radiation shorter than 50--200 Å, depending on the angle of incidence. In the case of F-1 glass, a sharp fine structure is observed in the reflection coefficient at wavelengths 70--130 Å. For titanium the fine structure appears at wavelengths shorter

UDC: 537.531

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L 9915-66

ACC NR: AP5022867

than 30 Å, and for polystyrene at wavelengths shorter than 45 Å. Gold exhibits no fine structure. The spectral dependences of the reflection coefficients show that titanium mirrors can be used effectively as filters for radiation of wavelengths shorter than 30--50 Å at various angles of incidence, and that polystyrene mirrors can be used as filters for radiation shorter than 50--180 Å, depending on the angle of incidence. The maximum reflection coefficients in the first order of diffraction have been calculated also for echelettes cut in F-1 glass and echelettes with gold and titanium coatings, which were also studied by the authors earlier (Opt. i spektr. v. 14, 285, 1963). Plots of the maximum reflection coefficient of the echelettes (600 and 1200 lines/mm) vs. the angle make it possible to choose the optimum angles of incidence and the angles of inclination of the echelette steps. The greatest possible reflection coefficients are obtained in first order. Orig. art. has: 3 formulas and 1 table.

SUB CODE: 20/ 07/ 18/ SUBM DATE: 21May64/ ORIG REF: 007/ OTH REF: 001

Card 2/2

L 41590-66 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/JW/JG

ACC NR: AP6018540 SOURCE CODE: UR/0181/66/008/006/1787/1790

AUTHOR: Lukirskiy, A. P. (deceased); Yershov, O. A.; Zimkina, T. M.; Savinov, Ye. P.

ORG: Leningrad State University im. A. A. Zhdanov (Leningradskiy gosudarstvennyy universitet)

TITLE: Spectral dependences of the absorption, reflection, and photoemission coefficients of LiF in the range from 60 to 120 ev

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1787-1790

TOPIC TAGS: lithium fluoride, absorption coefficient, absorption edge, quantum yield, bremsstrahlung, x ray diffraction study, spectral distribution

ABSTRACT: In order to study the fine structure of the absorption edge, the authors measured the coefficients of absorption, reflection, and the quantum yield of LiF in the range 60 - 120 ev, which has not been thoroughly investigated in the past. The measurements were made with an x-ray spectrometer with diffraction grating using the bremsstrahlung spectrum of a tungsten anode. The apparatus and procedures for its use and for elimination of higher-order diffraction spectra were described elsewhere (Opt. i spektr. v. 19, 433, 1965 and earlier papers). The tested samples were thin polycrystalline LiF films deposited by vacuum evaporation on nitrocellulose substrates. Sharp fluctuations of the absorption coefficient, which exactly duplicate fluctuations in the spectral dependence of the quantum yield, were observed in the region of the absorption K edge of the lithium ion over a section extending from ~60 to ~80 ev. The

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ACC NR: AP6018540

large values of the quantum yield (more than 50%) and its correlation with the absorption coefficient indicate that the fundamental role in the photoemission near the absorption edge is played by Auger electrons. The spectral dependence of the reflection coefficient also displays a fine structure near the K edge, and agrees qualitatively with the fine structure of the absorption spectrum. However, no exact correlation is observed between the absorption and reflection coefficients, in view of the complicated relation between them via the refractive index. The authors thank A. M. Rumsh for a discussion of the results and S. A. Gribovskiy and N. N. Ivanchik for help with the reduction and presentation of the results. Orig. art. has: 1 figure and 1 table.

SUB CODE: 20/ SUBM DATE: 03Nov65/ ORIG REF: 008/ OTH REF: 006

Card 2/2

L 04797-67 EWT(l)/EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6024479 SOURCE CODE: UR/0181/66/008/007/2137/2142

AUTHOR: Yershov, O. A.; Lukirskiy, A. P. (deceased) 35 B

ORG: Leningrad State University im. A. A. Zhdanov (Leningradskiy gosudarstvennyy universitet)

TITLE: Investigation of the energy structure of Si and SiO_2 from the emission and absorption spectra in the region of ultrasoft x radiation

SOURCE: Fizika tverdogo tela, v. 8, no. 7, 1966, 2137-2142

TOPIC TAGS: emission spectrum, absorption spectrum, x ray spectrum

ABSTRACT: The results reported in the present article were published in part in an earlier paper (FTT v. 7, 2355, 1965), which gave the $L_{II, III}$ emission band in a small section of the $L_{II, III}$ absorption spectrum of Si and SiO_2. The present article contains all the remaining data concerning the L emission and absorption spectra of Si and Si in SiO_2, and also the K emission and absorption spectra of O in SiO_2. The samples were prepared in the same manner as in the earlier paper and the test procedure was that described in a separate paper (FTT v. 6, 43, 1964). Plots are presented of the emission spectra of pure silicon, the absorption spectra of Si and SiO_2, and the dependence of the transmission of a thin Si layer on the energy of the incident quantum in the region of $L_{II, III}$ absorption edge in SiO_2. The energy level

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L 04797-67

ACC NR: AP6024479

schemes of Si and SiO_2 are deduced on the basis of the results. Orig. art. has: 5 figures and 1 table

SUB CODE: 20/ SUBM DATE: 21Dec65/ ORIG REF: 002/ OTH REF: 015/

Card 2/2 afs

ANTONYUK, P.P.; VERNYAYEV, O.; YERSHOV, P.

Cultivator for mulberry shrub plantations. Trakt. i sel'khozmash. no.12:24-25 D '58. (MIRA 11:12)
(Cultivators) (Mulberry)

ERSHOV, P.

SUBJECT: USSR/Schooling (Shipbuilders) 27-8-15/32

AUTHOR: Ershov, P., Instructor, Trade School No. 17 (Gor'kiy Oblast')

TITLE: Visual Aids for Ship Boiler- and Hull Makers (Naglyadnyye posobiya dlya kotel'shchikov-sudokorpusnikov).

PERIODICAL: Professional'no - Tekhnicheskoye Obrazovaniye, Aug. 1957, # 8, pp 23-24 (USSR)

ABSTRACT: This Trade School trains workmen for the river fleet, in particular ship boiler- and hull makers. The school has experienced a need for a number of instructional models of ship construction and the question of model making.

The article contains 2 photos.

INSTITUTION: Remeslennoye Uchilishche # 17(Gor'kovskaya Oblast') Trade School # 17 (Gor'kiy Oblast')

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress

Card 1/1

YERSHOV, P., inzh.

Wood-cement slabs and blocks. Zhil.stroi. no.1:7-9 Ja '60.
(MIRA 13:5)

(Lightweight concrete) (Wood waste)

ANTONYUK, P.P.; YERSHOV, P.G.; VERNYAYEV, O.V.

KSSh-5 mounted wide-range orchard cultivator. Trakt. i sel'khozmash. no.4:36-37 Ap '59. (MIRA 12:5)

1.Zavod "Krasnyy Aksay."
(Cultivators)

YERSHOV, P.I.

CHIZHOV,D.G.; KOGTEV,G.I.; LAVRENENKO,K.D.; SPIRIN, S.A.; NEKRASOV,A.M.; IVANOV, M.I.; UFAYEV,M.Ya.; GRISHIN, I.K.; KOSTIN,M.F.; POPOV,V.A.; ZAGORODNIKOV, P.I.; FEDOTOV, P.N.; KAZ'MIN, A.V.; FOMICHEV, G.I.; YERSHOV,P.I.; MESHCHERYAKOV,V.I.; YEFREMOV,S.G.; LEVIN, I.S.; LETUCHEV,L.I.; KUZOREV, S.V.

Nikolai Alekseevich Andreev. Energetik 4 no.9:40 S '56. (MLRA 9:10)
(Andreev, Nikolai Alekseevich, 1896-1956)

SIMONOV, P.V.; VALUYEVA, M.N.; YERSHOV, P.M.

Voluntary regulation of the galvanic skin response. Vop. psikhol. 10 no.6:45-50 N-D '64. (MIRA 18:2)

1. Institut vysshey nervnoy deyatel'nosti i neyrofiziologii AN SSSR, Moskva.

ACCESSION NR: AP4031817 S/0247/64/014/002/0204/0210

AUTHOR: Simonov, P. V.; Valuyeva, M. N.; Yershov, P. M.

TITLE: Certain characteristics of voluntary and involuntary emotional reactions of man

SOURCE: Zhurnal vy*sshey nervnoy deyatel'nosti, v. 14, no. 2, 1964, 204-210

TOPIC TAGS: voluntary emotional reaction, involuntary emotional reaction, EEG shift, EKG shift, skin galvanic reflex shift, pain stimulus, activating mechanism, inhibitory mechanism, sympathetic nervous system, parasympathetic nervous system

ABSTRACT: The voluntary and involuntary reactions of 21 drama students were investigated in two experimental series. In the first series the subject was asked to anticipate a painful stimulus at a given moment, and in the second series the subject was asked to reproduce mentally a very painful situation knowing for certain that no pain stimulus would follow. During the experiment the subject was seated in a dark chamber with eyes closed and was required to remain

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ACCESSION NR: AP4031817

absolutely motionless. After the subject adapted to darkness, normal EEG, EKG, and skin galvanic reflexes were recorded. Then reactions were recorded for the 20 sec period when the subject was asked to anticipate a pain stimulus at a given moment and for the following 20 sec period when the subject was asked to reproduce mentally a very painful situation. Findings show that voluntarily evoked emotions, especially by those well trained in Stanislavskiy methods, produce more significant EEG, EKG, and skin galvanic reflex shifts than the anticipation of a real pain stimulus. Investigation of the complex interaction of activating and inhibiting mechanisms, based on an automatic froquency analysis of EEG and recorded vegetative functions, indicates that effects of a sympathetic nature lead to an increase of EEG fast waves and effects of a parasympathetic nature lead to an intensification of EEG slow waves. Shifts related to actual fear are probably less pronounced because of inhibitory effects including those of a parasympathetic nature. Orig. art. has: 3 figs.

