"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

AID P - 3449

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 16/32

Authors : Nekrasov, M. M., Kand. of Tech. Sci., Dotsent, and L. A. Rakhmanov, Kand. of Tech. Sci., Kiyev

Title : Apparatus for testing the electric field intensity

Periodical : Elektrichestvo, 10, 61-63, O 1955

Abstract : The authors developed a simple portable apparatus, fed from the a-c network, which permits obtaining a picture of the electric field of insulating structures to measure potentials of any point in respect to the ground and voltage distribution in different sectors of the insulating structure. The apparatus consists of a two-step rheostat amplifier with a vacuum-tube voltmeter and a probe. The authors describe details of the apparatus, its connection diagram, and the method of operation. Five diagrams.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

Elektrichestvo, 10, 61-63, O 1955 AID P - 3449

Card 2/2 Pub. 27 - 16/32

Institution : Kiyev Polytechnical Institute

Submitted : S 20, 1954

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

BUTKO, S.I NEKRASOV M.M.

A.c. current testing condenser paper for breakdown. Bum.prom. 31 no.12 13-14 D '56. (MLRA 10:2)

1. Kiyevskiy ordena Lenina Politekhnicheskiy institut.
(Paper--Testing) (Condensers (Electricity)--Testing)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113[illegible]

83863

24.2400

Translation from: Referativnyy zhurnal, Elektr[illegible]

33415

AUTHOR: Nekras[illegible], M.M.

TITLE: Estimation of the State of [illegible] Low Gradients

PERIODICAL: Izv. Kiyevsk. [illegible]

TEXT: The author established in a general [illegible] following basic characteristics of a laminated [illegible] of dielectric at low gradients of the magnit[illegible] of the current from the time [illegible] ρ [illegible] K_1 [illegible] ω ε φ ω [illegible] $\delta = \rho$ [illegible] and $\varepsilon = \varphi$ [illegible] The results [illegible] heterogeneity of a dielectric [illegible] uniformity of the outer field and [illegible] the strength [illegible] appearing in insulation during operation [illegible] the outer field. An analysis of the effect of the degree [illegible]

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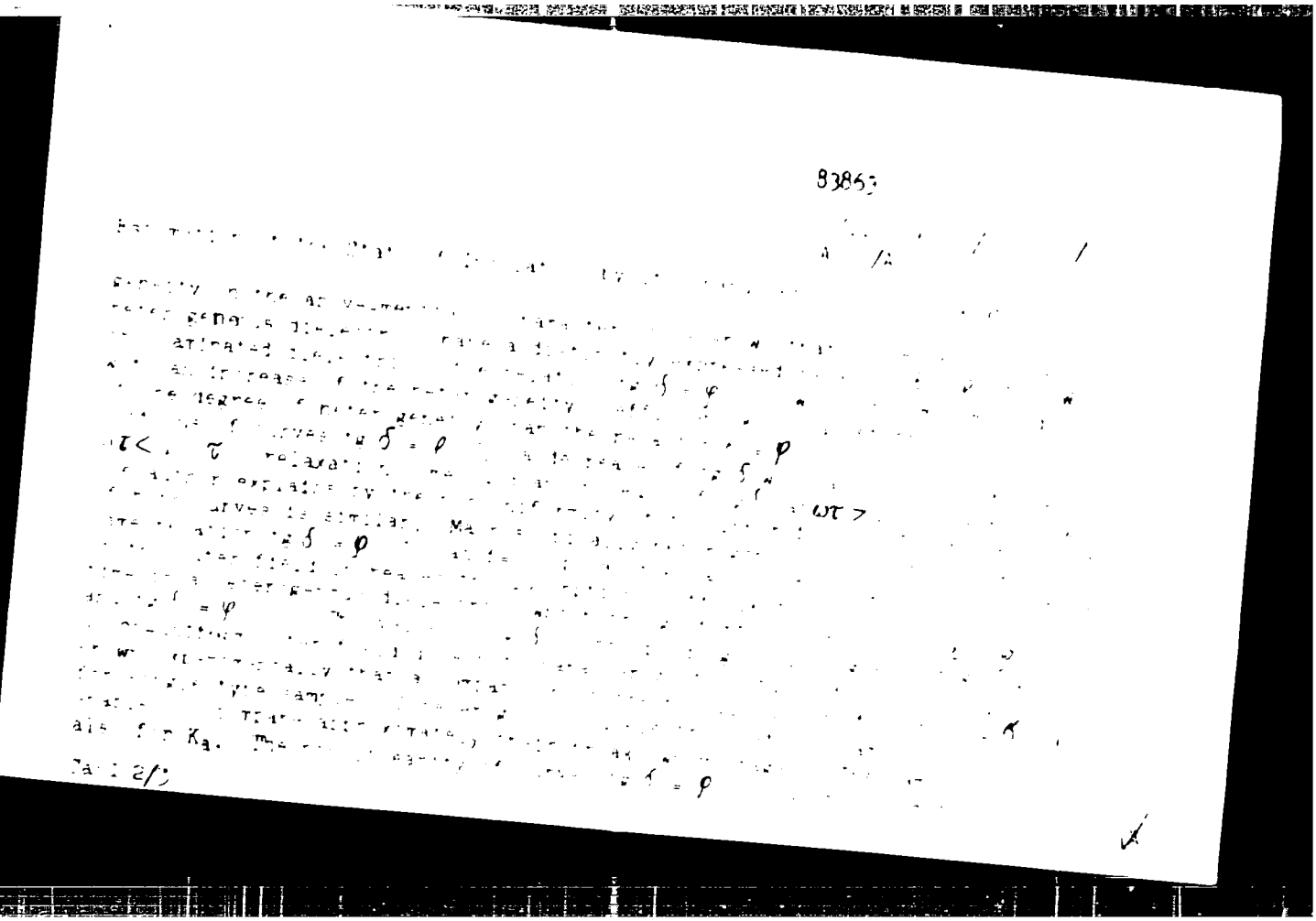
APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136[illegible]

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

83863

S [illegible]
AC52 A052

Estimation f the State of Insulation by Its Characteristics at Low [illegible]

[illegible]mperatures where the relaxation losses increase sharply. [illegible] ture should not be increased when determining K_a, [illegible] and [illegible]M. [illegible] dielectric heterogeneity can also be determined by the relat[illegible] $\delta = f$ [illegible] The curve $tg\,\delta = \varphi(\omega)$ for heterogeneous diele[illegible] 1200 cycles which increases with n. The relation

$$\frac{tg\,\delta_{1000\ cps}}{tg\,\delta_{50\ cps}} = m$$

determines not only a change of a distribut[illegible] concentrated non-uniformity (at m > 1). The [illegible] $tg\,\delta$ [illegible] ω heterogeneous dielectric agree with the curves $tg\,\delta = \varphi$ [illegible] references.

[illegible]

Translator's note: This is the full translation of the original [illegible] abstract.

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

AUTHOR: Nekrasov, M.M. SOV/102-58-4-5/11

TITLE: Semiconductor Components of Given Nonlinearity

PERIODICAL: Avtomatika, 1958, Nr 4, pp 46-53 (Ukr.SSR)

ABSTRACT: The paper deals with some properties of nonlinear resistors based on SiC or an oxide semiconductors ($PbO+MnCO_3$ or $BaCO_3$); the mixtures are fired in air to produce materials in which the outside films or the grains differ very greatly in conductivity from the insides. The figures, apart from Fig 1 which is merely illustrative, give actual results obtained by the authors. Fig 8 shows a method of connection designed to facilitate fine adjustment of the nonlinearity (it simultaneously increases the nonlinearity; other methods of connection can decrease the nonlinearity).

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

SOV/102-58-4-5/11

Semiconductor Components of Given Nonlinearity

Card 2/2 There are 8 figures and 9 references, 6 of which are Soviet, 1 is American and 2 are translations from English.

ASSOCIATION: Kyyivs'kiy ordena Lenina politekhnichn y instytut (Kiyev Order of Lenin Polytechnical Institute)

SUBMITTED: August 29, 1957

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

05363

AUTHORS: Nekrasov, M.M. and Poplavko, Yu.M.

TITLE: Nonlinear Ferroelectric Capacitors

PERIODICAL: Avtomatika 1959 Nr 1, pp 70-76 (USSR)

ABSTRACT: The capacitors are of a new type with dielectrics ... from ... current component system (not given). The table ... gives the effective dielectric constant for small ... voltage swing, tan δ and C_{max}/UC_{min} where ... effective value of the a.c. voltage. Fig 1 shows ... hysteresis loops (the nonlinearity is greatest at ... voltage gradients of 75 to 100 V/mm). Fig 2 shows curves ... taken at 100 c/s with various values of a.c. and d.c. ... fields (in V/mm) where $E_=$ denotes d.c. and $E_\sim$ a.c. ... Fig 3 shows values for 100, 500, 900, 1000, 1500, 2000, ... 3 000 and 5000 c/s (a) for low voltages, b) for ... voltages). Fig 4 shows ε and tan δ as functions of ... temperature at 1000 c/s. Fig 5 shows ε and tan δ ... as functions of volta e for two different specimens. ... Fig 6 gives data recorded at 100 and 1000 c/s for the ... specimen of Fig 4 at temperatures from 22 to 93°C (note ... errors in second diavram). The Curie point is 92°C. ... Fig 7 and 8 illustrate applications named, a tabulat...

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

563

Nonlinear Ferroelectric Capacitors

(Fig 7), a frequency multiplier (Fig. 9,a), a phase generator (Fig 9,b), an a.c. voltage stabilizer (Fig. 9,c) and a d.c. voltage stabilizer. There are 8 figures and 2 Soviet references

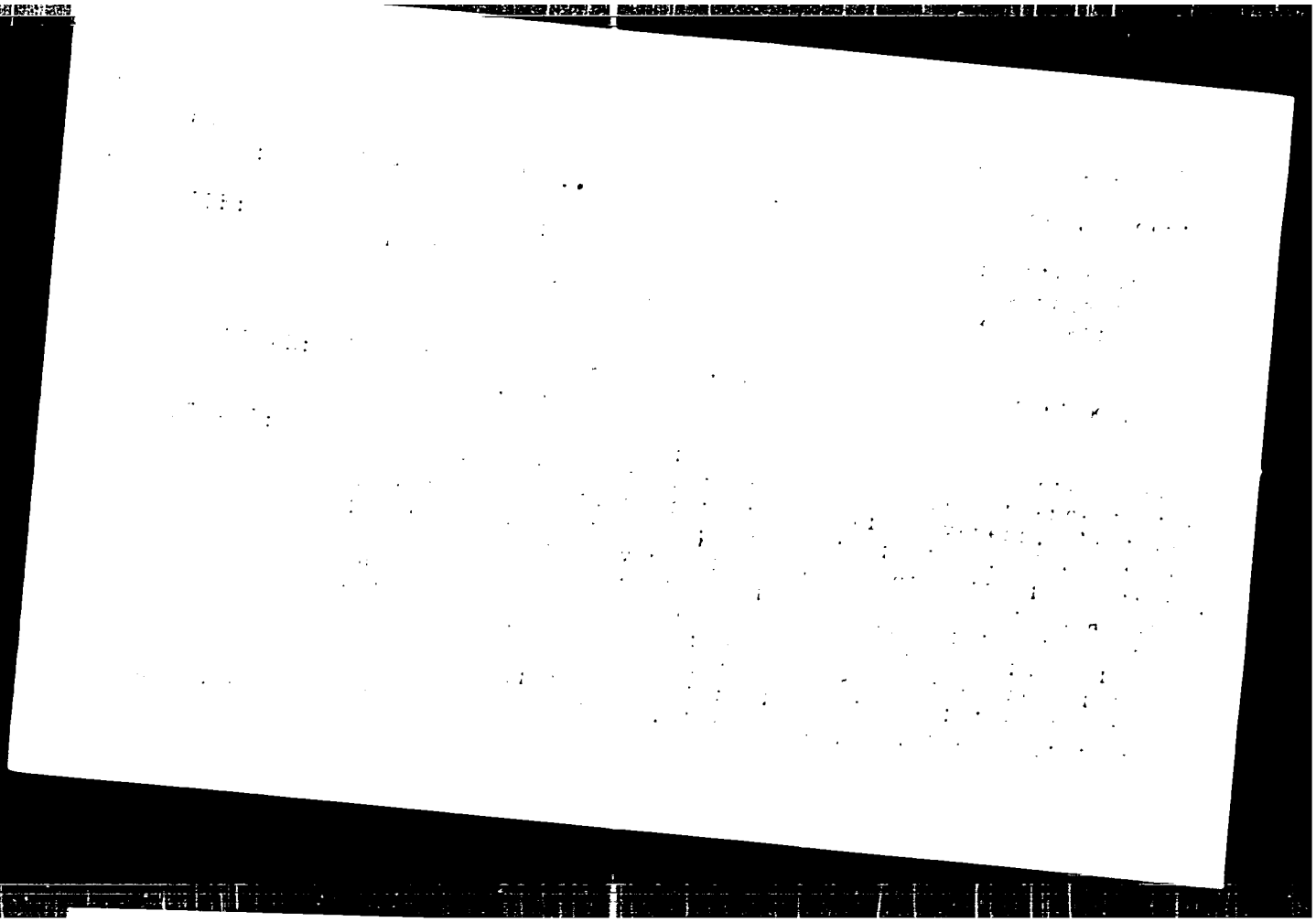
ASSOCIATION: Kievskiy ordena Lenina Politekhnicheskiy Institut (Kiev Polytechnical Institute)

