TSVETKOV, A.I., otv. red.; SHLEPOV, V.K., red. izd-va; DOROKHINA, I.N., tekhn. red.

[Transactions of the Sixth Conference on Experimental and Technical Mineralogy and Petrography] Trudy shestogo soveshchaniia po eksperimental'noi i tekhnicheskoi mineralogii i petrografii, Leningrad, 1961. Moskva, Izd-vo Akad. nauk SSSR, 1962. 410 p. (MIRA 15:7)

1. Soveshchaniye po eksperimental'noy i tekhnicheskoy mineralogii i petrografii. 6th, Leningrad, 1961.
(Petrology--Congresses)

ROSHCHIN, K.S.; TSVETKOV, A.I.; SIDNEV, N.F.; TSEGE, A.S.; LIKHACHEV, V.F.; SHIBANOV, K.I.; LEVITINA, Kh.K.; OSTROVKINA, M.Ya.; BAYBAKOV, P.M.; KROL', A.I.

Improvement in the operation of the rectifying devices of electroplating tanks. Prom. energ. 15 no.11:19-20 N '60. (MIRA 14:9)
(Electroplating) (Electric current rectifiers)

TSVETKOV, A.I.; SHUTOV, Yu.D.; SHIGORIN, G.G., kand. tekhn. nauk, retsenzent; REYZ, M.B., red. izd-va; VORONETSKAYA, L.V., tekhn. red.

[Construction of sewer conduits by shield tunneling; construction practices in Leningrad] Sooruzhenie kanalizatsionnykh kollektorov metodom shchitovoi prokhodki; opyt stroitel'stva v Leningrade. Leningrad, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 97 p. (MIRA 15:2)

(Sewerage) (Tunneling)

28803
S/138/61/000/009/008/011
A051/A129

11,2320

AUTHORS: Tsvetkov, A. I., Fedyukin, D. L., Zakharenko, N. V.

TITLE: A perfected instrument for the determination of the vulcanization kinetics of rubber mixtures

PERIODICAL: Kauchuk i rezina, no. 9, 1961, 31 - 32

TEXT: A description is given of the Soviet-made vulcameter, based in principle on the vulcameter manufactured abroad [Ref. 1: I. Peter, W. Heidemann, Kautschuk u. Gummi, 10, WT, 168 - 172 (1957); 11, WT, 159 - 161 (1958); Ref. 2: R. More, S. H. Morrele, A. R. Payne, Rubb. J. a. Intern. Plast., 136, no. 23, 858 (1959); Rev. Gén. du Caoutchouc, 36, no. 7 - 8, 1001 (1959)]. The Soviet machine determines the optimum of vulcanization of various rubber mixtures and records curves of the vulcanization kinetics at various temperatures [Ref. 3: Author's certificate no. 134069. Byull. izobreteniy, no. 23, Standartgiz, 1960]. The basic difference of the Soviet model is in the construction of the measuring device of the shifting force and in the method of sample fastening. The instrument consists of a clamp adjustment with an eccentric cable, recorder of force with automatic recording and a thermostatic attachment (Fig. 1). Samples 1 and 2 (30 x 25 x 2 mm)

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A perfected instrument for the determination of...

are mounted between the upper (3) and lower (4) clamps. The upper clamp is made of two parts, which move in a horizontal direction by means of a two-way screw (11). The hollow clamps circulate the heat carrier. The temperature range is determined by the type of thermostat (in this case it is the Bobser Ultrathermostat). The cam 5 creates the sign-changing deformation of the samples rotated by the motor 7 through the reductor 6 (mounted on the back wall of the instrument). The cam brings the upper clamp into motion with a constant amplitude equal to 0.2 mm and a frequency of 1 cycle per minute. The shift force is fed to the measuring device through the stationary lower clamp 4, consisting of a hydraulic dynamometer 8 with a manometric tube 9. The magnitude of the membrane shift of the dynamometer or the lower shift at a maximum permissible load of 20 kg does not exceed 0.03 mm. The automatic recording of the test results is performed by the automatic recorder 10 which permits only maximum shift forces of the deformation cycle to be recorded. An electromagnet is used to record the forces in the maximum positions; it is synchronized with the cam of the cable. Thus the instrument is able to record the change kinetics of the shift force in heating. The produced curve characterizes the relationship of the shift force to the time (Fig. 2). The instrument can also be used for determining the duration of the mixture softening,

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A051/A129

duration of the viscous-fluid state, estimating the beginning and rate of vulcanization. The simplicity of the contruction and saving of the rubber mixture has proven the expediency of the instrument and the method used, and they are recommended to all rubber plants and scientific research institutes. There is 1 diagram, 1 graph and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: R. E. Morris, J. W. Hollister, A. E. Barrott, Ind. Eng. Chem., 42, no. 8, 1581 (1955).

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy (Scientific Research Institute of Rubber and Latex Articles)

Card 3/3

S/138/61/000/002/005/008
A051/A129

11.2320 also 2915

AUTHORS: Grinberg, A.Ye.; Tsvetkov, A.I.; Yal'tseva, Ye.P.; Makeyeva, A.R.; Peschanskaya R.Ya.; Prashchikina, N.P.; Prashchikina, A.S.; Kryukova, A.B.

TITLE: Furfurhydramide and its vulcanization activity

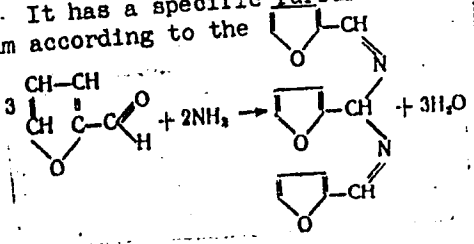
PERIODICAL: Kauchuk i rezina, no. 2, 1961, 25 - 29

TEXT: The Soviet rubber industry uses diphenylguanidine as a nitrogen-containing accelerator with a basic nature. Its production is based on toxic and inflammable materials (aniline, carbon sulfide, lead silicagels and isopropyl alcohol). An attempt was made to find a cheaper nitrogen-containing organic base. Furfurhydramide was tested in combination with sulfur accelerators as an accelerator of vulcanization. A method for producing the furfurhydramide from cheap and accessible raw material was developed. It is an nitrogen-containing organic base which can be used as a vulcanization accelerator in combination with altax, captax or thiuram. In mixtures based on natural rubber and a series of synthetic rubbers containing diphenylguanidine in combination with altax or captax, furfurhydramide can be used instead of diphenylguanidine. It increases the durability of the

Card 1/5

Furfurhydramide and its vulcanization activity

vulcanizates in repeated deformations. When it is used in combination with captax, altax or thiuram in mixtures based on natural and a number of synthetic rubbers, the rate of vulcanization does not change and vulcanizates are obtained with satisfactory technical properties. Its use extends the assortment of vulcanization accelerators and decreases the consumption of captax, altax, diphenylguanidine and thiuram. Its physical and chemical characteristics are: finely crystalline powder of straw-yellow color with d_4^{20} 1.15 - 1.16, melting point when crystallized from ethyl ether 117 - 118°C. It is easily soluble in methyl, ethyl and isopropyl alcohol, acetone, ether, benzene, but is insoluble in water. The molecular heat of combustion at P = const. is 1,828.15 cal, at V = const. it is 1,827.87 cal. Acids decompose it to furfurole and ammonium, when boiled in diluted alkali it is converted to the isomer base furfurin. It absorbs ultraviolet rays, whereby its color changes to a dark brown. It has a specific furfurole odor. It is produced from furfurole and ammonium according to the equation:



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A051/A129

Furfurhydramide and its vulcanization activity

Commercial furfurhydramide melts at 110 - 115°C. Its nitrogen content is 10.41% calculated and 10.20 - 10.30% found. Obtained data showed that when natural rubber is heated in the presence of furfurhydramide and sulfur, there is a significant decrease of the plasticity, whereas the plasticity of natural rubber containing only sulfur or furfurhydramide hardly changes at all when heated under the same conditions. It is concluded that furfurhydramide strengthens the structuralizing effect of sulfur. It does not affect the inclination of the mixtures to scorching. There are 3 tables, 4 figures and 8 references: 2 Soviet, 4 English and 2 German.

