CHEREPNIN, K. N.

Cherepnin, K. N. -- "On the question of the organization of climatic stations at the Lake Tagar spa for bone and joint tuberculosis patients," Sbornik trudov (Tomskiy obl. nauch.-issled. in-t fiz. metodov lecheniya i kurortologii), Vol. VI, 1949. p. 222-26

SO: U-5241, 17 December 1953, (Letopis 'zhurnal 'nykh Statey, No. 26, 1949).

[redacted], I. . .

Dissertation: "Flora and Vegetation of the Southern Part of Krasnoyarskiy Kray."
Dr Biol Sci, Inst of Botany imeni V. L. Komarov, Acad USSR, Moscow, Oct-Dec 1953.
(Vestnik Akademii Nauk, Moscow, Jun 54) (Source gives brief summary of work.)

SO: SUM 318, 23 Dec 1954

CHEREPNIN, L.M.

Fiftieth anniversary of N.M.Mart'ianov's death. Bot.zhur.40 no.5:758-760 S-O '55. (MLRA 9:4)

1.Krasnoyarskiy gosudarstvennyy pedinstitut.
(Mart'ianov, Nikolai Mikhailovich, 1845-1904)

CHEREPNIN, L. M.

14-57-6-12556

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6, p 117 (USSR)

AUTHOR: Cherepnin, L. M.

TITLE: Observations on Early Relics of the Yenisey Steppe (Zametki o drevnikh reliktakh priyeniseyskikh stepey)

PERIODICAL: Uch. zap. Krasnoyar. gos. ped. in-ta, 1956, Nol 5, pp 45-50

ABSTRACT: A study of the steppe flora in the Southern Krasnoyarskiy kray revealed the presence of native plant species which have no philogenetic links with present flora of Siberia. These species are unique both systematically and geographically. Erodium tataricum (a Pliocene relic) is known only in the Khakass steppes. Most species of this type have a concentrated habitat around the Mediterranean Sea, a few grow in the Caucasus, in Middle and Central Asia, and some are known in

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14-57-6-12556

Observations on Early Relics of the Yenisey Steppe (Cont.)

North America, Australia, and in Macronesia. The author includes Oxytropis includens, which is endemic to the Khakass steppes, among the early relics, probably of the Pliocene period. Astragalus Palibinii, a species endemic to the Yenisei stony steppes, is widely distributed through the Minusinsk depression and the regions around Krasnoyarsk. Nedysarum minussinense, endemic to the Khakassk-Minusinsk stony steppes, has a variation which still grows in the Altay district. The author believes it very possible to include among this group of Pliocene steppe relics a number of steppe plants of the southern Krasnoyarskiy kray: Halogeton glomeratus, a central Asiatic desert-solonchak species, which is encountered in alkaline parts of the Khakass steppes; Limonium macrorhizon, an early inhabitant of northern Kazakhstan (after a geographic gap, it is encountered in solonchaks of the Khakass steppes); Zygophyllum macrorterum, a central Asian desert-steppe species (in the regions adjacent to the Khakass deposit: the Chuya River, the Altayskiy Kray, the Irtysh River); Oxytropis tragacanthoides, which is endemic to the Tuva,

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14-57-6-12556

Observations on Early Relics of the Yenisey Steppe (Cont.)

Chuya and **Shirinskaya stony steppes;** Oxytropis bracteata, a rather isolated species in this area; Cumbaria dahurica, an early desert-steppe Mongol-Dauriya species (in the regions adjacent to the Khakass deposit: southern part of the Tuva Autonomous Region and the Bukhtarma River valley); Nitaria sibirica (common in the Abakan steppes); Convolvulus Ammanii, a central Asian desert-steppe species (of which two separate habitats exist in the area in question: the Khakas area and the Krasnoyarsk area); Ephedra monosperma. Two maps of the habitats are included.

Card 3/3 N. Ya. T.

LIKHANOV, B.N.; KHAUSTOVA, M.N.; YEROKHINA, A.A.; MARKOV, F.G.; SPIZHARSKIY, T.N.; DODIN, A.L.; KHIL'TOVA, V.Ya.; CHEREPNIN, L.M.; GROMOV, L.V., kand. geol.-mineral. nauk; SHCHERBACHEV, V.D.; SHUTYY, M.Yo.; NEMCHINOV, V.S., akad., red.; NEKRASOV, N.N., red.; PUSTOVALOV, L.V., red.; ZUBKOV, A.I., kand. ekon. nauk, red.; KAVUN, T.K., red. izd-va; SUSHKOVA, L.A., tekhn. red.

[Natural conditions of Krasnoyarsk Territory] Prirodnye usloviia Krasnoiarskogo kraia. Moskva, Izd-vo Akad. nauk SSSR, 1961. 248 p. (MIRA 14:7)

1. Krasnoyarskaya kompleksnaya ekspeditsiya. 2. Institut geografii AN SSSR (for Likhanov, Khaustova). 3. Pochvennyy institut im. V.V.Dokuchayeva AN SSSR (for Yerokhina). 4. Nauchno-issledovatel'skiy institut geologii Arktiki Ministerstva geologii i okhrany nedr SSSR (for Markov). 5. Vsesoyuznyy geologicheskiy institut Ministerstva geologii i okhrany nedr SSSR (for Spizharskiy, Dodin). 6. Laboratoriya geologii dokembriya AN SSSR (for Khil'tova). 7. Krasnoyarskiy pedagogicheskiy institut Ministerstva prosveshcheniya RSFSR (for Cherepnin). 8. Sovet po izucheniyu proizvoditel'nykh sil pri Prezidiume AN SSSR (for Gromov, Likhanov, Khaustova, Yerokhina, Shcherbachev, Shutyy). 9. Chlen-korrespondent AN SSSR (for Nekrasov, Pustovalov)

(Krasnoyarsk Territory--Natural history)

UVAROV, V.V., doktor tekhn. nauk, prof.; BEKNEV, V.S., kand. tekhn. nauk; MIKHAL'TSEV, V.Ye., kand. tekhn. nauk; CHERNOBROVKIN, A.P., kand. tekhn. nauk; LAPIN, Yu.D., inzh.; CHEREPNIN, L.S., inzh.

Highly efficient gas turbine unit with 200Mw. rating. Teploenergetika 12 no.5:7-16 My '65. (MIRA 18:5)

1. Moskovskoye vysshoye tekhnicheskoye uchilishche imeni Baumana.

L 24684-66

ACC NR: AP6015525 SOURCE CODE: UR/0096/65/000/005/0007/0016

AUTHOR: Uvarov, V. V. (Doctor of technical sciences; Professor); Beknev, V. S. (Candidate of technical sciences); Mikhal'tsev, V. Ye. (Candidate of technical sciences); Chernobrovkin, A. P. (Candidate of technical sciences); Lapin, Yu. D. (Engineer); Cherepnin, L. S. (Engineer)

ORG: MVTU im. Bauman

TITLE: High-efficiency 200 megawatt gas-turbine installation

SOURCE: Teploenergetika, no. 5, 1965, 7-16

TOPIC TAGS: gas turbine, electric power plant

ABSTRACT: The advantages of building a high pressure non-regenerative 200 megawatt gas-turbine installation with an approximate weight factor of 3.5 kg/kw are described. This factor is 2.5 times smaller than in steam gas installations and seven times smaller than in steam power installations. Calculations indicate that a gas-turbine installation requires about 50% lower capital investment as compared to a steam power installation, lowers the volume and cost of the main structure three times and the cost per kilowatt-hour not less than 15%. The possibility of building powerful gas-turbine installations with gas temperature of 750-800°C is indicated. Adoption of still higher temperature up to 1200°C, will increase the efficiency to 53-55% and double the power. Orig. art. has: 10 figures and 5 tables. [JPRS]

SUB CODE: 10 / SUBM DATE: none / ORIG REF: 006 / OTH REF: 001

Card 1/1 UDC: 621.438.001.5

CHEREPNIN, L. V.

Russkaya metrologiya. M., Izd. istor.-arkhiv. in-ta (1944), 1-93.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A. G.,
Markushevich, A. I.,
Rashevskiy, P. K.
Moscow-Leningrad, 1948

1. CHEREPNIN, L.V.

2. USSR (600)

4. Feudalism

7. Basic stages in the development of feudal property in Russia; to the 17th century, Vop.ist. no. 4, 1953.

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

AUTHOR: Cherepnin, L. V., Professor SOV/30-58-9-37/51

TITLE: News in Brief (Kratkiye soobshcheniya) Journey of a Delegation of Soviet Historians to Roumania (Poyezdka delegatsii sovetskikh istorikov v Rumyniyu)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, Nr 9, pp. 95 - 96 (USSR)

ABSTRACT: The meeting was called by the Prezidium Akademii Rumynskoy Narodnoy Respubliki (Presidium of the Academy of the Roumanian People's Republic) and by the Rumyno-Sovetskiy nauchnyy institut (Roumanian-Soviet Scientific Institute) and was held in Bucharest from June 9 - 11. The Soviet delegation consisted of L.V.Cherepnin and M.G. Sazina (Moscow), F.P.Shevchenko (Kiyev), N.A.Mokhov and S.Ya. Aftenyuk (Kishinev). The conference dealt with problems of Roumanian-Russian relations. L.V.Cherepnin in his report analysed the Russian code of the feudal law from the year 1649 and the Roumanian one from 1646. N.A.Mokhov spoke on problems of the Roumanian-Russian relations in the XVII. and XVIII. century. F.P.Shevchenko reported on Roumanian participation in the partisan fights in the Ukraine during the second world war. M.G.Sazina reported on the Soviet delegation's

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struggle for a treaty of peace with Roumania in the peace conference in Paris 1946. During this visit the Soviet delegation took interest in the universities and institutes of the Academy of Sciences of the RNR (Roumanian People's Republic) and in their working program.

