\$/192/62/003/005/002/003 D267/D308

X-ray diffraction ...

number of molecules in the cell, and density (both calculated and determined). There is 1 table.

ASSOCIATIONS:

Institut elementoorganicheskikh soedineniy AN SSSR (Institute of Elemental Organic Compounds AS USSR); Universitet Adama Mitskevicha, Poznan', Pol'skaya Narodnaya Respublika (Adam Michiewicz University, Poznań, Polish People's Republic)

SUBMITTED:

July 1, 1962

Oard 2/2

	MHOTSYANOVA, T.L.; AVOYAN, R.L.	
	Preliminary K-ray study of some triphenyloxomium salts. Zhur. strukt.khim. 4 no.1:113 Ja-F 163. (MIRA 16:2)	
,	l. Institut elementoorganicheskikh soyedineniy AN SSSR. (Oxonium compounds) (X-ray crystallography)	

AVOYAN, R.L.; STRUCHKOV, Yu.T.

Crystal structure of 4-chlore-5-bromeacenaphthene. Zhur.strukt.khim.
4 no.4:631-633 Jl-Ag '63. (HIRA 16:9)

1. Institut elementeerganicheskikh seyedineniy AN SSSR.

(Acenaphthene crystals)

AVOYAL, R.L.; KITAYGOAGDSKIY, A.1.; STRUCHKOV, Yu.T.

Crystal structure of 5,6-dichlero-11,12-diphenylnaphthacene. Zhur.
strukt.khim. 4 no.4,1633-636 Jl-Ag 163. (MIRA 16:9)

1. Institut olementoerganicheskikh seyedineniy AN SSSR.

(Naphthacene crystals)

AKOPYAN, Z.A.; AVOVYAM, R.I..; STRUCHEOV, Yu.T.

Space groups and unit cells of organic compounds. Part 2: Peridisubstituted nephthalenes. Zhur.strukt.khim. 4 no.5:772 S-0 (MIRA 16:11)

1. Institut elementoorganicheskikh soyedineni; AN SSSR.

ZAKHAROVA, G.N.; AVOYAN, R.L.; STRUCHKOV, Yu.T.

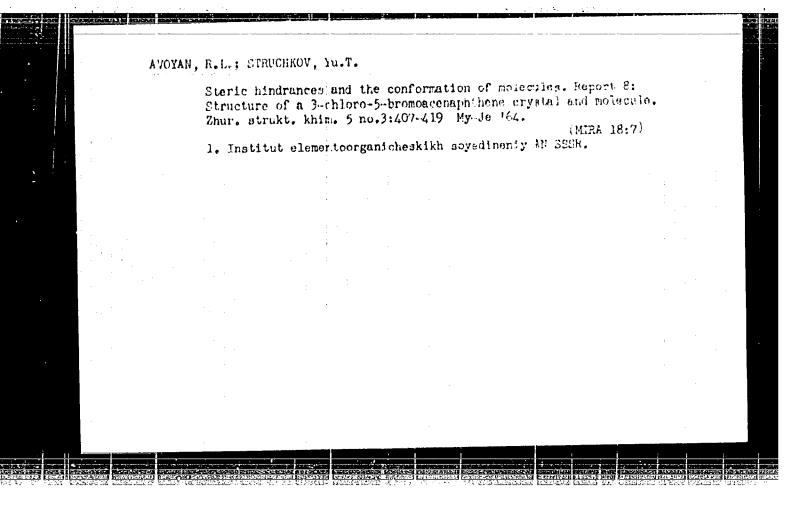
Structure of the products of iodination of aceraphthene with iodine monochloride. Zhur.strukt.khim. 4 no.6:928-930 N-D '63. (MIRA 17:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KALUSKI, Z.L.; STRUCHKOV, Yu.T.; AVOYAN, R.L.

X-ray diffraction study of diferrocenyl. Zhur. strukt. khim. 5 no.5:743-758 S-0 '64 (MIRA 18:1)

1. Universitet imeni Adama Mitskevicha, Poznan', Pol'sha, i Institut elementoorganicheskikh soyedineniy AN SSSR.



		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	AVOYAR, R.I.; KITAYGOROLGKIY, A.I.; S. BUCHARA, Yu.Y.	
	Steric hindrances and conformation of molecules. Report 9: Structure of a 5,5-dichloro-11,12-diphenylnaphthacene crystal and molecule. Thur. strukt. khim. 5 no.3:420-439 My-Je *(4. (MRA 18:7)	
	1. Institut elementoorganicheskikh soyedinenty Al SSSR.	
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AVOIAN, R.L.; ZAKHAROVA, D.N.; AKOFYAN, Z.A.; STRUCHKOV, Iu.T.

X-ray diffraction study of some organosilicon compounds.
Zhur.strukt.khdm. 6 no.52792-793 S-0 '65.

(MIRA 18:12)

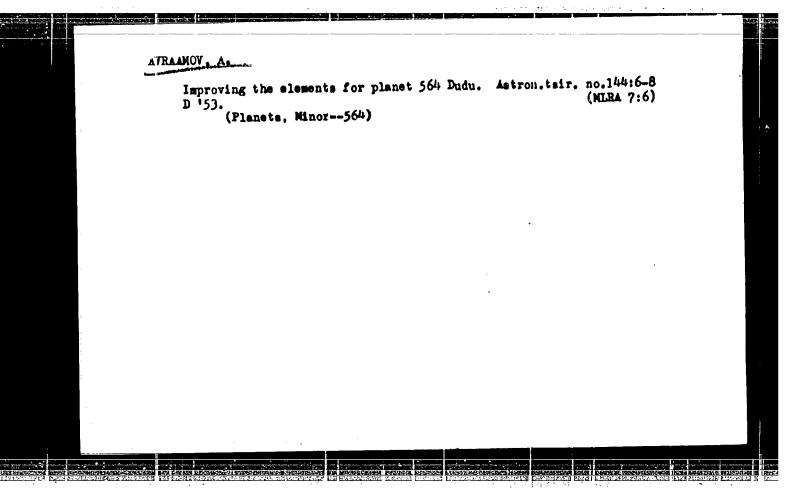
1. Institut elementoorganicheskikh scyedineniy AN SSSR.
Submitted June 20, 1965.

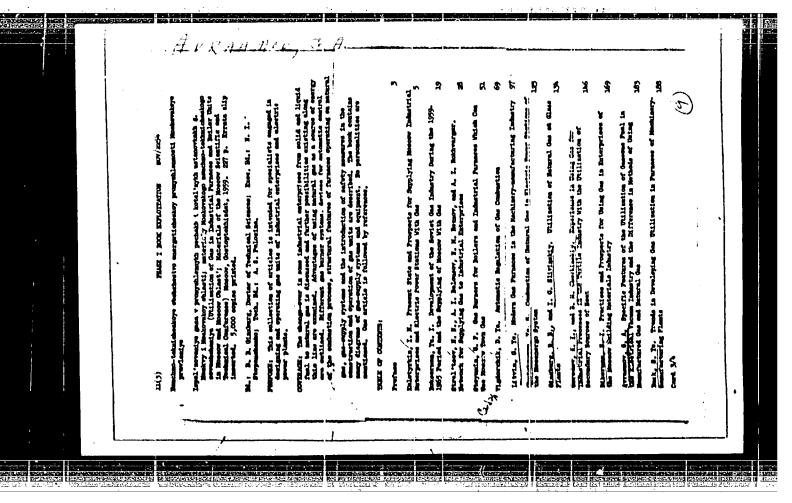
BOKIY, N.G.; AVOYAN, R.L.; ZAKHAROVA, G.N.; MINASYAN, M.Kh.; AKOPYAN, Z.A.; STRUCHKOV, Yu.T.

