34960

[illegible]

15.2620

AUTHORS: Bezborodov, [illegible], [illegible] and [illegible]
Orlova, [illegible] and [illegible], [illegible]

TITLE: The effect of strontium and [illegible] properties of glass

SOURCE: [illegible] Sbornik [illegible] [illegible], [illegible] - [illegible]

TEXT: The authors [illegible] the effect [illegible] not containing [illegible] as the effect of [illegible] tion properties, chemical [illegible] of the system CaO - [illegible] 102 types of glasses [illegible] the [illegible] varied within the [illegible] MnO_2 14.5 - 0 %, Fe_2O_3 [illegible] % and SiO_2 [illegible]

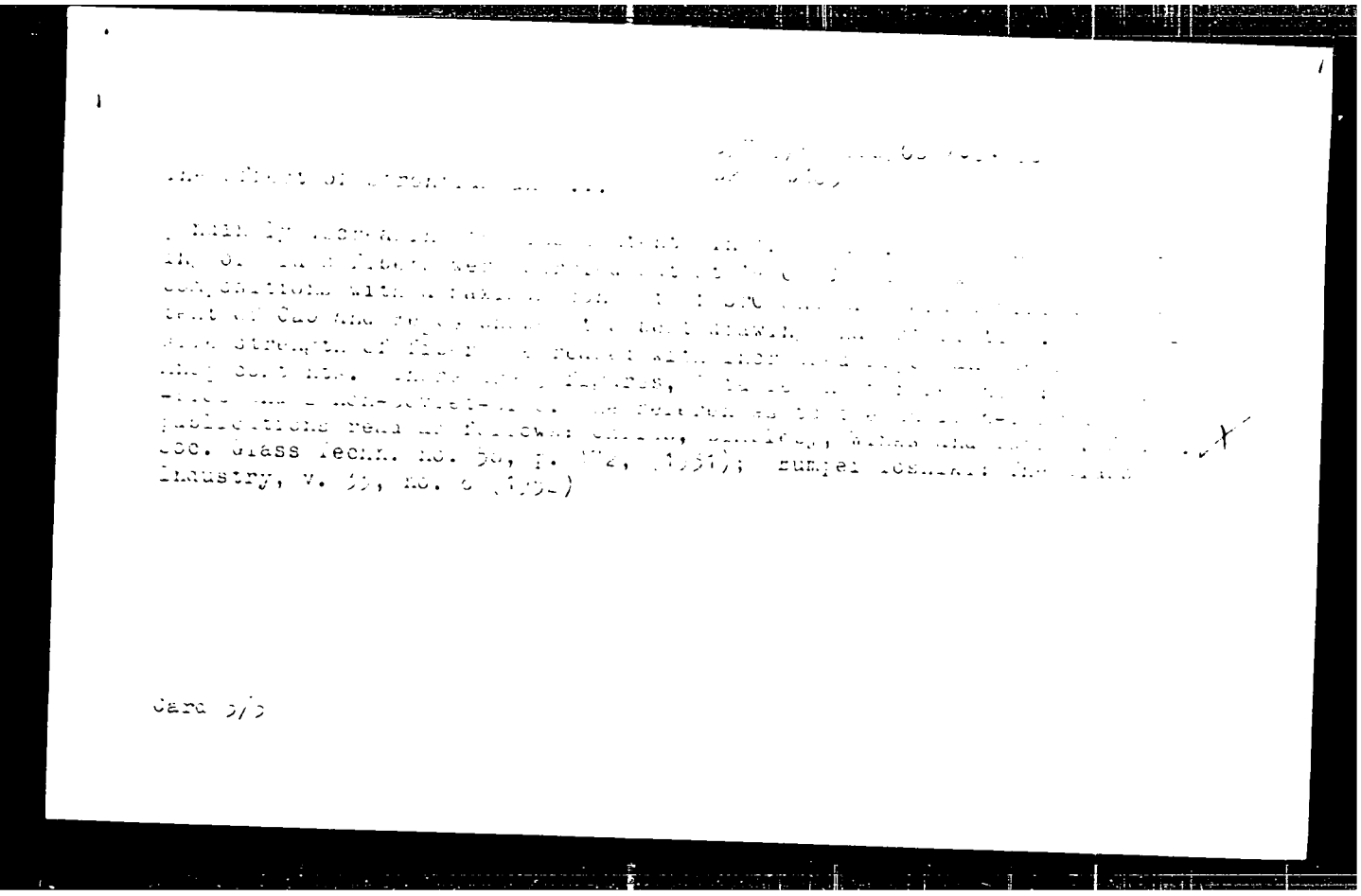
Card 1/3

The effect of strontium ... ...

ments on the ... properties of ... the following composition: ... Age : 0.05 %; ... : ... maining components of the mixture were ... substances. The ... taining 25 % SrO and ... 2. % CaO ... these were affected adversely ... correspondingly decreasing the ... ation properties improved ... taneously increasing the ... to a lesser degree, when increasing the ... of ... Chemical stability of the ... the loss in weight ... ter, ... or ... showed great stability to the aforementioned ... where the stability increased on lowering the ... content ...

Card 2/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00123



Card 3/3

34410
S/081/62/000/002/070/[illegible]
B150/B101

15.2125

AUTHORS: Bezborodov, M. A., Mazo, E. E., Iodo, S. S., Orlova, V. M., Volchek, L. K., Volkodatov, A. F.

TITLE: Synthesis of glasses for glass fiber in the system SrCaAlSiO

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1962, 378, abstract 2K241 (Dokl. AN BSSR, v. 5, no. 7, 1961, 304 - 307)

TEXT: The field of vitrification was studied and developed in the system SrCaAlSiO considered as a triangle in the angles of which are situated Al_2O_3, SiO_2 and SrO + CaO in definite proportions. Three variants of the system were investigated with the ratios CaO:SrO (in mole %) equalling 1:0; 1.23 and 1.85. It was established that glasses of the SrCaAlSiO system are suitable for the production of glass fiber. [Abstracter's note: Complete translation.]

Card 1/1

MATVEYEV, M. A.; MAZO, E. E.; VOLCHEK, L. K.; ORLOVA, V. M.; VOLKODATOV, A. F.

"Effect of aluminum oxide on properties of glasses of some non-alkaline silicate systems."

report submitted for 4th All-Union Conf on Structure of Glass, Leningrad, 16-21 Mar 64.

ORLOVA, V.N., inzh.

Automatic unit for packaging, wrapping and freezing ice cream.
Izobr. v SSSR 3 no.2:14-15 F '58. (MIRA 11:3)
(Ice-cream freezers)

KHRBITSKAYA, N.V.; ORLOVA, V.M.; SEBSOROVA, V.M.; SMIRNOV, Ye.I.; SHLAIN, I.B.

Industrial experiment of replacing sodium sulfate by astrakhanite in glass manufacture. Stek. i ker. 15 no.8:3-5 Ag '58. (MIRA 11:8)
(Glass manufacture) (Sodium sulfates) (Bloedite)

ANTONOV, Vsevolod Ivanovich; GOLOVKO, Dmitriy Gavrilovich; ORLOVA, V.P., red.

[Subsurface drainage of lands and their reclamation] Osushenie zemel' zakrytym drenazhem i ikh osvoenia. Moskva, Sel'khozizdat, 1963. 103 p. (MIRA 17:3)

KIRILLOV, A.A.; FROLOV, N.N.; ORLOVA, V.P., red.; DEYEVA, V.M., tekhn. red.

[Hydraulic structures in irrigation systems on sagging loess soils] Gidrotekhnicheskie sooruzheniia na orositel'nykh sistemakh v lessovykh prosadochnykh gruntakh. Moskva, Sel'khozizdat, 1963. 270 p. (MIRA 17:2)

KATS, D.M., doktor geol.-miner. nauk; ORLOVA, V.P., red.; KOPNINA, N.N., tekhn. red.

[Ground water cycle in irrigated areas and its control] Rezhim gruntovykh vod v oroshaemykh raionakh i ego regulirovanie. Moskva, Sel'khozizdat, 1963. 364 p. (MIRA 17:3)

VOSTOKOVA, Ye.A.; TAGUNOVA, L.N.; VEREYSKIY, N.G.; PREOBRAZHENSKAYA, N.N.; MOSKALENKO, N.G.; RACHINSKAYA, N.N.; TURMANINA, V.I.; SHITOV, V.D.; ORLOVA, V.P., red.; PEVZNER, V.I., tekhn.red.; OKOLELOVA, Z.P., tekhn.red.

[Handbook and guide to the lithological composition of surfical sediments and the depth of occurrence of underground waters] Spravochnik-opredelitel' litologicheskogo sostava poverkhnostnykh otlozhenii i glubiny zaleganiia podzemnykh vod. Pod red. N.G.Vereiskogo i E.A.Vostokovoi. Moskva, Sel'khozizdat, 1963. 259 p. (MIRA 17:3)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii (for all except Orlova, Pevzner, Okolelova).

SMETANIN, A.P., kand. sel'khoz. nauk; KIRICHENKO, K.S., kand. sel'khoz. nauk; ZAYTSEV, V.B., kand. sel'khoz. nauk; ALEKSANDROV, M.A.; ORLOVA, V.P., red.

[Rice cultivation on the "Slavianskii" State Farm; based on experience with M.E.Baranova's group] Vozdelyvanie risa v sovkhoze "Slavianskii"; na opyte zvena M.E.Baranovoi. Moskva, Kolos, 1965. 129 p. (MIRA 18:7)

ORLOVA, V.S., Moskva.

Lectures of foreign physicists in Moscow. Priroda 45 no.10: 109-110 O '56. (MLRA 9:11)
(Particles, Elementary)

ORLOVA, V.S. (L'vov)

Clothing industry of the Lvov Economic Region. Shvein.prom. no.2: 11-12 Mr-Ap '61. (MIRA 14:4)
(Lvov Economic Region--Clothing industry)

CHERNYAYEV, I.I.; ORLOVA, V.S.

Platinum iodopentammines. Zhur.neorg.khim. 6 no.6:1272-1280 Je '61. (MIRA 14:11)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova AN SSSR.

(Platinum compounds) (Ammines)

AVTOKRATOVA, T.D.; ANDRIANOVA, O.N.; BABAYEVA, A.V.; BELOVA, V.I.; GOLOVNYA, V.A.; DERBISHER, G.V.; MAYOROVA, A.G.; MURAVEYSKAYA, G.S.; NAZAROVA, L.A.; NOVOZHENYUK, Z.M.; ORLOVA, V.S.; USHAKOVA, N.I.; FEDOROV, I.A.; FILIMONOVA, V.N.; SHENDERETSKAYA, Ye.V.; SHUBOCHKINA, Ye.F.; KHANANOVA, E.Ya.; CHERNYAYEV, I.I., akademik, otv. red.

[Synthesis of complex compounds of platinum group metals; a handbook] Sintez kompleksnykh soedinenii metallov platinovoi gruppy; spravochnik. Moskva, Izd-vo "Nauka," 1964. 338 p. (MIRA 17:5)

1. Akademiya nauk SSSR. Institut obshchey i neorganicheskoy khimii. 2. Institut obshchey i neorganicheskoy khimii AN SSSR (for all except Chernyayev).

CHERNYAYEV, I. I.; ORLOVA, V. S.

"Iodinetriammines and tetrammines (CIS) of Pt (IV)."

report presented at 8th Intl Conf, Coordination Chemistry, Vienna, 7-11 Sep 64.

ORLOVA, V. T.

USSR/Physical Chemistry. Thermodynamics, Thermochemistry, B-6
Equilibria, Physical-Chemical Analysis, Phase Transitions.

