KOBYNEK, S.D.; FROLOV, N.S.

Device for testing parachutes. Sbor. rats. predl. vnedr. v proizv. no.2:9-10 '61. (MIRA 14:7)

1. Trest "Dzherzhinskruda", rudoupravleniye imeni Il'icha. (Mine hoisting)

VOLOKHOV, A.A.; KOBYSH, V.I.; NOVIKOVA, E.G.

Method for recording respiration by means of a thermistor. Zhur. vys.nerv.deiat. 6 no.2:342-345 Mr-Ap '56. (MLRA 9:8)

1. Laboratoriya sravnitel'nogo ontogeneza nervnoy sistemy Instituta normal'noy i patologicheskoy fisiologii AMN SSSR.
(RESPIRATION, function tests
spirometry of laboratory animals during experimentation, appar. & method)
(LABORATORY ANIMALS
appar. & method for spirometry during experimentation)

KOBYSH, V.I.; NIKITINA, G.M.

Registration of conditioned and unconditioned motor reactions in animals during ontogenesis with the aid of a carbon recorder. Zhur. vys.nerv.deiat. 11 no.3:557-560 My-Je '61. (MIRA 14:7)

1. Laboratory of Comparative Ontogenesis of the Nervous System, Institute of Normal and Pathological Physiology, U.S.S.R. Academy of Medical Sciences, Moscow.
(CONDITIONED RESPONSE) (NERVOUS SYSTEM)

22193

S/048/61/025/004/042/048
B117/B209

24,3500

AUTHOR: Kobyshev, G. I.

TITLE: Luminescence of crystals surface-activated by uranyl ions

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 4, 1961, 542-544

TEXT: The present paper has been read at the 9th Conference on Luminescence (Crystal Phosphors). The author wanted to clarify the luminescence spectrum resulting when uranyl cations which are in coordinate bond with water molecules are applied to the surface of a crystal (e.g., magnesium oxide). Unlike ordinary crystal phosphors, the activator in this case is on the surface or in the surface layer, and thus is accessible to external influences. The luminescence of the uranyl cation has been studied both on the surface of inorganic polymers (Ref. 5: G. I. Kobyshev, Dokl. AN SSSR, 127, 373 (1959)) having no crystal structure, and on crystals. A report is given on experiments with magnesium oxide. Magnesium oxide powder (or gel) was annealed in air for 5-6 hr at temperatures of 600 ÷ 700°C.

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Luminescence of crystals ... S/048/61/025/004/042/048
B117/B209

The activator was added from a uranyl salt solution (10^{-3} mole.l^{-1}). The anion did not cause any major change. The sample was treated at a pressure of 10^{-5} mm Hg and was simultaneously heated to 170 ÷ 200°C. This treatment provided the removal of capillary-condensed, adsorbed, and coordinately bound water. A weak luminescence with a continuous spectrum was observed in the range of 16,000 ÷ 18,000 cm^{-1}, emitted by the uranyl cation that has lost the coordinately bound water. Only on the surface of crystalline bodies, a "quasi-line" spectrum can be observed beside the continuous spectrum; it differs greatly from the spectrum of the uranyl salt, and is due to the luminescence of crystalline formations on the surface of magnesium oxide. The introduction of the activator does not necessitate any thermal treatment of the phosphor, which is a proof of the surface character of crystal formation. The "lines" of the quasi-line spectrum fit into the series formula: $\nu = 17650 - 700\ \nu_1 + 370\ \nu_2$. This spectrum remains unchanged when steam or a gas (H_2O, NH_3) is introduced. The continuous spectrum, however, changes into a band spectrum with frequency spacing of about 770 cm^{-1} in the range of

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17,000 ÷ 21,000 cm^{-1}. The changes effected by gases are completely reversible. It is a conspicuous characteristic that the quasi-line spectrum with its clearly marked vibrational structure conserves its discrete nature even when the temperature is raised to room temperature. Increased temperature causes a decrease in luminescent intensity, a redistribution of luminescent intensities among the "lines," and the formation of a yet shorter-wave component. The vibrational structure which is very clear in the quasi-line spectrum up to 20°C, and the absence of deformation frequencies indicates a weak interaction between the excited electron state and the vibrational energy of the lattice. This is probably due to the formation of two-dimensional crystals on the surface which thus complete the structure of the magnesium oxide crystal. A considerable compensation of U - O bonds (uranyl- and coordinate bonds) takes place in the two-dimensional crystal concerned. Perhaps this may be explained by a breaking of the double bonds and the formation of one-and-a-half-valent bonds. Thus, the uranyl ion plays the role of an activator of luminescence in magnesium oxide on the one hand, while on the other, the luminescence which is characteristic of the state of coordination of uranyl can be observed only in consequence of a coordination

Luminescence of crystals ...

of the uranyl cation with oxygen atoms of the base. In this case, the luminescence of the uranyl ion has to be considered an intermediate phenomenon between luminescence of a crystal phosphor and molecular luminescence. Finally, the author points out the fact that the examined quasi-line spectrum resembles in its structure the luminescence spectra of the uranyl cation introduced into calcium oxide (Ref. 3: J. Ewles, N. Lee, J. Electrochem. Soc., 100, 392 (1953)) and into sodium fluoride (Ref. 2: W. A. Runciman, J. phys. chem., 17, 645 (1956); Proc. Roy. Soc., 237, 39 (1956); Brit. J. Appl. Phys. Suppl., 4, 78 (1955)). A. N. Terenin is thanked for advice. [Abstracter's note: Essentially complete translation.] There are 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc.

Card 4/4

TRET'YAKOVA, Yevgeniya Nikolayevna, prof.; KOPYSHEVA, Nina Vladimirovna; DMITRIYEVA, N.M., red.; ZAKHAROVA, A.I., tekhn. red.

[Chronic nonspecific diseases of the lungs in children and their climatological treatment] Khronicheskie nespetsificheskie zabolevaniia legkikh u detei i ikh klimaticheskoe lechenie. Moskva, Medgiz, 1960. 200 p. (MIRA 14:12)
(LUNGS--DISEASES) (CLIMATOLOGY, MEDICAL)

KOBYSHCHA, V.

Effectiveness of issuing credit for new machinery. Den.i kred. 17 no.4165-68 Ap '59. (MIRA 12:8)
(Machinery in industry--Finance)

KOBYSHCHA, V.

Eliminate excessive expenses in maintaining agency-owned houses. Zhil.-kom.khoz. 10 no.4:9-10 '60.
(MIRA 13:6)

1. Zamestitel' glavnogo bukhgaltera Primorskogo sovnarkhoza.
(Vladivostok--Apartment houses--Management)

KOKSHCHA, V.

Transition to a seven-hour workday and the mechanization of administrative work. Fin.SSSR 21 no.6:22-25 Je '60.
(MIRA 13:6)

1. Zamestitel' glavnogo bukhgaltera Primorskogo sovnarkhoza.
(Hours of labor) (Maritime Territory—Machine accounting)

KOBYSHEV, F.K.; BOGACHEV, N.I.; POPOV, A.V.

New work organization. Neft. khoz. 40 no.8:28-30 Ag '62.
(MIRA 17:2)

AUTHORS: Kolyshev, G. I., Se[illegible], B. N. [illegible]-2-29/63

TITLE: The Luminescence Spectra of Coordination Uranyl Nitrate Compounds (Spektry lyuminestsentsii koordinatsionnykh soedineniy uranil-nitrata)

PERIODICAL: Doklady Akademii Nauk SSSR, [illegible], Vol. [illegible], Nr [illegible], pp. 330 - 332 (USSR)

ABSTRACT: The existence of a structural luminescence spectrum probably is not a specific property of the crystal hydrates of uranyl nitrates. It is rather the consequence of a more general phenomenon, i.e. of the coordination of addition molecules (molekul-addend) attached to the uranyl ion. In the present paper the luminescence of the dehydrated uranyl nitrate and of some of its coordination compounds with various [illegible] was investigated in order to check the influence of coordination and of the properties of the added molecules upon the luminescence spectrum. Microcrystalline powders prepared from the coordination compounds of uranyl nitrate (the chemical formulae of which are given) were used in the measurement of the luminescence spectra. The

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luminescence spectra were all taken at a temperature of 77°K. The luminescence spectrum exhibited by the deuterated salt consisted of a wide band in the range of from 4560 to 5100 Å with the maximum at 5455 Å. Above the band record of this band little pronounced maxima could be found. All of the complex compounds enumerated here (which contain electron donor molecules) exhibit a bright luminescence at 90°K. Some of them also luminesce at room temperature. They show the luminescence spectrum typical of the uranyl salts, which incorporates a sharply marked oscillation spectrum. A diagram shows some of these spectra. The frequency of oscillation is mainly determined by the uranyl ion and it is little dependent upon the nature of the addendum. An exception is represented by the ammoniate of the uranyl nitrate, as its luminescence spectrum does not show any structure. From the data found in this investigation the following proceeds: The coordination of electron donor molecules with the uranyl ion together with the formation of sufficiently stable bindings is the necessary condition for the occurrence of the structure typical of the luminescence spectrum of uranyl

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The Luminescence Spectra of Coordination Uranyl Nitrate Compounds

SOV/20-120-2-29/63

compounds. A displacement of the maximum of intensity of luminescence towards smaller frequencies is found in the luminescence spectra of the complex compounds in question (with the exception of $UN.2C_6H_5NO_2$), if the donor properties of the added molecules become more pronounced. This displacement follows certain rules. There are 1 figure, 1 table, and 14 references, 7 of which are Soviet.

ASSOCIATION: Fizicheskiy institut i Khimicheskiy institut Leningradskogo gosudarstvennogo universiteta im.A.A.Zhdanova (Institute of Physics and Institute of Chemistry of the Leningrad State University imeni A.A.Zhdanov)

PRESENTED: March 18, 1958, by A.N.Terenin, Member, Academy of Sciences, USSR

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The Luminescence Spectra of Coordination Uranyl Nitrate Compounds SOV/20-120-2-29/63

SUBMITTED: March 4, 1958

1. Uranyl nitrate—Luminescence 2. Uranyl nitrate—Spectra
3. Uranyl nitrate—Theory

Card 4/4

5(4)
AUTHOR: Kobyshev, G. I.