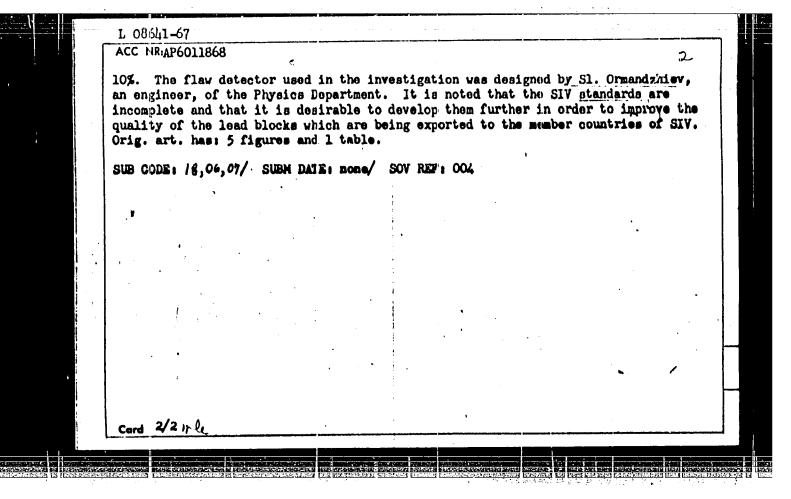
X-ray diffraction investigation of some organometallic compounds. Zhur.strukt.khim. 6 no.5:795-796 S-(165. (MIRA 18:12))

1. Institut elementoorganicheskikh soyedineniy AN SSSR. Submitted June 25, 1965.

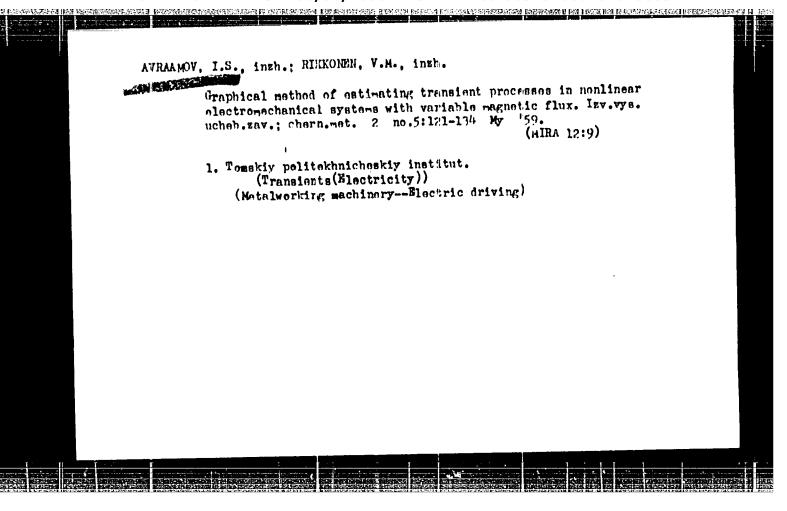
CC NR: AP6026866	SOURCE CODE: UR/O192/66/CO7/C	· · · · · · · · · · · · · · · · · · ·
UTHOR: Kaluski, Z. L.; Avoyan, R.	L.; Struchkov, Yu. T.	<i>53</i>
RG: Institute of Organoelemental oyedinenty AN SSSR)	Compounds AN SSSR (Institut elementoo	rganicheskikh
ITIE: X-ray analysis of substitut	ed ferrocenes	
OURCE: Zhurnal strukturnoy khimii	, v. 7, no. 1, 1966, 131-133	# # -
OPIC TAGS: substituent, ferrocene hemical compound, molecular struct	, x ray analysis, physical chemistry ure	property,
andwich compounds. Various substi- aboratory of Academician A. N. NES aysical properties including color arameters, molecular weight, densi- plicating compounds: phenylferroces tha-pyrrylferrocene, N-pyrrylforr	ion of previous work on the structure tutod ferrocenes synthesized in the MEYANOV were subject to x-ray analysi, melting point, geometric shape, lat ty, symmetry group etc. are given for ne, n-chlorophenylferrocene, n-tolylf ocene, alpha-thionylferrocene, tetracenyl and bis-carbomethoxy-ferrocenyl	s. tice the errocone,
JB CODE: 07 / SUBM DATE: 150ct	.65 / ORIG REF: 006	
ord 1/1 fdh	UDC:: 548.737	·







AVRAAMOV, I. S., Cand Tech Sci (diss) -- "Transitory processes in nonlinear electromechanical systems using magnetic current". Tomsk, 1959. 16 pp (Min Higher and Inter Spec Educ RSFSR, Tomsk Order of Labor Red Panner Polytech Inst im S. M. Kirov), 150 copies (KL, No 10, 1960, 129)



SOV/144-59-4-2/13 **AUTHOR:** Avrnamov, I.S., Assistant TITLE: The Physics of Cscillations in a Non-linear Generator-motor System with Variable Magnetic Flux PERIODECAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1959, Nr 4, pp 12 - 27 (USSR) ABSTRACT: The topics examined are: the transient processes, the energy conditions and the mechanism of oscillations in a series-excited generator-motor system. The method of analysis has already been used by workers at the Tomsk Polytechnical Institute, Chair of Industrial Electrification. The most general case of a compound motor with series excitation is that of Figure 1, while Figure 2 is a speed torque characteristic taken with the switch P2 in the open' position. A particular advantage of the circuit is the ease of speed control (over a 100:1 range) by means of current in the shunt winding on the generator. This current need not exceed 5% of the generator rating. The electrical equilibrium in the circuit is described by Eq (1) and the Card1/4 mechanical equilibrium by Eq (3). The equations are

SOV/1 $^{14}4$ -59-4-2/13 The Physics of Oscillations in a Non-linear Generator-motor System with Variable Magnetic Flux

non-linear; the parameters are plotted in Figure 3 (generator characteristic), Figure 4 (non-linear inductance and effective capacitance) Figure 5 (static current versus load current at constant torque), Figure 6 (magnetization characteristic of the motor). The following effects are ignored: a) eddy currents in the magnetic circuit; b) power loss in the cones; c) eddy losses in the copper; d) the variation in the system inductance L(I). The accelerating voltage characteristic is replaced by the cubic (Eq 5) and the equation of motion, in terms of speed, is Eq (9). This equation is solved by isoclines (Ref 11) using the phase-plane representation of Figure 7. The calculated transient behaviour is in Figure 8, which shows excellent agreement with the experimental oscillograms of Figure 10. At any instant the energy delivered to the motor is being usefully transferred, wasted in losses, or stored as kinetic energy. The variation in distribution among these modes is shown in Figure 11 for the commencement of a transient process. The way in which energy enters the system is represented in Figure 12, where a source of

Card2/4

SOV/144-59-4-2/13
The Physics of Oscillations in a Non-linear Generator-motor System with Variable Magnetic Flux