Abs Jour: O. K. Yanat'yeva, V. T. Orlova
Inst : -
Title : Study of Equilibria in System K_2SO_4-Na_2SO_4-$MgSO_4$-H_2O at 55°

Orig Pub: Zh. neorgan. khimii, 1956, 1, No 5, 988-994

Abstract: The solubility at 55° was studied in the systems Na_2SO_4 (I) - K_2SO_4 (KK) - $MgSO_4$ (III) - H_2O and I - II - H_2O. Crystals of the relation of II : I > 3 (3.35 and 3.60) were obtained in the latter system. Their x-ray pictures differ from that of glaserite ($3K_2SO_4.Na_2SO_4$) (IV), which allows the authors to consider these crystals as a new phase forming at higher temperatures. Six crystallization fields were disclosed in the quaternary system, viz.: I, II, $NgSO_4.6H_2O$ (V), $Na_2SO_4.MgSO_4.4H_2O$ (VI), $K_2SO_4.MgSO_4.4H_2O$ (VII), IV and four nonvariant treble points: 1) 12.96 of II, 4.05 of I, 15.64 of III; solid phases of IV, II, VII; 2) 7.12 of II, 12.61 of I, 20.25 of III; solid

Card 1/2

Card 2/2

AUTHORS: Yanat'yeva, O. K., Orlova, V. T.

SOV/78-3-10-28/35

TITLE: I. The Crystallization Volume of Schenite in Sea Water K, Na, Mg // Cl, SO_4-H_2O at 0° (I.Ob"yem kristallizatsii shenita v morskoy sisteme K, Na, Mg // Cl, SO_4-H_2O pri 0°)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 10, pp 2408-2413 (USSR)

ABSTRACT: The conditions of crystallization of schenite- $K_2SO_4 \cdot MgSO_4 \cdot 6H_2O$. were investigated in the five-component system K, Na, Mg // Cl, SO_4-H_2O at 0°. The solubility, viscosity and density were determined in the systems K, Na, Mg // SO_4-H_2O, K, Mg // Cl, SO_4-H_2O and K, Mg, Na // Cl, SO_4-H_2O at 0°. In the system K, Na, Mg // SO_4-H_2O no solid solution of the glaserite type appears in the solid phase. The equilibrium diagram of the system is characterized by four ranges of crystallization: schenite- $K_2SO_4 \cdot MgSO_4 \cdot 6H_2O$ and the hydrates of the sulfates of K, Na and Mg. Six crystallization ranges of the following salts appear in the system K, Mg // Cl, SO_4-H_2O: schenite, carnallite - $KCl \cdot MgCl_2 \cdot 6H_2O$-, KCl, $MgSO_4 \cdot 7H_2O$, $MgCl_2 \cdot 6H_2O$ and $K_2SO_4 \cdot H_2O$. The conditions of the existence of schenite in

Card 1/2

I.The Crystallization Volume of Schenite in Sea Water K, SOV/78-3-10-28/35
Na, Mg||Cl, SO_4-H_2O at 0°

the fivecomponent system K, Na, Mg || Cl, SO_4-H_2O were determined. The crystallization range of schenite is limited by six salts: glaserite ($3K_2SO_4 \cdot Na_2SO_4$) , KCl, NaCl, $K_2SO_4 \cdot H_2O$, $MgSO_4 \cdot 7H_2O$ and $Na_2SO_4 \cdot 10\ H_2O$. There are 3 figures, 3 tables, and 4 references, 3 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im.N.S.Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N.S.Kurnakov of the Academy of Sciences, USSR

SUBMITTED: May 5, 1958

Card 2/2

5(2)

SOV/78-4-8-32/43

AUTHORS: Yanat'yeva, O. K., Orlova, V. T.

TITLE: On the Conditions of the Existence of Glaserite in the System K, Na, Mg || Cl, SO_4 - H_2O at 0° (Ob usloviyakh sushchestvovaniya glazerita v sisteme K, Na, Mg || Cl, SO_4 - H_2O pri 0°)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 8, pp 1903-1909 (USSR)

ABSTRACT: The authors wrote this paper on the occasion of the 40th anniversary of the existence of the Komsomol. The double salt glaserite ($3K_2SO_4.Na_2SO_4$) forms solid solutions with its components Na_2SO_4 and K_2SO_4. The publication data on the temperature limits for the existence of these solid solutions deviate. It was only proved that the addition of chlorides permits the existence of glaserite at low temperatures. The investigations of the authors showed that in the systems K_2SO_4 - Na_2SO_4 - H_2O and K_2SO_4 - Na_2SO_4 - Mg_2SO_4 - H_2O no glaserite is formed. In order to determine the solid phases of the system mentioned first, which represents an important member of the marine

Card 1/3

On the Conditions of the Existence of Glaserite in the System K, Na, Mg || Cl, SO_4 - H_2O at 0°

five-component system K, Na, Mg || Cl, SO_4 - H_2O, the solubility isothermal line was investigated at 0°. In contrast to data from publications (Ref 2) $K_2SO_4 \cdot H_2O$ and $Na_2SO_4 \cdot 10H_2O$ were found to be solid phases. Glaserite is formed only at 0° and only in the presence of certain amounts of chlorides (KCl, NaCl and MgCl). It does not crystallize from the sulphate solutions of K, Na and Mg. The range of existence of glaserite is found in the systems K, Na || Cl, SO_4 - H_2O and K, Na, Mg || Cl, SO_4 - H_2O at a chloride concentration of 8-10% and it increases with their increasing concentration. The crystallization ranges of glaserite, potassium sulphate monohydrate and Glauber's salts were determined in the five-component complex at 0°. The small range of glaserite penetrates conically into the range of the two sulphates which occupy the maximum part of the diagram. The results are important for the production of pure salts in the processing of crude salts of marine origin. There are 5 figures, 3 tables, and 7 references, 5 of which are Soviet.

Card 2/3

On the Conditions of the Existence of Glaserite in the System K, Na, Mg || Cl, SO_4 - H_2O at 0^o SOV/78-4-8-32/43

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

SUBMITTED: May 5, 1958

Card 3/3

ORLOVA V T

COUNTRY : GDR
CATEGORY : B-8

ABS. JOUR. : RZKhim., No. 5 1960, No. 17[illegible]

AUTHOR : Janat'yeva, G. K. and Orlova, V. T.
INST. : Not given
TITLE : Equilibria in the Salt Water System K, Na, Mg ‖ Cl, SO_4-H_2O at 50°

ORIG. PUB. : Freiberger Forschungsh, A, No 125, 119-126 (1959)

ABSTRACT : Solubility, viscosity, and density characteristics in the systems K, Mg ‖ Cl, SO_4-H_2O and K, Na, Mg ‖ Cl, SO_4-H_2O have been investigated at 25°. The complete solubility diagram for 5-component salt water, including 15 crystallization volumes of the salts [sic], has been obtained.

From authors' summary

CARD: 1/1

35

YANAT'YEVA, O.K.; ORLOVA, V.T.

Reciprocal system consisting of K, Na, and Mg chlorides and sulfates at 100°. Zhur.neorg.khim. 6 no.12:2816-2817 D '61. (MIRA 14:12)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN SSSR.

(Systems (Chemistry))

YANAT'YEVA, O.K.; ORLOVA, V.T.

Solubility polytherm of the system K, Na, Mg||Cl, SO_4 - H_2O.
Dokl. AN SSSR 142 no.1:102-104 Ja '62. (MIRA 14:12)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR. Predstavleno akademikom I.I. Chernyayevym.
(Systems (Chemistry)) (Crystallization)

YANAT'YEVA, O.K.; ORLOVA, V.T.; KUZNETSOV, V.G.

Nature of the glaserite phase in the system K_2SO_4 - Na_2SO_4 - H_2O.
Zhur. neorg. khim. 8 no.7:1756-1765 Jl '63. (MIRA 16:7)

(Alkali metal sulfates) (Aphthitalite)

ORLOVA, V.T.; YANAT'IEVA, O.K.

Interaction of salts in the system Na, Mg // Cl, SO_4 - H_2O at 100°. Zhur. neorg. khim. 8 no.7:1789-1791 Jl '63. (MIRA 16:7)

(Salts) (Systems(Chemistry))

ORLOVA, V.V.

Pr (1)

Meteorological Abst.
Vol. 4 No. 3
March 1953
Part 2
Bibliography on Frost
and Frost Forecasting

[illegible] 82 47

4C 216 *Orlova, V. V. (ed.). Klimatologicheskii spravochnik Moskovskoi Oblasti. [Climatological handbook for the Moscow District.] Moscow, Gidromet Izdat 1938. 99 p. map. [illegible] DLC—On p. 11–12, 29 entitled Pervyi i poslednii moroz i prodolzhitel'nost' bezmoroznogo perioda [First and last frost and duration of the frost free period], mean and extreme data derived from series of observations (10 years to 54 years) for numerous stations of the Moscow District are given. *Subject Headings:* 1. Frost frequencies 2. Frost free period 3. Moscow Region U.S.S.R.

ORLOVA, V.V., kandidat geograficheskikh nauk; BUDYKO, M.I., doktor fiz.-mat. nauk, redaktor; POKROVSKA, T.V., kandidat geograficeskikh nauk, redaktor; BRAYNINA, M.I., tekhnicheskiy redaktor

[Climatological study of the Baraba depression] Klimaticheskii ocherk barabinskoi nizmennosti. Pod red. M.I.Budyko, T.V.Pokrovskoi. Leningrad, Gidro-meteorologicheskoe izd-vo, 1954. 235 p. (MLRA 8:6)
(Baraba Steppe--Climate)

ORLOVA, V. V.

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P.; BUCHINSKIY, I.Ye.; SEYANINOV, G.T., professor; BOSHNO, L.V.; ALISOV, B.P.; BIRYUKOV, N.N.; GAL'TSOV, A.P.; GRIGOR'YEV, A.A., akademik; EYGENSON, M.S., professor; MURETOV, N.S.; KHROMOV, S.P.; BOGDANOV, P.N.; LEBEDEV, A.N.; SOKOLOV, V.N.; YANISHEVSKIY, Yu.D.; SAMOYLENKO, V.S.; USMANOV, R.F.; CHUBUKOV, L.A.; TROTSENKO, S.Ya.; VANGENGEYM, G.Ya.; SOKOLOV, I.F.; STYRO, B.I.; TEMNIKOVA, N.S.; ISAYEV, E.A.; DMITRIYEV, A.A.; MALYUGIN, Ye.A.; LIEDEKMAA, Ye.K.; SAPOZHNIKOVA, S.A.; RAKIPOVA, L.R.; POKROVSKAYA, T.V.; BAGDASARYAN, A.B.; ORLOVA, V.V.; RUBINSHTEYN, Ye.S., professor; MILEVSKIY, V.Yu.; SHCHERBAKOVA, Ye.Ya.; BOCHKOV, A.P.; ANAPOL'SKAYA, L.Ye.; DUNAYEVA, A.V.; UTESHEV, A.S.; RUDNEVA, A.V.; RUDENKO, A.I.; ZOLOTAREV, M.A.; NERSESYAN, A.G.; MIKHAYLOV, A.N.; GAVRILOV, V.A.; TSOMAYA, T.I.; DEVYATKOVA, A.M.; ZAVARINA, M.V.; SHMETER, S.M.; BUDYKO, M.I., professor.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform. sbor.GUGMS no.3/4:26-154 '54. (MLRA 8:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Fedorov). 2. Glavnaya geofizicheskaya observatoriya im. A.I.Voeykova (for Predtechenskiy, Lebedev, Yanishevskiy, Isayev, Rakipova, Pokrovskaya, Orlova, Rubinshteyn, Budyko, Shcherbakova, Anapol'skaya, Dunayeva, Rudneva, Gavrilov, Zavarina). 3. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Buchinskiy).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform. sbor. GUGMS no.3/4:26-154 '54. (Card 2) (MLRA 8:3)