SUBMITTED: June 20, 1960

Card 2/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

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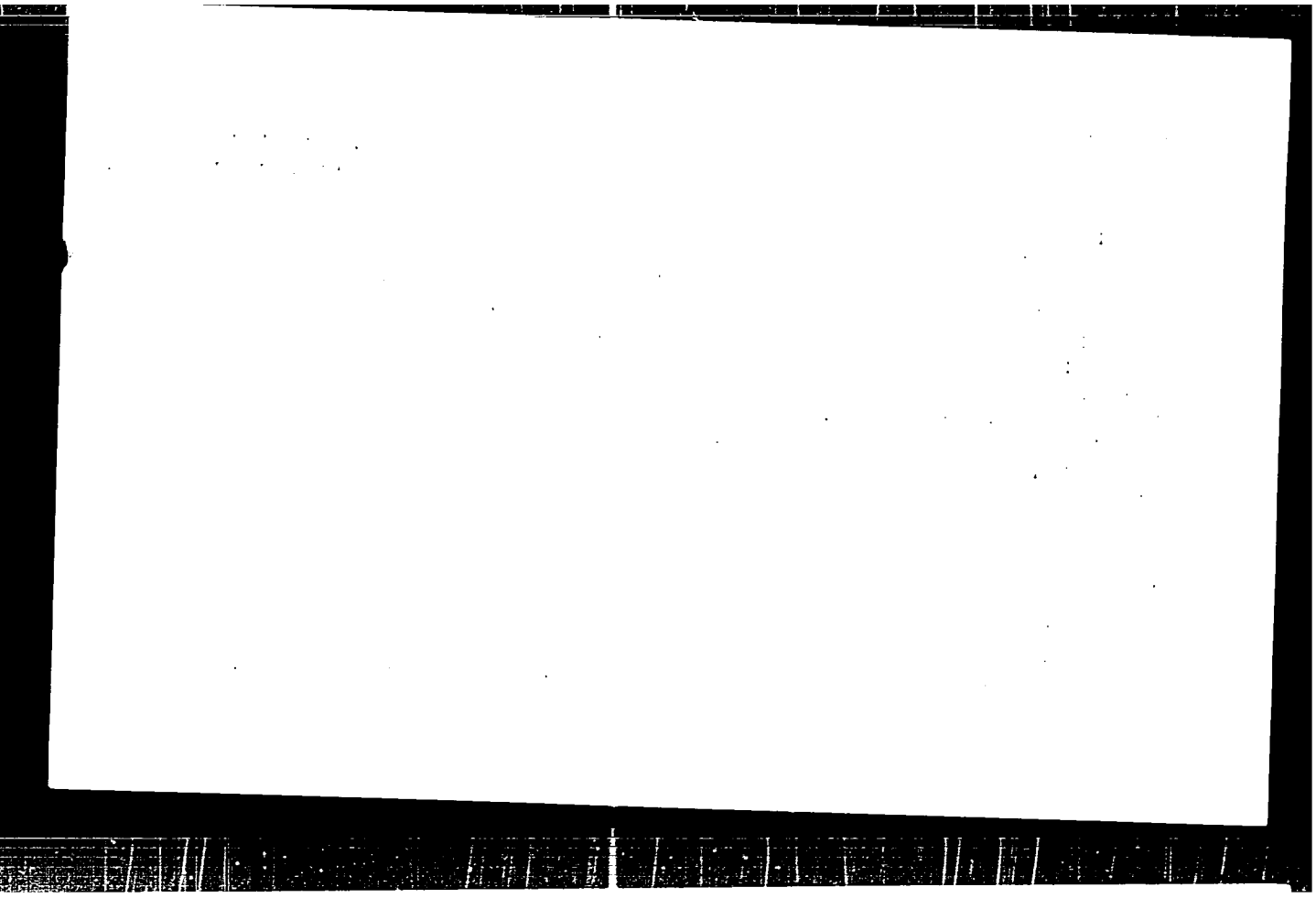
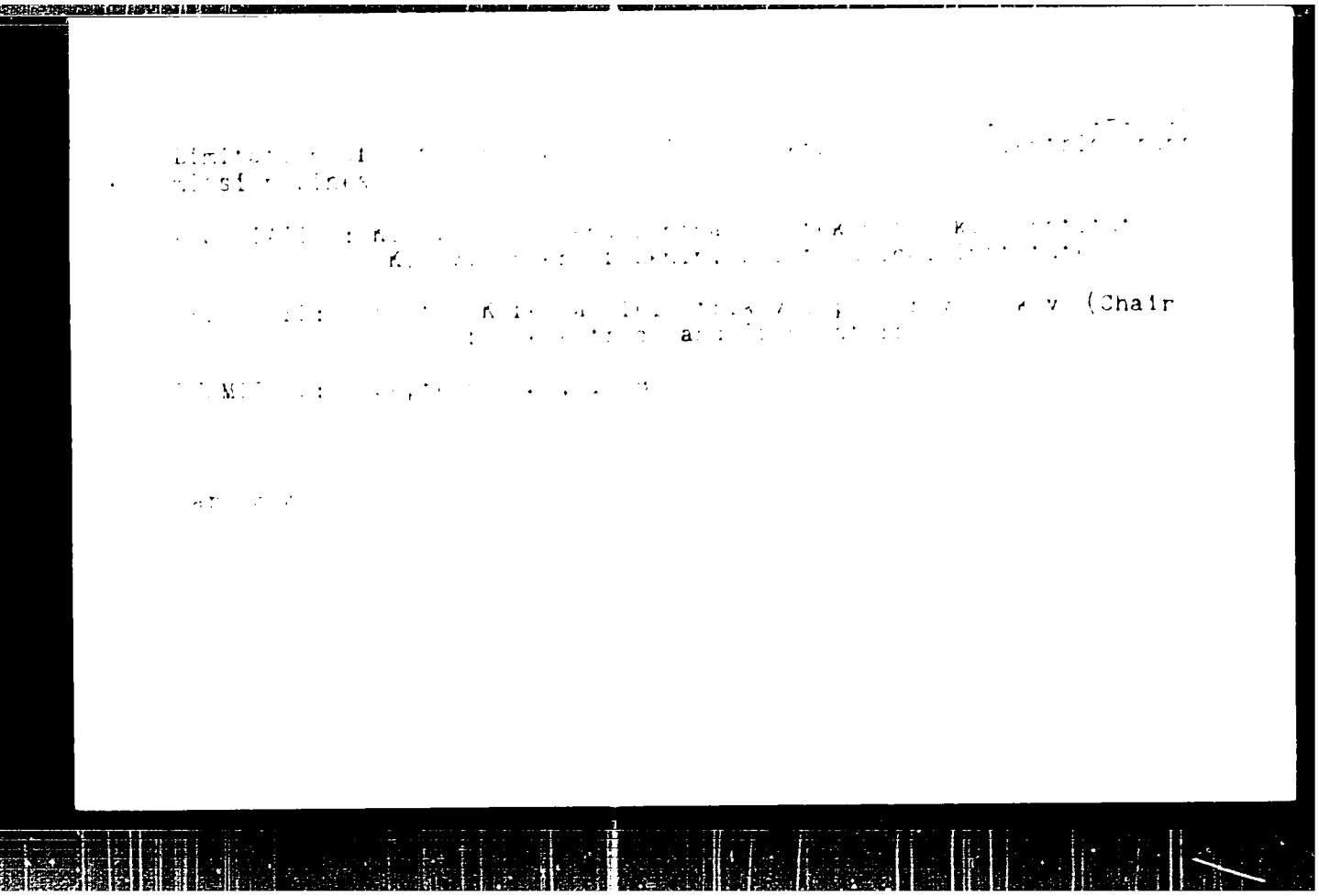


APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

SOV/14-59-5-11/14

Author: [illegible], M.M., Candidate of Technical Sciences, Docent, Pletchenkov, I.I., Aspirant

Title: Modified Silicone Insulation

Publication: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1959, Nr 5, pp 98 - 100 (USSR)

Abstract: Insulating materials based on organic polymeric resins modified by polyorganosiloxanes are of considerable interest. These materials have good adhesion to metals, a resistance to heat which is nearly as good as that of ordinary silicone resins, and high drying-speeds. Resins that may be modified include polyesters, epoxides, polyvinylacetyls, phenolformaldehydes and others. Moreover, the process of combined polymerisation of resin organic polymers (oils and resins) with monomers or polyorganosiloxanes can also give technically valuable products. By this process of co-polymerisation, the authors developed a series of modified silicones, containing the combination of silicone and tung oil designated as MK-5. They also used polyorganosiloxane fluids Nrs , 5, and 9 (of the All-Union Electro-Technical Institute nomenclature). Insulation based on modified silicones has a

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Modified Silicone Insulation

Good resistance to moisture and oil, [illegible] flexi[illegible] good insulating properties. For example, samples of [illegible] paper (K-12) of 100 x 100 mm were impregnated with silicone fluid Nr 2, pure silicone varnish [illegible] and [illegible]. The samples were heat-treated at a temperature of 160 - 160°C, which did not impair the mechanical properties of the paper; they were then weighed and maintained in a humid atmosphere for 40 hours. The results of the tests are given in Figure 1 and it will be seen that treatment with co-polymer SK-3 gives the least water absorption, the weight increase being only 1.4%. Electric strength tests results on the material after exposure to moist atmosphere are recorded in Figure 2; it will be seen that co-polymer SK-3 gives the best result. Varnish [illegible] used to impregnate the annular windings of [illegible] in within large pipes. It operates in particularly difficult conditions; on pipelines it [illegible]

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

...Silicone Insulation

very near the walls and is exposed to high temperatures, steam and weather. The coils impregnated with SK-3 were compared with other types, including the standard product impregnated with varnish Nr 460, and the best results are tabulated. The performance of the coils impregnated with co-polymer SK-3 was particularly good. It is concluded that modified silicone insulation is very suitable for electrical equipment exposed to high temperature and humility.. Modified silicone insulation has the advantage that it is only a quarter of the cost of insulation based on pure silicone compositions. The resistance to heat of the modified silicones is not quite as good as that of the straight silicones, but the dielectric, electricity and mechanical properties are equally good or better.

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

Association: Kafedra dielektrikov i poluprovodnikov, Kiyevskiy politekhnicheskiy institut (Chair of Dielectrics and Semiconductors, Kiyev Polytechnical Institute)

Submitted: April 8th, 1959.

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

AUTHORS: Nekrasov, M.M., Candidate of Technical Sciences, Docent; Il'chenko, N.S., Candidate of Technical Sciences, Docent, and Kletchenkov, I.I., Aspirant

SOV/144-59-6-11/15

TITLE: Wire Enamel Based on Modified Lacquers

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1959, Nr 6, pp 93 - 95 (USSR)

ABSTRACT: Vinyflex enamel based on polyvinyl acetyl has better physical and mechanical properties than oil-enamel lacquers and so is widdy used. Silicone lacquers are now being used in order to improve the heat- and moisture-resistance of enamel wires but the adhesion of silicone lacquer films to metal and their resistance to abrasion are inferior to those of vinyflex. Insulation of good mechanical strength and high adhesion may be obtained by using modified organic lacquers which are modification products of certain oil-enamel lacquers and silicone resins. Such films are elastic and have good resistance to heat and moisture.

It has been found that tung, linseed and certain other oils and resins used to manufacture insulating enamels

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

react with substituted esters of orthosilicic acid in the presence of traces of water, easily forming liquid modified lacquers which can give water- and oil-resistant films. In this way, the authors modified the tung-oil-based insulating lacquer Nr 302 by silicone fluid Nr 2 (polymethylsyloxane fluid). The modified enamel is designated SK-3. The method of preparation is described. The best water-resistance and electric strength of film was obtained by using 20% of silicone. It was found that films of the modified enamel are somewhat better in physical and chemical properties than straight silicone enamels. Wires of 0.14 and 1.08 mm dia, coated with the modified enamel, withstood testing to the requirements of standard GOST 2773-51 and were found to have additional desirable properties. The main electrical properties of the insulated wire, after storage for nine months, are given in Table 1. It is concluded that the use of enamel SK-3 for enamelling copper wire gives a satisfactory product of improved heat-resistance, compared with wires insulated with oil-base

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

Wire Enamel Based on Modified Lacquers SOV/144-59-6-11/15

lacquers and vinyflex. The properties of the product are very dependent on the furnace temperature during the enamelling process. Enamel SK-3 is cheaper than vinyflex. The following people participated in the work on enamelling the wires at the "Ukrkabel" Works: foreman of the enamelling shop, Engineer Vol'khovskiy, A.Ye; students of the Kiyev Polytechnical Institute, Zozulya, B.I. and Siromakha, I.F.

There are 1 table and 2 Soviet references.

ASSOCIATION: Kafedra dielektrikov i poluprovodnikov, Kiyevskiy politekhnicheskiy institut (Chair of Dielectrics and Semiconductors, Kiyev Polytechnical Institute)

SUBMITTED: September 29, 1958

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

NEKRASOV, M.M.

Ferroelectric condensers with a high degree of nonlinearity.
Izv. vys. ucheb. zav.; radiotekh. 2 no.6:741-746 N-D '59.
(MIRA 13:6)

1. Rekomendovano kafedroy dielektrikov i poluprovodnikov Kiyevskogo ordena Lenina politekhnicheskogo instituta.
(Ferroelectricity) (Condensers (Electricity))

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

S/194/61/000/007/011/079
D201/D305

G.[redacted]0

AUTHOR: Nekrasov, M.M.

