

SOKOLOV, P.V., kandidat fiziko-matematicheskikh nauk.

Applying the set compactness of functions to differential
equations with discontinuous right side. Uch.zap.Penz.gos.
ped.inst. no.2:47-60 '55. (MLRA 10:2)

(Differential equations)

SOKOLOV, P.V. (Penza)

Remarks on A.V. Pkhakadze and A.A. Shestakov's article "Classification of the singular points of a first-order differential equation unsolved with respect to the derivative." Mat. sbor. 53 no. 4:541-543 Ap '61. (MIRA 14:5)

(Differential equations)
(Pkhakadze, A.V.) (Shestakov, A.A.)

OZHINSKIY, I.S.; SOKOLOV, P.V.; YUFA, B.Ya.; CHUMACHENKO, Z.N., red.
izd-va; BYKOZA, V.V., tekhn. red.

[How to search for uranium ores]Kak iskat' uranovye rudy. Izd.2.,
ispr. i dop. Moskva, Gosgeoltekhizdat, 1962. 55 p. (MIRA 16:3)
(Prospecting) (Uranium ores)

SOKOLOV, P.V., dotsent, kand.ekonomicheskikh nauk

Militarist nature of the modern state-monopoly capitalism. Mor.
sbor. 46 no.5:35-43 My '63. (MIRA 16:4)
(Capitalism) (Militarism)

REMPER', A.M.; SUKHOV, P.V.; KOPEYKIN, A.A., glavnyy red.; ROKHVARGER, Ye. L.,
zamestitel' glavnogo red.; VASYUTINSKAYA, A.A., red.; GARTSMAN, B.M.,
red.; ZAYONTS, R.M., red.; LUNDINA, M.G., red.; NOSOVA, Z.A., red.;
PETROV, N.A., red.; RIVKIN, A.M., red.; ROMANOV, P.R., red.;
SOKOLOV, P.V., red.; FEYN, Yu.E., red.; KOSYAKINA, Z.K., red.;
KASIMOV, D.Ya., tekhn.red.

[Research on clay materials] Issledovanie glinistogo syr'ia. Moskva,
Gosstroizdat, 1963. 119 p. (Kuchino. Gosudarstvennyi nauchno-
issledovatel'skii institut stroitel'noi keramiki. Trudy, no.22).
(MIRA 17:3)

ACCESSION NR AM4008935

BOOK EXPLOITATION

S/

Sokolov, Petr Vasil'yevich (Candidate of Economical Sciences, Docent in the Department of Political Economy)

War and human resources (Voyna i lyudskiye resursy*), Moscow, Voenizdat, 1961, 137 p. 20,000 copies printed.

TOPIC TAGS: military reserve, wartime mobilization, logistics, labor force, casualties, human resources

PURPOSE AND COVERAGE: This book examines the problem of human resources in war, which are an important indicator of the military potential of states and have an effect on the course and outcome of armed conflicts. The book throws some light on the human composition of the armed services, changes in the size of armies, training of military reserves in connection with the change in the materiel-technical base of war, with the development of rocket-nuclear weapons; the sources of human resources and also the factors affecting the capacity for military and labor mobilization of the populace are discussed. The book does not pretend to give an exhaustive answer to all these questions. On the basis of the experience gained in past world wars and analysis of contemporary circumstances certain problems of human resources in war are considered; the need for a detailed study of the econo-

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mic and human resources of the aggressive imperialistic states is underscored. The book is written in the vernacular and is intended for the mass reader.

TABLE OF CONTENTS [abridged]:

Introduction - - 3

Ch. I. The armed services' requirements for human resources - - 8

Ch. II. The problem of the labor force - - 70

Ch. III. The use of human resources under wartime conditions - - 110

SUB CODE: AD

SUBMITTED: 06Sep61

NR REF SOV: 186

OTHER: 040

DATE ACQ: 27Feb64

Card 2/2

SOKOLOV, Petr Vladimirovich, dotsent; PEYCH, N.N., retsenzent; TSITSURA,
N.M., retsenzent; SERGOVSKIY, P.S., redaktor; FEDOROV, B.M., redaktor;
KARASIK, N.P., tekhnicheskij redaktor.

[Drying lumber] Sushka drevesiny. Moskva, Goslesbunizdat, 1955. 422 p.
(Lumber--Drying) (MIRA 9:6)

SOKOLOV, Petr Vladimirovich; SERGOVSKIY, P.S., redaktor; BEL'CHENKO, N.I.,
redaktor izdatel'stva; SHITS, V.P., tekhnicheskiy redaktor

[Accelerated methods of drying wood; dry kilns and drying in
hydrophobic liquids] Uskorennye sposoby sushki drevesiny;
kamernaia sushka i sushka v gidrofobnykh zhidkostiakh. Moskva,
Goslesbumizdat, 1956. 81 p. (MLRA 9:10)

1. Dotsent Lesotekhnicheskoy akademii im. S.M.Kirova (for Sokolov)
(Lumber--Drying)

SERGOVSKIY, Pavel Semenovich, prof., doktor tekhn.nauk; CHUDINOV, B.S.,
retsensent; SOKOLOV, P.V., red.; SIDEL'NIKOVA, L.A., red.izd-va;
BACHURINA, A.M., tekhn.red.

[Hydrothermal treatment of wood] Gidrotermicheskaya obrabotka
drevesiny. Moskva, Goslesbunizdat, 1958. 440 p. (MIRA 12:3)

1. Kafedra lesopil'no-strogal'nykh proizvodstv Lesotekhnicheskoy
akademii im. S.M.Kirova (for Chudinov).
(Wood)

SOKOLOV, Petr Vladimirovich, dotsent; PEYCH, N.N., retsenzent; TSITSURA,
N.M., retsenzent; SERGOVSKIY, P.S., red.; BEL'CHENKO, N.I.,
red.izd-vn; KUZNETSOVA, A.I., tekhn.red.

[Drying of wood] Sushka drevesiny. Izd.2., perer. Moskva,
Goslesbumizdat, 1960. 426 p. (MIRA 13:12)
(Lumber--Drying)

VLASOV, Georgiy Dmitriyevich, prof., doktor tekhn.nauk; KULIKOV, Valentin Anatol'yevich, dotsent, kand.tekhn.nauk; RODIONOV, Sergey Vasil'yevich, dotsent, kand.tekhn.nauk. Primalni uchastiye: SOKOLOV, P.V., dotsent, kand.tekhn.nauk; SAPOZHNIKOV, A.K., inzh.; NEKHAMKIN, N.O., red.; VOLOKHONSKAYA, L.V., red.izd-va; KORNYUSHINA, A.S., tekhn.red.

[Technology of the woodworking industries] Tekhnologiya derevo-
obrabatyvaiushchikh proizvodstv. Moskva, Goslesbumizdat, 1960. 566 p.
(MIRA 13:9)

(Woodworking industries)

SOKOLOV, Petr Vladimirovich; SHORNIKOV, Yevgeniy Alekseyevich;
GOLUBEVA, T.M., red.; VENTSEL', I.V., red. izd-va;
BELOGUROVA, I.A., tekhn. red.