4. Vsesoyuznyy institut rastenievodstva (for Selyaninov, Rudenko). 5. Bioklimaticheskaya stantsiya Kislovodsk (for Boshno). 6. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova (for Alisov). 7. Ministerstvo putey soobshcheniya SSSR (for Biryukov). 8. Institut geografii Akademii nauk SSSR (for Gal'tsov, Grigor'yev). 9. Geofizicheskaya komissiya Vsesoyuznogo geograficheskogo obshchestva (for Eygenson). 10. Ministerstvo elektrostantsiy i elektropromyshlennosti SSSR (for Muretov). 11. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova (for Khromov). 12. TSentral'nyy nauchno-issledovatel'skiy gidrometeorologicheskiy arkhiv (for Sokolov, Zolotarev). 13. Gosudarstvennyy okeanograficheskiy institut (for Samoylenko). 14. TSentral'nyy institut prognozov (for Usmanov, Sapozhnikova). 15. Institut geografii Akademii nauk SSSR i TSentral'nyy institut kurortologii (for Chubukov). 16. Nauchno-issledovatel'skiy institut imeni Sechenova, Yalta (for Trotsenko). 17. Arkticheskiy nauchno-issledovatel'skiy institut (for Vangengeym).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state of climatological research and methods of developing it]. Inform.sbor. GUGMS no.3/4:26-154 '54. (Card 3) (MLRA 8:3)

18. Dal'nevostochnyy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Sokolov). 19. Institut geologii i geografii Akademii nauk Litovskoy SSR (for Styra). 20. Rostovskoe upravlenie gidrometsluzhby (for Temnikova). 21. Morskoy gidrofizicheskiy Institut Akademii nauk SSSR (for Dmitriyev). 22. Vsesoyuznyy institut rasteniyevodstva (for Malyugin). 23. Akademiya nauk Estonskoy SSR (for Liedemaa). 24. Akademiya nauk Armyanskoy SSR (for Bagdasaryan). 25. Leningradskiy gidrometeorologicheskiy institut (for Milevskiy).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the reports (in the form of debates) [of the current state climatological research and methods of developing it]. Inform.sbor. GUGMS no.3/4:26-154 '54. (Card 4) (MLRA 8:3)

26. Gosudarstvennyy gidrologicheskiy institut (for Bochkov). 27. Kazakhskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Uteshev). 28. Upravlenie gidrometsluzhby Armyanskoy SSR (for Nersesyan). 29. Leningradskoye upravleniye gidrometsluzhby (for Mikhaylov, Devyatkova). 30. Tbilisskiy gosudarstvennyy universitet (for Tsomaya). 31. TSentral'naya aerologicheskaya observatoriya (for Shmeter).
(Climatology)

ORLOVA, V.V.

Water economy of the growing season during an arid year in Western Siberia in connection with origination of precipitation. Trudy GGO no.50:21-38 '55. (MLRA 9:8)
(Siberia, Western--Precipitation (Meteorology))
(Siberia, Western--Hydrology)

ORLOVA, V V

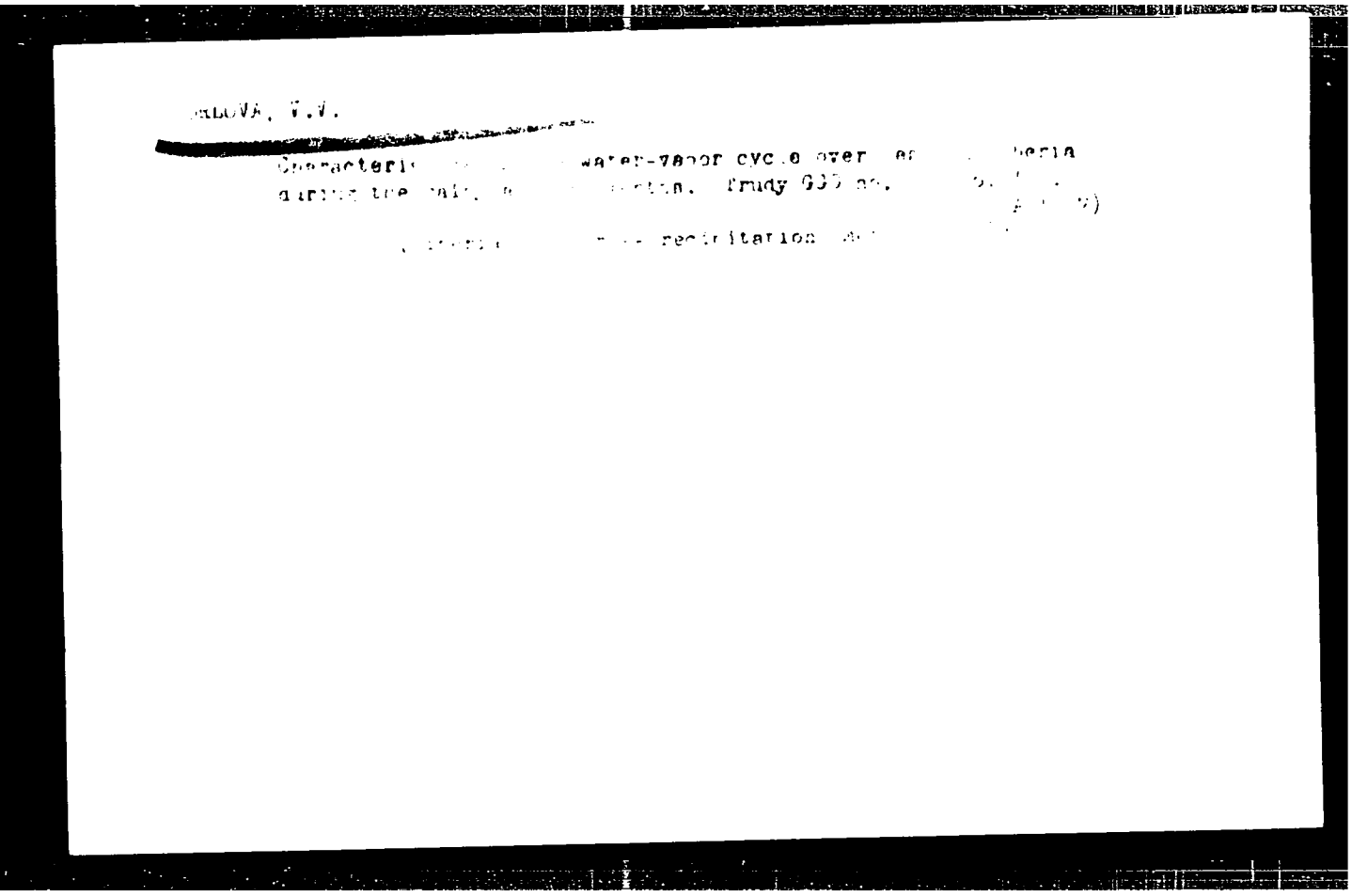
PERIODICAL ABSTRACTS

AID 4183 - P

Sub.: USSR/Engineering

LASHKO-AVAKYAN, S. V., N. F. LASHKO, and V. V. ORLOVA.
MEZHKRISTALITNYYE TRESHCHINY V SVARNYKH SOYEDINENIYAKH IZ ALYUMINEVYKH SPLAVOV (Inter-crystal Fissures in Welded Junctions of Aluminum Alloys). Svarochnoye proizvodstvo, no. 1, Ja 1956: 13-18.

These authors present results of their research and the experiments of other scientists on causes of crystallization and occurence of fissures in welded junctions of aluminum alloys. They describe two devices for determination of the deformations occuring in metals and alloys resistance to crystallization. Results obtained in these delicate experimentations are analysed and practical suggestions made. Two sketches, 5 graphs and 6 microphotographs ("Fractographs"). 7 Russian, 4 non-Russian references.



36-62-4/6

AUTHOR: Orlova, V. V.

TITLE: Characteristics of Moisture Exchange in Western Siberia During Wet and Dry Months (Osobennosti vlagooborota Zapadnoy Sibiri vo vlazhnyye i zasushlivyye mesyatsy)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1956, Nr 62, pp. 52-61 (USSR)

ABSTRACT: The author reviews the occurrence of dry and moist seasons in Western Siberia for the last 50 years and draws maps of air-mass trajectories for 500, 700, and 850 millibar levels for 1952 and 1953. Other data include the moisture content of the atmosphere, the total transfer of moisture during the last several years, the velocity of transfer, and the amounts and coefficients of precipitation

Card 1/2

Characteristics of Moisture Exchange (Cont.)

and evaporation during dry and wet months. M.I. Budyko, O.A. Drozdov and V.V. Orlova are mentioned. There are 5 charts, 5 tables and 3 USSR references.

AVAILABLE: Library of Congress

Card 2/2

ORLOVA, V.V.

Water-vapor cycle over western Siberia in rainy and dry seasons. (MIRA 10:11)
Trudy GGO no.70:48-59 '57.
(Siberia, Western--Water cycles)

Orlova, V.V.

3(8) PHASE I BOOK EXPLOITATION SOV/2269

Glavnaya geofizicheskaya observatoriya

Voprosy klimatografii (Problems of Climatography) Leningrad, Gidrometeoizdat, 1958. 134 p. (Series: Its: Trudy, vyp. 85) Errata slip inserted. 1,100 copies printed.

Sponsoring Agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR.

Ed. (Title page): V.V. Orlova, Candidate of Geographical Sciences; Ed. (Inside book): L.P. Zhdanova; Tech. Ed.: A.N. Sergeyev.

PURPOSE: This issue of the Observatory's Transactions is intended for meteorologists, climatologists and soil scientists.

COVERAGE: The authors discuss the impact of climate and precipitation upon soil conditions and crop cultivation. Articles on the snow cover in Western Europe and the problem of correlating data obtained from precipitation gauges

Card 1/3

SOV/2269

Problems of Climatography

and rain gauges are presented here as part of the International Geophysical Year program. The article by I.A. Gol'tsberg suggests a method of compiling data on probable occurrence of certain meteorological phenomena. There are numerous graphs, maps and tables. References accompany each article.

TABLE OF CONTENTS:

MM/fal
9-21-59

Card 2/3

ORLOVA, Valentina Vladimirovna; POKROVSKAYA, T.V., otv. red.; VAYTSMAN, A.I., red.; ALEKSEYEV, A.G., tekhn. red.

[Western Siberia]Zapadnaia Sibir'. Leningrad, Gidrometeoizdat, 1962. 359 p. (Klimat SSSR, no.4) (MIRA 15:9)
(Siberia, Western--Climate)

ORLOVA, Valentina Vladimirovna; POKROVSKAYA, T.V., otv. red.; VAYTSMAN, A.I., red.; ALEKSEYEV, A.G., tekhn. red.

[Climate of the U.S.S.R.]Klimat SSSR. Leningrad, Gidrometeoizdat. No.4.[Western Siberia]Zapadnaia Sibir'. 1962. 359 p. (MIRA 15:8)

1. Leningrad. Glavnaya geofizicheskaya observatoriya.
(Siberia, Western--Climate)

L 16591-66 EWT(1)/FCC GW

ACC NR: AT6006610 SOURCE CODE: UR/2531/65/000/181/0014/0045

AUTHOR: Drozdov, O. A. (Doctor of geographical sciences); Orlova, V. V.; Shver, Ts. A.