SOV/20-127-2-38/70

TITLE: Influence of the Surface of the Adsorbent on the Luminescence Spectrum of the Uranyl Ion

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 2, pp 373-376 (USSR)

ABSTRACT: There are mentions in publications concerning the great sensitivity of luminescence spectra of the uranyl ion to alterations in its surrounding medium (Refs 5, 6). To investigate this influence, an analysis was made of the change in the luminescence spectra of the uranyl ion adsorbed on adsorbents. The spectra were excited with the lamp PRK-4 (λ - 3650 Å) and were photographed by means of a spectrograph or recorded photoelectrically by means of spectrograph ISP-51 with attachment FEP-1. Adsorption took place from aqueous solutions of uranyl salts (nitrate, sulfate, potassium uranyl sulfate). To remove the anions, the samples were washed out; the uranyl adsorbed did not enter solution. When washing out with salt solutions it was possible to observe ion exchange reactions. After 5 - 6 h of degassing by heating up to 200°, the spectra were observed at 90 or 77°K. Figure 1 shows the luminescence spectra of the

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hydrated ion $(UO_2 \cdot 2H_2O)^{++}$ on silica gel, microporous glass, alumino gel, alumo silica gel, magnesium oxide, and chromatographic paper. The microporous glass prepared according to the method by Grebenshchikov and O. S. Molchanova was made available by the latter, and the author expresses her his gratitude. The absorption band maxima of the adsorbed uranyl do not agree with any band maximum of the uranyl nitrate solutions. The form of the spectrum depends on the type of adsorbent. Its surface therefore changes the state of the uranyl ion. With long protracted degassing, the spectrum loses its structure by a change in its degree of hydration. This change is reversible. By the action of steam, the original spectrum appears again (Fig 2). NO_2 acts in a similar way, but with an ensuing structural change of the spectrum. Thus the adsorbed uranyl ion is capable of coordinating different molecules. In the adsorbed state, a decrease in the full-symmetrical vibration frequency is observable with all adsorbents applied, as compared to its values in crystals and solutions. The present investigation

Influence of the Surface of the Adsorbent on the Luminescence Spectrum of the Uranyl Ion SOV/20-127-2-38/70

was carried out under the supervision of Academician A. N. Terenin. The author thanks him for supplying the subject and for valuable advice given. There are 2 figures and 16 references, 7 of which are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

PRESENTED: March 24, 1959, by A. N. Terenin, Academician

SUBMITTED: March 24, 1959

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85233

S/048/60/024/006/026/030/XX
B013/B067

24.3500

AUTHOR: Kobyshev, G. I.

TITLE: Effect of the Surface of an Adsorbent on the Luminescence of the Uranyl Ion

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 6, pp. 752-755

TEXT: The author studied the luminescence spectrum with a vibrational structure of the coordinated uranyl ion. The uranyl ion served as an indicator of the changes which it underwent during absorption and under the effect of foreign molecules. Microporous quartzoid glass produced according to I. V. Grebenshchikov (Ref. 6), silica gel, alumo gel, alumosilica gel, magnesium oxide gel, etc. were studied as adsorbents. Figs. 1 and 2 show photoelectrically recorded luminescence spectra of an uranyl ion hydrated at 77°K in adsorbed state on microporous glass as well as on magnesium oxide. This indicates that the spectrum depends on the type of adsorbent. Also at 77°K, no line spectrum which is characteristic of a crystalline state can be observed. The schematical representation of

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Effect of the Surface of an Adsorbent on the Luminescence of the Uranyl Ion

S/048/60/024/006/026/030/XX
B013/B067

spectra shown in Fig. 3 serves to compare the positions of the peaks in the luminescence spectra of crystal hydrates, hydroxides, and uranyl glass. The peculiarity of the luminescence spectrum of the hydrated uranyl ion and the experimental data indicate that the uranyl ion on the surface is in an adsorbed state, and that no salt crystallites are added. Experiments in vacuo showed that the surface of the adsorbents dehydrates the adsorbed uranyl ion $(UO_2 \cdot 2H_2O)^{2+}$. As a result of dehydration, the intensity of luminescence is strongly reduced. The structural luminescence spectrum appears in the coordination of the ion with H_2O and NO_2 molecules under the formation of a complex surface compound. In the adsorbed state, the uranyl ion is not coordinated with the surface atoms. Adsorption takes place as a result of a substitution of the proton of the surface hydroxyl group by the uranyl ion. It was found that the dampening of luminescence by J^- and NO_2^- ions is totally reversible (Fig. 4) and can be expressed by the linear formula of Stern - Fol'mer. If the luminescence intensity is reduced, the duration of the excited state of the uranyl ion becomes shorter (Fig. 5). The present paper was read at the Eighth Conference

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Effect of the Surface of an Adsorbent on the Luminescence of the Uranyl Ion

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B013/B067

on Luminescence (Molecular Luminescence and Luminescence Analysis) which took place in Minsk from October 19 to 24, 1959. There are 5 figures and 12 references: 7 Soviet.

ASSOCIATION: Laboratoriya fotosinteza Nauchno-issledovatel'skogo fizicheskogo instituta Leningradskogo gos universiteta im. A. A. Zhdanova (Laboratory of Photosynthesis of the Scientific Research Institute of Physics of Leningrad State University imeni A. A. Zhdanov)

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L 17782-63 EWP(j)/EPF(c)/EWT(m)/BDS ASD Pc-4/Pr-4 RM/AW/MAY

ACCESSION NR: AP3005850 S/0051/63/015/002/0253/0261

AUTHOR: Lyalin, G.N.; Koby*shev, G.I.

TITLE: Luminescence of and intracomplex energy transfer in uranyl phthalocyanine

SOURCE: Optika i spektroskopiya, v.15, no.2, 1963, 253-261

TOPIC TAGS: luminescence, energy transfer, uranyl ion, phthalocyanine

ABSTRACT: The purposes of the work were to investigate the luminescence of the complex compound of uranyl with phthalocyanine in the expectation that there would be observed the spectrum characteristic of metal-containing phthalocyanines and possibly the luminescence of the uranyl cation itself, and to obtain evidence for intracomplex energy transfer. The uranyl-phthalocyanine complex was synthesized by V.F. Borodkin in the Ivanov Chemical Engineering Institute by a procedure analogous to that employed by I.M.Kogan (Khimiya krasiteley /Dye chemistry/ p.657, M.,1956) for synthesizing metallo-phthalocyanines. That the complex actually was formed was checked by infrared spectroscopy. The luminescence spectra in the red and near infrared (500 to 1000 mμ) regions were recorded photoelectrically by means of a set-up assembled about an ISP-51 glass optics spectrograph (dispersion at 700 mμ

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L 17782-63

ACCESSION NR: AP3005850

about 5 mμ/mm). The spectra were obtained for the UO_2Phc (Phc = the phthalocyanine skeleton) suspended in vaseline oil and in solutions in dioxane and nonane. These were compared with the spectra of meta.-free H_2Phc and MetPhc. The results clearly indicate complex formation. Study of the fine structure of the luminescence spectra by the Shpol'skiy (frozen solution) method indicates that the uranyl cation scarcely perturbs the energy levels of the conjugated bond system of the azaporphyrin ring of UO_2Phc. The coordinating uranyl ion participates in the emission process. The excitation wavelength dependence of the [illegible] indicates the existence of at least two types of luminescence centers: one active in electronic transitions from an excited singlet state to the ground state of the complex; the other is responsible for luminescence incident to transfer of energy from the uranyl cation to the system of π-conjugated bonds of the azaporphyrin ring. A number of the absorption and luminescence spectra are reproduced in the figures. The wavenumbers of the luminescence lines are listed in tables. "We take this opportunity to thank Academician A.N.Terenin for suggesting the topic and guidance in the work. We are also grateful to Docent V.F.Borodkin of the Ivanov Chemical Engineering Institute for synthesis of the complex and to laboratory technician D.S.By*strov for recording the infrared absorption spectra." Orig.art. has: 10 figures and 4 tables.

Card 2/2

ACCESSION NR: AP4009478 S/0051/63/015/006/0837/0838

AUTHOR: Koby*shev, G.I.; Lyalin, G.N.; Teremin, A.N.

TITLE: Manifestation of a hydrogen bond in the luminescence spectrum of magnesium phthalocyanine with uranyl nitrate hexahydrate

SOURCE: Optika i spektroskopiya, v.15, no.6, 1963, 837-838

TOPIC TAGS: hydrogen bond, protonization, magnesium phthalocyanine, uranyl nitrate, magnesium phthalocyanine luminescence

ABSTRACT: In an earlier investigation (G.I.Koby*shev, G.N.Lyalin and A.N.Teremin, DAN SSSR,148,1294,1963) in which photoluminescence was employed to study excitation energy transfer from the coordinated UO_2^{++} ion to magnesium phthalocyanine in ethyl alcohol solutions there was established the following unique effect: at 290°K there is present in the luminescence spectrum of Mg phthalocyanine the usual narrow peak of this compound at 673 mμ together with a number of secondary longer wavelength peaks, but upon freezingof the solution (cooling to 77°K) this peak virtually disappears and a new peak at 703 mμ appears in the sensitized luminescence spectrum. It was inferred that the new band was due to a protonized form of the pigment. Ac-

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S/020/63/148/005/012/029
B102/B186

AUTHORS: Lyalin, G. N., Kobyshev, G. I.