GREKUL, Filipp Aleksandrovich; CHEREPNIN, L.V., doktor istor. nauk, prof., red.; GAL'PERIN, V., otv. za vypusk; TEL'PIS, V., tekhn. red.

[Agrarian relations in Moldavia in the 16th and the first half of the 17th century] Agrarnye otnosheniia v Moldavii v XVI - pervoi polovine XVII vv. Pod red. L.V.Cherepnina. Kishinev, Gos izd-vo "Kartia moldovenieske," 1961. 455 p.
(MIRA 15:4)
(Moldavia—Agriculture—Economic aspects)
(Moldavia—Land tenure)

CHEREPNIN, M.S. (Karaganda).

Solving and studying problems reducible to quadratic equations.
Mat.v shkole no.1:51-53 Ja-F '54. (MLRA 7:1)
(Equations, Quadratic)

CHEREPNIN, M.S. (Karaganda).

Causes of the differences in evaluationg examination assignments in geometry. Mat.v shkole no.2:11-14 Mr-Ap '54. (MLRA 7:3)
(Geometry--Problems, exercises, etc.)

CHEREPNIN, N.A., LOBIKOV, Yu.V.

Attachment used for milling valve seats in pistons. Mashinostroitel' no.1:38-39 Ja '57. (MLRA 10:4)
(Pistons) (Milling machines--Attachments)

AUTHOR: Cherepnin, N.F.

SOV/115-58-1-21/50

TITLE: The Electrotensometric Dynamometer DTB-8 (Elektrotenzometricheskiy dinamometr DTB-8)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 1, pp 38 - 39 (USSR)

ABSTRACT: The described beam type dynamometer with the electronic EI-1 indicator was designed by DONUGI for measuring the slowly changing forces acting on anchor bolts in solid rock formations around mine workings. The device has 4 wire transducers glued to its lower portion in the zone of tension, which are connected as a bridge. The electrical resistance of this bridge is proportional to the relative deformation, and the change of resistance produces an unbalance of the bridge, and a sound which is audible with a headphone. The dynamometer measures forces with a 1.0 to 1.5% error within a 100 kg to 8 ton range. There are 2 diagrams.

1. Dynamometers---Design 2. Dynamometers---Applications
3. Dynamometers---Performance

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7 14 SOV/32-25-1-46/51

AUTHOR: Cherepnin, N. F.

TITLE: Electrotensiometric Ring Dynamometer (Elektrotenzometricheskiy kol'tsevoy dinamometr)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 1, pp 121-122 (USSR)

ABSTRACT: The instrument mentioned in the title is that of type DTK-7 and was designed for the determination of tensile stresses of rods with anchorage for mountain building constructions (rods, ropes, anchor bolts, bars for reinforced concrete etc.). It operates together with an electron indicator (Fig) and, thus, consists of two units. The indicator is composed of an unbalance compensator and a zero indicator. The elastic element of the dynamometer is a steel ring in a casing. Four wire strain cells (of 250 Ohm resistance each) are glued to the inner part of the steel ring. Two of the strain cells determine the deformation by stress and the two others the deformation by pressure. The cells are connected by a bridge scheme in which a maximum current flows in the diagonal of the bridge, and where there is a complete temperature compensation. The bridge is fed by an alternating voltage of the audio-frequency of

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Electrotensiometric Ring Dynamometer

800 cycles, with the equilibrium in the bridge being attained on the disconnection of the sound signal; the reading is done from the scale of the unbalance compensator. The data of the instrument are: measurable limit stress is 7 tons; deviations in measurement are from 1.0 to 1%; weight: 8.3 kg. I. P. Slaba and A. S. Sautkin took part in designing and testing the instrument. There is 1 figure.

ASSOCIATION: Donetskiy nauchno-issledovatel'skiy ugol'nyy institut (Donets Scientific Research Institute for Coal)

CHEREPNIN, N.V.

Influence of secondary electron emission of insulators on the stability of parameters of electron tubes. Radiotekh.i elektron. 1 no.1:38-50 ja '56. (MLRA 9:11)
(Electron emission) (Electron tubes)

9(2)(4) PHASE I BOOK EXPLOITATION SOV/1487

Cherepnin, N.V.

Elektronnyye lampy dlya shirokopolosnykh usiliteley (Electron Tubes for Wide-band Amplifiers) Moscow, Gosenergoizdat, 1958. 109 p. 26,000 copies printed.

Ed.: A.A. Zhigarev; Tech. Ed.: N.I. Borunov.

PURPOSE: The book is intended for workers in the vacuum tube industry. It may also be used as reference material by those developing radio and telephone equipment.

COVERAGE: The book presents a survey of requirements of electron tubes used for wide-band amplifiers and outlines methods of their manufacture. The production of reliable and durable tubes is briefly described and technical data on a new series of wide-band amplifier tubes with a long life are presented. No personalities are mentioned. There are 40 references, of which 8 are Soviet, including 3 translations, 16 English, 4 French, and 12 German.

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Electron Tubes for Wide-band Amplifiers SOV/1487

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Electron Tubes for Wide-band Amplifiers SOV/1487

AVAILABLE: Library of Congress

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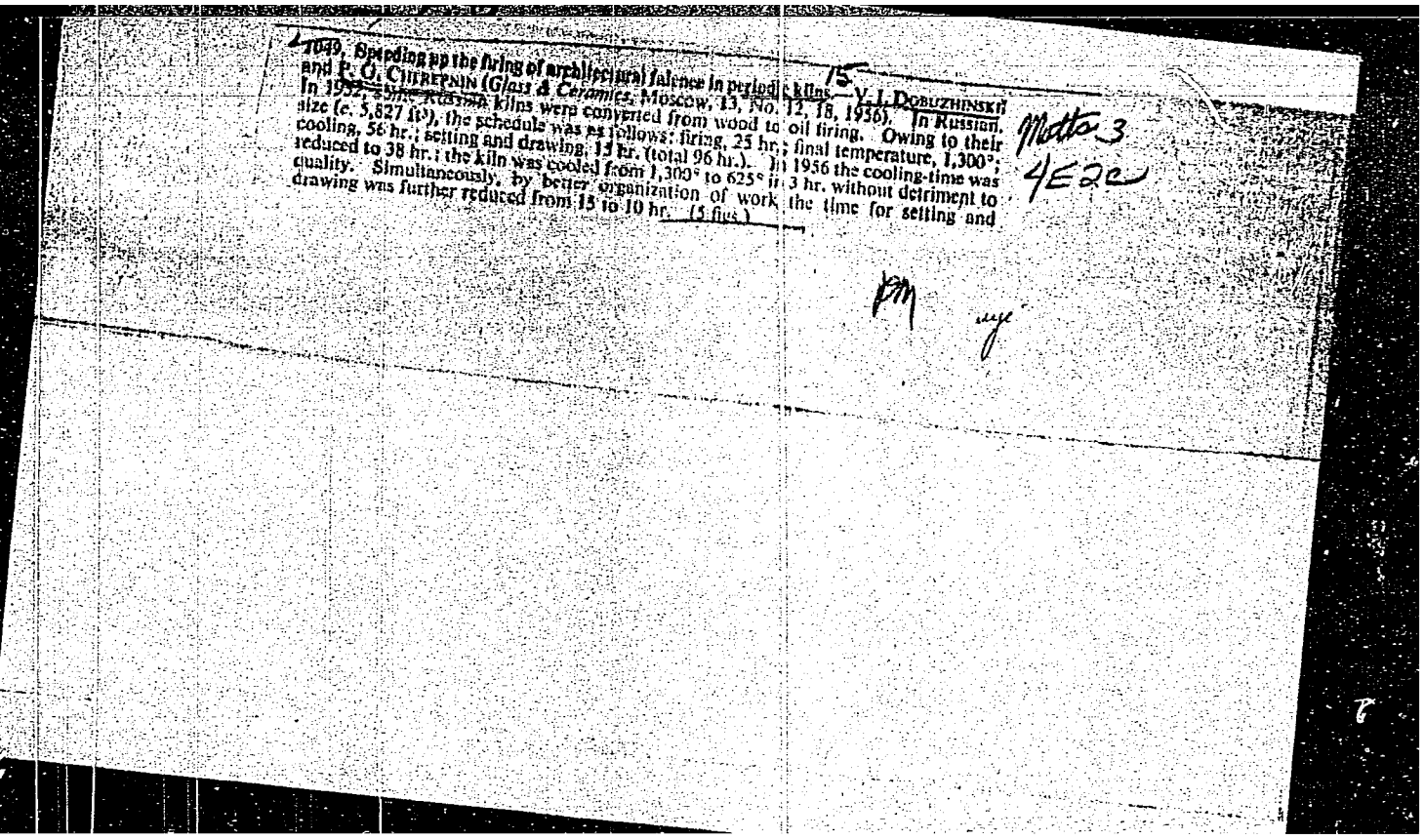
Card 3/3

CHEREPNIN, N.Ye., inzhener.