ORG: Main Geophysical Observatory im. A. I. Voyeykov (Glavnaya geofizicheskaya observatoriya)

TITLE: Optimum duration of an averaging period in climatological investigations

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 181, 1965. Voprosy obshchey i sinopticheskoy klimatologii (Problems in general and synoptic climatology), 14-45

TOPIC TAGS: [redacted], atmospheric temperature, atmospheric precipitation, meteorologic observation, climatic condition

ABSTRACT: Current problems concerning the selection of duration of an averaging period in meteorological observations have been investigated. A new experimental method of checking the degree of climatic stabilities, based on a number of atmospheric temperature and precipitation observations has been suggested. The authors present tabulated data on average differences between mean temperatures

Card 1/2

L 16591-66
ACC NR: AT6006610

for 10-, 25- and 50-year periods with temperatures for individual subsequent years and data on precipitation. Orig. art. has: 2 figures and 3 tables.
[Based on author's abstract]

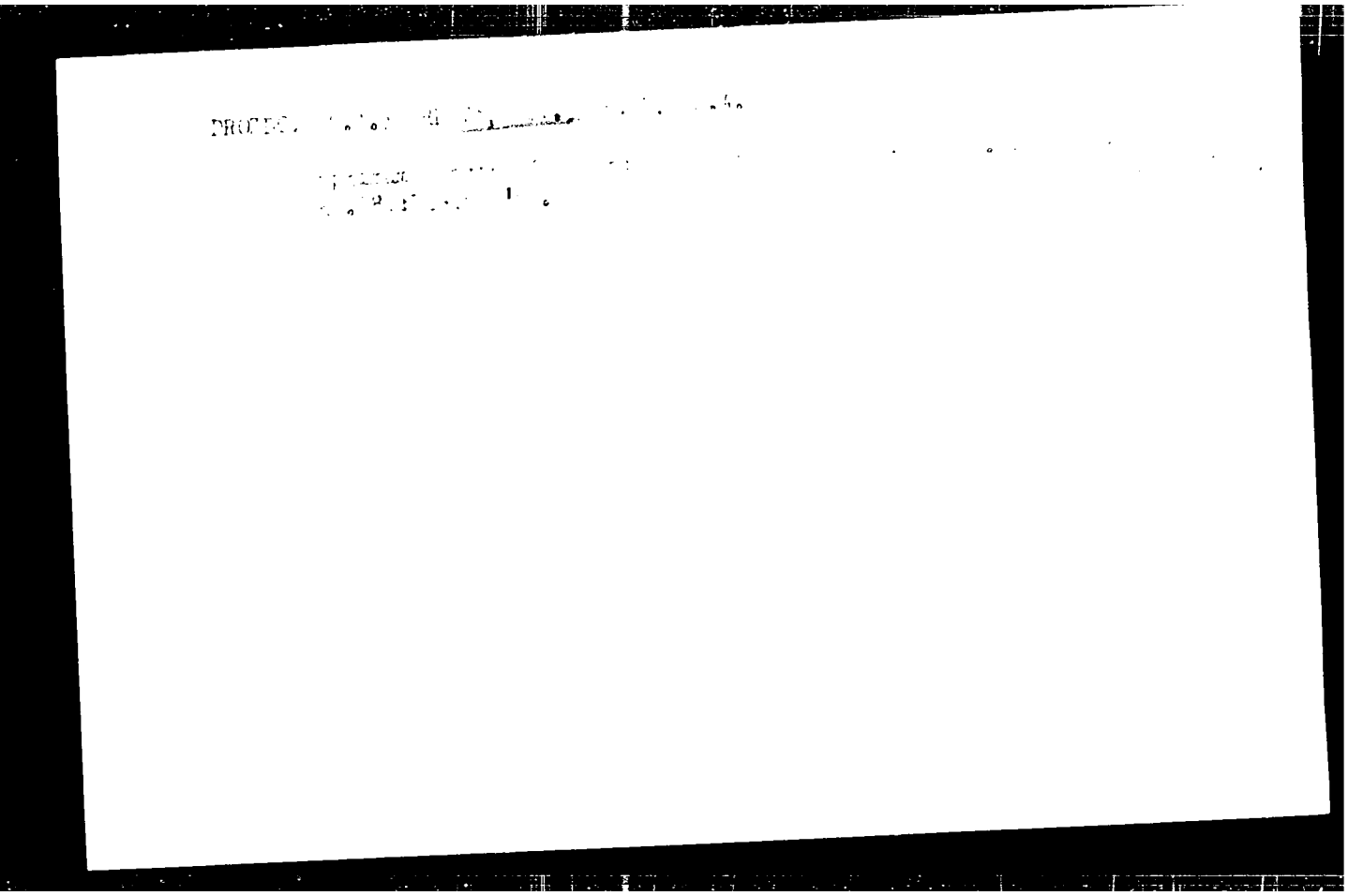
SUB CODE: 04/ SUBM DATE: none/

Card 2/2

VORONIN, V.G.; KHARITONOV, A.F.; Prinimala uchastiye ORLOVA, V.V.

Investigating the rigidity of single-stand hydraulic presses. Kuz.-shtam. proizv. 5 no.12:16-19 D '63. (MIRA 17:1)

1. Zaveduyushchaya izmeritel'noy laboratoriyey Orenburgskogo zavoda "Gidropress" (for Orlova).

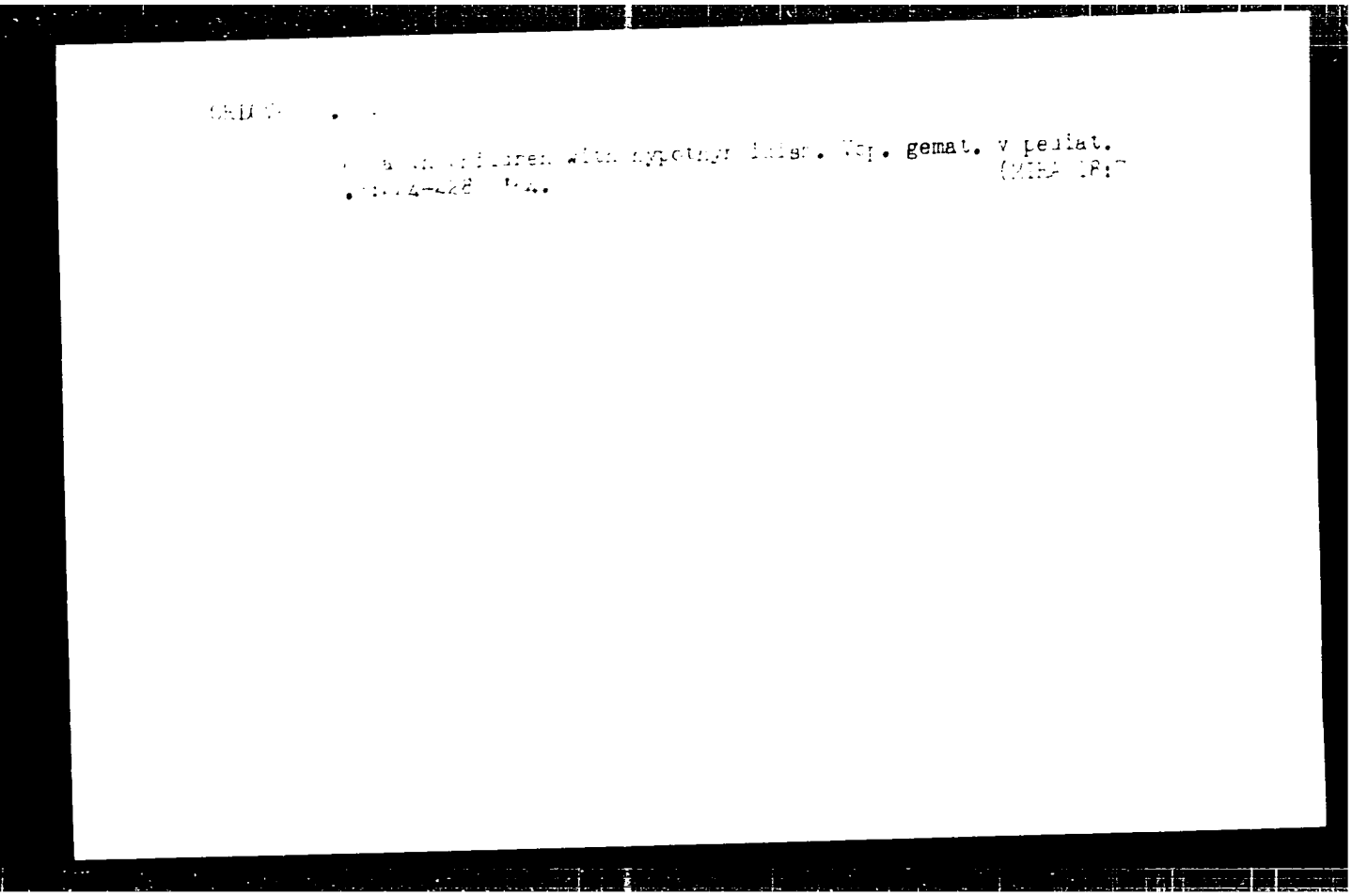


APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

NAZARUK, I.A.; KATOK, B.L., red.[deceased]; ORLOVA, V.Ya., red. izd-va; SHKLOVSKAYA, I.Yu., red.izd-va

[Equipment for enterprises of the metallurgical industry; a catalog] Oborudovanie dlia predpriiatii metallurgicheskoi promyshlennosti; katalog-spravochnik. Moskva, Metallurgizdat, 1963. 583 p. (MIRA 17:3)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye po snabzheniyu i sbytu produktsii tyazhelogo, traktornogo i stroitel'no-dorozhnogo oborudovaniya.



ORLOVA, Ye. A.

The value of prothrombin time determinations. Ye. A. Orlova (M. F. Vladimirskii Moscow Regional Sci.-Research Clin. Inst.). *Zhur. Nevropatol. i Psikhiatrii im. Korsakova* 53, 957-65(1953).--In the absence of clear-cut pathol. changes on the part of the liver, gastro-intestinal tract, cardio-vascular, and endocrine systems, but in the presence of central nervous disturbances the prothrombin time can change to a considerable degree. Independent of etiologic factors the prothrombin time in disturbances of the central nervous system (CNS) tends to become shortened, its index varying between 110-150%. It occurs in 15% of patients with edema of the brain, in 64% of patients in the early days of thrombosis of the brain and in 32% of patients with brain contusions. The shortened prothrombin time varies between 5-10 sec. An increase in the prothrombin time of 10-15 sec. over and above the normal 25-30 sec. occurs rarely and is asscd. with a profound disturbance of the CNS. A shortening in the prothrombin time in brain hemorrhages and in the presence of hypertonicity occurred in 80% of such patients; a delay in the prothrombin time in thrombosis of the brain vessels occurred in 64% of the patients. In such diseases of the CNS as epilepsy (during non-seizure periods) the prothrombin time stays well within normal limits. B. S. Levine

ORLOVA, Ye. A., Cand. Medic. Sci. (diss) "Change of Prothrombine Activity of Blood in Some Injuries of Central Nervous System," Khar'kov, 1961, 18 pp. (Khar'kov Med. Inst.)(KL Supp 12-61, 287).