TITLE: Luminescence of the uranyl-phthalocyanin complex

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 5, 1963, 1053 - 1056

TEXT: The uranyl-phthalocyanin complex investigated was synthesized by V. F. Borodkin in the Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanovo Institute of Chemical Technology). The IR absorption spectrum of the complex was characterized by the 1055, 1068, and 1530 cm^{-1} bands which are observed in phthalocyanins containing metal atoms, and the 1310, 1325, and 1006 cm^{-1} bands similar to those observed in free phthalocyanin. The 920 cm^{-1} frequency observed is attributed to stretching vibrations of the UO_2^{++} ion. All bands differ in intensity from those observed in metal-free phthalocyanin. The electron absorption and luminescence spectra also differ for uranyl phthalocyanin and metal-free phthalocyanin, both dissolved in dioxane. The solvent has little effect on the position of the peaks. The presence of the uranyl complex is characterized by the 661, 632, and 598 mμ (290°K) absorp-

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tion and 676, 710, and 748 m ($77^{\circ}K$) luminescence bands. The integral intensity of the luminescence spectrum decreases at $77^{\circ}K$ and increased with T. The vibrational structure of the spectrum was studied by Shpol'skiy's method (UFN, 77, 321, 1962) at $77^{\circ}K$ on UO_2-phthalocyanin samples dissolved in honane, and compared with the results obtained for metal-free H_2-phthalocyanin in equal concentration (10^{-5} M). The fact that the luminescence in UO_2-phthalocyanin proved to depend partly on the exciting frequency indicates the presence of at least two different luminescence centers. The series of peaks with 676, 709, and 747 mμ is a result of the luminescence of electronic excitation on the complex as a whole. The series with the green peak (692 mμ at $290^{\circ}K$) arises on energy transfer from the UO_2^{++} to the system of π-conjugate bonds of the azaporphyrin ring of the UO_2-phthalocyanin molecule. There are 3 figures and 3 tables.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

PRESENTED: July 21, 1962, by A. N. Terenin, Academician
SUBMITTED: July 10, 1962
Card 2/2

AID Nr. 967-5 15 May

ENERGY TRANSFER FROM URANYL CATION TO PHTHALOCYANIN IN SOLUTION AND IN ADSORBED STATE (USSR)

Kobyshev, G. I., G. N. Lyalin, and A. N. Terenin. IN: Akademiya nauk SSSR. Doklady, v. 148, no. 6, 21 Feb 1963, 1294-1297.
S/020/63/148/006/010/023

A spectrophotometric study has been conducted of excitation energy transfer from uranyl cations to phthalocyanin at various temperatures. Solutions of H_2 phthalocyanin in dioxane and Mg phthalocyanin in ethanol with 10^{-4} to 10^{-5} M concentrations were used with 10^{-3} to 10^{-4} M uranyl nitrate or uranyl acetate additive. The addition of uranyl salts produced, with proper illumination, a ten- to twentyfold increase in the intensity of luminescence of both phthalocyanin solutions; however, the addition of magnesium or vanadyl salts produced no effect, eliminating ionic effects on higher levels of the pigment as a possible explanation. Along

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AID Nr. 967-5 15 May

ENERGY TRANSFER [Cont'd]

S/020/63/148/006/010/023

with the increased luminescence in the presence of uranyl cations, an anomalous temperature dependence of luminescence was observed which was most pronounced in the case of H_2 phthalocyanin with uranyl acetate in dioxane. The dependence of spectra on wavelength of the excitation light was studied, as well as energy transfer between uranyl ions and phthalocyanin, adsorbed on magnesium oxide. [BB]

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BDS

AP3000526

S/0020/63/150/002/0407/0410

AUTHOR: Lyalin, G. N.; Koby*shev, G. I.; Terenin, A. N. 46

TITLE: Quenching of luminescence of carotenoid adsorbants

SOURCE: AN SSSR. Doklady, v. 150, no. 2, 1963, 407-410.

TOPIC TAGS: luminescence quenching, carotenoid adsorbants, lability; Beta-carotine, lutein

ABSTRACT: The adsorbants and solutions of Beta-carotine and the structurally related lutein which enter into the composition of the pigments of a photo-synthesizing plant were studied. The lability degree of addition of O sub 2 to the molecules of these pigments was explained in detail by the luminescence quenching method. "We wish to express our thanks to Professor D. I. Sapozhnikov for submitting Beta-carotine and lutein specimens and to V. I. Shirokov for carrying out the fluorometric measurements." Orig. art. has: 3 figures and 1 formula.

ASSOCIATION: Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo gosudarstvennogo universiteta im. A. A. Zhdanova (Scientific Research Institute of Physics, Leningrad State University)

Card 1/2

KOBYSHEV, G.I.; LYALIN, G.N.; TERENIN, A.N., akademik

Photoreaction of Mg-phthalocyanin with a coordinated uranyl cation. Dokl. AN SSSR 153 no.4:865-868 D '63.
(MIRA 17:1)

1. Leningradskiy gosudarstvennyy universitet im. A.A. Zhdanova.

L 26087-66 EWT(1) SCTB DD

ACC NR: AP6015085 SOURCE CODE: UR/0020/66/168/001/0068/0071

AUTHOR: Kobyshev, G. I.; Lyalin, G. N.; Terenin, A. N. (Academician) 59

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

TITLE: Luminescence of chlorophyll excited by a ruby laser 2

SOURCE: AN SSSR. Doklady, v. 168, no. 1, 1966, 68-71

TOPIC TAGS: luminescence, luminescence spectrum, luminescent material, laser application, laser effect, chlorophyll

ABSTRACT: Experiments were performed to detect radiation emission during transition of a molecule from the second excited singlet level to the ground level ($S_2^* \rightarrow S_0$). A high-power ruby laser (J. L. Hall et al., Phys. Rev. Lett., 11, 364 (1963); W. L. Peticolas, et al., Phys. Rev. Lett., 10, 43, (1963); J. B. Birks et al., Phys. Lett., 18, 127 (1965) was used to excite solution of chlorophyll "a" (5×10^{-3} M), methyl-chlorophyllide (5×10^{-3} M), magnesium phthalocyanine (10^{-4} M) in ethyl alcohol, chlorophylline (5×10^{-3} M) in methyl alcohol, and phthalocyanine without metal (10^{-4} M) in dioxane. The emission from a "Razdan" K-4-2 laser (pulse energy of 1 joule, with a pulse repetition frequency of 2 cps) was focused on the object by a lens through a KS-17 light filter. The luminescence of the object was separated by means of a ZMR-3 monochromator (linear dispersion in the investigated range was

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UDC: 535.373.2

2

L 26087-66
ACC NR: AP6015085

0

20 mμ/mm). The photon counting method was used for recording the luminescence spectrum. A blue-green luminescence in the path of the laser beam was clearly seen in the solutions of chlorophyll "a" and methylchlorophyllide. The spectrum of this luminescence at 290K displayed a 430—510 mμ band with a maximum at 480 mμ displaced to the longwave side with respect to the 430 mμ band of the absorption spectrum. The observed band can be attributed to the expected radiative transition from the S_2^* level to the S_0 ground level. Three processes are suggested as possible causes for the excitation of the molecule to a high S_2^* level during absorption of small-energy photons: 1) addition of two photons of a powerful pulse owing to an intermediate virtual level; 2) two-photon excitation resulting from the first excited singlet state during its existence (2×10^{-9} sec); and 3) accumulation, caused by a powerful pulse, of a high concentration of triplet molecules with subsequent triplet-triplet annihilation. Orig. art. has: 2 figures. [JA]

SUB CODE: 20/ SUBM DATE: 15Feb66/ ORIG REF: 006/ OTH REF: 026/ ATD PRESS: 4254

Card 2/2 CC

L 04760-67 EWP(j)/EWT(l)/EWT(m) IJP(c) RM

ACC NR: AP6025971 SOURCE CODE: UR/0051/66/021/001/0128/0130

AUTHOR: Kobyshev, G. I.; Lyalin, G. N.; Terenin, A. N.

62
13

ORG: none

TITLE: Intermolecular energy transfer from the excited triplet level

SOURCE: Optika i spektroskopiya, v. 21, no. 1, 1966, 128-130

TOPIC TAGS: molecular interaction, molecular property, molecular structure, molecular spectrum, light excitation, excitation energy, excitation spectrum, excited state, spectroscopy

ABSTRACT: The possibility of non-radiating intermolecular energy transfer from the excited triplet level of a donor molecule is experimentally confirmed. A glasslike solution of fluoresceine and naphthalene in boric acid was used. Due to the long life of the triplet state and its high quantum output it was possible to excite a high percentage of fluoresceine into its triplet state and to retard its deactivation by maintaining it in a solid state form. An output from a mercury arc in the 436 μ region was used to first achieve transition into the singlet state. The second transition into the upper triplet level was due to illumination from an incandescent source through a filter. The luminescence spectrum from naphthalene was detected by means of a photomultiplier preceded by a monochromator to isolate the UV radiation of interest

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UDC: 535.373.2

kh

Card 2/2

SOV/112-58-2-3168

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 2, p 214 (USSR)

AUTHOR: Aul', F. F., and Kobyshev-Kuz'min, G. M.

TITLE: The Experimental Application of Semiconductor Amplifiers in Electric Delay Lines (Opyt ispol'zovaniya poluprovodnikovykh usiliteley v traktakh elektricheskikh vremennykh zaderzhek)

PERIODICAL: Tr. Vses. Gos. n.-i. in-ta radioveshchat. priyema i akustiki, 1956, Nr 7, pp 161-181

ABSTRACT: A description is presented of 4 experimentally-tested transistor-amplifier circuits designed with Soviet P1 and P2 triodes connected in various combinations (with a common emitter, collector, and base): 2-stage amplifiers with P1A triodes (common base) and P2A (common collector), one designed with two P2A triodes (common emitter), and one 3-stage with two P1A (common collector and common emitter) and P2A (common collector). All of these amplifiers are intended to compensate attenuation in a 600-ohm delay line and have a voltage amplification (K_u) of 1.2 to 1.35. The amplifier

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SOV/112-58-2-3168

The Experimental Application of Semiconductor Amplifiers in Electric Delay Lines

consumes 156-340 mw at 26 v. A simplified circuit for each amplifier is presented along with data on its components and experimental curves of $R_{вх}$, $K_{м}$, and $K_{ф}$ as a function of frequency. In addition, grapho-analytical methods for calculating every scheme are presented. The use of such amplifiers is recommended for the correction of the frequency response of a delay line and also for the correction of the attenuation inserted by passive elements of a channel.

I.F.N.

Card 2/2

9(4)

SOV/112-59-5-9833

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 5, p 200 (USSR)

AUTHOR: Kobyshev-Kuz'min, G. M., and Shuvalov, Ye. V.

TITLE: Noise Properties of Soviet Junction Transistors

PERIODICAL: Tr. Vses. n.-i. in-t radioveshchat. priyema i akust., 1957, Nr 8, pp 3-33

ABSTRACT: Results of an experimental investigation of the noise factor F of Soviet junction transistors in a grounded-emitter circuit are reported. The integral value of F was determined for two bands: 20-10,000 cps and 300-10,000 cps. The noise factor was calculated from the formula

$$F = U_{sh}^2 / (4kTR_o \Delta f K_E^2),$$

where U_{sh} is the noise voltage at the transistorized amplifier output, R_o is the input resistor, Δf is the effective pass band that can be determined by a numerical integration, K_E is the voltage gain measured by a sine-wave

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Noise Properties of Soviet Junction Transistors

oscillator. A spectrum analyzer was used for the spectral analysis of F. The dependence of F on the frequency, R_o, emitter current I_e, and the collector voltage U_k was investigated. Investigation of three samples of the low-noise P1D transistor showed that the semiconductor noise extends up to 700-1,000 cps; at frequencies over 3,000 cps, the noise factor F grows because K_E decreases. An expression for F in a grounded-emitter circuit (accounting for thermal and schrot effects) was derived from an analysis of T-type equivalent circuit containing three noise generators. By differentiating the F expression with respect to R_o, a formula for the optimum value of the internal source resistance $R_{o\ opt}$ can be found. Experimental curves for 16 samples of P1 and P2 transistors are presented; a blunt minimum of F with R_o = 100-600 ohms was obtained. A deviation of the experimental minimum from the calculated one (200 - 1,000 ohms) is due to the semiconductor noise. With a different emitter current, the calculated noise factor has a minimum at I_e = 0.5 ma.

