

SOV/137-58-9-19977

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 270 (USSR)

AUTHOR: Kuperman, D.I.

TITLE: 45Kh Disk Steel as a Substitute for 43N Steel (Stal' marki  
45-Kh-diskovaya kak zamenitel' stali 43N)

PERIODICAL: Tr. Nevsk. mashinostroit. z-da, 1957, Nr 2, pp 70-74

ABSTRACT: Ref. RZhMet, 1958, Nr 9, abstract 19976

1. Steel---Effectiveness

Card 1/1

SOV/137-58-9-19976

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 270 (USSR)

AUTHOR: Kuperman, D.I.

TITLE: Elimination of Rejects Due to Temper Brittleness in Turbine-disk Forgings of 45Kh Disk Steel (Likvidatsiya braka po otpusknoy khrupkosti pokovok turbinnykh diskov, izgotoviennykh iz stali marki 45Kh-diskovaya)

PERIODICAL: Tr. Nevsk. mashinostroit. z-da, 1957, Nr 2, pp 82-84

ABSTRACT: Application of a statistical method revealed a relationship between  $a_k$  and the P content of 45Kh steel. As a result, the maximum P contents are set at 0.025%. For steels containing > 0.03 P, a special heat treatment was devised based on repeated tempering and cooling after tempering by a combination of methods. Nr 45Kh disk steel, which is highly heat stable, may be used in a number of cases instead of costly 34KhM steel for temperatures up to 400°C.

1. Turbines--Equipment 2. Steel--Forging I.B.  
3. Steel--Quality control

Card 1/1

FILE: Babayeva, E.V., Engineer and Kuperman, D.I., *Metody povysheniya udarnoy vydnostroeniya v turbostroyenii.* 114-6-6/11  
 Methods of increasing the impact strength of forgings in turbine manufacture. (Metody povysheniya udarnoy vydnostroeniya v turbostroyenii.) 114-6-6/11  
 PERIODICAL: "Energomashinoostroenie" (Power Generation Machinery Construction) 1957, Vol. 3, No. 6, pp. 20 - 23 (U.S.S.R.)

ABSTRACT:

In the production of turbine disc forgings cases are observed of the metal having low impact strength although the values of the yield point, ultimate strength, elongation, reduction of area and hardness are all correct. Experience has shown that minor variations in the structure of fracture properties remain the same. This article presents the results of an investigation from which it is possible to establish a relationship between the structure of the fracture and values of the impact strength of forgings and also to find methods of heat treatment to improve the structure of fracture and to increase the impact strength of discs made from steels 34X and 40H. Twenty disc forgings of steel 34X which were made and heat-treated at different times were rejected for low impact strength. The heat treatment to which they had been subjected is described and since it was not satisfactory

FOR RELEASE: 08/23/2000  
 Card 1

Increasing the impact strength of forgings used in turbine manufacture. (Cont.) 114-6-6/11  
 The forgings were given additional heat treatment. It was found that normal heat treatment conditions could not ensure complete recrystallisation of the steel and the metal texture corresponding to the condition of forging was maintained. Therefore different kinds of heat treatment were tried. These are classified into six different conditions. The types of fracture observed are classified into five groups and tables are given of the mechanical properties of the forgings before and after the various heat treatments. Six disc forgings of steel 40H which were rejected for low impact strength were examined. There was evidence of overheating in forging. The different discs were heat-treated in different ways and the results are given in a table. The table shows that after special heat treatment conditions the impact strength of the forgings was not However, on the majority of specimens the fracture has a fibrous structure. Since the rate of cooling has a tremendous influence on the impact strength and the structure of fracture heat treatment with faster cooling was tried. The results are tabulated and it is shown that the rate of cooling is effective in increasing the impact strength

Methods of increasing the impact strength of forgings used in turbine manufacture. (Cont.)  
 114-6-6/11

of the discs.  
 It is concluded that disc forgings of steels 34XM, 40H and 43H which were subject to overheating near the hub, usually, in the process of hot working, maintain their shiny steel 34XM a similar fracture and low impact strength. In crystalline fracture and low impact strength is not particularly observed in degree of overheating is not always clearly if the rate of cooling of the micro-structure hardening is not the rate of analysis of steel 34XM. Special heat treatment including heating to Chernov's 'b' point gives stable increase in the impact strength and improvement in the appearance of fracture of steel 34XM.

Coarse grain of steel 34XM. Special heat treatment and 43H is not fully corrected by overheating of steels 40H and despite the stable improvement in impact strength the appearance of the fracture remains either mixed or fine grained.

When the impact strength is low because cooling has not been fast enough during hardening of steels 34XM and 43H, repeated heat-treatment is permissible including hardening by cooling through water into oil. This treatment is less effective with steels 40H and 43H in the case of reheating in forging near the hub.

rd 3/4

AUTHOR: Kuperman, D.I., Engineer

117-58-6-17/56

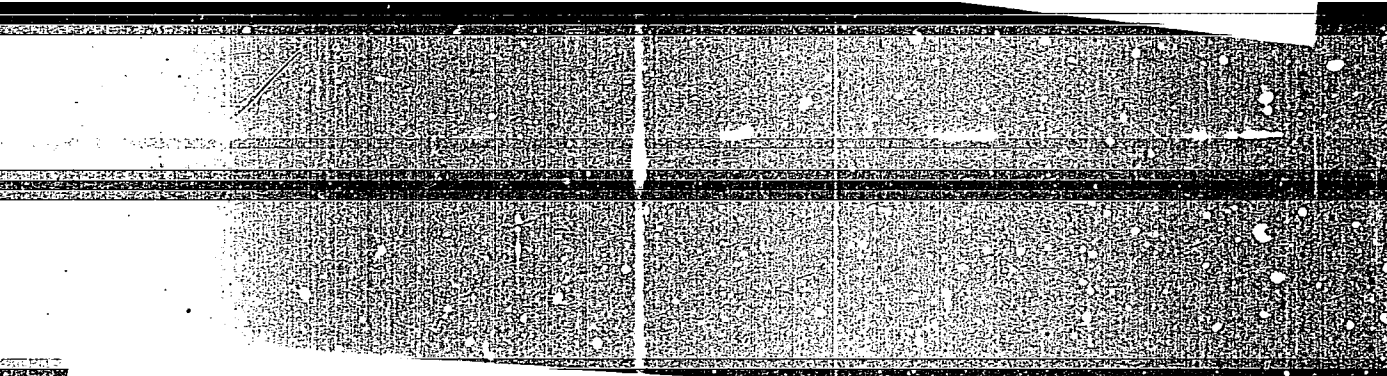
TITLE: Elimination of the Deformations of Springs After Tempering (Ustraneniye deformatsii pruzhin posle zakalki)

PERIODICAL: Mashinostroitel', 1958, Nr 6, pp 28-29 (USSR)

ABSTRACT: In turbine manufacturing large springs made from wire 10 mm and more in diameter, and a height of at least 400 mm are used. The steel used for the manufacture of the springs is 60S2A. The springs in turbines are subjected to severe stresses, and must be tempered. But the tempering causes deformations, so that many springs are not fit for use. Special devices have been developed to prevent deformation. As these devices impede the tempering, a new method has been developed to make use of the softening of the steel during annealing. This softening process takes place during the decomposition of the martensite and is characterized by the low resistance of the steel to bending. During this stage the springs are brought into chucks which correct all deformations. These chucks are pipes of 175 mm in diameter. The springs are put into them after a heating of 30 min. at a temperature of 860-870°C, and are annealed for 1½ hours at a temperature of 400-420°C. In the table the results of the testing are given.