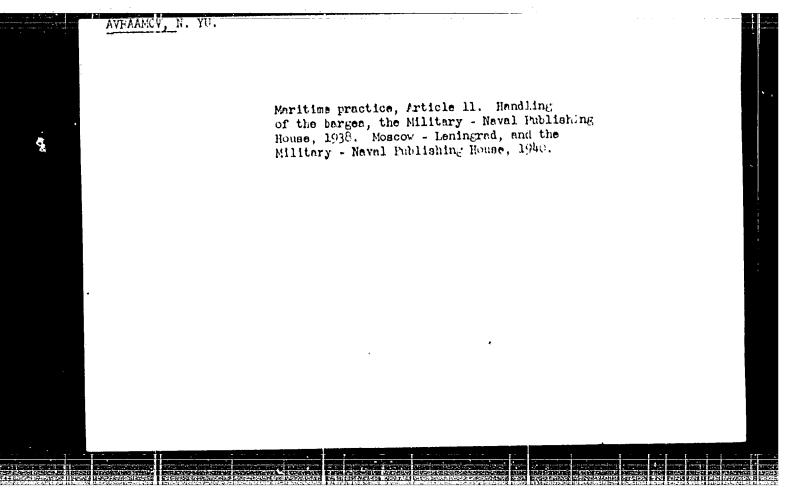
energy is periodically connected to an oscillatory circuit by a 'valve' operated by a feedback link. The effective capacitance is defined by the equation following (21) and the feedback current is the last expression on p 21. The equivalent oscillatory circuit is Figure 13. Referring to Figure 8, the interval "oab" corresponds to the 'open' condition of the regulating 'valve' and "6 " to the

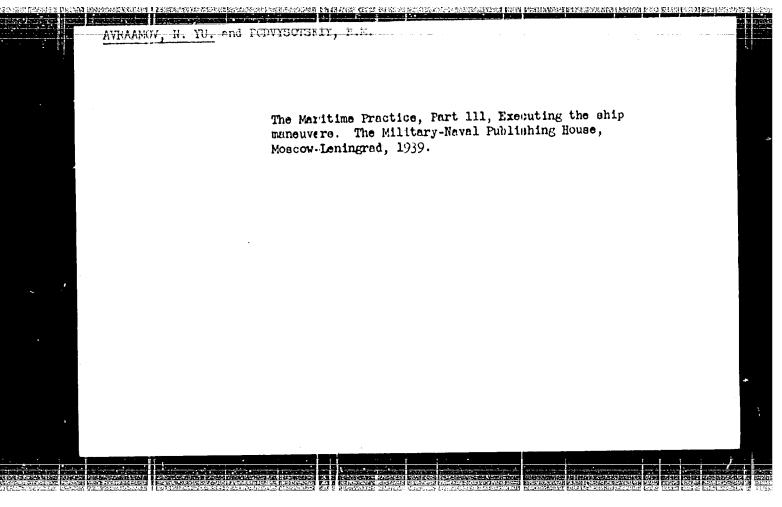
'closed' condition. The point "i" is one of unstable equilibrium and the point "d" is the minimum-flux point. An important feature of the phase-plane representation, Figure 7, is that it differs from those described by Van der Pol in always exhibiting negative resistance. There are 13 figures and 14 references, 12 of which are Soviet, 1 English and 1 German.

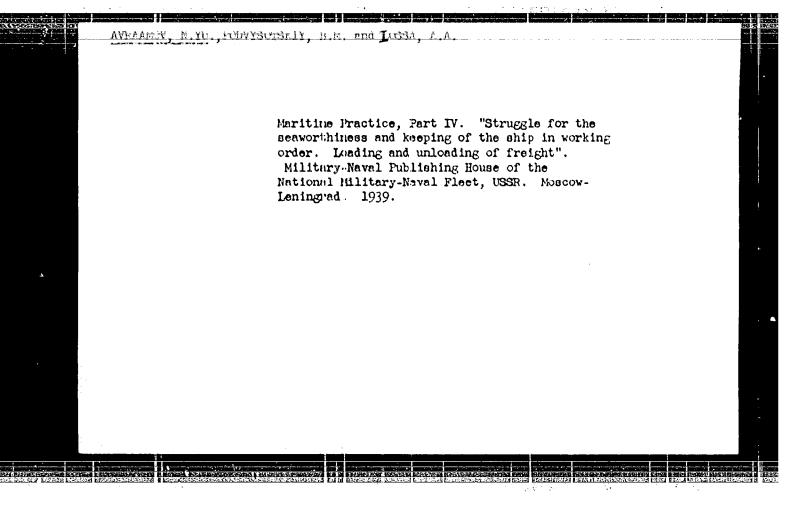
Card 3/4

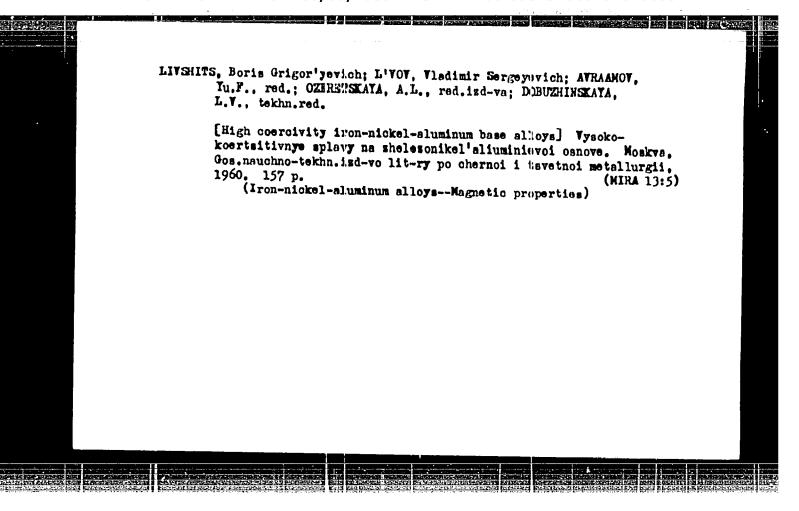
\$/271/63/000/003/012/049 A060/A126 AUMHORS: Avraamov, I.S., Ineshin, A.P. TEME: Engineering logic and the automation of production PERIODICAL: Referativnyy ihurnal, Avtomatika, telemekhanika i vychislitel naya tekhnika, no. 3, 1963, 55, abstract 3A312 (Uch. zap. Tomskiy un-t, 1962, no. 41, 156 - 170) TEM: The authors describe a digital servosystem designed for controlling a Marge class of mechanisms connected with the displacement and precise stopping at various points. To such mechanisms belong: factory cranes, pressure units of rolling mills, mine elevators, ingot care, etc. The system contains a memory unit for the coordinates of the exact technical stopping point, a memory unit of the current position of mechanisms, a feedback transducer and computer unit. With the aid of the methods of the algebra of logic a reliable computer network is worked out. The reliability of its operation is attained through the application of a reflecting code, the introduction of DC feedbacks and of stabilizing networks which protect the flip-flops from pulse noise. There are 9 figures and