ASSOCIATION: Nauchno-issledovatel'skiy institut resinovych i lateksnych izdeliy (Scientific Research Institute of Rubber and Latex Articles)

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20809

S/138/61/000/002/005/008
A051/A129

Furfurhydramide and its vulcanization activity

Figure 1: Effect of furfurhydramide on the change in the plasticity of natural rubber when heated in a press at a temperature of 143°C: 1 - without additions; 2 - 3 w.p. of sulfur; 3 - 1 w.p. of furfurhydramide; 4 - 1 w.p. of furfurhydramide and 3 w.p. of sulfur; 5 - 3 w.p. of sulfur and 5 w.p. of zinc oxide; 6 - 3 w.p. of sulfur, 5 w.p. of zinc oxide and 1 w.p. of furfurhydramide.

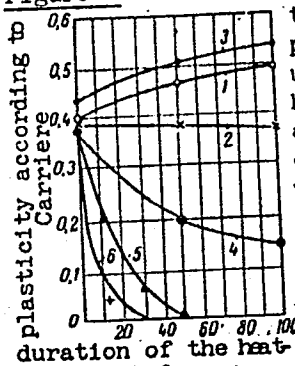
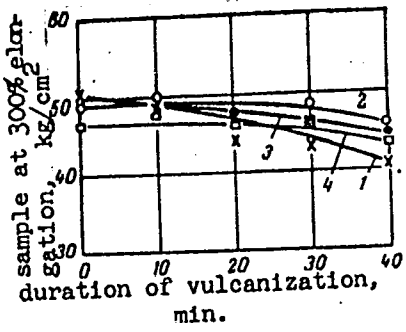


Figure 2: Module at 300% elongation of vulcanizates of mixtures based on SKI containing 30 w.p. jet carbon black: 1 - 1 w.p. of furfurhydramide and 0.25 w.p. of thiuram; 2 - 2 w.p. of furfurhydramide and 0.25 w.p. of captax; 3 - 2 w.p. of furfurhydramide and 0.25 w.p. of altax; 4 - 2 w.p. of altax (standard mixture sample).



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Furfurhydramide and its vulcanization activity

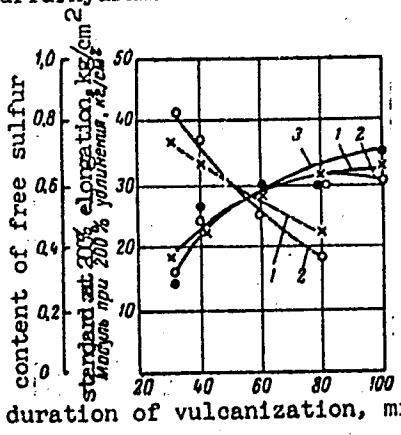

Figure 3: Relationship of the module at 200% elongation (———)and the content of free sulfur (-----) to the duration of vulcanization of the mixtures based on SKS-30 ARM containing gaseous channel carbon black: 1 - 2 w.p. of furfurhydramide and 0.5 w.p. of altax; 2 - 0.3 w.p. diphenylguanidine and 1.5 w.p. of altax; 3 - 0.6 w.p. of furfurhydramide and 1.5 w.p. of altax.

Card 5/5

86378
S/020/60/133/006/029/031XX
B016/B054

5.3700 2209, 1236, 1275

AUTHORS: Strizhkov, B. V., Lapitskiy, A. V., Vlasov, L. G., and Tsvetkov, A. I.

TITLE: Production of Titanyl Oxalates of Bivalent Metals, and a Physico-chemical Study of Their Thermal Decomposition

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 6, pp. 1347-1349

TEXT: The authors report on the synthesis of the salts of titanyl oxalic acid $H_2(TiO(C_2O_4)_2)\cdot 2H_2O$ with bivalent cations, and on the physico-chemical study of the decomposition of these salts on heating. For this purpose, the authors developed special methods, and produced, with their aid, barium-, strontium-, lead-, and calcium-titanyl oxalates. For the first three salts, they used the following procedure: Concentrated solution of oxalic acid was added, under continuous stirring, to the aqueous solution of $TiCl_4$ (concentration 0.2-0.3 g/ml) which had been prepared by the method described in Ref. 3. Aqueous solutions of barium

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86378

Production of Titanyl Oxalates of Bivalent Metals, and a Physico-chemical Study of Their Thermal Decomposition

S/020/60/133/006/029/031XX
B016/B054

chloride, strontium chloride, or lead nitrate were added to the resulting solution of titanyl oxalate at room temperature. The resulting complex salts yielded a white precipitate. Calcium-titanyl oxalate could only be obtained in acetonic solution. An analysis of the compounds produced showed the following compositions: $BaTiO(C_2O_4)_2 \cdot 4H_2O$; $SrTiO(C_2O_4)_2 \cdot 5.5H_2O$; $PbTiO(C_2O_4)_3 \cdot 4H_2O$, and $CaTiO(C_2O_4)_2 \cdot 5H_2O$. By an X-ray phase analysis and a crystal-optical investigation, the authors proved that the complex salts obtained consist of small isotropic crystals. A comprehensive thermographic and thermogravimetric investigation showed that the thermal decomposition of the said four titanyl oxalates proceeds by steps, and is accompanied by several endo- and exothermic processes (Fig. 1). From the character of decomposition, the authors conclude that the oxalate groups are mainly bound to the titanyl ion; the cation has no noticeable effect on the strength of this bond. The process of thermal decomposition is concluded at about 800°C. The end products are meta-titanates of the corresponding metals. Table 1 gives the specific gravities of the salts used and of the products of thermal decomposition. As was expected, the

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Production of Titanyl Oxalates of Bivalent Metals, and a Physico-chemical Study of Their Thermal Decomposition

S/020/60/133/006/029/031XX
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specific gravity increases with rising roasting temperature up to a maximum which corresponds to the specific gravities of barium-, strontium-, calcium-, and lead titanate, respectively. There are 1 figure, 1 table, and 3 non-Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: April 7, 1960, by I. I. Chernyayev, Academician

SUBMITTED: April 4, 1960

AFANAS'YEV, G.D.; LAPIN, V.V.; TSVETKOV, A.I.

Boris Vasil'evich Ivanov; obituary. Izv. AN SSSR. Ser. geol. 25 no.2:105 F '60. (MIRA 13:10)
(Ivanov, Boris Vasil'evich, 1906-1959)

STRIZHKOV, B.V.; LAPITSKIY, A.V.; VLASOV, L.G.; TSVETKOV, A.I.

Synthesis of titanyl oxalates of divalent metals and a physicochemical study of their thermal decomposition. Dokl.AN SSSR 133 no.6:1347-1349 Ag '60. (MIRA 13:8)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova. Predstavleno akademikom I.I.Chernyyavym.
(Oxalates) (Titanium compounds)

KOTLOVA, A.G.; OL'SHNSKIY, Ya.I. [deceased]; TSVETKOV, A.I.

Characteristics of the foliation in binary silicate and borate systems. Trudy IGEM 42:3-20 '60. (MIRA 13:7)
(Silicates) (Borates)

TSVETKOV, A.I.; VAL'YASHIKHINA, Ye.P.; LAS'KOVA, A.D.

Heating curves of aluminum oxide trihydrate and phase transformations in the substance in the course of their recording. Trudy IGEM 42:21-40 '60. (MIRA 13:7)
(Alumina) (Hydrates)

83296

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A051/A029

15 9130

AUTHORS: Grinberg, A.Ye.; Tavetkov, A.I.; Makeyeva, A.R.; Prashchikina, A.S.; Levitin, I.A.; Shapiro, A.L.; Mamayeva, I.A.