Efficient use of a DIP crane. Elek.sta. 25 no.1:47-48 Ja '54.
(MLRA 7:1)
(Cranes, derricks, etc.)



1049. Speeding up the firing of architectural faience in periodic kilns. V. I. DOBUZHINSKII and P. O. CHEREPNIN (*Glass & Ceramics*, Moscow, 13, No. 12, 18, 1956). In Russian. In 1952, [illegible] Russian kilns were converted from wood to oil firing. Owing to their size (c. 5,827 ft³), the schedule was as follows: firing, 25 hr.; final temperature, 1,300°; cooling, 56 hr.; setting and drawing, 15 hr. (total 96 hr.). In 1956 the cooling-time was reduced to 38 hr.; the kiln was cooled from 1,309° to 625° in 3 hr. without detriment to quality. Simultaneously, by better organization of work the time for setting and drawing was further reduced from 15 to 10 hr. (5 figs.)

15

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PANOV, I.V.; ANTONINOV, V.N.; SOKOLOV, D.D.; ZAGUMENNYY, V.V.; CHEREPNIN, S.V.; OBYDENNYY, P.T.; KOROBOV, A.S., red.; KOMONOV, A.S., red. izd-va; KHENOKH, F.M., tekhn. red.

[Provisional technical specifications for planning landscaping operations]Vremennye tekhnicheskie usloviia na proektirovanie rabot po ozeleneniiu. Utverzhdeny prikazom po Ministerstvu kommunal'nogo khoziaistva RSFSR No.233 ot 20 oktiabria 1961. Izd-vo M-va kommun.khoz.RSFSR, 1962. 147 p. (MIRA 15:8)

1. Gosudarstvennyy institut po proyektirovaniyu kommunal'nogo stroitel'stva.

(Landscape gardening)

ACC NR: AP6025980 SOURCE CODE: UR/0310/66/000/007/0020/0023

AUTHOR: Cherepnin, V. (Engineer)

ORG: Lengiprorechtrans

TITLE: Removing misalignments while hauling ships on slipways

SOURCE: Rechnoy transport, no. 7, 1966, 20-23

TOPIC TAGS: hoisting equipment, marine equipment, marine engineering [illegible]

ABSTRACT: When hauling out river vessels on G-150 and G-300 slipways, the hoisting carriages easily wedge out or in if they are overloaded or underloaded, unless their loads are level with those of the neighboring carriages. This holds true if the ship's center of gravity is located over the resulting reaction force of the supporting carriages; when it is displaced, the misalignment of uniformly distributed carriages can be avoided only when the displacement of the ship's center of gravity is less than 2 1/2% of the distance between the end carriages. Modern cargo ships placed on slipways have a significant overhang aft, and their center-of-gravity displacement, which reaches 12—15%, cannot be reduced by changing the electrical slip of the individual hoisting-winch motors by introducing an additional resistance into the stator winding. Basic methods and formulas are presented for determining the loading of carriages when the ship's center of gravity is displaced and for calculating their settling on

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UDC: 629.128.004

ACC NR: AP6025980

the carriages in such a way that no curving occurs during the hauling operation. The simplicity of the proposed method is demonstrated by two sets of calculations. Orig. art. has: 6 figures and 1 table.

SUB CODE: 13/ SUBM DATE: none

Card 2/2

CHEREPNIN, V.K.

Zonal structure of pyrite crystals in Ursk deposits of the Salair Ridge. Zap. Vses. min. ob-va 86 no.729-731 '57. (MIRA 11:3)

1. Tomskiy politekhnicheskiy institut.
(Salair Ridge--Pyrites)

CHEREPNIN, V.K.

Native sulfur in the oxidation zone of the Maynskoye copper-pyrite deposit. Zap. Vses. min. ob-va 87 no.4:503-504 '58. (MIRA 12:1)
(Sayan Mountains---Sulfur)

CHEREPNIN, V.K.; ZHURAVLEV, R.S.

Using centrifugal analysis to diagnose finely dispersed products of the oxidation zone. Trudy Inst.geol.i geofiz.Sib.otd.AN SSSR no.4:141-145 '60. (MIRA 15:7)
(Mineralogy, Determinative) (Centrifugation)

CHEREPNIN, V.K.

Method of studying ore bodies in sulfide deposits. Razved. i okh. nedr 27 no.8:25-27 Ag '61. (MIRA 16:7)

1. Tomskiy politekhnicheskiy institut.
(Sulfides) (Ore deposits)

CHEREPNIN, V.L.; LUZGANOV, A., student

Grafting of Siberian pine in the southern forest-steppe of Krasnoyarsk Territory. [Trudy] STI 35:109-112 '63
(MIRA 18:2)

ZILIST, Petr Sigizmundovich; CHEREPNIN, V.Ye., redaktor; VOLCHOK, K.M., tekhnicheskiy redaktor

[Advanced technological methods in shipbuilding and ship repairing] Peredovye tekhnologicheskie metody v sudostroenii i sudoremonte. Leningrad, Izd-vo "Rechnoi transport," Leningradskoe otd-nie, 1956. 118 p. (MLRA 9:12)
(Shipbuilding) (Ships--Maintenance and repair)

GETSOV, Iosif Yefremovich, dotsent, kand.tekhn.nauk; GUSEV, M.N., retsenzent; CHEREPNIN, V.Ye., retsenzent; CHERNOV, M.I., red. VINOGRADOVA, N.M., red.izd-va; BOBROVA, V.A., tekhn.red.

[The design of ship-repair and shipbuilding enterprises] Proektirovanie sudoremontnykh i sudostroitel'nykh predpriiatii. Moskva, Izd-vo "Rechnoi transport," 1959. 335 p. (MIRA 13:6)

(Shipyards) (Shipbuilding)

CHEREPNINA, G.M.

Representation of the relief of sandy plains. Geod.i kart. no.1: 58-60 Ja '63. (MIRA 16:2)
(Relief maps)

CHEREPNINA, S.K.

New genus of Ordovician tetracorals in the Gornyy Altai. Trudy SNIIGGIMS no.23:140-142 '62. (MIRA 16:9)
(Altai Mountains—Tetracoralla)

CHEREPNOV, L. (Gor'kiy)

Pneumatic water lifting system. Pozh.delo 8 no.3:26 Mr '62.
(MIRA 15:4)
(Hydraulic rams)

S/2981/64/000/003/0105/0119

ACCESSION NR: AT4037652

AUTHOR: Rutman, M. M.; Savin, F. I.; Balakhontsev, G. A.; Cherepok, G. V.; Zinov'yev, V. K.

TITLE: Properties of V92 alloy ingots

SOURCE: Alyuminiyevy*ye splavy*, no. 3, 1964. Deformiruyemy*ye splavy* (Malleable alloys), 105-119

TOPIC TAGS: aluminum magnesium zinc alloy, V92 alloy, continuous alloy casting, alloy heat treatment, alloy property

ABSTRACT: A technique for production-scale melting and continuous casting of V92, an aluminum-base alloy (3.75% Mg, 2.75% Zn, 0.8% Mn, 0.2% Ti) is described. Round (225—1100 mm in diameter) and flat (250 x 1400 mm) ingots were cast. The high Mg content of the alloy required addition of about 0.001% Be. No difficulties were encountered in casting round ingots. The pouring rates used corresponded to the lower limit of those used for AMg6 alloy. For ingots less

L 13283-66 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b) IJP(c) MJW/JE

ACC NR: AP6001104 (N) SOURCE CODE: UR/0136/65/000/012/0072/0074

AUTHOR: Shadrin, G. G.; Cherepok, G. V.