ASSOCIATION: Institut vy*sshey nervnoy deyatel'nosti i neyrofiziologii akademii nauk SSSR (Institute of Higher Nervous Activity and Neuro-physiology, Academy of Sciences USSR)

Card 2/3

ACCESSION NR: AP4031817

SUBMITTED: 21Mar63 ENCL: 00 SUB CODE: LS

NR REF SOV: 004 OTHER: 008

Card 3/3

PROMEVICH,V.P., inzhener; YERSHOV,P.N., inzhener; KOZLOV,I.M., arkhitektor

Plans for housing and public buildings designed by the State Institute of Planning for the Forest Industries. Rats. i izobr. predl. v stroi. no.102:5-9 '55. (MIRA 8:10)
(Buildings, Prefabricated)

YERSHOV, P.N.; BAKHTNYAROV, V.D., red.; NIKITINA, L.V., red. izd-va.; BACHURINA, A.M., tekhn. red.

[Model houses for logging camps; "Lumber industry and forestry" pavilion] Standartnye doma dlia lesozagotovok; pavil'on "Lesnaia promyshlennost' i lesnoe khoziaistvo." [Moskva] M-vo lesnoi promysbl. SSSR [1957] 11 p. (MIRA 11:11)

1. Moscow. Vsesoyuznaya promyshlennaya vystavka. (Lumber camps)

YERSHOV, P.N., red.; DOLGOV, A.I., red.; NIKIFOROV, A.S., red.; POZDEYEV, N.V., red.; SKOBLOV, D.A., red.; PHULNIKOVA, M.N., red.; TEMKINA, Ye.L., tekhn.red.

[Proceedings of the section on standard housing construction and furniture] Sektsiia standartnogo domostroeniia i mebeli. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1958. 212 p. (MIRA 12:5)

1. Vsesoyuznoye soveshchaniye po stroitel'stvu. 3rd, Moscow, 1958. 2. Nachal'nik otdela standartnogo domostroyeniya Ministerstva lesnoy promyshlennosti RSFSR (for Yershov). 3. Zaveduyushchiy laboratoriyey derevoobrabatyvayushchikh stankov i potochnykh liniy v derevoobrabotke TSentral'nogo nauchno-issledovatel'skogo instituta mekhanicheskoy obrabotki dereva (for Dolgov). 4. Zamestitel' nachal'nika otdela standartnogo domostroyeniya Ministerstva lesnoy promyshlennosti RSFSR (for Pozdeyev). 5. Glavnyy ekspert Gosstroya SSSR (for Skoblov).

(Buildings, Prefabricated) (Furniture)

YERSHOV, Pavel Nikolayevich; POSTRELOV, G.A., red.; VOROB'YEVA, N.N., red.izd-va; BRATISHKO, L.V., tekhn.red.

[Using Portland cement fibrolite slabs in standard housing construction] Fibrolitovye plity na portland-tsemente v standartnom domostroenii. Moskva, TSentr. biuro tekhn.informatsii lesnoi promyshl., 1958. 6 p. (MIRA 12:1)
(Sillimanite) (Building blocks)

ALABYAN, K.S.[deceased]; BLOKHIN, P.N.; BOTVINKO, M.Ya.; DEVYATKOV, G.V.; DMITRIYEV, A.D.; YERSHOV, P.N.; ZAYTSEV, A.G.; KIBIREV, S.F.; KOSTYUKOVSKIY, M.G.; KUZNETSOV, B.T.; L'VOV, G.N.; MOGIL'NYY, A.I.; ORLOV, G.M., OVSYANNIKOV, K.L.; PROMYSLOV, V.F.; SMIRNOV, N.N.; SKACHKOV, I.A.; SOLOFNENKO, N.A.; SUSNIKOV, A.A.; CHAGIN, D.A.; KUCHERENKO, V.A., obshchiy red.; GRISHMANOV, I.A., obshchiy red.; SVETLICHNYY, V.I., obshchiy red.; RUBANENKO, B.R., obshchiy red.; BARSKOV, I.M., red.; UDOD, V.Ya., red.izd-va; YUDINA, L.A., red.izd-va; GOLOVKINA, A.A., tekhn. red.

[Building practices in foreign countries; Northern Europe and German Federal Republic] Opyt stroitel'stva za rubezhom; v stranakh Severnoi Evropy i FRG. Po materialam otchetov delegatsii sovetskikh spetsialistov-stroitelei. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1959. 598 p. (MIRA 12:12)

1. Predsedatel' Gosstroya SSSR (for Kucherenko). 2. Zamestitel' predsedatelya Gosstroya SSSR (for Svetlichnyy).
(Europe, Western--Building)

YERSHOV, Petr Nikolayevich; GLEBOVA, L., red.; GERASEVICH, Z., tekhn. red.

[Chemical rainbow] Khimicheskaia raduga. Kemerovo, Kemerovskoe knizhnoe izd-vo, 1962. 181 p. (MIRA 16:7)
(Dyes and dyeing)

POZDEYEV, Nikolay Vasil'yevich; YERSHOV, P.N., red.; GUSHCHINA, R.N., red.izd-va; GRECHISHCHEVA, V.I., tekhn. red.

[Manufacture and use of fiberboard] Proizvodstvo i primenenie fibrolitovykh plit. Moskva, Goslesbumizdat, 1963. 90 p. (MIRA 16:10)

(Fiberboard)

KHAFIZOV, G.Kh.; YERSHOV, P.N., nauchn. red.

[Use of new materials in the construction of standard apartment houses in Finland] Primenenie novykh materialov v standartnom domostroenii Finliandii. Moskva, TSentr. in-t tekhn. informatsii i ekon. issl. po lesnoi bumazhnoi i derevoobrabatyvaiushchei promyshl., 1963. (MIRA 17:5)
71 p.

1. SAMARIN, I. YA. YERSHOV, P. P.

2. USSR (600)

4. Stokers, Mechanical

7. Feeding fuel into boiler fusances with mechanical stokers. Mash. zhir-prom. no. 9: S '52

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

YERSHOV, P.R., vedushchiy red.; MUKHINA, E.A., tekhn. red.

[Handbook of the industry's time standards for repairing equipment and organizing the repairing of catalytical cracking units] Spravochnik otraslevykh norm vremeni na remont tekhnologicheskogo oborudovaniia i po organizatsii remonta ustanovok kataliticheskogo krekinga . Moskva, Gos. nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1961. 121 p. (MIRA 14:9)

1. Moscow. TSentral'noye byuro promyshlennykh normativov po trudu.
(Cracking process)

BURDYUKOV, Rafail Borisovich; SMIRNOV , L.P., red.; YERSHOV, P.R., ved. red.; TROFIMOV, A.V., tekhn. red.

[Tables of normal gravity values] Tablitsy normal'nykh znachenii sily tiazhesti. Moskva, Gos. nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1961. 113 p. (MIRA 14:11)
(Gravity--Tables, etc.)

YERSHOV, P.R., vedushchiy red.; POLOSINA, A.S., tekhn. red.

[Automatic control of deep drilling; transactions of the conference held in August 1960 by the All-Union Design and Planning Scientific Research Institute for Drilling Oil and Gas Wells] Avtomatizatsiia protsessov glubokogo bureniia; trudy soveshchaniia vo VNIIBT v avguste 1960 g. Moskva, Gos. nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1961. 122 p. (MIRA 14:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut burovoy tekhniki.
(Oil well drilling) (Automatic control)

VESELOV, A.G., red.; YERSHOV, P.R., ved. red.; MUKHINA, E.A., tekhn. red.

[Standard job classification manual; mixed occupations] Edinyi tarifno-kvalifikatsionnyy spravochnik rabochikh; skvoznye professii. S prilozheniem dopolnenii i izmenenii... ot 23 ianvaria 1960 g. No.90/P-1 i ot 8 sentiabria 1960 g. No.1098/P-21. Moskva, Gostoptekhizdat, 1961. 684 p. (MIRA 15:3)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po voprosam truda i zarabotnoi platy.
(Occupations--Classification)

BROD, I.O.[deceased]; VASIL'YEV, V.G.; VYSOTSKIY, I.V.; KRAVCHENKO, K.N.; LEVINSON, V.G.; L'VOV, M.S.; OLENIN, V.B.; SOKOLOV, B.A.; YERSHOV, P.R., ved. red.

[Oil- and gas-bearing basins of the earth] Neftegazonosnye basseiny zemnogo shara. [By] I.O.Brod i dr. Moskva, Nedra, 1965. 597 p. (MIRA 18:3)

YERSHOV, R.Ye.

USSR/ Physics - Magnetization curve

FD-1048

Card 1/1 : Pub. 153 - 19/23

Author : Yershov, R. Ye.

Title : Influence of a circular field upon the form of the curve of longitudinal magnetization

Periodical : Zhur. tekh. fiz., 24, 1508-1512, Aug 1954

Abstract : Discusses: variation of the initial part of the curve with growth of field; dependence of the magnetization on field for various longitudinal fields; dependence of susceptibility on field in the presence and absence of circular field; dependence of magnetization on curvature of curve in the presence of the circular field; and dependence of magnification of transformer current on circular field in a core for various primary currents. Notes that the transverse case was studied in 1944 at the Gor'kiy Fiziko Technical Institute, under guidance of Gorelik.

Institution : --

Submitted : 31 December 1953

S/139/60/000/006/008/032
E032/E414

AUTHOR: Yershov, R.Ye.