TITLE: The Synthesis and the Investigation of Rubber Mastication Accelerators

PERIODICAL: Kauchuk i Rezina, 1959, No. 10, pp. 35 - 39

TEXT: Numerous articles have been published on the subject of accelerating the mastication process both of natural and synthetic rubbers by using various organic compounds, such as mercaptanes, amines, nitro-compounds, nitroso-compounds, guanidines, etc. The present article deals with the different methods of obtaining them and the results of a comparative study of the action of dibenzoylsulfide and zinc thiobenzoate, which were the first substances to be recommended by the authors as accelerators (Ref. 4) in the mastication process in natural and synthetic [СКС-30 (SKS-30), СКН-26 (SKN-26)] rubbers. The effect of these two accelerators on the properties of the mixtures and vulcanizates were compared to Renacite IV and Peptone 22, two mastication accelerators used extensively in other countries. Dibenoylsulfide and thiobenzoate are non-toxic and are more easily

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The Synthesis and the Investigation of Rubber Mastication Accelerators

and simply to obtain than Renacite IV and Peptone 22. Dibenzoylsulfide has also a higher activity. Other chemical properties of the latter compound are listed (Ref. 6). The synthesis of dibenzoylsulfide for this study is outlined and the obtained product described in detail. Thiobenzoate was obtained from sodium thiobenzoate and zinc sulfate by means of a mutual exchange of the salts in an aqueous solution (Formula 1). The laboratory procedure is explained (Formulae 2, 3 and 4), and the experimental results discussed. It was seen that dibenzoylsulfide as a mastication accelerator of natural rubber, on the rollers and in the rubber mixer, surpasses Renacite IV, Peptone 22 and zinc thiobenzoate. It also accelerates the thermomastication of SKS-30 and SKN-26. Zinc thiobenzoate as an accelerator of mastication of natural rubber is equivalent to Renacite IV and Peptone 22. Dibenzoylsulfide and zinc thiobenzoate just as Renacite IV and Peptone 22 have no effect on the properties of raw mixtures and on the physico-mechanical properties of the vulcanizates. Mass production of dibenzoylsulfide and zinc thiobenzoate should be started, since they are simple to manufacture and have a high activity as accelerators of rubber mastication. There are 8 graphs, 4 tables and 6 references: 4 Soviet and 2 German.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy (Scientific Research Institute of Rubber and Latex Products)

3 (8)
AUTHORS: Tsvetkov, A. I., Val'yashikhina, Ye. P., SOV/20-127-6-38/51
Lar'kova, A. D.

TITLE: News About the Thermography of Gibbsite

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 6, pp 1280 - 1282 (USSR)

ABSTRACT: The problem of an endothermal peak of disintegration of the monohydrate - boehmite - (500 - 550°), occurring besides the principal peak of dehydration (300 - 350°) in the thermograms of gibbsite, has not yet been clarified. The most probable assumption was that the boehmite in well crystallized gibbsite can originate by crystal dehydration due to an increase in steam pressure in some places (Refs 10,11). The authors tried to check this assumption by experiment. They started from the presupposition that there must be a certain dependence between the dispersion degree of gibbsite and the value of the boehmite peak on the thermogram of the former. Thus, it would be sufficient to compare the thermograms of differently fine pulverized gibbsites under equal conditions. Gibbsite from the Zhuravlinskoye deposit in the South Ural was used for this

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purpose. Figure 1 shows the results. The thermograms proved to be peculiar in various respects: a) Concerning the boehmite effect, the thermograms show that it actually disappears when the crystals are pulverized, which confirms the assumption of reference 10. The dispersion degree of gibbsite exerts a very strong influence on the character and intensity of its phase transformations on heating. This contradicts the usual ideas (particularly of Ref 1). X-ray photographs at 400, 700 and 1000° did not produce the desired results. The authors, however, were able to find similar data in publications (Ref 1) concerning some silica-hydrate gels. Further investigations seem to be necessary. There are 1 figure and 15 references, 5 of which are Soviet.

ASSOCIATION: Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii Akademii nauk SSSR (Institute of Ore Deposit Geology, Petrography, Mineralogy, and Geochemistry of the Academy of Sciences, USSR)

PRESENTED: May 9, 1959, by N. M. Strakhov, Academician

SUBMITTED: May 7, 1959

SAPOZHNIKOV, D.G.; TSVETKOV, A.I.

Precipitation of hydrous calcium carbonate at the bottom of Lake Issyk-Kul'. Dokl.AN SSSR 124 no.2:402-405 Ja '59. (MIRA 12:1)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR. Predstavleno akademikom D.S. Korzhinskim.
(Issyk-Kul', Lake--Calcite)

TSVETKOV, A.I.

EPSHTEYN, V.G.; PROKOF'YEV, Ya.N.; MAKEYEVA, A.P.; TSVETKOV, A.I.; POZIN, A.A.; PRASHCHIKINA, A.S.

Butadiene-styrene resins as reinforcing agents for rubber mixtures. Khim.prom. no.5:261-265 Jl-Ag '57. (MIRA 10:12)

1.Nauchno-issledovatel'skiy institut rezinovykh izdeliy shirokogo potrebleniya i Yaroslavskiy tekhnologicheskiy institut.
(Rubber, Synthetic)
(Resins, Synthetic)

TSVETKOV, A.I.; TRUTNEV, N.A.

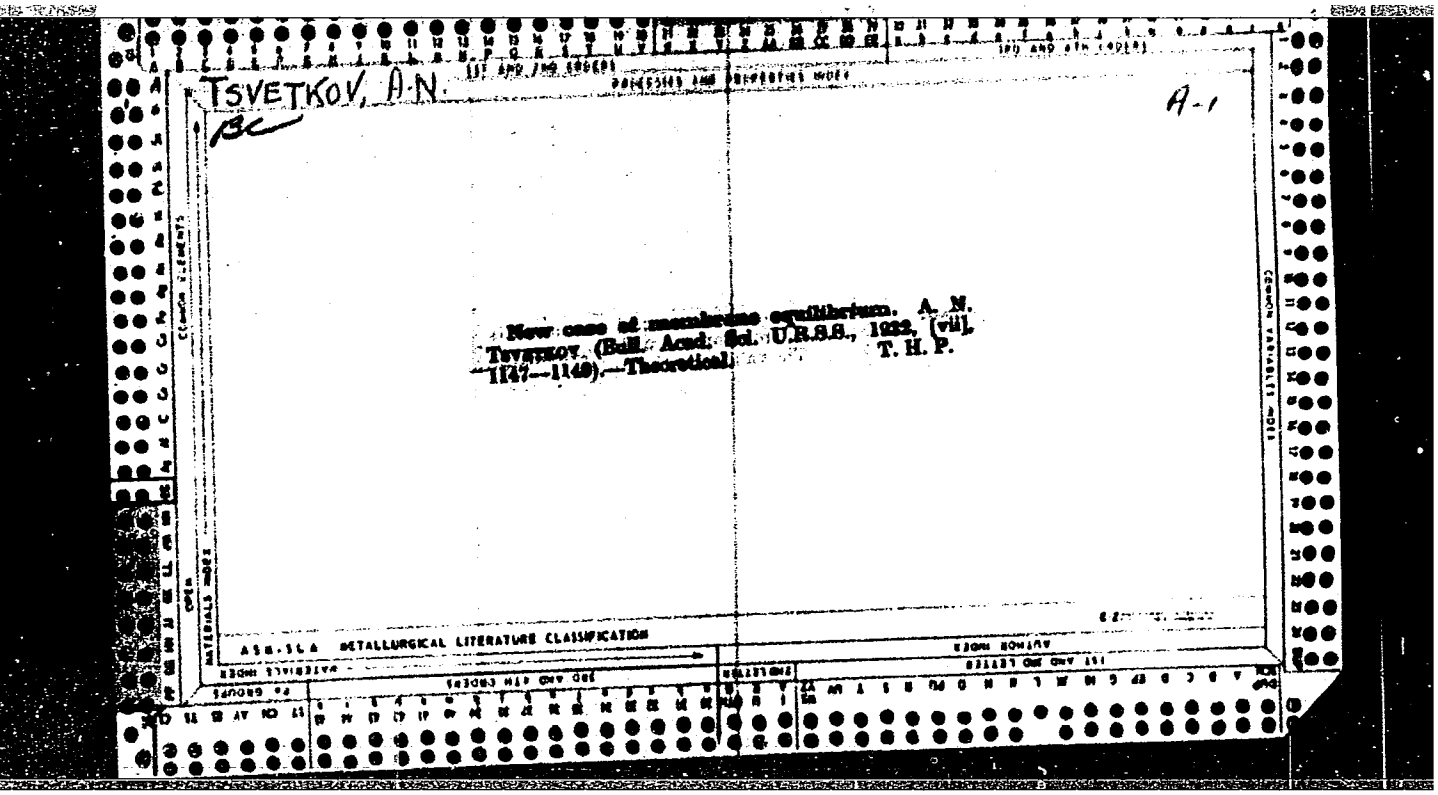
Work practice of innovators and progressive workers in factories producing rubber. Khim.prom.no.7:431-432 O-N '56. (MLRA 10:1)

1. Nauchno-issledovatel'skiy institut rezinovym izdeliy shirokogo potrebleniya.
(Boots and shoes) (Rubber goods)

PROSIN, Aleksandr Vasil'yevich; TSVETKOV, Aleksey Nikolayevich; SIFOROV, V.I., otv.red.; VOLKOVA, E.M., red.izd-va; GUSEVA, I.N., tekhn.red.

