

Ore-Mining Industry (Cont.)

SOV/5474

of Technical Sciences (deceased); Part XII by G. M. Malakhov, Professor, Doctor of Technical Sciences; and Part XIV by V. N. Voronin, Doctor of Technical Sciences (deceased), and L. D. Voronina, Candidate of Technical Sciences. No personalities are mentioned. Each part of the handbook is accompanied by references, all Soviet .

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KAPLUNOV, R.S.

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(Measuring instruments)

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"Slava" (for Kaplunov).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

100 AND 4TH COORDS

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

29

Testing "Gratan" used in the preservation of fish skins. YA. N. KAPLUNOV.
 Za Otdalenie Tekhniki. Kosherennoe Proizvodstvo 1931, No. 2, 14.—Experiments were
 carried out with soaked salted skins of cod and wolf fish. Best results were obtained
 with 0.5% soln. of "Gratan." The qualities of the wolf-fish skin were unsatisfactory,
 while those of cod were good. Higher concns. of "Gratan" caused contraction, a slight
 tanning effect and ossification. Fish skins less resistant toward alkalis must not be
 treated with "Gratan." "Gratan" contains cyclic hydrocarbons condensed with
 phenol. A. A. BOEHLINGE

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

100 AND 4TH COORDS

1ST AND 2ND ORDERS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

PROCESSES AND PROPERTIES INDEX

27

Preparing and bleaching reptile leather. Ya. N. Kuzhakov and V. N. Semenuova. *Otdelnie Tekhniki. Kozhevniche Promyshlennost* 1931, No. 2, 18-19. The following procedure is recommended. Soak in 5 parts H₂O at 15-20° for 20 hrs. Lime with H₂O 500% of the wet leather, CaO (50%) 10 g. per l., Na₂S (62%) 2 g. per l. for 4 days at 15° for lizard skin and for 3 days for snake skin. Delime with H₂O 300%, NaHSO₃ 2%, HCl 0.25% of the wt. of the raw skin at 35° for 1 hr. Soften with H₂O 400%, creosol 10%, 0.5% of the raw skin at 35°. For vegetable tanning treat with sumac soln. of 0.3% B_é. in the first and 3% B_é. in the last vat (4% B_é. for lizard skin in the last vat) for 4-5 days. Bleach with acetic or oxalic acid, fat liquor with an emulsion of alizarin oil (2%), castor oil (2%), preserved egg yolk (3% with 10% fat) and H₂O 100% of the tanned skins, at 35° for 20-30 min. For formalin-chrome tanning give a preliminary treatment with H₂O 200%, formalin 3%, add to the same soln. after one hr. Na₂CO₃ 4% and H₂O 50% of the second wt. of the skin and let stand 2 hrs. Then treat with H₂O 200% and Cr₂O₃ 2.0% of the 2nd wt. of the skin, having a basicity according to Schorkummer of 35%. Neutralize, fat liquor and finish. For S-chamoise tanning, the skins are pickled for one hr. after softening in a soln. of 3% HCl, 150% H₂O, 10% NaCl. The thiosulfate bath is prepd. from 150% H₂O, 5% Na₂S₂O₄ and 9% NaCl of the 2nd wt. of the raw skins; duration 1-1.5 hrs. For chamoise tanning use H₂O 40%, alum 7%, flour 10%, NaCl 3%, egg yolk 20% (with 10% fat), dry and finish. The lizard leather prepd. by one of the above methods has a breaking strength of 2.18 kg. per square mm. when dry and 1.70 kg. per square mm. when wet. KMnO₄ is the best bleaching agent. A. A. B.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

GROUP	CLASSIFICATION	GROUP	CLASSIFICATION
1	2	3	4

PROCESSES AND PROPERTIES INDEX

29

Treating fish skins. Ya. N. Kaplunov and G. S. Katsrenva. *Izvestiya Tsentral. Nauch.-Issledovatel. Inst. Kosmicheskoi Prom.* 1962, No. 6 7, 37-40. Fish skins, when exposed to 0.05 N alkali and sulfite salts, undergo considerable changes reaching a complete hydrolysis. The action of acids on the collagen depends on their activity (pH) and on the species of fish. Alkalies have less effect than acids. Alkalies increase the swelling of the skins to a mass. Sulfite salts are more active than weak alkalies, but their action is not as detrimental to fish, as to animal skins. The action of alkalies, in the presence of neutral salts is low. Acid and alkali salts do not act on fish skins. A. A. Bochtling.

ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

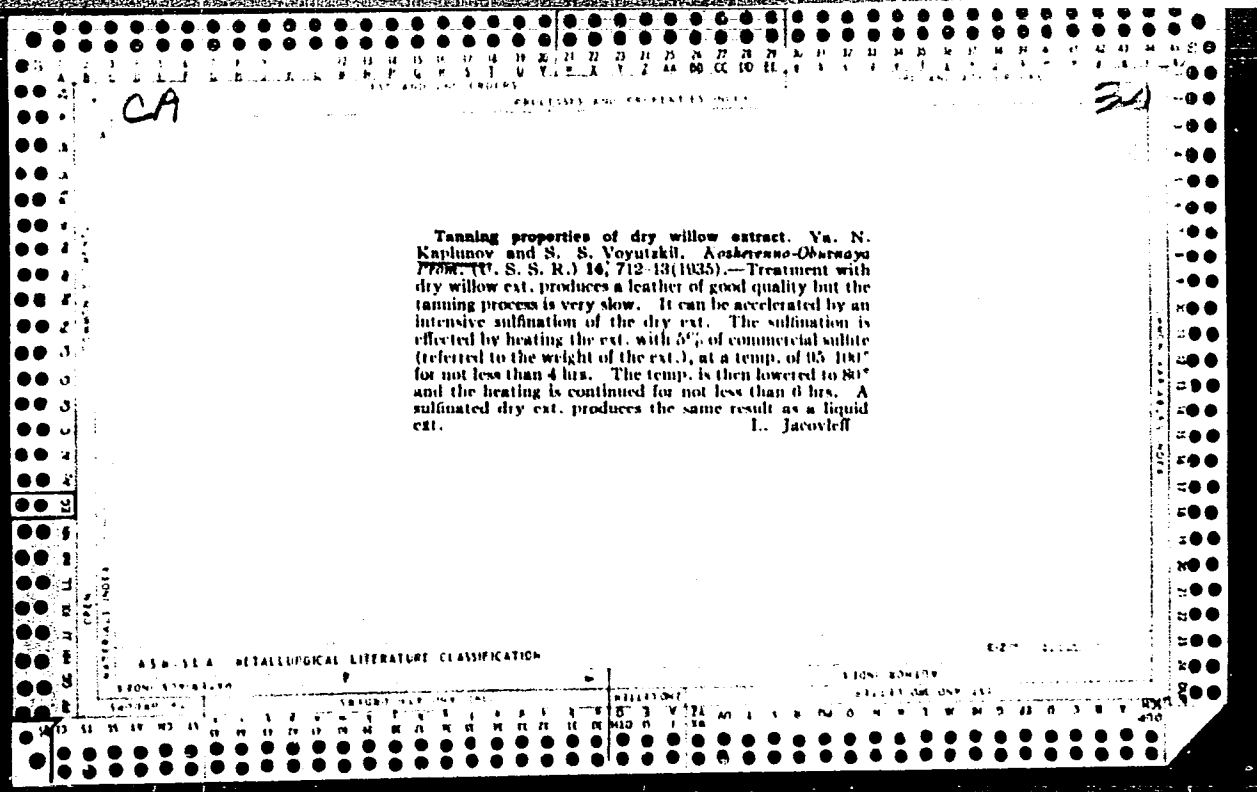
29

Ca

Accelerated drum tanning of pig skins. Ya. N. Kaplanov and A. I. Zhemochkin. *Tekhnol. Nauch.-Issledovatel. Inst. Koshovnoy Prom., Sverdlovsk* No. 6, 68-71(1934).—The skins are washed, freed from fat, treated with a paste of Na₂S:CaO = 1:3, limed with a soln. contg. 10-12% CaO, 400% H₂O (on the wt. of the skins) at 18-20°, washed, split so as to produce a grain side of 2.5 mm., washed, softened with 0.3% of pancreatic gland and 1% (NH₄)₂SO₄ at a liquid factor of 1:4, and treated with a 3% soln. of bisulfite at a liquid factor 1:1. They are tanned with an 18-20° Bé. willow ext., washed with water, bleached with 0.3% hyposulfite (on the wt. of the tannins) or with 1% oxalic acid (on the amount of water), neutralized with 4% hyposulfite (on the wt. of the hides), washed with water at 25°, pressed after 24 hrs. to a water content of 40-45%, drummed without liquid, and fat-liquored with alizarin 20, train oil 60 and suet 20%, or spindle oil 30 and sulfonated train oil 50%.