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Methods of increasing the impact strength of forgings used in turbine manufacture. (Cont.)  
114-6-6/11

of the discs.

It is concluded that disc forgings of steels 34XM, 40H and 43H which were subject to overheating near the hub, usually, in the process of hot working, maintain their shiny crystalline fracture and low impact strength.

In steel 34XM a similar degree of overheating is not always clearly observed in analysis of the micro-structure particularly if the rate of cooling during the process of hardening is not great enough. Special heat treatment including heating to Chernov's 'b' point gives stable increase in the impact strength and improvement in the appearance of fracture of steel 34XM.

Coarse grain structure of overheating of steels 40H and 43H is not fully corrected by special heat treatment and despite the stable improvement in impact strength the appearance of the fracture remains either mixed or fine grained.

When the impact strength is low because cooling has not been fast enough during hardening of steels 34XM and 43H, repeated heat-treatment is permissible including hardening by cooling through water into oil. This treatment is less effective with steels 40H and 43H in the case of overheating in forging near the hub.

Card 3/4

Methods of increasing the impact strength of forgings used  
in turbine manufacture. (Cont.) 114-6-6/11

There are 5 figures, 4 tables and 2 Slavic literature  
references.

AVAILABLE:

Card 4/4

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000927610002

AUTHOR:

Kuperman, D.I., Engineer

TITLE:

Elimination of the Deformations of Springs After Temper-  
ing (Ustraneniye deformatsii pruzhin posle zakalki)

PERIODICAL:

Mashinostroitel', 1958, Nr 6, pp 28-29 (USSR)

ABSTRACT:

In turbine manufacturing large springs made from wire 10 mm and more in diameter, and a height of at least 400 mm are used. The steel used for the manufacture of the springs is 60S2A. The springs in turbines are subjected to severe stresses, and must be tempered. But the tempering causes deformations, so that many springs are not fit for use. Special devices have been developed to prevent deformation. As these devices impede the tempering, a new method has been developed to make use of the softening of the steel during annealing. This softening process takes place during the decomposition of the martensite and is characterized by the low resistance of the steel to bending. During this stage the springs are brought into chucks which correct all deformations. These chucks are pipes of 175 mm in diameter. The springs are put into them after a heating of 30 min. at a temperature of 860-870°C, and are annealed for 1½ hours at a temperature of 400-420°C. In the table the results of the testing and measuring of these

Card 1/2

Elimination of the Deformations of Springs After Tempering 117-58-6-17/36

springs are given. There is 1 table.

AVAILABLE:

Library of Congress

Card 2/2

1. Springs-Deformation 2. Tempering-Applications



25(2)

307/117-55-3-10/37

AUTHOR: Kuperman, D. I., Engineer

TITLE: A New Method of Making Balancer Axles (Novyy metod izgotovleniya osey balansira)

PERIODICAL: Mashinostroitel', 1959, Nr 3, p 17 (USSR)

ABSTRACT: On the author's suggestion, steel "20" formerly employed for the balancer axle (shown in drawing) of the "ATZ-NATI" tractor was replaced by steel "50G", of a higher wear resistance and far better resistance to deformation during heat treatment. This replacement has eliminated the operations of cementation, additional boring of the center hole after cementation, and sand blasting. All machining can now be done in a single cycle without the former transportation from machine tool to heat treatment ovens and back. The balancer axles for the cater-

Card 1/2

A New Method of Making Balancer Axles

SOV/117-59-3-10/37

pillar tractor "KhTZ" are now also made of "50G" steel. There is 1 diagram.

ASSOCIATION: Nevskiy mashinostroitel'nyy zavod imeni Lenina  
(Nevskiy Machine Building Plant imeni Lenin)

Card 2/2

СОВЕТСКИЙ СОЮЗ

Вопросы, связанные с деятельностью органов государственной безопасности в области разведки, являются исключительно внутренними делами СССР. Любые попытки вмешательства в эти дела со стороны иностранных государств и организаций являются грубым нарушением международного права и суверенитета нашей страны.

BERDYANSKIY, V.N.; KUPERMAN, E.Sh.; MIRSAGATOV, A.N.

Building subsurface drainage in the Golodnaya Steppe. Gidr.i mel.  
14 no.3:16-22 Mr :62. (MIRA 15.4)

1. Institut vodnykh problem i gidrotekhniki AN UzSSR.  
(Golodnaya Steppe---Drainage)

HERDYANSKIY, V.N., inzh.; KUFERMAN, E.Sh., inzh.; MIRSAGATOV, A.N., inzh.

Mechanization of the construction of a deep covered drain. Mekh.  
stroi. 19 no.7:18-19 J1 '62. (MIRA 15:7)  
(Drainage) (Pipe-laying machinery)

BERDYANSKIY, V.N.; KUPFERMAN, E.Sh.; MIRSAGATOV, A.N.

Technology of the combined mechanized construction of a closed  
horizontal drainage in the Golodnaya Steppe. Vop. gidrotekh.  
no.15:57-68 '63.

(MIRA 18:2)

REF ID: A66111

Kupersan, F. M. - "On controlling the development of wheat ears according to the theory of the plant growth in stages," Vestnik Mosk. un-ta, 1948, No. 12, p. 171-79

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

KUPERMAN, F.M. Docent

"Biological Peculiarities in the Development of Wheat Nodes." Thesis for degree of Dr. Biological Sci. Sub 22 Jun 49, Moscow Order of Lenin State U imeni M.V. Lomonosov

Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949. From Verkhernyaya Moskva. Jan-Dec 1949



КУЗНЕЦОВ, П. К.

Agriculture

(Biological principles of wheat cultivation) (Moskva) Moskovski univ., 1950

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

KUTEPAN, F. I.

Seeds

Separation and storage of biologically valuable seeds as one of the most important conditions for increasing the productivity of cultivated plants, Vest. Mosk, un., 5, No. 9, 1950.

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

KUPERMAN, F. M.

Hybridization, Vegetable

Vegetative hybridization of cereals, Est. v shkole No. 2, 1952.

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

KURERMAN, PROF. F. M.

Barley

What are the characteristics of hull-less barley, its distribution and fertility?  
Prof. F. M. Kurerman. Est. v. shkolo No. 3, 1952.

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

KUPERMAN, F. M.

Grasses

Vegetation hybridization of true grasses. Vest. Mosk. un. 7 No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October, 1952~~1953~~, Unclassified.

1. KUPERMAN, F.M.
2. USSR (600)
4. Growth (Plants)
7. Some laws of plant formation and their use in selection work. Sel.i sem. 19  
no. 11, 52

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

1. N. K. RUPREKHA
2. USSR (600)
4. Botany - Morphology
7. Morphophysiological methods in plant examination. Biul. MEIP. Gtd. biol. 57 no. 6. 1952.

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

KUPERMAN, F. M. Prof.

"Basic Stages of the Organo-Genesis of Grains and the Direction of Their Variability," a paper given at the All-University Scientific Conference "Lomonosov Lectures", Vest. Mosk. Un., No.8, 1953.

Translation U-7895, 1 Mar 56



KUPERMAN, F.M., professor, doktor biologicheskikh nauk.

Regularity in the formation of fruit-bearing organs in plants.  
Est. v shkole no.3:23-31 My-Je '54. (MLRA 7:7)

1. Kafedra darvinizma Moskovskogo gosudarstvennogo universiteta  
imeni M.V.Lomonosova.  
(Botany--Morphology)

KUPERMAN, F. M.