[Radio relay lines] Radiorelelnye linii sviazi. Moskva, Izd-vo Akad.nauk SSSR, 1958. 106 p. (MIRA 12:3)

1. Chlen-korrespondent AN SSSR (for Siforov).
(Radio relay systems)



TSVETKOV, A.N.

6(7) PHASE I BOOK EXPLOITATION SOV/1874

Prosin, Aleksandr Vasil'yevich, and Aleksey Nikolayevich Tsvetkov

Radioreleynyye linii svyazi (Radio Relay Systems) Moscow, Izd-vo AN SSSR, 1958. 106 p. (Series: Akademiya nauk SSSR. Nauchno-populyarnaya seriya) Errata slip inserted. 15,000 copies printed.

Resp. Ed.: V. I. Siforov, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: E.M. Volkova; Tech. Ed.: I.N. Guseva.

PURPOSE: This book may be useful to technical personnel working with radio relay equipment and systems.

COVERAGE: The authors discuss problems of constructing radio relay communication systems for long-distance telephony and television transmission. They describe the function, principles of operation, and basic circuits of radio relay systems operating at a distance of the normal horizon as well as those using long-distance tropospheric and ionospheric propagation of ultra short-waves. No personalities are mentioned. There are no references.

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Radio Relay Systems

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TSVETKOV,A.N.

Results of evaluating the quantitative mineral composition of certain types of high alumina content minerals by the thermal analytical method. Trudy Inst. geol. nauk no.157:5-29 '55.
(MLRA 8:6)

(Alumina) (Mineralogy, Determinative) (Thermal analysis)

ACC NR: AR7004288 SOURCE CODE: UR/0274/66/000/011/A010/A010

AUTHOR: Tsvetkov, A. N.

TITLE: Reducing mean loss in coded-data-transmission systems

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 11A77

REF SOURCE: Sb. 2-ya Vses. konferentsiya po teorii kodir. i yeye prilozh. Sekts. 3. Ch. 1. M., b.g., 64-71

TOPIC TAGS: data transmission, information processing, error correcting code

ABSTRACT: The transmission of a parameter taking on a continuum of values (e.g., code transmission of measurands) is considered. The problem is considered of optimization of a decision algorithm at the output of an information-transmission system for a fixed law of quantization of the message at its input. A case of mean-square error serving as a criterion is examined as an example. Optimization of quantization is reduced to an algorithm calculated on a digital computer. Estimated results show that the optimal quantization and optimal decision algorithm permit cutting down the mean-square error of transmission by 20--50% for a signal-to-noise power ratio under 2. Transmission of a parameter by error-correcting codes is considered. N. S. [Translation of abstract]

SUB CODE: 09, 17

Card 1/1 UDC: 621.991.1:519.2

TSVETKOV A.P.

98-58-7-21/21

AUTHOR: Taranovskiy, S.V., Doctor of Technical Sciences, Professor; and Tsvetkov, A.P., Engineer.

TITLE: **Corresponding Member** of the AS of the Republic of Czechoslovakia, Frantishek Yermarzh, "Hydrotechnical Locks, Hydraulic and Counterpoised, with Automatic Control", Praha, State Publishing House of Technical Literature, 1956.(Chlenkorr. AN Chekhoslovatskoy Respubliki Frantishek Yermarzh "Gidrotekhnicheskiye zatvory, vododeystvuyushchiye i uravnoveshennyye, s avtomaticheskim upravleniyem", Praga, Gosud. izd.tekhnicheskoy literatury, 1956.)

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo,1958,Nr 7,pp 62-64(USSR)

ABSTRACT: The authors review the above mentioned book, which can serve as a manual for hydrotechnicians and builders, as well as a textbook for students of vuzes. There are seven diagrams.

1. Books--Review

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67419
SOV/123-59-12-46771

18.7400
Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 12, p 120 (USSR)

AUTHOR: Tsvetkov, A.P.

TITLE: Reconditioning of Machine Parts by Metal Plating (Electric Metal Plating in an Air Jet)

PERIODICAL: Tekhn.-ekon. byul. Sovnarkhoz Amursk. ekon. adm. r-na, 1958, Nr 2, pp 26-27

ABSTRACT: The author investigates a new method of reconditioning machine parts of steel and cast iron by cold vibrocontact facing of metals and hard alloys in an electrolyte jet. The advantages of this method are: 1) the metal is brought onto the cold machine part, therefore no annealing, no lowering of mechanical properties, etc take place, which occur in facing with the aid of a gas flame. 2) the method ensures a stable adhesion to the surface of the machine part reconditioned. 3) the method is more simple, less expensive and more harmless than the galvanic method of reconditioning ma-

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67419
SOV/123-59-12-46771

Reconditioning of Machine Parts by Metal Plating (Electric Metal Plating in an Air Jet)

chine parts. 4) the method makes it possible to apply sintered hard alloys of the T15K16 type and others, 0.1 - 0.2 mm thick and more. Recommendations are given.

S.N.S.

4

Card 2/2

TARANOVSKIY, S.V., doktor tekhn.nauk, prof.; TSVETKOV, A.P., inzh.

"Hydraulic and balanced hydraulic gates with automatic control" by František Ermarž. Reviewed by S.V. Taranovskii, A.P. TSvetkov. Gidr. stroi. 27 no.7:62-64 Jl '58. (MIRA 11:8)
(Sluice gates) (Automatic control)

TSVETKOV, A.P.

BABKIN, S.I., kandidat tekhnicheskikh nauk; BAZILEVICH, B.K., professor, doktor tekhnicheskikh nauk; BEYZEL'MAN, [illegible], inzhener; BELYAYEV, V.N., kandidat tekhnicheskikh nauk; BINGER, I.A., kandidat tekhnicheskikh nauk; BOGUSLAVSKIY, P.Ye., kandidat tekhnicheskikh nauk; BOROVICH, L.S., kandidat tekhnicheskikh nauk; VOL'AIR, A.S., professor, doktor tekhnicheskikh nauk; GONIKBERG, Yu.M., inzhener; GORODETSKIY, I.Ye., professor, doktor tekhnicheskikh nauk; GORDON, V.O., professor; DIMSHTBERG, F.M., kandidat tekhnicheskikh nauk; DOSCHATOV, V.V., inzhener, IVANOV, A.G., kandidat tekhnicheskikh nauk; KIKASOSHVILI, R.S., professor; KODNIR, D.S., kandidat tekhnicheskikh nauk; KOLOMIYTSEV, A.A., kandidat tekhnicheskikh nauk; KRUTIKOV, I.P., kandidat tekhnicheskikh nauk; KUSHUL', M.Ya., kandidat tekhnicheskikh nauk; LEVENSON, Ye.M., inzhener; MAZYRIN, I.V., inzhener; MALININ, N.K., kandidat tekhnicheskikh nauk; MARTYNOV, A.I., kandidat tekhnicheskikh nauk; NIBERG, N.Ya., kandidat tekhnicheskikh nauk; NIKOLAYEV, G.A., professor, doktor tekhnicheskikh nauk; PETRUSEVICH, A.I., doktor tekhnicheskikh nauk; POZDNYAKOV, S.N., dotsent; POMAMOREV, S.D., professor, doktor tekhnicheskikh nauk; PRIGOROVSKIY, N.I., professor, doktor tekhnicheskikh nauk; PROKIN, B.A., kandidat tekhnicheskikh nauk; RESHETOV, D.N., professor, doktor tekhnicheskikh nauk; SATEL', E.A., professor, doktor tekhnicheskikh nauk; SERENSEN, S.V.; SLOBODKIN, M.S., inzhener; SPITSYN, N.A., professor, doktor tekhnicheskikh nauk; STOLBIN, G.B., kandidat tekhnicheskikh nauk; TAYTS, B.A., kandidat tekhnicheskikh nauk; TETEL'BAUM, I.M., kandidat tekhnicheskikh nauk; UMANSKIY, A.A., professor, doktor tekhnicheskikh nauk; FEODOS'YEV, V.I., professor, doktor tekhnicheskikh nauk;