An tanning with a mist. of oak and spruce ext. the ratio 2:1 (by the tannin content) is used and all operations preceding deliming are carried out as described for willow ext. The hides are not delimed, but after the treatment with pancreatic gland and (NH₄)₂SO₄ are pickled with HCl 3, NaCl 8 and water 100% (on the wt. of the skins). After 12 hrs. they are neutralized with hyposulfite 5, NaCl 5% and water to make up to 10° Bé. A. A. B.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION



111 AND 110 ORDERS

PROCESSES AND PROPERTIES INDEX

29

ca

Impregnation of pigskin. Ya. N. Kaplunov and A. A. Pchel'in. *Koskovskoe-Obozreniye Priro.* 14, 258-9(1935); *Chem. Zentr.* 1936, I, 4242.---Methods are given for the impregnation of leather with size, sulfite pulp ext., naphthene soaps and sulfonated train oil. M. G. Moore

COMMON ELEMENTS

OPEN

MATERIALS INDEX

418-11A METALLURGICAL LITERATURE CLASSIFICATION

111 AND 110 ORDERS

111 AND 110 ORDERS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

100 AND 4TH GROUPS

1ST AND 2ND GROUPS

PROCESSES AND PROPERTIES INDEX

30

Rubber resistant against oil and low temperatures
Ya. N. Kaplunov. *Caoutchouc and Rubber* (U. S. S. R.)
1940, No. 2, 25-9. - Tests were made to det. the resistance
to oil and low temps. of mixes. contg. Thiokol, Soypru-
and natural rubber. Swelling in oil, gasoline and petro-
lum increased the stability of chloroprene rubber articles
at low temps. Pump cups were prepd. which hardened at
-42° but did not break, showed a good oil resistance and
had a max. swelling of 35% in 48 hrs. at 20°. The strength
was further improved by using a fabric lining. The cups
withstood temps. of -55° and also steam at 155°.

B. Z. Kamich

COMMON ELEMENTS

COMMON VARIABLE

OPEN MATERIALS INDEX

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND GROUPS

3RD AND 4TH GROUPS

5TH AND 6TH GROUPS

7TH AND 8TH GROUPS

9TH AND 10TH GROUPS

11TH AND 12TH GROUPS

13TH AND 14TH GROUPS

15TH AND 16TH GROUPS

17TH AND 18TH GROUPS

19TH AND 20TH GROUPS

21ST AND 22ND GROUPS

23RD AND 24TH GROUPS

25TH AND 26TH GROUPS

27TH AND 28TH GROUPS

29TH AND 30TH GROUPS

31ST AND 32ND GROUPS

33RD AND 34TH GROUPS

35TH AND 36TH GROUPS

37TH AND 38TH GROUPS

39TH AND 40TH GROUPS

41ST AND 42ND GROUPS

43RD AND 44TH GROUPS

45TH AND 46TH GROUPS

47TH AND 48TH GROUPS

49TH AND 50TH GROUPS

51ST AND 52ND GROUPS

53RD AND 54TH GROUPS

55TH AND 56TH GROUPS

57TH AND 58TH GROUPS

59TH AND 60TH GROUPS

61ST AND 62ND GROUPS

63RD AND 64TH GROUPS

65TH AND 66TH GROUPS

67TH AND 68TH GROUPS

69TH AND 70TH GROUPS

71ST AND 72ND GROUPS

73RD AND 74TH GROUPS

75TH AND 76TH GROUPS

77TH AND 78TH GROUPS

79TH AND 80TH GROUPS

81ST AND 82ND GROUPS

83RD AND 84TH GROUPS

85TH AND 86TH GROUPS

87TH AND 88TH GROUPS

89TH AND 90TH GROUPS

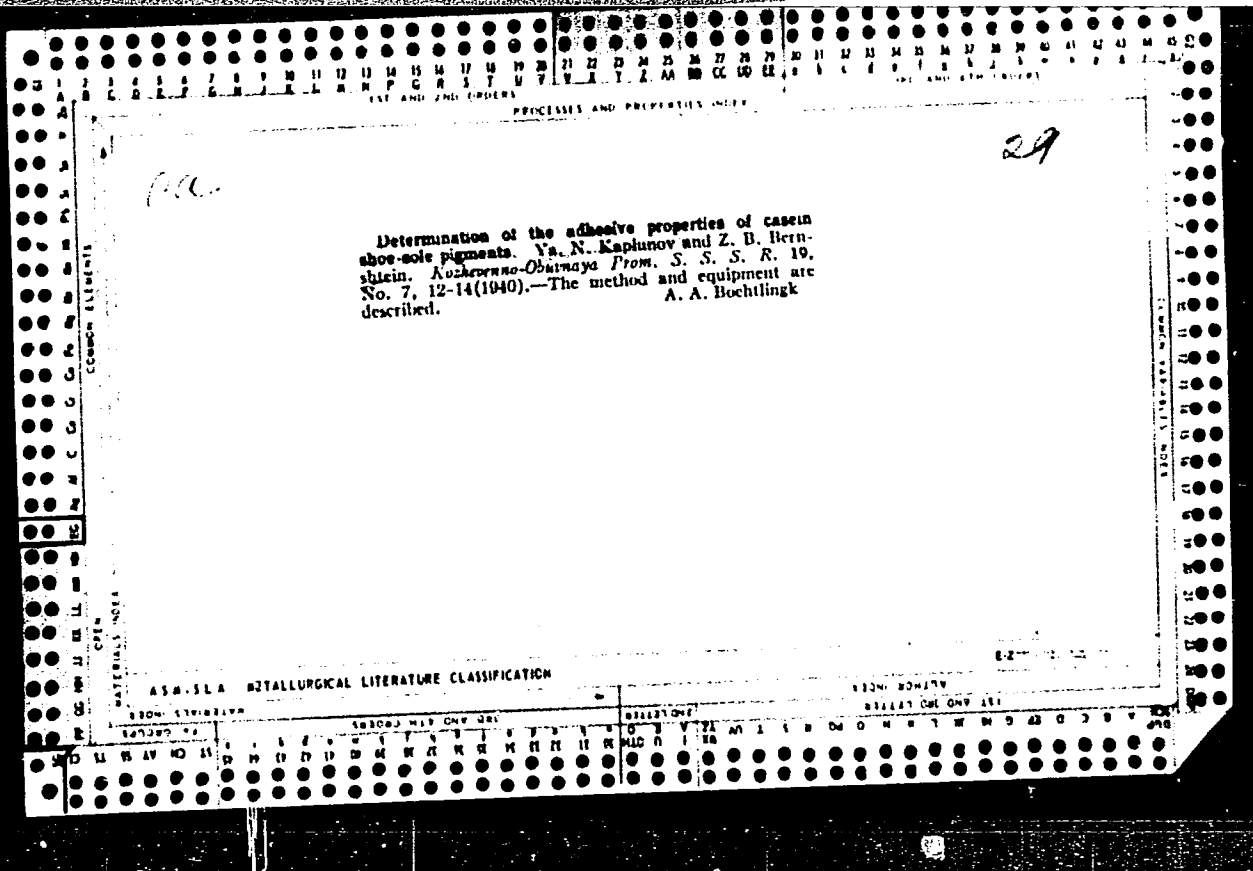
91ST AND 92ND GROUPS

93RD AND 94TH GROUPS

95TH AND 96TH GROUPS

97TH AND 98TH GROUPS

99TH AND 100TH GROUPS



PROCESSES AND PROPERTIES INDEX

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Determination of the elasticity and light stability of casein-pigment leather dressings. Z. B. Bernshtein and Ya. N. Kaplunov. *Kozhynna-Obuvnaya Prom. S. S. S. R.* 19, No. 6, 20-3(1940).—A description of the Shopper bending machine and a device equipped with an elec. arc and a humidification app. for testing the light-stability of pigments in an atm. with different contents of moisture. A. A. Bochtlingk

METALLURGICAL LITERATURE CLASSIFICATION

E 2 7 1 1

KAPLUNOV, YA.N.

Technology

Technology of the reclaiming of rubber, Moskva, Gizlegprom, 1951.

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

КАПЛИНОВ 1/2 А

Ya N. K. Alimov

Composition for retarding the aging of marine insurance
Author: P. S. Ulin, Ya. N. Karpunov, S. N. Frenkel, V. M.

SOV/138-58-10-6/10

AUTHORS: Gul', V. Ya.; Vil'nits, S. A.; Gel'perin, N. I.; Il'in, N. S.;
Kaplunov, Ya. N.; Tsarskiy, L. N. and Krasikova, G. Z.