[Centralized control and automatic regulation of conditions in lumber drying kilns] Tsentralizovannyi kontrol' i avtomaticheskoe regulirovanie rezhimov v lesosushil'nykh kamerakh. Leningrad. No.1. 1963. 20 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriya: Derevoobrabatyvaiushchaia promyshlennost', no.5) (MIRA 16:12)

(Lumber---Drying) (Automatic control)

KOBLIKOVA, Aleksandra Georgiyevna, dots., kand. tekhn. nauk;
KUZ'NINOV, G.P., dots., kand. tekhn. nauk, retsenzent;
CHUDNOV, B.S., dots., kand. tekhn. nauk, retsenzent;
SOKOLOV, P.V., dots., kand. tekhn. nauk, otv. red.;
BEZGODOVA, L.V., red.

[Hydrothermal processing of wood; calculations of kilns
for drying lumber in superheated steam. Manual on course
planning for the students of the faculty of the mechanical
technology of wood] Gidrotermicheskaia obrabotka drevesiny;
raschet kamer dlia sushki pilomaterialov v srede peregreto-
go para. Rukovodstvo k kursovomu proektirovaniu dlia stu-
dentov fakul'teta mekhanicheskoi tekhnologii dre esiny.
Leningrad, Vses. zaachnyi lesotekhn. in-t, 1963. 82 p.
(MIRA 17:7)

KOBLIKOVA, Aleksandra Georgiyevna, dots., kand. tekhn. nauk;
CHUDNOV, B.S., dots., kand. tekhn. nauk, retsenzent;
SOKOLOV, P.V., dots., kand. tekhn. nauk, otv. red.

[Hydrothermal processing of wood; systems for intensive drying of lumber. Lecture for students of the Faculty of the Technology of Mechanical Wood Processing] Gidrotermicheskaia obrabotka drevesiny; rezhimy dlia intensivnoi sushki pilomaterialov. Lektsiia dlia studentov fakul'teta mekhanicheskoi tekhnologii drevesiny. Leningrad, Vses. zaochnyi lesotekhn. in-t, 1964. 44 p. (MIRA 18:3)

SERGOVSKIY, Pavel Semenovich; STERLIN, I.M. kand. tekhn. nauk;
BAGDASARYEV, Ye.Ye., inzh.; SAMBOVSKIY, Leonid
Vladimirovich, dots., kand. tekhn. nauk; SOKOLOV, F.V.,
red.

[Equipment for the hydrothermal processing of wood] Obo-
rudovanie gidrotermicheskoi obrabotki drevesiny. Mo-
skva, Lesnaia promyshl., 1964. 326 p. (MIRA 18:1)

1. Kafedra lesopil'no-strogochnykh proizvodstv Leningradskoy lesotekhnicheskoy shkoly im. Kirova (for Sakhnovskiy).

SOKOLOV, P.V.; ZERNOV, V.A., spets. red.; STOGOVA, T.I., red.

[Technical and economic indices of lumber kilns] Tekhniko-ekonomicheskie pokazateli lesosushil'nykh kamer. Moskva, TSentr. nauchno-issl. in-t informatsii i tekhniko-ekon. issledovaniy po lesnoi, tselliulozno-bumazhnoi, derevoobrabatyvaiushchei promyshl. i lesnomu khoz., 1964. 29 p. (MIRA 18:5)

1. Tsentral'nyy nauchno-issledovatel'skiy institut tekhnicheskoy informatsii i tekhniko-ekonomicheskikh issledovaniy po lesnoy, tsellyulozno-bumazhnoy, derevoobrabatyvaiushchey promyshlennosti i lesnomu khozyaystvu (for Stogova).

SOKOLOV, Petr Vladimirovich; FILIPPOV, Yu.M., inzh., retsenzent;
SERGOT'SKII, P.S., red.

[Designing drying and heating machines for wood] Proektiro-
vanie sushil'nykh i nagrevatel'nykh ustanovok dlia drevesiny.
Moskva, Lesnaia promyshlennost', 1965. 330 p.
(MIRA 18:9)

POZNAYEV, Aleksandr Petrovich; SOKOLOV, P.V., red.

[Measurement of wood moisture; electrical methods and
apparatus] Izmerenie vlazhnosti drevesiny; elektriche-
skie metody i pribory. Moskva, Lesnaia promyshlennost',
1965. 141 p. (MIRA 18:3)

SOKOLOV, P.V.; BOGDANOV, Ye.S.; KRECHETOV, I.V.; BAGDAT'YEV, Ye.Ye.;
MARATSUTS, L.S.

Results of comparative testing of automatic systems for the
drying of wood. Der. prom. 14 no. 12:3-4 D '65. (MIRA 18:12)

SAMARIN, A.M., otvetstvennyy redaktor; SOKOLOV, P.Ye., redaktor;
KHABAKHPASHEV, A.A., redaktor; GOSTEV, K.I., redaktor; PRONOV, A.P.,
redaktor; CHERNOV, A.N., redaktor izdatel'stva; SOMOREV, B.A.,
tekhnicheskiiy redaktor

[Continuous casting of steel] Nepreryvnaia razlivka stali; 17-19
oktiabria. Moskva, Izd-vo Akademii nauk SSSR, 1956. 299 p. (MLRA 9:7)

1. Vsesoyuznaya konferentsiya po nepreryvnoy razlivke stali,
1st, 1955. 2. Chlen-korrespondent AN SSSR (for Samarin)
(Steel--Metallurgy) (Continuous casting)

TROSHIN, P. [Troshyn, P.]

We take on increased obligations. Sil'.bud. 11 no.6:3-4 Je '61.
(MIRA 14:7)

1. Predsedatel' soveta Nikolayevskogo oblastnogo mezhkolkhozstroya.
(Nikolayev Province—Construction industry),
(Precast concrete)

SOKOLOV, R. (Moskva)

Transformer with wide band voltage regulation. Radio no. 11:63
N'55. (MIRA 9:1)

(Electric transformers)

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S/048/61/025/003/025/047
B104/B214

AUTHORS: Tolstoy, N. A. and Sokolov, R. A.

TITLE: Luminescence of thallium chloride single crystals

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya,
v. 25, no. 3, 1961, 375-376

TEXT: This paper was read at the Ninth Conference on Luminescence (Crystal Phosphors) held in Kiyev from June 20 to June 25, 1960. The spectral composition and the intensity of luminescence of single crystals of thallium chloride were studied after different treatments of the crystals which were bred by the authors themselves. The luminescence was excited by light of wavelength $365 \text{ m}\mu$ at the temperature of liquid nitrogen; the measurement of the specimens was done in a helium atmosphere. It turned out that thallium chloride has three luminescence bands: 1) a blue band with the maximum at about $460 \text{ m}\mu$ (Fig. 1, Curve 1); 2) an orange band with the maximum near $620 \text{ m}\mu$; 3) a dark-red band with the maximum at $740 \text{ m}\mu$. The blue band appears immediately after breeding; the orange band appears after plastic deformation (Fig. 1, Curve 2),

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Luminescence of thallium...