ORG: None

TITLE: Certain patterns of crack formation during the production of round ingots with large cross sectional areas

SOURCE: Tsvetnyye metally, no. 12, 1965, 72-74

TOPIC TAGS: cracking, metal casting, aluminum alloy, cooling, high strength metal / V93 aluminum alloy, D16 aluminum alloy

ABSTRACT: The casting of large-diameter ingots of high-strength V93 and D16 type deformable Al alloys is complicated by the marked proneness of these alloys to crack during continuous casting with direct water-cooling of the ingot. These alloys are used as machine elements, being suitable for forging, stamping and pressing. The cracks are classified as either hot cracks, forming during the crystallization of the alloy, or cold cracks forming with the low-temperature cooling of the ingot. Considering the difficulty of obtaining crack-free ingots of 1100-mm diameter, the authors experimented with the creation of a uniform cooling over the perimeter, and the possibility of regulating the height of the ingot's cooling zone. To this end, they developed a new design of a crystallizer for the casting of large ingots (Fig. 1). The

Card 1/3 UDC: 669.715:621.746.76

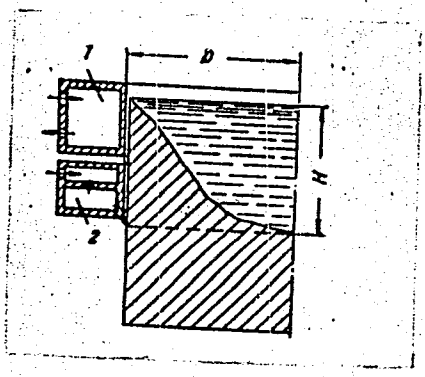

Fig. 1. Ingot cooling diagram

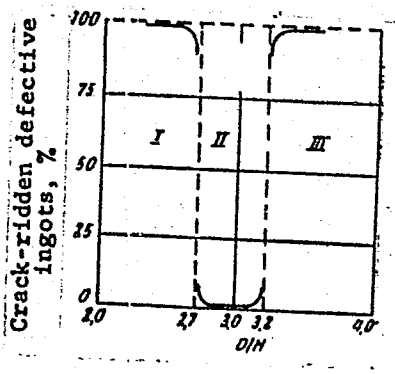

Fig. 2. Effect of K = D/H on crack formation

I - hot crack region; II - crack-free region; III - cold crack region

L 13283-66

ACC NR: AP6001104

crystallizer consists of molder 1 and secondary cooling ring 2 which represent two chambers with a separate coolant supply, linked together over the entire perimeter by orifices of 2-3 mm diameter. During the casting it was established that different types of cracks form depending on the height H of the cooling zone of the ingot: their formation during casting is accompanied by a high-pitched sound; when the height of the cooling zone < 330 mm, hot cracks appear -- their formation was not observed during casting and was discovered only after the ingots had been cut into pieces; when the height of the cooling zone is 350-380 mm, the cast ingots were crack-free. These findings led to deducing the relation

$$K = \frac{D}{H} = 2{,}7 \div 3{,}2.$$

A checkup established that this relation also applies to the casting of ingots with diameters of 650-1100 mm from deformable Al alloys of the D16, V95 and 93 types and demonstrated the possibility of selecting the height of the cooling zone for ingots as a function of diameter (Fig. 2). This makes it possible to greatly reduce the percentage of defective ingots. Orig. art. has: 2 figures, 2 tables.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000

Card 3/3

SHADRIN, G.G.; CHERNOK, G.V.

Certain regularities of crack formation during the production of large cross section circular ingots. Tsvet. met. 38 no. 12: 72-73 D '65 (MIRA 19:1)

EWP(k)/EWT(m)/EWP(t)/ETI IJP(c) JH/WW/JD/HW/JG

ACC NR: AT6024944 (A,N) SOURCE CODE: UR/2981/66/000/004/0296/0302

AUTHOR: Rutman, M. M.; Cherepok, G. V.; Rudenko, V. S.

ORG: none

TITLE: Effect of furnace lining on the silicon content of deformable aluminum alloys

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 296-302

TOPIC TAGS: refractory, aluminum silicate, aluminum zinc alloy, magnesium containing alloy

ABSTRACT: The reaction between liquid aluminum alloys and aluminosilicate refractories used for furnace linings was studied by determining the effect of the composition of alloys of Al-Zn, Al-Mg, and Al-Zn-Mg systems on the depth of penetration of silicon into the alloys after a 20-hr contact at 750°C. The extent of this reaction was found to depend on the composition of the alloy. Small admixtures of certain elements (Be, Mn, Li), substantially affect the extent and nature of the reaction between the melt and the aluminosilicate lining. A rise in the temperature of the melt increases the rate of the reaction of all the alloys with the lining; a particularly pronounced increase in the extent of the reaction is observed in the case of aluminum alloys containing magnesium or magnesium and zinc. A classification of deformable aluminum

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L 46971-66

ACC NR: AT6024944

alloys is proposed, and the use of certain types of refractories for various alloy groups is recommended. Orig. art. has: 4 figures.

SUB CODE: 11/ SUBM DATE: None

/Card 2/2

CHEREPOV, Aleksey Il'ich; POKROVSKAYA, A., redaktor; KAPLAN, S., tekhnicheskiy redaktor.

[Barnaul] Barnaul. Barnaul, Altaiskoe knizhnoe izd-vo, 1955. 85 p. [Microfilm] (MLRA 10:5)

(Barnaul--Description)

CHEREPOV, A.I., inzh.

Improve safety inspection of shafts hoists. Bezop.truda v prom. 2 no.5:10 My '58. (MIRA 11:4)
(Hoisting machinery)

CHEREPOV, A.I., inzh.

Do not permit the operation of new mines unsufficiently developed. Bezop.truda v prom. 3 no.4:6 Ap '59. (MIRA 12:6)

1. Tul'skiy Sovet narodnogo khozyaystva.
(Coal mines and mining)

CHEREPOV, A.I., inzh.

Safe operation of mine shafts. Bezop.truda v prom. 4 no.7:12 Jl '60. (MIRA 13:8)
(Mining engineering—Safety measures)

CHEREPOV, A. I., inzh.

Over-all mechanization of production processes in a mine. Bezop. truda v prom. 6 no.9:1-3 S '62. (MIRA 16:4)

1. Tul'skiy sovet narodnogo khozyaystva.

(Tula Province—Coal mines and mining—Technological innovations)

OSTROVSKIY, M.Ye.; GILLER, E.S.; CHEREPOV, I.A.; MELIKHOVA, A.A.

Design for a new type of a chemical plant. Prom. stroi. 41 no.7:13-18 Jl '64. (MIRA 17:8)

USSR/Cultivated Plants - Fodders. M-4

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29861

Author : Cherepov, I.F.
Inst :
Title : Corn on a Fallow with Diverse Systems of Fertilization in Crop Rotations.

Orig Pub : V sb.: Kukuruza v BSSR. Minsk, AN BSSR, 1957, 187-190

Abstract : At the Benyakov Experimental Station in 1955 corn was placed after oats. The largest corn yield (396.8 centners per ha. of green stuff) was gotten when one applied to it on the fallow: manure at 60 t. + Ca + $N_{30}P_{60}K_{60}$ and on the crops in rotation, to winter rye on a black fallow: lime + manure at 40 t., to potatoes manure at 40 t., and $N_{45}P_{60}K_{60}$ [text reads $N_{45}P_{60}P_{60}$] on barley with additional grass.

Card 1/1

L 22451-66 EWT(d)/FSS-2

ACC NR: AP6004999 (A) SOURCE CODE: UR/0106/66/000/001/0048/0059

AUTHOR: Cherepov, N. N.

ORG: none

TITLE: Principal characteristics of a binary-information-transmitting system with a compound information feedback

SOURCE: Elektrosvyaz', no. 1, 1966, 48-59

TOPIC TAGS: information transmission, binary information transmission

ABSTRACT: Unlike the simple information-feedback system, a new compound information-feedback system uses an error-detecting code and a joint receiver-transmitter command for repetition. The new-system logic is so designed that the final decision on transmission of correcting information belongs to the sending end but this decision is essentially influenced by the receiving end where defective code combinations are inverted prior to being fed into the feedback channel. This indirect RQ signal results in a much higher probability of correct decision at the sending end. The round-trip signal delay causes an increase in the required capacity of

Card 1/2 UDC: 621.391.18

L 22451-66
ACC NR: AP6004999

intermediate storage devices. Formulas for determining the mean time of message transmission and the probability of erroneous reception are developed. Their analysis shows that the new system promises a considerably lower probability of false code-combination reception with a lesser or equal coefficient of increase of the mean time of binary-bit transmission. However, as the new system does not use simultaneous information feedback, it is best applicable in the cases where the reverse information flow is much lower than the forward flow or where channel fill is low in both directions. Orig. art. has: 2 figures, 22 formulas, and 2 tables.

SUB CODE: 17, 09 / SUBM DATE: 08Jan65 / ORIG REF: 001 / OTH REF: 002

Card 2/2

D'YACHKOV, P.N.; UZBERG, A.I.; CHEREPOV, P.V.

Recovering the caustic magnesite dust by means of granulation. Ogneupory 25 no.8:345-352 '60. (MIRA 13:9)

1. Vostochnyy institut ogenporov (for D'yachkov). 2. Zavod "Magnezit" (for Uzberg, Cherepov).

(Magnesite) (Ore dressing)

CHEREPOV, V.T., aspirant

Methods for cultivating the pathogen of European foulbrood. Veterinariia 41 no.6:31-32 Je '64. (MIRA 18:6)

1. Nauchno-issledovatel'skiy institut pchelovodstva.

CHEREPOV, Ye.I.

Council on the Use of Blasting in the National Economy. Vest.AN SSSR 31 no.6:93-94 Je '61. (MIRA 14:6)
(Blasting)

L 44191-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6013281 (A) SOURCE CODE: UR/0413/66/000/008/0079/0079 57 B

INVENTOR: Kotlyarevskiy, I. L.; Zanina, A. S.; Gusenkova, N. M.; Sokolov, I. Ye.; Cherepov, Ye. I.