TITLE: Investigation of the Possibility of Pulverizing Chilled
Rubber (Razrabotka sposoba izmel'cheniya okhlazhdennykh
rezin)

PERIODICAL: Kauchuk i Rezina, 1958, ⁷Nr 10, pp 22 - 28 (USSR)

ABSTRACT: Much rubber scrap is not re-used because of the difficulty of pulverizing the material. This difficulty can be overcome by chilling the rubber. The authors first review the changes in physical and mechanical properties of rubber at low temperature. Fig. 1 shows maximum speed of rupture (mm/sec) against temperature for a vulcanized mixture of SKB and natural rubber. Fig. 2 shows the same for SKB (Butyl) rubber. Each figure shows curves for three different rates of deformation. The maximum speed of rupture is that which occurs immediately before the specimen parts. The re-orientation of material at the point where rupture commences was studied by scribing a line across the specimens, and comparing the thickness of the line where rupture commences with the thickness of the line in the unruptured part of the stretched specimen. In Fig. 4 these relative thicknesses are plot-

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SOV/138-58-10-6/10

Investigation of the Possibility of Pulverizing Chilled Rubber

ted against time for specimens of SKB and natural rubber at four different temperatures. The specimens were deformed at a rate of 500 mm/min. At -53°C no re-orientation at the rupture point occurs. Fig.5 shows stress versus relative elongation for the same rubber mix at different temperatures. Fig.6a shows the relative elongation versus temperature, and Fig.6b the stress versus temperature at the moment of rupture, in each case for three different rates of deformation. In Fig.7 the work of deformation (kg/cm^2) is plotted against temperature for SKB-50 and the same in Fig.8 for SKB-50 plus natural rubber. By comparing Figs. 2, 6 and 7 one sees that the temperature for maximum work of deformation to rupture corresponds to that for minimum speed of rupture and for maximum relative elongation at rupture. At low temperatures the low mobility of the molecular structure prevents re-orientation at the point of rupture as is seen in Fig.4; the resistance to rupture and relative elongation decrease and the speed of rupture increases. Fig.9 shows stress versus relative elongation for samples of rubber and fabric, cut from a tyre casing, at three different rates of deformation for four temperatures. These follow

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SOV/138-58-10-6/10

Investigation of the Possibility of Pulverizing Chilled Rubber . .

the same form as the plain rubber specimens in Fig.5. In order to obtain a brittle state when pulverizing rubber and fabric materials the temperature must be lowered and the speed of pulverization or rupture must be increased. The apparatus shown in Fig.10 was constructed to determine optimum speed of deformation for pulverization. Specimens 10 - 20 mm wide and 1 - 6 mm thick are clamped to the periphery of a 200 mm disc which can be rotated at various speeds. The disc runs in an insulated tank. The specimens strike against a pin mounted on a spring, so that the force acting on the pin can be measured dynamometrically, and the energy of deformation in fracturing the specimens can be calculated. Optimum speed was found to be in the region of 3000 r.p.m. From the parameters established, the hammer-mill type of pulverizer, shown in Fig.11, was constructed. The gap between the hammers and the saw-toothed periphery of the mill casing is 1.5 - 2 mm. The mill runs at 3000 r.p.m. The mill is fed with pieces of rubber about 40 x 20 x 8 mm previously cooled in a dry ice and alcohol mixture. Pulverized material discharged through the grating at the

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Investigation of the Possibility of Pulverizing Chilled Rubber

base of the mill was subjected to sieve analysis. Energy input was measured by a recording wattmeter. Table 1 shows results with this pulverizer for various rubber and rubber fabric materials. The size of the openings in the discharge grating was either 5 mm or 2 mm. Material was cooled to temperatures of -66° , -60° and -50°C . Time and k.w.h. to pulverize 400 gramme quantities of material are given, and the specific energy requirement in k.w.h. per metric ton of material is given in the last column. Table 2 gives the sieve analysis for the various samples for 5 mm and for 2 mm openings in the discharge grating. To complete the calculation for energy requirements, the power in k.w.h. required to cool one ton of material to temperatures between 5°C and -55°C are given. These calculations are based on an initial temperature of 20°C ., specific heat of material $0.5 \text{ c.cal/kg}^{\circ}\text{C}$, and 59.5% cooling efficiency from a Freon 12-refrigeration circuit as

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SOV/138-58-10-6/10

Investigation of the Possibility of Pulverizing Chilled Rubber . .

in Fig.12 with a further 20% loss to air allowed for.
There are 12 Figures, 2 Tables and 7 Soviet References

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii
im. M. V. Lomonosova (Moscow Institute of Precision
Chemical Technology imeni M.V. Lomonosov)

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5(1,3)

AUTHORS:

Gul', V. Ye., Mayzel', N. S., SOV/153-2-2-25/31
Frenkel', S. N., Il'in, N. S., Kaplunov, Ya. N., Khmunin,
S. F., Voronkov, Yu. F.

TITLE:

Examination of the Use of High-molecular Substances for
the Isolation of Current Conducting Rails (Issledovaniye
primeneniya vysokomolekulyarnykh veshchestv dlya izolyat-
sii shin tokoprovodov)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimiches-
kaya tekhnologiya, 1959, Vol 2, Nr 2, pp 274-279 (USSR)

ABSTRACT:

A number of demands is made on the isolation mentioned in
the title, which could not be satisfied for a long time. In
most cases a material perfect in every way proved to be
unsatisfactory with regard to one single characteristic, so
that the rails mentioned in the title could not be isolated.
A uniform point-of-view concerning the electric break-down
of high-molecular compounds is lacking at present. The
authors presume that the electric field strength at which a
high-molecular compound breaks down, is mainly determined
by peculiarities of the chemical structure of the macro-
molecules, further by the structure of the material

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Examination of the Use of High-molecular Substances
for the Isolation of Current Conducting Rails

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based upon a high-molecular compound, as well as by a number of external factors which are connected with the application of the relevant products. By confronting the values of a total polarization (electronic, ionic, and structural), it is possible to estimate the suitability of a material with a certain chemical composition. The structural polarization, first established by P. P. Kobeko, is characteristic of caoutchouc and caoutchouc-like materials. The purpose of the present paper is an attempt to use high-molecular materials of such composition and mode of application which meet all demands for isolating the rail surface. Butyl-caoutchouc, butadiene-styrene-caoutchouc, silicon-caoutchouc, polyamide-resin 548, polyvinyl-butyral, polytetrafluoro-ethylene (fluoroplast), and polyethylene were used. A device was set up for testing the resistance to electric breakdown. All requirements of GOST-864-41 were satisfied during the tests. Only the test voltage was increased to 3,500-5,000 v instead of 2,000 v. First of all the methods of application of the isolation-coating to the sample

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Examination of the Use of High-molecular Substances SOV/153-2-2-25/31
for the Isolation of Current Conducting Rails

were discussed. All types of coatings were tested for heat-, frost-, light-, and ozone-resistance, and for vibration. Tables 1 and 2 show that the isolation on the basis of polymer substances, applied in molten state on a heated metal surface, differs from other isolation methods with polymers of increased electric strength. The authors propose a rational method of isolation for the conductor-rail, that is the application of molten and sprayed polyethylene particles on a heated rail surface. There are 2 tables.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M. V. Lomonosova; Kafedra fiziki (Moscow Institute for Fine Chemical Technology imeni M. V. Lomonosov; Chair of Physics)

SUBMITTED: December 16, 1957

Card 3/3

SOV/138-59-3-8/16

AUTHORS: Shokhin, I. A. and Kaplunov, Ya. N.

TITLE: Two-Stage Preparation of Homogeneous Regenerated Rubber Mixtures in a High Speed Rubber Mixer (Metod dvukhstadiynogo izgotovleniya odnorodnykh rezino-regeneratnykh smesey v skorostnom rezinosmesitele)

PERIODICAL: Kauchuk i rezina, 1959, Nr 3, pp 33 - 38 (USSR)

ABSTRACT: The possibility of preparing homogeneous regenerated rubber mixtures in a covered rubber mixer by changing the conditions of mixing were investigated (part of the experiments were carried out by O.I. Glushak). It was assumed that the non-homogeneity of rubber mixtures containing regenerated rubber is due to the incorrect mixing of the components. Experiments were carried out on mixtures of tyre rubber prepared from SKS-30A and SKB-NK mixtures; their composition is given in Table 1. Regenerated rubber prepared from tyre rubbers was added to this mixture (Table 2) in quantities of 0, 15, 30 and 45% (Table 3). The rubber-regenerated rubber mixtures were prepared in a 2 litre laboratory mixer. The speed of the rotor of the mixer was 63 rev/min, the friction 1 : 1.19, and a pressure of 6 atm was applied to the

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SOV/138-59-3-8/16

Two-Stage Preparation of Homogeneous Regenerated Rubber Mixtures
in a High-Speed Rubber Mixer

plunger. Tyre mixtures based on SKS-30A and regenerated rubber R-33 were prepared by a one-stage method. The composition of four different mixtures is given in Table 4. Three mixtures based on SKS-30A rubbers containing carbon black and master batches prepared from these mixtures, having similar plastic and elastic properties as the regenerated rubber R-33, were tested (Table 6). The composition of tyre rubbers prepared from these mixtures is shown in Table 7 and identical experiments were carried out on rubber mixtures based on SKB-NK rubbers. The physical and mechanical characteristics of all tyre rubber mixtures, with varying quantities of added regenerated rubber and various methods of addition, are listed in Table 8. The mixtures tend to become more rigid during the two-stage process than during the one-stage process. This is probably due to the better distribution of the

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Two-Stage Preparation of Homogenous Regenerated Rubber Mixtures
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regenerated rubber in the mixture. Micro-photographs confirm that the two-stage process of mixing produces more homogenous distribution of the regenerated rubber in tyre rubbers. The two-stage process increases the workability during repeated deformation; this is obviously of great importance when considering the quality of car tyres. the effect of the addition of various quantities of regenerated rubber R-33 and R-33NB and the method of introducing them into the mixtures affects the quality of tyre rubbers (Figures 1 and 2). The two-stage method is most suitable when the rigidity of the carbon-black-containing master batch is considerably higher than the rigidity of the used regenerated rubber. There are 2 figures, 8 tables and 6 Soviet references.