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and the dark-red band after a heat treatment of the specimens in a pure He atmosphere (Fig. 1, Curve 3). Long exposure to ultraviolet light ($\lambda = 365 \text{ m}\mu$) at temperatures lower than -150°C did not lead to any remarkable change in luminescence. At higher temperatures, the intensity of the whole spectrum decreased. In this case, the blue luminescence was extinguished more quickly than the luminescence of longer wavelengths (Fig. 1, Curve 4). Measurements of the intensity of luminescence I in the maximum of the blue band as a function of the time of exposure to light of wavelength $365 \text{ m}\mu$ showed that I decreases hyperbolically with an increase of t according to the rule $I = I_0/(1+At)$. Here, I_0 is the initial intensity and A a constant depending on the temperature and intensity of irradiation. By a parallel measurement of the light transmittance of the Hg line with $\lambda = 436 \text{ m}\mu$, it was found that in this spectral range the transmittance after the exposure does not change markedly (Fig. 2). Therefore, the weakening of the observed luminescence cannot be explained as a "filter effect". The decrease of intensity on exposure is a reversible process: By aging the exposed specimen in the dark, luminescence is restored almost completely. The restoration of luminescence

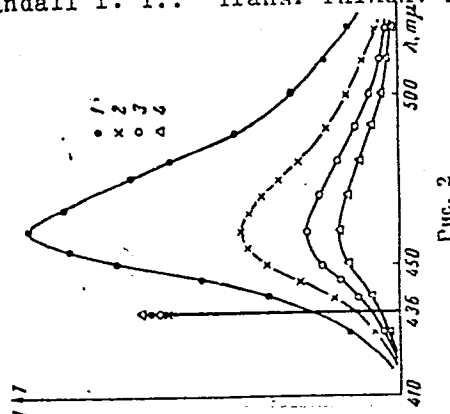
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Luminescence of thallium...

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is accelerated at higher temperatures. It can be assumed that the lattice defects are the centers of blue luminescence. The orange luminescence band with its maximum near 620 m μ results from mechanical defects (dislocations); this agrees with assumptions made in other paper. The dark-red band is evidently caused by the impoverishment of the crystals in chlorine. Possibly an electron from the escaped chlorine atom fills this place and forms an F-center. There are 2 figures and 3 references: 1 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: Randall I. T.. Trans. Faraday Soc., 35, 6 (1939).



Card 3/4

SOKOLOV, R.I.; ROTMAN, V.K.

Position of hydrothermally altered effusive rocks in the geological structure of the Tetyukhe region. Sov.geol. 4 no.5:138-142 My '61.
(MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii institut.
(Tetyukhe region—Rocks, Igneous)

SOSNINA, M.I.; ZHANOVA, A.I.; SOKOLOV, R.I.; PODGORNAYA, N.S.

Paleozoic sediments of the massif of the Zarod Mountain (Maritime
Territory). Trudy VSEGEI 93:153-159 '64. (MIRA 18:7)

NEKHOROSHEV, V.P.; KHOROVA, B.Ya.; KHISAMETDINOV, M.G.; BOGDANOV,
K.G.; SHILIN, D.M.; LYAZHNITSKAYA, I.V.; SOLOVYOV, R.N.

Nikolai Nikolaevich Kurek, -1963; n. obituary. Zap. Vses.
min. ob-va 95 no. 29246-247 '64. (MIRA 17:6)

SOKOLOV, R.V. (Vinnitsa)

On the content of "social hygiene." Sov.zdrav. 13 no.11:58 '59.
(MIRA 13:3)

(PUBLIC HEALTH)

SOKOLOV, R.V.

Development and calculation of a mechanized system for
servicing the production areas of a mechanical shop.
Trudy LIEI no.55:26-40 '65.

(MIRA 18:11)

SOKOLOV, S.

"Heroes of our times." Metallurg 8 no.4:34-35 Ap '63. (MIRA 16:3)

1. Literaturnyy sotrudnik gazety "Chelyabinskiy metallurg".
(Iron and steel workers)

SOKOLOV, S.

Courage. Metallurg 9 no.9:19-20 S 164.

(MIRA 17:10)

1. Neshtatnyy korrespondent zhurnala "Metallurg."

SOKOLOV, S.; ORLOV, I.

Meet Kropachev. Metallurg 9 no.11:19-20 N '64.

(MIRA 18:2)

1. Neshtatnyy korrespondent zhurnala "Metallurg" (for Sokolov).
2. Starshiy inzh. otdela organizatsii truda Chelyabinskogo metallurgicheskogo zavoda (for Orlov).

SOKOLOV, S.; PRIVALOV, V.

Strength of teamwork. Metallurg 8 no.12:29-30 D '63.
(MIRA 17:4)

1. Sotrudnik redaktsii gazety "Chelyabinskiy metallurg" (for Sokolov).
2. Starshiy inzhener otдела tekhnicheskoy informatsii Chelyabinskogo metallurgicheskogo zavoda (for Privalov).

SOKOLOV, S.

One day in the year. Metallurg 9 no.2:22-23 F '64. (MIRA 17:3)

1. Neshtatnyy korrespondent zhurnala "Metallurg".

БЕКОЛОВ, А. А. (1917), 1.

For high quality, for world standards. 1984-1985. (SIRA 1877)

1. Местительство кавказского народа "Баталин" (For Dokosov).

KOZLOV, P. (g. Rovno); SOKOLOV, A.; CHERKASOV, N.; YERKIN, M.;
SHCHEGLOV, A., instruktor; BONDAR', N.; MORSHCHININ, S., inzh.
(Kazan'); SOKOLOV, S.; BARINOVA, Z., inzh.

Readers relate, advise and criticize. Sov. profsoiuzu 18 no.18:32-
33 S '62. (MIRA 15:9)

1. Neshtatnyy korrespondent zhurnala "Sovetskiye profsoyuzy" (for Kozlov). 2. Rukovoditel' lektorskoy gruppy oblastnogo soveta professional'nykh soyuzov, (for Sokolov). 3. Rabotnik ob'yedineniya "Sel'khoztehnika", Tlumachskiy rayon, Stanislavskoy obl. (for Cherkasov). 4. Zaveduyushchiy Chelyabinskoy yuridicheskoy konsul'tatsiyey professional'nykh soyuzov (for Yerkin). 5. Rayonnyy komitet professional'nogo soyuza zheleznodorozhnikov Karagandinskogo otdeleniya Kazakhskoy zheleznoy dorogi (for Shcheglov). 6. Sekretar' postoyanno deystvuyushchego proizvodstvennogo soveshchaniya tsentral'nykh remontnykh masterskikh tresta "Ukrgazneftestroy", Kiyev (for Bondar'). 7. Zaveduyushchiy neshtatnym otdelom truda i zarabotnoy platy pri Kalininskom oblastnom komitete professional'nogo soyuza rabochikh stroitel'stva i promyshlennosti stroitel'nykh materialov (for Sokolov). 8. Krasavinskiy l'nokombinat, g. Krasavino, Vologodskoy obl. (for Barinova).
(Labor laws and legislation) (Trade unions)
(Russia--industries)

SOKOLOV, S. A.

Distr: 4E2c(j)/4E4j

15 Effect of the composition of pine tars on the reclaiming of SKP-natural rubber tire stocks. S. A. Sokolov and V. F. Drozdovskii. *Kauchuk i Resina* 16, No. 8, 12-15(1957).