TITLE: Magnetostatic Field Due to a Crack-Type Defect

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No.6, pp.59-63

TEXT: An experimental study is reported of the effect of crack-type defects in magnetized specimens on the magnetic field outside the specimen. The specimen investigated was in the form of a silicon iron plate containing 1.17% Si (120 mm long, 80 mm wide and 45 mm thick). The defect was imitated by a rectangular gap (26 x 1 mm) at the centre of the specimen and perpendicular to its longitudinal axis. The arrangement is illustrated in Fig.1, where 1 is the specimen, 2 the coils and 3 the electromagnet pole pieces. The coils on the end of the specimen were used to produce uniform magnetization over the entire specimen. The field above the defect was measured with the aid of "ferroprobes" as described by Vlasov and Yershov (Ref.4). In the present case, the ferroprobe method has the following advantages over the usual ballistic method. In the case of the ballistic method, the measuring coil must have a

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S/139/60/000/006/008/032
E032/E414

Magnetostatic Field Due to a Crack-Type Defect

large number of turns if the small defect-field is to be detected. This in turn means that the measured field is in fact an average field over the volume of the coil, and since the defect-field Hd falls off rather rapidly with distance from the surface of the specimen, this method gives low values of Hd. The ferroprobe method, on the other hand, gives an average over the length of the probe only, and the working thickness of the device is of the order of 1 mm. Secondly, owing to the presence of a large amount of iron (electromagnet core, specimen), a negative ballistic error is introduced in the ballistic method (Kharchenko, Ref.5). This is due to the rapid increase in the inertia to magnetic polarity reversal. Ferroprobes, on the hand, do not react to changes in the magnetic flux and their indications depend only on the magnitude of the field. Fig.3 shows the dependence of the defect-field Hd at the surface of the specimen on the average induction Bo in the specimen (curves marked 6). In Fig.3, curve 1 refers to an open defect (d = 0), while curves 2 and 3 correspond to d = 7.5 and

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S/139/60/000/006/008/032
E032/E414

Magnetostatic Field Due to a Crack-Type Defect

26.4 mm respectively. The curves marked a refer to the average permeability in the covering layer for d = 0, 7.5 and 26.4 mm respectively. It is concluded that the field due to a covered defect appears only for a certain definite value of the magnetization of the specimen. This is associated with the screening effect of the covering layer. The rate at which the defect field increases with the average magnetization of the specimen depends on the ratio of the magnetic reluctances of the defect and the metal layers in its immediate neighbourhood. There are 4 figures and 10 Soviet references.

ASSOCIATION: Institut fiziki AN SSSR g. Krasnoyarsk
(Institute of Physics AS USSR, Krasnoyarsk)

SUBMITTED: December 4, 1959 (initially)
June 6, 1960 (after revision)

Card 3/4

S/139/60/000/006/008/032
E032/E414

Magnetostatic Field Due to a Crack-Type Defect

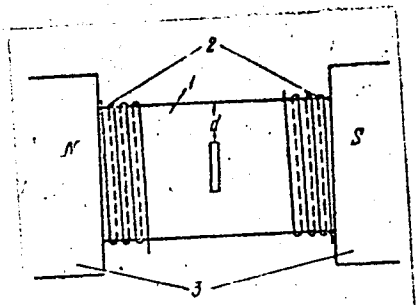

Рис. 1. Схема установки. *1*— образец, 2 — дополнительные катушки, *3*—полюса электромагнита.

Fig.1.

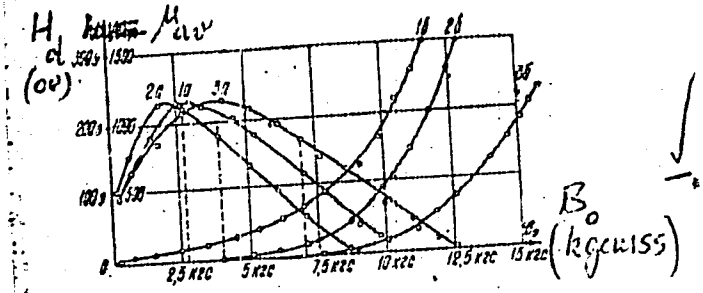

Рис.3. Зависимость величины поля дефекта (кривые *б*) и средней проницаемости в покрытии (кривые *а*) от средней индукции в образце при разных значениях толщины покрытия: *1* — открытый дефект; *2*—d=7,5 *мм*; *3*—d=28,4 *мм*.

Fig.3.

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field of YERSHOV, R. Ye., Cand Phys-Math Sci -- "Study of the magneto-~~field~~ defect in ferromagnetic manufactured articles taking into consideration the non-linearity of the material's magnetic properties." Krasnoyarsk, 1961. (Min of Ed RSFSR, Krasnoyar SK State Ped Inst) (KL, 8-61, 226)

YERSHOV, R.Ye.

Nonlinear calculations for magnetic flaw detection in the range of medium and strong fields (10^2 - 10^3 oersteds) and their experimental verification. Izv.vys.ucheb.zav.; fiz. no.3:122-133 '61. (MIRA 14:8)

1. Krasnoyarskiy institut fiziki.
(Magnetic fields) (Magnetic testing)

S/139/62/000/001/028/032
E073/E535

AUTHORS: Yershov, R.Ye.

TITLE: Non-linear calculations in magnetic defectoscopy for the range of medium and strong fields (10^2 - 10^3 Oe) and their experimental verification

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no.1, 1962, 162-166

TEXT: In an earlier paper (Ref.1: Izvestiya vuzov SSSR, Fizika, No.3, 122, 1961) it was shown that the field of a defect of the type represented by a transverse crack can be determined in the plane-parallel case in the range of medium and strong fields by means of the formula

$$H_d = \frac{H_{av}}{1 + d/h} \qquad (1)$$

where H - field inside the defect assumed as being uniform, d - thickness of the layer covering it, h - width of the defect. The quantities d and h are determined by the dimensions of the

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defect and its location inside the component. Therefore, calculation of H_d according to Eq.(1) reduces to determining the field inside the defect. This paper is devoted to solving this problem and to comparing theoretically calculated values of H_d with experimentally obtained values. A transcendental equation is obtained and by solving it according to the "regula falsi" method, H_{av} can be calculated as a function of the magnetic state of the specimen at a distance from the defect, the geometry of the specimen and the properties of the material and, following that, the magnitude of the field of a transverse crack-type defect can be calculated according to Eq.(1). Experimental verification of the results shows that the obtained results differ from theoretical values by a factor of 1.5 to 2 as compared to differences by a factor of 6 to 8 in the case of linear methods of calculation. There is 1 figure.

ASSOCIATION: Institut fiziki SO AN SSSR, Krasnoyarsk
(Institute of Physics SO AS USSR, Krasnoyarsk)

SUBMITTED: June 20, 1960 (Initially)
July 27, 1961 (after revision)

DROKIN, A.I.; CHERKASHIN, V.S.; SMOLIN, R.P.; YERSHOV, R.Ye.

No-hysteresis magnetization curves for ferromagnetic metals and alloys. Izv. AN SSSR. Ser. fiz. 26 no.2:291-295 F '62. (MIRA 15:2)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR.
(Ferromagnetism)

YERSHOV, R.Ye.

Nonlinear calculations in magnetic defectoscopy for the range of medium and strong fields (10^2-10^3 3) and their experimental verification. Part 2. Izv.vys.ucheb.zav.;fiz. no.1:162-166 '62. (MIRA 15:6)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR, Krasnoyarsk.
(Magnetic testing)

ACCESSION NR: AP4018385 S/0120/64/000/001/0176/0177

AUTHOR: Yershov, R. Ye.; Rodicheva, E. K.; Volgina, Z. M.

TITLE: Using ferroprobes in determination of magnetic rigidity of thin ferromagnetic films

SOURCE: Pribory* i tekhnika eksperimenta, no. 1, 1964, 176-177

TOPIC TAGS: ferroprobe, magnetic rigidity, ferromagnetic film, gradient meter

ABSTRACT: Using the measuring circuit suggested by F. Förster (Z. Metallkunde, 1955, 46, no. 5, 358), a series of tests was conducted with a gradient meter. The latter consisted of two "half-probes," each having a primary and a secondary of 660 turns and an 80NKhS-permalloy core. A current of 21 ma at 23.5 kc was used. The magnetic rigidity was determined on the basis of measuring the demagnetizing field necessary to compensate for the

Card 1/2

ACCESSION NR: AP4018385

residual magnetism in the thin-film specimen. Orig. art. has: 4 figures.

ASSOCIATION: Institut fiziki SO AN SSSR (Institute of Physics, SO AN SSSR)

SUBMITTED: 07Feb63 DATE ACQ: 18Mar64 ENCL: 00

SUB CODE: PH NO REF SOV: 000 OTHER: 002

Card 2/2

S/0048/64/028/004/0751/0755

ACCESSION NR: AP4030657

AUTHOR: Yorshov, R.Ye.