Card 3/3

S/063/62/007/002/010/014
A057/A126

AUTHORS: Kaplunov, Ya.N., Mayzel', N.S.
TITLE: Conference on current conducting polymer materials
PERIODICAL: Zhurnal vsesoyuznogo khimicheskogo obshchestva imeni D.I. Mendeleeva, v. 7, no. 2, 1962, 221 - 222

TEXT: The conference was held in October 1961 and was organized by the kafedra khimii i fiziki polimerov i protsessov ikh pererabotki (Chair of Chemistry and Physics of Polymers and their Processing) and the local organization VKhO imeni Mendeleeva Moskovskogo instituta tonkoy khimicheskoy tekhnologii imeni Lomonosova (Local Organization of the All-Union Chemical Society imeni Mendeleeva of the Moscow Institute of Fine Chemical Technology imeni Lomonosov). In the conference participated representatives of the VNIPIK, TsNIISK, TsNIIMPS, NIIShP, NIIR, Voenno-inzhenernaya akademiya im. Kuybysheva (Military-Engineering Academy imeni Kuybyshev), Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automation and Telemechanics of the AS USSR), Institut narodnogo khozyaystva im. Plekhanova (Institute of National Economy imeni Plekhanov) and others. The following reports were given: N.S. Mayzel', and V.Ye. Gul',

Card 1/2

Conference on current.....

S/063/62/007/002/010/014
A057/A126

"Investigation of the conductivity of polymer base-systems"; Ya.M. Parnas, "Investigation of conducting polymers in the high-frequency field"; N.A. Makarov (Institute of Automation and Telemechanics AS USSR), "Application of conducting plastics for galvanoplastics"; I.A. Ostryakov (VNIIPK), "Current conducting and semi-conducting polymer materials"; L.N. Tsarskiy, Ya.N. Kaplunov, and V.Ye. Gul', "Low-temperature heating elements on polymer base". These authors also organized industrial production of such elements at the Kurskiy zavod rezinotekhnicheskikh izdeliy (Kursk plant of technical rubber articles) which elements were installed to heat the hall of the Narva GES. S.S. Iogansen reported on "The use of conducting polymers in medicine and biology"; V.K. Katusova read her report "Perspectives for the application of conducting polymer materials in agriculture". In spite of the fact that this conference was the first in this field, the importance of these materials for the national economy was demonstrated and the following directions for further investigations given: 1. Explanation of the mechanism of conductivity in these materials; 2. Determination of the relation between the chemical nature of the polymer and the conducting properties; 3. Development of new fields of application of these materials. An Organization Committee with the members Professor V.Ye. Gul', Ya.M. Parnas, and I.A. Ostryakov was elected at the conference.

Card 2/2

KAPLUNOV, Ya.N.; MAYZEL', N.S.

Conference on conductive polymer materials. Zhur.VKHO 7 no.2:
221-222 '62. (MIRA 15:4)

(Polymers--Electric properties)

S/138/62/000/012/006/010
A051/A126

AUTHORS: Babitskiy, B. L, Vinitiski, L. Ye., Kaplunov, Ya. N.

TITLE: Dielectric properties of reclaimed rubber and its vulcanizates

PERIODICAL: Kauchuk i rezina, no. 12, 1962, 18 - 22

TEXT: Investigation results are submitted of the dielectric properties of reclaimed rubber and its vulcanizates . The possibilities for improving these properties are discussed. Reclaimed serial rubbers produced by reprocessing domestic tires were found to be superior to tire rubbers in their electro-insulating properties (GOST 6433-52). The specific volumetric electrical resistance of the reclaimed rubber is equal to that of the "pure" rubbers. The high electro-insulating properties of reclaimed rubber are also noted in its vulcanizates. The latter are inferior, however, in their electric spark-over resistance and the dielectric loss value. Both, filled and non-filled reclaimed vulcanizates are not inferior to electro-insulating "pure" rubbers in their mechanical characteristics, satisfying the GOST 2068-61 conditions for insulating rubber of electric cables, lines and cords. The electric tensility can be raised, while maintaining a high specific electrical resistance, by introducing a specially selected

Card 1/2

BABITSKIY, B.L.; VINITSKIY, L.Ye.; DROZDOVSKIY, V.F.; DYUBKO, L.D.; KAPLUNOV,
Ya.N.; MELENT'YEVA, Z.G.; SHOKHIN, I.A.; Primali uchastiye:
ZHIL'TSOVA, A.A.; LEVIT, R.G.; YAKOVLEV, D.A.

Effect of filling reclaimed rubber on the dielectrical properties of
the reclaimed product. Kauch. i rez. 24 no.5:22-25 My '65.
(MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo
transporta i Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

KAPLUNOV, Zinoviy Vladimirovich, inzhener; LIUBOSH, A.A., inzhener,
nauchnyy redaktor; KAPLAN, M.Ya., redaktor izdatel'stva;
PUL'KINA, Ye.A., tekhnicheskiy redaktor

[Prefabricated large-sized apartment house construction elements;
the experience in Leningrad apartment house building] Sbornye
krupnorazmenye konstruktsii zhilykh zdani; iz opyta zhilishchnogo
stroitel'stva Leningrada. Leningrad, Gos. izd-vo lit-ry po stroit.
i arkhitecture, 1956. 231 p. (MIRA 9-10)
(Apartment houses)

KAPLUNOV, ZINOVIIY VLADIMIROVICH

RAYNUS, Mliazar Samuilovich; KAPLUNOV, Zinowiy Vladimirovich; KLYACHKO, A.L.,
inzhener, nauchnyy redaktor; KAPLAN, M.Ye., redaktor izdatel'stva;
PUL'KINA, Ye.A., tekhnicheskiiy redaktor

[Building of large panels without framework; experience in large
panel construction in Leningrad] Krupnopanel'nyi beskarkasnyi dom;
opyt stroitel'stva krupnopanel'nogo doma v Leningrade. Leningrad,
Gos.isd-vo lit-ry po stroit. i arkhit., 1957. 101 p. (MLRA 10:9)
(Leningrad--Apartment houses)

157 KAPLUNOV, Z.V.

RAYNUS, E.S.; KAPLUNOV, Z.V.

Large-panel housing construction in Leningrad. Biul.tekh.inform.
3 no.1:7-11 Ja '57. (MIRA 10:10)

1.Glavnyy inzhener stroytresta No.3 (for Raynus). 2.Glavnyy
inzhener byuro tipovogo proyektirovaniya instituta Lenproyekt
(for Kaplunov)

(Leningrad--Apartment houses)

KAPLUNOV, Z.V., inzh.

Using prestressed reinforced concrete construction elements in
building apartment houses and public buildings. Biul.tekh.inform. 4
no.10:13-16 0 '58. (MIRA 11:11)
(Prestressed concrete construction)

KOLKER, Ya.G., inzh.; KAPLUNOV, Z.V., inzh., red.; PYUL'KKYANEN, A.N.,
tekhn.red.

[Temporary technical specifications for large reinforced concrete hollow ceiling panels (TU9/58); Temporary instruction on using large reinforced concrete hollow panels for precast ceilings (I 9/58)] Vremennye tekhnicheskie uslovia na kurpnorazmernye zhelezobetonnye pustotelye paneli dlia perekrytii (TU 9/58); Vremennaisa instruksia po primeneniui krupnorazmernykh zhelezobetonnykh pustotelykh paneli dlia sbornykh perekrytii (I 9/58). Leningrad, Proektnyi kabinet in-ta "Lenproekt," 1958. 25 p. (MIRA 13:4)

1. Leningrad. Proyehtnyy institut "Lenproyeht."
(Concrete slabs)

KAPLUNOVA, L. S.

FD-1512

USSR/Geophysics - Soil Science

Card 1/1 : Pub. 129-15/18

Author : Kaplunova, L. S., and Mel'nikova, T. S.

Title : Influence of fertilizers on the botanical composition of perennial grasses

Periodical : Vest. Mosk. un., Ser. fizikomat. i yest. nauk, 9, No 6, 119-126, Sep 54

Abstract : Since the attempt to increase the yield of grasses is now being accompanied by improvement of the quality of grass mixtures (e. g. clover, timothy, and raznotrav'ye'), the authors study the influence of introducing mineral fertilizers and of liming podzolist soils on the botanical composition of such mixtures. Their experiences show that for the maximum development of the leguminous (clover) component the lime and phosphor-calcium fertilizers are most effect in the non-chermozem belt; other soils may differ. They find that an important criterion determining the quality of hay is the foliation (leafing) of the grasses.