L 05237-67 EWP(k)/EWP(h)/EWT(d)/EWP(1)/EWP(v)ACC NRI AR6020535 SOURCE CODE: UR/0372/66/000/001/G036/G037 AUTHOR: Avraamov, I, S.; Derkach, V. A.; Derkach, N. G.; Nosyrev, V. I.; Selyandin, V. I.; Tsinker, E. B. TITLE: A system for the programmed control of wide-reach multiple-stop mechanisms SOURCE: Ref zh. Kibern, Abs. 1G251 REF HOURCE: Mezhvuz. sb. tr. Zap.-Sib. sovet po koordinatsii i planir. nauchnoissled, rabot po tekhn. i yestestv. naukam, vyp. 4, 1965, 129-136 TOPIC TAGS: automatic programming, crane, control circuit ABSTRACT: A system (S) for the programmed control of the movements of a grab-type bridge crane is described. The S may also be used to control mechanisms moving over distances of several dozen meters and longer., This S is characterized by the discrete determination of the coordinates of the bridge and carriage of the crane, accomplished at individual points by means of independent contact pickups. Then the precision of the halt does not exceed the dimensions of the pickup. The article presents a schematic diagram of a S with the following elements: 1) setting device; 2) encoder of the specified coordinate;. 3) device for determining UDC: 62-506;681...142..:352;621 CALL THE RESIDENCE OF THE PARTY OF THE PARTY









SOV/137-58-10-21512

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 150 (USSR)

AUTHORS: Livshits, B.G., Ibragimov, Sh. Sh., Avraamov, Yu. S.,

TITLE: Theory of Phase Transformations in Nichrome and Nimonic (Teoriya fazovykh prevrashcheniy v nikhrome i nimonike)

PERIODICAL: V sb.: Issled. po zharoprochn. splavarn. Vol 2. Moscow, AN SSSR, 1957, pp 171-180

ABSTRACT: The fact that electrical resistivity (ER), heat capacity (HC). and certain other properties of nimonic and nichrome alloys are functions of temperature indicates that a K state exists in these alloys. In nichrome specimens which have been quench-hardened at a temperature of 770°C, the K-state appears as a result of heating to 400 460°. Heating the alloy to 460-560° causes it to revert into a statically disordered solid-solution state. The formation of the K state is accompanied by changes in the microstructure of the alloys. apparently as a result of deformations, i. e., according to

X-ray data the alloys retain their single phase character. Card 1/2 A change in microhardness analogous to a change in the ER

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Theory of Phase Transformations in Nichrome and Nimonic

is observed. In the case of nimonic two processes take place: 1) Segregation of a Ni₃(Ti, Al) phase from the solid solution at temperatures of 850-750°, and 2) the appearance of a K-state at temperatures below 500-600°. Despite of the structure of nimonic which had been tempered at 500-600° failed to reveal any decomposition of the solid solution, even though the physical was also studied by the method of measuring the internal friction of alloys with the aid of a vacuum relaxator. On the strength of these data it may be nichrome, whereas in the case of nimonic Ni, Cr, Ti, and Al are the partici-

1. Chrome-nickel alloys--Phase studies

DECEMBER 19 DESCRIPTION OF THE PROPERTY OF THE

P. S.

Card 2/2

SOV/137-58-9-19843

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 249 (USSR)

AUTHORS: Avraamov, Yu.S., Livshits, B.G.

TITLE: An Investigation of the Nimonic Alloy by Means of the Internal-

friction Method, Measurement of Electrical Resistance, and Dilatometric Analysis (Issledovaniye splava nimonik metodom vnutrennego treniya, elektrosoprotivleniya i dilatometriches-

kogo analiza)

PERIODICAL: V sb.: Issled, po zharoprochn, splavam, Vol 2 Moscow,

AN SSSR, 1957, pp 198-210

ABSTRACT: The causes of anomalous hardening of the alloy during cool-

ing at a critical rate of 160°C/hr from a temperature of 1100°C were examined, together with the anomalous increase in electrical resistance (ER) observed during tempering of an alloy which has been quenched previously. An alloy containing 21% Cr, 2.48% Ti, 0.67% Al, and 75.85% Ni was investigated. The following procedures were employed: Quenching in water at a temperature of 1100° with subsequent tempering at tempera-

tures ranging from 400-10000; cooling at the critical rate from

Card 1/2 1100° followed by step-wise treatment of the alloy at

SOV/137-58-9-19843

An Investigation of the Nimonic Alloy (cont.)

temperatures between 1100 and 600°. The results obtained corroborate the hypothesis that the process of hardening proceeds in two stages: Decomposition of the a and al phases at temperatures ranging from 700 to 900°, followed by additional decomposition not accompanied by the segregation of a new phase in the range of temperatures between 500 and 650° which results in anomalous increases in hardness and ER. The energy of activation, Q, required for the formation of a K-state was calculated from the kinetic curves of the ER, plotted during the tempering operations performed after quenching, and was found to be 66,100 cal/g-mole in the case of an alloy which has been quenched at \$100°, and 39,300 cal/g-mole in the case of an alloy which has been quenched at 800°. The difference in magnitudes of Q may be explained by the diffusional nature of the formation of the K-state and by the inhibition of this process on quenching at 11000 due to the presence of large amounts of dissolved Al and C atoms which tend to retard the diffusion process. A peak, which was discovered during measurements of internal friction, is connected with the presence of Ti atoms in the solid solution. The peak does not appear in an alloy with a K-state; this points to the fact that in a solid solution Cr as well as T) atoms participate in the segregation of atoms which correspond to the K-state.

1. Chromium-nickel alloys--Internal friction 2. Chromium-nickel alloys A.F. Card 2/2 --Resistance 3. Chromium-nickel alloys--Mardening

AVEAAMOV, Yu. S., MEZHEHNAYA, S. O., CEVELSKTY, V. B., and RELYAKOV, L. N. (Moscow Inst. of Steel.)

"The Internal Friction of "Metastable" Solid Solutions ."

reports presented at an Inter-waz Conference on Relaxation Phenomena in Pure Metals and Alloys, 2-4 Apr 1958, at Moscow Inst. of Steel.

Vest. Vys. Shkoly, 9, 72-3, 1958.

18.1250 18.7100 AUTHORS:

Livshits, B.G., Kousakovskaya, N.N., Ibragimov, Sh.Sh., Avraamov, Yu.S.

TITLE:

Investigation Into Phase and Structure Transformations of

PERIODICAL:

Tr. Sektsii metalloved, i term. obrabotki metallov, Tsentr. pravl. Nauchnotekhn. o-va mashinostroit. prom-sti, 1958, Nr 1, pp 140 - 154

ABSTRACT:

The authors carried cut investigations of "EI437" alloy subjected to various types of heat treatment and having the following composition (in %): C 0.05, Si 0.43, Mm 0.24, S 0.003, P 0.005, Ce 0.02, Cr 20.55, Ti 2.44, A. 0.79, Cu 0.004, Fe 0.56; the remainder was Ni. Electric resistance was measured on "UPN3/2" and "UTV-2" machines during the heating process and at room temperatures; measurements were made on a capacity dilatometer; the temperature dependence of heat capacity was determined by the Sykes (Sayks) method; the phase composition of electrolytically separated deposits was determined by the roentgenographical, microscopical and electron-microscopical methods. Moreover, endurance tests were performed. Heat treatment of specimens consisted of quenchhardening with subsequent controlled cooling-off at various rates. Highest

Card 1/2

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SOV/137-59-12-27205

Investigation Into Phase and Structure Transformations of "EX437" Alloy

hardness values were obtained if the cooling rate was 160 degrees/hour, corresponding to a sufficiently complete isolation of the separating phases and to not too excessive a coagulation. The electron-microscopical investigations showed that the separation and coagulation of the strengthening 7'-phase was more intensive during continuous cooling-off from high temperatures than during tempering of a supercooled solution; the particle dimensions depended on the cooling rate. In slow cooling a hexagonal phase was revealed together with the 7'-phase. Measurement of the temperature dependence of specific heat capacity and measurements of electric resistance and dilatometrical data, showed that two processes took place: namely, within the 700 - 900°C temperature range, a process connected with the formation of a phase in the solid solution, and a process of developing a K-state below 700°C; whose thermal effect was equal to 1.35 cal/g. The first process shifted the maximum of the K-state formation slightly towards the lower temperature side. It is assumed that the crigination of the K-state is due to the formation of Guinter-Preston type zones in areas with increased concentration of alloying elements; it is characterized by the occurrence of a specific micro-relief. There are 12 bibliographical titles.