TITLE: On the angular dependence of alternating field demagnetization /Report, Symposium on Ferromagnetism and Ferroelectricity held in Leningrad 30 May-5 June 1963/

SOURCE: AN SSSR. Izv.Ser.fiz., v.28, no.4, 1964 751-755

TOPIC TAGS: ferromagnetism, demagnetization, alternating field demagnetization, demagnetization anisotropy, cobalt

ABSTRACT: The author has previously found that the efficiency of an alternating magnetic field gradually reduced to zero for demagnetizing magnetite specimens depends on the angle between the initial magnetization and the demagnetizing field. The demagnetizing effect of an alternating field of fixed initial strength is greatest when it is parallel to the initial magnetization, and least when it is perpendicular thereto. The author refers to this phenomenon as the "uniaxial anisotropy of demagnetization." In order to determine whether demagnetization is also anisotropic in pure ferromagnetic metals, the effect was investigated in the case of 10 mm diameter 0.34 mm thick cobalt discs, electrolytically deposited on copper and subsequent-

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ACCESSION NR: AP4030657

ly stripped from the copper base. Microscopic examination of the discs showed the crystallites to measure 0.01 mm on the average, and x-ray studies showed them to be randomly oriented. The coercive force was 109 Oe. Demagnetization anisotropy was observed in the cobalt discs. The ratio of the reduction of the magnetization produced by a small alternating demagnetizing field parallel to the initial magnetization, to the reduction produced by an equal demagnetizing field perpendicular thereto, was about 1.6, when the initial magnetization was 100 gausses. This ratio was smaller for greater initial magnetizations. The dependence of the demagnetizing efficiency on the angle between the demagnetizing field and the initial magnetization is calculated from the following assumptions: 1) each crystallite has a single axis of easy magnetization; 2) these axes are randomly oriented; 3) each crystallite is magnetized, if at all, in the direction of its easy axis; 4) the demagnetizing effect on a single crystallite of the alternating demagnetizing field is proportional to the component of the demagnetizing field in the direction of the axis of the crystallite. It is found that in order to obtain agreement with experiment for large values of the initial magnetization, it is necessary to assume, in addition to 4), that the demagnetizing effect on a single crystallite depends also on the angle between the axis of the crystallite and the direction of the initial magnetization,

Card 2/3

ACCESSION NR: AP4030657

those crystallites oriented parallel to the initial magnetization being the least easily demagnetized. This additional effect is ascribed to interaction between the crystallites. Orig.art.has: 8 formulas and 5 figures.

ENCL: 00

OTHER: 001

ASSOCIATION: none

DATE ACQ: 30Apr64

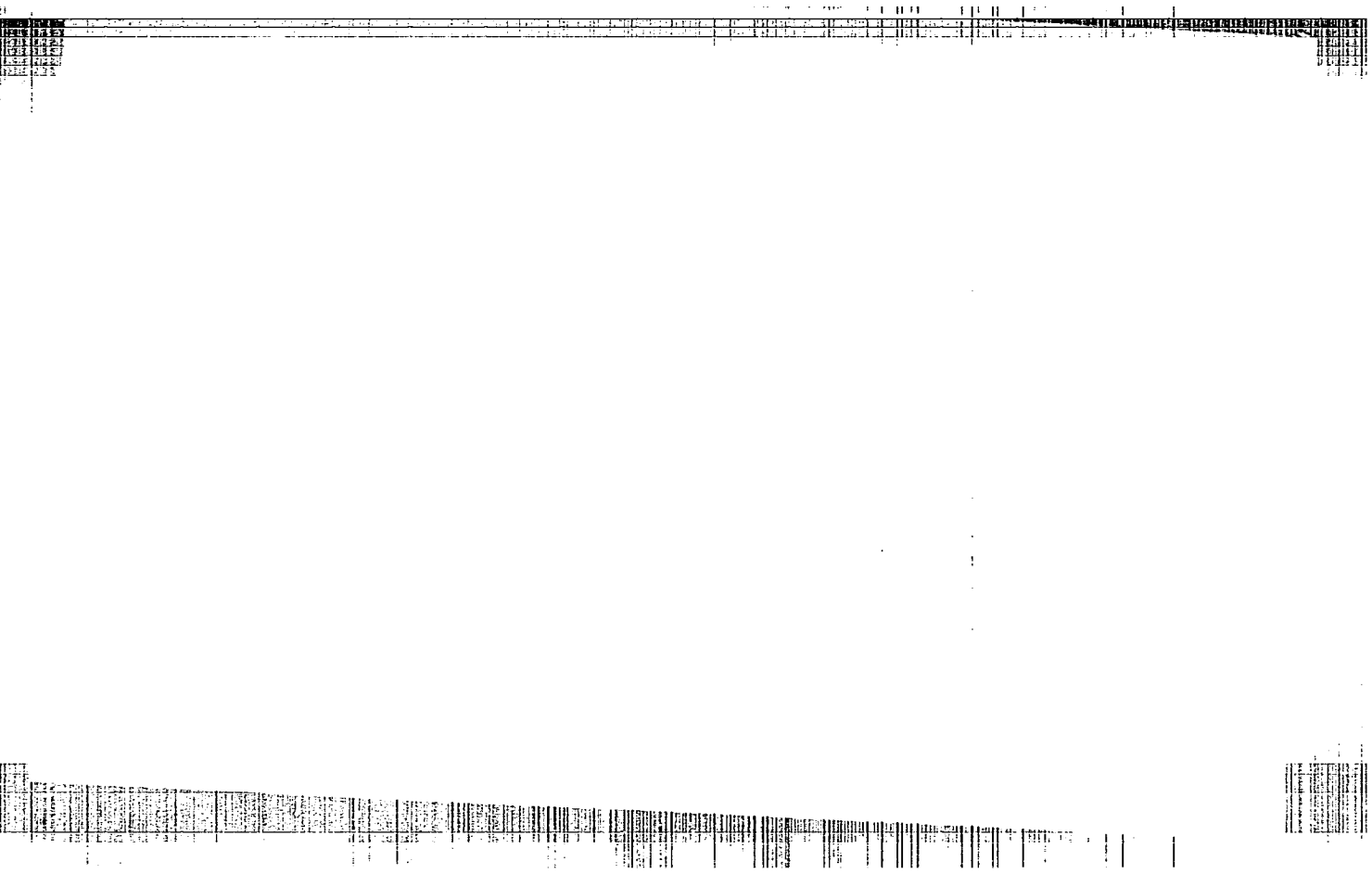
SUBMITTED: 00

NR REF SOV: 001

SUB CODE: EM

Card 3/5

magnetic moment, vector fan, demagnetization curva



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L 50976-65 EWT(1)/

cobalt films

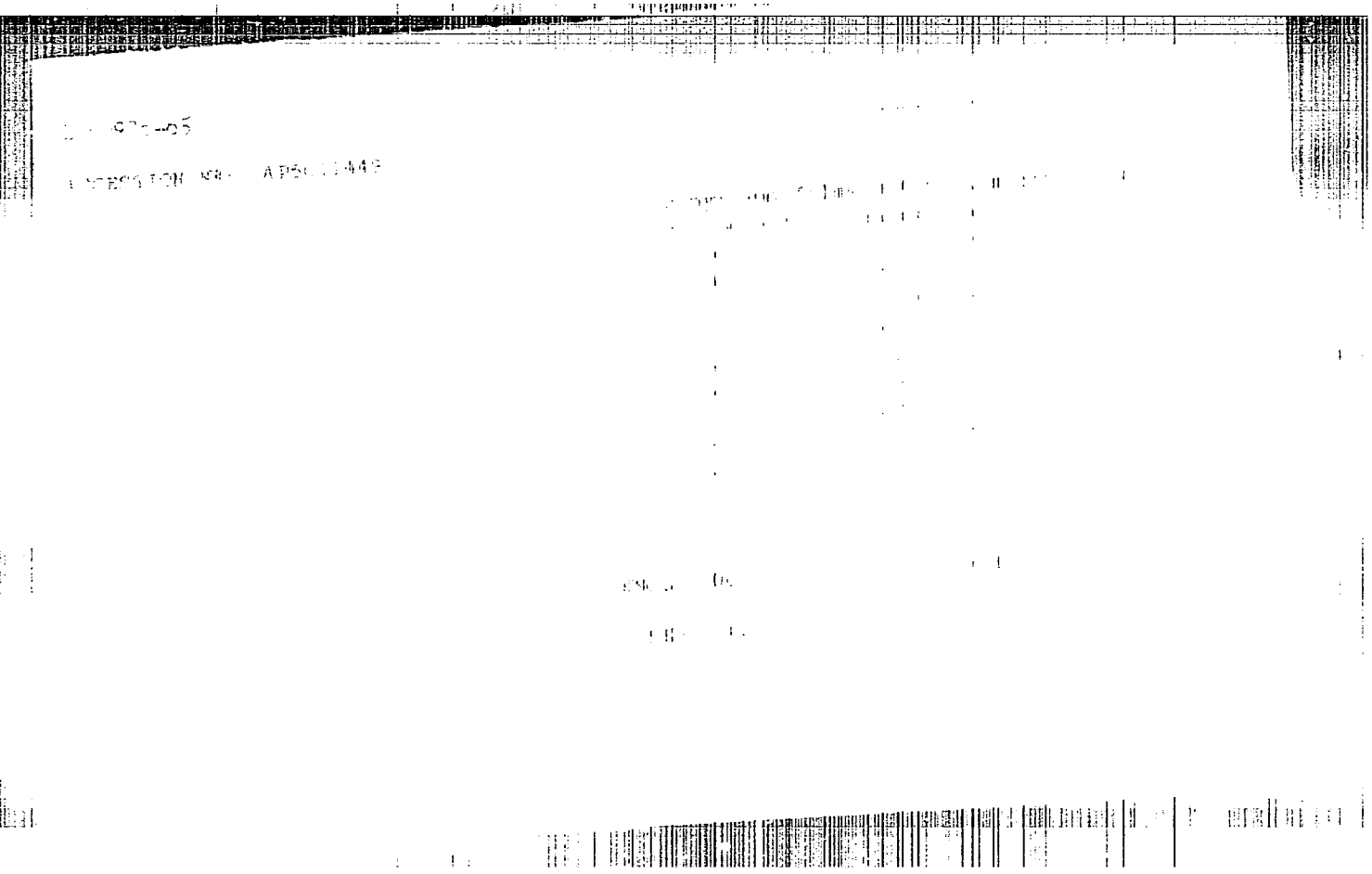
Physics of

TOPIC TAGS: ferromagnetic thin film, cobalt, demagnetization, magnetic property

ABSTRACT: In an earlier study by one of the authors

otd. AN SSSR, Ser. tekhn., 6, No. 2

demagnetization of



L 28465-66 EWT(d)/EWT(m)/EWP(e)/EWA(d)/EWP(n)/T/EWP(t)/ETI/EWP(k)/EWP(b)/EWP(m)-2

ACC NR: AP6010276 IJP(c) JD SOURCE CODE: UR/0181/66/000/001/0075/0078

AUTHOR: Yershov, R. Ye.