(Continued on next card)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001757220003-4"

BABKIN, S.I.--- (continued) Card 2.
KHAYT, D.M., kandidat tekhnicheskikh nauk; ZYDLICV, V.Ya., kandidat tekhnicheskikh nauk; SHRAYBER, M.M., inzhener, nauchnyy redaktor; SHEDROV, V.S., kandidat tekhnicheskikh nauk, nauchnyy redaktor; TSVETKOV, A.P., dotsent, nauchnyy redaktor; SLESNIKOV, F.I., inzhener, nauchnyy redaktor; MARKUS, M.Ye., inzhener, nauchnyy redaktor; KARGANOV, V.G., inzhener, nauchnyy redaktor; SCHERKAS, N.S., doktor tekhnicheskikh nauk, professor, redaktor; SOKOLOV, T.F., tekhnicheskiy redaktor

[Manual of machinery manufacture] Spravochnik mashinostroitelia; v trekh tomakh. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry. Vol.3, 1951 1093 p. (MLRA 12:9)

1. Deystvitel'nyy chlen Akademii nauk USSR (for Sorensen)
(Machinery)

TARANOVSKIY, S.V., doktor tekhn.nauk, prof.; TSVETKOV, A.P., inzh.

"Crest gates, theiry composition and design" by F.Jermar [in Czech]. Reviewed by S.V.Taranovskii, A.P.TSvetkov. Gidr.stroi. 31 no.8: 63-3 of cover Ag '61. (MIRA 14:8)
(Gastes, Hydraulic) (Jermar, F.)

TSVETKOV, A.P., zasluzhennyy vrach RSFSR (Vologda, Sovetskiy pr., d.26, kv.18)

Non-parasitic pseudocyst of the spleen. Vest.khir. 78 no.3:110 Mr '57. (MIRA 10:6)

1. Iz khirurgicheskogo otdeleniya Vologodskoy gorodskoy detskoy bol'nitsy (gl. vrach - V.F.Gavrilenko).

(SPLEEN, cysts
non-parasitic pseudocyst (Rus))

TSVETKOV, A.P.

Twisted hydrosalpinx. Vest.khir.76 no.7:137 Ag '55.(MLRA 8:10)

1. Zasluzhennyy vrach RSFSR. 2. Iz khirurgicheskogo otdeleniya (zav.-A.P.Tsvetkov) Vologodskoy gorodskoy bol'nitsy.
(FALLOPIAN TUBES--OBSTRUCTIONS)

TSVETKOV, A.P.,; BAKLANOVA, V.Ya.

Multiple chylaceous cysts of the small intestine mesentery causing intestinal constipation. Khirurgiia, no.11:82 N '55 (MLRA 9:6)

1. Iz khirurgicheskogo otdeleniya Vologodskoy gorodskoy bol'nitsy.
(MESENTERY--CYSTS) (INTESTINES--OBSTRUCTIONS)

TSVETKOV, A.P., inzhener.

"Hydrotechnical gates with flat supporting sheathing." V.I.Petrashen'. Reviewed by A.P.TSvetkov. Gidr.stroi. 23 no.5:46 '54. (MLRA 7:8)
(Sluice gates) (Petrashen', V.I.)

TSVETKOV, A.F.

TSVETKOV, A.P., inzhener.

"Hydrotechnical gates with flat supporting sheathing." V.I.Petrashen'. Reviewed by A.P.TSvetkov. Gidr.stroi. 23 no.5:46 '54. (MLRA 7:8)
(Sluice gates) (Petrashen', V.I.)

TSVETKOV, A. P.

USSR/Engineering - Hydraulics, Structural Analysis Jan 52

"Formula for Preliminary Determination of the Weight of Sluice Gates," A. P. Tsvetkov, Engr

"Gidrotekh Stroi" No 1, pp 25-30

Develops new formula for detg wt of movable portion of flat gates. Formula eliminates majority of deficiencies incorporated in other existing formulas. It is based on assumption that gate represents a space system in which span pieces, plating and stringers jointly participate in total work of structure under bending load, creating joint moment of resistance.

212T59

TSVETKOV, A. P.

168T20

USSR/Engineering - Hydraulics Aug 50

"Roof-Shaped Water Gate," A. P. Tsvetkov, Engr

"Gidrotekh Stroi" No 8, pp 29-32

Discusses advantages of roof-shaped water-action gate and recommends application for small and medium hydraulic structures. Considers system very convenient for mass production of standard sections which may be assembled into complete gates of any size specified by GOST 4688-89. Analyzes characteristic curve and its effect on controllability of gate.

168T20

168T20

TSVETKOV, A. P.

Intestines - Obstructions

Retrograde intussusception. Khirurgiia No. 4, 1952

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

TSIMLYANSKIY, S.V., TSVETKOV, A.P.

Sluice Gates

Calculation of the performance of steel gates in hydrotechnical installations by the method of limiting state. Gidr. stroi. 21, no. 2, 1952.

MONTHLY LIST OF RUSSIAN ACCESSIONS, LIBRARY OF CONGRESS, JULY 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001757220003-4"

TSVETKOV, A. P.

Surgical Instruments and Apparatus.

Modified needle-holder. Khirurgiia. No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952 Uncl.

TSVETKOV, A. P.

Surgical Instruments and Apparatus

Modified needle-holder. Khirurgiia. No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952? Uncl.

TSVETKOV, A. P.

Rocks, Igneous

Isomorphic displacements in the non-alkaline pyroxene group. Trudy Inst. geol. nauk AN SSSR, no. 138, 1951

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

TSVETKOV, A.P.

Hydraulic Engineering

Formula for determining in advance the weight of flat gates. Gidr.stroi. 21, no.1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1952 ~~1953~~, Uncl.

[redacted], A. I.

Intestines - Obstructions

Retrograde intussusception. Khirurgiia No. 4, 1952

Monthly List of Russian Accessions, Library of Congress, August 1952, Unclassified.

TSVETKOV, A. S.

Anatomy of the arterial nenves of the human brain Molotov, Molotov-skoe obl. izd-vo, 1948. 124 p.

DAFM

1. Brain- Blood vessels.
2. Nerves, Cranial.

PRIVALOV, Ivan Ivanovich, 1891- ; TSVETKOV, A.T., redaktor; GAVRILOV, S.S., redaktor.

[Analytic geometry] Analiticheskaia geometriia. Izd. 18., chastichno perer.i dop. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1953. 360 p. (MLRA 7:2)

(Geometry, Analytic)

MARKUSHEVICH, A.I.; TSVETKOV, A.T., redaktor; NEGRIMOVSKAYA, R.A., tekhnicheskiy redaktor

[Complex numbers and conformal representations] Kompleksnye chisla i konformnye otobrazheniia. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1954. 51 p. (Populiarnye lektsii po matematike, no.13)
(Numbers, Complex) (MLRA 7:10)
(Surfaces, Representation of)

EL'SGOL'TS, L.E.; TSVETKOV, A.T., redaktor; GAVRILOV, S.S., tekhnicheskiy redaktor

[Ordinary differential equations] Obyknovennye differentsial'nye uravneniia. Izd. 2-e. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1954. 239 p. (Fiziko-matematicheskaia biblioteka inzhenera) (MLRA 8:5)

(Differential equations)

ANDREYEV, P.P.; GLAGOLEVA, A.A., professor, redaktor; TSVETKOV, A.T., redaktor; AKHLAMOV, S.N., tekhnicheskiy redaktor.

[Course in elementary geometry for technical schools] Kurs elementarnoi geometrii dlia tekhnikumov. Pod.red. A.A.Glagoleva. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1954. 266 p. (MLRA 7:10)
(Geometry--Study and teaching)

PRIVALOV, I.I.; TSVETKOV, A.T., redaktor; AKHLAMOV, S.N., tekhnicheskiy redaktor.

[Analytic geometry] Analiticheskaia geometriia. Izd. 19-e. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1954. 299 p. (MLRA 7:10)
(Geometry, Analytic)

IYERUSALIMSKIY, A.M.; TSVETKOV, A.T., redaktor; GAVRILOV, S.S., tekhnicheskiy redaktor

[Descriptive geometry] Nachertatel'naia geometriia. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1954. 304 p. (MLRA 8:4)
(Geometry, Descriptive)

KRYLOV, A.N.; TSVETKOV, A.T., redaktor; GAVRILOV, S.S., tekhnicheskiy redaktor.