Fine tar (I) was treated with H₂O at 70-80°, the H₂O-sol. acids (II) filtered, the residue treated with gasoline and the gasoline-insol. portion (III) removed, the filtrate treated with 8% KOH, the neutral oils (IV) sepd., rosin:acids and other higher acids (V) pptd. with BaCl₂ (and redissolved in HCl), leaving the phenols (VI) in the filtrate. The effect of each separate fraction on the reclaiming process was: II destroys cord fibers; III, effect unknown; IV swells stock, participates in joint oxidation with stock; V participates in oxidation; VI inhibits oxidation. The effect upon the quality of the reclaim was: II imparts dryness and improves plasticity; III facilitates processing, lowers plasticity, and raises tensile strength of vulcanizate; IV increases softness, reduces tensile strength, and improves appearance of product; VI improves plasticity. Thus the properties of I depend on the proportions of the fractions, and this mixt. is recommended for reclamation procedures: II 2-3%, III 8-10, IV 50-5, V 20-5, VI <10, other compds. <10%.

Malcolm Anderson.

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Sokolov, S, A.

15

Substitutes for crude pine resin in the reclaiming industry.
 A. A. Liverovskii, E. L. Shumilovskaya, and S. A. Sokolov.
 Zhur. Priklad. Khim. 30, 1837-43 (1957). — A resin SVIS
 obtained from pine stumps after about 20% of resin had
 been extd. with C_6H_6 ; improved the plasticizing effect of pine
 resin in reclaiming of old rubber. I. Bencowitz

Distr: 4E2c(j)/
4E4j

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SOV/138-59-4-8/26

AUTHORS: Drozdovskiy, V.F., Sokolov, S.A. and Dogadkin, B.A.

TITLE: The Effect of Sulphur-Containing Derivatives of Carbazole
on the Regeneration of Rubbers (Sliyaniye serosoderzha-
shchikh proizvodnykh karbazola na protsess regeneratsii
rezin)

PERIODICAL: Kauchuk i Rezina, 1959, Nr 4, pp 29-31 (USSR)

ABSTRACT: The addition of small quantities of activators shortens the time of regeneration of rubbers and also makes it possible to use smaller quantities of plasticizers. Various sulphur-containing compounds such as mercaptans, zinc salts of mercaptans and alkyl phenol sulphides are used as activators during the regeneration of natural and synthetic rubber vulcanisates. The Polish patent specification 35298 (1953) (Ref 6) mentions the use of a mixture of mercapto-anthracene and mercapto-carbazole. The effect of these compounds on the process of regeneration and on the vulcanization process of a mixture of SKB and NK rubbers was investigated. The rubbers were regenerated by heating them for five hours at 180°C and tested according to the standard for regenerated tyre rubbers GOST 3550-54. During the test the product obtained

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The Effect of Sulphur-Containing Derivatives of Carbazole on the Regeneration of Rubbers

by interacting carbazole with sulphur monochloride and morpholine disulphide was used (Table 1). Literature data (Ref 7) indicate that morpholine disulphide itself acts as vulcanizing agent and also as a vulcanization accelerator. Experiments were carried out to test the effect of the product obtained by the interaction of carbazole and sulphur monochloride on the vulcanization process of natural rubber at 143°C. Results indicated that this product also acts as vulcanizing agent and vulcanizing accelerator, but is less effective than morpholine disulphide. 3-mercapto carbazole was prepared according to data given earlier (Ref 8) and its effect compared with that of "Renatsit" II (Table 2). Results showed that 3-mercapto carbazole is more active than trichlorothiophenol ("Renatsit" II). The activity of 3-thiocyanate carbazole and $\alpha,3$ -dithiocyanate carbazole was also tested (Table 3),

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The Effect of Sulphur-Containing Derivatives of Carbazole on the
Regeneration of Rubbers

and it was shown that purified 3-thiocyanate carbazole was equally effective as "Renatsit" II. The x,3-dirhodanate carbazole, however, was unsatisfactory. (Table 4). The authors concluded that the 3-mercapto carbazole and 3-rhodanate carbazole are satisfactory compounds to be used during the regeneration of rubbers, and their action is analogous to that of mercaptans. There are 4 tables and 10 references, 8 of which are English, 1 Soviet and 1 Polish.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Tyre Industry Research Institute)

Card 3/3

DROZDOVSKIY, V.F.; LAVROVA, T.V.; SOKOLOV, S.A.

Effect of carboxylic acid anhydrides on the rubber reclaiming process.
Kauch.i rez. 20 no.3:33-35 M_r '61. (MIRA 14:3)

1. Nauchno-issledovatel'skiy-institut shinnoy promyshlennosti.
(Anhydrides) (Rubber, Reclaimed)

DROZDOVSKIY, V.F.; SOKOLOV, S.A.; SHOKHIN, I.A.; EYTINGON, I.I.

Activators of rubber reclaiming process. Kauch. i rez. 20
no. 12:22-25 D '61. (MIRA 15:1)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Rubber, Reclaimed)

3/138/62/000/001/007/009
A051/A126

AUTHORS: Krivunchenko, N.G.; Kolkhir, K.F.; Zvereva, N.I.; Dmitriyeva, Ye.V.; Drugovskaya, M.N.; Sokolov, S.A.

TITLE: The use of gas-producing resins in rubber reclaiming

PERIODICAL: Kauchuk i rezina, no. 1, 1962, 52 - 53

TEXT: The disadvantages of dry-distillation of pine tars, for use as softeners in rubber reclaiming are non-uniformity and high cost. In the attempt to find new resins for this purpose, gas-producing ones proved to be the most successful. The Chekhov Rubber Reclaiming Plant developed the composition of a resin and a technology of rubber reclaiming, using the product of the Izhevsk Plant in 1958. This product has the following advantages: 1) Uniformity in group composition of the softener, leading to improved physico-mechanical properties of the reclaimed rubbers. 2) Reduced production cost of the reclaimed rubber. 3) Increased capacity output of the refining rollers. 4) Increased capacity output of the autoclaves due to a shorter rubber devulcanization process. 5) Improved receiving and storage methods of the resin, eliminating the use of wooden barrels. The Chekhov Recovery Plant produced 6.5 thousand tons of reclaimed rubber in 1959. In 1960, the Recovery Plant consumed 2,000 tons of resin. There is 1 table.

ASSOCIATION: Chekhovskiy regeneratnyy zavod (Chekhov Recovery Plant)

SOKOLOV, Sergey Aleksandrovich; MUN'KIN, Veniamin Borisovich;
BOGATOVA, V.G., red.

[Equipment and systems for the remote control of lighting
by operator stations] Apparaty i sistemy telemekhaniziro-
vannogo upravleniia operatorskim osveshcheniem. Moskva,
Iskusstvo, 1965. 234 p. (MIRA 18:7)

Sokolov, S. A.

272

AUTHORS: Mikhaylov, M. I., Sokolov, S.A.

TITLE: Protection against direct lightning strokes of reinforced-concrete communication-line poles. (Zashchita zhelezobetonnykh opor lininiy svyazi ot pryamykh udarov molnii).

PERIODICAL: "Elektrosvyaz" (Telecommunications), 1957, No.4, April, pp. 67 - 74 (U.S.S.R.)