L 45197-66 EWT(m)/EWP(j) IJP(c) RM

ACC NR: AP6022453 SOURCE CODE: UR/0422/66/000/001/0011/0015

AUTHORS: Sis'kov, V. I.; Sedov, V. I.; Solov'yev, A. A.; Orlova, V. Ya. 47 13

ORG: none

TITLE: Statistical methods of standardization of the quality of production

SOURCE: Standarty i kachestvo, no. 1, 1966, 11-15

TOPIC TAGS: tire, quality control, normal distribution, probability, tensile strength, elongation, hardness, wear resistance / 260-20 tire

ABSTRACT: The statistical principles of the standardization of the quality of production are examined by the example of the tire industry. The quality of the 260-20 tires of the Moscow, Yaroslav, Omsk, and Yerevan plants is considered. The quality indices are divided into two groups: those with a normal distribution (tensile strength and hardness) and those with a distribution of essentially positive values (wear, residual elongation, specific elongation, tensile strength in lamination between tread and breaker, breaker and carcass, sidewall and carcass, and between layers of carcass). It is found that the established requirements for the guaranteed and average mileage of the tires are insufficiently founded, as they do not reflect the statistical laws in mileage distribution. A final conclusion about quality norms should be made on the basis of correlation analysis. Orig. art. has: 6 formulas and 4 tables.

SUB CODE: 13, 14/ SUBM DATE: none/ ORIG REF: 002

Card 1/1 hs

L 2859-66 EWT(1)/EWA(h) JM

ACC NR: AP5026712 SOURCE CODE: UR/0141/65/008/005/0963/0971

AUTHOR: Orlova, Ye. D.

ORG: Scientific-Research Institute of Radio Physics at Gorky University (Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete)

TITLE: Concerning one possibility of using a triode to generate microwave oscillations

SOURCE: IVUZ. Radiofizika, v. 8, no. 5, 1965, 963-971

TOPIC TAGS: triode tube, microwave oscillator/ GI7B

ABSTRACT: The author calculates the full admittance of the anode-cathode gap in a triode and shows that its active component becomes negative at certain transit angles, so that oscillations can be produced by using a single tank circuit. When plotted against the grid-cathode transit angle, the full admittance is an oscillating function with periodically repeating negative-resistance sections. The author then describes a microwave oscillator based on this principle, using a GI-7B metal-ceramic triode (see Fig. 1.) The experimentally obtained frequencies, up to 478 Mc, under different operating conditions, agreed with the theoretical predictions. The use of a triode in lieu of a diode reduces the role of the

Card 1/2

UDC: 621.385.3.029.64

ORLOVA, Ye.I.

"Methods for Determining Microscopic Quantities of Radioactive Strontium". p. 149.

Trudy Vsesoyuznoy Konferentsii po Meditsinskoy Radiologii (Voprosy Gigiyeny i Dozimetrii) Medgiz, 1957, Moscow, Russian, 584.

Proceedings of the All-Union Conference on Medical Radiology (Hygienic and Dosimetric Problems).

PHASE I BOOK EXPLOITATION SOV/3589

Sbornik radiokhimicheskikh i dozimetricheskikh metodik (Collection of Radio-Chemical and Dosimetric Methods) Moscow, Medgiz, 1959. 459 p. Errata slip inserted. 9,000 copies printed.

Eds. (Title page): N.G. Gusev, U.Ya. Margulis, A.N. Marey, N.Yu. Tarasenko, Yu.M. Shtukkenberg; Ed. (Inside book): V.I. Labaznov; Tech. Ed.: A.I. Zakharova.

PURPOSE: This collection of articles is intended for physicists, sanitation and public health doctors, chemists and other specialists working in radioactive dosimetry.

COVERAGE: This work discusses the following subjects: (1) principles of organizing sanitation and dosimetric control in institutions where work is carried on with radioactive substances; (2) radio-chemical and chemical methods for determining certain radioactive substances in samples of air, water, soil and foodstuffs; (3) physical methods of measuring contamination of the air by radioactive gases and aerosols, and methods for determining the level of contamination of working surfaces, clothes and leather coverings; (4) methods of measuring external streams of x- and gamma-radiation, and methods of individual dosimetric monitoring; (5) Absolute and relative methods of measuring the activity of solid and liquid radioactive sources. There are four appendixes dealing with methods of calculating the total dosage from sources of ionizing radiation, units of activity, and doses from natural (background) radioactivity in the calcium of foodstuffs. Sanitary regulations observed during transportation, storage, and handling of radioactive substances are discussed, as well as the permissible level of ionizing radiation. The editors thank Yu.V. Sivintsev and D.P. Shirshov. References appear at the end of each chapter.

15

Card 1/ 6

BELITSKIY, A.S.; ORLOVA, Ye.I.

Migration of the products of uranium fission in subterranean waters.
Gig. i san. 25 no. 6:3-8 Je '60. (MIRA 14:2)
(WATER—POLLUTION) (RADIOACTIVE WASTE)

ORLOV, A.S.; ORLOVA, Ye.I.

Simple method for the quantitative determination of desoxyribonucleic acid in animal tissues. Biokhimiia 26 no.5:834-839 S-O '61. (MIRA 14:12)

1. Central Research Institute of Medical Radiology, Leningrad.
(NUCLEIC ACIDS)

ORLOV, A.S.; ORLOVA, Ye.I.

DNA content and biosynthesis in mouse tissues following repeated X-ray irradiation. Radiobiologiia 4 no.4:498-502 '64. (MIRA 17:11

1. Institut radiatsionnoy gigiyeny Ministerstva zdravookhraneniya RSFSR i TSentral'nyy institut meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR, Leningrad.

L 1311-66 EWT(m) DIAAP

ACCESSION NR: AP5017629 UR/0240/65/000/007/0046/0050
628.112 : 543.32 : 546.42

AUTHOR: Orlova, Ye. I.

TITLE: Migration of strontium-90 in ground waters of different salt composition

SOURCE: Gigiyena i sanitariya, no. 7, 1965, 46-50

TOPIC TAGS: water, radioactive contamination, radio strontium, strontium, magnesium, calcium, sodium, anion, cation, material mixing, sorption

ABSTRACT: The effects of naturally occurring calcium, magnesium, sodium, and strontium in ground water on strontium-90 sorption were first investigated in experiments under static conditions. Sand (20g) and different natural water solutions (30 ml) all containing the same amount of strontium-90 were mixed together for 1 hr and allowed to stand for 20 hrs. Fifteen days later strontium-90 radioactivity of sand and water solutions were measured with an MST-17 counter to determine the distribution coefficient (strontium-90 level of sand/strontium-90 level of water). Findings showed that a natural strontium level of 5×10^{-3} mg/l or lower does not affect strontium-90

Card 1/2

L 1311-66
ACCESSION NR: AP5017629

sorption by sand, but a higher natural strontium level reduces strontium-90 sorption and leads to an increased migration capacity. Also, an increased concentration of calcium, magnesium or sodium in a solution reduces strontium-90 sorption. Sorption is reduced most by calcium, then by magnesium, and is least affected by sodium. In experiments under dynamic conditions, different water solutions containing strontium-90 were filtered through sand in a 200 cm vertical column divided into 10 separate sections. The results also showed that increased concentrations of natural strontium, calcium, or magnesium in a water solution reduce strontium-90 sorption by sand and thereby increase the migration capacity of strontium-90. Thus, in highly mineralized waters strontium-90 may travel almost at the rate of the water itself and contaminate a water bearing stratum over a considerable distance. Orig. art. has: 3 tables and 4 figures.

ASSOCIATION: None.

SUBMITTED: 12Nov63 ENCL: 00 SUB CODE: NP, GC

NR REF SOV: 004 OTHER: 002

Card 2/2

VOSKRESENSKIY, V.A.; MAKLAKOV, A.I.; ORLOVA, Ye.M.; KIREYEVA, G.V.

Characteristics of changes of plasticized polyvinyl chloride in the high-frequency current field. Izv.vys.ucheb.zav.; khim. i khim.tekh. 7 no.2:297-300 '64. (MIRA 18:4)

1. Kazanskiy inzhenerno-stroitel'nyy institut i Kazanskiy gosudarstvennyy universitet imeni V.I.Ul'yanova-Lenina.

L 17800-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-10 RPL WW/RM
ACCESSION NR: AP4044747 S/0153/64/007/003/0482/0485

AUTHOR: Voskresenskiy, V. A.; Maklakov, A. I.; Yegorova, L. Ya.; Bikchentayeva, S. Kh.; Orlova, Ye. M.

TITLE: The blended polytetrafluorethylene + polyethylene polymer system

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 7, no. 3, 1964, 482-485

TOPIC TAGS: polytetrafluorethylene, polyethylene, x ray diffraction, x ray structural analysis, thermographic study, polymer strength, chemical interaction, copolymer formation

ABSTRACT: Comparative x-ray structural analyses and thermographic studies were made of the blended polytetrafluorethylene and polyethylene system and of the component resins to determine the cause of the increased strength and improved pressure casting processibility of the blended systems. X-ray patterns showed that the radii of the diffraction circles of the component resins were retained in various blends of the two resins, indicating preservation of the initial

Card 1/2

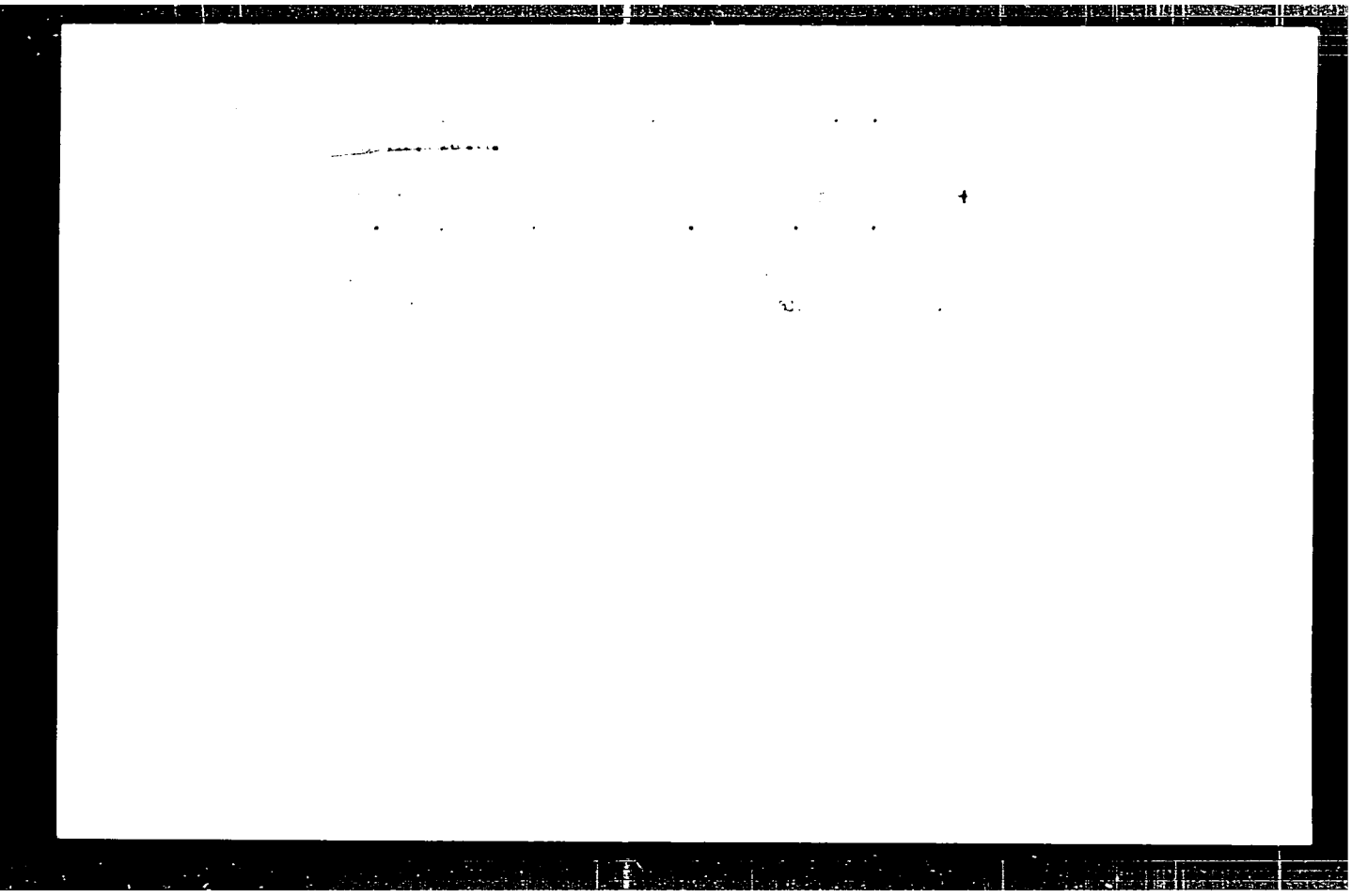
2

crystal structure. Differential thermal analysis also indicated there was no chemical interaction of copolymer formation. The strengthening effect was explained due to the secondary intermolecular bonding between chains or packs of chains of the initial polymers. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Kazanskiy inzhenerno - stroitel'ny*y institut (Kazansk Construction Engineering Institute) Kazanskiy gosudarstvenny*y universitet im. V. I. Ul'yanova-Lenina (Kazansk State University)