N/5  
631.311  
.K9

KUPFRMAN, F M

Etapy formirovaniya organov plodonosheniya zlakov (Stages of formation of the organs of fertility of cereals, by) F. M. Kuperman (1 dr.) Moskva, izd-vo Moskovskogo Universiteta, 1955. v. illus., diagrs. tables. At head of title: Moscow. Universitat. "Spisok Literaturny": v. 1, p. 306-316. Lib. Has: v. 1.

KUPERMAN, F.M., professor, doktor biologicheskikh nauk.

Light as a factor in the development and changes in forms of plants. Est. v shkole no.1:14-21 Ja-F '55. (MLRA 8:9)

1. Moskovskiy gosudarstvennyy universitet im.M.V.Lomonosova.  
(Plants, Effect of light on)

KUPERMAN, F.M.; RZHANOVA, Ye.I; KAPITANOVA, T.A; ZHAKIPOVA, A.P;  
LYUBIVAYA, N.S; LYUBIVYY, V.M.

Relation of plant developments to organogenesis of corn inflorescence.  
Vest.Mosk.un. no.9:121-133 S '55. (MLRA 9:1)  
(Corn (Maize))

KUPERMAN, F.M.

Role of light at different stages of the organogenesis of wheat, rye,  
and barley. Trudy Inst.fiziol.rast. 10:272-285 '55. (MIRA 8:9)

1. Laboratoriya biologii razvitiya rasteniy kafedry darvinizma Moskovskogo  
gosudarstvennogo universiteta im. M.V. Lomonosova.  
(Plants, Effect of light on)

KUPERMAN, Fanni Mikhaylovna; STANKOV, S.S., professor, otvetstvennyy redaktor;  
SEREBRYAKOV, I.G., professor, redaktor; MIKHAYLOVA, T.A., tekhnicheskii redaktor

[Biological principles in wheat growing] Biologicheskie osnovy kul'tury pshenitsy. [Moskva] Izd-vo Moskovskogo univ. Vol.3. [Morpho-physiological methods of studying wheat species. Biological control of wheat plantations] Morfofiziologicheskie priemy issledovaniia vidov pshenitsy. Biologicheskii kontrol' za posevami pshenitsy. 1956. 279 p. (MIRA 9:11)  
(Wheat)

KUPERMAN, F.M., professor.

Biological methods for checking the development and growth of corn.  
Est. v shkole no.2:18-24 Mr-Apr '56. (MLRA 9:7)

1.Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.  
(Corn (Maize))

KUPERMAN, F.M.; LUCHSHEV, A.A.; SHUL'GIN, A.M.

Some features of the development and growth of corn in the new  
corn regions. Report no.1. Izv. AN SSSR. Ser.biol. no.4:15-38  
J1-Ag '56. (MLRA 9:10)

1. Moskovskiy ordena Lenina i ordena Krasnogo znameni Gosudarstven-  
nyy universitet imeni M.V.Lomonosova, Kafedry darvinizma klimatologii  
i zemledeliya.

(MOSCOW PROVINCE--CORN (MAIZE))



COUNTRY : USSR  
 CATEGORY : Cultivated Plants

ASS. GROUP : Zhenitel., No. 3, 1959, No. 10921

AUTHOR : Suprunov, F. M.  
 TITLE : University named M. V. Lomonosov  
 : The Use of Morphophysiological Methods of Study in Corn  
 Breeding.

Abstract : V sb.: Vopr. metodiki selektsii pshenitsy i kukuruzy.  
 Zhar'kov, Ukr-t, 1957, 209-222.  
 Data (of the University named M. V. Lomonosov) on the  
 morphological control of the growth and development of  
 plants, of the condition of the vegetative cone of the  
 panicle and ears and of the state of the axil buds in corn  
 varieties differing with respect to the length of the  
 growing season under definite meteorological conditions.  
 A close relationship was observed between the growth pro-  
 cesses and the passage through the developmental stages  
 and the stages of organogenesis. Also observed was the

REF: 1/5

COUNTRY :  
CATEGORY :  
ABS. JOUR. : RZhBiol., No. 1959, No. 10921  
AUTHOR :  
INST. :  
TITLE :  
ORIG. PUB. :  
ABSTRACT : difference in the nature of the requirements with respect to the conditions of the length of the day during the formation of the female and male generative organs. Nine stages of organogenesis were singled out during the formation of the male inflorescence and of the panicle starting from the undifferentiated growth cone until flowering, and 12 stages were singled out in the formation of the female generative organs and of the ear from the inception of its rudimentary form until the wax-stage maturity and the ripening of the kernels. The actual coming into being of the organogenesis stages occurs only in the presence of a def-  
CARD: 2/5

COUNTRY :  
CATEGORY :

ABS. JOUR. : RZhBiol., No. 1959, No. 10921

AUTHOR :  
INST. :  
TITLE :

ORIG. PUB. :

ABSTRACT : inite condition of the plants during a stage and is closely related to external conditions. By influencing the progress of the passage through the developmental stages and the stages of organogenesis, it is possible to change, in the required direction, the form, dimensions and other characteristics of the plants, the number of the rows of kernels in the ears, the number of ears, the weight of the kernels, etc. An additional feeding of the plants during the period of the 4th stage of organogenesis, when the

CARD: 3/5

COUNTRY :  
CATEGORY :  
ABS. JOUR. : REHBIOL., No. 1959, No. 10921  
AUTHOR :  
INST. :  
TITLE :  
ORIG. PUB. :  
ABSTRACT : formation of spikelets is in progress, promotes an increase in their number. Application of large doses of Cu at the beginning of the 6th stage when the pollen is being formed, causes its complete underdevelopment. The length of the ear depends on the duration of the 3d stage of the organogenesis of the ear on which the elongation of the growth cone is in progress. Better conditions of growth at the 4th stage promote the formation of a larger number of spikelets, the formation of productive plants, etc. Differentiation of the growth cone of the male generative organs begins considerably earlier than that of

CARD: 4/5

COUNTRY :  
CATEGORY :

ABS. JOUR. : RZhBiol., No. 1959, No. 10921

AUTHOR :  
INST. :  
TITLE :

ORIG. PUB. :

ABSTRACT : the female generative organs. The bursting is reached in 6-30 days, depending on the variety. The rate of the organogenesis of the ear (especially at the 3-7th stages) is higher in comparison with the rate of panicle formation and by flowering stage, an ear of corn overtakes the panicle in its development. The development of the generative organs proceeds faster under the conditions of the shortened 9-hour day. -- T. I. Shapiro

CARD: 5/5

USSR / General and Special Zoology. Insects.

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16424

Author : Dobrovolskii V.V., Kuperman F.M.

Inst : Not given

Title : On the Control of Swedish Fly Larvae on Corn.  
(O bor'be s lichinkami shvedskoi mukhi na kukur-  
uze.)

Orig Pub: Seleksiya i semenovodstvo, 1957, No 1, 56

Abstract: More than 100 types and hybrids of corn were in the sown environs of Moscow at the end of May. A suspension of 2 liters of [hexachlorocyclohexane] HCH (0.05 g of 12% dust and 2.5 g of ammonium nitrate per 1 litre of water) was introduced into each group of plants June 13. (3-4 plants). Although the experimental young crops were greatly infested with larvae, the

Card 1/2

20

USSR / General and Special Zoology. Insects.

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16424

Abstract: plants became better June 22, the leaves restored their normal coloring, the fifth and sixth leaves developed normally, the sixth and seventh leaves opened up one to two days sooner, the plants were stronger than the control plants, while all the larvae in the plants died.