[Lectures on approximate computation] Lektsii o priblizhennykh vychisleniiakh. Izd. 6-e. Moskva, Gos.izd-vo tekhniko-teoret.lit-ry, 1954. 398 p. (MLRA 8:6)
(Approximate computation)

PRIVALOV, I.I.; TSVETKOV, A.T., redaktor.

[Introduction to the theory of the functions of complex variables] Vvedenie v teoriiu funktsii kompleksnogo peremennogo. Izd. 9-e. Moskva, Gos. izd-vo tekhniko-teoret. lit ry, 1954. 444 p.(MLRA 7:8) (Functions of complex variables)

DEMIDOVICH, B.P.; TSVETKOV, A.T., redaktor; MURASHOVA, N.Ya., tekhnicheskiy redaktor.

[Collection of problems and exercises in mathematical analysis] Sbornik zadach i uprazhnenii po matematicheskomu analizu. Izd. 2-e, ispr. i dop. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1954. 511 p. (MLRA 8:1)
(Functions)

PRIVALOV, I.I.; TSVETKOV, A.T., redaktor; AKHLAMOV, S.N., tekhnicheskiy redaktor

[Analytic geometry] Analiticheskaia geometriia. Izd- 20-e, stereotipnoe. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1955. 299 p. (Geometry, Analytic) (MLRA 8:7)

EL'SGOL'TS, Lev Ernestovich; TSVETKOV,A.T., redaktor; GAVRILOV,S.S., tekhnicheskiy redaktor

[Qualitative methods in mathematical analysis] Kachestvennye metody v matematicheskom analize. Moskva, Gos.izd-vo tekhniko-teoret. lit-ry, 1955. 300 p. (MLRA 9:2)
(Calculus)

MINORSKIY, Vasiliy Pavlovich; TSVETKOV, A.T., redaktor; MURASHOVA, N.Ya. tekhnicheskiy redaktor.

[Collection of problems in higher mathematics] Sbornik zadach po vysshei matematike. Izd.3-e. Moskva, Gos.izd-vo tekhniko teoret. lit-ry, 1955. 359 p; (MLRA 8:11)
(Mathematics--Problems, exercises, etc.)

MINORSKIY, Vasiliy Pavlovich; TSVETKOV, A.T., red.; MURASHOVA, N.Ya., tekhn. red.

[Problems in higher mathematics] Sbornik zadach po vysshei matematike. Izd.4., stereotipnoe. Moskva, Gos.izd-vo tekhniko-teoret. lit-ry, 1957. 359 p. (MIRA 16:8)
(Mathematics—Problems, exercises, etc.)

TSVETKOV, A.I.; VAL'YASHIKHINA, Ye.P.

Concerning E.G. Proshchenko's article "Natural magnesium tetrahydo-sulfate." Min. sbor. no.15:405-406 '61. (MIRA 15:6)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.
(Magnesium sulfate)
(Proshchenko, E.G.)

GORDON, Vladimir Osipovich; prof.; SEMENTSOV-OGIYEVSKIY, Mikhail Alekseyevich [deceased]; TSVETKOV, A.T., red.; MURASHOVA, N.Ya., tekhn.red.

[A course in descriptive geography] Kurs nachertatel'noi geometrii. Izd.13, stereotipnoe. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1960. 404 p. (MIRA 14:3)
(Geometry, Descriptive)

PRIVALOV, Ivan Ivanovich; TSVETKOV, A.T., red.; BRUDNO, K.F., tekhn.red.

[Introduction to the theory of functions of complex variables] Vvedenie v teoriiu funktsii kompleksnogo peremennogo. Izd.10. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1960. 444 p. (MIRA 13:11)

(Functions of complex variables)

TSVETKOV, A. I.

GOKHMAN, Yeliazar Khaimovich; TSVETKOV, A.T., red.; TUMARKINA, N.A., tekhn.red.

[Stieltjes integral and its application] Integral stil't'esa i ego prilozheniia. Moskva, Gos. izd-vo fiziko-matematicheskoi lit-ry, 1958. 191 p. (MIRA 11:4)
(Integrals)

PROSKURYAKOV, Igor' Vladimirovich; FEDOROV, Yu.G., red.; TSVETKOV, A.T., red.; MURASHOVA, N.Ya., tekhn.red.

[A collection of problems in linear algebra] Sbornik zadach po lineinoi algebre. Moskva, Gos.izd-vo tekhniko-teoret. lit-ry, 1957. 368 p. (MIRA 11:2)
(Algebra--Problems, exercises, etc.)

BAKHVALOV, Sergey Vladimirovich, MODENOV, Petr Sergeyevich; PARKHOMENKO, Aleksey Serapionovich; TSVETKOV, A.T., redaktor; GAVRILOV, S.S., tekhnicheskiy redaktor

[Collection of problems in analytic geometry] Sbornik zadach po analiticheskoi geometrii. Izd. 2-oe, perer. Moskva, Gos. izd-vo tekhniko-teoret.lit-ry, 1957. 384 p. (MLRA 10:10)
(Geometry, Analytic--Problems, exercises, etc.)

ANDREYEV, Pavel Pavlovich; TSVETKOV, A.T., redaktor; TUMARKINA, N.A., tekhnicheskiy redaktor

[A course in elementary geometry for technical schools] Kurs elementarnoi geometrii dlia tekhnikumov. Izd. 3-e. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 240 p. (MLRA 9:11)
(Geometry)

RASHEVSKIY, Petr Konstantinovich; TSVETKOV, A.T., redaktor; GAVRILOV, S.S., tekhnicheskiy redaktor

[A course in differential geometry] Kurs differentsial'noi geometrii. Izd. 4-oe. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 420 p. (Geometry, Differential) (MLRA 9:10)

BOLTYANSKIY, Vladimir Grigor'yevich; TSVETKOV, A.T., redaktor; AKHLAMOV, S.N. tekhnicheskiy redaktor

[Figures of equal size and construction] Ravnovelikie i ravnosostavlennye figury. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 62 p. (Populiarnye lektsii po matematike, no.22) (MLRA 9:9)
(Geometrical drawing)

CHETVERUKHIN, Nikolay Fedorovich; LEVITSKIY, Vladimir Sergeyevich; PRYANISHNIKOVA, Zoya Ivanovna, TEVLIN, Abram Maksimovich, FEDOTOV, Georgiy Ivanovich; KOTOV, I.I., redaktor; TSVETKOV, A.T., redaktor; GAVRILOV, S.S., tekhnicheskiy redaktor

[A course in descriptive geometry] Kurs nachertatel'noi geometrii. Pod red. N.F.Chetverukhina. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 435 p. (MLRA 10:2)
(Geometry, Descriptive)

POSVYANSKIY, A.D.; RYZHOV, N.N.; CHETVERUKHIN, N.F., redaktor; TSVETKOV, A.T., redaktor; TUMARKINA, N.A., tekhnicheskiy redaktor

[A collection of problems in descriptive geometry] Sbornik zadach po nachertatel'noi geometrii. Pod red. N.F.Chetverukhina. Moskva, izd-vo tekhniko-teoret. lit-ry, 1956. 280 p. (MLRA 10:3)
(Geometry, Discriptive--Problems, exercises, etc.)

TSVETKOV, A.T.

CHETVERUKHIN, N.F., redaktor; BESKIN, N.M., redaktor; TSVETKOV, A.T., redaktor; MEGRIMOVSKAYA, R.A., tekhnicheskiy redaktor.

[Methods of descriptive geometry and its application; a collection of articles] Metody nachertatel'noi geometrii i ee prilozheniia; sbornik statei. Moskva, Gos.izd-vo tekhniko-teoret.lit-ry, 1955. 411 p. (MLRA 8:12)

(Geometry, Descriptive)

89815

1.5100 2908

S/193/60/000/006/006/015
A004/A001

AUTHOR: Tsvetkov, A.V.