TITLE: Non-linea. thermally stable resistances (varistors)

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1961, 8, abstract 7 V66 (V sb. Vses. Mezhvuz. konferentsiya po teorii i metodam rascheta nelineyn. elektr. tsepey, no. 2-P, Tashkent, 1960, 197-209)

TEXT: Problems are considered of the el. conductivity in non-linear semiconductor resistances such as: The effect on conductivity of the specimen structure; the magnitude of voltage being applied; temperatures, and manufacture techniques. Conditions are considered of thermal stability of varistors made of technically pure powdered silicon with electron and hole conductivity. A table is given of basic properties of varistors PC3 -3 (RSZ-3), K3-T (KZ-T), K-2H (K-2N) and 1513, together with the voltampere and current temperature characteristics of non-linear barrier layer resistances of

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

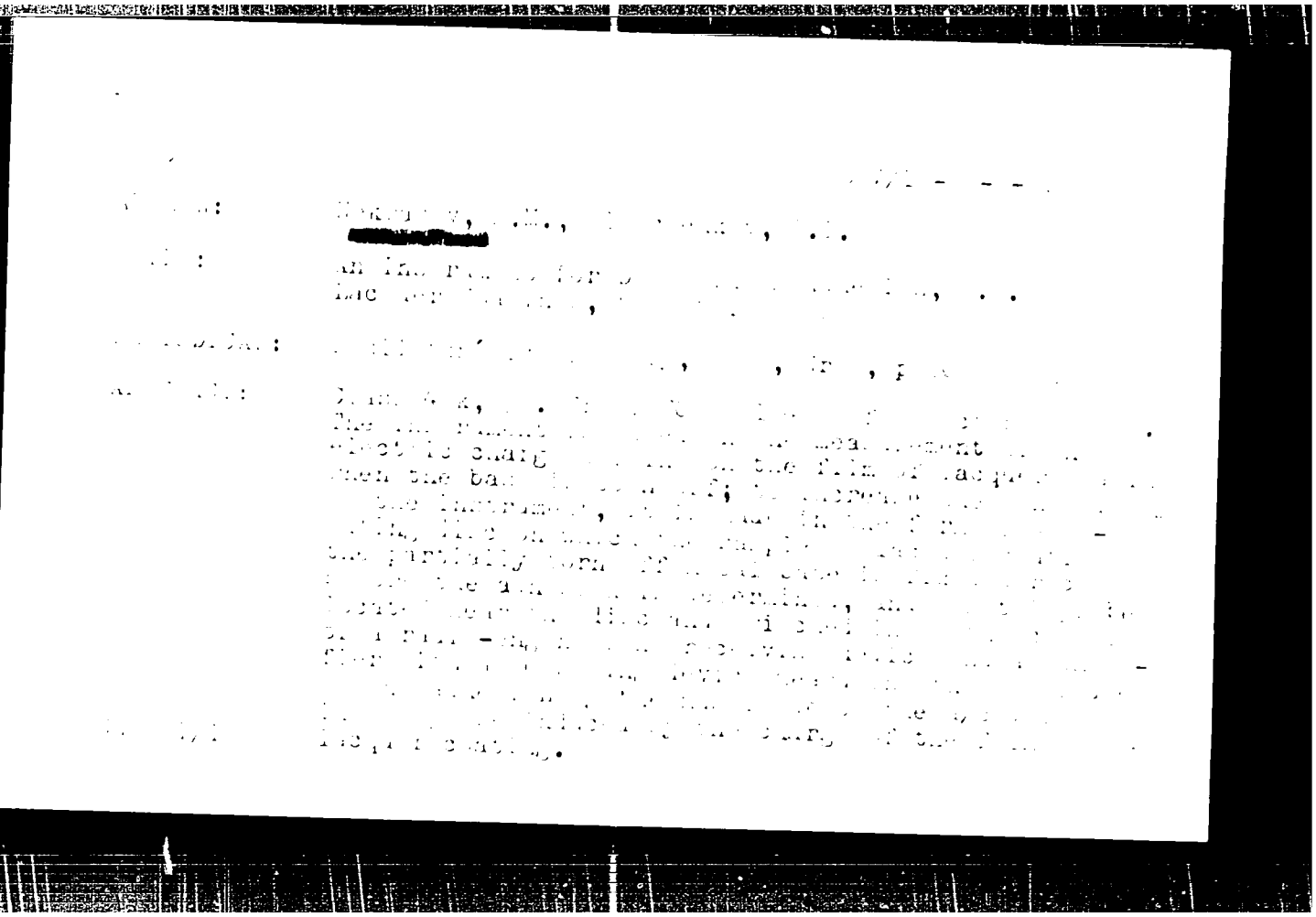
Non-linear thermally stable... S/194/61/000/007/011/079
D201/D305

various origins. 5 figures. 6 references. [Abstracter's note:
Complete translation]

Card 2/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113



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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

69456

24.7700

S/139/60/000/01/032/041
E201/E391

AUTHOR Nekrasov M.M.

TITLE Resistors with Various Non-linearities, Based on Oxide Semiconductors

PERIODICAL Izvestiya vysshikh uchebnykh zavedeniy Fizika 1960 Nr 1 pp 191 - 196 (USSR)

ABSTRACT: Oxide Semiconductors can be used to produce resistors of type R_{II} and R_{I}. In type R_{II} resistors large changes of the current are accompanied by very small changes of the voltage. In type R_{I} resistors large changes of the voltage are required to produce a small change of the current. The non-linearity of these resistors is mainly due to internal-field inhomogeneities (nonuniform external fields also increase the non-linearity). The internal field inhomogeneities are produced by an appropriate selection of the composition and by a suitable treatment particularly annealing. The greatest non-linearity is obtained when the internal-field inhomogeneities are at their maximum due to the presence of a barrier layer

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113[illegible]

69436

S/1[illegible]/60/0[illegible]0/0[illegible]/0[illegible]/04[illegible]
E-01/E[illegible]1

Resistors with Various Non-linearities Based on Oxide Semiconductors

Resistors of R_I-type were prepared from Sb_2S_3 + 5PbO (using pressures of 2 000 kg/cm^2 and roasting below 500 °C for up to 1 hour, Figure 1) from $MnCO_3$ + PbO_2, $MnCO_3$ + Pb_3O_4, $MnCO_3$ + PbO (by heating to about 400 °C the lead oxides were converted to PbO and the $MnCO_3$ + PbO mixture [illegible] non-linearity, Figures 2-4) and from mixtures [illegible] Fe_2O_3 such as Fe_2O_3 (50%)CuO(20%)ZnO (30%) [illegible] (50%)NiO(20%)CuO(15%)ZnO(15%). R_p-type [illegible] can also be prepared from $BaCO_3$ + PbO, $SrCO_3$ + PbO, etc. The [illegible] non-linearity was obtained by depositing a thin barrier layer on a mixed oxide resistor, for example by depositing a TiO_2 or a Bi_2O_3 layer on [illegible] + PbO, a TiO_2 layer on FeSi (5% Fe) or on pure Si [illegible] results can also be obtained by using

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

S/139/60/000/01/032/041
E201/E391

Resistors with Various Non-linearities Based on Oxide Semiconductors

ternary mixtures of some of the compounds listed above. Resistors of type R_I were prepared from $NiCO_3 \cdot PbO_2$ (roasting at 900 °C) and from $SiO_2 \cdot PbO_2$ (700 °C). The current-voltage and current-temperature curves of $NiCO_3 \cdot PbO_2$ are shown in Figures 6 and 7 respectively.

There are 7 figures and 6 references 2 of which are Soviet 2 English and 2 translations from English into Russian

ASSOCIATION Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnical Institute)

SUBMITTED January 28 1959 initially
July 11, 1959 after revision

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

NEKRASOV, M.M.

Improving the characteristics of insulation ceramics by decreasing their inhomogeneity. Izv.vys.ucheb.zav.; fiz. no.3:[illegible]-13 '60. (MIRA 14:7)

1. Kiyevskiy politekhnicheskiy institut.
(Ceramics)
(Electric insulators and insulation)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

82982

S/181/60/002/008/006/B006/B007

24.7800

AUTHORS: Nekrasov, M. M., Fotiyev, Yu. M.

TITLE: The Seignettoelectric Properties of Solid Solutions in the Ternary System $Ba(Ti,Zr,Sn)O_3$

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 8, pp. [illegible]

TEXT: In the present work, some problems of the preparation of seignettoelectric ceramics with large non-linearity and comparatively small losses are discussed. The non-linearity of ceramic capacitors is of great importance in radio-electronics. The properties of the ternary systems $(Ba,Sr)TiO_3$, $Ba(Ti,Zr)O_3$, and $Ba(Ti,Sn)O_3$, which show a large non-linearity, were previously studied by G. A. Smolenskiy et al., [illegible], N. P. Khodakov, V. A. Bokov, and T. N. Verbitskaya (Refs. [illegible]). On the basis of these systems, non-linear capacitors - the so-called varicapacitors - are commercially produced. They have, however, some flaws, for which reason new materials with better properties are sought to be obtained. The authors investigated many different compositions of the system mainly not

Card 1/3

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82982

The Seignettoelectric Properties of Solid [illegible] S[illegible]
Solutions of the Ternary System $BaTiO_3$-$BaZrO_3$-$BaSnO_3$ [illegible] B[illegible] F[illegible]

In the title in order to obtain the optimum composition with [illegible]
maximum non-linearity of the curve $\varepsilon(E)$. For the preparation [illegible]
samples (15 mm large tablets), $BaCO_3$, TiO_2, ZrO_2, and SnO_2 were [illegible]
the starting material; barium titanate, -zirconate and -stannate were
synthesized at 1200°C. The dependence of the temperature [illegible]
transition on the composition of $BaZrO_3$ - $BaTiO_3$ - $BaSnO_3$ was [illegible]
for these samples. The effects of the individual components on the
position of the Curie point (i.e., the temperature of phase transition
from cubic to tetragonal symmetry) is discussed in detail. Thus, for
example, it is found that an increase of zirconate or stannate not
the Curie point while the temperatures of other transitions are raised.
Thus, the three transitions never coincide. Fig. 2 shows the [illegible]
triangle of the investigated system; the region in which [illegible]
electric solutions are found is shaded; the investigated [illegible]
in the $BaTiO_3$ corner are noted. It was found that the temperature
$Ba_xTi_{0.8}Zr_{0.2}Sn_{0.4}O_3$ shows the optimum properties. [illegible]
composition, the reverse characteristics $\varepsilon(E)$ are [illegible]

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

The Seignettoelectric [illegible]

Solutions of the Ternary System Ba [illegible]

The temperature and frequency [illegible] investigated. Some numerical results [illegible] in a Table. The following [illegible] composition. $\varepsilon_{max}/\varepsilon_{min}$ = 18 [illegible]; $\frac{1}{\varepsilon}\frac{d\varepsilon}{dE}$ [illegible] with time = 2%. tanδ [illegible] fields; and Curie point [illegible] references. 11 Soviet and [illegible]

SUBMITTED December [illegible]

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

BC 9/3067

S/2100 (1135, 1145, 1155)

AUTHOR: Nekrasov, V. M.

TITLE: Nonlinearity of Carborundum Resistors

PERIODICAL: Inzhenerno fizicheskiy zhurnal, 1960, V. , N. , pp. 82-84

TEXT: According to the author the inhomogeneity of the inner field over the resistor cross section has to be regarded as the cause of the non-linearity of carborundum resistors. The present paper investigates this assumption. Samples of electrotechnical silicon carbide and abrasive silicon carbide were used. Monocrystals of electrotechnical silicon carbide are known to have nonlinear volt ampere characteristics. Monocrystals of abrasive silicon carbide produced by the Zaporozhskiy abrazivnyy zavod (Zaporozh'ye Abrasive Factory) have linear volt-ampere characteristics. The samples were classified into two groups. The first group was subjected to shock annealing, the second was slowly heated. The annealing temperature all samples consisted of 90% silicon carbide and 10% ultraporcelain. The volt ampere characteristics are shown in Fig.

Card 1/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

AUTHOR:

Nonlinearity of carborundum resistors

The author concludes from the results that the nonlinearity of the resistor is only due to inhomogeneities in the grain and that the higher the inhomogeneity of the sample the more are the values of which the resistor is nonlinear. Abrasive silicon carbides subjected to shock annealing can also be used as nonlinear resistors. The nonlinearity in electrotechnical silicon carbide begins at lower voltages than in abrasive silicon carbide; the latter exhibits a high thermal stability. There are 1 figure and 2 Soviet references.

ASSOCIATION: Politekhnicheskiy institut, Kiyev (Polytechnic Institute, Kiyev)

SUBMITTED: March [illegible]

Card [illegible]

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

NEKRASOV, Mikhail Makarovich, kand.tekhn.nauk, dotsent

Determination of the absorbtion coefficient of nonhomogeneous dielectrics. Izv. vys. ucheb. zav; elektromekh. 3 no.8:131-143 '60. (MIRA 13:9)

1. Zaveduyushchiy kafedroy dielektrikov i poluprovodnikov Kiyevskogo politekhnicheskogo instituta.
(Dielectrics)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

80157

S/105/60/000/05/18/028
B007/B008

24,2400

AUTHOR: Nekrasov, M.M.