Card 2/2

KUPERMAN, F.M.

USSR/Cultivated Plants - Grains.

M-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91592

Author : Kuperman, F.M.

Inst : Moscow State University

Title : Biological Control in the Development and Growth of Agricultural Crops.

Orig Pub : Nauka i peredov. opyt v s. kh., 1957, No 2, 28-30.

Abstract : Through observations on the formation of fruit-bearing organs in winter crops, the Moscow State University's Plant Development Biology Laboratories developed a method of determining the viability of winter crops during the wintering period by the condition of the growth cone. The method of determination is described in detail. In live plants the growth cone is white or light green with pronounced turgor. In dead plants the cone is

Card 1/2

USSR/Cultivated Plants - Grains.

M-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91592

characterised by complete loss of turgor, a turgor in the cells and the appearance of a yellow-brown and even brown-black color. The characteristics of 12 stages of organogenesis, established by the author are given in the article. They are characteristic for winter grains and it is recommended that observations be made on their processes for determining the necessity of certain agrotechnical measures at the proper time. -- G.N. Chernov.

Card 2/2

KUPERMAN, F.M., professor.

Variability of corncobs and panicles (in answer to V.I. Mal'tseva's question). Biol, v shkole no.3:91-94 My-Je '57. (MLRA 10:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.  
(Corn (Maize)) (Inflorescence) (Botany--Variation)



KUFERMAN, F.M., professor.

Biological control of the development and growth of farm crops.  
Nauka i pered.op. v sel'khoz. 7 no.2:28-30 F '57. (MLRA 10:3)  
(Field crops) (Biological research)

KUPPERMAN, F.M., professor; MOROZOVA, Z.A., aspirant; ROSTOVTSOVA, Z.P.,  
Kandidat biologicheskikh nauk.

Biological investigation of the growth and development of spring  
crops. Nauka i pered. op. v sel'khoz. 7 no.5:30-32 My '57.  
(Wheat) (Oats) (Millet) (MIRA 10:6)

PISAREV, V.Ye., prof.; KUPERMAN, F.M., prof.; MAR'YAKHINA, I.Ya., kand. biol.  
nauk.

Biological investigation of the growth and development of buckwheat.  
Nauka i pered. op. v sel'khoz. 7 no.12:44-46 D '57. (MIRA 11:1)  
(Buckwheat)

Kuperman, F. M.

25-9-9/40

AUTHOR: Kuperman, F.M., Doctor of Biological Sciences, Mar'yakhina, N.Ya.,  
Candidate of Biological Sciences, Rybakova, M.I., Candidate of  
Biological Sciences

TITLE: Regularities in the Development of a Plant (Zakonomernosti  
razvitiya rasteniya)

PERIODICAL: Nauka i Zhizn', 1957, # 9, p 17-20 (USSR)

ABSTRACT: The article deals with the different stages in the vegetation  
period of plants. Studies to this effect were especially in-  
tensified in the first three decades of the XX-th century.  
Soviet scientists had an important share in the development of  
theories in the field of ontogeny of higher plants. Important  
are the works of the following scientists: A.N. Beketov, K.A.  
Timiryazev, V.A. Palladin, N.P. Krenke, V.N. Lyubimenko, N.A.  
Maksimov and N.T. Kholodnyy. Of special importance are the  
works of I.V. Michurin and the scientific research conducted  
by T.D. Lysenko which led to the theory on the development of  
plants by certain stages. It was proved that a series of basic  
conditions were necessary to warrant the normal growth of a  
plant in each stage, such as favorable temperature, the right

Card 1/2

' Regularities in the Development of a Plant

25-9-9/40

proportion between the length of days and nights, the spectral composition of light, a certain minimum of moisture, the existence of certain microelements, proper fertilization, etc. The discovery of recurring regularities in the growth of widely different plants helps to find new ways for the control over their growth and development.

There are 17 figures and 4 Russian references.

AVAILABLE: Library of Congress

Card 2/2

KUPERMAN, F.. prof.

Biological control of the growth and development of winter crops.  
Nauka i pered. op. v sel'khoz. 8 no.10:42-45 0 '58.

(MIRA 11:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.  
(Grain) (Growth (Plants))

KUPERMAN, E. M.

"Regularities in Organogenesis of Higher Angiosperms."

Paper submitted for the Int'l Botanical Congress, Montreal, Canada, 19-29 Aug 1959.

Moscow State University, U.S.S.R.

ANDREYENKO, Stepan Sidorovich; KUPERMAN, Fanni Mikhaylovna; RUBIN, B.A.,  
prof., obshchiy red.; GOL'TSMAN, O.G., ed.; LAZAREVA, L.V.,  
tekhn.red.

[Physiology of corn; studies on the physiology of development,  
growth, photosynthesis, mineral nutrition, and water regimen]  
Fiziologiya kukuruzy; ocherki po fiziologii razvitiia, rosta,  
fotosinteza, mineral'nogo pitaniia i vodnogo rezhima. Pod  
obshchey red. S.A.Rubina. Moskva, Izd-vo Mosk.univ., 1959.  
288 p.

(Corn (Maize))

(MIRA 12:12)



KUPERMAN, F.M., prof.

Method of determining the condition of winter crop stands.  
Zemledelis 7 no.8:48-57 Ag '59. (MIRA 12:10)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.  
(Grain)

KUPERMAN, F., doktor biolog. nauk; PISAREV, V., doktor sel'skokhoz. nauk

A good monograph ("Siberian millet" by E.T. Varenitsa. Reviewed  
by F. Kuperman and V. Pisarev). Nauka i pered. op. v sel'khoz. 9  
no.4:78-79 Ap '59. (MIRA 12:6)  
(Millet) (Varenitsa, E.T.)

VERENITSA, Ye., doktor biolog. nauk; KUPPERMAN, F., doktor biolog. nauk;  
PISAREV, V., doktor sel'skokhoz. nauk

Outstanding works of a Soviet scientist. Nauka i pered. op. v  
sel'khoz 9 no.10:77-79 0 '59 (MIRA 13:3)  
(Lysenko, Trofim Denisovich, 1898-)

KUPERMAN, Fanni Mikhaylovna, prof., doktor biolog. nauk; LEONOVA, T.S.,  
red.; SAVCIENKO, Ye.V., tekhn. red.

[Biological control in the service of the harvest] Biologicheskii  
kontrol' na sluzhbu urozhaiu. Moskva, Izd-vo "Znanie," 1961. 52 p.  
(Vsesoiuznoe obshchestvo po rasprostraneniuiu politicheskikh i  
nauchnykh znani. Ser.8, Biologiya i meditsina, no.22)

(MIRA 15:1)

1. Moskovskiy Gosudarstvennyy universitet (for Kuperman)  
(Plant physiology)

KUPFERMAN, Faina Mikhaylovna; DANIL'CHENKO, O.P., red.; YERMAKOV, M.S.,  
tekhn.red.

[Theory of individual development and ways of controlling the  
nature of the organism; lecture from a course in the biology  
of plant development] Teoriia individual'nogo razvitiia i puti  
upravleniia prirodnoi organizma; lektsiia iz kursa "Biologiia  
razvitiia rastenii". Moskva, Izd-vo Mosk.univ. No.1. 1961.  
55 p.