ORG: Physics Institute, Siberian Dept. of the AN SSSR (Institut fiziki SO AN SSSR)

TITLE: Possibility of testing the depth of hardened layer by the eddy current method

SOURCE: Defektoskopiya, no. 1, 1966, 75-78

TOPIC TAGS: steel, nondestructive test, flaw detection, eddy current, harmonic analysis, metal hardening, electromotive force / 40G steel

ABSTRACT: The author investigated the frequency dependence of the third-harmonic amplitude of secondary e.m.f. for specimens with various depths of hardened surface layer. The specimens (track lugs of 40G steel, 256 mm long, 40 mm in diameter) were, after cold working, hardened with electric current to depths of 3.75, 3.5, 3.25, 2.5, 1.8 and 1 mm. In the experimental setup (Fig. 1) the specimens were magnetized in solenoid 1 with fields of various frequency but identical amplitude (8.3 oe, which roughly corresponds to the coercive force of the non-hardened specimen). The magnetizing current was produced by generator 2 and its intensity was adjusted to the voltage drop across resistor 3. The e.m.f. arising in the secondary winding on solenoid 1 proceeded to the cutoff RC-filter 4 and selective filter 5. The capacitances of the two filters were taken in the ratio of 1:3 and hence the first filter blocked

UDC: 620.179.14

Card 1/4

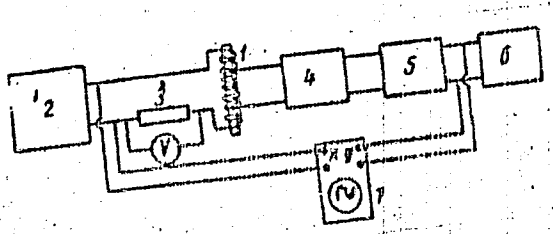


Fig. 1. Block diagram of setup:

1 - solenoid; 2 - ZG-10 generator; 3 - fixed resistor;
4 - cutoff RC-filter; 5 - selective RC-filter; 6 - V3-2A voltmeter;
7 - oscillograph

the first harmonic of the secondary e.m.f. while the second filter isolated the third harmonic. The amplitude of the latter harmonic was measured by voltmeter 6. The filtration frequency was checked with oscillograph 7 according to Lissajou patterns for a frequency ratio of 1:3. The experiments dealt with determining the relation of generator frequency to the E_h/E_n ratio of the readings of voltmeter 6 for hardened (to a specified depth) and non-hardened specimens. The curves thus plotted (Fig. 2) all

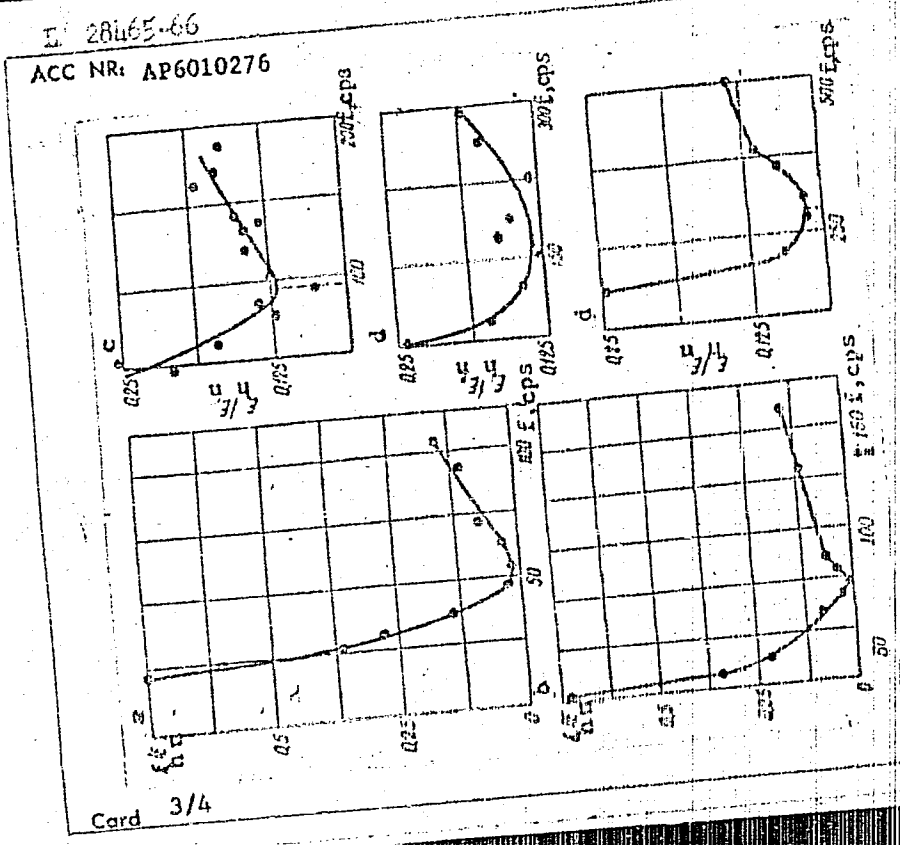


Fig. 2. Frequency dependence of the third-harmonic amplitude ratio between the third harmonics of the hardened and non-hardened specimens as a function of hardening depth:

a - 3.75 mm; b - 3.25 mm; c - 2.5 mm; d - 1.8 mm; e - 1 mm

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ACC NR: AP6010276

clearly display a minimum whose position changes with depth of hardening. A possible explanation for this effect is that the secondary e.m.f. of the entire specimen is the vectorial sum of the e.m.f. of its hardened and non-hardened (base metal) parts; the third harmonics of the secondary e.m.f. of both these parts are opposite in phase and the third harmonic of the overall e.m.f. will have a minimum. Earlier it was established (Yershov, R. Ye. Izv. vuzov, Fizika, 1966, no. 4 (in print))that the phase of the third harmonic is extremely sensitive to the degree of heat treatment of the specimen. Thus, the feasibility of nondestructive testing of hardening depth by the eddy current method is demonstrated. When a device is developed for this purpose, it should consist of a low-frequency (up to 400 cps) generator with a sufficient power for generating the third harmonic, a solenoid (sensor), and an electron-tube voltmeter. The generator frequency at which the readings of the voltmeter are at a minimum is the criterion for the determining the depth of the hardened layer of the specimen. Orig. art. has: 3 figures.

SUB CODE: 13, 09, 11/ SUBM DATE: 23Sep65/ ORIG REF: 004

Card 4/4 IC

67755

SOV/126-8-5-7/29

8400

AUTHORS: Vlasov, V.V., and Yershov, R.Ye.

TITLE: On the Dependence of a Crack-type Defect Field on the Thickness of the Metal Layer Covering It

PERIODICAL: Fizika metallov i metallovedeniye, Vol 8, 1959, Nr 5, pp 689-693 (USSR)

ABSTRACT: On the basis of an experimental and theoretical investigation of the dependence of the field of a cylindrical defect on its depth of location, A.P. Sapozhnikov (Ref 2) concluded that the leakage field is caused not only by the walls of the defect but also by the metal located above it. Therefore, with decreasing thickness of the layer above the defect, the intensity of the defect field should increase, but only until the defect zone of the metal is directly affected. In the case of an open defect, such a zone is completely absent and the defect field can be smaller still. To verify this result, the authors studied artificial defects which were covered with magnetically differing layers (Refs 7,8,9). The main drawback of these earlier experiments was that the defect was covered by a separate piece of metal. In the present paper

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On the Dependence of a Crack-type Defect Field on the Thickness of the Metal Layer Covering It

experiments are described with strongly work-hardened 1% Si-steel plates 120 x 80 x 9 mm. In these, the defect (25 x 1.3 mm) simulating the transverse crack was located in the centre of the plate (Fig 1) with its length in the transverse direction and its breadth (1.3 mm) in the direction of the longitudinal axis. The plate was placed between the poles of an electromagnet. The dependence of the tangential component of the defect field H on the induction B in the plate for thicknesses of the material above the defect of 0, 2.5, 7.4 and 28.3 mm, is plotted in Fig 3. Fig 4 shows similar curves for a defect breadth of 0.24 mm in the absence of any material above the defect, and in the presence of a 1.5 mm thick layer. Further data are plotted in Fig 5. The experiments have shown that the magnetostatic field of a crack-type defect increases with decreasing thickness of the covering layer, which is in agreement with the data in the literature for the field of a cylindrical defect. The divergent results obtained in earlier work of one of the present authors

67755

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On the Dependence of a Crack-type Defect Field on the Thickness of the Metal Layer Covering It

(Refs 7, 8) appear to be due to experimental errors. Acknowledgements are expressed to Professor R.I. Yanus for his critical comments.
There are 5 figures and 9 Soviet references.

ASSOCIATION: Institut fiziki metallov AN SSSR
(Institute of Physics of Metals, Academy of Sciences, USSR)

SUBMITTED: March 31, 1959

Card 3/3

YERSHOV, S.; MIKHAYLOV, B.

Annual plan has been overfulfilled. Sel'. stroi. 12 no.1:3-5 Ja '58.
(MIRA 11:2)

1. Nachal'nik Tambovskogo oblastnogo upravleniya po stroitel'stvu v kolkhozakh (for Yershov). 2. Glavnyy inzhener Tambovskogo oblastnogo upravleniya po stroitel'stvu v kolkhozakh (for Mikhaylov).
(Tambov Province--Farm buildings)

Yershov, S.