ABSTRACT: The authors give results of experiments undertaken by TsNIIS at the proving grounds in Golitzyn in 1955. The results obtained may be given as follows: reinforced concrete poles can be used as a lightning conductor without special earthing systems. Measurements showed that their resistance is 20 to 70 ohms, while the soil resistivity is of the order of 300 ohm/meter. From theoretical considerations, no excessive temperature rise of armature, with subsequent damage to the concrete, is to be expected. This was proved experimentally on poles subjected to current pulses up to 60 000 amps. Experiments have also shown that damage to the concrete occurs for every lightning stroke. The breakdown occurs at voltage pulses of 33 - 34 kV with corresponding current pulses of 5000 amps or higher. For very large currents (50 000 to 60 000 amps) disintegration of concrete should not be unexpected, especially in the

MIKHAYLOV, M.I., doktor tekhnicheskikh nauk, professor; NIKOL'SKIY, K.K.,
inzhener; RAZUMOV, L.D., inzhener; SOKOLOV, S.A., inzhener.

Protecting interurban underground communication cables from
lightning. Vest. svyazi 17 no.3:8-10 Mr '57. (MLRA 10:4)

1. Nachal'nik laboratorii Tsentral'nogo nauchno-issledovatel'skogo
instituta svyazi (for Mikhaylov). (Lightning protection)
(Electric cables)

RYABKOVA, Ye.Ya., kand.tekhn.nauk; BAZELYAN, E.M., inzh.; SOKOLOV,
S.A., inzh.

Deformation of underground communication cables due to
lightning discharges. Izv.vys.ucheb.zav.; energ. 2 no.9:
38-42 S '59. (MIRA 13:2)

1. Moskovskiy ordena Lenina energeticheskiy institut. Predstavlena
kafedroy tekhniki vysokikh napryazheniy.
(Electric lines, Underground) (Lightning)

AUTHOR: Sokolov, S.A.

SOV/106-59-6-9/14

TITLE: Reduction of the Earth Resistance in Rock Localities and in Regions of Ever-Frozen Ground (O snizhenii soprotivleniy zazemleniy v skal'nykh mestnostyakh i v rayonakh vechnoy merzloty)

PERIODICAL: Elektrosvyaz', 1959, Nr 6, pp 65-70 (USSR)

ABSTRACT: The article consists of two parts: 1) a theoretical investigation and experiments on laboratory models; 2) results of experimental field work. The equipotential surfaces of a tubular earthing rod can be represented by ellisoids of revolution (Fig 1). If the ground is cut out to a depth

$$z_{\beta} = u = \sqrt{a^2 + l^2}$$

(symbols as shown in Fig 1), then the lines of current flow will not be distorted and the total resistance of the earth R_H will be

$$R_H = R_1 + R_2 = \frac{1}{2\pi l} \left[\rho_H \ln \frac{2}{a_0} + (\rho_{cm} - \rho_H) \frac{1}{2} \ln \frac{\sqrt{l^2 + a^2} + l}{\sqrt{l^2 + a^2} - l} \right]$$

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(4)

SOV/106-59-6-9/14

Reduction of the Earth Resistance in Rock Localities and in Regions of Ever-Frozen Ground

where R_1 is the resistance of the replaced layer, R_2 is the resistance of the remaining earth, ρ_H is the specific resistance of the hole material, ρ_{cm} is the specific resistance of the earth. This relationship is deduced from Ollendorf's work "Currents in the Earth", Ref 1. Fig 2 shows the relationship between $\xi = \frac{R_H}{R_{cm}}$ and $\alpha = \frac{\rho_{cm}}{\rho_H}$ and a_r for $\ell = 2.5$ cm;

R_{cm} is the resistance of the earth before the hole is made. Changing the diameter of the tube within the limits 4 to 7 cm has little effect on the value of ξ . Fig 2 shows that 1) increasing α is effective up to 2.5 - 3 m only; 2) reduction of the specific resistance ρ_H of the filled-in material is useful over a limited range (up to $\alpha = 5 - 10$). Thus, the use of a large quantity of good-conducting material around the earth point is wasteful. Experiments on models in the Central Scientific Research Communications Institute confirmed the theoretical results. The experiments are described and the results tabulated in Table 1. The results

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2/5

SOV/106-59..6-9/14

Reduction of the Earth Resistance in Rock Localities and in Regions of Ever-Frozen Ground

indicate that the earth resistance can be reduced 2.5 to 3 times by making a zone with a low specific resistance round the earth point. The hole should have a radius 1.5 to 2 m and a depth equal to the length of the tube in the ground. The hole is filled with a material having a specific resistance 5 to 10 times lower than the specific resistance of the ground, and the tube is driven into the material. Experimental earths were set up at a number of places (Skovorodino and others). The earths used various quantities of common salt (8 - 40 kg) and some of the earths were processed by Sanick's method, using $\text{Cu}_2\text{Fe}(\text{CN})_6$ gel. The results showed that the resistances of all the earths, which had the same initial resistance but different amounts of salt, changed by approximately the same amount. Electrodes processed by Sanick's method after working at low temperatures for several months acquired high resistance values, approximating to the values of the unprocessed earths. Investigation on models in a cold chamber show that the gel in the earth decomposed and was destroyed by water. The ground

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SOV/106-59-6-9/14

Reduction of the Earth Resistance in Rock Localities and in Regions of Ever-Frozen Ground

temperature has a great effect on the earth resistance. The resistance of sand with 3.7% moisture content increased eight-fold when the temperature fell from 0 to 8 °C. In regions where the ground is always frozen, there is a stable temperature (mean value -1.5°C) at depths below 2.5 to 3 m. Above this depth, seasonal temperature variations giving temperatures very much below -5°C occur. Table 2 gives monthly variations in temperature for various depths at Skovorodino, Amurskaya Oblast'. Tables 3 and 4 show the effects of snow layers on ground temperature. The temperature is also strongly affected by vegetation, particularly mosses. Thus, when installing earths, the temperature regime of the ground should be investigated. Best results are achieved by

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SOV/106-59-6-9/14

Reduction of the Earth Resistance in Rock Localities and in Regions
of Ever-Frozen Ground

installing the earth at the bottom of natural or
artificial water beds.
Card
5/5 There are 4 figures, 4 tables and 5 references, of which
3 are Soviet, 1 Scandinavian and 1 German.

SUBMITTED: September 25, 1958

05377

SOV/106-59-8-9/12

AUTHOR: Sokolov, S.A.

TITLE: The Probability of Damage by Lightning to Subterranean Cable Lying Alongside a Wood

PERIODICAL: Elektrosvyaz^s, 1959, Nr 8, pp 67 ~ 75 (USSR)

ABSTRACT: A subterranean cable in the centre of a wood is just as liable to lightning damage as one situated in an open field, but a cable running in the vicinity of a wood obtains a degree of protection from the trees at the edge of a wood (Figure 1). The edge trees give a protection zone in a manner similar to lightning conductors. A.A. Akopyan (Ref 1) has established the dimensions of the protection zone of lightning conductors on the assumption that not one strike out of a 1.000 strikes will fall in the unprotected zone. The greatest radius of the protection zone on the Earth's surface for rod lightning conductors is $r = 1.5h$, where h is the height of the lightning conductor. The author describes the development of a lightning flash and the methods in which damage can result to the cable.