V.R.

Card 2/2

18(7) AUTHORS:

Avraamov, Yu. S., Osvenskiy, V. B.

SOV/163-58-4-27/47

TITLE:

On the Problem of Structural Changes in Fe-Ni-Mo Alloys (K voprosu o prirode strukturnykh prevrashcheniy v splavakh

Fe-Ni-Mo)

PERIODICAL:

Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 4,

pp 162-168 (USSR)

ABSTRACT:

On account of measurements of the electric resistance, the hardness and the temperature dependence of magnetic saturation, the nature of phase conversions in Fe-Ni-Mo alloys

was clarified, and the critical interval of phase conversions was specified for these alloys. The possibility is shown here to examine the kinetics of the phase conversion process after the shift of the point of inflection on the curve for the temperature dependence of the magnetic saturation. For determining the temperature interval of conversions taking place in the binary Fe-Ni alloy and in Mo-alloys, the electric resistance in heating and cooling wire specimens of 3 mm was measured on a potentiometer installation. On account of the investigation made here, the influence of Mo on the processes

Card 1/2

taking place in the alloys examined is explained as follows.

CIA-RDP86-00513R000102620003-7 "APPROVED FOR RELEASE: 06/06/2000

On the Problem of Structural Changes in Fe-Ni-Mo

507/163-58-4-27/47

In the binary Fe-Ni alloy, the formation of the superstructure Ni, Fe occurs in annealing in the cratical temperature interval. Introduction of a small quantity of molybdenum into the alloy leads to the formation of zones of the Gin'ye-Preston type with Mo-atoms. Formation of these zones prevents ordering in the alloy. In case of small quantities of molybdenum, however, the ordering process is not eliminated. In case of a further

increase of the molybdenum content in the alloy (over 1 %) the resulting zones suppress more and more the ordering process. The alloy with 1 % Mo may be regarded as a limit only in the sense that this alloy separates the alloys with opposite effects of the electric resistance change in annealing. There are

4 figures, 1 table, and 8 references, 3 of which are Soviet.

ASSICTION:

Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED:

October 26, 1957

Card 2/2

\$UV/126-6-1-15/33 Avraamov, Yu. S., Belyakov, L. N. and Livshits, B. G. AUTHORS: Internal Friction Peaks in Ni-Cr Base Solid Solutions TITLE: (Piki vnutremago treniya v tverdykh mastvorakh na baze nikel'-k'nroma) PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 1, pp 116-121 (UBSR) The alloys used were 20% Cr, 0.05% C, balance Ni, and 20% Cr, 2.48% Ti, 0.68% Al, 0.03% C, balance Ni (nichrome and nimonic respectively). Torsional ABSTRACT: oscillations in vacuo, using an apparatus not described, were employed. Fig.1 shows the effect of variable grain size (produced by quenching from various temperatures) on the internal friction-temperature curve for nimonic (up to 750°C); two peaks are found, at 150 (A) and 650-660°C (E) respectively. The latter is caused by grain boundary displacement. Fig.2 gives similar curves for nimonic of low and high carbon contents, the latter after quenching and ageing. Fig. 3 shows the same for mimonic containing varying amounts of Ti. From these results it is concluded that the A peak Card 1/2 is related to the presence of Ti, as no deformation is

Internal Friction Peaks in Ni-Cr base solid solutions

involved, and the peak rises with Ti content. The exact shape of the peak is affected by ageing at 520°C, and completely removed by ageing at 575°C for eight hours. Fig.4 illustrates the results of applying various heat-treatments to the alloy. The effects are related to the formation of a K-state in the α' solid two separate peaks, which behave differently, is not, however, discussed.

There are 4 figures and 8 references, 5 of which are Soviet, 3 English.

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ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)
SUBMITTED: October 22, 1956

Card 2/2

1. Nickel alloys--Physical properties 2. Nickel alloys---Mechanical properties 3. Grains (Metallurgy)--Metallurgical effects 4. Titanlum--Metallurgical effects

AUTHORS: Avraamov, Nu. S., Livshits, Z. G., SOV/48-22-10-19/23
Osvensk., V. B.

TITLE: Modification of Structural Transformations in Permalloy During

Alloying With Molybdenum (Izmeneniya strukturnykh

prevrashoheniy v permalloye pri legirovanii molibdenom)

PERIODICAL: Isvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958,

Vol 22, Nr 10, pp 1263 - 1268 (USSN)

ABSTRACT: On the basis of measurements of the electric resistance,

of the strength, of the temperature dependence of the internal friction, and of the saturation magnetization in the present paper the nature of the structural transformations in Fe-Ni-Mo alloys was explained and the critical temperature range was exactly defined. The examined alloys are listed in the table. The information collected permits to draw the following conclusions: In the hardened solid alloy the molybdenum atoms are in the free state. For this reason under the influence of the external strains a co-ordination takes place without hindrance, i.e. a new orienta-

by Siner). When the alloy is worked unto the K-state, zones

ordination takes place without hindrance, i.e. a new orientation of the atom-pairs of molybdenum (according to the model

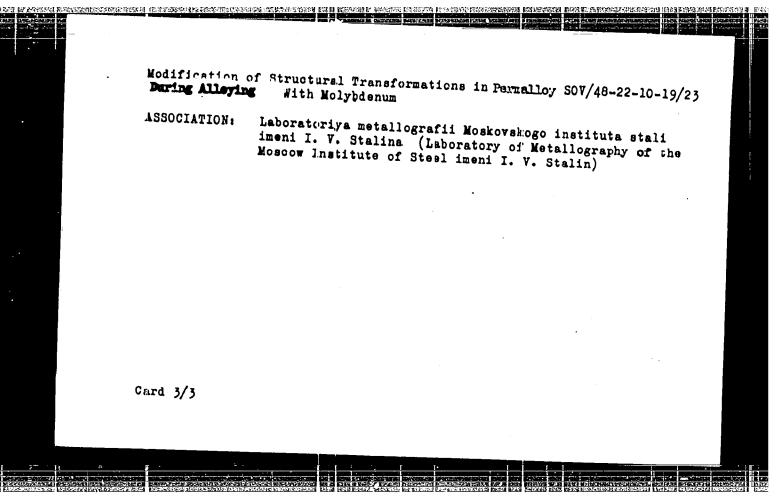
Card 1/3

Modification of Structural Transformations in Particlety SOV/48-22-10-19/23 During Alloying With Molybdenum

(of the type of the Guinet (Gin'ye) - Preston zones) containing the molybdenum atoms are formed. The alloy behaves as if an intraphase separation had taken place in it. The molybdenum atoms in this case are no longer in the free state and therefore cannot participate in the coordination under the action of a strain. Therefore the maximum of the internal friction initially decreases and in the case of a protracted tempering completely disappears. The measurements of the internal friction showed that the molybdenum atoms in the case of the formation of the K-state apparently are removed from the solid solution. This fact proves that in solid solutions during the process of tempering zones are forming which contain the molybdenum atoms and which in their composition differ from the vasic solid solution. The investigation of the temperature dependence of Young's modulus in Fe-Ni-Mo alloys showed that this modulus increases when the Kastate forms. There are 5 figures, 1 table, and ll references, 7 of which are Soviet.