TITLE: Nonlinear Capacitors on the Basis of Ternary Rochelle Salt Electrical Systems

PERIODICAL: Elektrichestvo, 1960, No. 5, pp. 76-79

TEXT: The following characteristics are demanded mainly of nonlinear dielectric elements: great dielectric constant, great variations of the "reversible capacitance" and small dielectric losses. A pairing of these properties is possible with the ternary rochelle salt electrical system (Ref., Footnote p. 76). Furthermore, such systems also allow one to obtain the necessary variety of characteristics by a suitable selection of the components. The advantages of the ternary rochelle salt electrical systems compared with the binary ones are shown in a table. It is possible to obtain special rochelle salt elements for the solution of certain problems, such as the measuring of the temperature with static pressure, on the basis of ternary rochelle salt electrical systems. The use of nonlinear capacitors rests on their property as follows: the capacitance of a capacitor working in the a.c. circuit depends on

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the d.c. voltage (reversible capacitance) applied to it. The reversible capacitance is the effective capacitance, if the a.c. field is superimposed by a d.c. field. The reversible correlations of the ternary rochelle salt electrical systems on the basis of $Ba(Ti, Sn, Zr)O_3$ are shown in Fig. 1. According to the amount of the a.c. voltage applied, the reversible nonlinearity also varies. This is the relative increase in reversible capacitance of the capacitor (measured in the a.c. field) divided by the increase in d.c. voltage. It can be seen from Fig. 1 that the greatest nonlinearity occurs at the gradient of the a.c. voltage of $E_{\sim}$ = 70 - 100 v/mm. The reversible correlations were investigated at various frequencies to test the possibility of an application in the practice. It was found that the reversible nonlinearity is not great at low a.c. voltages (up to 50 v/mm) and varies only slightly with the increase of the frequency of from 50 to 1.10^7 cycles. The reversible characteristic depends on the frequency at greater gradients of the a.c. voltage ($E_{\sim} \geq 100$ v/mm), this dependence becoming noticeable already at sound frequencies. The reversible nonlinearity of the rochelle salt electrical systems depends on the temperature of the surrounding medium This correlation expresses itself in various ways at various voltage gradients (Fig. 3). It is shown that the nonlinear capacitors should be used in the range

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of from -20 to +70°C at high voltages. In this case, a great steepness of the reversible correlation and smaller losses are obtained The curves in Fig. 3 show that the capacitance of the nonlinear capacitor does not depend only on the a.c. voltage, but also on the d.c. voltage. The a.c. circuit can therefore be controlled with the aid of the d.c. voltage or with the aid of a slowly altering signal. An amplitude modulation of high frequency is obtained in this way. The following remarks are made in conclusion: the ternary rochelle salt electrical systems give the possibility of obtaining elements with the necessary properties. Since the tgδ - maximum corresponds to relatively low temperatures and the dielectric losses decrease strongly with the further temperature rise, a quick stabilization of its temperature sets in with the operation of a nonlinear dielectric element. The individual properties of the dielectric elements can be strengthened on the basis of ternary systems and new possibilities for their application can thus be obtained. There are 6 figures, 1 table, and 1 Soviet reference.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnic Institute)

SUBMITTED: October 17, 1959

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

9.2100 (1135,1145,1331)

S/139/60/000/005/0[illegible]
E073/E135

AUTHOR: Nekrasov, M.M

TITLE: Non-Linear Resistance Based on Thin Haloid Compound Films

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No 5, pp 143-147

TEXT: Resistances possessing non-linear volt-ampere characteristics at very low applied voltages can be obtained by sublimation onto a metallic base. The structure of the layer directly adjacent to the base will differ from the layers above it and therefore it is always possible to produce a layered specimen with a non-uniform voltage distribution within the body of the film. The simplest technology of producing thin semiconducting films is thermal sublimation of haloid salts which can be done without vacuum. The films obtained on the metallic base will not be pure haloid compounds but a mixture of haloid compounds with the metal oxides. It is best to carry out the process in special furnaces in which the base and the substance to be evaporated (sublimated) are heated separately. In such a case it is possible to control the temperature not only of the substance to be

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APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

S/139/60/000/005/024/031
E073/E135

Non-Linear Resistance Based on Thin Haloid Compound Films

evaporated but also of the base, which is of considerable importance The quality of the film is affected not only by the temperature but also by the material of the base Non-linear resistances were produced consisting of thin films of haloid compounds with a relatively low fusion temperature. Non-linear resistances of the following films were obtain[illegible] HgI_2 films (0.1-0.2 mm thick), CdI_2, $CuBr_2$, $MgCl_2$, $FeCl_3$, [illegible] The resistances as a function of the r m s voltage for 200, 2000 and [illegible]00 kc/s are plotted in Figs 1-3 for films of the first three of the above mentioned components. The non-linearity of the volt-ampere characteristics of these films is attributed to the fact that the here mentioned haloid substances react chemically with the base, as a result of which layers of varying resistance are obtained; if in addition these layers also possess differing types of conductivities the films will have rectifying properties Some of the films also have high electric strength and therefore extensive practical applications can be anticipated

Card 2/

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

S/139/60/000/005/014/021
E073/E135

Non-Linear Resistance Based on Thin Ha[illegible] Semiconductor Film

There are 4 figures and 5 Soviet references

ASSOCIATION: Kiyevskiy politekhnicheskiy institut
(Kiyev Polytechnical Institute)

SUBMITTED: December [illegible], 1959, and after revision in February, 1960

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

NEKRASOV, M.M.; KOBTSEV, Yu.D.

Nonlinear seignettoelectric systems with several Curie temperatures.
Ukr. fiz. zhur. 5 no.1:75-78 Ja-F '60. (MIRA 14:6)

.. Kiyevskiy politekhnicheskiy institut.
(Ferroelectricity)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

S/[illegible]
A[illegible]

26.2190

AUTHORS: Nekrasov, M.M., and Siromakh, I.F.

TITLE: A Device for Measuring Static and Dynamic Pressures

PERIODICAL: Byulleten' Izobretenly, [illegible], No. [illegible], p. 44

TEXT: Class 42k, 14_{04}. No. [illegible] of Apr [illegible], 1960). In this device the measuring element is connected into a bridge circuit. The novel device is more sensitive, for which purpose it is fitted with a ferrite [illegible] of a toroidal shape, that takes up the active loads.

Card 1/1

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

9.2110(1643,1145,1153)

85019

AUTHORS. Nekrasov, M. M. and Koplavko, Yu. M.

TITLE: Solid Solutions of the Ternary Piezoelectric System Ba(Ti, Zr, Sn)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, ... Vol. 24, No. ..., pp. ...-...,

TEXT: The authors studied the dielectric properties of ... of the Ba(Ti, Zr, Sn) system of different compositions. The temperature dependence of the dielectric constant and of the ... tangent were measured with a Tesla bridge, various concentrations of zirconate and stannate have an additive effect on the temperature of the phase transitions (Fig. 1b). Near the point of incidence of the phase transitions, solid solutions with a predominance of titanate, the dielectric losses being comparatively small. For numerous solutions, the authors studied the dielectric constant and the loss angle tangent as functions of the field strength of the constant and the

Card 1/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

85019

[illegible] the Ternary [illegible] System Ba(Ti, Zr, Sn)[illegible]

[illegible]

[illegible] The resulting curves (Fig. [illegible]) represent [illegible] the [illegible] the reversible non-linearity. [illegible] the quality [illegible] linear [illegible] depends not only on the reversible non-linearity N_i [illegible] ε [illegible] $d\varepsilon/dE$ but also on the dielectric losses, the authors suggest [illegible] by the coefficient $K = |N_p|_{max}/\tan\delta$ of the solid [illegible] studied by the authors, Ba(Ti [illegible] 0.89, Zr [illegible] 0.11, Sn [illegible] has the highest value of K (K = 12), at which N_p = 0.9 cm kv for $\varepsilon_{max}/\varepsilon_{min}$ = [illegible], $\tan\delta$ = [illegible] weak fields, and $\tan\delta$ = 0.15 at a maximum. The present paper [illegible] at the <u>Third Conference on Piezoelectricity</u>, which took place [illegible] from January 2[illegible] to [illegible]. There are [illegible] figures and [illegible] references [illegible] Soviet.

Card [illegible]

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, M.M., kand.tekhn.nauk; SIROMAKHA, I.F.; CHEREDNICHENKO, V.Ya.

Induction instrument for measuring static and dynamic pressures.
Avtom.i prib. no.1:91 Ja-Mr '62. (MIRA 15:3)

1. Kiyevskiy politekhnicheskiy institut.
(Electric measurements)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113[illegible]

[illegible]/62 [illegible]
[illegible]/E435

AUTHORS: Bogdanovich, [illegible], Nekrasov, [illegible], Sikorskiy, Yu. [illegible]
Chepurenko, [illegible]

TITLE: A study of the electrical properties of solid solutions in pseudo ternary systems

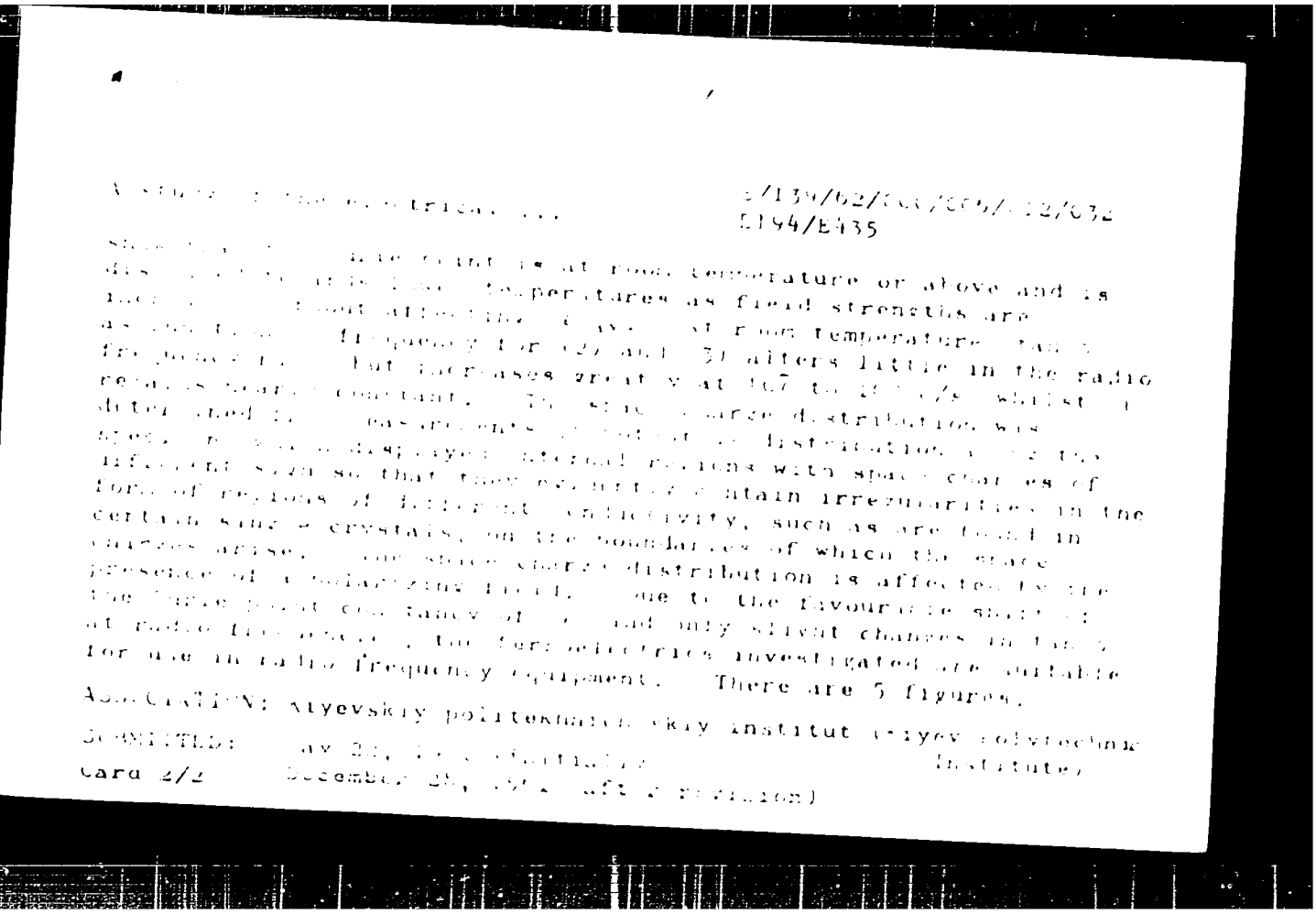
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika. no.6, 1962, 72-76

TEXT: The following pseudo ternary ferroelectrics were studied: 1) 65% [illegible] + [illegible] BaSnO3 + 31 BaZrO3 [illegible] 2) 85 [illegible] + [illegible] BaSnO3 + [illegible] and 3) 90% BaTiO3 + [illegible] BaSnO3 + [illegible] + 13 BaZrO3 [illegible]. Below a critical temperature, ranging from [illegible] °C for (1) to [illegible] 25° for (3), the conductivity is below 10^{-12} ohm^{-1}cm^{-1}; at higher temperatures the conductivity increases rapidly and the presence of an inflection point in the curve of logarithm of conductance against reciprocal temperature indicates that at high temperatures the conductivity is intrinsic and relates to the stoichiometric [illegible] composition whilst at lower temperatures it is extrinsic and depends on the divergence from the stoichiometric [illegible]. The energy of activation depends on composition, heat treatment and oxygen content. Curves of permittivity (ε) as function of temperature

Card 1/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113[illegible]

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136



S/139/62/000/006/012/032
E194/E435

Card 2/2 December 25, 19[illegible] (after revision)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, M.M., kand.tekhn.nauk; POPLAVKO, Yu.M.

Ferroelectric transducers. Avtom.i prib. no.1:59-62 Ja-Mr '63.
(MIRA 16:3)

1. Kiyevskiy politekhnicheskiy institut.
(Transducers)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

L 1269-66 EPA(s)-2/EPA(w)-2/EWA(h)/EWT(l)/EWT(m)/EWP(t)/EWP(b)/EWP(c) WH

ACCESSION NR: AR5012519 UR/0196/65/000/004/B011/B011
621.315.62

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 4B54

AUTHOR: Beirasov, M. M.; Savoshchenko, V. S.

TITLE: Capacitor ceramics $BaTiO_3$

CITED SOURCE: Sb. Proisv. protsessy i tekhnol. gorn. mashinostr. Khar'kov, Khar'kovsk. un-t, 1964, 166-169

TOPIC TAGS: ceramic capacitor

TRANSLATION: It is reported that if $BaTiO_3$ ceramic mass is processed along a conventional lines but with insufficient admission of oxygen, the result is a thermally stable ceramics of $BaTiO_3$ formula. The dielectric-constant temperature coefficient of $BaTiO_3$ within -60÷80C is 3% or lower; dielectric constant, about 500; $tg\delta$ within 40—130C is 1% or lower. The dielectric constant in an electric field of 100—700 v/mm is practically independent of the field strength; $tg\delta$ grows from 1 up to 4%. Within 10^3—10^5 cps, where dielectric constant is independent of f, $BaTiO_3$ is recommended for manufacturing temperature-stable ceramic capacitors. Bibl. 3, figs. 3.