(Ontogeny (Botany))

(MIRA 14:4)

ALEKSANDROV, V.G., prof., red.; DVORYANKIN, F.A., prof., red.; KADEN, N.N.,  
kand. biol. nauk, red.; KUPERMAN, F.M., prof., red.; L'VOVA, I.N.,  
kand. biol.nauk, red.; PALAMARCHUK, I.A., kand.biolog.nauk, red.;  
PODDUBNAYA-ARNOL'DI, V.A., prof., red.; PRONIN, V.A., kand.biolog.nauk,  
red.; RZHANOVA, Ye.I., kand. biol.nauk, red.; ROSTOV'TSEVA, Z.P., kand.  
biol.nauk, red.; SEREBRYAKOV, I.G., prof., red.; USTINOVA, Ye.I., kand.  
biol.nauk, red.; CHELYADINOVA, A.I., kand. biol.nauk, red.; YERMAKOV,  
M.S., tekhn. red.

[Morphogenesis in plants; transactions dedicated to the 100th anniversary of the publication of Darwin's "Origin of species."] Morfogenez rastenii; trudy posveshchait'sia 100-letiiu so dnia vykhoda v svet truda Charlza Darvina "Proiskhozhdeniye vidov." Moskva, Izd-vo Mosk. univ. Vol.1. 1961. 683 p. (MIRA 14:9)

1. Soveshchaniye po morfogenezu rasteniy, 1959.  
(Botany--Morphology)

RUSTEMBEKOV, S.S.; KUPERMAN, F.M.

Development and growth of various morphophysiological types of corn in relation to light. Nauch. dokl. vys. shkoly; biol. nauki no.2:206-214 '61. (MIRA 14:5)

1. Rekomendovana kafedroy darvinizma Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova. (CORN (MAIZE)) (PLANTS, EFFECT OF LIGHT ON)

KUPERMAN, F.M.

Morphological and physiological effect of light of different spectral composition on plants as related to the length of the photoperiod.

Nauch. dokl. vys. shkoly; biol. nauki no.4:136-146 '61.

(MIRA 14:11)

1. Rekomendovana kafedroy darvinizma Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.

(PLANTS, EFFECT OF LIGHT ON)



SHUL'GIN, I.A.; KUPERMAN, F.M.; VYSLOUKH, V.A.; SHCHERBINA, I.P.

Chlorophyll content as a physiological index of heterosis in corn.  
Fiziol. rast. 8 no.6:754-756 '61. (MIRA 16:7)

1. Laboratory of the Biology of Development of Moscow University  
and K.A. Timiriazev Institute of Plant Physiology, U.S.S.R.  
Academy of Sciences, Moscow.  
(Heterosis) (Corn (Maize)) (Chlorophyll)

KUPERMAN, F.M., prof. dr. biolog. nauk; FODOL'NIY, V.Z.; SHUL'GIN, I.A.,  
kand. biolog. nauk

Changes in the shape and size of sunflower leaves in connection  
with the stages of its organogenesis. Uch. zap. Kab.-Balk. gos.  
un. no. 10:31-40 '61. (MIRA 17:6)

RZHANOVA, Yevdokiya Ivanovna; KUPERMAN, F.M., prof., otv. red.;  
DANIL'CHENKO, O.P., red.; YERMAKOV, M.S., tekhn. red.

[Subject, methods, and problems of the biology of the development of higher plants; lecture from a course in the biology of plant development] Predmet, metody i zadachi biologii razvitiia vysshikh rastenii; lektsiia iz kursa "Biologiya razvitiia rastenii." Moskva, Izd-vo Mosk. univ., 1962. 30 p. (MIRA 16:1)  
(Plant physiology)

KUPERMAN, Faina Mikhaylovna; DANIL'CHENKO, O.P., red.; YE.SIAKOV, M.S.,  
tekhn. red.

[Theory of individual development and ways of controlling the  
nature of the organism; lecture from a course in the biology  
of plant development] Teoriia individual'nogo razvitia i pu-  
ti upravleniia prirodnoi organizma; lektsiia iz kursa "Biologiya  
razvitia rastenii." Izd.2., dop. i perer. Moskva, Izd-vo  
Moak. univ., 1962. 67 p. (MIRA15:9)

(Ontogeny (Botany))

KUPERMAN, F.M., prof., red.; NECHAYEVA, Ye.G., red.; YERMAKOV, M.S.,  
tekh. red.

[Biological control in agriculture; methods for determination,  
tables, and brief description of the phases of organogenesis in  
50 plant species]Biologicheskii kontrol' v sel'skom khoziaistve;  
metodika opredeleniia, tablitsy i kratkoe opisanie etapov orga-  
nogeneza 50 vidov rastenii. Moskva, Izd-vo Mosk. univ., 1962.  
273 p. (MIRA 15:12)

(Botany, Economic) (Growth (Plants))

KEREFOV, K.N., doktor sel'skokhoz.nauk, prof.; KUPERMAN, F.M., doktor  
bidlg. nauk, prof.; SHAUTSUKOV, Z.Kh., kand.sel'skokhoz. nauk

Morphophysiological analysis of the single-ear and double-ear  
forms of corn on collective farms of the Kabardino-Balkar  
A.S.S.R in 1961. Uch. zap. Kab. - Balk. gos. un. no.14:14-22'62.  
(MIRA 16:6)

1. Kabardino-Balkarskiy gosudarstvennyy universitet (for  
Kerefov), 2. Moskovskiy gosudarstvennyy universitet (for  
Kuperman).

(KABARDINO-BALKAR A.S.S.R.--CORN BREEDING)

SHUL'GIN, I.A.; KUPERMAN, F.M.; SHCHERBINA, I.P.

Relation between the chlorophyll content and stages of organogenesis in corn. Fiziol. rast. 9 no.3:347-352 '62. (MIRA 15:11)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva Akademii nauk SSSR, Moskva i Laboratoriya biologii razvitiya rasteniy Moskovskogo gosudarstvennogo universiteta.  
(Corn (Maize)) (Chlorophyll)

L'VOVA, Irina Nikolayevna; KUPERMAN, F.M., prof., otv. red.;  
DANIL'CHENKO, O.P., red.; GEORGIYEVA, G.I., tekhn. red.

[Sex in plants; a lecture from the course "Biology of plant development"] Pol u rastenii; lektsiia dlia studentov zaochnogo i vechernego otdelenii biologicheskikh fakul'tetov gosudarstvennykh universitetov. Lektsiia iz kursa "Biologiya razvitiia rastenii." Moskva, Izd-vo Mosk. univ., 1963. 54 p.

(MIRA 16:5)

(Plants, Sex in)



KUPERMAN, Faina Mikhaylovna; DANIL'CHENKO, O.P., red.; CHISTYAKOVA,  
K.S., tekhn. red.

[Physiologicomorphologic variability of plants in onto-  
genesis; a lecture from the course "Biology of plant  
development"] Morfofiziologicheskaya izmenchivost' rastenii  
v ontogeneze; leksiya iz kursa "Biologiya razvitiya rastenii."  
Moskva, Izd-vo Mosk. univ., 1963. 63 p. (MIRA 16:10)  
(Ontogeny (Botany)) (Botany--Morphology)

KUPERMAN, Faina Mikhaylovna; DANIL'CHENKO, O.P., red.; GEORGIYEVA,  
G.I., tekhn. red.

[Characteristics of the individual development of plants  
depending on the conditions of the environment; light and  
plant development] Zakonomernosti individual'nogo razvitiia  
rastenii v zavisimosti ot uslovii vneshnei sredy; svet i  
razvitie rastenii. Lektsiia iz kursa "Biologiya razvitiia  
rastenii." Moskva, Izd-vo Mosk. univ., 1963. 102 p.  
(MIRA 17:2)

SHUL'GIN, Igor' Aleksandrovich; KUPERMAN, F.M., prof., otv. red.;  
KLESHCHIN, A.F., prof., otv. red.; DANIL'CHENKO, O.P.,  
red.; GEORGIYEVA, G.I., tekhn. red.