THE RESERVE OF THE PROPERTY OF

Card 2/3



18 (1) AUTHORS: Avraamov, Yu. S., Mezhennaya, S. O. SOV/163-59-2-34/48 TITLE: Investigation of the Alloy Ni, Mn by the Method of Internal Friction (Issledovaniye splava Ni Mn metodom vnutrennego treniya) PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, Nr 2, pp 189-193 (USSR) ABSTRACT: The phase composition of the alloy Ni3lin was investigated by the method of internal friction after various thermal treatment. The influence of the thermal treatment on the Ni3Mn alloy in dependence of the temperature on the internal friction was investigated and the results are given in figure 1. Two maxima, A and B, occur at 120 and 2900 on the temperature curve of the hardened alloy. The maxima can be interpreted as meta-stability in the orientation of the solid solutions. The dependence of the internal friction of the deformed steel on temperature was investigated and is given in figure 2. Beside the maxima A and B also the maximum D occurs at 226° on the temperature curve of the internal friction of the deformed Ni3Mn alloy Card 1/2 (deformation degree 75 %). The maximum 1) is interpreted

Investigation of the Alloy Nil Mn by the Method of Internal Friction

SOV/163-59-2-34/48

likewise as meta-stability of the solid solution. A further maximum (C) occurs on the temperature curve of the internal friction of carbonaceous alloys at 360° (Fig 3). The occurrence of the maximum C is explained by the diffusion of the carbon atoms in the stress field. The amount of the maximum C in carbonaceous samples is reduced after six hours of melting at 360° and subsequent hardening in water, in consequence of the carbide formation in the solid solution. Only one maximum occurs at 360° on the temperature curve of the internal friction after the separation of the carbide phase. The method of internal friction makes the investigation of the orientation state in the alloy possible. There are 3 figures and 5 references, 3 of which are Soviet.

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Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED:

July 10, 1958

Card 2/2

66234 18.7520 SOV/126-8-3-18/33 AUTHORS: Livshits, B.G., Avragnov. Xu.S., Osvenskiy, V.B., Mezhennaya, S.O. and Belyakov, L.N. TITLE: Internal Friction of Metastable Solid Solutions PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, Nr 3, pp 440-448 (USSR) ABSTRACT: The alloy of stoichiometric composition Ni3Mn and alloys of the same composition alloyed with 1.34 and 2.77% Mo, respectively, were studied by measuring the temperature dependence of internal friction. Using this method, Ni3Fe type alloys without molybdenum and those alloyed with molybdenum, and also EI437A type alloys (nimonic) were The chemical composition of the investigated alloys is shown in the table on p 441. The internal

friction was measured in wire specimens, 300 mm long and 0.7 mm diameter, in vacuum. The alloy NigMn is an ordered alloy with a Curie point of approximately 350°C (Ref 10 and 11). In the curve showing the temperature dependence

of internal friction of a quenched Ni₃Mm alloy (quenched from a temperature above that at which ordering occurs) two peaks, A and B_B with maxima at 120 and 290°C are observed (Fig 1). In the curve of the temperature

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Internal Friction of Metastable Solid Solutions SOV/126-8-3-18/33

dependence of internal friction of a deformed Ni3Mn alloy (75% deformation), the peaks A and B remain and an additional peak, D, having a maximum at 226°C, appears; the general level of internal friction rises sharply (Fig 2). An additional peak, C, having a maximum at 316"C, is evident in a carburized Ni₃Mn alloy containing 0.35% C (Fig 3). The appearance of this peak is due to the diffusion of carbon atoms in the elastic stress range. During the investigation of the influence of alloying the Nil3Mn solid solution with molybdenum, it was found that supplementary maxima - peaks M and C at 52 and 316°C - appeared in temperature dependence of internal friction curves (Fig $\frac{1}{4}$). In Fig 5, the influence of heat treatment on the temperature dependence of a Ni3Mn alloy containing 1.34% Mo is shown. A similar result is obtained with an alloy containing 2.77% Mo. On measuring the internal friction of NizFe alloys alloyed with Mo (Fig 6) two peaks were obtained in the low temperature range, one in the region of 85°C (peak A) and the other at 170°C (peak B). Fig 7 shows the influence of heat treatment on the temperature dependence of internal

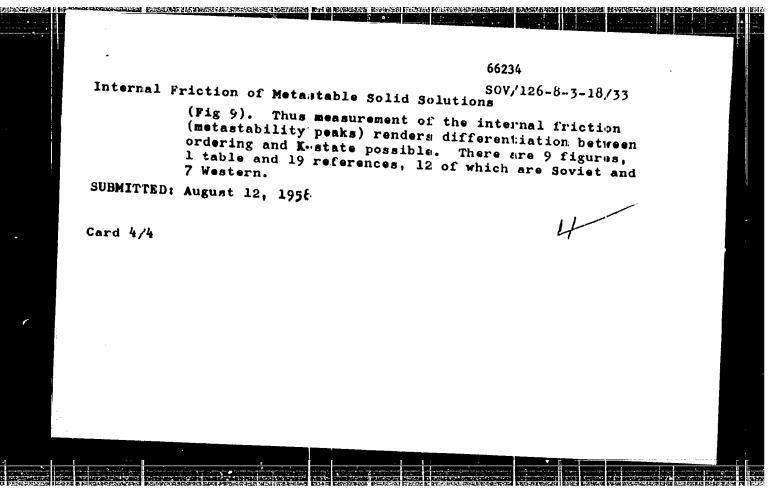
Card 2/4

66234

Internal Friction of Metastable Solid Solutions SOV/126-8-3-18/33

friction of the alloy Ni3Fe. Fig 8 shows the influence of heat treatment on the internal friction of a nimonic alloy. In Fig 9, the change in internal friction with Ti content in a nimonic alloy is shown. The authors conclude that on measuring the temperature dependence of internal friction of metastable solid solutions characteristic effects can be expected even when the structural factor is exceedingly small. The magnitude of the effects in this case must be the greater, the greater the difference in free energy between a quenched and tempered alloy. A comparison of the internal friction of ordering alloys with that of alloys forming a K-state structure at low temperatures is exceedingly interesting (see Fig 4 and 5). On adding molybdenum to ordering alloys (Ni3Mn) the metastability peak decreases as molybdenum decreases the degree of possible order. Conversely on adding this element to K-state alloys (NigFe + Mo) the metastability peak increases, as the increase in molybdenum concentration appears to increase the extent of atom segregation (K-state) in the solution. The same can be said about titanium in the alloy EX437

Card 3/4

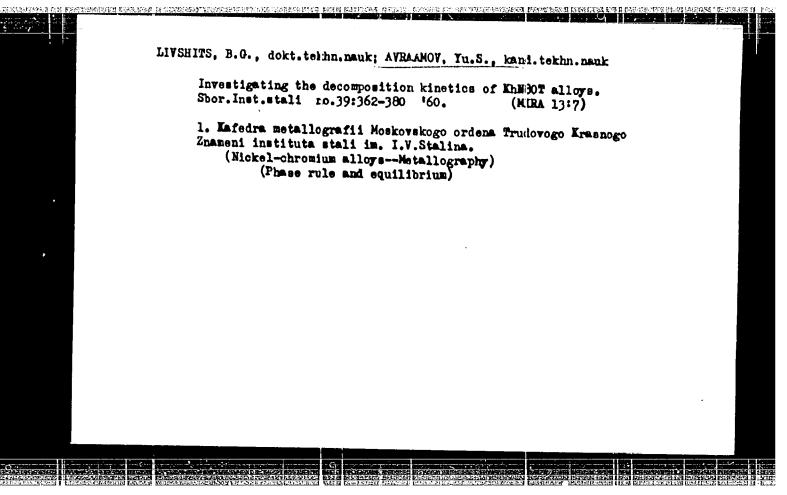


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AVEAANOV, Yu.S.; MEZHENHAYA., S.O.