Institution : Chair of Agrochemistry

Submitted : April 6, 1954

KAPLUNOVA, L.S.

Effect of fertilizers on the chemical composition of perennial
grasses. Vest.Mosk. un.10 no.12:143-155 D '55. (MLRA 9:5)

1. Kafedra agrokhimii.

(Fertilizers and manures) (Grasses)

KAPLUNOVA, L.S.

Liquid nitrogen fertiliser for turf-Podzolic soils. Vest.
Mosk. un. Ser. biol., pochv., geol., geog. 14 no.3:101-107
'59. (MIRA 13:6)

1. Kafedra agrokhimii Moskovskogo universiteta.
(Fertilisers and manures) (Ammonium hydroxide)

AVDONIN, N.S., professor; KAPLUNOVA, L.S., assistant

Effect of ammonia water on soils and plants. Zemledelie 8
no.2:49-55 F '60. (MIRA 13:5)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Plants, Effect of ammonia on) (Soil acidity)

KORENEVSKAYA, V.Ye; KAPLUNOVA, L.S.; ZVYAGINTSEV, D.G.

Studies on the recultivation of lands pitted with quarries.
Nauch. dokl. vys. shkoly; biol. nauki no.4:192-195 '63
(MIRA 16:11)

1. Rekomendovana kafedrami fiziki i melioratsii pochv, agrokhemii i biologii pochv Moskovskogo gosudarstvennogo universiteta im. Lomonosova.

*

KORENEVSKAYA, V.Ye.; YAKUSHEVSKAYA, I.V.; KAPLUNOVA, L.S.; KHUDYAKOVA, Yu.A.

Soil improvement characteristics of the Palace of the Soviets Park.

Vest. Mosk. un. Ser. 6: Biol., pochv. 18 no.1:45-56 Ja-F '63.

(MIRA 16:12)

1. Kafedra fiziki i melioratsii pochv, kafedra pochvovedeniya,
kafedra agrokhimii, i kafedra biologii pochv. Moskovskogo universiteta.

KORENEVSKAYA, V. Ye.; KAPLUNOVA, L.S.; ZVYAGINTSEV, D.G.

Agrochemical hydrophysical and microbiological characteristics
of turf-Podzolic soils with removed humus horizon. Pochvovedenie
no. 2:43-52 D '65 (MIRA 19:1)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
Submitted July 18, 1962.

KAPLUNOVA, R.

New features. Prom.koop. 13 no.6:6-7 Ja '59. (MIRA 12:9)

1. Zamestitel' predsedatelya pravleniya promkolkhosa im.Stalina,
Moskva.

(Moscow--Clothing workers)

Kinetics of the bipolar photoelectrolytic reaction
on semiconductors with metal electrodes
K. K. Kiselev, I. I. Selezneva, B. P. Ponomarev, E. M.
Kozlov, and V. I. Kuznetsov
1984, Zh. Fiz. Khim. 58, 2300-2304
The authors study the kinetics of the photoelectrolytic
reaction on semiconductors with metal electrodes. It is
shown that the reaction is controlled by the rate of
charge transfer from the semiconductor to the metal
electrode. The authors also study the effect of the
illumination intensity on the reaction rate. The
results are compared with the theory of the photoelectrolytic
reaction on semiconductors with metal electrodes.

the type of photocells without barrier
layers, such as cells in which Cu_2O is the semiconductor.

Werner Jacobson

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1557
AUTHOR KAPLUNOVA, E.I., TOLPYGO, K.B.
TITLE The Kinetics of the Bipolar Photoelectromotoric Force in a Semiconductor with Metallic Electrodes.
PERIODICAL Zurn.techn.fis, 26, fasc.10, 2165-2169 (1956)
Issued: 11 / 1956

Here the theory of photoelectromotoric forces occurring in such a semiconductor in the case of an unsteady illumination is developed in linear approximation. The semiconductor is assumed to be fully homogeneous, and its contacts with the metal are determined solely by effective "transparencies" for holes and electrons. The theory is intended to explain the idealized form of the impulse which was attained in the course of experiments carried out by I.P.POTAPENKO, dissertation and auto-review, KGU (State university, KIEV ?) during constant illumination.

In linear approximation the theory of the photoelectromotoric force is reduced to the integration of a system of partial differential equations (which express the modifications of the numbers of electrons and holes in the zones and on local levels), and to the integration of POISSON'S equations at certain boundary conditions. For certainty's sake an electron semiconductor is investigated here and the thermal excitation of the holes is neglected. Light is assumed to be sinusoidally modulated. With rectangular light impulses (length T and height L_0) the photoelectromotoric force is obtained by the summation of "replies" for all components of FOURIER'S series.

A. H. LUNOV H, L. I.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1838
AUTHOR DYKMAN, I.M., KAPLUNOVA, E.I., TOLPYGO, K.B.
TITLE The Field Mass of the Polarizing Exitons in Ion Crystals.
PERIODICAL Žurn.techn.fis, 26, fasc. 11, 2459-2466 (1956)
Issued: 12 / 1956

The present work investigates the comparatively slow motion of an exciton as a whole. In this case the velocity of the displacement of the "center of mass" of the "polarization trough" is to be understood (in the exciton- as well as in the polaron theory), which agrees with the motion of an electron and hole. It is then possible, when developing the exciton energy according to the powers of the velocity v , to content oneself with the quadratic term. The coefficient near $v^2/2$ is then the effective mass of the exciton.

The macroscopic computation of the effective mass of the exciton: Several previous works are cited, whereupon the formula for the effective mass M , which was derived by L.G.LANDAU and S.I.PEKAR (Žurn.eksp.i teor.fis, 18, 419 (1948)), is given and specialized for the spherical-symmetric states of the excitons (particularly for the lowest $1s$ -state). Finally, the definite formula for M is given without following the entire course of computation. Under certain conditions the value

$M \sim 10^5 - 10^6$ electron masses is obtained for NaCl, KCl and other alkali halide crystals. However, so large effective masses of the exciton apparently do not correspond to the actual values for these materials. Therefore, the microscopic structure of the crystals must be taken into consideration in this connection.

Zurn.techn.fis, 26, fasc. 11, 2459-2466 (1956) CARD 2 / 2 PA - 1838

The microscopic computation of the effective mass of the exciton: For the computation of the displacement of the ions the potential energy of the interaction between the crystals with an electron and a hole is written down. The induction $\vec{D}(\vec{r})$ occurring in this formula is computed as the induction of a multipole with the usual formulae for electrostatics. The displacements and the dipole moments of all ions can easily be determined after transition to the normal coordinates. The deformation in the distribution of the exciton charge and the modification of the forces acting upon the surrounding ions (if the displacement of the ions is less than the lattice constant), are neglected. When computing the forces brought to bear by the excitons onto the ions, the field of the exciton is considered to be the field of a system of seven charges which move with progressive uniformity within the space. The formula for the effective mass M found under these and other conditions is given.

The numerical values of the effective mass of the exciton in KCl- and NaCl-crystals, which are discussed at the end, show that the effective mass of the exciton has essentially a fieldlike character.

INSTITUTION:

Kaplanova, Ye. I.

AUTHORS: Kaplunova, Ye. I., and Tolpygo, K. B.

57-10-7/33

TITLE: Note on the Temperature Dependence of the Hall-Coefficient in Semiconductors with Constant Concentration of Carriers (Temperatur=
naya zavisimost' koeffitsiyenta Kholla v poluprovodnikakh s postoyan=
noy kontsentratsiyey nositeley).

PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 10, pp. 2246-2251 (USSR).

ABSTRACT: A method is proposed to determine a number of semiconductor para=
meters from the dependence of the Hall coefficient on the tempera=
ture. This method makes it possible to elaborate experimental data
in a very simple manner and to compare it with theory. Just like in
the former publication of the author (Tolpygo) in IFAN USSR, Nr 3,
52, 1952, here also the simplest case of an isotropic quadratic
dependence of the carrier energy on the velocity in homoeopolar
semiconductors with great mobility is investigated, if the disper=
sion is essential in acoustical vibrations and in charged admixtures
at the same time. Formulae for the dependence of the mobility on
temperature are deduced and it is shown, that $u(T)/T^{3/2}$ must be an
universal function $f(a)$ of a dimensionless quantity $a = a_0 T^{3/2}$ with
an accuracy. $u(T)$ represents the temperature dependence of the

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Note on the Temperature Dependence of the Hall-Coefficient in
Semiconductors with Constant Concentration of Carriers.