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SOV/112-59-5-9833

Noise Properties of Soviet Junction Transistors

Experimental curves $F(I_e)$ for three P1D transistors are presented; they clearly show the minimum F at I_e = 0.5 ma. Curves $F(U_k)$ for three samples of P1D are presented. With $(U_R) < 10-15$ v, F is almost independent of U_k; however, F increases sharply if U_k grows further. Expressions for F and $R_{o\ opt}$ for the three fundamental circuits are submitted. A comparison showed that for a minimum F, with $K_E - K_{E\ max}$, the common-emitter circuit should be used.

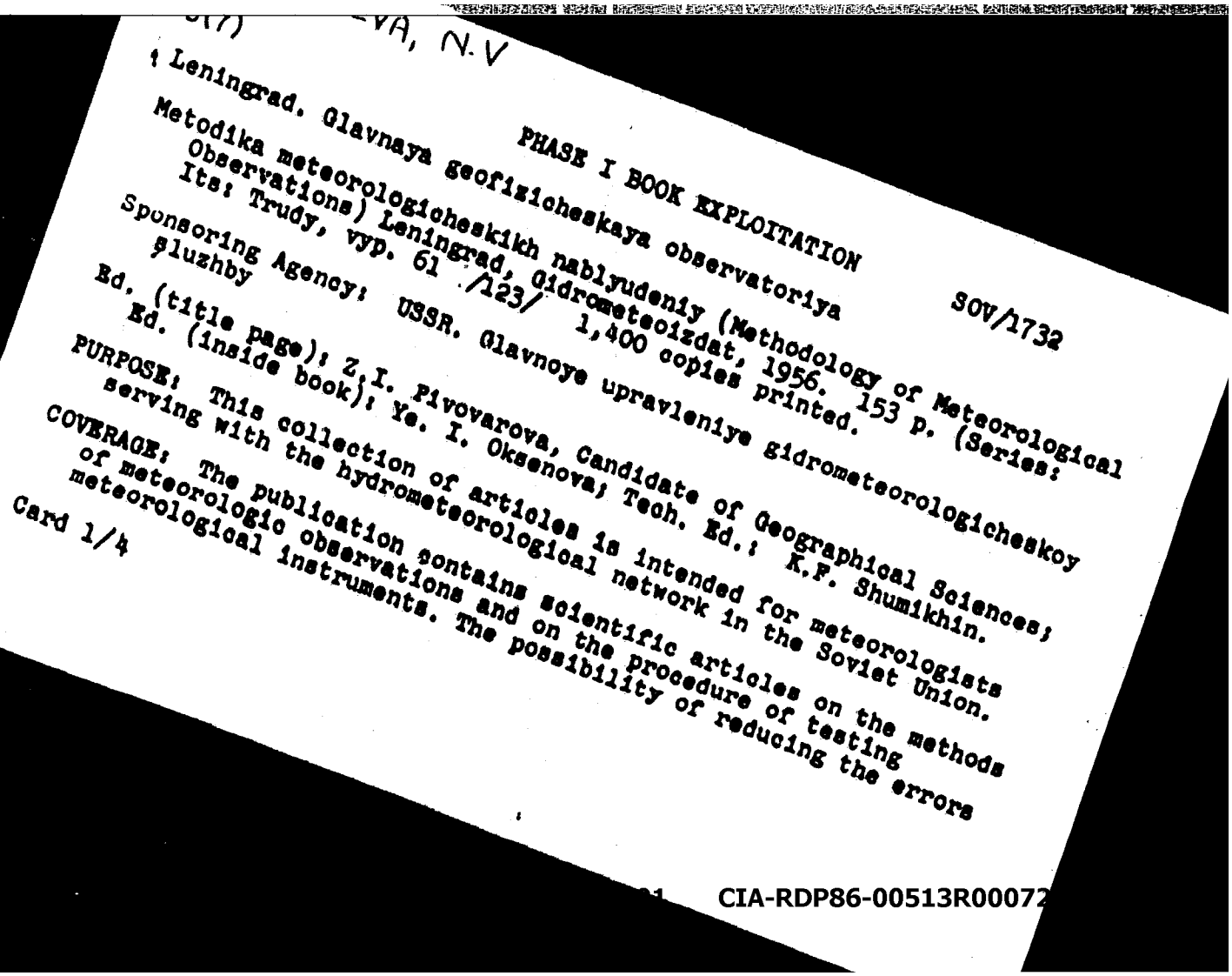
N.V.B.

Card 3/3

ROSTOVTSEVA, N. V.

"Methods of Determining Dew and Its Geographic Distribution." Cand Geog Sci, Main Geophysical Observatory imeni A. I. Voyeykov: Main Administration of the Hydrometeorological Service, Council of Ministers USSR, Leningrad, 1955. (KL, No 11, Mar 55)

SO: Sum. No. 670, 29 Sep 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educatio al Institutions (15)



(17) -VA, N.V

PHASE I BOOK EXPLOITATION SOV/1732

t Leningrad. Glavnaya geofizicheskaya observatoriya

Metodika meteorologicheskikh nablyudeniy (Methodology of Meteorological Observations) Leningrad, Gidrometeoizdat, 1956. 153 p. (Series: Its: Trudy, vyp. 61 /123/) 1,400 copies printed.

Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby

Ed. (title page): Z.I. Pivovarova, Candidate of Geographical Sciences; Ed. (inside book): Ye. I. Oksenova; Tech. Ed.: K.F. Shumikhin.

PURPOSE: This collection of articles is intended for meteorologists serving with the hydrometeorological network in the Soviet Union.

COVERAGE: The publication contains scientific articles on the methods of meteorologic observations and on the procedure of testing meteorological instruments. The possibility of reducing the errors

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and thus securing more accurate results in observations are shown by mathematical computations and graphs. The need for a universal portable instrument that would be capable of instantly recording cloud height is emphasized. The articles are accompained by maps, diagrams, tables and references.

TABLE OF CONTENTS:

Methodology of Meteorological Observations SOV/1732

Sternzat, M.S. Errors in Measuring the Direction and the Velocity of Wind From a Ship

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AVAILABLE: Library of Congress

MM/jmr
5-21-59

Card 4/4

KOSTSHEVA, M.V.

Methods for the determination of dew and its geographic distribution. Trudy GGO no.61:70-84 '56. (MLRA 10:7)

(Dew)