SUBMITTED: 07Dec62 ENCL: 00

SUB CODE: GC, MT NO REF SOV: 003 OTHER: 000



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

L 22202-65 EWT(m)/EPF(c)/EWP(j)/T-2 Pc-4/Pr-4 AFWL/SSD/AS(mp)-2/RAEM(c)/RAEM(1) RM

ACCESSION NR: AP5001483 S/0190/64/006/012/2185/2188

AUTHOR: Chernitsyn, A.I., Maklakov, A.I., Voskresenskiy, V.A., Orlova, Yo. M.

TITLE: Study of the efficiency of plasticizers for polyvinyl chloride by nuclear magnetic resonance

SOURCE: Vysomolekulyarnyye soyedineniya, v. 6, no. 12, 1964, 2185-2188

TOPIC TAGS: nuclear magnetic resonance, NMR spectrum, plasticizer, polyvinyl chloride, spin, spin relaxation, spin lattice relaxation, dialkyl phthalate, dialkyl sebacate, dicresyl phosphate

ABSTRACT: NMR spectroscopy was used to determine the spin-spin (T_2) and spin-lattice (T_1) relaxation of plasticized polyvinyl chloride specimens, and the results for T_2 were shown to be a measure of the efficiency of the plasticizers. The samples con-

sharply with 30-40 wt. % plasticizer per polymer, [illegible]
illustrated in Fig. 1 of the Enclosure. The increase in T_2 was related to the increased

Card 1/3

L 22202-65
ACCESSION NR: AP5001483

mobility of both plasticizer and polymer molecules. Sebacic acid esters gave the highest T_2 values, and this was ascribed to the chemical structure of their molecules causing their good distribution between the polymer molecules. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Kazanskiy Gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina (Kazan State University); Kazanskiy inzhenerno-Stroitel'nyy institut (Kazan Engineering-Construction Institute)

SUBMITTED: 24Feb64 ENCL: 01 SUB CODE: MT, NP

NO REF SOV: 007 OTHER: 003

Card 2/3

VOSKRESENSKIY, V.A.; ORLOVA, Ye.M.

Modern concepts of the plasticization of polymers. Usp.khim. 33 no.3:320-333 Mr '64. (MIRA 17:4)

1. Kafedra khimii Kazanskogo inzhenerno-stroitel'nogo instituta.

ORLOVA, Ye. M. [redacted] Cand Med Sci -- (diss) "Basic problems of the correction of vision by means of contact lenses." Mos, 1959. 16 pp (2nd Mos State Med Inst im N. I. Pirogov), 250 copies. List of author's works, pp 15-16 (12 titles) (KL, 48-59, 117)

ORLOVA, Yelena Mikhaylovna; BELOSTOTSKIY, Yevgeniy Maksimovich [deceased]; KHVATOVA, A.V., red.; GABERLAND, M.I., tekhn.red.

[Contact lenses] Kontaktnye linzy. Moskva, Medgiz, 1961. 114 p. (MIRA 15:5)
(CONTACT LENSES)

AUTHORS: Bogdanova, G. S. Orlova, Ye. L. 72-58-5-7/18

TITLE: Coloring of Glass by Means of Cerium and Titanium Compounds (Okrashivaniye stekla soyedineniyami tseriya i titana)

PERIODICAL: Steklo i Keramika 1958, Nr 5, pp. 21-25 (USSR)

ABSTRACT: In the paper by K. T. Bondarev, V. A. Dubrovskiy, V. V. Pollyak I. Ye. Shapiro (ref. 1) the conditions for the production of glass types with a high degree of transparency by using cerium were investigated. A systematic investigation of the selective absorption of glass types with cerium oxide content was carried out by Kapnitskiy and Keller. Cerium oxide is never used alone as coloring substance. In 1919 Taylor proposed a combination of cerium and titanium oxides for producing yellow glass. In a paper from 1933 it is among other stated that the coloring intensity did not change when the content of cerium and titanium oxide was increased This was, however, not proved in the experiments carried out by the authors and in those by Vargin, Kefeli and Starikova (1954) at the State Institute for Optics. The authors of this paper investigated the dependence of the character of spectral absorption on the glass types colored with cerium

Card 1/3

and titanium oxides. This was done to check the possibilities of the production of yellow-orange colored light filters. Furthermore the production of experimental types of glass is described in detail. The spectral characteristic of the glass was determined by means of the SF-4 spectrophotometer, the general light transparency and the color coefficients by means of the electric colometer UFK-1, system VNISI. Three types of glass were investigated: lead-, zinc- and barium glass. The suitability of the glass types for light filters was estimated according to the absorption curve, as introduced by L. I. Demkina. The authors preferred the method of determining the differences to that of optical density In figure 1 the spectral characteristics of the glass types colored by cerium and titanium oxides are mentioned. The increase of the content of lead oxide leads to a considerable increase of the optical glass density (figures 2 and 3). The curves for lead-, zinc- and barium glass with different oxides of alkalies are shown in figures 4-6. With all types of glass the intensity of coloring increases when the content of the oxides of alkalies is reduced (figure 7). The spectral characteristics of barium glass molten on different conditions can be seen in figure 8. The light technical characteristics

Coloring of Glass by Means of Cerium and Titanium Co[illegible] 58-5-7/18

of 2 yellow-orange colored light filters colored by cerium and titanium oxides are mentioned in table 1. Table 2 shows the glass compositions of some light filters. The problem of the usefulness of the application of cerium and titanium oxides for the production of yellow-orange colored light filters can be definitely solved only after practical tests in industry.
There are 8 figures, 2 tables, and 1 reference, which is Soviet.

AVAILABLE: Library of Congress

1. Glass--Color 2. Cerium oxides--Applications 3. Titanium oxides--Applications

Card 3/3

15(2), 15(6) SOV/72-59-3-5/19

AUTHORS: Bogdanova, G. S., Orlova, Ye. M.

TITLE: Heat-resisting Yellow-orange Colored Light Filters (Termostoykiye zhelto-oranzhevyye svetofil'try)

PERIODICAL: Steklo i keramika, 1959, Nr 3, pp 13 - 16 (USSR)

ABSTRACT: The investigation results obtained by I. D. Tykachinskiy, O. K. Botvinkin, L. I. Buneyeva, R. S. Levina, M. V. Okhotin, Yu. V. Rogozhin, Z. M. Syritskaya (Ref 1) in the field of colorless, alkaliless and alkali-weak glass types, as well as the investigation of the cerium-titanium coloring of glass (G. S. Bogdanova, Ye. M. Orlova, Ref 2) made it possible for the authors of the present paper to carry out experiments for the production of heat-resisting yellow-orange colored filters. Glass Nr 13, worked out by the Institut stekla (Glass Institute), was used as initial glass. For their experiments the authors employed the spectrophotometer SF-4 and the photoelectric colorimeter UFK-1 of the VNISI system. Figure 1 shows the spectrum characteristics of glass types containing equal molar quantities of lithium-sodium-potassium oxides, figure 2

Card 1/2

Heat-resisting Yellow-orange Colored Light Filters

shows the composition with various quantities of cerium oxides (with a constant 10% content of TiO_2), figure 3 various quantities of cerium and titanium oxides, and figure 4 various TiO_2 contents (with a constant 4% content of CeO_2). The table gives the compositions, the phototechnical characteristic figures and extension coefficients of the glass recommended. After-checking in the test glass plant proved the good properties of these glass types. Figure 5 shows the melting conditions of the glass type ZhS-18, from which may be seen that the mass production of the glass types recommended does not call for special conditions. There are 5 figures and 1 table.

Card 2/2

Orlova, Ye. M.

15(2)

AUTHOR: None Given

SOV/72-59-5-1/23

TITLE: Glass Science at the VIII Mendeleyev Congress (Nauka o stekle na VIII Mendeleyevskom s"yezde)

PERIODICAL: Steklo i keramika, 1959, Nr 5, pp 1-4 (USSR)

ABSTRACT: In the beginning a proclamation of the TsK KPSS to the personnel of the building material industries for a qualitative and quantitative increase of production is mentioned. The Congress took place in Moscow in the second half of March of the current year and was devoted to the 125th anniversary of the great scholar's birthday. Outstanding chemists of the Soviet Union and the People's Democracies attended the Congress. The principal problems of the development of chemistry were discussed at the plenary meetings and the meetings of the 18 Congress sections. Professor I. I. Kitaygorodskiy opened the meetings of the sub-section for glass and gave a survey of the stages of development of Soviet glass production as well as of a number of promising tasks in the field of glass technology. Moreover, the following lectures were held: Doctor Korani (People's Republic of Hungary) investigated the structure of the top-layers of glass;

Card 1/4

A. I. Avgustinnik (LTI imeni Lensovet) discussed the formation of a finely disperse crystalline phase from the glass-like phase; V. V. Vargin and G. O. Karapetyan (GOI) reported on absorption spectra, luminiscence, and photochemical properties of cerium-glass types; A. G. Vlasov (GOI) reported on the quantitative reciprocal relations between ordered and disordered glass phases; Ye. A. Poray-Koshits, Institut khimii silikatov AN SSSR (Institute of Silicate Chemistry of the AS USSR) discussed the reasons for the disagreement on the problem of the structure of glass-like substances; Professor O. K. Botvinkin, N. I. Ananich, and M. L. Mironova, Institut stekla (Glass Institute) reported on the Investigation of the Glass Structure by the Method of Thermal Analysis and Optical Polarization; Ye. V. Podushko (GOI) discussed the new method of electric glass melting and the melting of silicates by means of high-frequency current; Yu. G. Shteynberg reported on strontium-magnesium glases without lead and boron for faience and majolica which have been developed in the Gosudarstvennyy nauchno-issledovatel'skiy keramicheskiy institut (State Scientific Research Institute of Ceramics); L. S. Yastrebova, and V. S. Molchanov (GOI) discussed the role played by the

Card 2/4

surface protection film in the destruction of silicate glasses; S. I. Veynberg (GOI) discussed the coloring characteristics and the technology of phosphate glasses; O. V. Mazurin (LTI) reported on the mobility of sodium ions in glass types of the system Na_2O-RO-SiO_2; Z. A. Nosova (NII Stroykeramika) discussed the process of subduing the glases by lead oxide and zirconium; L. G. Mel'nichenko, Khar'kovskiy politekhnicheskiy institut (Khar'kov Polytechnic Institute) reported on silicate formation and sintering processes in the briquetted glass layer; K. M. Yevstrop'yev investigated various types of glass; N. N. Semenov (Glass Institute) reported on the determination of impurities in silica by spectroscopic analysis; G. S. Bogdanova, and Ye. M. Orlova (Glass Institute) reported on types of electrode glass which has been devised by them. Yu. V. Rogoshin (Glass Institute) discussed the kinetics of the formation of crystallization centers in photo-sensitive types of glass ; Z. N. Syritskaya (Glass Institute) discussed the results of the investigation of the tendency of phosphatic systems towards glass formation; L. A. Grechanik, N. L. Petrovykh, and V. G. Karpechenko (NIIES) reported on the investigation of types of semiconducting oxide glass on the basis of V_2O_5 ; N. V. Solomin, L. A. Grechanik, I. V. Shpakova, and Ye. A. Faynberg (NIIES) discussed the production of conductive films on types of glass which contain components easily to be regenerated.