Card 1/1 SUB CODE: MT, EC ENCL: 00

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

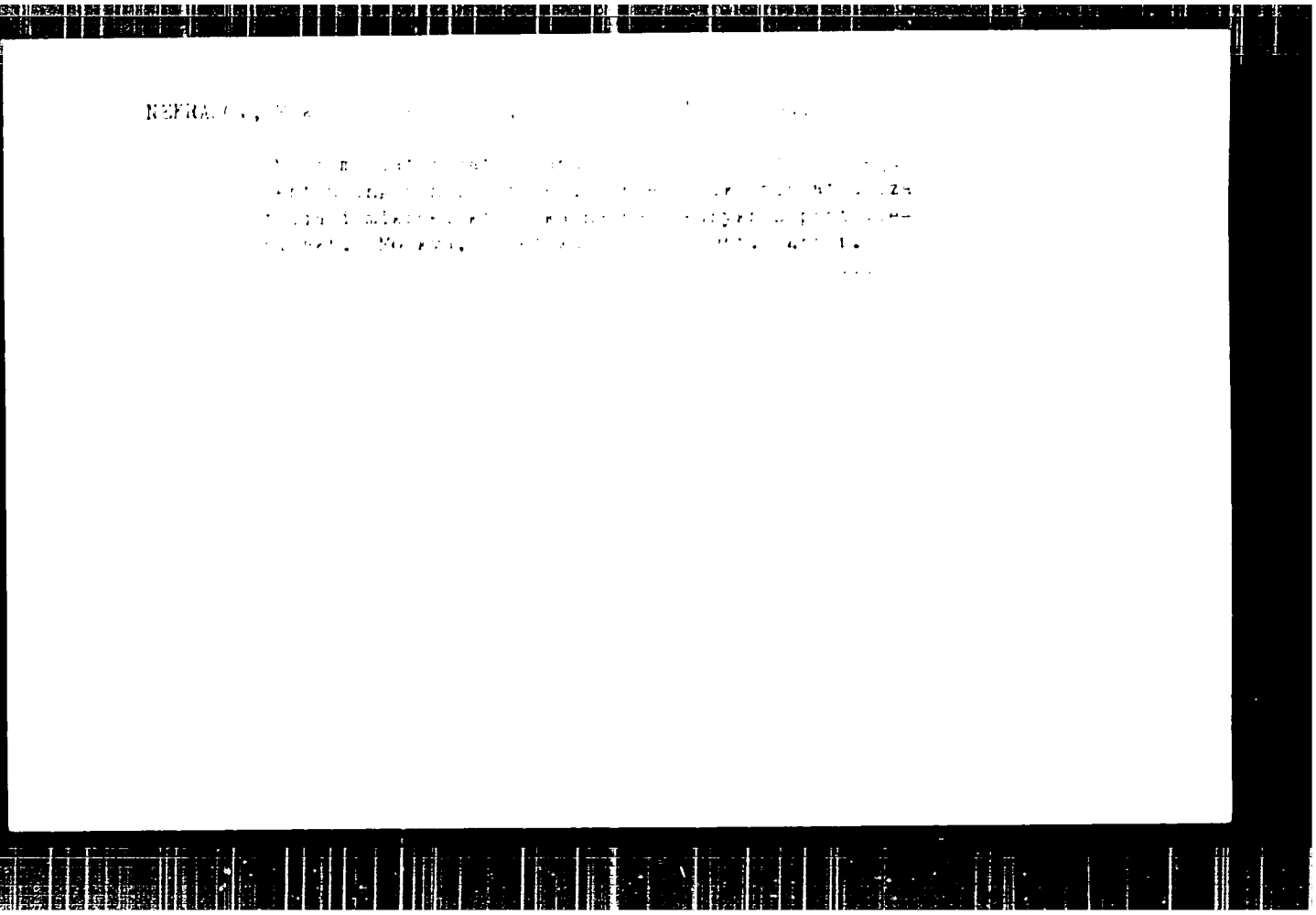
"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, M.M., kand.tekhn.nauk (Kiyev)

Control of the thermal resistance factor of semiconductors.
Elektrichestvo no.4:30-34 Ap '64. (MIRA 17:5)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

L 2996-66 EWT(m)/EWP(i)/EWP(t)/EWP(b) JD

ACCESSION NR: AP5019725 UR/0144/65/000/007/0834/0837
546.12

AUTHOR: Nekrasov, M. M. (Professor, Head of dielectrics and semiconductor dept) 39 B

TITLE: Thin-film ferric-chloride nonlinear resistors

SOURCE: IVUZ. Elektromekhanika, no. 7, 1965, 834-837

TOPIC TAGS: varistor

ABSTRACT: Phenomena transpiring in thin-film semiconductor varistors, such as lattice-type thermal conduction, macroscopic inhomogeneity vs. electric conductivity, etc. are briefly described. The best experimental results were obtained with a 0.005--0.002-mm $FeCl_3$ film deposited (by sublimation) on an iron sheet in 1.5--2 hrs at 300--310C, with a temperature of the backing of 130--140C. The varistor had a clearly nonlinear resistance at applied voltages as low as 0.5 v and could withstand temperatures up to 70C. Orig. art. has: 3 figures and 5 formulas

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnic Institute)

SUBMITTED: 10May61 ENCL: 00 SUB CODE: EC

NO REF SOV: 004 OTHER: 000

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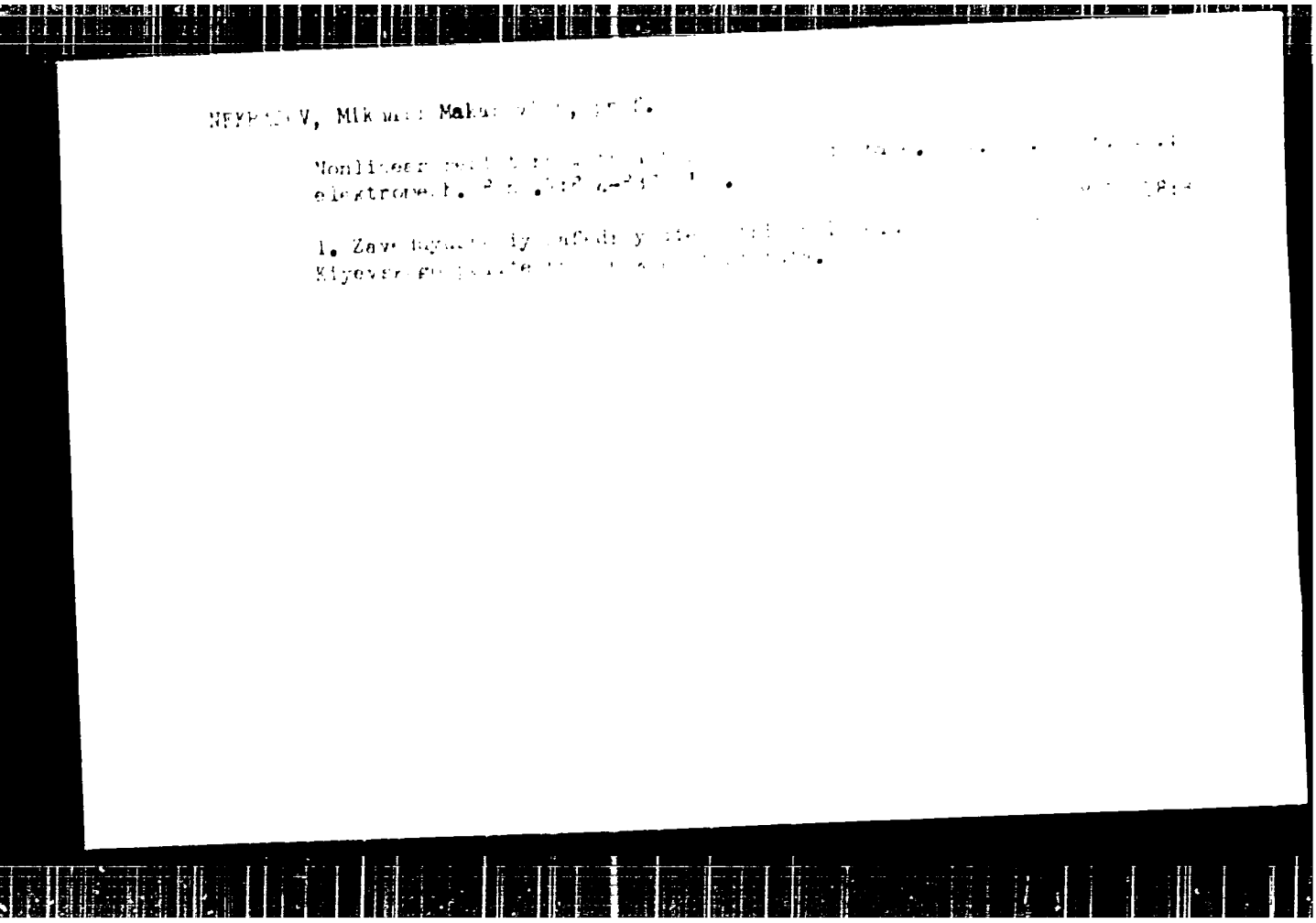
"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113[illegible]

ACC NR: AR6035131 SOURCE CODE: [illegible]

AUTHOR: Nersisov, M. M.; [illegible]

TITLE: The current amplification factor as a function of temperature [illegible] transistors consisting of monocrystals

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. [illegible]

REF SOURCE: Vestn. Kiyevsk. politekhn. in-ta. Ser. Radioelektron., [illegible] 2, [illegible] [illegible]

TOPIC TAGS: semiconductor [illegible], current amplifier, [illegible] transistor, monocrystal, triode, temperature variation

ABSTRACT: A composite transistor (CT) is an amplification cascade [illegible] of two or more transistors with directly connected electrodes. This method of connection provides a wide transmission band a d-c amplification factor with [illegible] increase in current α_{Σ} close to unity and an input resistance R_{input} close to the R_{input} of a vacuum tube. A two-triode CT circuit and estimates of its temperature

UDC: 621.382.071.72

Card 1/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113[illegible]

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

ACC NR: AR6035131

stability are given. An inverse relationship was found to exist between the coefficient of temperature stability S and the input resistence R_i. Experimental data are given in tabular form on the temperature dependence α_{ee}. Variations in α_{ee} amount only to a few fractions of one percent with a 60K change in temperature. There is a bibliography of 3 titles. [Translation of abstract]

SUB CODE: 09/

Card 2/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

ACCESSION NR.: AR4046015 S/0058/64/000/007/H035/H035

SOURCE: Ref. zh. Fizika, Abs. 7Zh244

AUTHORS: Nekrasov, M. N.; Poplavko, Yu. M.

TITLE: Investigation of nonlinear ceramic ferroelectric materials over a wide frequency range

CITED SOURCE: Izv. Kiyevsk. politekhn. in-ta, v. 40, 1962, 26-41

TOPIC TAGS: ferroelectric material, dielectric constant, ceramic dielectric, dielectric loss, domain structure, relaxation process

TRANSLATION: An experimental procedure is described, used in the investigation of nonlinear ferroelectrics (FE) in the range 0--10^{10} cps, and different methods of applying the control voltage are indicated. The influence of some technological factors on the dielectric properties of the FE at different frequencies is instigated.

Card 1/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

ACCESSION NR: AR4046015

The frequency dependences of the dielectric constant ε and of the losses tanδ of ceramic FE in weak fields are considered. It is established that the dielectric constant of an FE of any composition decreases with the increasing frequency in the range $0--10^{10}$ cps, and most sharply in the microwave region. Tanδ usually has a maximum at frequencies $10^{4}--10^{5}$ cps, and increases sharply with the frequency in the HF and in the microwave region, owing to the domain relaxation process. A fixed electric bias causes a decrease in ε and tanδ at all frequencies. Depending on the electric field, ε changes by 3--4 times away from the Curie point (by 30--40° lower) and is practically independent of the frequency up to the microwave region, where it decreases, but remains equal to 1.2--1.4 for several ferroelectrics. The frequency characteristics of the FE are greatly influenced by the technological regime, particularly the annealing temperature, and also the brand of the initial raw material.

Card 2/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

ACCESSION NR: AR4046015

SUB CODE: SS, MT ENCL: 00

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113(

NEKRASOV, M.V.

Technological processes in machining hydraulic cylinders.
Stan.i instr. 33 no.11:20-22 N '62. (MIRA [illegible])
(Metal cutting)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, N.

Attention [illegible] M. A [illegible]

1, Predsedatel' [illegible] Moskva.
obshche [illegible]

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, N.

Review of sports work. Voen. znan. 39 no.12:14-15 D '63.
(MIRA 17:1)

1. Predsedatel' Novosibirskogo oblastnogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, N.I.; IVANOV, S.I., redaktor; KARYAGINA, M.S., tekhnicheskiy redaktor.