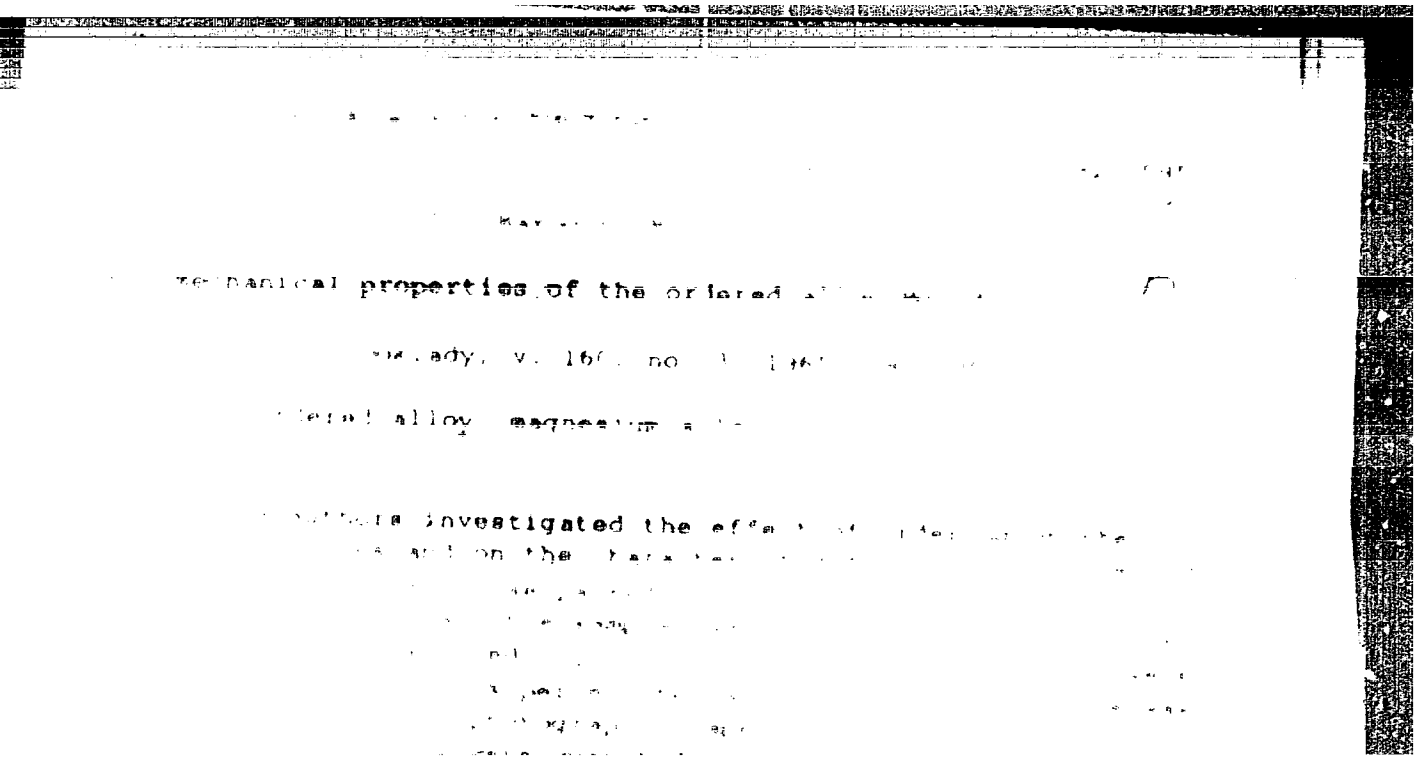
KOBYTAV, M.I., insh

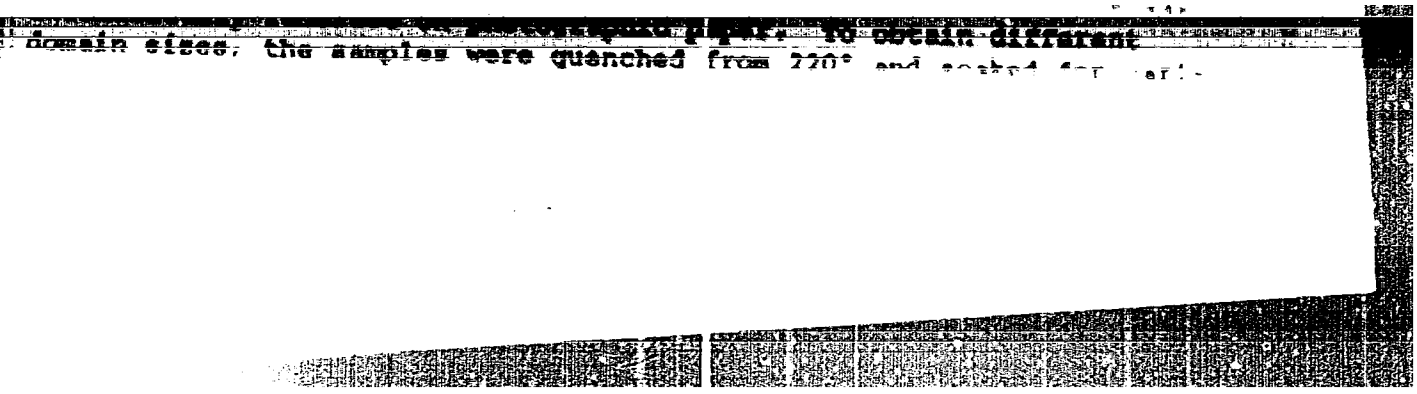
Simplification of the standard circuit of automatic switching of the standby power. Elek.sta. 29 no.9:82 S '58. (MIRA 11:11)
(Electric substations)

KOBYTEV, S.I.; SUKHOV, V.I., otv.red.; MORGUNOV, Yu.N., red.; BERDYIEV, B., tekhn.red.

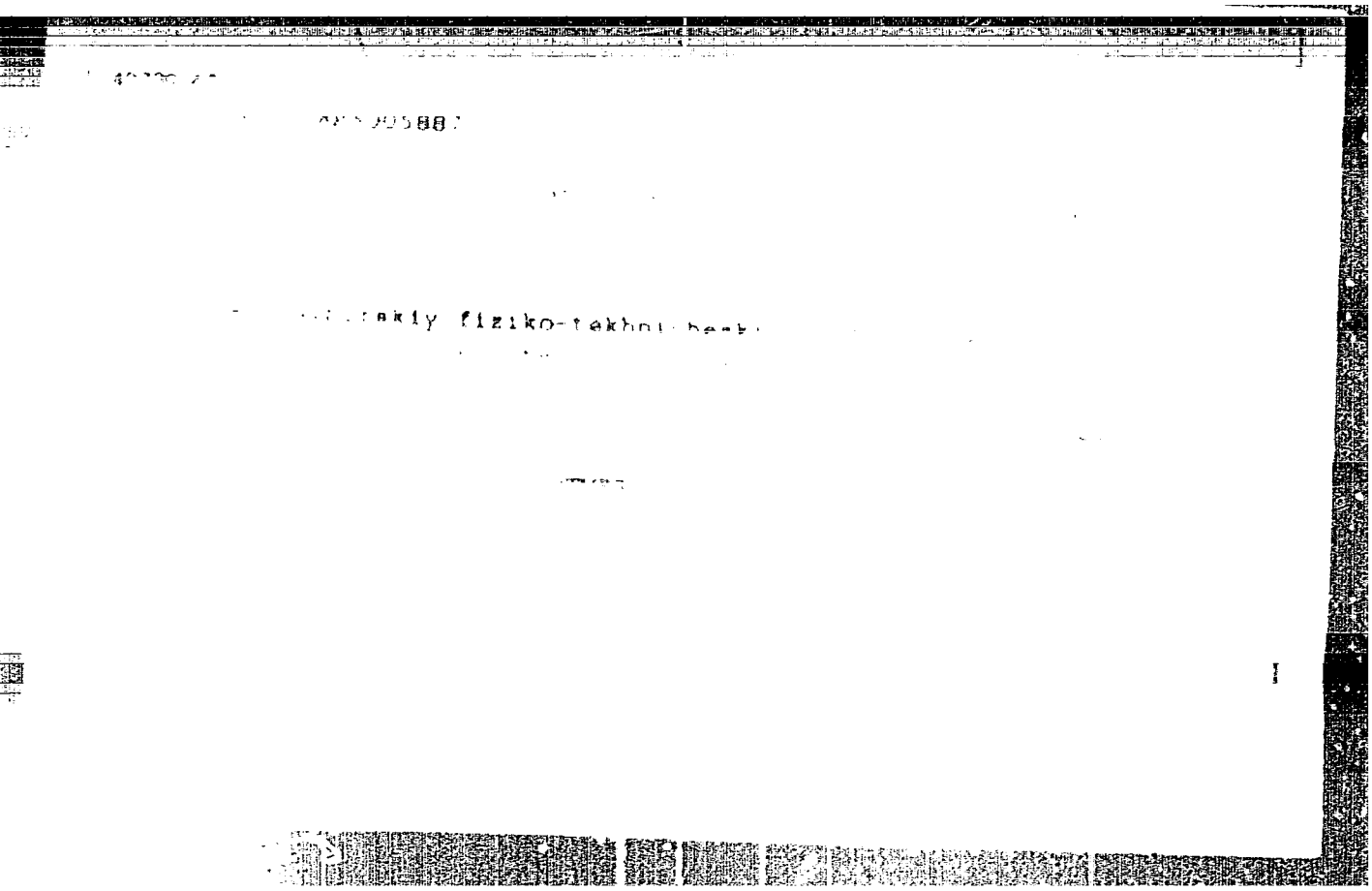
[Melons of Turkmenistan; from the experience of the Chardzhou Agricultural Experiment Station of the Turkmen Agricultural Research Institute] Dyni Turkmenistana; iz opyta raboty Chardzhouskoi sel'skokhoziaistvennoi opytnoi stantsii Turkmenskogo nauchno-issledovatel'skogo instituta zemledeliia. Ashkhabad, M-vo sel'.khoz.Turkmenskoi SSR, 1959. 18 p. (MIRA 14:3)

(Turkmenistan--Melons)





domain sizes, the samples were quenched from 720° and aged for



KOBYZEV, A. S.

"Etiology, Pathogenesis, Clinical Course, and Therapy of Acute Leukoses." (Dissertation for Degree of Doctor of Medical Sciences) Voronezh State Medical Inst, Voronezh, 1955

SO: M-1036 28 Mar 56

KOBYZEV, A.S., dotsent

Treatment of acute leucosis. Sov.med. 20 no.5:35-38 My '56.
(MLRA 9:9)

1. Iz kafedry propedevtiki vnutrennikh bolezney Voronezhskogo meditsinskogo instituta
(LEUKEMIA, therapy,
(Rus))

KOBYZEV, A.S., doktor med.nauk

Role of estrogenic hormones in the pathogenesis of leukemic process [with summary in English]. Probl.endok. i gorm. 3 no.5: 114-117 S-O '57. (MIRA 11:1)

1. Iz kafedry propedevtiki bnutrennikh bolezney (zav. - doktor meditsinskikh nauk A.S.Kobyzev) Voronezhskogo meditsinskogo instituta.

(ESTROGENS, injurious effects,
leukemia frequence in animals & men treated with (Rus))
(LEUKEMIA, etiology and pathogenesis,
estrogens as factor in frequency of leukemia in animals & men (Rus))

KOBYZEV, A.S., doktor med.nauk

Clinical variations of acute leukosis. Sov.med. 21 no.8:73-78 Ag '57.
(MIRA 10:12)

1. Iz kafedry gospital'noy terapii (zav. - prof. B.S.Mesterov) i kafedry propedevtiki terapii (zav. - doktor meditsinskikh nauk A.S. Kobyzev) Voronezhskogo meditsinskogo instituta.

(LEUKEMIA
acute, classif. (Rus))

USSR/General Problems of Pathology - Comparative Oncology U-1

Abs Jour : Ref Zhur - Biol., No. 18, 1958, 84913

Author : Kobyzev, A. S.
Inst : no institute is given
Title : Materials on the Inter-relationship of Tuberculosis and Leukosis

Orig Pub : Terapevt. Arkhiv, 1957, Vol. 29, No. 6, 48-53

Abstract : Of 76 patients in acute leukosis (AL) seen by the author, seven were found to have active tuberculosis; in the majority of these the AL had emerged on a background of exacerbations of the tuberculous process. The cases described in the literature of leukemoid, agranulocytic reactions in tuberculous patients, like the development of the leukemic process itself, are connected by the author with changes in the reactivity of a sensitized organism, the sensitivity being due to distrubances in the regulatory influence of the CNS, and also with disturbances in the metabolic, endocrine, and biochemical processes in the organism of patients

Card 1/2

Chair of Hospital Therapy
Voronezh Med Inst.

KOBYZEV, A.S., dotsent (Voronezh)

Pathogenesis and morphology of erythroleucomyelosis. Klin.med. 35 [i.e.34] no.1 Supplement:25 Ja '57. (MIRA 11:2)

1. Iz kafedry gospital'noy terapii (zav. - prof. V.S.Nesterov) Voronezhskogo meditsinskogo instituta.
(BLOOD--DISEASES)

KOBYZEV,K., letchik

A book about a flier and inventor. "The Falcon" N.S.Bobrov. Reviewed by K.Kobyzev. Tekh.mol.23 no.11:33 N'55. (MLRA 8:12)

(Nesterov, Petr Nikolaevich,) (Bobrov,N.S.)

KOBYZEV, K., letchik

Agricultural aviation. Nauka i pered. op. v sel'khoz. 8 no.9:67-69 S '58. (MIRA 11:10)
(Aeronautics in agriculture)

KOBYZEV, N.; PERMYAKOV, V.