ORG: none

TITLE: Preparation of oligomers. Class 39, No. 180797 [announced by the Institute for Chemical Kinetics and Combustion, Siberian Branch, Academy of Sciences, SSSR (Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya Akademii nauk SSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 79

TOPIC TAGS: oligomer, polyarylene, polyacetylene, polycondensation, heat resistant material, dielectric strength

ABSTRACT: This Author Certificate introduces a method for preparing an oligomer of the polyarylene polyacetylene series by oxidative polycondensation of diacetylene. To obtain soluble polymer compounds with high heat resistance and dielectric strength, 2, 2-bis-(4' -methoxy-3' -ethynylphenyl)-propane is suggested as the diacetylene. [LD]

SUB CODE: 07 11/ SUBM DATE: 29Mar65/

Card 1/1 afm

ANGELOV,St.; CHEREPOVA, N.

Studies on theileriasis. Izv. microbiol. inst. 15:5-11 '63

KOEV, N.; CHEREPOVA, N.

Serological and epidemiological studies Pneumocystis pneumonia. Izv. mikrobiol. inst. (Sofiia) 10:21-24 '61.

GOLIK, YE. M. - ml. nauchn. sotr. i, SAKHAROVA, N. A. - inzh., CHEREPOVA, O. V. - O. St. nauch. sotr., ABRAMOVICH, M. D. - inzh.

Institut stroitel'nykh materialov Akademii arkhitektury USSR

RAZRABOTKA TEKHNOLOGII POLUCHENIYA DVUSLOINYKH KERAMICHESKIKH PLIT DLYA OBLITSOVKI FASADOV

Page 102

SO: Collection of Annotations of Scientific Research Work on Construction, completed in 1950, Moscow, 1951

CHEREPOVA, O.V., kand.tekhn.nauk; SAKHAROVA, N.A., kand.tekhn.nauk; GOLIK, Ye.M., inzh.

Opaque, colored glazes. Stek. i ker. 22 no.3:29-30 Mr '65. (MIRA 18:10)

1. Nauchno-issledovatel'skiy institut stroitel'nykh materialov i izdeliy.

DAZHUK, K.V., kandidat tekhnicheskikh nauk; CHEREPOVA, O.V., kandidat tekhnicheskikh nauk.

Efficient structural ceramics made of tripoli earth. Nov. v stroi. tekh. no.6:4-44 '55. (MLRA 9:11)

1. Nauchno-issledovatel'skiy institut stroitel'nykh materialov Akademii arkhitektury USSR.
(Tripoli (Mineral)) (Ceramics)

CHEREPOVA, O.V., kandidat tekhnicheskikh nauk; SAKHAROVA, N.A., kandidat tekhnicheskikh nauk; GOLIK, Ye.M., inzhener.

Weatherproofness of ceramic facings. Nov.v stroi.tekh. no.8: 91-124 '56. (MLRA 9:11)

(Façades) (Ceramics)

LYSIN, B.S., akademik; CHEREPOVA, O.V.

Investigation of tinless and leadless enamels. Dop.AN URSR no.2: 219-221 '61. (MIRA 14:2)

1. AN USSR (for Lysin).
(Enamel and enameling)

CHEREPOVA, O.V.; SAKHAROVA, N.A.; GOLIK, Ye.M.; PARNOVSKIY, L.K.; GUMENYUK, Ye.L.

Light colored glazed tiles. Stek. i ker. 18 no.7:24-26 Jl '61. (MIRA 14:7)

(L'vov—Tiles)

CHEREPOVA, O. M.

CHEREPOVA, O. M. -- "The Annual Meadow Crops of Tambov Oblast." Min Higher Education. Fruit and Vegetable Inst imeni I. V. Michurin. Michurinsk, 1955.
(Dissertation for the Degree of Candidate in Agricultural Sciences).

SO: Knizhnaya Letopis', No 9, 1956.

SAKHAROVA, N.A.; CHEREPOVA, O.V.; GOLIK, Ye.M.

Colored coating for slag pyrocerams. Stroi. mat., det. i izd. no. 2:105-114 '65 (MIRA 19:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut stroitel'nykh materialov i izdeliy, Kiyev.

CHEREPOVA, V.A.; KOSYKH, V.P.

Mikhail Konstantinovich Dalmatov; 60th birthday and 30th anniversary of his scientific activities. Arkh.pat. 16 no.1:93 Ja-Mr '54. (MLRA 7:5)
(Dalmatov, Mikhail Konstantinovich, 1894-)

CHEREPOVA, V.A.

Effect of penicillin on the secretory and motor activity of the intestine. Antibiotiki 5 no.4:82-85 Jl-Ag '60. (MIRA 13:9)

1. Kafedra patologicheskoy fiziologii Omskogo veterinarnogo instituta.
(PENICILLIN) (INTESTINES)

RUDERMAN, R.S.; CHEREPOVICH, L.V., inzh.

Use of ultrasonic waves in dyeing hosiery. Tekst. prom. 21 no.4:44-45 Ap '61. (MIRA 14:7)

1. Glavnyy inzhener L'vovskoy chulochnoy fabriki (for Ruderman).
(Ultrasonic waves—Industrial application)
(Dyes and dyeing—Knit goods)

TIKHONOV, Aleksey Ivanovich; CHEREPOVICH, Sergey Yefimovich; GRITSKEVICH, A.G., kand. tekhn. nauk, red.

[White Russia, a republic with large-scale chemical industries] Belorussiia - respublika bol'shoi khimii. Minsk, Belarus', 1964. 57 p. (MIRA 18:7)

MITYAKOV, N.A.; MITYAKOV, E.Ye.; CHEREPOVITSKIY, V.A.

Results of radio observations from the artificial satellites "Kosmos 1" and "Kosmos 2" in the Crimea. Geomag. i aer. 3 no. 5:816-822 S-O '63. (MIRA 16:11)

1. Radiofizicheskiy institut pri Gor'kovskom gosudarstvennom universitete.

10

L 65295-65 EWT(d)/EWT(l)/FS(v)-3/FSS-2 TT/AST/GW

ACCESSION NR: AP5021255 UR/0293/65/003/004/0618/0629
629.195.2:621.39

AUTHORS: Getmantsev, G. G.; Kalashnikov, N. I.; Bykov, V. L.; Benediktov, Ye. A.; Yerukhimov, L. M.; Belikovich, V. V.; Bakhnin, V. M.; Kantor, L. Ya.; Korobkov, Yu. S.; Kunilov, M. V.; Mityakov, N. A.; Puzyrev, I. M.; Rapoport, V. O.; Sigalov, A. G.; Cherepovitskiy, V. A.; Akim, E. A.

TITLE: The results of an experiment on radio communications via "Echo 2" and the moon at a frequency of 162.4 megacycles between the observatories of Jodrell Bank and Zimenki

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 4, 1965, 618-629

TOPIC TAGS: moon, satellite communication, radio telescope, radio transmission, satellite tracking, scientific research coordination / Jodrell Bank radio telescope, Zimenki observatory radio telescope, BESM 2 electronic computer

ABSTRACT: During February-March 1964 the Academy of Sciences of the SSSR, NASA of the USA, and the General Post Office Department of Great Britain conducted an experiment to establish one-way radio communication at 162.4 megacycles via the passive satellite "Echo-2" and the moon. Echo-2 was used for 34 communication

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L 65295-65

ACCESSION NR: AP5021255

tests of 10-15 minutes (the time interval permitted by Echo's orbit), and the moon was used for 15 test runs between the Echo tests. The transmitting equipment at Jodrell Bank and the receiving unit of the Zimenki Observatory are described in detail. Echo orbit information furnished by NASA, visual observations, and radio tracking data from fixed stations were fed to a BESM-2 electronic calculator which provided programmed tracking control. The received signal exhibited strong fluctuations separable into two periods: 1) a 1-2 minute fluctuation associated with Echo-2 distortion from a sphere and with tracking errors; 2) a 3-10 second period associated with small surface irregularities. The rapid fluctuations varied with each test. Voice signals, slowed by a factor of 8, were barely intelligible. Telegraph, teletype, and photofacsimile transmission, in general, were unsatisfactory, but in periods of high signal-to-noise ratios intelligible messages were received. The moon transmissions were not as clear but did furnish scientific information. Unexpected transmission losses included 3-5 db for polarization losses and 1-2 db for unknown causes. The international cooperation was excellent, with the Soviet submitting a complete report. Offers for further cooperation have been extended. Orig. art. has: 3 tables, 7 figures, and 4 formulas.

ASSOCIATION: none

SUBMITTED: 18Apr65 ENCL: 00 SUB CODE: AA, EC

NO REF SOV: 000 OTHER: 002

Card 2/2 nc

L 23430-65 EWT(d)/FSS-2/EWT(1)/EEC(k)-2/FCC/EWA(d)/EWA(h) AST/IT/GW

ACC NR: AP6012830 SOURCE CODE: UR/0293/66/004/002/0249/0256

49
41
B

AUTHOR: Mityakov, N. A.; Mityakova, E. Ye.; Cherepovitskiy, V. A.