USSR/ Electronics - Radio

Card 1/1 Pub. 89 - 23/30

Authors : Yershov, S.

Title : The operation of a ring wound balanced modulator

Periodical : Radio 6, 45 - 46, Jun 1955

Abstract : Technical data are presented regarding the operation of a ring wound balanced modulator utilized for the conversion of frequencies in range exciters with quartz stabilization. In order to comprehend the performance of a balanced modulator it is necessary first to analyze what is happening in a circuit consisting of an alternating voltage generator, diode, batteries and change-over switch. Diagrams.

Institution : .....

Submitted : .....

YERSHOV, S.

Crystal oscillators using transistors. Radio no.5:20-22 My '63. (MIRA 16:5)
(Oscillators, Transistor) (Oscillators, Crystal)

YERSHOV, S. A.

Dissertation defended for the degree of Candidate of Economic Sciences at the Institute of World Economic and International Relations 1962

"Monopolies in the Electrotechnical Industry of the US."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

1. YERSHOV, S. A.
2. USSR (600)
4. Kelif Uzboy-Antiquities
7. Archeological collection from the Kelif Uzboy. Izv. Turk. fil AN SSSR no. 3, 1951

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

YERSHOV, S.A.; LEONENKO, I.N.

Oil and gas potentials in the Moscow syneclise and Ryazan-Saratov trough. Mat.po geol.i pol.iskop.tsentr.raion.evrop.chasti SSSR no.5:139-142 '62. (MIRA 16:6)
(Petroleum geology) (Gas, Nautral--Geology)

YERSHOV, Savva Fedorovich

[Pages of the past; an old soldier's notebook] Stranitsy proshlogo; zapiski starogo soldata. Leningrad, Lenizdat, 1962. 184 p. (MIRA 16:10)
(Russia--Army--Military life)

YERSHOV, S. I.

25888 Yershov, S. I. Bor'ba S Lichinkami Malyariynogo Komara V Golovnykh Chastyakh Osushitel'nykh Kanalov. Zdravookhraneniye Kazakhstana, 1948, No. 4, S. 30-32

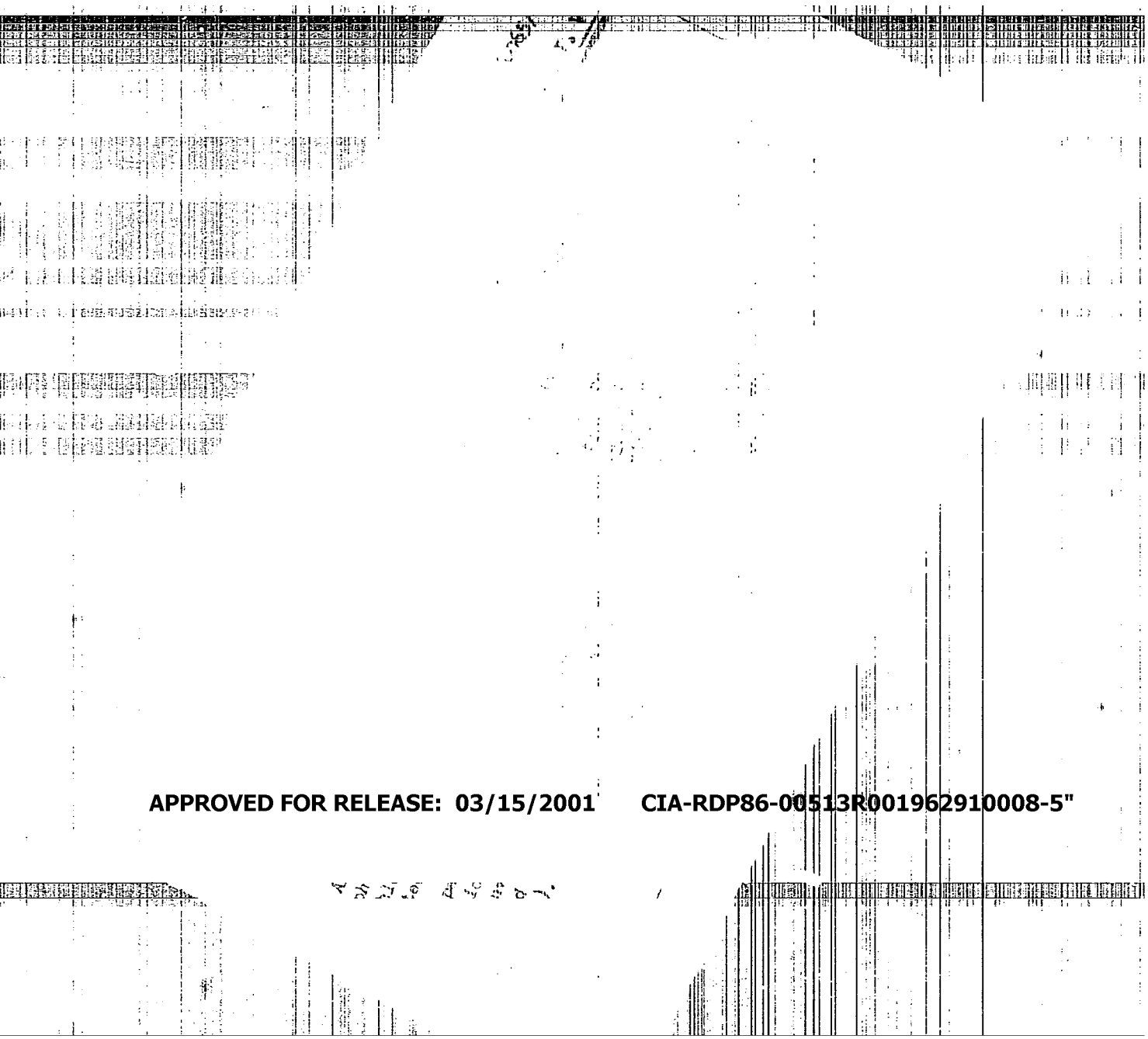
SO: Letopis' Zhurnal Statey, No. 30, Moscow, 1948

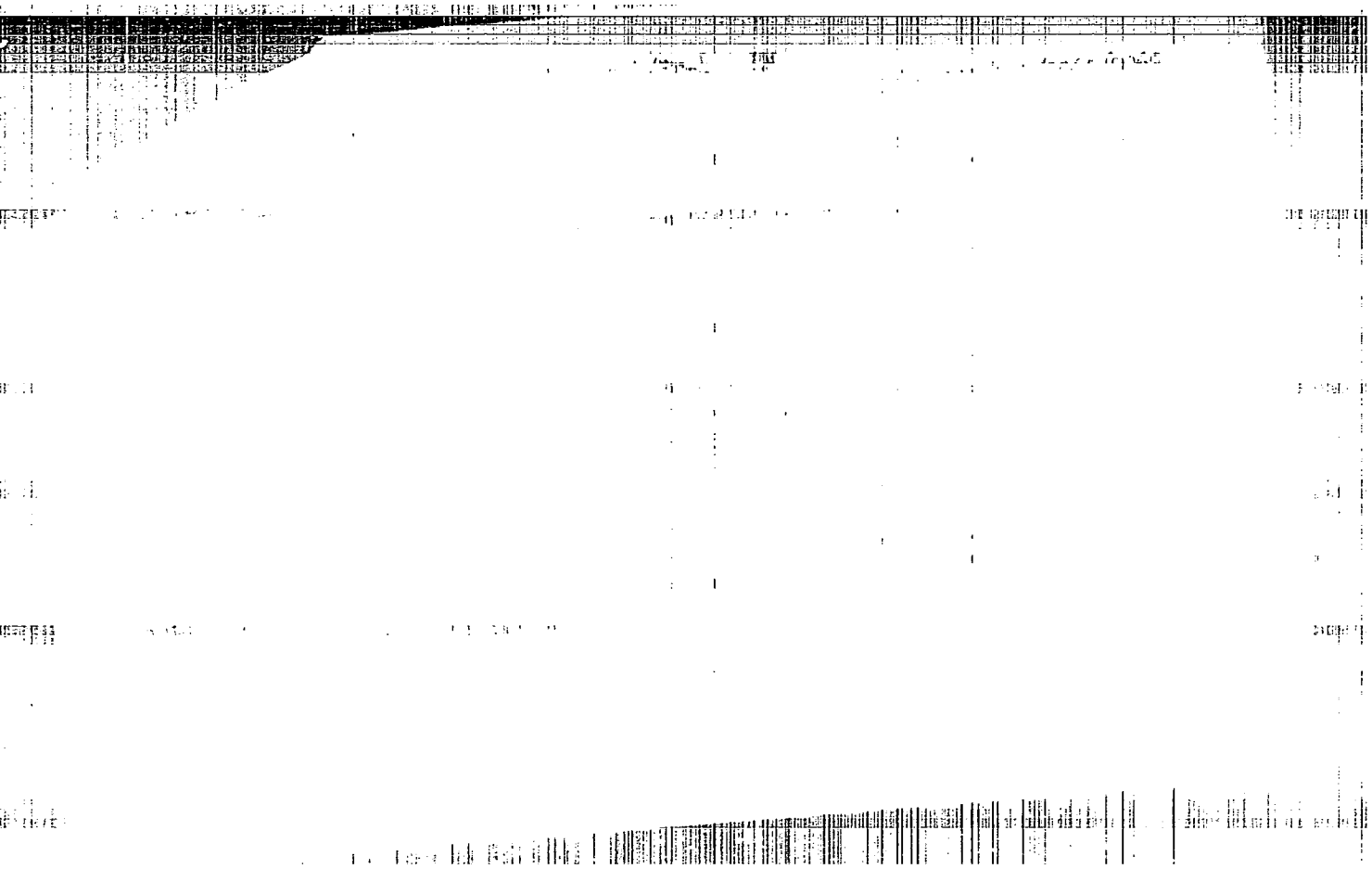
YERSHOV, S.S. (Moskva)