When there is no seasonal prevalence in flights. Kryl.rod. 11 no.6:23-24 Je '60. (MIRA 13:7)
(Yaroslavl--Flight training)

IGNAT'YEV, S.; KOBYZEV, N.

Eyewash specialists in the Tashkent Aeronautics Club. Kryl.rod. 12 no.5:28 My '61. (MIRA 14:7)
(Tashkent—Aeronautics)

PROKOF'YEV, S.; KOBYZEV, N.

Cheaters should not be in an aviators club. Kryl.rod. 12 no.10: 30 O '61. (MIRA 15:2)

(Aeronautical societies)

KOHYZEV, N.

Results of compromising. Kryl.rod. 14 no.3:20 Mr '63.
(MIRA 16:4)
(Gomel'—Aeronautics—Societies, etc.)

KOBYZEV, N.

You are not fit to be a trainer! Kryl.rod. 13 no.6:29 Je '62. (MIRA 19:1)

SOV-107-58-9-3/38

AUTHOR: Kobyzev , P., Instructor in the TsK, VLKSM

TITLE: Restless hearts (Bespokoynyye serdtsa)

PERIODICAL: Radio, 1958, Nr 9, pp 3 - 4 and 2 - 3 of centerfold (USSR)

ABSTRACT: The author praises the achievements of the Komsomol organization and deals in particular with the contributions its members have made in the sphere of amateur radio. There are 8 photos.

1. Radio operators--Performance 2. Radio operators--USSR

Card 1/1

KOBYZEV, S.S., inzh.; KOLINA, M.O.

Using the "Kraiderman" leader in sinking an inclined shaft. Shakht. stroi. 7 no.7:31 Jl '63. (MIRA 16:10)

KORNILOV, Yu.N., inzh.; KOBYZEV, S.S., inzh.; KOLINA, M.G., inzh.

Mining equipment abroad. Ugol' Ukr. 7 no.10:53-54 O '63.
(MIRA 17:4)

BYDFROVSKIY, S.I.; KOBYZEV, S.S.

Comparative testing of shaft sinking clamshells. Trudy TSNIIPodzemshakhtstroia no.2:3-13 '63. (MIRA 17:5)

PETUKHOV, N.N.; KOBYZEV, S.S.

Analysis of the existing and elaboration of new systems and means of transportation in high-speed horizontal mining. Trudy TSNIIPodzemshakhtstroia no.3:101-120 '64. (MIRA 18:9)

KOBYZEV, V. K., jt. au.

Korchemnyi, M. I. Advanced methods and steps in the work of Kuznetsk sheet-rolling mill operators Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1952. 43 p. (54-40372)

25(1) SOV/125-59-12-8/18

AUTHOR: Kobyzev, V. K.

TITLE: Surfacing of Grooved Rolls According to Pattern

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 12, pp 58-64 (USSR)

ABSTRACT: Detailed engineering information is given on a new method and equipment used at the Kuznetsk Metallurgical Combine (or KMK). The two resurfacing installations at KMK consist each of a Craven roll lathe, an "A-384" welder designed by the Institut elektrosvarki im. Ye. O. Patona (Institute of Electric Welding imeni Ye. O. Paton), measuring equipment, welding converter and transformer, an induction heater, and gas nozzles for preheating. The device automatically moving the "A-384" welder one step forward after every revolution of the roll in the lathe, the roll remaining in a horizontal position, was designed and made at KMK, and eliminated the initial difficulty of resetting the welder in the resurfacing process after every full revolution of the roll. An installation with the tracer

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Surfacing of Grooved Rolls According to Pattern

for automatic resetting is shown in photographs. It is mentioned that Craven lathes were used because of the lack of special lathes [Reference 1] permitting the tilting of the roll for surfacing vertical and steep side surfaces in the passes. Surfacing is completed in one single layer, and the layer is of a uniform thickness over the entire pass surface. The surface is smooth, and sometimes no machining is required after surfacing. The wear resistance of these resurfaced rolls is 5.1 times higher than before resurfacing. More than 200 rolls of 500 to 1200 mm diameter were resurfaced in 1957 and 1958. The surfacing material is "PP-3Kh2V8" powder wire. The mentioned special resetting device with tracer was granted an Author's Certificate, Nr 112836. Engineers R. A. Braunshteyn, and V. I. Merzlyakov, and Technician S. R. Rakipov took part in the development of the resurfacing installation. There are 6 photographs, 1 diagram and 2 Soviet references.

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SOV/125-59-12-8/18

Surfacing of Grooved Rolls According to Pattern

ASSOCIATION: Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine).

SUBMITTED: July 11, 1959.

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18.5100

77460
SOV/133-60-1-21/30

AUTHOR: Kobyzev, V. K. (Engineer)

TITLE: Information and Current Events. Hard Facing of Roll Passes Using Master Shape Profile Templets

PERIODICAL: Stal', 1960, Nr 1, pp 68-70 (USSR)

ABSTRACT: This is a brief description of the technique used by the Kuznetsk Metallurgical Combine (Kuznetskiy metallurgicheskiy kombinat-- KMK) for producing the built-up (by welding) shape passes on rolling mill rolls. The Kuznetsk Combine (in rolls-turning shops of the railbeam and medium-shape-rolling Department) has two electric welding building-up installations consisting of rolls-turning lathes with welding machines of A-384 type, controlling-measuring devices, converters (converting a-c current into d-c current), transformers, inductors, or gas burners for heating the rolls, before hard-facing, to 280-320° C. The steel rolls, as well as the flat parts of the equipment, are hard-faced by drawn or powder wire

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Information and Current Events. Hard Facing of Roll Passes Using Master Shape Profile Templets

77460
SOV/133-60-1-21/30

PP-3Kh2V8 under the AN-20 flux using the A-384 apparatus designed by the Institute of Electric Welding imeni Ye. O. Paton (Institut elektrosvarki imeni Ye. O. Patona). The method developed by the Institute is suitable for hard-facing the horizontal or slightly slanting portions of rolls shapes. Therefore, the Kuznetsk Combine conducted an investigation of technology of hard-facing the roll passes with sharply slanting walls (keeping the axis of the roll in horizontal position). R. A. Braunshteyn, L. N. Soroko, and V. I. Merzlyakov (Engineers), S. R. Rakipov (Technician), and A. I. Markevich, V. I. Shakhmatov, and V. P. Kozhukhov (Welders) participated in the work. A mathematical connection between the various technological factors was established. The derived formulas were used for determination of the method of hard-facing (at a given thickness and hardness of hard-faced layer) and also for calculation of thickness of metal of the original rolls which should be taken off when machining the roll passes prior to

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hard-facing. During 1957-1958, over 200 rolls were hard-faced at the Kuznetsk Metallurgical Combine (KMK). The average life of rolls increased 5.1 times. Since 1957 the hard-facing (using the PP-2Kh2V8 wire) is applied to rolls of the blooming mill. The 900 mill works exclusively on hard-faced rolls. The hard-faced layer has practically no wear. However, the above technology had some disadvantages, and so a special arrangement (Author's Certificate Nr 112836) was developed for automatic electric arc hard-facing of shape roll passes and rollers of the shape-straightening machine, using the shape profile templets. The principle of this arrangement is based on differentiation of the speed of movement of welding head in horizontal and vertical directions in accordance with the curvature of the templets. The rates of hardfacing are directed depending on the conditions of roll's work and the developed parameters. The results of 1959 testing of the device for automatic hard-facing of shape profile, using

a master templet, showed: (a) the entirely satisfactory quality of hard-faced surface of roll passes, without any defects; (b) good surface finish of hard-faced surface, which at times is so satisfactory that the rolls are put into the stands without any machining; (c) the design sufficiently simple and convenient regarding its setup and use; (d) the reliable work of the device under production conditions, which justifies its recommendation of hard-facing rolling mill rolls and other bodies of revolution of simple and complex profile. There are 3 figures; and 2 Soviet references.

ASSOCIATION: Kuznetsk Metallurgical Combine (KMK)

S/148/60/000/008/003/018
A161/A029

AUTHORS: Chelyshev, N.A.; Kobyzev, V.K.; Plekhanov, N.G.; Bondanova, N.G.; Yampol'skiy, A.M.

TITLE: Investigation of Metal Deformation During Rolling on a "750" Mill With the Use of Radioactive Isotopes

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. - Chernaya metallurgiya, 1960, No. 8, pp. 48 - 58

TEXT: The investigation was carried out with the use of S^{35} isotope added to a 7-ton ingot of 50Г (500) killed steel during rolling on the "750" two-stand two-high billet mill of the Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine). The mill has box passes in the first stand (Fig. 1) and a rhomb-square pass system in the second (Fig. 2). Three distinct zones were produced in metal by adding the isotope after the formation of a crystallized crust in the ingot mold, and again 10 min later after the formation of another solid layer. The first isotope addition had an activity of 950 mCu, the second the double activity, so as to obtain three zones: a non-radioactive outer layer and two inner zones of different radioactivity. The observed deformation in height

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S/148/60/000/008/003/018
A161/A029

Investigation of Metal Deformation During Rolling on a "750" Mill With the Use of Radioactive Isotopes

and width was very different in separate layers in both stands. The observations are discussed in detail and illustrated by figures and tables. Autoradiograms show the deformation after each of the 15 passes in the billet mill. The effect of the ratio h_{mean}/l (mean height of the deformation area to grip arc length) [Abstractor's note: Subscript mean is a translation from the Russian sr (sredniy)] and of the grip angle on the deformation was determined (noticed previously by A.I. Tselikov in Reference 2). The following conclusions were drawn: 1) The isotope method makes possible the observation of deformation without disturbing the process. 2) The deformation is distributed very non-uniformly in height and width in box passes as well as in the rhomb-square system. 3) The height deformation variations in separate metal zones in separate passes depend on changes of h_{mean}/l and grip angle. At high h_{mean}/l high deformation takes place in the outer zone and low deformation in the central zone at all grip angles; the deformation gradually evens out in all zones with reducing the h_{mean}/l ratio, and at a h_{mean}/l ratio lower than 1.7 the center is deformed more than the outer layer. An increasing grip angle at constant h_{mean}/l ratio raises the deformation in the outer layers, and hence the deeper metal layers are worked better with

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S/148/60/000/008/003/018
A161/A029

Investigation of Metal Deformation During Rolling on a "750" Mill With the Use of Radioactive Isotopes

smaller grip angle. 4) The local non-uniformity of deformation is considerable, particularly in the first half of the rolling process. This causes separated layers under the billet surface, particularly if the metal has a low plasticity. The magnitude of local deformation non-uniformity depends also on the h_{mean}/l ratio and the grip angle; when they increase, the deformation non-uniformity increases, and the detrimental effect of large grip angles is the stronger the higher is the h_{mean}/l ratio. 5) In high-deformation areas, changes of the free-spreading index $\frac{\Delta b}{\Delta h}$ are determined mainly by changes of the h_{mean}/l ratio. In passes with unrestricted widening, the width deformation also changes with the h_{mean}/l ratio and the grip angle, and positive as well as negative deformation is possible. 6) The pass system of the "750" mill must be changed. The following persons took part in the investigation: G.A. Sakharov (deceased), P.G. Marinin and I.V. Manchevskiy. There are 6 figures, 3 tables and 5 Soviet references.