57-10-7/33

mobility. Next the equation for the Hall coefficient R_x is deduced and it is shown, that R_x as a function of temperature possesses a minimum, which was not to be expected from the formula obtained in the earlier paper. This is connected with the fact, that R_x is represented by the ratio of two functions growing at an unequal rate. The carrier concentration N and the quantity a_0 can be found from the shift displacement of the curve $\ln R_x$ of $\ln T^3$ with respect to the standard curve $\ln a_0$ of $\ln a$. A combination with measurements of conductivity furnishes the mobility of the electrons as a function of temperature. It is shown, that it is possible to determine from the difference between N and the concentration of singly ionized admixtures, to what degree the admixed donators are compensated by acceptors. The method of elaborating experimental data proposed here makes it possible to remove the indeterminacy from distinguishin between the Hall-mobility and the drift mobility and permits to determine the magnitude of the carrier concentration and the concentration of singly ionized admixtures with much greater exactitude.

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Note on the Temperature Dependence of the Hall-Coefficient in Semiconductors with Constant Concentration of Carriers. 57-10-7/33

There are 2 figures, 1 table and 2 Slavic references.

ASSOCIATION: Institute for Physics AN Ukrainian SSR, Kiyev (Institut fiziki AN USSR, Kiyev).

SUBMITTED: March 4, 1957.

AVAILABLE: Library of Congress.

Card 3/3

AUTHORS: Dykman, I.M. and Kaplunova, Ye.I. SOV/109-3-8-2/18

TITLE: The Role of Colloidal Particles in the Electric Conductivity and Thermal Emissivity of Semi-conductor Cathodes (O roli kolloidnykh chastits v elektroprovodnosti i termoemissii poluprovodnikovyykh katodov)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 8, pp 990 - 999 (USSR)

ABSTRACT: In 1954, Ortusi (Ref 7) put forward the hypothesis that colloidal particles of metallic barium can exist in an oxide cathode after its activation. These particles are formed in barium oxide in the vicinity of certain negatively-charged centres which attract oxygen vacancies. The presence of colloidal particles affects the characteristics of electron conductivity and thermionic emission of the cathode and it is therefore of interest to investigate the electrical properties of a semi-conductor which has an excess of metallic atoms which can be either in the atomic or colloidal phase. It is assumed that a semi-conductor cathode contains R excess metal atoms in a unit volume and that R is independent of temperature.

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The Role of Colloidal Particles in the Electric Conductivity and Thermal Emissivity of Semi-conductor Cathodes

At a given temperature the number of atoms in the atomic phase is R_1 and in the colloidal is $Q - R_1$. In a thermo-dynamic equilibrium, the chemical potentials of both the phases μ_1 and μ_2 should be equal. It is necessary to determine the magnitude of μ_1 or μ_2 . The metallic atoms contained in the interstices of the crystalline lattice can be regarded as a system of harmonic oscillators, whose energy is expressed by Eq.(1), where H_0 is a constant corresponding to the minimum energy, ω is the frequency of oscillation of an atom and m is the mass of an atom. The free energy of the atoms is given by Eq.(2), where n_M is the concentration of the interstices and Z is given by Eq.(3). The chemical potential μ_1 is given by:

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The Role of Colloidal Particles in the Electric Conductivity and Thermal Emissivity of Semi-conductor Cathodes

$$\mu_1 = \frac{\partial F_1}{\partial R_1} = kT \ln \left[e^{-H_0/kT} \left(\frac{kT}{\hbar\omega} \right)^3 \frac{N_M - R_1}{R_1} \right] \quad (4)$$

For finding μ_2 , a colloidal particle is regarded as a part of the crystal lattice of the metal. The free energy of the particle can be described by Eq.(5). If it is assumed that the number of oscillation branches is three, Eq.(5) can be written as Eq.(7), from which it follows that μ_2 is given by Eq.(8). By comparing μ_1 and μ_2 , the equilibrium concentration of the atomic metal is expressed by:

$$R_1 = \frac{N_M}{1 + \gamma e^{\delta/kT}} \quad (9),$$

Card3/7 where δ and γ are given by Eqs.(10). For the case of

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The Role of Colloidal Particles in the Electric Conductivity and Thermal Emissivity of Semi-conductor Cathodes

anionic vacancies in the cathode, the free energy is expressed by Eq.(11), where p is the number of colloidal particles in the interstices of the lattice and Ψ_0 is the free energy of an ideal lattice which can be expressed by Eq.(12). If each colloidal particle loses s atoms by evaporation, its free energy is expressed by Eq.(14). On the other hand, the free energy of a lattice with sp anionic vacancies is expressed by Eq.(15). The full, free energy of the system is given by Eq.(17). From the condition of minimum, free energy, it follows that the number of vacancies sp is expressed by Eq.(18), where γ_1 is defined by Eq.(19). Comparison of Eqs.(9) and (18) shows that both the types of the barium distribution in the cathode lead to the same distribution law for the atomic particles. If the cathode contains both the atomic and colloidal phases simultaneously, each of these can act as an electron donor. In the state of equilibrium, the system can be characterised by a common chemical potential μ . This can be found from the condition of the neutrality of the system, which is expressed by:

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The Role of Colloidal Particles in the Electric Conductivity and Thermal Emissivity of Semi-conductor Cathodes

$$n_- = Q_- e^{\mu/kT} = \frac{R_1 \nu e^{\frac{\epsilon-\mu}{kT}}}{1 + \nu e^{\frac{\epsilon-\mu}{kT}}} + \frac{q}{e_0} p \quad (20)$$

where Q_- is the number of states in a zone, e_0 is an elementary charge, ν is a multiplier functionally related to the valency of the donors and q is a positive charge on a colloidal particle. The charge q can be expressed by Eq.(21), where r is the radius of a colloidal particle and μ_0 is the Fermi level of a non-charged particle. From Eqs.(20) and (21), the final expression for μ is in the form of Eq.(22). The formula was used to carry out some numerical calculations and to plot a number of graphs. The values of μ for various δ , ϵ and μ_0 are shown in the table on p 995, while the

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The Role of Colloidal Particles in the Electric Conductivity and Thermal Emissivity of Semi-conductor Cathodes

curves illustrating temperature dependence of μ are given in Figure 1 (Curves α , a , β and b). The above theoretical results can be extended to include the case of the semi-conductors containing an admixture of "foreign" colloidal particles. It is shown that, in this case, the concentration R_1 is expressed by Eq.(26).

All the above calculations were carried out for the temperatures and the concentrations at which the number of the colloidal particles was comparatively large and it was therefore possible to assume a uniform potential inside the cathode. In cases where the number of colloidal particles is small, the distribution of the potential inside the cathode, for a given colloidal particle, is variable and can be found by solving a Debye-type equation. If a colloidal particle is in the vicinity of the surface, the variation of the potential along the surface corresponds to the change of the work functions. On the other hand, a donor-type particle leads to the appearance of regions having a reduced work function. An acceptor-type particle at the surface leads to the appearance of regions

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The Role of Colloidal Particles in the Electric Conductivity and Thermal Emissivity of Semi-conductor Cathodes

with an increased work function. From this, it is possible to conclude that the presence of colloidal particles may be one of the causes of the spot-like structure of the actual oxide cathodes. The authors express their appreciation to Corresponding Member of the Ac.Sc. Ukrainian SSR, N.D. Morgulis, for his interest in this work and for useful discussions. The authors also thank their senior collaborator K.B. Tolpygo, for a number of valuable remarks. There are 2 figures, 1 table and 8 references, 7 of which are English and 1 French.

ASSOCIATION: Institut fiziki AN USSR, Kiyev (Institute of Physics, Ac.Sc. Ukrainian SSR, Kiyev)

SUBMITTED: January 29, 1958

Card 7/7

1. Semiconductors--Electrical properties
2. Semiconductors--Electro transitions
3. Semiconductors--Mathematical analysis
4. Oxide films--Electrical effects

KAPLUNOVA, Ye.I.

Poly-electron interpretation of the hole zone in diamond-type crystals. Fis. tver. tela 1 no.2:177-185 F '59.

(MIRA 12:5)

(Semiconductors) (Wave mechanics)

REYNBERG, S.A., zasluzhennyy deyatel' nauki professor; ROZENTAL', T.V.,
kandidat meditsinskikh nauk; KAPLUNOVA-SERGEYEVA, D.E. (Moskva)

Röntgenological changes in the lungs in pneumorickettsiosis
(Q fever). Klin.med. 34 no.12:44-54 D '56. (MLRA 10:2)

1. Iz pervoy kafedry rentgenologii i radiologii (zav. - prof. S.A.
Reynberg) Tsentral'nogo instituta usovershenstvovaniya vrachey (na
baze Moskovskoy gorodskoy ordena Lenina klinicheskoy bol'nitsy
imeni S.P.Botkina)

(Q FEVER, case reports radiography
lungs)

(LUNGS, DISEASES, radiography
Q fever)

KAPLUNOVICH, L.M.; RESCHETNOVA, A.M.

Continuity in the work of a factory and a district therapist.
Zdrav.Ros.Feder. 7 no.3:35-36 Mr '63. (MIRA 1643)

1. Uchastkovyy terapevt Chelyabinskoy gorodskoy klinicheskoy
bol'nitsy (fir Kaplunovich). 2. Tsekhovoy terapevt Chelyabinskoy
gorodskoy klinicheskoy bol'nitsy (for Reschetnova).
(CHELYABINS--LABOR AND LABORING CLASSES--MEDICAL CARE)

KAPLUNOVICH, P. S.