Effect of addition alloying with molybdenum on internal friction during the ordering of Bi, Mn alloys. Isv.vys.ucheb.zav.; chern.met. no.;1:102-105 '60. (MIRA 13:6)

1. Moskovskiy institut stali. (Nickel-manganese alloys--Metallography) (Molybdenum) (Internal friction)



39059 5/148/62/000/005/006/009 E202/E492

18-12-15

AUTHORS: Samarin, B.A., Sumin, V.I., Avraamov, Yu.S.

TITLE:

Method of determination of Hall constant and its

application to the studies of ageing

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya

metallurgiya, no.5, 1962, 134-139

TEXT: Hall effect and its changes during the natural ageing of duraluminium was determined using an apparatus comprising three circuits: primary current, electromagnet supply and measuring circuits. The current in the first and second circuit was capable of adjustment and reversal, the field produced by the second circuit being calibrated for the various pole separation. The measuring circuit comprised the sample with the three Hall electrodes and a potentiometric compensator, clamped in a frame with copper jaws. The Hall emf was measured by means of electrooptical amplifier $\psi \ni O y - 15$ (FEOU-15) the output of which was fed into a sensitive galvanometer (10-8 V/nm). The relative error of the Hall coefficient R_X was 5%. Using the conductivity data given by H. E. Schmidt (2.f.Metallkunde, 49, 1958, 113) Card 1/3

Method of determination ...

\$/148/62/000/005/006/00 E202/E492

the number of conductivity electrons $\, n \,$ and their mobility $\, v \,$ were also determined viz:

	$\mathbf{E}_{\mathbf{x}} \cdot 10^{6}$	n	v	
Sample	cm3/A·sec	per atom	cm ² /V·sec	
Al	-36.3	2.86	13.4	
Cu	-55.7	1.33	32.8	

Natural ageing was studied in duraluminium of the following composition: 6.12% Cu, 0.7% Mg, 0.49% Si, 0.65 Mm, 0.40% Fe, ad 100% Al. Samples were cut from 0.2 mm thick ribbon and additional check on ageing was carried out by sclerometric tests and measurement of specific (electric) resistance ρ . Within the first 5 hours $R_{\rm X}$, v, 8hm, and ρ were increasing while n was decreasing. All these values remained substantially unchanged within the next 50 hours. It was concluded that the changes Card 2/3

Method of determination ...

39069 5/148/62/000/005/006/009 E202/E492

occurring during the natural ageing in the supersaturated solid solution are not related to the deposition of the excess θ -CuAl2 phase. A feasible explanation offered suggests accumulation of Cu atoms in 2 or 3 atomic planes which are intrinsically bound with the solid solution lattice, producing quasichemical bonds lowering n and increasing v. Consequently, R_X and ρ increase during ageing proportionately to 1/ne and 1/nev respectively (where e is the electron charge). There are 4 figures and 1 table.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: July 11, 1961

Card 3/3

S/148/62/000/007/004/005 £210/335

AUTHORS: Samarin, B.A., Sumin, V.I. and Avraamov, Yu.S.

TITLE: Studies of phase transformations in duralumin alloy using the method of the Hall constant determination

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no. 7, 1962, 140 - 145

TEXT: Experimentation aiming at relating the processes occurring during artificial ageing of duralumin-type alloy with the changes in its electronic configuration is described. Three types of measurements were made: measurement of the Hall constant $R_{\rm H}$, specific resistance ρ and Brinell hardness; the results/plotted for varying ageing times and varying ageing temperatures. The samples were water-quenched from 490 - 500 °C and then subjected to artificial ageing for 0.5 - 10 hours. The number of conductivity electrons per atom n and their mobility V were calculated from the changes in $R_{\rm H}$ and ρ . The resulting V-curves had the same shape as the $R_{\rm H}$ curves, while the n-curves appeared as a mirror image of the former curves. Card 1/3

Studies of

S/148/62/000/007/004/005 E210/E335

The changes in the above parameters during artificial ageing pointed to the existence of two substantially different processes: the first occurring at low temperatures (20 - 100 °C) and corresponding to the natural ageing, and the second occurring at high temperatures and corresponding to artificial ageing. On the basis of their own and other investigations the athors concluded that after hardening of the Al-Cu alloy, a supersaturated solid solution is formed, containing, in certain small regions, slightly different constituent concentrations from those prevailing generally. In the early stages of ageing the above solid solution cannot decompose since the elastic energy of the lattice increases very intensively. These energy considerations favour the accumulation of copper atoms in the minute Guinier-Preston zones which are bound to the sclid-solution lattice. Increased temperature diffuses the copper atoms and leads to formation of $^{\alpha}_{h}$ solidsolution superlattice in which copper-rich planes alternate with the aluminium planes, which lowers $R_{\rm H}$, \circ and the hardness.

Card 2/3

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Further temperature rise starts to precipitate the metastable θ '-phase which removes some copper from the supersaturated solid solution, thereby lowering the coherence and introducing some strain into the solid-solution lattice which, in turn, leads to uneven decomposition and increased $R_{\rm H}$ values (above the values

present in the annealed state). Still further increase in temperature leads to the Drmation of the stable 9-phase, bringing the solid solution closer to the equilibrium, which is accompanied by the fill in $\rm\,R_{H}$.

There are 2 figures.

ASSOCIATION:

Moskovskiy institut stali i splavov

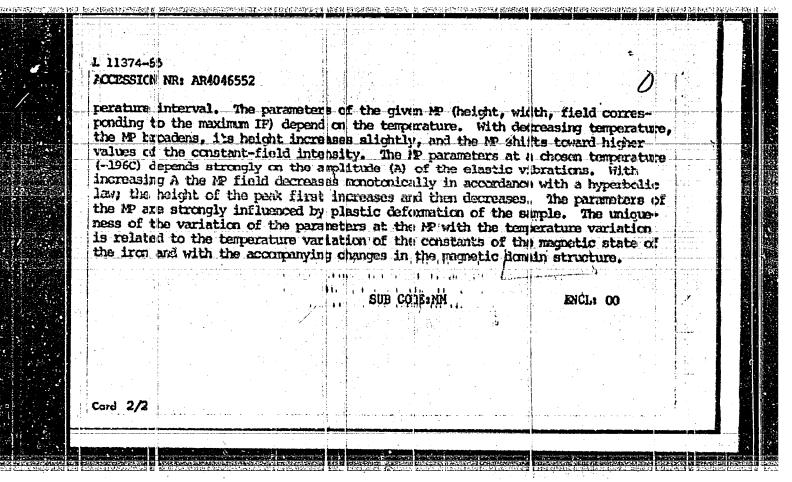
(Moscow Institute of Steel and Alloys)