ASSOCIATION: Sibirskiy metallurgicheskiy institut (Siberian Metallurgical Institute)

SUBMITTED: November 30, 1959

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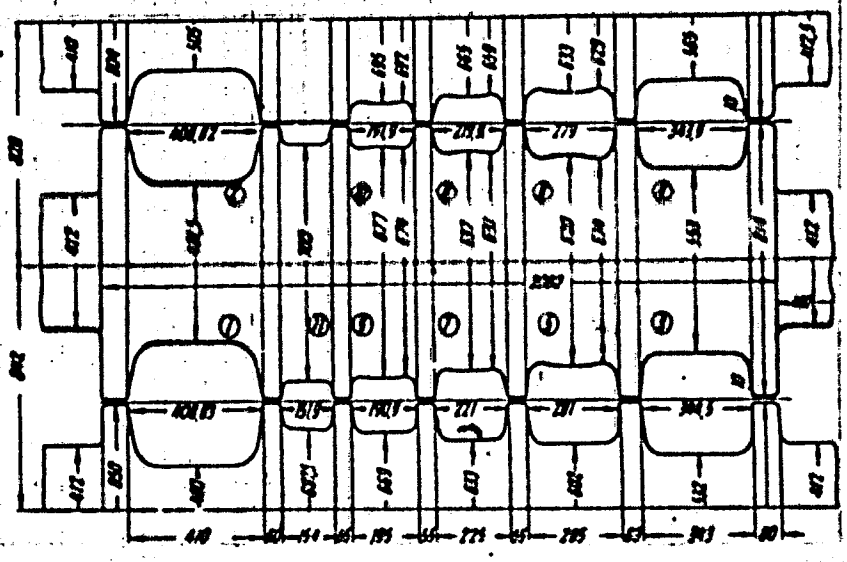
S/148/60/000/008/003/018
A161/A029

Investigation of Metal Deformation During Rolling on a "750" Mill With the Use of Radioactive Isotopes

Figure 1. Calibration of the Passes of the First Stand of the Mill.



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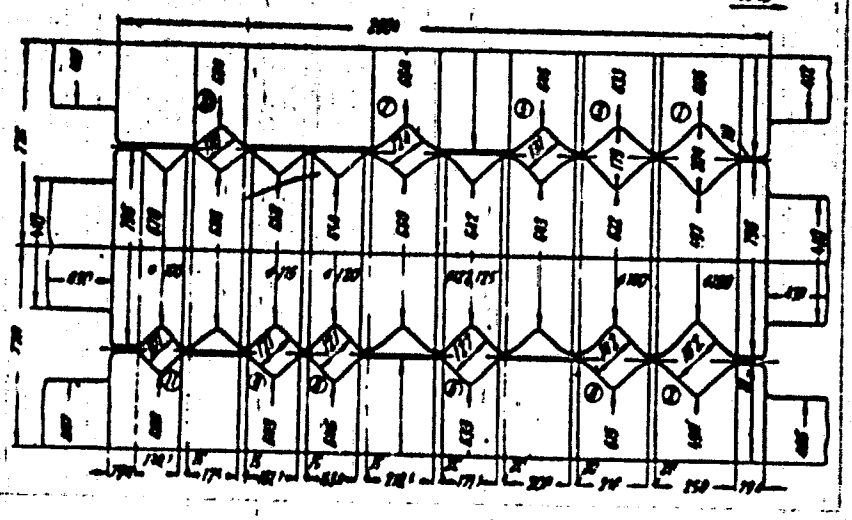
S/148/60/000/008/003/018
A161/A029

Investigation of Metal Deformation During Rolling on a "750" Mill With the Use of Radioactive Isotopes

Figure 2. Calibration of the Passes of the Second Stand of the Mill.



Card 5/5

KRAVCHENKO, L.Ya.; KOBYZEV, V.K.

Ways to save metal. Metallurg 7 no.4:26-27 Ap '62.
(MIRA 15:3)

1. Glavnyy prokatchik Kuznetskogo metallurgicheskogo kombinata (for Kravchenko). 2. Nachal'nik prokatnoy laboratorii Kuznetskogo metallurgicheskogo kombinata (for Kobyzev).
(Novokuznetsk—Rolling (Metalwork))

KOBYZEV, V.K.; RYAZANOV, D.G.

Thickness of the layer deposited on the grooves of rolling mill rolls following a master cam. Avtom. svar. 16 no.11:82-85 N '63. (MIRA 17:1)

1. Kuznetskiy metallurgicheskiy kombinat.

ACCESSION NR: AP4013549 S/0133/64/000/001/0050/0052

AUTHORS: Kobyzev, V. K.; Yershov, V. N.; Kuznetsov, A. F.; Mazurik, P. N.; Ryazanov, D. G.; Piskes, E. Ya.

TITLE: Rolling two-layer sheets with the basic layer made of low-alloy steel

SOURCE: Stal', no. 1, 1964, 50-52

TOPIC TAGS: rolling, plating, low alloy steel, steel, 16GS low alloy steel, carbon steel, OKh13 stainless steel, Kh18N10T stainless steel, St.3 steel, stainless steel, corrosion, steel corrosion, steel mechanical properties, 3K steel, 15K steel, 20K steel, regenerative furance, continuous furnace

ABSTRACT: This work was carried out in order to study the surface quality and the mechanical properties of two-layer steel sheets. The samples were a basic sheet made of low-alloy steel (16GS) plated with stainless steels OKh13 or Kh18N10T. The procedure followed was developed by the KMK (Kuznetsk Metallurgical Combine). One part of the samples was held at 1260C for 1.25 hours, at 1320C for 0.75 hours, and at 1310C for 1.5 hours. Temperature at the end of rolling was 1170-1180C, and rolling was completed either with or without edging. In the former case the plate

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ACCESSION NR: AP4013549

metal was ruptured in some cases; in the latter case the quality of the metal surface was much higher, and no peeling of the plate layer was observed. The remaining samples were heated in a continuous furnace to 1310-1330C for 4.5 hours. Temperature at the end of rolling was 1000-1010C. All the samples plated with steel Kh13N10T underwent thermal treatment at 900-930C after rolling, while samples plated with steel OKh13 were held at 660C for 14-18 hours. The results obtained were satisfactory. They are presented graphically in Figs. 1 and 2 on the Enclosures. "I. L. Vaynshteyn, M. M. Bazhenov, A. V. Yakubson, and G. S. Bublik participated in this work." Orig. art. has: 4 figures and 1 formula.

ASSOCIATION: Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine)

SUBMITTED: 00 DATE ACQ: 03Feb63 ENCL: 02

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

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ACCESSION NR: AP4019480 S/0133/64/000/003/0245/0246

AUTHORS: Koby*sev, V. K.; Dubrovin, A. K.; Peretyat'ko, V. N.; Laskaronskiy, B. N.

TITLE: Heating and rolling ingots of stainless steels EI171 and EI432

SOURCE: Stal', no. 3, 1964, 245-246

TOPIC TAGS: stainless steel, heat treatment, rolling effect, roll pressure, heat resistant steel, chromium nickel steel, steel EI171, steel EI432

ABSTRACT: Rolling of chromium-nickel acid-resistant and heat-resistant steels EI171 (Kh17N13M2T) and EI432 (Kh17N13M3T) was successfully attempted after a single heating at the Kuznetsk Metallurgical Combine. The work was done to improve the former method which called for two heatings and light pressure rolls, and which often produced large tears and numerous hair cracks in the metal. In the present experiments metal was malleablized at 1240-1260C for 6 hours. This allowed increasing the size reduction to 25-55 mm and completing the rolling process in 23 passes. The terminal temperature was above 1100C and was within the range of maximum steel plasticity. The surface quality was found to improve with the increase of the terminal temperature (see Fig. 1 on the Enclosure). The total heating time was reduced from 16 hr 45 min to 12 hr 15 min; the number of passes