Application of rutin in hemorrhagic retinopathies; preliminary communication. Vest. oft., Moskva 30 no. 6:16-17 Nov.-Dec. 1951. (CIME 21:3)

1. Of the Department of Eye Diseases (Head — Prof. A. B. Katsnel'son), Chelyabinsk Medical Institute.

KAPLUNOVICH, P.S.

USSR/Human and Animal Physiology - The Organs of Sensation.

V-11

Abs Jour : Ref Zhur - Biol., No 2, 1958, 9082

Author : ^S P.A. Kaplunovich

Inst :

Title : ACTH and Cortisone in the Treatment of Diseases of the Eyes.

Orig Pub : Vestn. oftal'mologii, 1956, No 6, 15-19

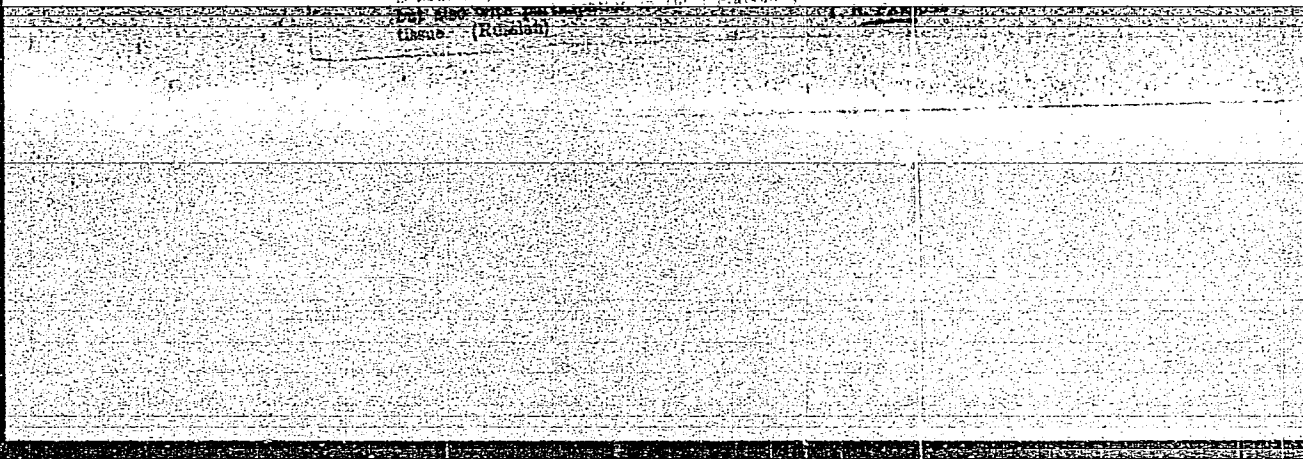
Abstract : The paper contains the results obtained with local application of a 1-2.5% suspension of cortisone for 28 patients and general application of ACTH for 24 patients with keratitis and keratoscleritis of different etiology, iridocyclitis and other diseases of the visual organ and its appendages, including sympathetic ophthalmia and allergic processes. Recovery was complete in 26 patients, improvement was seen in 15, and the treatment was without effect in 11. Particularly good results were obtained among patients with phlyctenular and parenchymatous keratitis,

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Chair of Eye Diseases, Chelyabinsk Med Inst.

KAPLUNOVICH, P.S.

0004: Influence of vitamin B₁₂ on intra-ocular pressure and some
 visual functions in glaucoma. P. S. Kaplunovich *Ophthalmol. Zh.*, 1958,
 6: 341-344. *Ref. 28*, 1958. *Abstracts of the 1958 Meeting of the
 International Society for the Study of Ocular Hypertension*, p. 107.
 The necessity of undergoing an operation is determined by the
 level of the tonometric index. The level of the tonometric index
 is determined by the level of the intra-ocular pressure. The adminis-
 tration of thiopurine by subconjunctival injection leads to a marked increase in the
 tonometric index and lead to a marked increase in the
 tonometric index.



KAPLUNOVICH, P. S., Candidate Med Sci (diss) -- "The pathogenesis, clinical aspects, and operative treatment of scar xerosis (xerophthalmia)". Stalino, 1959. 20 pp (Stalino State Med Instim A. M. Gor'kiy), 200 copies (KL, No 24, 1959, 150)

KAPLUNOVICH, P.S., assistant

Contrast X-ray photography and tomography of Stensen's duct in connection with its transplantation into the conjunctival sac. Oft. zhur. 14 no.1:37-40 '59. (MIRA 12:6)

1. Kafedra glaznykh bolezney (zav. - prof. A.B. Katsnel'son)
Chelyabinskogo meditsinskogo instituta.
(LACRIMAL ORGANS--SURGERY)(PAROTID GLANDS--TRANSPLANTATION)

KATSNEL'SON, A.B., prof.; KAPLUNOVICH, P.S. assistant

Treatment of hemophthalmia by the injection of cerebrospinal fluid
into the vitreous body. Vest.oft. 72 no.5:19-21 S-O '59.

(MIRA 13:3)

1. Kafedra glaznykh bolezney (sveduyushchiy - prof. A.B. Katsnel'son)
Chelyabinskogo meditsinskogo instituta.

(EYE, dis.)

(VITREOUS BODY)

(CEREBROSPINAL FLUID)

KATSNEL'SON, A.B.; KAPLUNOVICH, P.S.

Instruments for facilitating the transplantation of Stensen's duct
into the conjunctival sack. Med. prom. 14 no. 10:45-47 0 '60.
(MIRA 13:10)

1. Chelyabinskiy meditsinskiy institut.
(PAROTID GLANDS—SURGERY)
(EYE, INSTRUMENTS AND APPARATUS FOR)

KAPLUNOVICH, P.S., kand.med.nauk

Clinical aspects and surgical treatment of pulsating exophthalmos.
Vest.oft. no.3:35-40 '61. (MIRA 14:9)

1. Kafedra glaznykh bolezney (zav. - prof. A.B. Katsnel'son)
Chelyabinskogo meditsinskogo instituta.
(EXOPHTHALMOS)

ANIKINA, V.S., ordinator; KAPLUNOVICH, P.S., kand.med.nauk

Transplantation of the vitreous body from a corpse of some eye diseases. Oft. zhur. 16 no.4:204-208 '61. (MIRA 14:7)

1. Iz kafedry glaznykh polezney (zav. - prof. A.B.Katsnel'son)
Chelyabinskogo meditsinskogo instituta i glaznogo otdeleniya
Chelyabinskoy oblastnoy klinicheskoy bol'nitsy.
(VITREOUS HUMOR—TRANSPLANTATION)

KAPLUNOVICH, Ya.Sh.

On the first and the second canonic form. Trudy UzGU no.78:
105-123 '58. (MIRA 13:6)

(Differential equations)

KAPLUNOVICH, Ya.Sh.

Some properties of "isoclines." Izv. vys. ucheb. zav.; mat. no.6:
43-50 '61. (MIRA 15:3)

1. Tobol'skiy pedagogicheskiy institut.
(Curves) (Geometry, Differential)

KAPLUNOVICH, Ya.Sh. (Tobol'sk)

Some theorems on the distribution of integral curves near a
singular point and in the large. Izv.vys.ucheb.zav.; mat.
no.5:74-79 '65.

(MIRA 18:10)

KAPLUNOVSKIY, G A

6
000

Gas-Pressure Risers for Casting Aluminium Alloys
Cherkasov, A. A. Kaplunovskiy

These risers will be used in the
foundry. The effect of gas pressure
on the density of the casting. Denser castings with
risers were obtained. — V. K.

ref LFT

ACCESSION NR: AT4016066

S/2698/63/000/000/0223/0228

AUTHOR: Kukkonen, E. Ya.; Kaplunovskiy, G. A.; Magnitskiy, O. N.; Gulyayev, B. B.

TITLE: Effect of the characteristics of the technological process on the properties of heat-resistant metal castings

SOURCE: Soveshchaniye po teorii lityyny*kh protsessov. 8th, 1962. Mekhanicheskiye svoystva litogo metalla (Mechanical properties of cast metal). Trudy* soveshchaniya. Moscow, Izd-vo AN SSSR, 1963, 223-228

TOPIC TAGS: refractory metal, heat resistant alloy, alloy casting, molybdenum alloy, tungsten alloy, carbon containing alloy, titanium alloy, cast metal property

ABSTRACT: The lack of industrial flow processes for manufacturing heat-resistant metals has led to insufficient knowledge of the properties of these castings. The authors investigated the influence of the methods of melting, casting parameters and other features on the properties of alloy castings containing titanium and molybdenum. The metals were cast in a DVP-15 vacuum electric oven with an electric arc in a carbon crucible. Parts are currently made of molybdenum by plastic bending of castings obtained by electric arc fusion of special packs of molybdenum and crystallization in water-cooled copper molds. Melting of molybdenum with a tungsten electrode and casting in centrifugal copper molds ensures the highest quality of dense molybdenum castings with fine structures. Orig. art. has: 6 figures and 3 tables.