Transmitting information along the electric communication channels.
Fiz.v shkole 21 no.3:17-27 My-Je '61. (MIRA 14:8)
(Telecommunication)

NIKITIN, V., master; GRISHKO, M., brigadir slesarey; GORYUNOV, L., slesar'; YERSHOV, T., slesar'; ZHIGAREV, B., slesar'; KONOVALOV, V., slesar'; LYAPIN, K., slesar'; NOSOV, P., slesar'; TAMANOV, P., mashinist

When will the new acethylene generator be put into production?
Izobr. i rats. no.10:44 O '58. (MIRA 11:11)
(Acethylene generators)





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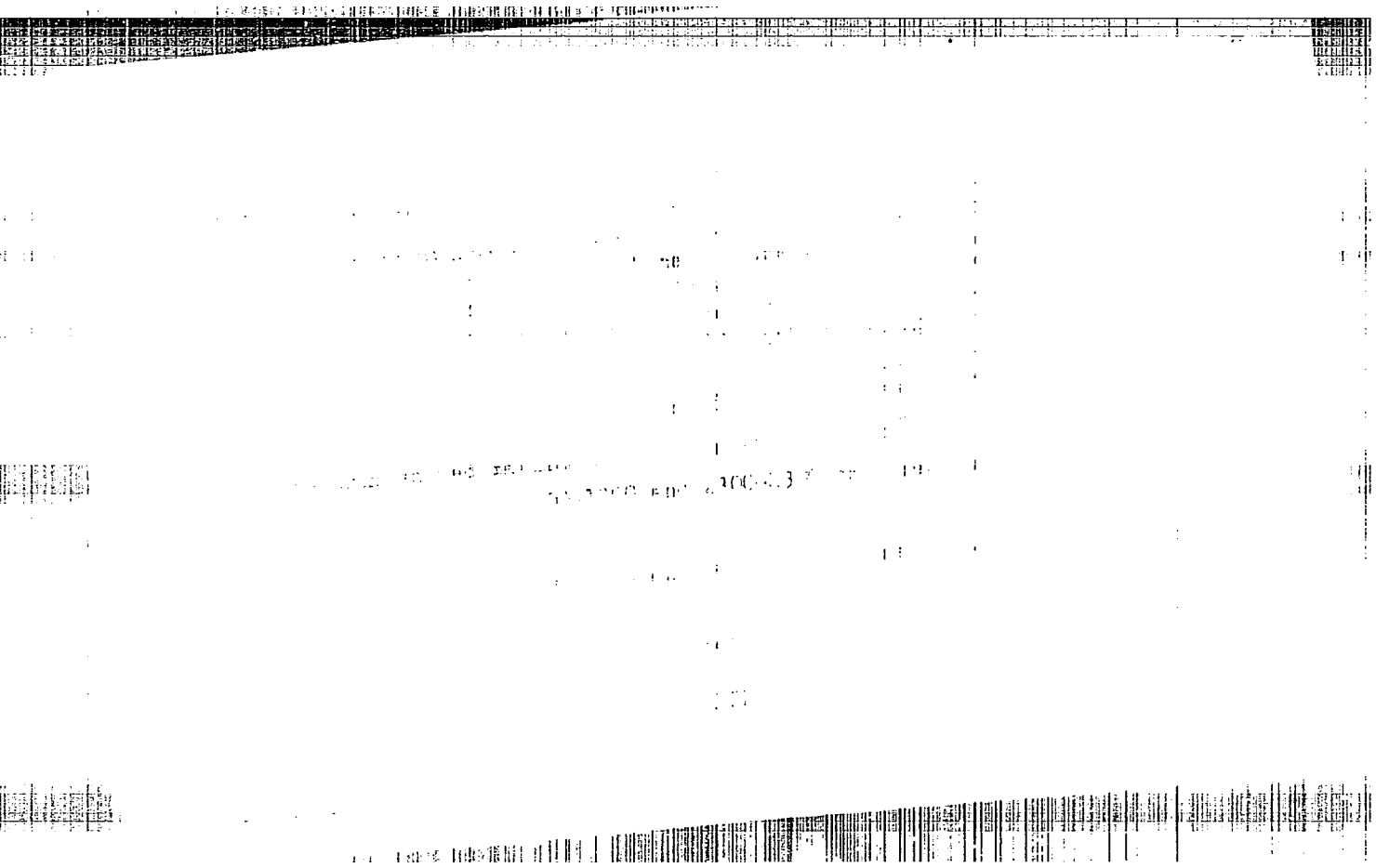

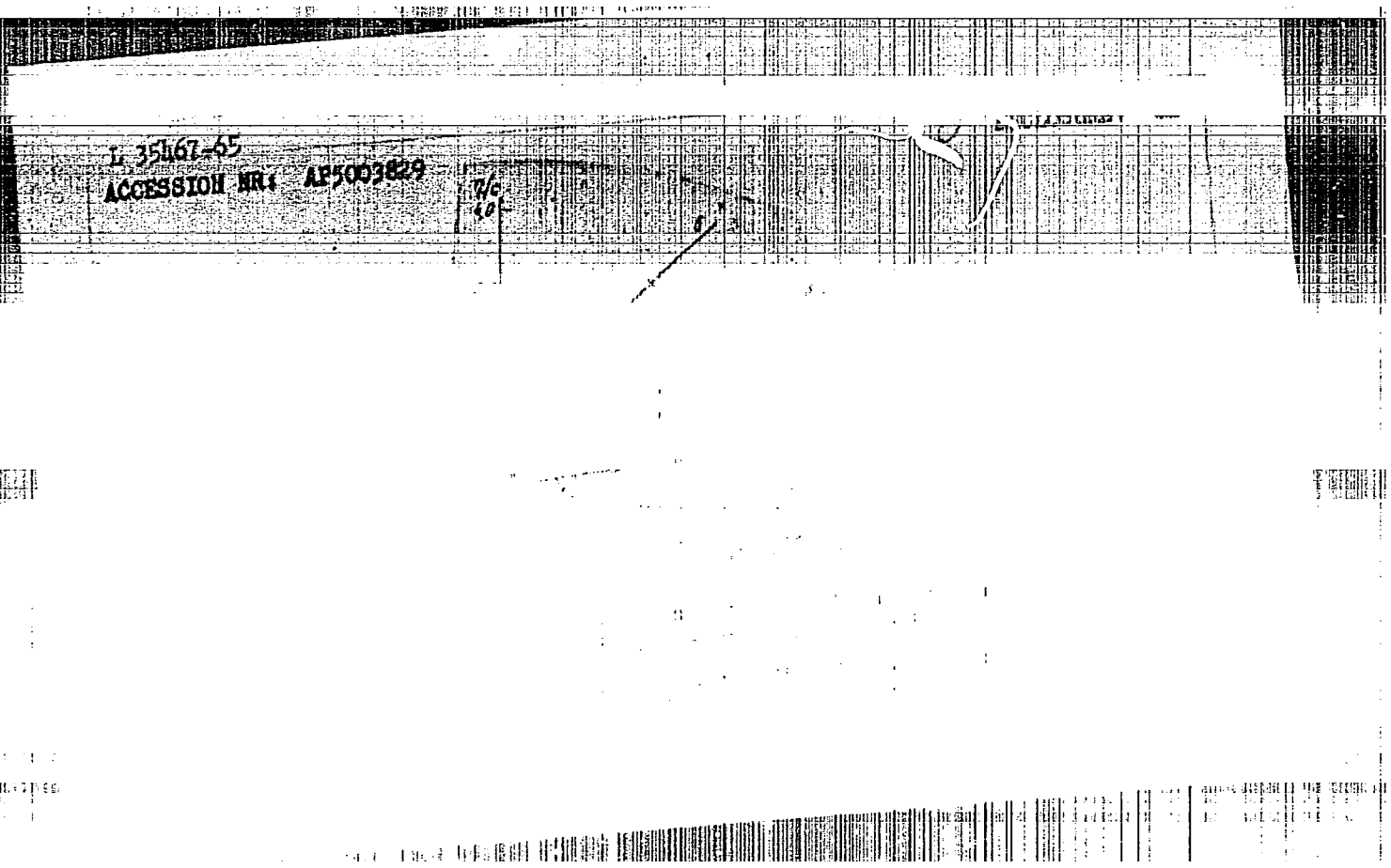

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It is necessary to exchange working experience between the workers of machinery testing stations. Mak.-elev.prom. 28 no.3:28 Mr '62. (MIRA 15:4)

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1. Gor'kovskiy avtozavod im. Molotova. (Automobiles--Design and construction)

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Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 9, p 153 (USSR)

AUTHOR: Yershov, V. A.

TITLE: The Compaction of the Top Shell (Skirt) of Hydrotechnical Sand Structures as a Factor in Their Dynamic Stability (Uplotneniye verkhney obolochki peschanykh gidrotekhnicheskikh sooruzheniy kak faktor povysheniya ikh dinamicheskoy ustoychivosti)

PERIODICAL: V sb.: 15-ya nauchn. konferentsiya Leningr. inzh.-stroit. in-ta. Leningrad, 1957, pp 86-88

ABSTRACT: Bibliographic entry

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YERSHOV, V. A.

8(6), 14(10) SOV/112-59-3-4656

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3, p 53 (USSR)

AUTHOR: Yershov, V. A.