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SOV/106-59-8-9/12

The Probability of Damage by Lightning to Subterranean Cable Lying
Alongside a Wood

As the lightning leader approaches the earth, charges move through the earth to the point underneath the leader. The instant the leader reaches the earth and the reverse strike starts the potential of this point can be so high that an electric arc occurs between the point and the cable. The arc is able to cross a distance given by:

$$y = 1.1 \sqrt{\frac{i\rho}{e_0}} \quad (1)$$

where ρ - the specific resistance of the earth, ohm - m,
 i - the lightning current, kA,
 e_0 - the critical electric field strength in the earth at which a rupture occurs, kV/m.

Table 1 shows the relationship between e_0 and ρ .

A calculated example ($\rho = 1\ 000$ ohm - m, $i = 250$ kA) shows that the maximum value of y_{\max} is of the order

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SOV/106-59-8-9/12

The Probability of Damage by Lightning to Subterranean Cable Lying
Alongside a Wood

of 20 m. Thus, lightning strikes more than y_{\max} from the cable will not cause arcing. This does not, however, mean that no damage to the cable will result. The lightning current is an aperiodic wave of 20 to 100 μ s. When such a current wave flows in a cable sheath, a potential difference between the sheath and the conductors arises and this potential may puncture the insulation. Table 2 shows the sheath current amplitude i_0 which will cause damage to the cable with an insulation breakdown strength of 2 000 V. The relationship between y and i_0 , as given by Sunde (Ref 4), is:

$$i = i_0 \frac{\ln l/\gamma a}{\ln(1/\gamma y + 1)} \quad (2)$$

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SOV/106-59-8-9/12

The Probability of Damage by Lightning to Subterranean Cable Lying
Alongside a Wood

where $\gamma \approx 0.08/\sqrt{\rho}$ is the "propagation" constant of the lightning current along the sheath, $1/m$, and m is the radius of the cable, m .

Within some distance $y_1 < y_{max}$ from the cable, damage is produced by an electrical arc to the cable; also for lightning strikes further than y_1 , damage occurs, without an arc, only when the current exceeds the value i_0 (although arcing may occur).

The author then shows that the total number of cases in which a subterranean cable is damaged by lightning in the course of a year is given by:

$$n = 2qNS \int_0^Y e^{-Ki} dy = 2qNS \left(\int_0^{y_1} e^{-Ki} dy + \int_{y_1}^Y e^{-Ki} dy \right) \quad (5)$$

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SOV/106-59-8-9/12

The Probability of Damage by Lightning to Subterranean Cable Lying
Alongside a Wood

- where $q = 0.1$ - the number of lightning strikes per km^2 per stormy day,
- S - the length of the cable (m),
- N - is the number of stormy days per year in the locality,
- Y - is the maximum distance from cable at which a lightning strike can cause damage to the cable,
- i - is the lightning current amplitude,
- $(0, y_1)$ - is the distance from the cable in which an arc will occur,
- (y_1, Y) - the space interval from the cable in which damage will occur without arcing.

Integration of Eq (5) gives:

$$n = 2qNS \left[Y e^{-KI} + K \int_{i_0}^{i_1} y e^{-Ki} di + K \int_{i_1}^{\infty} y e^{-Ki} di \right] \quad (6)$$

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05377

SOV/106-59-8-9/12

The Probability of Damage by Lightning to Subterranean Cable Lying
Alongside a Wood

where i_1 is the value of the current at y_1 as found from Eqs (1) and (2), I is the maximum possible lightning current. Letting the cable be at a distance $y = l$ from the edge of a wood and taking $l < 1.5h$ (Figure 2), the author shows that probable number of cases of cable damage is given by Eq (9), which is shown graphically in Figure 3 as a function of h (for $\rho = 800$ ohms). Table 3 gives the optimum distance of the cable from the wood for various values of ρ and h . It is pointed out that these formulae do not take into account the influence of the tree roots. In practice, the distance given in Table 3 should be increased by the length of the roots.

The author next investigates the probability of damage to a cable buried along a path in a wood and shows that the maximum width of a strip protected by the trees is $7h$; this assumes that the locality is level and the trees are not lower than 6 to 8 m high. Finally, the author

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05377

The Probability of Damage by Lightning to Subterranean Cable Lying
Alongside a Wood

SOV/106-59-8. 9/12

investigates the effect of single trees or other high
objects near the cable and the effect of nearby overhead
communication lines near the cable on the probability of
damage to the cable.

There are 3 figures, 3 tables and 8 references, of which
7 are Soviet and 1 English.

SUBMITTED: March 31, 1959

Card 7/7

S/106/60/000/005/008/009
A055/A133

AUTHOR: Sokolov, S. A.

TITLE: Subterranean communication cables struck by lightning. Influence of the radioactivity of the ground

PERIODICAL: Elektrosvyaz', no. 5, 1960, 71

TEXT: It was supposed that the ionization of the air by the radioactive substances contained in the ground would facilitate the process of discharge of atmospheric electricity, and that the lightning would therefore strike, in the great majority of cases, the points with increased radioactivity. Laboratory experiments carried out for the construction of lightning arresters with radioactive cartridges strengthened this hypothesis. To check it under natural conditions, the TsNIIS laboratory chose a trunk-line that had been often damaged by lightning (the cable had been struck 3 to 4 times per thunderstorm-season). Measurements of the radioactivity of the ground were effected within a zone 195 km long. Recording tests were made at least every 500 m. The radiometer used for these tests allowed to record the radioactivity in any point of the followed track, even in water. The obtained results did not reveal any relationship

Card 1/2

MIKHAYLOV, M.I., doktor tekhn.nauk; SOKOLOV, S.A.

Methods for lowering the cost of the protection of underground communication cables from overvoltage caused by lightning.
Vest. svyazi 21 no.5:11-12 My '61. (MIRA 14:6)

1. Nachal'nik laboratorii Tsentral'nogo nauchno-issledovatel'skogo instituta svyazi (for Mikhaylov). 2. Starshiy inzhener laboratorii Tsentral'nogo nauchno-issledovatel'skogo instituta svyazi (for Sokolov).

(Electric lines--Underground)
(Lightning protection)

MEKHAYLOV, M.I., doktor tekhn.nauk; SOKOLOV, S.A., inzh.

Damage of a telephone cable network resulting due to single-phase short-circuiting of a 110 kv. power transmission line. Elek. sta. 33 no.8:58-59 Ag '62. (MIRA 15:8)
(Telephone lines) (Electric power distribution)
(Electric lines--Underground)

ALESHIN, M.F.; BONDYREV, V.V.; SOKOLOV, S.A.; MASLOV, I.A.

Device for automatic selection of ferrite cores. Nauch.-tekh.
sbor. Gos. izd-va lit. v obl. atom. nauki i tekh. no.6:122-128
'67 (MIRA 17:8)

L 5193-66 EWP(m)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(h)/EWA(c) JD/HW
ACC NR: AP5024975 SOURCE CODE: UR/0286/65/000/016/0039/0039

INVENTOR: Sokolov, S. A.; Donde, L. I.; Nikolayev, V. P.; Rakhman, L. Ts.