[Organization of defense work in schools] Organizatsiia oboronnoi raboty v shkole. Moskva, Izd-vo DOSAAF, 1956. 55 p. (MLRA 9:6)
(Civil defense)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

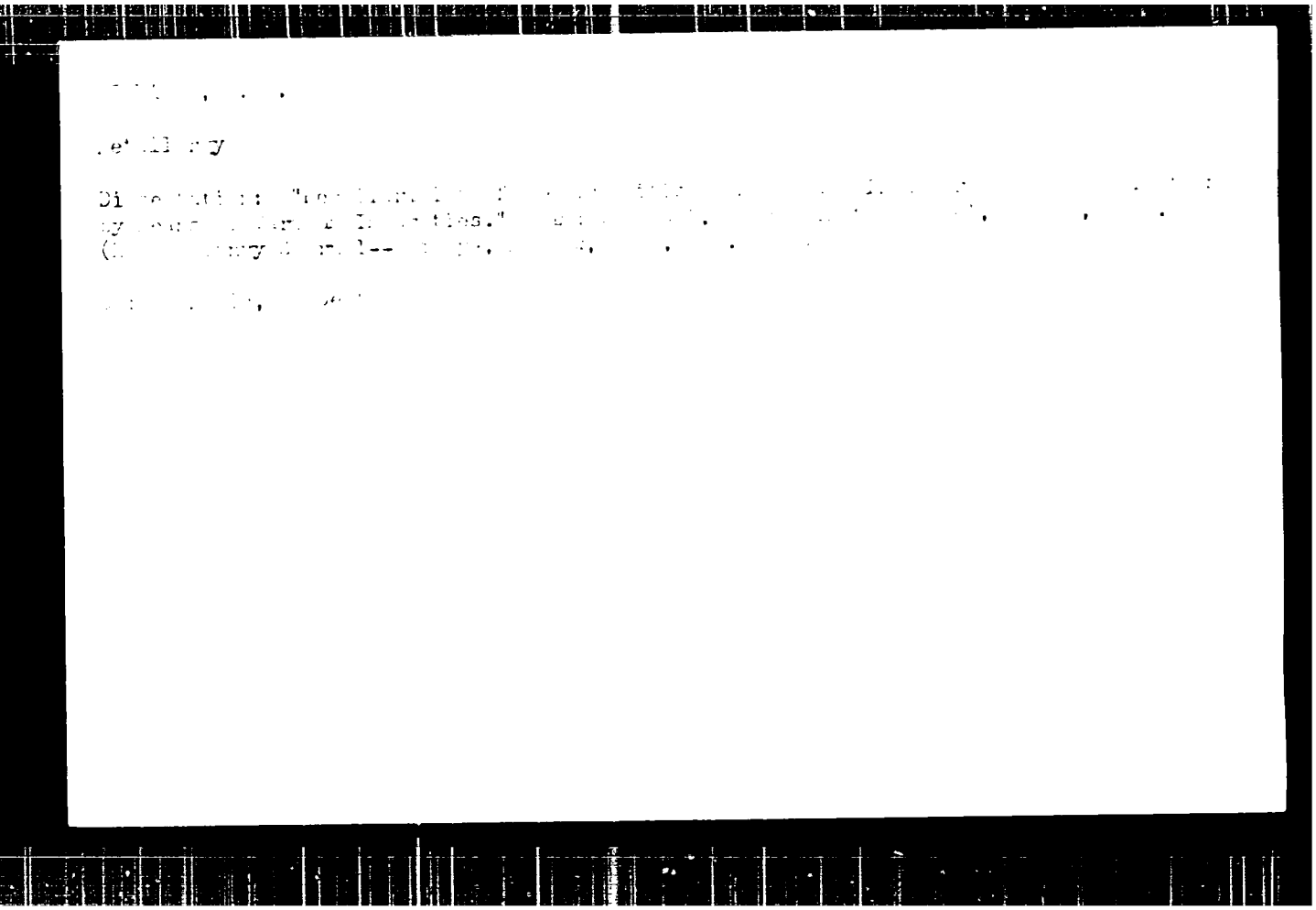
MIKRASOV, M.I., inzh.

Preventing backfiring of petroleum metal-cutting torches.
Bezop.truda v prom. 4 no.7:25-26 Jl '60.
(MIRA 13:8)

(Gas welding and cutting)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, N. K.

USSR/Miscellaneous - Foundry processes

Card 1/1 : Pub. 61 - 8/23

Authors : Stark, B. V., and Nekrasov, N. K.

Title : Effect of cast iron modified with 75%-ferrosilicon on its graphitization

Periodical : Lit. proizv. 4, 18-22, July 1954

Abstract : The effect of delayed addition of a 75%-ferrosilicon on the structure of cast iron at various contents of basic elements - carbon and silicon - and various modifier dosages, was investigated. The effect of modification was estimated by comparing cast iron samples prior and after addition of the modifying agent which changes the chem. composition of the cast iron. The effect of the modifier on the change in cast iron structure relative to the C and Si content in the cast iron, is explained. Ten USSR references (1941-1952). Tables; graphs; illustrations.

Institution : ...

Submitted : ...

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, N.K.

STARK, B.V.; NEKRASOV, N.K.

Influence of the oxidation of cast iron upon the effect of modification. Lit.proizv. no.9:18-20 D'54. (MLRA 8:2)
(Cast iron--Metallurgy)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

STARK, B.V.; [redacted] kandidat tekhnicheskikh nauk.

Characteristics of graphitization of cast iron during its transformation by various addition elements. Sbor. Inst. stali no.35:389-416 '56. (MLRA 10:8)

1. Kafedra teorii metallurgicheskikh protsessov. 2. Chlen-korrespondent AN SSSR (for Stark).
(Cast iron--Metallography)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

Translation from: Referativnyy zhurnal: Metallurgiya, 1958, No. 4, p. 8554

AUTHOR: Nekrasov, N. K.

TITLE: To the Theory of Inoculation of Iron. (K teorii modifitsirovaniya chuguna.)

PERIODICAL: Sb. tr. Moskovsk. tekh. metallurg. in-t, 1957, Nr. 2, pp. 59-73

ABSTRACT: A review of present day theories of inoculation. Three pre-
sented and the two recognized theories which regard the pro-
cess of I as the result of the influence of the additives upon
crystallization parameters, namely, the nucleation hypothesis
(NH) and the adsorption film hypothesis, are subjected to crit-
ical analysis. Proof is advanced of the impossibility of mechan-
ical application of either of these theories to the process of iron
I in which crystallization is complicated by graphitization. The
conclusions of various Soviet investigators adhering to the NH
and to the adsorption film hypothesis are compared with the
results of the author's experimental investigations performed
by addition of graphitizing and carbide-inhibiting inoculants to
the melt. It would appear that I makes for the formation of mic-
roscopic inhomogeneities in the concentration of the added ele-

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To the Theory of Inoculation of Iron

ment in the liquid with some increase in concentration in individual volumes. Depending upon the nature of the additive, either an increase in the tendency of the melt to undergo graphitization or a decrease therein may occur. This analysis of the process makes it possible to explain phenomena that are difficult to explain by the NH. The phenomenon of demodification on addition of both graphitizing and carbide-stabilizing inoculants is explained as the consequence of an equal effect in the chemical composition which leads to an unmodified course of crystallization in the iron. The magnitude of the optimum time that lapses after the introduction of the inoculants, the increase in the effect when the amount of inoculant is increased, the reduction effect when oxidized iron is treated and similar matters now become explainable. The identity of the mechanism of iron with liquid and solid inoculants is noted. It is pointed out that O_2, S and other impurities decrease the strength of the Fe-C bonds, neutralize the effect of inoculants. Bibliography: 18 references.

[illegible]

Card 2/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113(

NEKRASOV, N. N.

Economics of the hydrogenation of Barzass coals B. N. Gladtsinov, N. N. Nekrasov and D. Ya. Shilerson. *Khim. Tverdogo Topliva* 6, 471-5(1935). Calcns. of cost of hydrogenation under economic conditions existing in Russia are presented. A. A. Boehtlingk

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113(

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

P. L.

NEKRASOV, N. N., KATZNELSON, and KOVALOV, A. A.

"Salamatin Apparatus for [illegible]," Zav. Lab.,
No. [illegible], pp. [illegible], 19[illegible]

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

N.KRASOV, Nikolai Nikolaevich.

Natural gas production in the Soviet national economy Moskva, Gosplanizdat, 1940. 135 p. map. (50-46899)

TN880.N45

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, Nikolai Nikolaevich.

New types of fuel Moskva, Gosplanizdat, 194?. 23 p. Narodnoe khoziaistvo na sluzhbe otechestvennoi voiny (49-32531)

TP343.N4

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, Nikolai Nikolaevich.

Substitute petroleum products Moskva, Gosplanizdat, 1943. 59 p. Narodnoe khozyaistvo na sluzhbe otechestvennoi voiny (48-35391)

TP343.N43

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

ZHITKOV, D.G., kandidat tekhnicheskikh nauk; NEKRASOV, N.N., inzhener.
POSPEKHOV, I.T., inzhener.

Examination of worn steel-wire ropes. Vest.mash.27 no.7:25-30 Jl '47. (Wire rope) (MLRA 9:4)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

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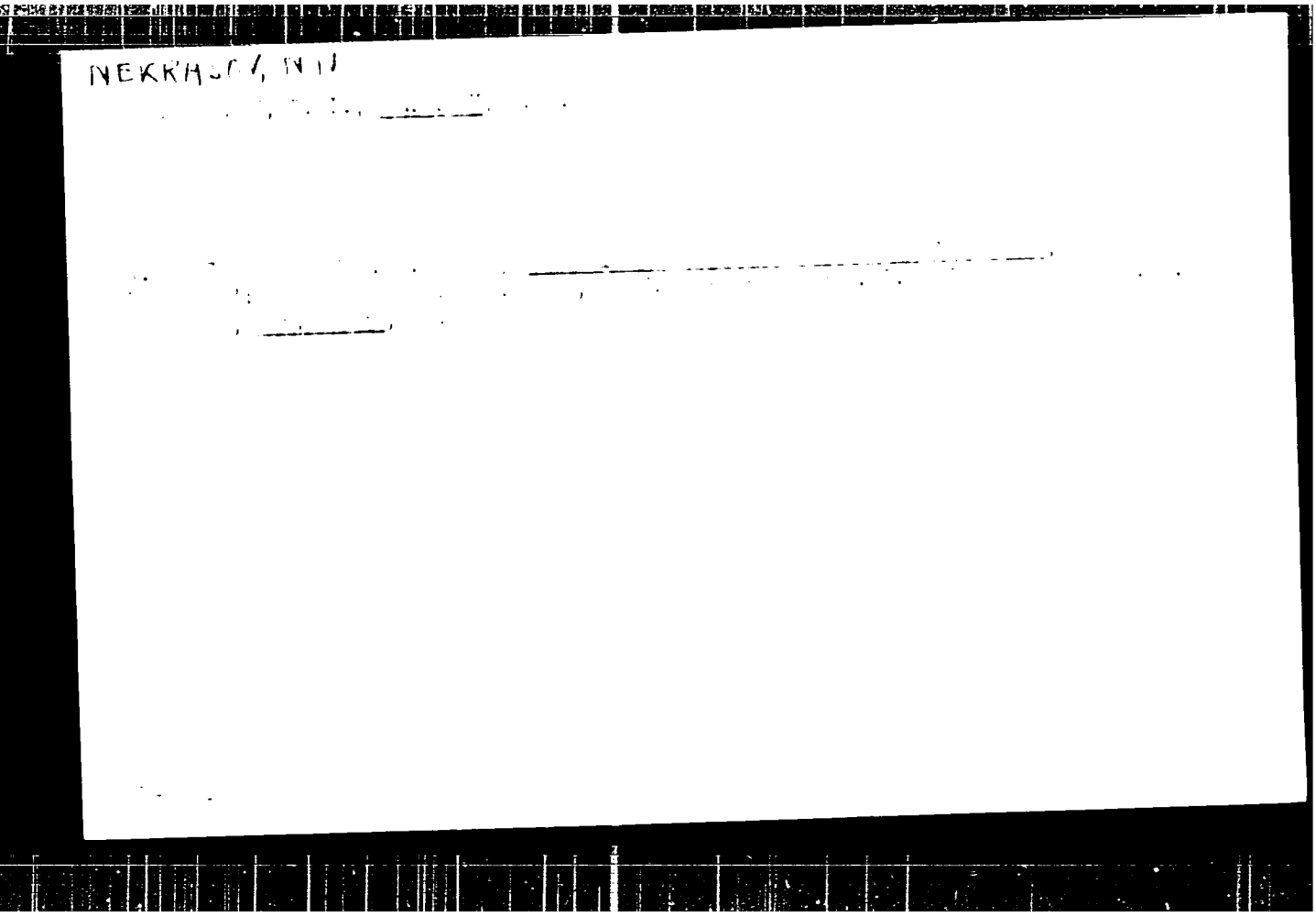


APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

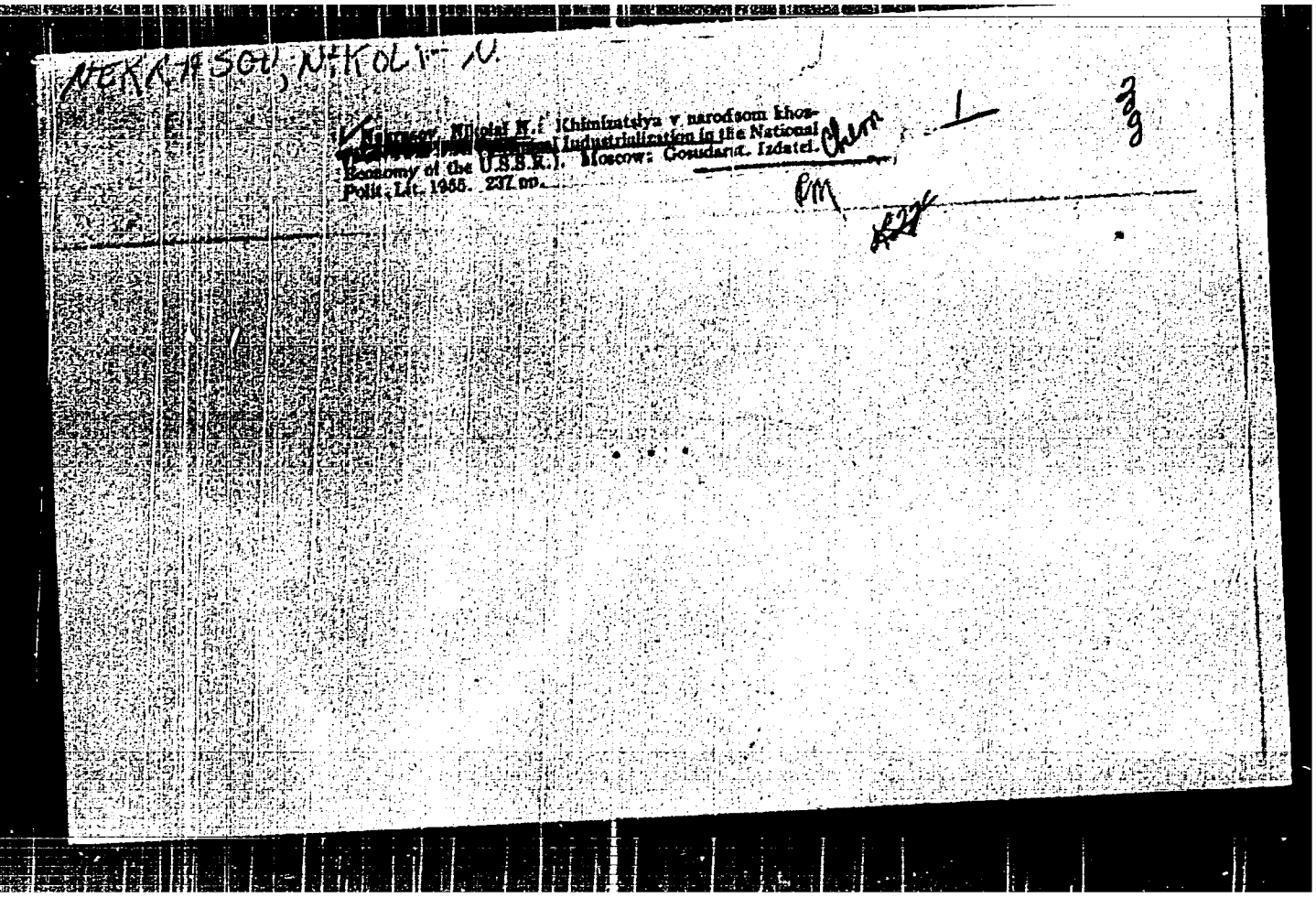
NEKRASOV, Nikolay Nikolayevich, professor; ISLANKINA, T.F., redaktor; ISLENT'YEVA, P.G., tekhnicheskiy redaktor.