S/072/60/000/02/008/021
B015/B003

15 (2)

AUTHORS: Bogdanova, G. S., Orlova, Ye. M.

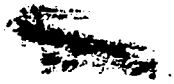
TITLE: Green Heat-Resistant Color Filters

PERIODICAL: Steklo i keramika, 1960, Nr 2, pp 26 - 28 (USSR)

ABSTRACT: The authors investigated in the present paper the influence of the composition of glass poor in alkali on the spectrum characteristics of copper- and chromium oxides. Thus it was possible to work out types of compositions of heat-resistant green color filters. As initial substance the glass previously elaborated at the Institut stekla (Institute of Glass) which is poor in alkali and has the following composition was used: 61.9% SiO_2; 4.2% MgO; 2% Na_2O; 15.4% CaO; 16.5% Al_2O_3; 4% (more than 100%) F'. The spectrum characteristics of glasses within the visible range were determined by an SF-4 spectrophotometer, and the color coefficients were measured by means of a UFK-1 colorimeter. Figures 1 - 4 show the transparency curves of glasses of various compositions dyed with copper oxide. In this connection the authors refer to papers by Vargin and Veynberg. In conclusion, the authors state that it is expedient for the elaboration

Card 1/2

of glasses for green color filters to proceed from potassium glasses with a low alumina content. A number of glasses are listed in the table the color characteristics of which correspond to various types of color filters. For a large-scale test glass of the type ZS-73 was chosen. Melting of the latter glass under working conditions of the Opytnyy stekol'nyy zavod (Experimental Glass Factory) is shown in figure 5. The use of quartz as refractory material is recommended for melting these new glasses. There are 5 figures, 1 table, and 1 reference.



S/080/61/034/001/018/020
A057/A129

15.8500 2209, 2409

AUTHORS: Voskresenskiy, V.A., Byl'yev, V.A., Orlova, Ye.M.

TITLE: On Some Regularities in Plastification of Polyvinyl Chloride by Non-Polar and Polar Substances

PERIODICAL: Zhurnal Prikladnoy Khimii, 1961, Vol. 34, No. 1, pp. 225-227

TEXT: The effect of the non-polar solid substances in diphenyl, naphthalin, and anthracene on plastification of polyvinal chloride [ПБ-1 (PB-1) type and ПФ-4 (PF-4)] and dependence of the plastification effect on the chain length of the non-polar part of some polar plasticizers (dimethyl-, diethyl-, dipropyl-, and dibutyl-phthalate) were investigated. The plasticizer was added to the polymer on rolls at 135-140°C and from the obtained film 2.5-3.0 mm thick sheets were formed by hot pressing. Compositions of the mixtures with non-polar plasticizers are given in Tab.1 and properties of the obtained mixtures in Tab.2. The results demonstrate that compatibility and plastification effect decrease from diphenyl to naphthalin and then to anthracene. This difference in plastification properties is due to the influence of size and

Card 1/7

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S/080/61/034/001/018/020
A057/A129

On Some Regularities in Plastification of Polyvinyl Chloride by Non-Polar and Polar Substances

form of the molecule of the plasticizer. Diphenyl has the best compatibility because of the elongated shape of its molecule, while naphthalin and especially anthracene molecules are much bigger. A new effect was observed with diphenyl-containing mixtures, viz., irreversible strengthening at room temperature with cold stretching of the sample resulting in unexpectedly high toughness (141.1 kg/cm^2 instead of 80-85 kg/cm^2 corresponding to the level of hardness). The increase in hardness with elongation is demonstrated in Tab.3. The observed effect of strengthening is apparently caused not only by the orientation of molecules and better distribution of the plasticizer in the polymer phase, but also by increasing of the crystal phase in the system polyvinyl chloride - diphenyl during cold stretching. Heating of the strengthened samples to 100-120°C caused momentarily collaps of the orientation effect and the material obtained rubberlike elasticity. Effect of the chain length of the non-polar part of polar plasticizers on plastification was studied on the following 3 compositions: no.1 - (in weight parts) 100 PF-4 resin, 64 plasticizer, 3 calcium stearate (stabilizer); no.2 - 100 PF-4 resin, 3 calci-

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A057/A129

On Some Regularities in Plastification of Polyvinyl Chloride by Non-Polar and Polar Substances

um stearate, 20 (equimolecular parts) plasticizer; no.3 - 100 PF-4 resin, 3 calcium stearate, 10 (equimolecular parts) plasticizer. Plastification effect was estimated by the tensile strength σ (in kg/cm^2) and hardness H_B (in kg/cm^2). The obtained results (Tab.4) demonstrate that increase in the non-polar part of the polar plasticizer caused increase in plastification effect. There are 4 tables.

SUBMITTED: March 19, 1960

Card 3/7

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A057/A129

AUTHORS: Voskresenskiy, V. A., Byl'yev, V. A., Orlova, Ye. M.

TITLE: Effect of high-frequency currents on the plastification of polyvinylchloride compositions

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 3, 1961, 593 - 597

TEXT: The effect of a high-frequency (19.5 megacycles) current field on some plasticized polyvinylchloride compositions was investigated. A considerable improvement of physico-chemical and mechanical properties of the polyvinylchloride film was attained after a 2-minute high-frequency heating of the mix. Also solubility of the film in low-molecular liquids decreased. Considerations on the mechanism of processes occurring in plasticized polyvinylchloride mixtures during high-frequency heating were presented. High-frequency heating of thermoreactive press-powders before formation of press-articles is nowadays widely used. Several literature data are given, e. g., by M. I. Garbar and A. D. Sokolov [Ref. 1: Khim. prom., 2, 38 (1948)], B. M. Notkin and I. Sh. Pik [Ref. 2: Khim. prom. 7, 198 (1952)], H. E. Murray [Ref. 4: Modern Plastics, 34, 137 (1957)] etc., and improvements were effected in processing of plastics by means of high-frequency heating.

Card 1/5

Effect of high-frequency currents on the...

Nevertheless simultaneously occurring processes of destruction and cross linking effected by this treatment were not investigated principally. In the present work one of the most important plastics - polyvinylchloride (PVC) - was investigated in relation to this problem. Plasticized compositions were prepared of PVC of the ПБ-1 (PB-1) type with dibutylphthalate, dibutylsebacinate, dimethylphthalate and 1-nitromethyl-2-chlorocyclohexanol-1. The following technological procedure was carried out: The polymer, plasticizer and the stabilizer were mixed and left 24 hrs for ripening at room temperature. Then a 1 - 2 cm thick layer of the mass was applied on an aluminum plate and the high-frequency treatment was carried out by means of a ГГ-107 (GG-107) generator. The distance between the surface of the mass and the mobile anode was 5 - 7 mm, anodic current 0.34 - 0.40 amp, net current 200 - 250 amp, and a 19.5 megacycle frequency was applied. Then the mass was rolled to a 0.25 - 0.30 mm thick film with a front roll at 135 ± 2°C and a back roll at 120 ± 2°C, having a friction ratio of 1 : 1.25. The properties of these films were then investigated. The necessary minimum of high-frequency treatment was determined with a composition containing: 100 weight parts of PVC, 64 dibutylphthalate and 1.5 calcium stearate using a treatment of 1, 2, 3, 4, 5, 6, 7 or 8 minutes. Optimum improvement of the tensile strength σ and relative elongation Δl

Card 2/5

Effect of high-frequency currents on the...

of the PVC films was effected by the 2-minute high-frequency heating. In this case the temperature of the mass increases just to 60 - 65°C by the treatment, while a 5-minute treatment effects an increase in the temperature to 165°C. The high-frequency effect was tested also on other compositions (Table 1) and the obtained results are presented in Table 2. The improvement of the physical and mechanical properties of all investigated compositions by the 2-minute treatment is obvious, but the degree of the effect depends on the amount and type of plasticizer. Corresponding tests demonstrated also that the high-frequency treatment increases considerably the resistance of the plastic films against benzene, water, 1 N H_2SO_4 and 1 N NaOH solutions. The present authors assume that the observed improvement is effected by deformation of polar groups in the polymer chain and the molecule of the plasticizer (increasing polarization) resulting in a more intensive interaction between polymer and plasticizer. Thus the latter is better distributed between the chains of the polymer and so less extractable by low-molecular solvents. A 3 - 5 minute high-frequency heating effects, on the other hand, a rise in temperature resulting in already considerable destruction and cross-linking processes (the latter prevail). Thus in 5-minute treatments cross-linking processes effect a decrease in elasticity, solubility and softening temperature of the plasticized material. There are 5 figures, 2 tables and 16 references: 8 Soviet-bloc and 8

Card 3/5

non-Soviet-bloc. The references to the four most recent English-language publications read as follows: H. E. Murray, Modern Plastics, 34, 137 (1957); Plastics Catalog, 455 (1944); Modern Plastics, 10, 116 (1945); A. Blake, Plastics, 210, 20 (1955).

Table 1. Composition of the mixtures

Composition of the mix	weight ratio of the components						
	no. 1	no. 2	no. 3	no. 4	no. 5	no. 6	no. 7
polyvinylchloride (resin PB-1)	100	100	100	100	100	100	100
dibutylphthalate	48	64	-	-	-	-	-
dibutylsebacate	-	-	48	64	-	-	-
dimethylphthalate	-	-	-	-	74	64	-
1-nitromethyl-2-chlorocyclohexanol-1 . .	-	-	-	-	-	-	100
calcium stearate	1.5	1.5	1.5	1.5	1.5	1.5	1.5

Card 4/5

S/080/62/035/008/008/009
D267/D308

AUTHORS: Voskresenskiy, V.A., Orlova, Ye.M., Bikchentayeva, S. Kh., and Komissarenko, A.B.

TITLE: The plasticizing of polytetrafluoroethylene

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 8, 1962, 1862 - 1863

TEXT: The authors studied the possibilities of a physical plasticization of polytetrafluoroethylene by combining it with high-pressure polyethylene. The blending was carried out on rollers with the friction ratio 1 : 1.25 at 150 - 155°C, to complete homogeneity. It was found that the incorporation of very small proportions of polyethylene increased the fluidity of the compositions, the optimum results being obtained when blends with 30 - 35 % of polyethylene were used. There is 1 table.

SUBMITTED: June 12, 1961

Card 1/1

ORLOVA, Ye.M.; SHKATOVA, A.F.