ORG: none

TITLE: Method of manufacturing thin-wall, spring-steel shapes.
Class 18, No. 173789 ²_B

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 39

TOPIC TAGS: ¹⁷spring, steel spring, thin wall spring, shaped spring

ABSTRACT: This Author Certificate introduces a method of manufacturing thin-wall, spring-steel shapes. In order to obtain precise form and prescribed mechanical properties, the spring strip is heated above the AC₃ point, cooled to 300-320C, drawn through forming dies at this temperature, wrapped with a narrow steel band, air cooled, cut in pieces, tempered, put on the mandrel, wrapped in glass cloth, and retempered. [WW]

SUB CODE: MM/ SUBM DATE: 26Jul62/ ORIG REF: 000/ OTH REF: 000/

ATD PRESS: 4132

Card 1/1 *hd*

UDC: 621.785.79-272.272

09010130

L 3943-66

ACCESSION NR: AP5018029

UR/0106/65/000/007/0063/0070
621.315.213.015:621.395.511

AUTHOR: Novoselov, A. S.; Sokolov, S. A.

21
B

TITLE: Voltages arising during lightning strokes in symmetrical cables at repeater stations

SOURCE: Elektrosvyaz', no. 7, 1965, 63-70

TOPIC TAGS: repeater station, surge voltage

ABSTRACT: The surge-voltage height and duration in an underground metal-sheath cable depends on the distance to the point of lightning discharge, lightning-current height and shape, earth resistivity, and cable construction. Formulas for the sheath-conductor and conductor-conductor voltage surges are derived. Lightning strokes were simulated by current impulses derived from a 50-kv surge generator capable of developing currents up to 20 ka. The impulses were applied at distances of 100, 750, 1400 m from a repeater station between the cable and a

Card 1/2

L 3943-66

ACCESSION NR: AP5018029

0

ground electrode buried at 100 m from the cable; impulse heights used were 1.5-10 ka; the measured sheath-conductor surge voltages were 0.42-95 v. It is found that, with a sound cable, the induced surges are not hazardous; they may reach hazardous values if one of the cable conductors is faulty (broken or grounded). However, in the latter case, the equipment is adequately protected by an R-4 lightning arrester. Orig. art. has: 6 figures, 9 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 28Dec64

ENCL: 00

SUB CODE: EC

NO REF SOV: 003

OTHER: 003

Card 2/2

DP.

MIKHAYLOV, M.I.; SKOLOV, S.A.

Lowering of the costs of the protection systems of cable lines
from direct lightning strokes. *Elektrosviaz'* 19 no.6:66-69
Je '65. (MIRA 13:6)

SOKOLOV, S. A.

Sokolov, S. A. - "Complex utilization of peat massifs," In symposium:
Torf v nar. khoz-ve Belorus. SSR, Minsk, 1948, p. 121-29

So: U-3566, 15 march 53, (Letopis 'Zhurnal 'nykh S+atey, No. 13, 1949)

SCHOLIC, S. A.

Part I Treasure Island Bibliographic Report

Call No.: AP546504

BOOK

- Authors: Ch. I - LEVINSON, A. L. and PROKOPEV, F. P.
- Ch. II - GORODENKO, S. A., Mch. of Eng. Sci., and DEEBINGER, T. V. Eng.
- Ch. III - PELL', V. S., Mch. of Eng. Sci., and RASPOVICH, Kh. A. Eng.
- Ch. IV - V - DRUKAL, S. A., Mch. of Eng. Sci.
- Ch. VI - PELL', V. S., Mch. of Eng. Sci.
- Ch. VII - CHEREKOV, I. N., Mch. of Eng. Sci., and SCHOLIC, S. A. Eng.
- Ch. VIII - RADNIK, S. I., Eng.
- Ch. IX - GORDIYONOV, I. B.
- Ch. X - TOMASHOV, V. A., Eng.

Full Title: THE FINE OF CINEMATOGRAPHY

Series: Accomplishments of Soviet Cinema Technique

Transliterated Title: Kinos'lenochnyy tekhnika

Series: Dostizheniya sovetskoy kinobekhniki

Publishing Data

Coordinating Agency: None

Publishing House: State Publishing House of Cinematographic Literature (Goskinoizdat)

Date: 1960

No. pp.: 462

No. copies: 10,000

Editorial Staff

Editor: None

Tech. Ed.: None

Ed.-in-Chief: Goldenskiy, E. N.,

Dr. of Technical Sciences

Appraiser: None

Card 2/2

Call No.: AF516504

Full Title: TECHNIQUE OF ORIENTATIONS

Series: Accomplishments of Soviet Cinema Technique

Text Data

Coverage: The book is the fourth in the series "Accomplishments of Soviet Cinema Technique" and describes the basic methods of taking colored motion pictures. The technique for black-white photography was given in the three previous books. A description of the combined and special types of production now adapted in Soviet cinema studios and the technique of cinema stage settings will be published in one of the following issues of the series.

The book primarily describes the lighting equipment, lenses and deflectors, electric power units for light effects, and arrangements for color-photographic balances of different intensities. The book also gives brief data on: apparatus for normal and synchronic methods of taking pictures; narrow and broad films; tripods of various types; controlling method and mechanisms in cinematographic apparatuses.

Purpose: General information for wide circle of specialists in motion pictures.

Facilities: Scientific Research Institute for Motion Pictures and Photography (N.I.K.F.I.); cinema-studios in Moscow and Leningrad regions.

No. Russian References: None

Available: A.I.D., Library of Congress

9. GILBY, G. A.: "Investigation of methods of increasing the productivity of punch-card calculating machines." Min Higher Education USSR. Leningrad Inst of Precision Mechanics and Optics. Leningrad, 1956. (Dissertation for the Degree of Candidate in Technical Science).

10: Knizhnyy Listok No. 12, 1956

СКОЛОВ, С. §.

СКОЛОВ, С. А. "The Effect of Radiation Disease on the Healing of Wounds in Experimental Animals." Leningrad State Order of Lenin Inst for the Advanced Training of Physicians. Third Surgical Chair. Chair of Medical Radiology. Leningrad, 1956. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya Letopis', No. 19, 1956.

SECRET, S. A.

24(4)

Abstracts from **THE STATE OF THE ART IN METALLURGY** 887/1296
Metallurgy, metallography, histo-metallography, metallographic methods (Metallurgy, Study of Metals, and Physicochemical Methods of Investigation) Summary, 1949-50, 308 p. (Series: I; Study, 77-3) British Library

Book, M. I. L. Berlin, Academic Press, 1950, 308 p. (Series: I; Study, 77-3) British Library
Author: M. I. L. Berlin, Academic Press, 1950, 308 p. (Series: I; Study, 77-3) British Library
Editor: M. I. L. Berlin, Academic Press, 1950, 308 p. (Series: I; Study, 77-3) British Library

CONTENTS: This book is of interest to researchers in metallurgy, as well as to the technical personnel of the metallurgical industry.
CONTENTS: This volume of the Study (Transactions) of the Institute Metallurgical Studies on Metallurgical Institute in A. A. Baykov contains 31 articles on metallurgical, industrial metals and alloys, and physicochemical phenomena. Some of the studies pertain to the reduction of oxides, dislocation in metals, the viscosity and other characteristics of blast furnace slag, dislocation in metals, casting of metals and to corrosion, simultaneous

Card 1/6

solubility of metals at various temperatures, apparatus for measuring electrical resistances and for determining the melting point of alloys and metals, optical spectral analysis, quantitative determinations by the sublimation method, and aging of alloys. Much study is accompanied by references.