TITLE: Copy Grinding Machine for the Machining of the Outer Contours of Turbine Blades

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No. 6, pp. 24 - 26

TEXT: The Leningrad branch of the Vsesoyuznyy proyektno-tekhnologicheskiy institut tyazhelogo mashinostroyeniya (All-Union Technological Planning Institute of Heavy Machinery) has designed a copy grinding machine for the tooling of turbine blade profiles. This machine was built by the Leningradskiy metallicheskiy zavod im. Stalina (Leningrad Metallicheskiy Plant im. Stalin) in 1959. The machine housing is a welded plate-steel structure with a coolant container inside. The housing is mounted on a cast iron base plate and houses also the coolant pump. Spindle stock 2, representing a two-arm lever, is mounted on two antifriction bearings 1. Cast iron plate 4 is fastened to welded stock housing 3. The spindle carrying grinding wheel 5 is mounted on antifriction bearings. The spindle is actuated by a 10-kw electromotor through a V-belt drive. Copy roll mechanism 6 with

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Copy Grinding Machine for the Machining of the Outer Contours of Turbine Blades

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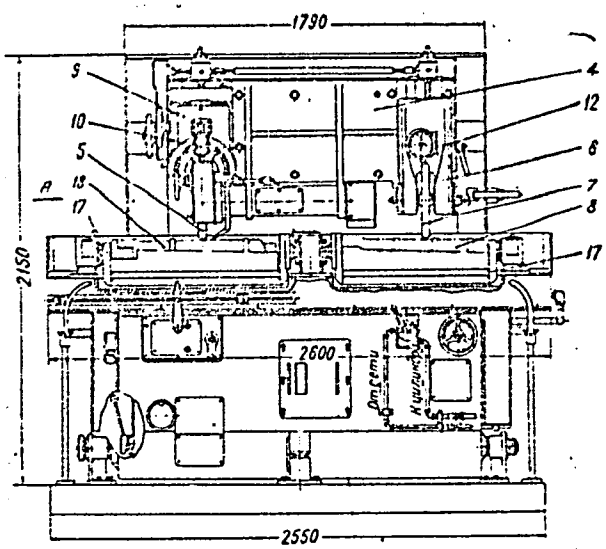
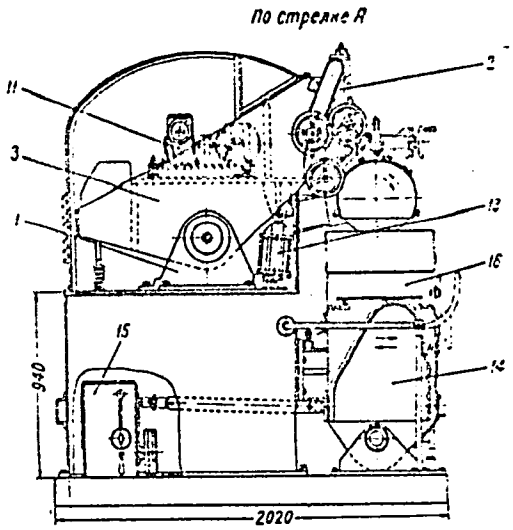
A004/A001





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S/193/60/000/006/006/015
A004/A001

Copy Grinding Machine for the Machining of the Outer Contours of Turbine Blades

copying roll 7 and template 8 are mounted on the right bedways of plate 4, while wheel dressing assembly 9 is mounted on the left bedways. Bracket 10 carrying a diamond pencil can be displaced in vertical and horizontal direction and along the circumferential curve. For the dressing of the wheel by a roller the machine is equipped with additional drive 11 consisting of a 0.6-kw electromotor, worm reducer with a gear ratio of 1:30, free wheeling clutch and V-belt drive. The vertical displacement of the bracket with the diamond pencil is kinematically connected to the vertical displacement of the copying roll, so that a reduction in diameter of the grinding wheel after each dressing is compensated for by a readjustment of the copying roll. The copying roll slide can be displaced independently by the hand wheel 12, which is used when turbine blades with big allowances are machined, requiring more than one pass. The grinding machine is equipped with pneumatic cylinder 13 for swivelling the spindle stock when the workpiece is set or the ready turbine blade is removed, or when one template is replaced for another. Rocking table 14 is mounted in front of the machine bed. To reduce the inertial force the table body is cast of silumin. On the bedways of the rocking table, upper silumin table 16 is mounted carrying two rockers 17. One rocker is

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A004/A001

Copy Grinding Machine for the Machining of the Outer Contours of Turbine Blades

intended to clamp template 8, the other to clamp workpiece 18. The blade is profiled by transverse infeed grinding, while periodical longitudinal feed shifts the grinding wheel to the next infeed line. The author presents the following technical specifications: grinding wheel diameter - 320 - 400 mm; wheel width - 25 - 40 mm; maximum rocker angle of rotation - $\pm 90^{\circ}$; maximum rocking angle of table - $\pm 18^{\circ}$; maximum length of the effective part of the blade being machined 700 mm; number of double-motions of the table per minute - 7.5-45.; the magnitude of the longitudinal feed of the upper table is regulated in the range from 0 to 8 mm; overall dimensions (length x width x height) - 2,670 x 2,140 x 2,800 mm; weight - 2,100 kg. There is one figure.

Card 4/4

IVANOV, S.A., inzh.; STAROVEROV, M.I.; KHARADZHA, F.N., prof.; TSVETKOV, A.V., inzh.

Surface insulation strength of the glass bulbs of high-voltage vacuum apparatus operating in compressed gas media. Elektrichestvo no.7:29-31 Jl '64. (MIRA 17:11)

1. Leningradskiy elektrotekhnicheskiy institut im. Ul'yanova (Lenina).

DOLGOV, V.A., inzh.; VAKHTER, M.L., inzh.; TSVETKOV, A.V., inzh.

Copying-grinding lathes for processing turbine blades of varying shapes. Energomashinostroenie 7 no.3:32-34 Mr '61. (MIRA 16:8)

(Lathes) (Turbines--Blades)

TSVETKOV, A. V

89741

1.5100 2908 S/114/61/000/003/002/002
E194/E235

AUTHORS: Dolgov, V. A., Vakhter, M. L. and Tsvetkov, A. V., Engineers

TITLE: A Copying-Grinding Machine for Machining Turbine Blades of Varying Profile

PERIODICAL: Energomashinostroyeniye, 1961, No. 3, pp. 32-34

TEXT: The most complicated operation in blade manufacture is grinding the blade profile. Until recently, at the Leningradskiy metallicheskiy zavod (Leningrad Metal Works) and other turbine manufacturers this operation has been carried out manually. The work is heavy and the metal is annealed locally because the pressure applied to the grinding wheel is uneven. In recent years many attempts have been made to mechanize the operation. After prolonged experimental and development work, the Leningrad Metal Works (LMZ) has developed two machines for grinding large turbine blades of variable profile. One of these machines was designed by the Leningrad Branch of VPTI (Designer M. A. Borukhzon) the other was developed at the LMZ; both give good and stable results. Deviations permitted from the theoretical profile do not exceed

Card ~~1/8~~

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S/114/61/000/003/002/002
E194/E235

A Copying-Grinding Machine for Machining Turbine Blades of Varying Profile

0.1-0.15 mm. The copying and grinding machine designed by the Leningrad branch of VPTI is based on mechanical copying of a model. The main feed of model and blank is provided through a special drive and distribution mechanism and the profiling feed is derived from the pressure of the model on a copying roller. The grinding is performed in transverse strokes and transition from one stroke to the next occurs on the overrun. Outline drawings of the machine are given in Fig. 1 and a detailed description of the mechanism is given. The copying roller 10 bears on the model 11 which operates on the grinding wheel 3 cutting the blank 2. The special drive 17 is provided for trimming the grinding wheel with an industrial diamond. The principles of operation are described. The method of grinding blades is illustrated in Fig. 2 the initial position of the blade and grinding wheel is shown in Fig. 2a. Blade section 1-2 is ground by rotating it round an axis, as point 2 is reached the cam mechanism arrests rotation and starts displacing the table so that the section 2-3 is ground. The feed