ORG: none

TITLE: Results of a study of the distribution of electron concentration in the ionosphere by a method of ground reception of radio signals from Electron-1

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 2, 1966, 249-256

TOPIC TAGS: ionosphere, ionospheric electron concentration/Electron 1

ABSTRACT: The total electron concentration in the ionosphere above the maximum of the F layer was determined from ground reception of signals of Electron-1 transmitted at 20.005 and 30.0075 Mc. Observations were made during February—March 1964 at Gorky and in the Crimea with equipment capable of recording the phase difference of coherent-frequency signals. Standard IKCh-3 equipment, described earlier by Ya. L. Al'pert et al., was employed in the Crimea, while special equipment capable of recording signal amplitudes and phase differences at coherent frequencies of 20, 30, 40, and 90 Mc was developed for use at Gorky. Standard R-250 M receivers were employed. Signals from a coherent reference heterodyne were also fed to the receivers. In the presence of satellite signals, low-frequency beats were generated at the output of the receivers. After passing through narrow-band filters, the low-frequency signals were fed to a phase meter, where they were brought to a single frequency of 9 kc. On the basis of recorded phase differences, total electron concentration was

Card 1/3 UDC: 350.388.1

determined to altitude z_c of the satellite from the following formula:

$$N_{nc} = \int_0^{z_c} N dz$$

where N_{nc} is the vertical profile of the ionosphere passing through a point at which radio beams intersect with the maximum of the F layer. Curves showing the diurnal variation of N_{nc} for various intervals of geographic latitudes are given in the

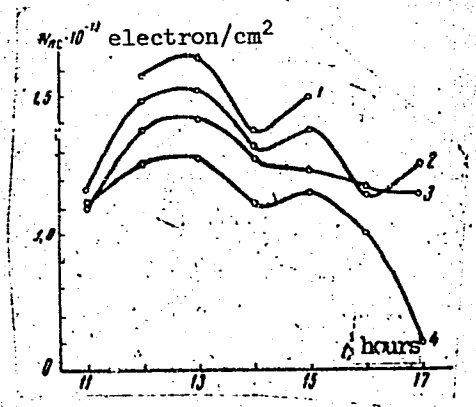


Fig. 1. Diurnal variation of the electron concentration for various geographic latitudes

1 - 51—53°; 2 - 53—55°; 3 - 55—57°; 4 - 57 to 60°.

figure. The total electron concentration was found to increase in the southward

direction. In conclusion, the authors avail themselves of the opportunity to thank T. I. Makarov and S. K. Malyshev for their participation in the development and preparation of the equipment; L. M. Barsukov, V. A. Vasin, and L. I. Grekov for their assistance in processing the material; and L. V. Piskunov and A. V. Potemkin for computing the ephemerides of the satellites. Orig. art. has: 6 figures and 1 table. [JR]

SUB CODE: 04, 17/ SUBM DATE: 05Jun65/ ORIG REF: 006/ OTH REF: 005/ ATD PRESS: 4236

CHEREPOVSKIY, I.F.

Laboratory car for checking automatic cab signaling devices. Avtom., telem. i sviaz' 9 no.10:18-20 O '65. (MIRA 18:11)

1. Starshiy inzh. laboratorii signalizatsii i svyazi Donetskoy dorogi.

CHEREPOVSKIY, I.F.; KIRLAN, A.I.

Unit for checking high-voltage dischargers. Avtom., telem. i sviaz' 2 no.9:33 S '58. (MIRA 11:10)

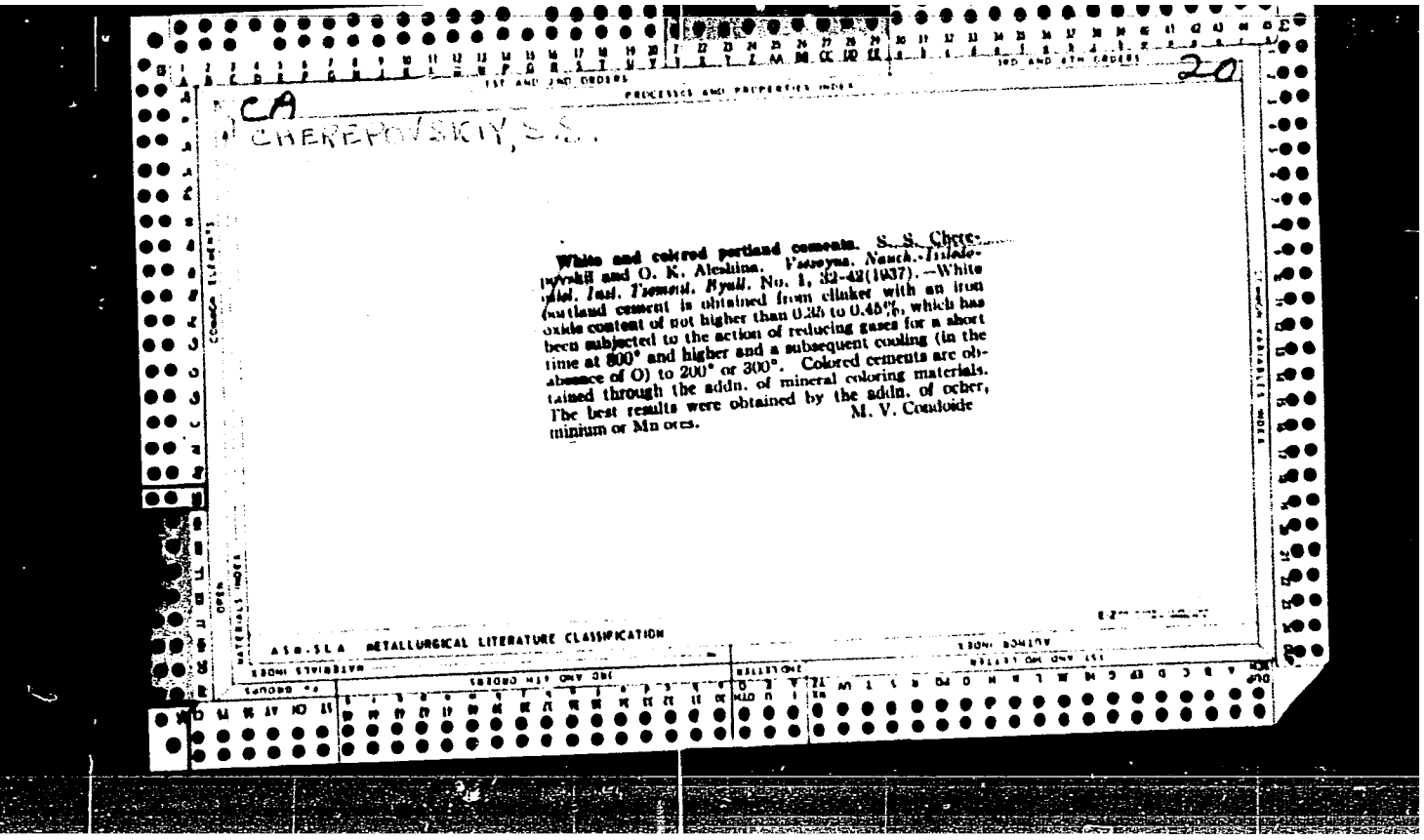
1.Nachal'nik laboratorii signalizatsii i svyazi Donetskoy dorogi (for Cherepovskiy). 2.Starshiy inzhener laboratorii signalizatsii i svyazi Donetskoy dorogi (for Kirlan).
(Electric lines--Testing)

FEDOROV, N.M., starshiy elektromekhanik; CHEREPOVSKIY, I.F.; ROMANENKO, B.D.

Letters to the editor. Avtom.telem. i sviaz' 3 no.12:41 D '59. (MIRA 13:4)

1. Kontrol'no-ispytatel'nyy punkt Bologovskoy distantsii signalizatsii i svyazi Oktyabr'skoy dorogi (for Fedorov). 2. Nachal'nik laboratorii signalizatsii i svyazi Donetskoy dorogi (for Cherepovskiy). 3. Zamestitel' nachal'nika Ozherel'skoy distantsii signalizatsii i svyazi Moskovskoy dorogi (for Romanenko).