[Morphological adaptations of plants to light; optical  
properties of leaves. A lecture from the course "Biology  
of plant development"] Morfofiziologicheskie prispobleniia  
rastenii k svetu; opticheskie svoistva list'ev. Lektsiia iz  
kursa "Biologiya razvitiia rastenii." Moskva, Izd-vo Mosk.  
univ. 1963. 72 p. (MIRA 16:9)

(Leaves--Optical properties)

KUPCHENKO, Faina Mikhaylovna, prof.; RZHANOVA, Yevdokiya Ivanovna,  
dets.; PARSHADANOVA, K.G., red.

[Biology of plant development] Biologiya razvitiia ra-  
stenii. Moskva, Vysshaya shkola, 1963. 423 p.  
(MIRA 17:9)

KUPEICMAN, Faina Mikhayloyna

[Morphological variability of plants in ontogenesis,  
a lecture from a course in the "Biology of plant develop-  
ment"] Morfologicheskaya izmenchivost' rastenii v ontoge-  
neze; lektsiia iz kursa "Biologiya razvitiia rastenii."  
Moskva, Izd-vo Mosk. univ., 1962. 63 p.

(Pik 1001)

SHILYEV, S.V.; KUPCHAN, P.M.

Effect of spectral light composition on the development of millet as related to the duration of photoperiods and the alternation of strong and weak light intensities. Vest. Mosk. un. Ser. 6: Biol., pochv. 20 no.6: 3-72 H-D '69.

(RER 19:1)



AUTHORS: Kuperman, F. Ye. and Landa, Ye. P. SOV/138-58-9-9/11

TITLE: The Bonding of Rubber to Plastics (Krepleniye reziny k plastmassam)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 9, pp 32 - 34 (USSR)

ABSTRACT: Investigations of a method of fixing rubbers to plastics are of great interest in mechanical engineering and other branches as construction material. Various British, Australian, U.S.A. and Japanese adhesives are quoted and tabulated (Refs. 1 - 8 and Table 1). A 20% solution of n,n',n"-triphenylmethane-triisocyanate in dichloroethane (the adhesive "Leykonat") was used. A thin layer of the adhesive was applied on the clean surface of Textolite, a laminated plastic. The latter was dried and then vulcanised at 135 ~ 140°C and 25 kg/cm<sup>2</sup> pressure. Good results were obtained with adhesives based on butadiene acrylonitrile and sodium-butadiene rubbers and also "Nairit", but the results were not favourable for NK rubbers. The strength of bonding was tested on a dynamometer and found to reach 20 kg/cm<sup>2</sup> (Table 2) for polar rubbers such as SKN-40 and "Nairit". For butadiene-acrylonitrile rubber (SKN-40) the strength of bonding

Card 1/2



The Bonding of Rubber to Plastics

SOV/138-58-9-9/11

was, in first approximation, inversely proportional to the hardness of the rubber (Fig.2). This method is used mainly in the car industry. The adhesive "Leykonat" can also be used for the bonding of polar and sodium-butadiene rubbers to aldehyde (phenol-formaldehyde) plastics. There are 2 Tables, 1 Figure and 8 References: 1 French and 7 English.

ASSOCIATION: Zavod "Kauchuk"  
(Factory "Kauchuk")

Card 2/2

TSUKERBERG, S.M.; ZAKHAROV, S.P.; NENAKHOV, B.V.; ABRAMOVA, E.Ye.;  
ZUYEV, Yu.S., red.; KUZNETSOV, F.Ye., red.; LIPERANSKAYA, A.A.,  
tekhn.red.

[High-roadability tires for motor vehicles] Shiny dlia avtomobilei povyshennoi prokhodimosti. Moskva, Gos.nauchno-tekhn.izd-vo khim.lit-ry, 1960, 71 p. (MIRA 14:4)  
(Motor vehicles--Tires)

PRIKLONSKAYA, Natal'ya Vladimirovna; SKACHKOV, Aleksey Sergeevich;  
KUPERMAN, F.Ye., red.; ZAZUL'SKAYA, V.F., tekhn. red.;  
PANTELEYEVA, L.A., tekhn. red.

[Rapid methods of rubber compounding] Skorostnye metody  
prigotovleniia rezinovykh smesei. Moskva, Goskhimizdat,  
1963. 419 p. (MIRA 16:11)

(Rubber machinery)

ACCESSION NR: AP4015074

S/0138/64/000/001/0010/0014

AUTHORS: Kuperman, F. Ye.; Karmin, B. K.

TITLE: Peculiarities in fatigue properties of vulcanized rubbers on the base of carboxyl containing rubbers (Presented at the third conference on chemistry and technology of rubber and its vulcanizates. Yaroslavl', December 17, 1960)

SOURCE: Kauchuk i rezina,<sup>23</sup> no. 1, 1964, 10-14

TOPIC TAGS: rubber, vulcanized rubber, methacrylic acid, magnesium oxide, zinc oxide, thiuram, sulfur, butadiene, styrene, static deformation, dynamic deformation, fatigue, creep, orientation, scorching

ABSTRACT: Filled vulcanizates of the protector type were investigated. These consisted mainly of a butadiene (70%) - styrene (30%) copolymer, containing in most instances 0.5, 0.8, and 1.25% methacrylic acid, 2.5% MgO, 1% ZnO, 2.5% thiuram, and 1% sulfur. The filler consisted of 20% (by weight) channel carbon black and 20% gas chimney carbon black. It was found that the creep (at 140C under constant load) of the test samples decreased with an increase in methacrylic acid content, while the durability and resistance to stretch fatigue went up

Card 1/2

ACCESSION NR: APL015074

sharply. On the other hand, under the effect of a reversed bending test with a twist, the durability of the vulcanizates decreased with higher methacrylic acid content. The authors attribute this to a higher modulus of internal friction. Since it is also known that substantial scorching takes place in the process of vulcanization of rubbers containing carboxyl groups, the authors recommend limiting the methacrylic acid content in butadiene-styrene rubbers to 0.5-0.8%. Orig. art. has: 8 charts and 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of the Tire Industry)

SUBMITTED: 00

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: CH

NO REF SOV: 008

OTHER: 005

Card 2/2

ACCESSION NR: AT5004100

S/000 1/64/000/000/0101/0123

26

Купечан, Ф. Яс. Кармин, Д. К

Card 1/3

channel black per 100% rubber. Viscosity was determined at 70-140C on a rotary

viscometer. 100% elastic recovery on a compression molding machine and deflator.

1.000 g of sample was used for each test. Compression molding was done at 140C.

1.000 g of sample was used for each test. Compression molding was done at 140C.

1.000 g of sample was used for each test.