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(1)

SOKOLOV, S. A.

47-58-2-12/30

AUTHORS: Zimin, A.V., Radziyevskiy, V.V. and Sokolov, S.A.

TITLE: Device for Determining the Ephemerides of an Earth Satellite (Prigor dlya opredeleniya efemeridy sputnika)

PERIODICAL: Fizika v Shkole, 1958, Nr 2, pp 59 - 61 (USSR)

ABSTRACT: This device consists of globe with its axle fixed in a box which contains the activating mechanism. The angle of inclination of the earth axis is equal to the angle of inclination of the sputnik's orbit to the equator. On the vertical plane, the orbit of the sputnik is fixed with a bent wire. This wire turns around the earth with the help of a handle and cog system. There is 1 figure.

ASSOCIATION: Pedagogicheskiy Institut, Gor'kiy (The Pedagogical Institute Gor'kiy)

AVAILABLE: Library of Congress

Card 1/1 1. Satellite vehicle trajectories-Determination 2. Satellite vehicle models-USSR

Papers submitted for the 10th Pacific Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1964.

- SEVERYUKA, B. A., Marine Hydrophysics Institute, Academy of Sciences USSR - Investigation into manifestations of organic substances of food chains under "ice conditions" (Section VII.C.1)
- SEVERYUKA, B. A., Institute of Oceanology - "Some regularities concerning the zonal distribution of chemical characteristics in the waters of the central part of the Pacific" (Section VII.C.1)
- SOYLOV, S. A., All-Union Scientific Research Institute of Marine Fishing and Oceanography - "Submarine 'Severyuka' - a new means for marine fishery investigations" (Section III.C.4)
- SOYLOVA, M. M., Institute of Oceanology - "The distribution of deep-sea biocoenosis in the Pacific in connection with food conditions" (Section III.C)
- SPOKOIN, Yu. M., Institute of Biology of Reservoirs, Academy of Sciences USSR - "The submarine illumination and the primary production of photosynthesis in the sea" (Section III.C.4)
- STEGOVA, B. E., Institute of Biology of Reservoirs, Academy of Sciences USSR - "The problem of vertical connections in the ornithogeographic studies of birds" (Section VII.D.3)
- STEGOVA, B. E. and SHIBRY, V. A., Institute of Oceanology - "The measure of east of deep oceanic currents with the application of anchor buoys (methods, apparatus, results)" (Section VII.D.5)
- ZAVY, B. A., and PEKHOV, A. V., Institute of Oceanology - "Geostrophic currents in the Antarctic sector of the Pacific" (Section VII.D.1)
- TRIGOROV, V. I., Institute of Geology - "New data on the tectonics of southern Kazakhstan" (Section VII.C)
- TRUBNIN, D. D., Institute of Ethnology - "The ethnologic study of the peoples of Oceania in the USSR" (Section II.B)
- VIKARSKI, G. B., Institute of Oceanology - "Features of evolution in the bottom topography of the Pacific Ocean" (Section III.C.1)
- VALKOVICH, V. A., Institute of Geology - "Geological diagrams of the Pacific coast in the USSR as a basis for the subdivision of continental depression of the type (Section VII.C)
- VALKOVICH, V. A., Institute of Oceanology - "Geographical distribution of abraded bottom fauna and the problem of vertical zonation" (Section III.C)
- VIVARSKI, G. B., Moscow State University, Geographical Faculty - "On the nature of the summer monsoon in east Asia" (Section VI.C)
- VLAGOV, G. M., Institute of Geology - "The island arches and the peripheral folded areas in the western belt of the Pacific belt" (Section VIII.C)
- MANGUSOVA, T. B., and MYLIK-DROG, V. I., Institute of Earth Physics, Leningrad - "Some possibilities in interpretation of surface waves of the Pacific" (Section VII.C.2)
- PAUSEIN, A. L., Institute of Geology - "The tectonic map of Eurasia" (Section VII.C)
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5(3)

SOV/79-29-8-24/81

AUTHORS:

Kochetkov, N. K., Nifant'yev, E. Ye., Sokolov, S. D.

TITLE:

Synthesis of Aromatic β -Ketoacetals

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2570-2575
(USSR)

ABSTRACT:

The β -ketoacetals which are mainly obtained from the corresponding β -chloro-vinyl ketones (Ref 1) are recently of manifold use in organic synthesis, whereas compounds of this class with aromatic radicals have nearly escaped notice (Refs 2-5). Quite recently, the authors synthesized the ethylene acetal of the benzoyl-acetaldehyde (Ref 6). Presently, they carried out the synthesis of various aryl- β -ketoacetals using, as initial products, the acyl- β -chloro-vinyl ketones which are now well accessible (Ref 7). Three new representatives of this class, the o-tolyl- and m-tolyl- β -chloro-vinyl ketone, and the n-bromo-phenyl- β -chloro-vinyl ketone, were synthesized. On the first attempts to obtain the acetal of benzoyl-acetaldehyde according to reference 1, the phenyl- β -methoxy-vinyl ketone (II) was formed instead of the expected compound. This was due to the catalytic action of alkali traces left over in the re-

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Synthesis of Aromatic β -Ketoacetals

action. Therefore, the reaction conditions were altered in such a way that in the distillation any traces of alkali were excluded by treating the reaction mixture with water, and extracting with ether. Thus the acetal of the benzoyl-acetaldehyde (III) resulted in a 60% yield. More convenient are the ethylene acetals of the β -ketoaldehydes which were recently synthesized by the authors (Ref 6). From among the representatives of the aromatic series, only the ethylene acetal of the benzoyl-acetaldehyde (IV) is described in publications. The fact that the cyclic ethylene acetals, which can easily be obtained by reaction of β -chloro-vinyl ketones with ethylene glycol, are formed by treating both the dimethyl acetals and the alkoxy-vinyl ketones with ethylene glycol in the presence of alkali, indicates their considerably higher stability. All transformations described, which are connected with the investigation of the stability of the acetals of the benzoyl-acetaldehyde, are illustrated in scheme 1. KOH and K_2CO_3

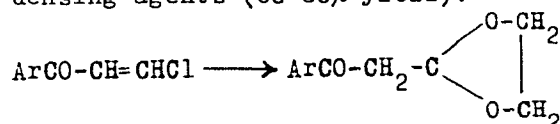
(Ref 6) proved to be the agents most useful for condensing the ethylene acetals of the β -ketoaldehydes of the aliphatic series. The operational method devised for the synthesis of the first member of the series was further applied to the syn-

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Synthesis of Aromatic β -Ketoacetals

thesis of the ethylene acetals of the β -ketoaldehydes substituted in the aromatic nucleus, using KOH and K_2CO_3 as condensing agents (60-80% yield):



where Ar = n,m,o- $\text{CH}_3\text{C}_6\text{H}_5$; n,o- ClC_6H_4 ; n- BrC_6H_4 ; n- $\text{CH}_3\text{o-C}_6\text{H}_4$.

The resultant crystalline acetals are stable, in general well soluble, and do not color with ferric chloride. There are 1 table and 14 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: July 3, 1958

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