(Railroads--Signaling)



CA

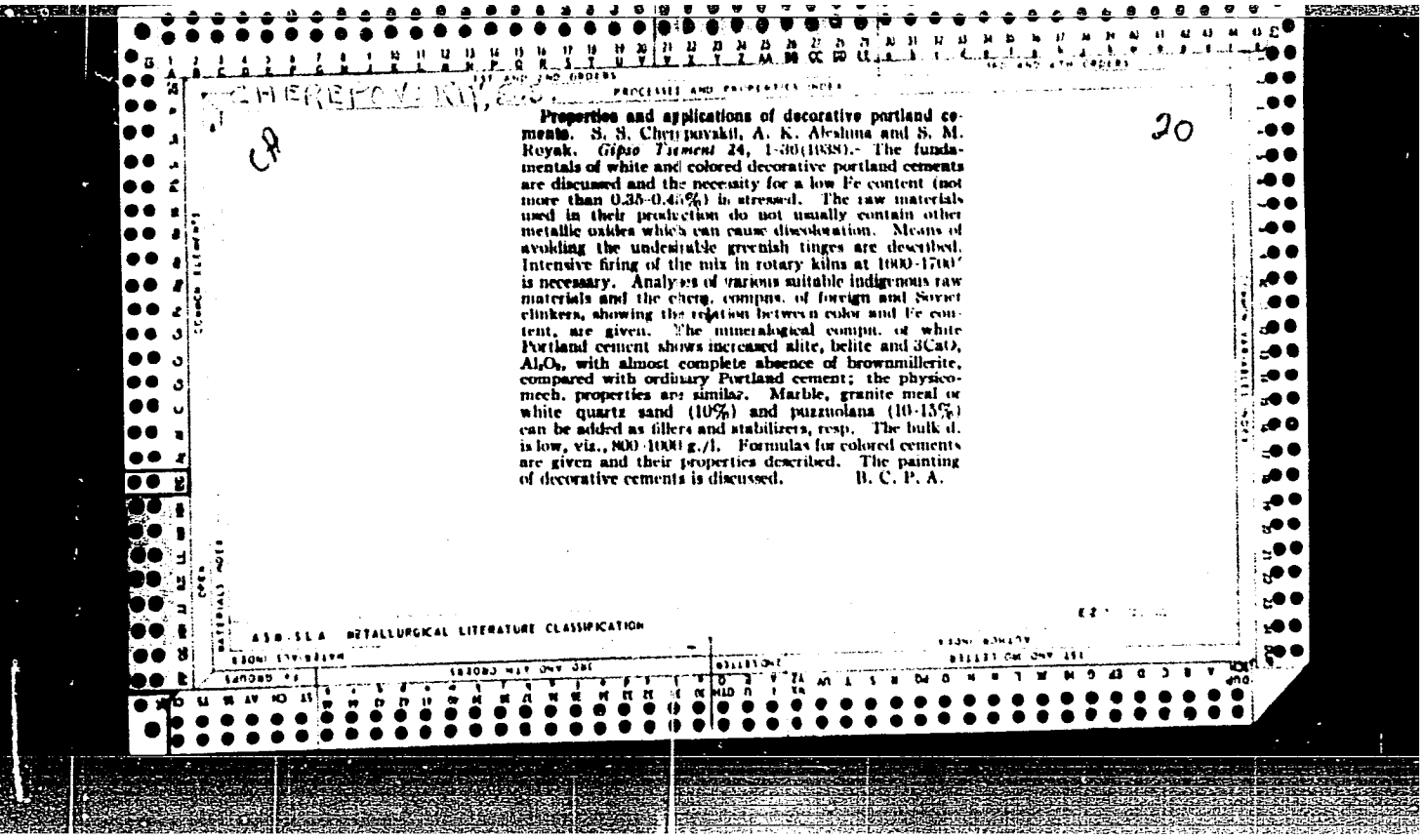
CHEREPOVSKIY, S. S.

20

White and colored portland cements. S. S. Cherepovskiĭ and O. K. Alesilina. *Vestnyas. Nauch.-Tekhnich. Obshch. Inst. Tsementn. Ryasli.* No. 1, 32-42(1937).—White Portland cement is obtained from clinker with an iron oxide content of not higher than 0.35 to 0.45%, which has been subjected to the action of reducing gases for a short time at 800° and higher and a subsequent cooling (in the absence of O) to 200° or 300°. Colored cements are obtained through the addn. of mineral coloring materials. The best results were obtained by the addn. of ocher, minium or Mn ores.

M. V. Condoide

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Properties and applications of decorative portland cements. S. S. Cherepovskii, A. K. Alekhina and S. M. Royak. *Gipso Tsement* 24, 1-30(1938).- The fundamentals of white and colored decorative portland cements are discussed and the necessity for a low Fe content (not more than 0.35-0.45%) is stressed. The raw materials used in their production do not usually contain other metallic oxides which can cause discoloration. Means of avoiding the undesirable greenish tinges are described. Intensive firing of the mix in rotary kilns at 1600-1700° is necessary. Analyses of various suitable indigenous raw materials and the chem. compns. of foreign and Soviet clinkers, showing the relation between color and Fe content, are given. The mineralogical compn. of white Portland cement shows increased alite, belite and $3CaO \cdot Al_2O_3$, with almost complete absence of brownmillerite, compared with ordinary Portland cement; the physicomech. properties are similar. Marble, granite meal or white quartz sand (10%) and puzzuolana (10-15%) can be added as fillers and stabilizers, resp. The bulk d. is low, viz., 800-1000 g./l. Formulas for colored cements are given and their properties described. The painting of decorative cements is discussed. B. C. P. A.

CHEREPOVSKIY, Serafim Sergeyevich; ALESHINA, Ol'ga Kuz'minichna; ROYAK, S.M., prof., nauchn. red.; TYUTYUNIK, M.S., red.

[Production of white and colored Portland cement] Proizvodstvo belogo i tsvetnogo portlandtsementa. Moskva, Stroiizdat, 1964. 125 p. (MIRA 17:9)

CHEREPREV, A.A.

USSR/Physical Chem. Crystals

B-5

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22140

Author : V. L. Levshin, V. F. Tynyakaya, A. A. Chereprev.

Inst : Not given

Title : The origin of level-localizations in ZnS-(Cu, Co) phosphors.

Orig Pub : Optika i Spektroskopiya, 1956, 1 No 2, 255-263

Abstract : This is a study of the thermoluminosity of phosphors ZnS, ZnS-Cu, ZnS-Co and ZnS-(Cu, Co). The blue luminosity (- 460 mμ) at ZnS originates only in the presence of a fusing agent ($CaCl_2$). The peak at -130° is caused by superstoichiometric Zn (it is facilitated by the presence of chlorine), the peak at -60° is ascribed to oxygen. The green luminosity is ascribed to traces of Cu. Hardly noticeable peaks appear at -5° and 0° and an important one appears at 20° for ZnS-Cu; they are ascribed to Cu and are the cause of a more prolonged after-luminosity ZnS at indoor temperatures. ZnS-Co in the stimulation moment has a sky-blue luminosity, a weak one at +20° and an intensive one at -186°. The introduction of Co strongly diminishes the light amounts at shallow local levels and creates deeper levels in the area of 50°. By increas-

Ca Card 1/2

CHERESH, N.N.

Blood stream of the visceral peritoneum under pathological conditions. Zdravookhranenie 3 no. 5:36-39 S-O '60.
(MIRA 13:10)

1. Iz kafedry normal'noy anatomii (zav. - prof. V.V. Kupriyanov) Kishinevskogo meditsinskogo instituta.
(PERITONEUM--BLOOD SUPPLY)

CHERESH, N. N., Cand Med Sci -- "Data for the microscopic anatomy of the blood-carrying channel of the visceral peritoneum in man." Kishinev, 1961. (Kishinev State Med Inst) (KL, 3-61, 266)

CHEGODAYEV, D.D.; CHERESHKEVICH, L.V., redaktor; KHAVIN, Z.Ya., redaktor; ERLIKH, Ye.Ya., tekhnicheskiy redaktor

[Fluoroplastic] Ftoroplasty. Pod red. L.V.Chereshkevicha. Leningrad, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1956. 85 p. (MLRA 10:2)
(Plastics) (Ethylene)

CHEGODAYEV, D.D.; NAUMOVA, Z.K.; DUNAYEVSKAYA, TS.S.; CHERESHKEVICH, L.V., red.; SHUR, Ye.I., red.; ERLIKH, Ye.Ya., tekhn.red.

[Fluoroplasts] Ftoroplasty. Pod red. L.V.Chereshkevicha. Izd.2., dop. Leningrad, Gos.nauchno-tekhn.izd-vo khim.lit-ry, 1960. 190 p. (MIRA 13:12)

1. Nachal'nik laboratorii ftoroplastov Nauchno-issledovatel'skogo instituta polimerizatsionnykh plastmass (Leningrad) (for Chereshkevich).

(Fluoroplast)

87920

S/191/60/000/004/001/015
B016/B058

15.8115

AUTHORS: Malkevich, S. G., Chereshkevich, L. V.

TITLE: Fluorostyrenes. Report I. Synthesis of p-Fluorostyrene and 2,5-Difluorostyrene

PERIODICAL: Plasticheskiye massy, 1960, No. 4, pp. 1-4

TEXT: The authors report on the synthesis of styrenes fluorinated in the ring: p-fluorostyrene and 2,5-difluorostyrene, as well as on their polymerization to polyfluorostyrenes. In their experiments they wanted to find out how this method of fluorination affects the properties of the polymers. For this purpose, they synthetized the initial and intermediate products: fluorobenzene was obtained by the diazonium fluoroborate method from aniline (Ref. 20). The yield amounted to 54% related to aniline; p-difluorobenzene was produced in several stages via p-nitrofluorobenzene → p-fluoroaniline → diazonium fluorophenyl fluoroborate. The synthesis of the intermediate products was carried out as follows: p-nitrofluorobenzene: from fluorobenzene by nitration with KNO_3-H_2SO_4 mixture; p-fluoroaniline: from p-nitrofluorobenzene by reduction with iron turnings and HCl. The yield was

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87920

Fluorostyrenes. Report I. Synthesis of p-Fluorostyrene and 2,5-Difluorostyrene

S/191/60/000/004/001/015
B016/B058

79% related to nitrofluorobenzene. The conversion of p-fluoroaniline into p-difluorobenzene was also obtained by the diazonium fluoroborate method and did not notably differ from the production of p-fluorobenzene from aniline. The yield was 44% related to fluoroaniline. p-fluorostyrene and 2,5-difluorostyrene were obtained from fluorobenzene and p-difluorobenzene, respectively. These were converted into acetophenones which were subsequently reduced to carbinols. p-fluorostyrene and 2,5-difluorostyrene, respectively, were formed by dehydration of the carbinols. The authors describe next the synthesis of the p-fluoroacetophenone of 2,5-difluoroacetophenone (for the first time), of p-fluorophenylmethyl carbinol, 2,5-difluorophenylmethyl carbinol (for the first time), 2,5-difluorostyrene (for the first time), and difluorobromobenzene (for the first time). The constants and properties of all substances were described. A. V. Pavlova is thanked for her participation in the studies. There are 20 references: 6 Soviet, 10 US, and 6 German.