[The increasing role of chemistry in the industrial processes of Russia's national economy] Khimizatsiia proizvodstvennykh protsessov v narodnom khoziaistve SSSR. Moskva, Izd-vo "Znanie," 1955. 30 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii, Ser. 4, no.2). (MLRA 8:4)

(Chemistry, Technical)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113



NEKRASOV, NIKOLAI V.

Nekrasov, Nikolai N. [Chimiatstva v narodnom khoz-
Academy of the U.S.S.R.). Moscow: Gosudarstv. Izdatel.
Polit. Lit., 1955. 237 pp.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

PHASE I BOOK EXPLOITATION 370

Nekrasov, Nikolay Nikolayevich

Ekonomika promyshlennosti i tekhnicheskiy progress (Industrial Economics and Technical Progress) Moscow, Gospolitizdat, 1957. 116 p. 25,000 copies printed.

Ed.: Antosenkova, L.; Tech. Ed.: Troyanovskaya, N.

PURPOSE: This booklet was written to acquaint readers with some problems of Soviet industrial economics, and the effect of technical progress on production increase, as well as the locational shifts and concentration of industrial production in the USSR.

COVERAGE: The subject paper reviews some industrial economics problems in connection with the accelerated technical progress of the

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primarily the U.S.A. There are no references.

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

PHASE I BOOK EXPLOITATION 672

Nekrasov, Nikolay Nikolayevich, Professor

Ekonomika khimicheskoy promyshlennosti (Economics of the Chemical Industry) Moscow, Gos. Izd-vo "Sovetskaya nauka", 1957. 396 p. 7,500 copies printed.

Ed.: Eydel'man, B.I.; Ed. of Publishing House: Lipkina, T.G.; Tech Ed.: Titova, L.

PURPOSE: This book has been approved by the Ministry for Higher Education of the USSR as a textbook for industrial engineering institutes and departments.

COVERAGE: The book describes the changes in the growth and scope of the Soviet chemical industry. It emphasizes the interrelationship which exists between engineering and economics in the chemical industries and in the different branches of the chemical industry. The book comprises 14 chapters which deal separately with the growth, location, structure, capital and labor, and management of the chemical industry. It also discusses planning and the rates of present and future development. There are no references. No personalities are mentioned.

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

5(0) PHASE I BOOK EXPLOITATION SOV/1406

Nekrasov, Nikolay Nikolayevich, Corresponding Member, USSR Academy of Science

Khimiya v narodnom khozyaystve (Chemistry in the National Economy) Moscow, Izd-vo "Znaniye," 1958. 47 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya III, 1958, no. 40) 66,000 copies printed

Sponsoring Agency: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy.

Eds: Bogatyrenko, Z.S. and Falaleyeva, T.F.; Tech. Ed.: Atroshchenko, L.Ye.

PURPOSE: This booklet is intended for the general reader interested in the production of chemicals and synthetic materials, and in the role of chemistry in the national economy.

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APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

Chemistry in the National Economy SOV/1406

COVERAGE: The rapid development of the chemical industry and the use of chemicals in various fields of the Soviet national economy is outlined. The Soviet Union now occupies second place, after the USA, in the production of chemicals. In the rate of the development of chemical production, however, the Soviet Union enjoys first place. All the prerequisites for a further rapid development of the chemical industry exist in the USSR. The gradual increase in the production of chemicals and such raw materials as synthetic rubber, fiber, wool, cotton, plastics, etc. is illustrated in a number of tables. The economic advantage of producing and using synthetic materials is illustrated by a number of examples. Investments and labor required to produce materials consisting of polymers are by far lower than those required for the recovery of a natural raw material. Millions of tons of various vegetables are needed to produce the alcohol which is used as raw material in the production of synthetic rubber, varnish, paints, drugs and other synthetic products. Thanks to recently developed technological methods, it has become possible and profitable to use synthetic material instead of food products as a raw material.

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Considerable efforts are therefore being made to widen the range of synthetic material needed in various branches of the industry. The author emphasizes the growing utilization of synthetic products and the increasing role of chemicals in agriculture and forestry. Efforts should be made to minimize losses of such raw materials as natural gas, paraffin wax, wood pulp, etc. All raw materials are needed and can easily be utilized in the interests of the Soviet national economy. No personalities are mentioned. No references are given.

TABLE OF CONTENTS:

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, N.N.; SHELEST, V.A.

Soviet-Chinese research in the Amur Basin. Izv.Sib.otd.AN SSSR no.10:5-14 '59. (MIRA 13:4)

1. Sovet po izucheniyu proizvoditel'nykh sil pri Prezidiume AN SSSR.

(Amur Valley)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, Nikolay Nikolayevich; EYDEL'MAN, B.I., red.; LIPKINA, T.G., red.izd-va; GRIGORCHUK, L.A., tekhn.red.

[Economics of the chemical industry] Ekonomika khimicheskoi promyshlennosti. Izd.2., perer. i dop. Moskva, Gos.izd-vo "Vysshaia shkola," 1959. 478 p. (MIRA 13:3)

1. Chlen-korrespondent AN SSSR (for Nekrasov).

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

MIKRASOV, N.N.

Current development and location of the productive forces of Siberia and the Far East is the incarnation of Lenin's ideas. Izv.Sib.otd.AN SSSR no.6:3-16 '60. (MIRA 13:9)

1. Sovet po izucheniyu proizvoditel'nykh sil AN SSSR.
(Siberia, Eastern--Economic geography)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NEKRASOV, N.N.

Scientific problems underlying the distribution of the productive forces. Vest. AN SSSR 33 no.5:24-33 My '63. (MIRA 16:6)

1. Chlen-korrespondent AN SSSR. (Industry)

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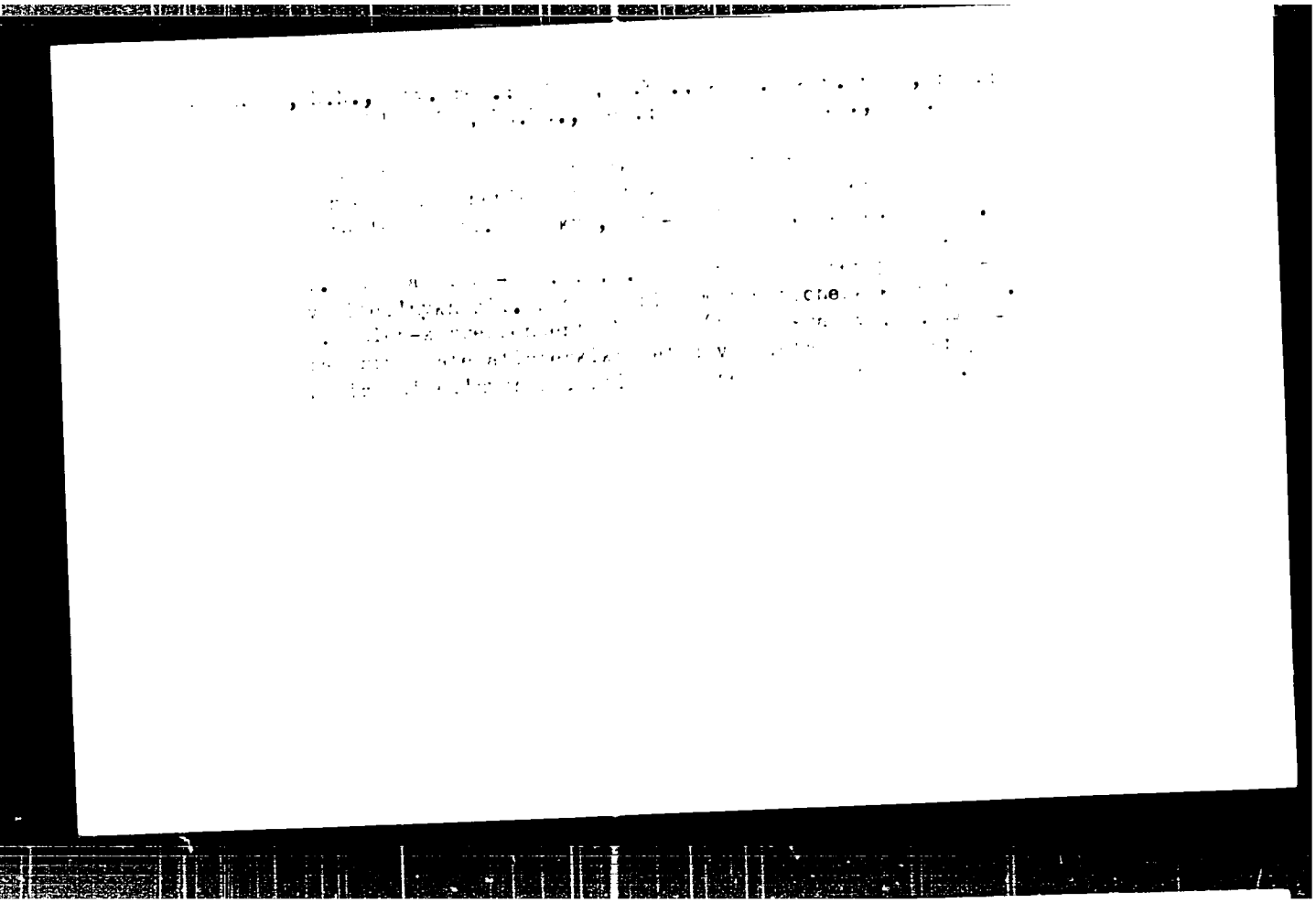
"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

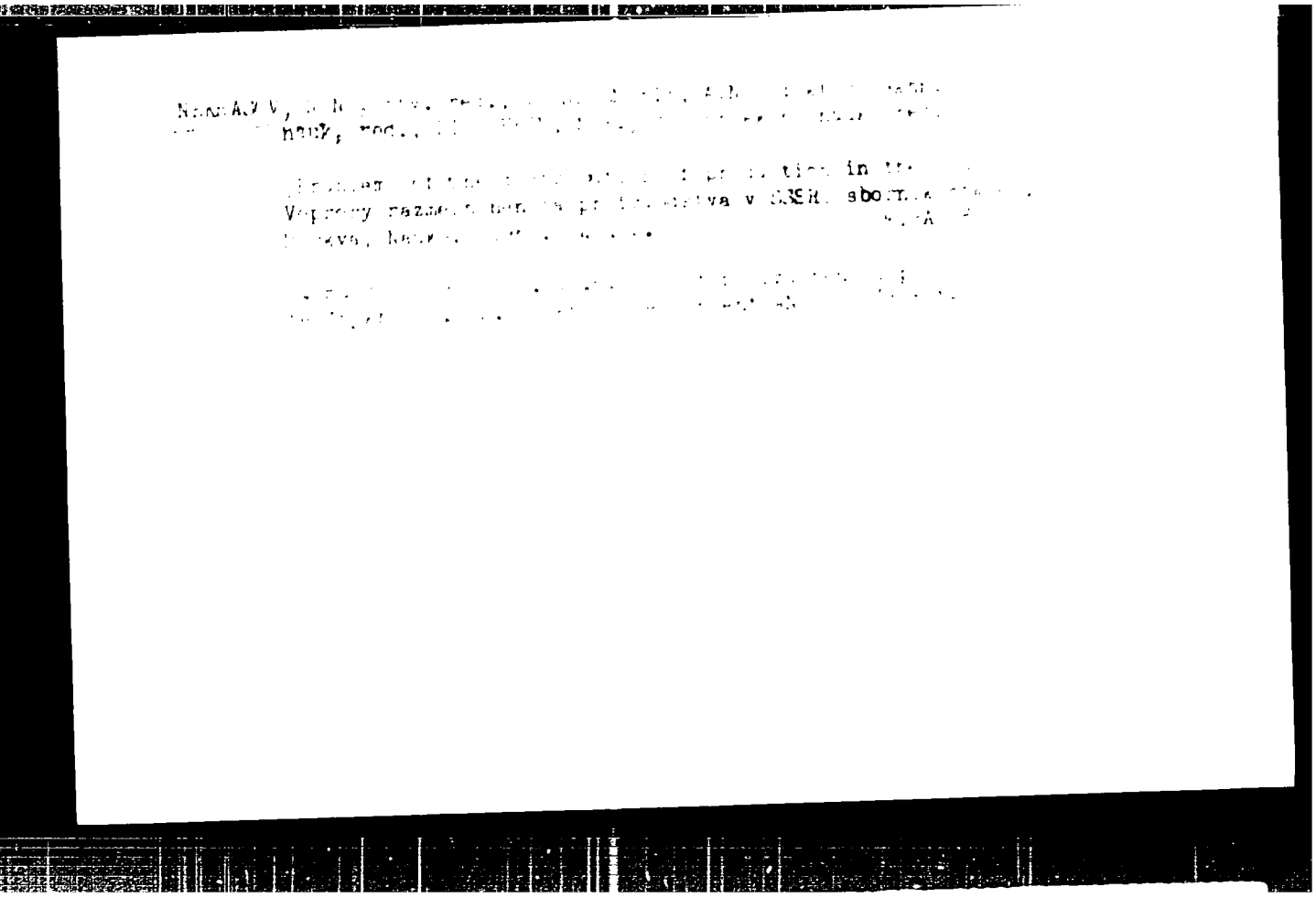
MAELADZE, Irakliy Solomonovich; NEKRASOV, N.N., otv. red.