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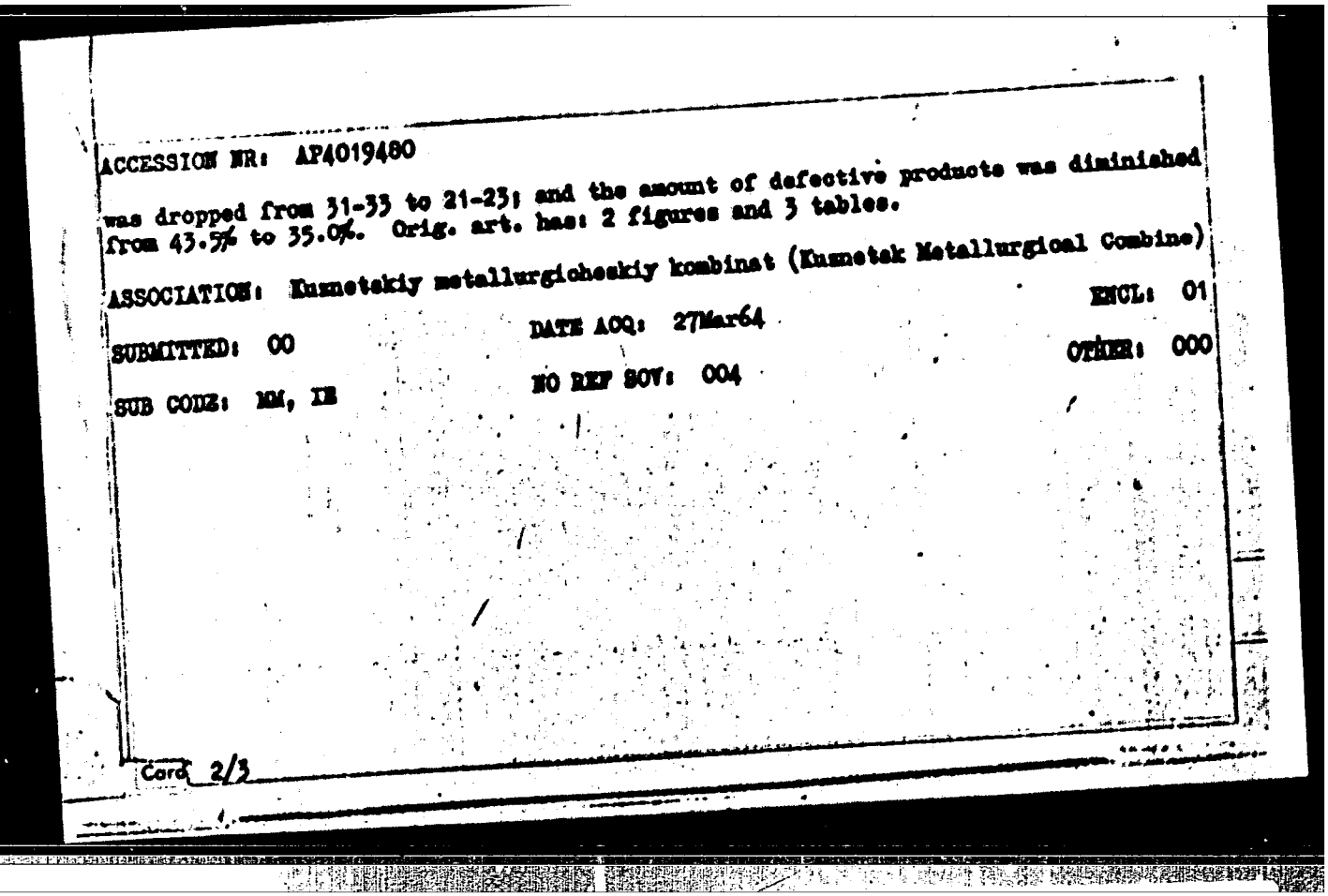

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was dropped from 31-33 to 21-23; and the amount of defective products was diminished from 43.5% to 35.0%. Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine)

SUBMITTED: 00 DATE ACQ: 27Mar64 ENCL: 01

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Card 2/3

ZAYKOV, M.A.; TSELUYKOV, V.S.; KAMINSKIY, D.M.; KUZNETSOV, A.F.; BELINSKIY, Ye.D.; SHAMETS, Ya.V.; FEDOROV, N.A.; BARITSKIY, S.I.; ZAKHAROV, A.I.; ZHURAVLEV, M.A.; KOHIZEV, V.K.

Investigating energy and power parameters in plate rolling on reversing mills. Izv. vys. ucheb. zav.; chern. met. 7 no.2:100-107 '64. (MIRA 17:3)

KOBYZEV, V.K., inzh.; ZAKHARENKO, N.I., inzh.; LASKARONSKIY, E.N., inzh.; OSCKIN, Ye.A., inzh.; USOL'TSEV, B.N., inzh.

Effect of the diameter of rolls with a grooved surface on the size and distribution of torque during metal rolling on a blooming mill. Stal' 24 no.10:899-901 O '64. (MIRA 17:12)

1. Kuznetskiy metallurgicheskiy kombinat.

CHELYSHEV, N.A.; KOBYZEV, V.K.; BOGDANOVA, N.G.; DUBROVIN, A.K.; KACHURIN, D.S.

Investigating metal deformation on a blooming mill with the help of radioactive isotopes. Izv.vys.ucheb.zav.; chern. met. 8 no.4: 96-101 '65. (MIRA 18:4)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.

KORYZEV, V.K., inzh.

New method of fluting and surface hardening of rolling mill rolls. Stal' 25 no.2:137-139 F '65. (MIRA 18:3)

1. Kuznetskiy metallurgicheskiy kombinat.

CHELYSHEV, N.A.; KOBYZEV, V.K.; BOGDANOVA, N.G.; DUBROVIN, A.K.; KACHURIN, D.S.

Radioactive isotope study of metal deformation in blooming mill rolling. Izv. vys. ucheb. zav.; chern. met. 7 no.12:65-72 '64 (MIRA 18:1)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.

KOBYZEV, V.K., inzh.; BYSTROV, A.V., inzh.

Hard facing head with a tracer carriage. Svar. proizv. 12:31-33 D '63. (MIRA 18:9)

1. Kuznetskiy metallurgicheskiy kombinat.

PLEKHANOV, P.S.; GOLOVANENKO, S.A.; KOHLZEV, V.K.; BULAT, S.I.; MIL'TO, Yu.R.; NIAZANOV, D.G.; BARANOVSKAYA, M.I.

Mastering the rolling of bimetal shapes for the agricultural machinery industry. Stal' 25 no.10:922-927 O '65. (MIRA 18:11)

1. Kuznetskiy metallurgicheskiy kombinat i TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I.P. Bardina.

KACHURIN, D.S., inzh.; KOBYZEV, V.K., inzh.; DUBROVIN, A.K., inzh.; USOL'TSEV, B.N., inzh.

Effect of fluting the roll surfaces on the quality of the rolled metal. Stal' 25 no.12:1103-1105 D '65. (MIRA 18:12)

1. Kuznetskiy metallurgicheskiy kombinat.

ACC NR: AP7006956 SOURCE CODE: UR/0217/67/012/001/0124/0126

AUTHOR: Zore, V. A.; Kimel'fel'd, O. D.; Suzdaleva, V. V.; Kobyzeva, L. P.; Genkina, Ye. S.

ORG: Medical Institute im. I. M. Sechenov, Minzdrava SSSR, Moscow (Meditsinskiy institut Minzdrava SSSR)

TITLE: Complex dielectric permittivity of human blood serum under normal conditions and during some diseases in the 100—500 mHz range

SOURCE: Biofizika, v. 12, no. 1, 1967, 124-126

TOPIC TAGS: microwave, [redacted], dielectric property, blood, human physiology

ABSTRACT: The dielectric permittivity of normal and pathological blood was measured using a bridge, the arms of which were sections of coaxial cables. The measurement error at 200 mHz was 1.5% and ε was 3.0%. Table 1 shows some results of a series of tests conducted on blood sera of various donors.

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Table 1. Frequency dependence of the dielectric qualities of various blood sera (23°C)

Blood group	Donor Age	Protein conc, %	100 mHz		200 mHz		300 mHz		400 mHz		500 mHz	
			ε_x	ε_δ	ε_x	ε_δ	ε_x	ε_δ	ε_x	ε_δ	ε_x	ε_δ
I	50	8,45	41,3	222,4	87,7	101,0	—	—	[illegible]	[illegible]	—	—
IV	21	8,83	77,3	220,1	[illegible]	98,1	—	—	67,4	[illegible]	—	—
III	25	8,25	70,3	[illegible]	[illegible]	[illegible]	[illegible]	15,4	[illegible]	17,4	—	—
II	20	8,[illegible]	90,3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	35,4	70,2	31,2
III	29	7,81	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	49,3
I	31	8,20	87,4	214,0	87,8	96,0	87,3	71,0	86,4	34,6	[illegible]	48,2
I	20	8,06	71,3	[illegible]	72,3	94,0	70,0	[illegible]	72,2	[illegible]	—	—
II	44	7,98	72,3	[illegible]	73,7	90,4	70,3	21,4	70,7	13,[illegible]	—	—

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ACC NR: AP7006956

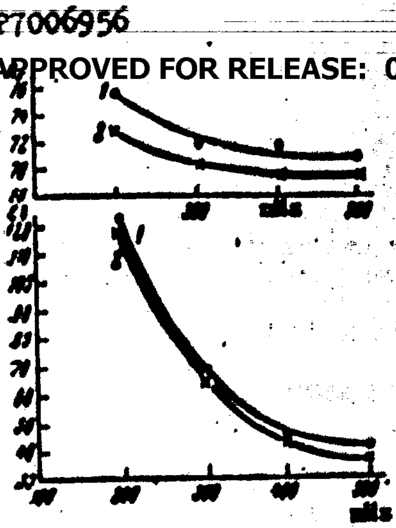

Fig. 1. Frequency dependence of the dielectric qualities (ε_x and $\varepsilon\delta$) of normal blood serum before (1) and after (2) controlled heating to 63°C for 15 min (2.5% protein; 23°C).

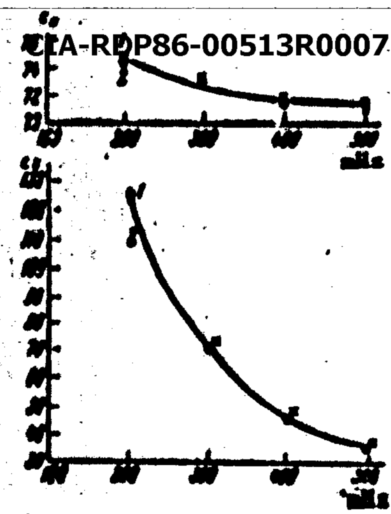

Fig. 2. Frequency dependence of the dielectric qualities of blood from a patient with myeloleukosis before (1) and after (2) heating to 63°C for 15 min (2.5% protein; 23°C).

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ACC NR: AP7006956

BRAYNINA, R.A.; MARGULIS, L.A.; KOVALEVSKAYA, I.L.; MITEREVA, V.G.; FERDINAND, Ya.M.; PUTRIN, N.G.; PAVLENKO, I.P.; TUPIKINA, V.A.; UDAVICHENKO, V.Ya.; KOBYZEVA, O.V.

Epidemiological effectiveness of dried alcoholic divaccine, enriched and nonenriched with Vi-antigens in school-age children and of Vi-antigens in preschool-age children in a typhoid fever outbreak. Zhur. mikrobiol.,epid.i immun. 40 no.12:18-22 D '63.

(MIRA 17:12)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta epidemiologii i mikrobiologii.

KOBYZAVA, Ye.S.

Effect of efficient nutrition on the decrease of morbidity and mortality of infants at the Central Home for Children. Pediatriia no.7:58-59 Jl '57. (MIRA 10:10)
(INFANTS--NUTRITION)

MYSHLYAYEVA, L.V.; KOBYZSKAYA, G.V.

Investigation of the reactions of the interaction of some silicones with water suspensions of cements and clinker minerals. Trudy MKHTI no.27:315-320 '59. (MIRA 15:6)
(Silicon organic compounds) (Cement clinkers)