Card 2/2

87877

S/191/60/000/005/002/020
B004/B064

15.8115

AUTHORS: Malkevich, S. G., Chereshkevich, L. V.

TITLE: Fluoro Styrenes. Information II. Polymerization of Parafluoro Styrene and 2,5-Difluoro Styrene

PERIODICAL: Plasticheskiye massy, 1960, No. 5, pp. 3 - 5

TEXT: This paper discusses the block- and emulsion polymerization of p-fluoro styrene and 2,5-difluoro styrene, and compares the properties of these polymers with those of polystyrene and poly-2,5-dichloro styrene. Block polymerization took place at 50° and 70°C in sealed glass ampuls with initiator (benzoyl peroxide) or without initiator. Solid, colorless, transparent polymers were obtained which externally did not differ from polystyrene and polydichloro styrene. With respect to their rate of polymerization, the compounds studied showed the following order: dichloro styrene > difluoro styrene > fluoro styrene, styrene. The molecular weights depended on the polymerization temperature. Emulsion polymerization took place in water with 0.2 % ammonium persulfate as initiator, and 1 % sodium oleate as emulsifier. The ratio between monomer and water was

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87877

Fluoro Styrenes. Information II. Polymerization of Parafluoro Styrene and 2,5-Difluoro Styrene

S/191/60/000/005/002/020
B004/B064

between 1:5 and 1:10. Powdery polymers had a molecular weight of between 100.000 and 230.000, and could be molded into transparent, colorless plates. Colored polymers of low molecular weight were obtained with the use of hydrogen peroxide as initiator and "Mopanzine sulfonic acid" as emulsifier. As in block polymerization, polystyrene and polydifluoro styrene had a considerably higher molecular weight than polyfluoro styrene and polydichloro styrene. The heat resistance according to Vicat depended on the monomer content of the product. In this respect, fluorine-containing polymers were not superior to polystyrene, and did not reach the same heat resistance as poly-2,5-dichloro styrene. The authors thank A. V. Pavlova for her collaboration. There are 7 tables and 1 Soviet reference

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83411
S/191/60/000/006/003/015
B004/B054

5.3830

AUTHORS: Malkevich, S. G., Tarutina, L. I., Chereshkevich, L. V.

TITLE: Spectroscopic Investigation of the Structure and Thermal Aging of the Copolymer From Tetrafluoro Ethylene and Ethylene

PERIODICAL: Plasticheskiye massy, 1960, No. 6, pp. 5 - 7

TEXT: The authors studied the thermal stability of the copolymer $(-CF_2-CF_2-CH_2-CH_2-)_n$. Films 60-80 μ thick or powdered copolymer were heated to 200, 240, 275, and 290°C in the presence of air or in vacuum (10^{-2} torr). The structural changes were observed by means of an infrared absorption spectrum taken on an ИКС-11 (IKS-11) apparatus with NaCl prism. At 200°C, the spectra were not changed even after 500 h. The authors found that the copolymer samples exhibited differently strong branching which became evident in the intensity of the 1390 cm^{-1} band (deformation oscillations of the CH_2 group)(Fig.1). After 5 h of heating to 275°C,

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Spectroscopic Investigation of the Structure and Thermal Aging of the Copolymer From Tetrafluoro Ethylene and Ethylene

branched samples lost in weight up to 4%. Fig. 2 shows the weight losses as a function of the intensity of the 1390 cm^{-1} band. Unbranched samples were stable. Fig. 3 shows that the weight loss depends on the extent of the contact area with air. Half an hour of milling of branched samples at 150°C accelerated aging, the weight loss rose to 10%, whereas unbranched samples remained unchanged even after 1 h of milling. The difference between branched and unbranched samples becomes obvious at 240°C. While the latter show an unchanged spectrum, the spectrum of branched samples shows new bands (Fig. 4): 1615 cm^{-1}, 1780 cm^{-1} (acid groups), 1755 cm^{-1} (C=O valence oscillations of the carboxyl group); and a not identified 1677 cm^{-1} band. Heating to 290°C accelerates the oxidation process (Fig. 5) while hydrogen fluoride is set free. The separation of HF becomes evident in new absorption bands: 1720 cm^{-1} (C=C stretching vibrations), 1850 cm^{-1} (dehydrogenated fluorine groups), and 3116 cm^{-1} (stretching vibrations of the =C-H group); thus, the authors assume a

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formation of -CF=CH- groups. The destruction also becomes evident in a reduction of viscosity of the melt and a lowering of the softening temperature (Table). No double bonds were observed when heating in vacuo. Viscosity and softening temperature increased. The authors thank Professor V. M. Chulanovskiy for advice, I. A. Marakhonov for viscosity determinations, A. I. Kornyushina for production of preparations, and C. I. Lapotnikova for taking the spectra. There are 5 figures, 1 table, and 4 references: 2 Soviet, 1 US, and 1 British.

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CHERESHKEVICH, L. V.

21136

15.8560 2209,1372, also 1043,1477 B/190/61/003/004/011/014
B101/B207

AUTHORS: Kabin, S. P., Malkevich, S. G., Mikhaylov, G. P., Sazhin, B. I., Smolyanskiy, A. L., Chereshkevich, L. V.

TITLE: Study of the dielectric losses and polarization of some fluoroplasts

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 4, 1961, 618-625

TEXT: This paper studies the effect of crystallization upon the dielectric constant ε and tan δ of the dielectric losses. Substances with the following parameters were studied:

Substance:	Denotation	$d_{20°}$, g/cm^3	ε, 10^5 cps, 0°C	tan δ, 10^5 cps, 0°C	melting point, °C
polyvinylidene fluoride	F-2	1.86	7.0	0.19	180
copolymer from tetrafluoroethylene and fluorovinylidene 1:4	CF-1	1.86	6.4	0.10	145

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Substance:	Denotation	$d_{20°}$, g/cm^3	ε, 10^5 cps, 0°C	tan δ, 10^5 cps, 0°C	melting point, °C
ditto, ratio 1:2	CF-2	1.91	6.6	3.09	160
ditto, ratio 1:1	CF-3	1.98	8.0	3.08	205

ε and tan δ were measured between -150°C and melting point of the polymer at frequencies of $5\cdot10^7$ cps on 0.1-0.5 mm thick samples according to a method described in Ref. 4 (G. P. Mikhaylov, B. I. Sazhin, Vysokomolek. soyed., 1, 9, 1959; Zh. tekhn. fiz., 25, 2166, 1955). The maximum error was less than 10%. Fig. 1 shows ε and tan δ as a function of temperature. The maxima occurring therein which are caused by relaxation, were also observed when tan δ was a function of frequency. Since tetrafluoroethylene has a symmetrical molecule with small dipole moment, the increase of ε and tan δ in the copolymers, is due to the polarity of vinylidene fluoride. Three ranges of dielectric losses owing to relaxation were observed. 1) high-frequency relaxation at CF-2 and CF-3 in the range of from -180- -100°C

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(maximum of tan δ); 2) medium-frequency relaxation in all substances investigated in the range of from -50- +50°C, and 3) low-frequency relaxation at +100- +200°C in all substances. Experiments carried out with hardened CF-3 showed a falling of high-frequency relaxation and a rise of middle-frequency relaxation as compared to the non-hardened polymer. Fig. 4 shows the frequency of the maximum of high-frequency and medium-frequency relaxation as a function of 1/T. The discussion of the experimental data led to the following conclusions: 1) The dielectric properties in the range of from 100-200°C cannot be explained by relaxation only. The structural transformations must also be taken into account. 2) The maxima of low-frequency relaxation lie close to the melting point of the polymers concerned, thus due to thermal motions in the crystalline phase. 3) The dielectric losses decrease with the degree of crystallization of the copolymers. 4) Orientation of polymers, i.e., increase of the degree of crystallization, may be accompanied by a considerable increase of ε. There are 4 figures, 1 table, and 11 references: 8 Soviet-bloc and 4 non-Soviet-bloc. The 2 references to English-language publications read as follows: M. E. Convoy et al., Rubb. Age, 76, 543, 1955; A. H. Willbourn, Trans. Faraday Soc., 54, 717, 1958.

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