TITLE: Methods of Compensation for Insufficient Tightness of Sand Dams Built by Hydraulicking (Sposoby kompensatsii nedostatochnoy plotnosti peschanykh plotin, sooruzhayemykh gidronamyvom)

PERIODICAL: V sb.: Dokl. 16-y Nauchn. konferentsii prof.prepodavat. sostava Leningr. inzh.-stroit. in-ta. L., 1958, pp 133-137

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YERSHOV, V.A., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Dynamic stability of dams built of saline sand during the process of desalinization. Sbor. nauch. trud. LISI no.37:62-75 '62. (MIRA 16:3)

(Dams) (Sand)

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Stability of sand embankments in connection with vibrations caused by rail and vehicular traffic. Sbor. nauch. trud. LISI no.37: 76-94 '62. (MIRA 16:3)

(Embankments) (Soil mechanics)

TERSHOV, V.A.

Result of application of prolonged interrupted sleep in clinical diseases of the nervous system. Zhur. nevr. i psikh. 54 no.11: 941-944 N '54. (MLRA 8:1)

1. Klinika nervnykh bolezney Stalingradskogo meditsinskogo instituta.

(NERVOUS SYSTEM, diseases, ther., sleep)
(SLEEP, therapeutic use, nervous system dis.)

BRIL', M.T.; YERSHOV, V.A.; YEVDOKIMOV, N.V.; DELARYU, V.V.

Problem of subarachnoid hemorrhages in syphilis. Vest.ven. i derm. no.3:27-31 My-Je '56. (MLRA 9:9)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof. M.T. Bril') i kafedry nervnykh bolezney (zav. - prof. V.A.Yershov) Stalingradskogo meditsinskogo instituta (dir. - prof. V.S.Yurov)

(SYPHILIS, complications,
subarachnoid hemorrh. (Rus))
(CEREBRAL HEMORRHAGE,
subarachnoid, in syphilis (Rus))

YERSHOV, V.A.; KUKINA, L.I.

Cholesterol-protein complexes in the cerebrospinal fluid under normal conditions and in certain pathological states. Zhur.nevr.i psikh. 60 no.5:558-561 '60. (MIRA 13:9)

1. Kafedra nervnykh bolezney (zav. - prof. V.A. Yershov) Stalingradskogo meditsinskogo instituta.
(CHOLESTEROL) (PROTEINS) (CEREBROSPINAL FLUID)

YERSHOV, V.A.; UMAKHANOV, R.U.

Clinical aspects and therapy of angioreticulomas of the fourth ventricle. Zhur.nevr.i psikh. 59 no.9:1038-1041 '59. (MIRA 12:11)

1. Klinika nervnykh bolezney (zav. - prof. V.A. Yershov) Stalingradskogo meditsinskogo instituta.
(CEREBRAL VENTRICLES neoplasms)

S/064/61/000/001/006/011
B132/B218

AUTHORS: Yershov, V. A., Ladskiy, N. K., Pagnuyeva, I. A.

TITLE: Permissible content of phosphorus compounds in acetylene

PERIODICAL: Khimicheskaya promyshlennost', no.1, 1961, 25-29

TEXT: According to the specification ГОСТ 1460-56 (GOST 1460-56), only carbide with a content of phsophorus compounds that does not exceed 0.08% (referred to PH_3) may be used for the production of acetylene. This low value must be observed because of the spontaneous ignition of acetylene in the presence of larger quantities of phosphorus compounds. Data given in publications on the PH_3 content causing ignition of acetylene are very contradictory. This may possibly be explained by the fact that the experiments underlying the above-mentioned published data were made with artificial acetylene mixtures of C_2H_2 and PH_3, and that the organic phosphorus compounds which also form during the evolution of C_2H_2 were not taken into account.

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Permissible content of phosphorus... S/064/61/000/001/006/011
B132, B218

The authors are of the opinion that: 1) phosphorus compounds cause not only ignition, but also reduce the ignition temperature of inflammable mixtures. In this connection, also very small quantities of PH_3 may be of importance. 2) Natural mixtures of C_2H_2 that were produced from carbide containing small admixtures of phosphorus compounds must be used. 3) The temperature of spontaneous ignition of acetylene-air mixtures with different contents of phosphorus compounds must be determined. From this a standard may be specified for the acetylene generator. First, the most inflammable acetylene-air mixture and the influence of phosphorus additions on the ignition temperature must be determined. In addition to that, it is necessary to determine the ignition temperature below which, under any conditions, no ignition occurs. In an arc furnace, various quantities of lime, coke and calcium phosphate were molten. The phosphorus compounds were determined iodometrically from GOST 1460-56, 5457-50 (GOST 1460-56, 5457-50). The most inflammable mixture was determined by three methods. According to method (I), the acetylene-air mixture was passed through an electrically heated porcelain tube. The ignition temperature was measured with a Cr-Al thermo-

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couple. Fig. 2 shows that with increasing C_2H_2 concentration the temperature of spontaneous ignition drops at first. The minimum lies at about 65%. Increasing PH_3 content lowers the ignition temperature. The values thus found are relatively high and cannot be used for a standard determination. According to the static method (II), the C_2H_2 -air mixture is passed through an evacuated steel bomb which was previously heated to ignition temperature. Then, the time that passes between the inflow of the mixture and its explosion is measured. These time intervals become longer as the temperature of the steel bomb decreases. Finally, no explosion occurs. An increase in pressure lowers the ignition temperature by 5 to 10%. According to method (III), air and acetylene, with a known content of PH_3 have been separately heated to the temperature of spontaneous ignition so as to exclude PH_3 oxidation before ignition. A tubular furnace was preheated to the same temperature. After introducing the air at a given volume rate, acetylene is added and again the time is measured, which passes between the

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nissible content of phosphorus...

ition of acetylene and the explosion. These time intervals became longer with a temperature drop of the furnace until finally no ignition occurred. The values obtained by this method are higher as compared to (II), which indicates that prevention of PH_3 oxidation does not result in a drop of the temperature of spontaneous ignition. In order to check the statement by Caro that during this process easily inflammable organo-phosphours compounds are formed, the authors preheated PH_3 containing C_2H_2 and determined the ignition temperature according to (I). Within the range of 200 to 300°C, a temperature drop by 40°C could be observed. After this drop, however, a sharp temperature rise occurred due to polymerization, which excludes the formation of easily inflammable organo-phosphorus compounds at high temperatures. The authors also studied the catalytic activity of a series of materials, such as lime, carbide, active carbon, platinum, ferrosilicon, geratol, and sand. Results showed that these substances, with which acetylene might come in contact when used industrially, do not reduce the temperature of spontaneous ignition. Changes in volume exerted a small influence upon the temperature of spontaneous ignition. On the basis of their results, the

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authors determined the maximum permissible content of phosphorus compounds in acetylene: As may be seen from Fig. 2, the lowest temperatures of spontaneous ignition are above 200°C, even at higher PH_3 concentrations. Since the maximum temperature during the evolution of C_2H_2 is 140°C, a mixture having a temperature of spontaneous ignition of 290-300°C (twofold margin of safety) may be considered to be permissible. According to Fig. 5, a PH_3 concentration of 0.2% corresponds to this temperature. In this case, the temperature of spontaneous ignition is 20°C below that of C_2H_2 and 10°C below that of acetylene produced from carbide conforming to the specification GOST 1460-56. Thus, a content of phosphorus compounds of 0.2% by volume referred to PH_3 is permissible. N. D. Baykalova took part in the experiments. There are 6 figues, 2 tables, and 10 references: 8 Soviet-bloc and 2 non-Soviet-bloc.

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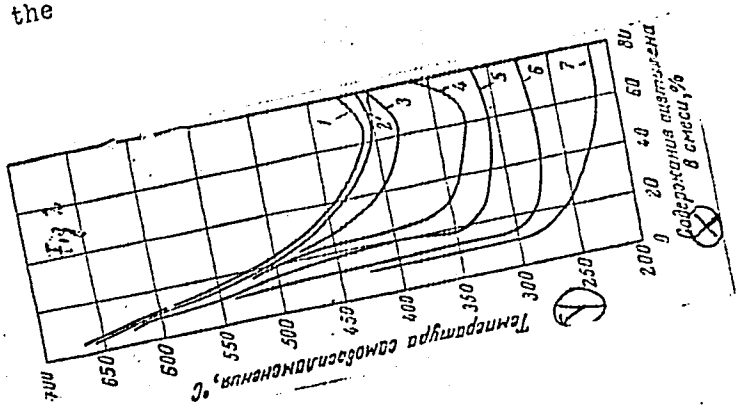
Permissible content of phosphorus...

Fig. 2: Dependence of the temperature of spontaneous ignition of an acetylene-air mixture on the content of acetylene at varying PH_3 concentrations.

Legend: x) acetylene content in the mixture, %; y) temperature of spontaneous ignition, °C.
1) 0.01%, 2) 0.08%, 3) 0.20%,
4) 0.57%, 5) 1.06%, 6) 2.66%,
7) 4,6%.



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Permissible content of phosphorus ...

Fig. 5: Lowest temperature of spontaneous ignition of acetylene at varying PH_3 contents.

Legend: x) PH_3 content of acetylene, %; y) temperature of spontaneous ignition, °C; 1) according to method (I); 2) according to method (II); 3) according to method (III).

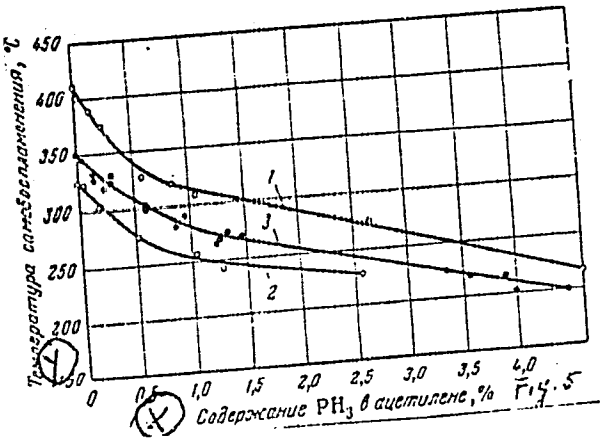

Fig. 5

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