Card 2/3





AUTHOR: Kuperman, G.B. (Moscow)

SOV-47-58-5-7/28

TITLE: The Study of the Properties of Solids in Connection with Their Structure (Izucheniye svoystv tverdykh tel v svyazi s ikh stroeniyem)

PERIODICAL: Fizika v shkole, 1958, Nr 5, pp 29-40 (USSR)

ABSTRACT: In instructing on "Properties of Solids", principal attention is given to the exposition of questions of applied and not of physical characteristics. The properties of solids, however, are being taught in the section "Molecular Physics and Heat". Therefore, this theme should consist mainly of information on such phenomena in solids which are caused by the motion of molecules and their mutual interaction. In polytechnical schools, physical phenomena must be studied in close touch with practical problems. Therefore, the students must become familiar with the physical fundamentals of the most widely-distributed methods of changes in the properties of solids. This can be done by a systematic study of the structure of solids and of the connection between the solid and its structure. The article describes how this can be achieved. The method proposed has been tested by the author and the teachers T.P. Zelenova of the 151st and A.I. Gervash of the 706th

Card 1/2

SOV-47-58-5-7/28

The Study of the Properties of Solids in Connection with Their Structure

Moscow Schools.

There are 5 drawings, 1 graph, 16 figures, 1 table and  
20 Soviet references.

1. Solids--Properties

Card 2/2

KUPERMAN, G.B. (Moscow)

Qualitative problems in the physics of solids. Fiz. v shkole 18  
no.4:76-77 J1-Ag '58. (MIRA 11:7)  
(Physics--Problems, exercises, etc.)



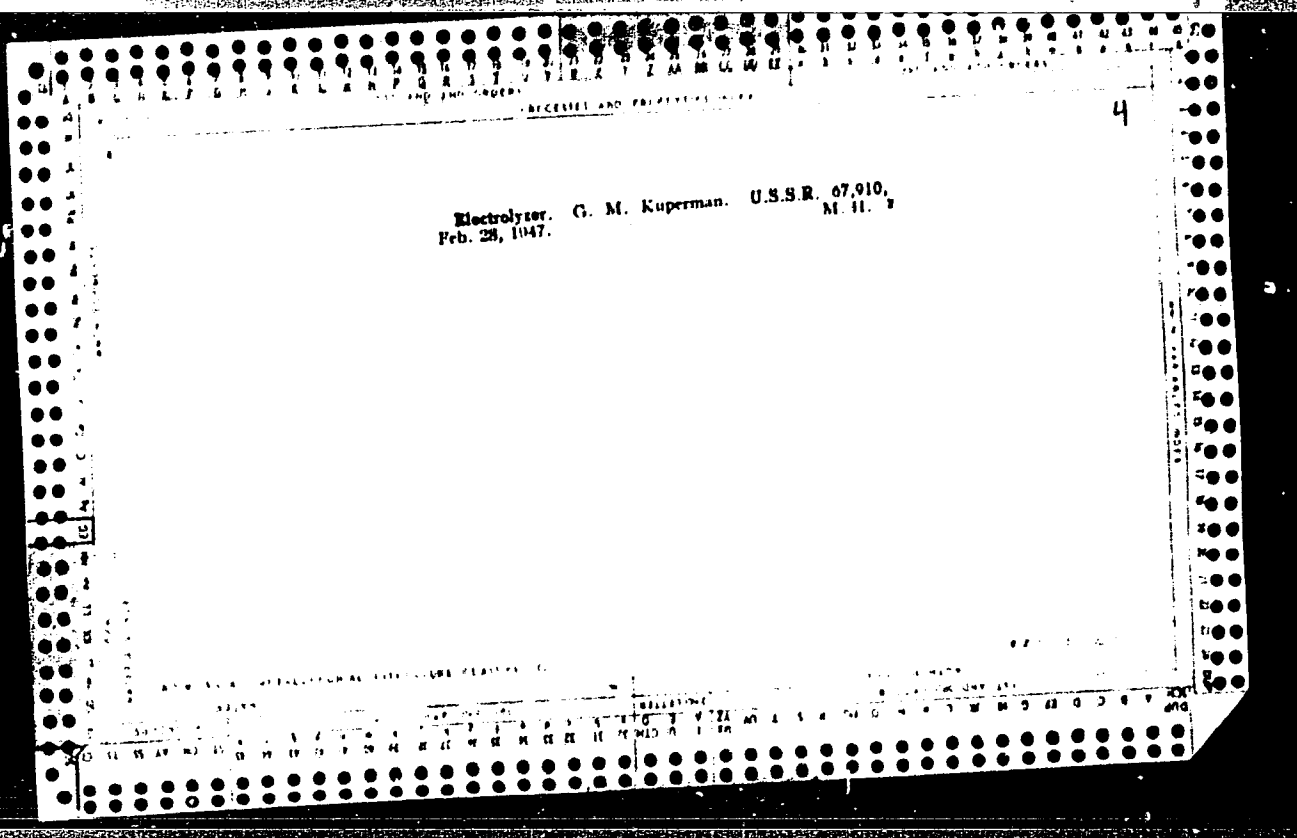
117 AND 118 SERIES PROCESSES AND PROPERTIES INDEX

B-1-3

Recovery of carbonic acid from acid gas, a by-product of petroleum refining. G. H. Kasperman (*J. Appl. Chem. Russ.*, 1947, 1A, 112-120).—Acid gas (70-80%  $H_2SO_4$  containing org. substances as 1-4% of C) is passed continuously from the anode to the anode chamber of an electrolytic cell electrodes, porous diaphragm. Under these conditions practically complete elimination of org. substances takes place (gases hydrocarbons from the catholyte, and as hydrocarbons and  $CO_2$  from the anolyte). The colorless acid is obtained in 100% by evaporation. R. T.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

GROUP	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
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GTRSP L No. 45

Kuperman, F.M. (M.V. Lomonosov Moscow State University). Regularities in the change of  
a variety of barley in connection with the conditions of stage development, 681-4

Akademiya Nauk, S.S.S.R. Doklady Vol. 79 No. 4

KUPERMAN, G.M.; GVARAMADZE, D.Kh.; DZHIKIYA, S.I.; ZARKUA, N.P.

Obtaining soda from mirabilite and barite of Georgian deposits. Trudy Inst. khim. AN Gruz.SSR 11:117-125 '53.