GULYAYEV, B.B.; MAGNITSKIY, O.N.; DEMIDOVA, A.A.; Prinimali
uchastiye: KAPLUNOVSKIY, G.A.; KUKKONEN, E.Ya.; BUTALOV,
L.V., kand. tekhn. nauk, retsenzent

[Castings of high-melting metals] Lit'e iz mugoplavkikh me-
tallov. Moskva, Izd-vo "Mashinostroenie," 1964. 291 p.
(MIRA 17:5)

L 19740-65 EMP(e)/EMP(m)/EMP(v)/EMP(t)/EMP(b) IJP(c) JD/MLK

ACCESSION NR: AT4048343

S/0000/64/000/000/0150/0153

AUTHOR: Kukkonen, E. Ya.; Kaplunovskiy, G. A.; Demidova, A. A.; Magnitskiy, O. N.

TITLE: The effect of gases on the quality of titanium alloy castings

SOURCE: AN SSSR. Komissiya po tekhnologii mashinostroyeniya. Gazy v litom
metalle (Gases in cast metals). Moscow, Izd-vo Nauka, 1964, 150-153

TOPIC TAGS: cast titanium, titanium alloy casting, blowhole formation, gas saturation, titanium porosity, oxygen adsorption, nitrogen adsorption, hydrogen adsorption, mold material, mold temperature

ABSTRACT: The authors note that the principal requirement in the production of titanium castings is to safeguard the metal against contamination, particularly by oxygen, hydrogen and nitrogen. This requirement predetermines the basic specifications of the entire technological process of the production of titanium alloy castings. As mold materials only the most chemically stable oxides can be used: zirconium dioxide, electrocorundum and magnesite. The binding materials must contain a minimum amount of those components which react actively with titanium. The metal is melted in a vacuum in a cooled crucible with a lining of the same alloy as that which is being melted. Particularly attention was paid in this article to:
1) the effect of the mold materials and the mold temperature during teeming on
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I. 19740-65

ACCESSION NR: AT4048343

vacuum degasification indicated that the basic charge has a considerable effect on the formation of blowholes in the castings: with degasified metal, the quantity of blowholes decreases noticeably. In disks without blowholes, defects in the form of shrinkage porosity are observed, while this type of defect is absent when blowholes are present. The authors also state that the number of blowholes in the casting depends on the configuration of the casting and the method employed in filling the mold. Those factors were found to be favorable which promote an upward direction in the filling of the mold and the crystallization of the metal. Still further details are discussed in the article. "I. P. Bashkov took part in the work." Orig. art. has: 2 tables and 2 figures.

ASSOCIATION: none

SUBMITTED: 20May64

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 3/3

L-19758-65 EMP(m)/EMP(t)/EMP(b) LJP(b) JD/JG/MLK

ACCESSION NR: AT4048345

S/0000/64/000/000/0167/0171

B

AUTHOR: Kaplunovskiy, G. A.; Kukkonen, E. Ya.; Demidova, A. A.; Magnitskiy, O. N.; Gulyayev, B. B. (Doctor of technical sciences, Professor)

TITLE: The effect of a gaseous medium during melting and teeming on the quality of cast chromium 18

18 SOURCE: AN SSSR. Komissiya po tekhnologii mashinostroyeniya. Gazy* v litom metalle 27
(Gases in cast Metals). Moscow, Izd-vo Nauka, 1964, 167-171

TOPIC TAGS: cast chromium, gas saturation, chromium melting, chromium teeming, chromium brittleness, oxygen adsorption, hydrogen adsorption, nitrogen adsorption, rare earth admixture

ABSTRACT: After noting that the principle cause of chromium brittleness is gaseous impurities, the authors report the results of studies aimed at selecting the optimal technological conditions for the smelting of chromium, from the point of view of ensuring a minimum gas content in the cast metal. The metal was smelted in an OKB-498m high-vacuum induction furnace in a rammed crucible of zirconium dioxide. As the basic metal, refined chromium was employed with the following composition: 0.024-0.000...

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L 19758-65

ACCESSION NR: AT4048345

0.002-0.050% N₂. The experimental melts were made in an inert argon atmosphere, since due to the high chromium vapor pressure at the melting temperature (63.5 mm Hg), it is not possible to melt the metal in a vacuum. For the purpose of decomposing the nitrides and removing the adsorbed gases, the chromium was aged at 750, 1200 and 1400C for 30 minutes at each temperature, and also in the melted state. The chromium was poured into a metal mold in order to exclude any effect of the mold material on the gas in the castings. Details regarding the technique of the experiment are given in the report. Conditions which ensure the absence of corona discharge at the electrode voltages were also determined during the development of specific samples. The process of melting 5 kg of chromium lasted up to 5 minutes. A table is given showing the content of oxygen and nitrogen in the cast chromium as a function of temperature and duration of exposure. Oxygen content was found to increase somewhat, in comparison with the base content, together with the time of aging. The nitrogen content also increases with aging for 30 minutes at 750-1200C. Experiments showed that the optimal conditions for chromium is 1200C and 30 minutes. In the cast metal the hydrogen content is 0.0004-0.0009%. It was also found that, all other conditions being equal, the content of non-metallic admixtures of the oxide type is approximately half as high (0.001-0.002%) after the fourth melting as after the first (0.66%). For the purpose of studying the effect of the material of the mold on the gas-saturation of the chromium, samples were poured into

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L 19758-65
ACCESSION NR: AT4048345

molds of different refractory materials, and a table is given in the article illustrating the dependence of the oxygen content in the castings on the mold material used. The authors indicate that the microhardness of the chromium is not changed by the mold material. The use of rare-earth elements to enhance the mechanical properties of cast chromium is discussed in some detail. Data are presented which indicate that the oxygen content of inclusions in cast chromium without admixtures reaches 0.661%, while admixtures of rare-earth elements showed the presence of oxides of the Cr_2O_3 type and oxides of the rare-earth elements. In this way, the rare-earth elements are found to have a refining effect. The article concludes with a brief discussion of a special study which was made to determine the optimal argon pressure for high-quality stock. The authors show that the structure of chromium, smelted and teemed at an argon pressure of 600 mm Hg is finer than that of chromium poured at 300, 60-90, and 1.2 mm. According to some writers, a fine-grain structure reduces the temperature threshold of chromium brittleness. The article has: 3 figures and 3 tables.

ASSOCIATION: None

SUBMITTED: 20May64

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 000

Card 3/3

KAPLUNOVSKIY, P. S.

KAPLUNOVSKIY, P. S.: "Natural reseeding in the beech forests of Transcarpathia." Min Higher Education Ukrainian SSR. Khar'kov Order of Labor Red Banner Agricultural Inst imeni V. V. Dokuchayev. Khar'kov, 1956. (Dissertation for the Degree of Candidate in Agricultural Sciences)

Source: Knizhnaya letopis' No. 28 1956 Moscow

USSR/Forestry - Forest Cultivation.

K-5

Abs Jour : Ref Zhur - Biol., No 9, 1958, 39111

Author : Molotkov, P.I., Kaplunovskiy, P.S.

Inst : -

Title : From the Experiment of Foresters in the Carpathians and
in Podolia.

Orig Pub : Lesn. khoz. 1957, No 7, 79-82.

Abstract : Experiments implying the successful growth of forest plant-
ings in various leskhoz' of the oblast are described.
Rational methods of agronomic technique of crops on stony
deposits and on fresh fellings (without soil preparation
and subsequent care) are described.
Successful results of the passage method for the recons-
truction of plantations of poor quality are noted.

Card 1/1

- 24 -

KAPLUNOVSKIY, P.S.

Blooming in autumn. Priroda 49 no.9:124 S '60. (MIRA 13:10)

1. Karpatskaya lesnaya opytaya stantsiya, Mukachevo.
(Carpathian Mountain Region--Plants, Flowering of)

KAPLUNOVSKIY, P.S., kand.sek'skokhoz.nauk

Fall flowering of the horse chestnut. Priroda 50 no.9:126-
127 S '61. (MIRA 14:8)

1. Karpatskaya lesnaya opytnaya stantsiya (Mukachevo).
(Horse chestnut)

MOLOTKOV, P.I.; KAPLUNOVSKIY, P.S.; GAVRUSEVICH, A.N.; MOLOTKOVA, I.I.;
PASTERNAK, P.S.; CHUBATYY, O.V.; POLYANOVSKIY, A.A., otv. za
vypusk; PANCHENKO, V., red.; LUCHKIV, M., tekhn. red.

[Mountain forest types] Tipy gornyykh lesov. Uzhgorod, Zakarpat-
skoe obl. knizhno-gazetnoe izd-vo, 1961. 79 p. (MIRA 15:7)
(Transcarpathia--Forests and forestry)