Correction of monocular aphakia with contact lenses. Uch. zap. GNII glaz.bol. no.8: Uch.zap. GNII glaz.bol. no.8: 173-180'63. (MIRA 16:9)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut glaznych bolezney imeni Gel'mgol'tsa (for Orlova) 2. Poliklinika No.7 Baumanskogo rayona Moskvy (for Shkatova).
(CONTACT LENSES)
(CRYSTALLINE LENS—ABNORMITIES AND DEFORMITIES)

ACCESSION NR: AP4041683 S/0153/64/007/002/0297/0300

AUTHOR: Voskresenskiy, V. A.; Maklakov, A. I.; Orlova, Ye. M.; Kireyeva, G. V.

TITLE: The nature of modifications in plasticized poly(vinyl chloride) induced by high-frequency currents

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 7, no. 2, 1964, 297-300

TOPIC TAGS: poly(vinyl chloride), pf 4 resin, plasticized poly(vinyl chloride), phthalic acid ester, sebacic acid ester, phosphoric acid ester, high frequency preheating, physicomechanical property

ABSTRACT: The previously established high-frequency-induced improvements in physicomechanical characteristics of plasticized poly(vinyl chloride) (PF-4 resin) were studied in detail in order to explain the mechanism of the high-frequency action. This study

Card 1/3

was prompted by the successful application of high-frequency currents in curing polymer materials, polymerizing glass-reinforced plastics, et cetera. Mixtures of PF-4 resin with a polar plasticizer and calcium stearate stabilizer were subjected to high-frequency preheating under optimum conditions before calendering to form thin films. Viscosimetric and thermomechanical measurements and differential thermal analysis showed nearly identical characteristics for high-frequency treated and untreated samples of the same initial composition, regardless of the nature of the plasticizer (phthalic, sebacic, or phosphoric acid esters). It was concluded that high-frequency currents do not induce any fundamental modification of the chemical structure or kinetic properties in macromolecules of the polymer. The previously observed improvements in physicomechanical characteristics, as well as resistance to aging and to low-molecular-weight liquids, are attributed to accelerated diffusion of the plasticizers into the bulk of the polymer and gelation. Such a degree of gelation is reached that the highest possible number of polymer-plasticizer-polymer bonds are formed. Orig. art. has: 3 figures.

ACCESSION NR: AP4041683

ASSOCIATION: Kazanskiy inzhenerno-stroitel'ny*y institut (Kazan Construction Engineering Institute); Gosudarstvenny*y universitet im. V. I. Ul'yanova-Lenina (Kazan State University)

SUBMITTED: 21Jun63 ATD PRESS: 3052 ENCL: 00

SUB CODE: MT, OC NO REF SOV: 009 OTHER: 003

Card 3/3

S/0153/64/007/001/0132/0136

ACCESSION NR: AP4037235

AUTHOR: Voskresenskiy, V. A.; Fridland, S. V.; Orlova, Ye. M.; By*l'yev, V. A.

TITLE: Several means of increasing the stability of plasticized systems.

SOURCE: Ivuz. Khimiya i khimicheskaya tekhnologiya, v. 7, no. 1, 1964, 132-136

TOPIC TAGS: plasticized system, plasticized polyvinylchloride, stability, thermal oxidation, stabilization, natural aging, artificial aging, physical mechanical index, high frequency heating, dibutylphthalate, dibutylsebacate, dibutylnitrophthalate, dibutylchlorophthalate, weight loss, swelling, tensile strength, elongation, hardness, plasticizer distribution, compatibility

ABSTRACT: The processes of natural and artificial aging of polyvinyl compositions plasticized with monomeric plasticizers of different chemical structure, and the effect of preceeding high frequency heating on the aging process were studied by noting the nature of the change in the physico-mechanical indexes of these compositions. Compositions comprising PF-4 polyvinylchloride resin, 100 parts by weight, plasticizer 64, and calcium stearate 3, were rolled into 2 mm films. Accelerated aging was at 80C under 5 atm. oxygen for 100 hours. In a dibutylphthalate

Card 1/3

ACCESSION NR: AP4037235

plasticized PVC under thermal oxidation, the weight decreased somewhat with time due to the evaporation of plasticizer, the degree of swelling in benzene increased, tensile strength increased and elongation and hardness decreased. Similar results were obtained with dibutylsebacate. After high frequency heating (19.5 megacycles, anode current 0.34-0.40 amps, grid current 200-250 amps, for 2 minutes at a distance of 5-7 mm from sample surface) the plasticized PVC was more stable to thermal oxidative aging (tensile strength increased more and elongation decreased less) due to more uniform distribution of the plasticizer in the polymer. A comparison was made of dibutylphthalate, dibutylnitrophthalate and dibutylchlorophthalate on PVC samples aged for 1 year at -5 to 24C, and 55-75% relative humidity. Dibutylnitrophthalate increases the indexes most (almost doubling the tensile strength and elongation) in comparison to the other two compounds. The changes with time of the properties of the nitro- and chloro-containing plasticizers are much slower than with dibutylphthalate itself. This is attributed especially to the compatibility of the nitro group with the polymer. Orig. art. has: 4 figures.

ASSOCIATION: Kazanskiy inzhenerno-stroitel'ny*y institut Kafedra khimii (Kazan Construction Engineering Institute, Department of Chemistry)

Card 2/3

ACCESSION NR: AP4037235

SUBMITTED: 20Nov62 ENCL: 00

SUB CODE: MT NO REF SOV: 006 OTHER: 001

Card 3/3

L 32183-66 EWT(m)/EWP(e)/T/EWP(t)/ETI IJP(c) JD/WH

ACC NR: AP6011324 (A) SOURCE CODE: UR/0363/66/002/003/0537/0540

AUTHOR: Bogdanova, G. S.; Orlova, Ye. M.

ORG: State Institute of Glass (Gosudarstvennyy institut stekla)

TITLE: Structural transformations in SiO_2-Al_2O_3-BaO-TiO_2 glasses during the initial stages of crystallization

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 3, 1966, 537-540

TOPIC TAGS: glass property, silicate glass, ~~ceramic technology, ceramic product, ceramic material~~ thermal process, silicon dioxide, alumina, barium oxide, titanium oxide, crystallization

ABSTRACT: Structural changes in SiO_2-Al_2O_3-BaO-TiO_2 glasses caused by thermal treatment were studied. The changes in glass properties as a function of thermal treatment for 2 hours at various temperatures are shown in figure 1. It was found that thermal treatment of SiO_2-Al_2O_3-BaO-TiO_2 glasses leads to irreversible structural changes which hinder crystallization processes. These structural changes are exothermal in nature and they are caused by coordinative rearrangements of aluminum ions within the glass lattice. Orig. art. has: 4 figures.

UDC: 666.1:542.65

Card 1/2

L 32183-66

ACC NR: AP6011324

(a)--% celsian (barium feldspar)
(b)--temperature of thermal treatment, °C

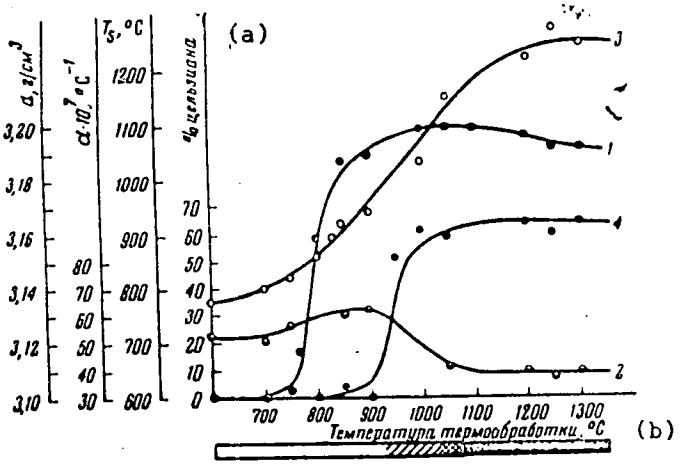

Fig. 1. The dependence of density (d), expansion coefficient (α), glass softening temperature (Ts), and crystalline phase content (% celsian) upon temperature of thermal treatment (for two hours); the shaded bar depicts the degree of glass crystallization, glass transparency declines toward right end of the bar; 1--d, 2--α, 3--Ts, and 4--% celsian.

SUB CODE: 07,11/ SUBM DATE: 25Jul65/ ORIG REF: 008

Card 2/2

OKLOVA, Ye. M.

USSR (600)

Atmospheric Pressure

Method of computing vertical velocities on different levels according to barometric weather maps. Trudy TSIP No. 15, 1949.

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

2

ORLOVA, Ye.M.

AID P - 1428

Subject : USSR/Meteorology and Hydrology

Card 1/2 Pub. 71-a - 2/23

Author : Orlova, E. M., Kandidat of Geographical Sciences

Title : Computation of vertical velocities from data of the wind field

Periodical : Met. i gidro., 1, 8-15, Ja - F 1955

Abstract : Computations of vertical velocities by the field of pressure data give positive practical results, but are sometimes deficient because of voluminous calculations and the dependence on weather changes. This has been surmounted by the method of K. I. Kashin who showed that the forecast of precipitation can be made if the ascending current is systematic and over large areas. A simplified method is presented for computation of the horizontal divergence of air currents necessary for calculating the vertical velocity in the field of the wind. A nomogram covering European Russia and a correspond-ing table are given when a meridional front is present in

Translation M-734, 29 Aug 55

AID P - 1428

Met. i gidro., 1, 8-15, Ja - F 1955

Card 2/2 Pub. 71-a - 2/23

order to prove that vertical velocities computed from data of the wind field correspond better to the weather conditions that do vertical velocities computed from data of the pressure field. Formulae, nomogram, 2 Russian references

Institution: Main Administration of the Hydrometeorological Service at the Council of Ministers of the USSR

Submitted : No date

SOV/124-58-11-12809

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 130 (USSR)

AUTHOR: Orlova, Ye. M.

TITLE: On the Role of Fronts in the Formation of Showery Precipitation (K voprosu o roli fronta v vozniknovenii livnevykh osadkov)

PERIODICAL: Tr. Tsentr. in-ta prognozov, 1955, Nr 38, pp 101-121

ABSTRACT: The investigation was performed on the premise that showers are the results of instability of the stratification of temperature and moisture both along a front and within a homogeneous air mass. The stratification observed in the layer from 1-1.5 to 5 km is normally always stable (indifferent stability relative to saturated air), inasmuch as in a disturbed atmosphere convection quickly destroys any unstable layers that might be forming. The stratification of convectively-unstable layers, which obtains prior to the inception of convection in a homogeneous air mass, is determined by horizontal transfer, vertical movements, and inflow of heat due to turbulence, radiation, local pressure changes, and the kinetic energy of the air particles. Such a stratification can be obtained graphically. In the calculation of the stratification obtaining prior to the inception of frontal

Card 1/3

On the Role of Fronts in the Formation of Showery Precipitation

convective activity one must take into account the temperature changes due to the influence of vertical movements and those due to ground friction, frontal friction and the nonstationary nature of the currents. In the construction of the moisture distribution curves, changes therein due to evaporation from the ground surface must be taken into account. Conditions conducive to the formation of showers are examined for the case of a slowly moving front and an occluded cyclone. It is established that on a sharply defined front the temperature and moisture stratification is always more unstable than in the surrounding frontal zone or within the air masses separated by the front itself; here the upper boundary of the surface front forms a convectively unstable layer 100-300 m thick, while the duration of the convection coincides with the duration of the frontal passage in the vicinity of the observation point. The ascending currents in the frontal zone are always more intense than in the air masses separated by the front; their velocities may vary between a few centimeters to several meters per second. In the post frontal cold sector of a cyclone, where in the absence of frontogenetic conditions there exist significant pressure and temperature gradients, convective instability relative to temperature and moisture is due to horizontal transfer and heating of the air and of the earth's surface. In that case a convectively unstable layer 100-300 m thick is located near the earth's surface while the duration of the