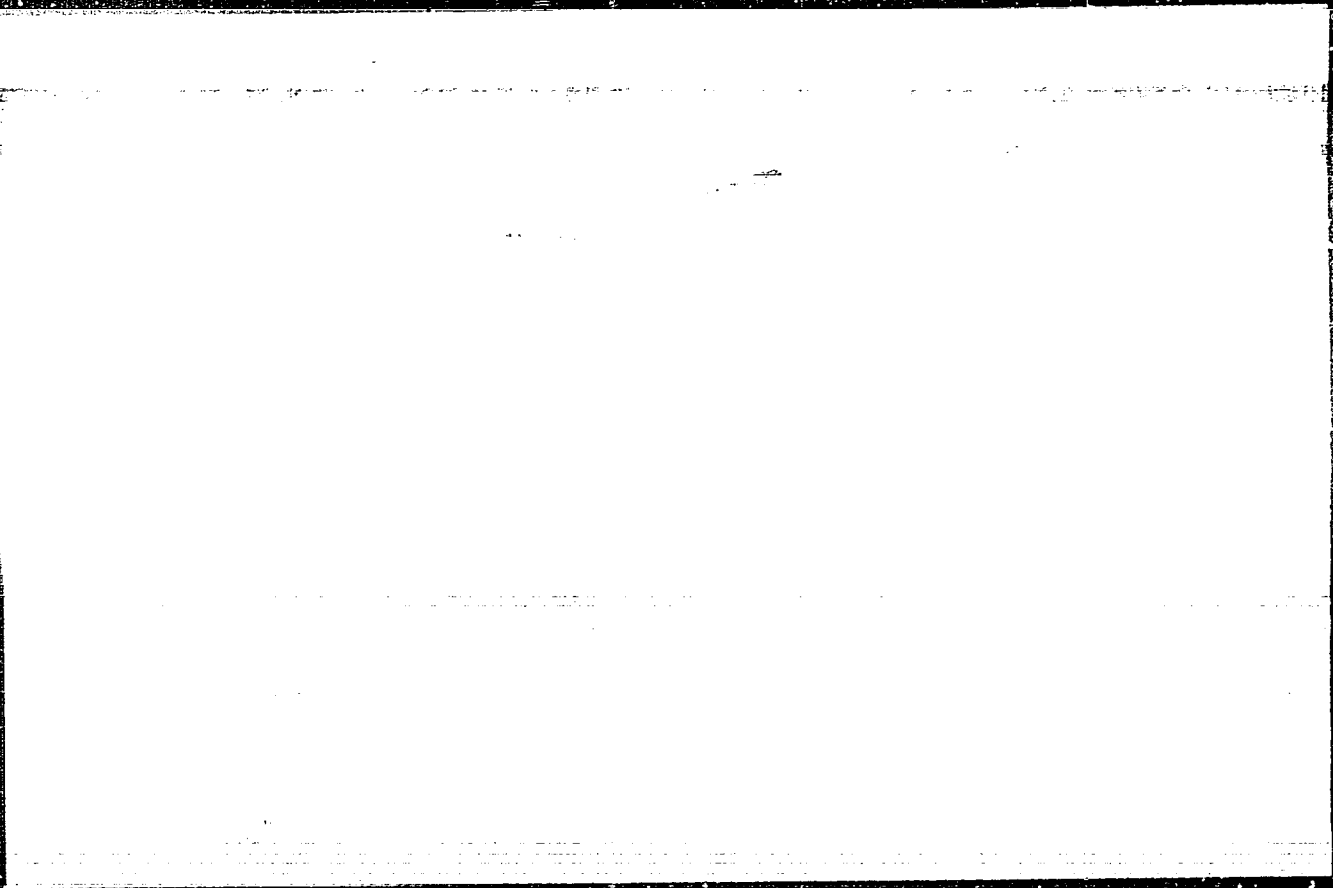
(MLRA 10:2)

(Sodium sulfate) (Mirabilite) (Barite)



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**CIA-RDP86-00513R000927610002-4**



**APPROVED FOR RELEASE: 08/23/2000**

**CIA-RDP86-00513R000927610002-4"**

KUPERMAN, G.M.

Preparation of alums and aluminum sulfate, based on Zaglik alunites and the sulfuric acid waste from the acid tars of the petroleum refining industry. Part 1. Trudy Inst.khim. AN Gruz. SSR 14:203-230 '58. (MIRA 13:4)

(Alum) (Aluminum sulfate) (Zaglik (Azerbaijan)--Alunite)

KUPERMAN, G.M.

Preparation of alums and aluminum sulfate, based on Zaglik  
alunites and the sulfuric acid waste from the acid tars of the  
petroleum refining industry. Part 2. Trudy Inst.khim. AN Gruz.  
SSR 14:231-252 '58. (MIRA 13:4)

(Alum) (Aluminum sulfate)  
(Zaglik(Azerbaijan)--Alunite)

KUPERMAN, G.M.; GOGORISHVILI, P.V.; ZARKUA, N.P.; GONGLIASHVILI, A.N.

Extraction of copper from sulfide ores by the autoclave method.  
Soob.AN Gruz.SSR 25 no.5:533-538 N '60. (MIRA 14:1)

1. Akademiya nauk GruzSSR, Institut khimii imeni P.G.Melikishvili,  
Tbilisi. Predstavleno chlenom-korrespondentom Akademi G.V.  
TSitsishvili.

(Copper--Metallurgy)

KUPERMAN, G.M.; GOGORISHVILI, P.V.; GONGLIASHVILI, A.N.; ZARKUA, N.P.

Preparation by the autoclave method of a solution of zinc sulfate from a concentrate of the Kvaisi sulfide ore deposit.  
Trudy Inst.khim.AN Gruz.SSR 16:9-13 '62. (MIRA 16:4)  
(Zinc sulfate) (Kvaisi region--Sulfide ores)

KUPERMAN I.

Cost Accounting

"Computing lowering of cost of production at each industrial operation." Bukh.  
uchet, 11, No. 5. 1952.

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

DOMANSKIY, V.I. [Domans'kyi, V.I.]; ZHURAVSKIY, L.I. [Zhurava'kyi, L.I.];  
KISEL', I.M. [Kysil', I.M.]; KUPERMAN, I.S.

Methods for the measurement and regulation of gas filling of  
ideal mixing apparatus. Khim.prom. [Ukr.] no.1:72-77 Ja-Mr  
'64. (MIRA 17:3)

NIRENSHTEYN, Z., inzh.; KUPERMAN, L., kand. tekhn. nauk

Kinetics of the contact drying of roofing felt. Stroim. mat. 2  
no.10:23-24 0 '56. (MIRA 12:3)  
(Roofing) (Drying apparatus)



STEPCHKOV, K.A.; VSYAKIKH, M.I.; KUPERMAN, L.A.

New methods of studying the oxidation spoilage of fats in  
food concentrates. Kons.i ov.prom. 17 no.5:27-30 My '62.  
(MIRA 15:5)

1. Tsentral'nyy nauchno-issledovatel'skiy institut konservnoy  
i ovoshchesushil'noy promyshlennosti.  
(Food, Concentrated--Testing)

F KUPERMAN, L.I.

3627. RATES OF CONSUMPTION OF ELECTRICITY IN PULVERISATION OF CENTRAL ASIAN COALS IN SHAFI PULVERISER PLANTS. Kuperman, L. I. (Za Ekonomiyu Toplivo (Fuel Econ.), 1949, (8), 17-20). Rates vary between 5.6 and 23.4 k.W.h. per ton according to type of coal, size before and after pulverisation and wear in pulveriser. (L).

ASB-35A METALLURGICAL LITERATURE CLASSIFICATION

Region	Country	Year	Author	Title	Language	Classification
ASB-35A						

8(6)

PHASE I BOOK EXPLOITATION

SOV/2068

Kuperman, L.I.

Leninskiye idei elektrifikatsii v deystvii (Lenin's Ideas on Electrification Are Carried Out) Odessa, 1957. 113 p. No. of copies printed not given.

Sponsoring Agency: Odesskiy politekhnicheskiy institut. Kafedra promyshlennoy teplotekhniki.

No contributors mentioned.

PURPOSE: This booklet is intended for the general reader interested in the history of electrification in the USSR.

COVERAGE: This booklet describes the progress made in the electrification of the USSR. Early work by GOELRO (State Commission for the Electrification of Russia) is discussed as are the effects of the dislocations and interruptions caused by the Civil War and

Card 1/3

Lenin's Ideas on Electrification (Cont.)

SOV/2068

World War II. The author defines the importance of both mineral fuels and water power to the overall electrification picture. He provides statistical data showing annual increases in electric power production, appropriations allocated to electric power plants, personnel employed by power stations, capacity of power stations, electric power generation by republics, etc. There are 8 references, all Soviet.

TABLE OF CONTENTS:

Importance of Electrification as Foreseen by the Founders of Marxism-Leninism	3
Plan of the GOELRO (State Commission for the Electrification of Russia) and Its Historical Significance	9
Development of the Electric-power Plant Network in the USSR	13
a) Principal goals of the GOELRO plan	13
b) Implementation of the GOELRO plan	17
c) Electric-power plant construction during the period of the socialist Five Year Plans	22

Card 2/3