[Specialization and the comprehensive development of the economy of the Georgian S.S.R. Spetsializatsiia i kompleksnoe razvitie narodnogo khoziaistva Gruzinskoi SSR. Moskva, Nauka, 19[illegible]. [illegible] p. (MIRA [illegible])

1. Chlen-korrespondent AN SSSR (for Nekrasov).

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113



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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

Name: NEKRASOV, N. V.

Dissertation: The development of teaching the USSR Constitution in the Soviet school

Degree: Cand Ped Sci

Affiliation: Acad of Pedagogical Sci RSFSR, Sci Res Inst of Teaching Methods

Defense Date, Place: 1955, Moscow

Source: Knizhnaya Letopis', No 45, 1956

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

KOLYSHEV, V.I.; NEKRASOV, N.V.; MARTYNOV, N.V., redaktor; GALAKTIONOVA, Ye.N., tekhnicheskiy redaktor.

[Laying asphalt concrete; manual for operators of asphalt laying machines] Ukladka asfal'tobetona; posobie motoristu asfal'toukladchika. Moskva, Izd-vo doroshno-tekhn.lit-ry Gushosdora MVD SSSR, 1952. 79 p. [Microfilm] (MLA 9:1)

(Asphalt concrete)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

NEKRASOV, N.V.

Significance of nonspecific sensibilization in complication in blood transfusions. Akt.vop.perel.krovi no.4:141-142 '55.
(MIRA 13:1)

1. Laboratoriya eksperimental'noy patologii Leningradskogo instituta perelivaniya krovi (zav. laboratoriyey - chlen-korrespondent AMN SSSR, prof. I.R. Petrov)
(BLOOD--TRANSFUSION)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

NEKRASOV, M.V.; RUSAKOV, A.N., otv.red.; KUDAKOVA, N.I., ekhn.red.

[Standards and estimates for building and assembly work] Edinye normy i rastsenki na stroitel'nye, montazhnye i remontno-stroitel'nye raboty 1960 g. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam. No.17. [Road construction] Dorozhnye raboty. 1960. 58 p. (MIRA 13:8)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. TSentral'naya normativno-issledovatel'skaya stantsiya Orgtransstroya Ministerstva transportnogo stroitel'stva (for Nekrasov).
(Road construction--Costs)

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

NEKRASOV, N.Ya.

Using 2,4-D together with fertilizers. Zemledelie 25 no.6:56 Je '63.
(MIRA 16:9)

1. Khar'kovskiy sel'skokhozyaystvennyy institut.
(Kharkov Province—Grain—Fertilizers and manures)
(Kharkov Province—Weed control)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

[redacted]

Economics build plants. Tekh.-mol. 30 no.11:1-, '62.
(MIR 16:9)

1. Spetsial'nyy korrespondent zhurnala "Tekhnika molodezhi" (for Doldobanov).

(Industrial management)

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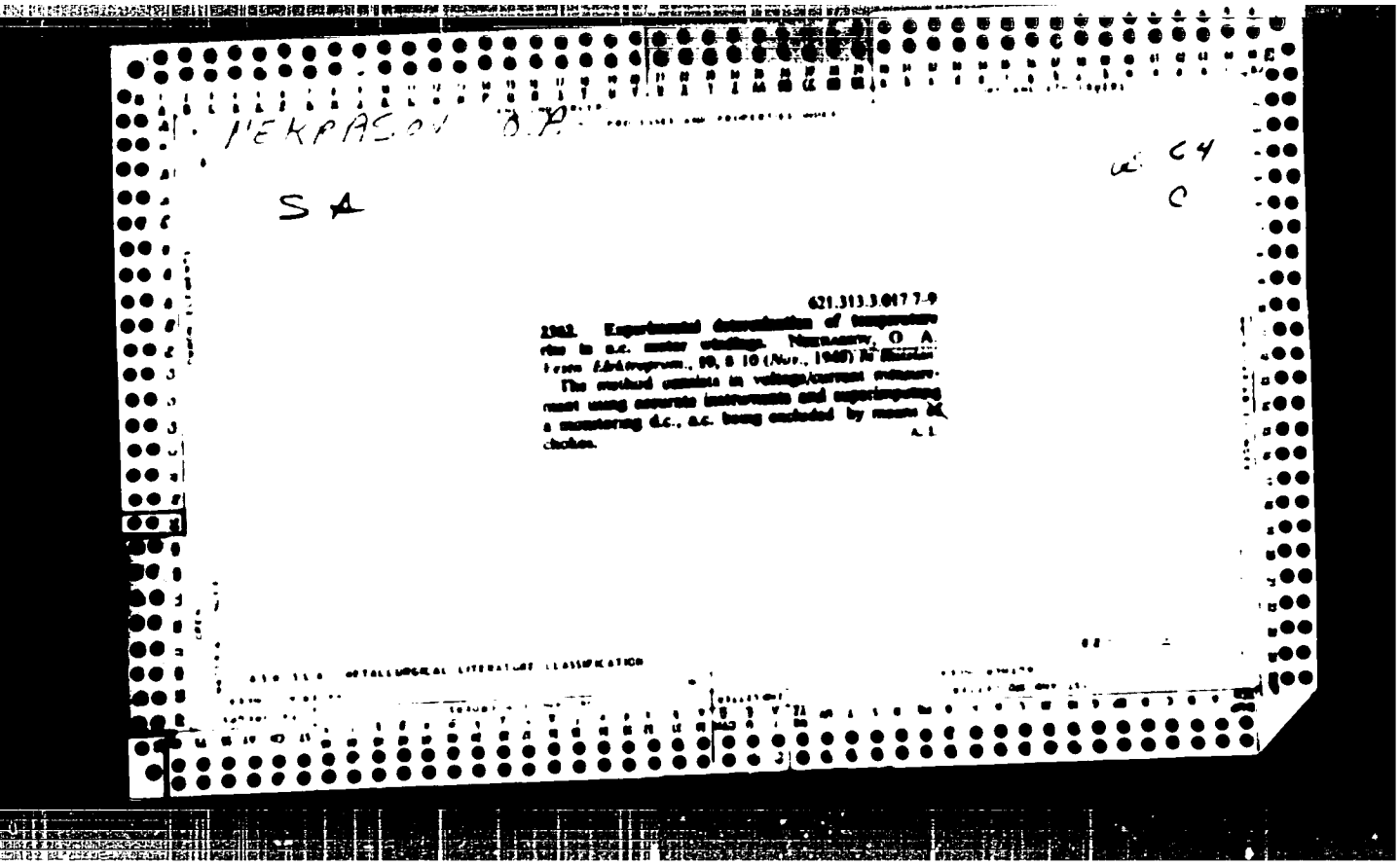

621.313.3.017.7-9

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113(

NEKRASCV, C A

1704. Test of traction motors by the method of artificial impulse load. Nekrasov, O. A. Elektrichestvo, 2, 67-9 (Feb., 1949) In Russian.—Traction motors may be tested by subjecting them to a variable load which can be made equivalent to the motor rating. The armature is connected to the line, the field is separately excited and by means of a periodically opening and closing contactor the excitation is made to vary between two limiting values. The value of the field external resistance shunted by the contactor and the length of the cycle which should give r.m.s. armature current equivalent to the rated value can be calculated. The armature current varies between a max. motoring and a max. generating value. The method was tried out on some tramcar motors and the frequency of contactor cycle was [illegible]. A small additional transient rapidly damped oscillating current appeared owing to the practical impossibility of determining the constants of the system very accurately. It was found impossible to attain a load equivalent of the 1 hr rating of the tested motors as the commutation became very bad but it is felt that for other types of motors this equivalence could be obtained. [illegible]

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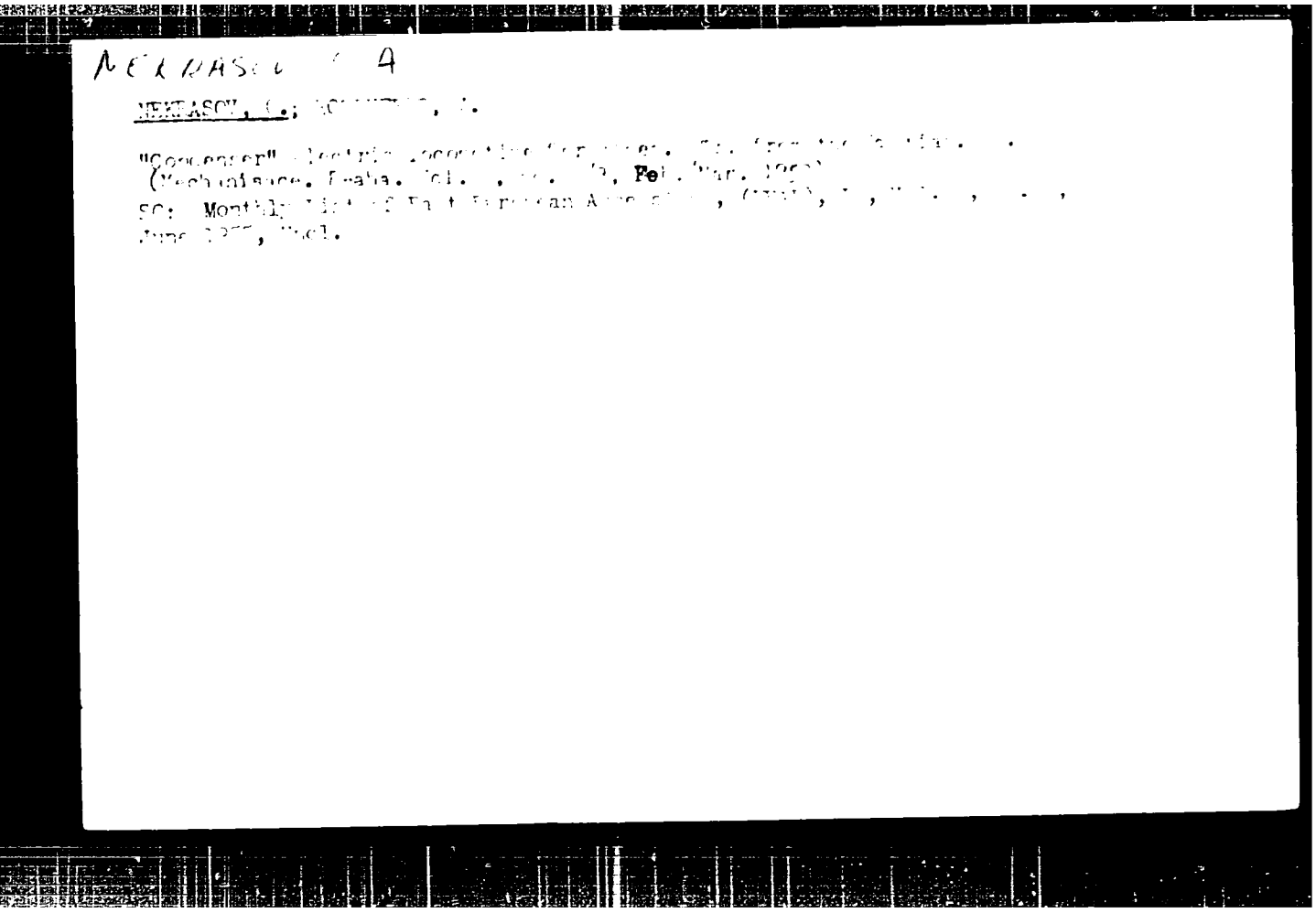

RELEASE 4

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001136

AUTHORS: Nekrasov, Oleg Alekseyevich, Candidate [illegible] 161 [illegible] of Technical Sciences, Senior Scientific Worker at the Chair of Electric Transport at the Moscow Institute of Power Engineering, Rekus, Grigoriy Savrilovich, Assistant at the Chair of Electrical Engineering at the Moscow Technical University imeni Bauman

TITLE: On a Starting-Up Circuit of a Condenser Induction Motor (Ob odnoy skheme puska asinkhronnogo kondensatornogo elektrodvigatelya

PERIODICAL: Nauchnyye doklady vysshey shkoly, Elektromekhanika i avtomatika, 1958, Nr 1, pp. 148 - 151 (USSR)

ABSTRACT: A method is investigated for the increase of the starting-up torque of a condenser motor by shunting the starting-up capacity by an effective resistance, which is disconnected after starting. This starting-up circuit is free of complicated appliances and in a number of cases permits to reduce the starting-up capacity. Two circle diagrams of a two-phase motor are given. One shows the moment of connecting, if a given capacity is connected with the condenser phase. The second shows the effect of shunting the capacity by an effective resistance. A compari-

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...ber of the two diagrams shows, that the shunting of the ...pacity by an effective resistance leads to a more symmetrical ...peration of the motor and an increase of the starting-up torque. The computations show that an optimum increase of the starting torque by shunting the condenser is attained at a starting capacity not exceeding a certain value. If the capacity is greater the effect is inversed or it does not occur at all. The greater the starting capacity, the smaller will be the effect caused by the connection of the effective resistance. It will tend towards zero at a certain ... The connection of an effective resistance results in an increase of the starting torque by a factor of ... as compared to that developed by the motor without a starting resistance. As a summary it is stated: It is favorable to use a resistance at starting the motor in starting installations. If conditions are selected in a favorable manner this results in a reduction of the starting capacity by a factor of ... and an increase of the starting torque by a factor of from ... to 2.5. 2 The circuit incorporating a starting resistance

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