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is maintained constant to ensure evenness of finish by appropriate profiling of the cam. The cam is displaced relative to the blade whilst on the overrun section 3-4. Blades up to 780 mm long can be ground, the maximum diameter of the grinding wheel is 400 mm and the least diameter 320 mm. The number of double strokes of the operating table per minute is 7.5-45, the grinding wheel runs at a speed of 1440 r.p.m. and the overall dimensions of the machine, length, width and height are 2670 x 2140 x 2800 mm. A defect of the machine is that the grinding wheel wears during the process of grinding and this causes some error in the blade profile. The machine developed by the LMZ is then described, it is a special machine Type 1C-96 (1S-96) of the "Stankonstruktsiya" Works which was modernized and made into a semi-automatic copying machine for grinding the backs of variable profile blades. The modernization consisted in reconstructing the polishing head and developing a device for turning the blade and model, in providing an oil cooling system and other minor reconstructions. An outline drawing

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of the machine is given in Fig. 3 and the construction is briefly described. It can deal with blades up to 760 mm long at a cutting speed of 25 m/sec, the table being displaced at a rate of 3250 mm/min. This machine has an abrasive belt which can make a cut up to 1 mm deep. The feed is controlled by a copying roller acting on the model. The amount of cross-feed depends on the shape of the blade and ranges from 1.5 to 4 mm. The pressure of the belt on the model is constant at 10 kg, the working part of the belt is 25 mm wide. The machine time for grinding a blade is 15-20 minutes depending upon the length and shape. A copious supply of cooling oil is provided during the grinding operation. The abrasive belts have a linen base with white electro-corundum of No. 46 grain size. The accuracy of the finished profile is within 0.1 mm over the length of the blade. This method of grinding has a number of advantages, it is very accurate, a good class 7 finish is obtained. The metal that is left on the blades after milling, 0.5-1 mm is removed in a single operation. The main difficulties with the

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machine are inadequate stability of the grinding belts and the high consumption of oil which must be frequently replaced because of contamination with cuttings and abrasives. Cooling with emulsion type lubricants is required and water resistant belts are needed. However, the use of automatic grinding has reduced the manufacturing costs and improved turbine efficiency. A full range of grinding machines for turbine blades should be developed. There are 3 figures and 3 tables.

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TSVETKOV, A.V.

Copying grinding machine for machinirg external profiles of turbine blades. Biul.tekh.-ekon.inform. no.6:24-26 '60. (MIRA 13:8)

(Grinding machines)

TSVETKOV, A.V.; KHARAKER, G.M.; KUZNETSOVA, M.I., red.; VIKTOROVA, Z.N., tekhn. red.

[Introducing multiple machining in the machinery industry] Vnedrenie gruppovoi tekhnologii v mashinostroenii. Moskva, TSINTIMASH, 1961. 61 p. (MIRA 16:5)
(Machinery industry) (Metalwork)

TSVETKOV, A. Y., DOGADKIN, B. A., SANDOVIRSKIY, D. M., KHELLER, T.Y., FEDROVA, S. A., BAKSHT, O. V., and RASHIVAHINA, K. Y.

"Oxidation of Buna in solution," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Moscow Polytechnic Institute.

B-3,084,395

SKAZIN, Nikolay Ivanovich; TSVETKOV, B., red.

[Fish pathways] Ryb'i tropy. Volgograd, Nizhne-Volzhskoe knizhnoe izd-vo, 1964. 64 p. (MIRA 18:2)

BURAVKOV, Boris Fedorovich; VETLUGIN, Aleksey Pavlovich; TSVETKOV,B., red.

[Scouts of the plant; from the work practice of party and state control groups and posts in the Sebryakovo Cement Plant] Dozornye zavoda; iz opyta raboty grupp i postov sodeistviia partiino-gosudarstvennomu kontroliu na Sebriakovskom tsementnom zavode. Volgograd, Nizhne-Volzhskoe knizhnoe izd-vo, 1964. 34 p. (MIRA 18:3)

ANTONOV, V.Ya., kand.tekhn.nauk; BEZZUBOV, N.D., kand.tekhn.nauk; BELOKOPYTOV, I.Ye., kand.sel'skokhoz.nauk; BLYUMENBERG, V.V., kand.tekhn.nauk; BOGDANOV, N.N., kand.tekhn.nauk; BRAGIN, N.A., inzh.; VASIL'YEV, Yu.K., inzh.; VINOGRADOV, V.A., inzh.; ROZENBERG, B.I., inzh.; GORGIDZHANYAN, S.A., kand.tekhn.nauk; ZIZA, A.A., kand.sel'skokhoz.nauk; KALABUKHOV, M.V., agronom-meliorator; KOLOTUSHKIN, V.I., inzh.; KORCHUNOV, S.S., kand.tekhn.nauk; KRYUKOV, M.N., dotsent; VAVULO, V.A., inzh.; NAUMOV, D.K., kand.tekhn.nauk; OLENIN, A.S., inzh.; PROVORKIN, A.S., inzh.; PROKHOROV, N.I., dotsent; RASKIN, G.I., inzh.; SAVENKO, I.V., inzh.; SERGEYEV, B.F., kand.tekhn.nauk; STOYLIK, M.A., inzh.; SUKHANOV, M.A., inzh.; TOPOL'NITSKIY, N.M., kand.tekhn.nauk; TYURYUNOV, S.N., doktor biol.nauk, prof.; FATCHIKHINA, O.Ye., kand.sel'skokhoz.nauk; TSVETKOV, B.I., inzh.; CHUBAROV, N.D., inzh.; MANDEL'BAUM, A.I., inzh.;

(Continued on next card)

ANTONOV, V.Ya.---(continued) Card 2.

YARTSEV, A.K.; SAMSONOV, N.N., inzh., glavnyy red.; BERSHADSKIY, L.S., inzh., nauchnyy red.; VAREMTSOV, V.S., kand.tekhn.nauk, nauchnyy red.; VYSOTSKIY, K.P., kand.tekhn.nauk, nauchnyy red.; GORINSHTEYN, L.L., kand.tekhn.nauk, nauchnyy red.; GORYACHKIN, V.G., prof., nauchnyy red.; YEFIMOV, P.N., kand.tekhn.nauk, nauchnyy red.; KUZHMAN, G.I., kand.tekhn.nauk, nauchnyy red.; KULAKOV, N.N., kand. tekhn.nauk, nauchnyy red.; KUTAIS, L.I., prof., doktor tekhn.nauk, nauchnyy red.; MIRKIN, M.A., inzh., nauchnyy red.; SEMENSKIY, Ye.P., kand.tekhn.nauk, nauchnyy red.; SOKOLOV, A.A., kand.tekhn.nauk, nauchnyy red.; KHAZANOV, Ya.N., dotsent, nauchnyy red.; KHALUGO, A.K., inzh., nauchnyy red.; TSUPROV, S.A., dotsent, nauchnyy red.; SHTEYNBOK, G.D., inzh., nauchnyy red.; KOLOTUSHKIN, V.I., red.; SKVORTSOV, I.M., tekhn.red.

[Reference book on peat] Spravochnik po torfu. Moskva, Gos.energ. izd-vo, 1954. 728 p. (MIRA 13:7)

1. Chlen-korrespondent AN BSSR (for Goryachkin).
(Peat--Handbooks, manuals, etc.)

POLYAKOV, V.F., inzh.; NIKITIN, V.[illegible], inzh.; RYSIN, V.I., inzh.; KOCHETOVA, V.I.; [illegible], Ya.P.; MUDRENOVA, A.V.; TSVETKOV, M.; VLADIMIROV, A.N.

Exchange of experience between the enterprises of economic councils. Torf. prom. 38 no.4:31-35 '61. (MIRA 14:9)

1. Sverdlovskaya fabrika Izoplit (for Polyakov). 2. Demidovskoye predpriyatiye Gor'kovskogo Soveta narodnogo khozyaystva (for Nikitin). 3. Predpriyatiye Radovitskiy mokh Moskovskogo oblastnogo Soveta narodnogo khozyaystva (for Rysin). 4. Komsomol'skoye torfotransportnoye upravleniye Ivanovskogo Soveta narodnogo khozyaystva (for Kochetova, Tolubeyeva, and Mudrenova). 5. Predpriyatiye Kimrskogo lensovnarkhoza (for Vladimirov).
(Peat machinery)

BABENKO, Aleksey Ivanovich; TSVETKOV, B., red.

[There where we live; from the work experience of a street committee] Tam, gde my zhivem; iz opyta raboty ulichnogo komiteta. Volgograd, Volgogradskoe knizhnoe izd-vo, 1963. 21 p. (MIRA 18:2)