SUBMITTED:

July 11, 1961

Card 3/3

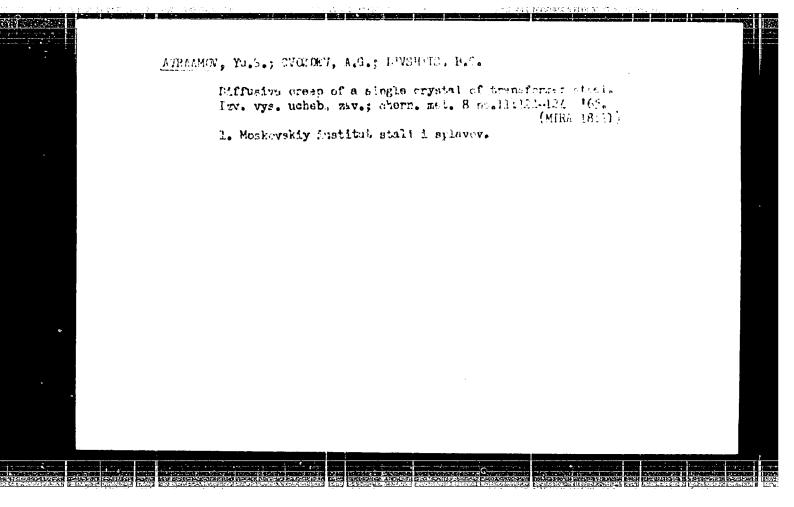
	L 11374-65 EWT(m)/EWP(t)/EWP(b) Pf-4 IJP(c)/SSD/ASD(f)-2/ESD(gs)/ ASD(m)-3/ASD(p)-3/AFWL JD/HB	
	ACCESSION NR: AR4046552 S/0058/64/000/008/E086/E087	
32:	SOURCE: Fef. 2h. Pizika, Abs. 8E670	
	AUTHORS: Avraamov, Yu. S., Kekalo, I. B., Moxmer, V.	
	TTTLE: Effect of temperature, amplitude, and irrequency of elastic cecillations	
	on the "magnetic" peak of internal friction in iron	
	CITED SOURCE: Sb. relaks. yavleniya v met. i mplavakh, M., Metullurgizdat, 1963,	
	TOPIC TAUS: iron, internal friction, temperature dependence, mignetic field	e.
	intensity, elastic vibration, plastic deformation, domain structure	
	TRANSLATION: A study was made of the properties of the magnetic peak (MP) of the internal friction (IF) in electrolytic iron annealed in H ₂ . The measurements were	
	made on a relaxator assembled in accordance with the scheme of an inverted low-	
	frequency pendulum, in the temperature interval from -196 to +50C, on samples 70	
	rm long and 0.7 mm in diameter. The plot of the IP as a function of the alternati-	
	ing magnitic field intensity exhibits a maximum in the entire investigated tem-	
	Cord 1/2	

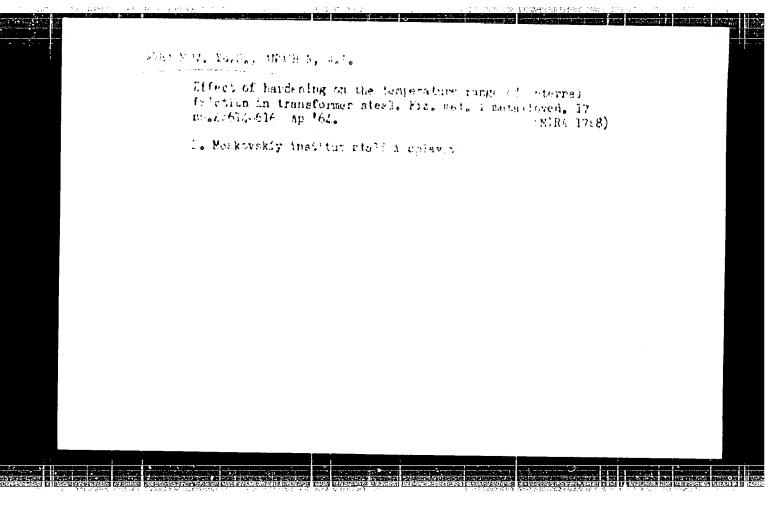


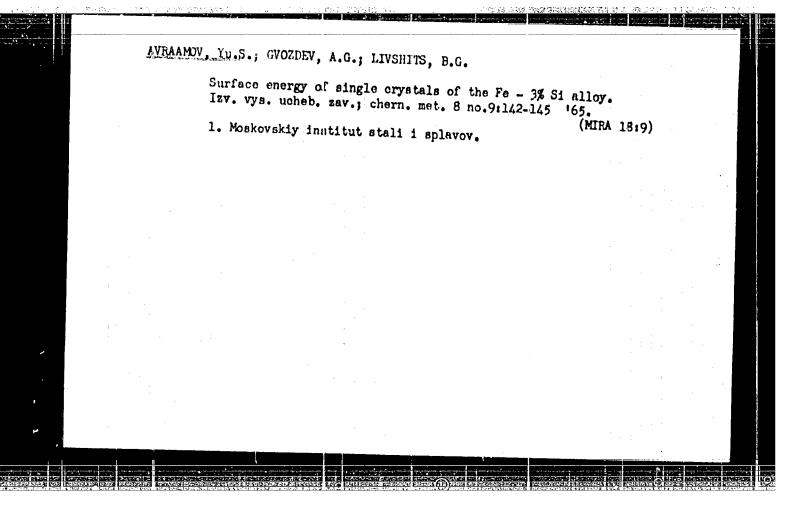
MORGNER, V.; AVRAAMOV, Yu.S.

Low-temperature internal friction in pure iron. Fiz. met. 1 metalloved.
16 no.4:635 0 '63. (MIRA 16:12)

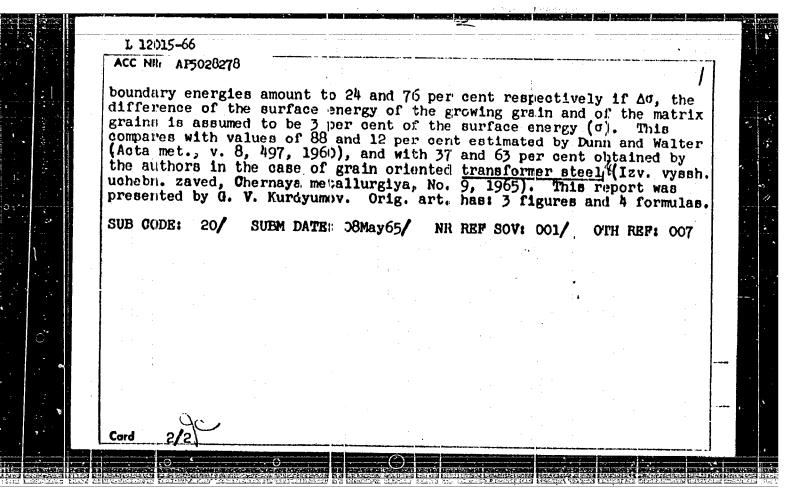
1. Moskovskiy institut stali i splavov.

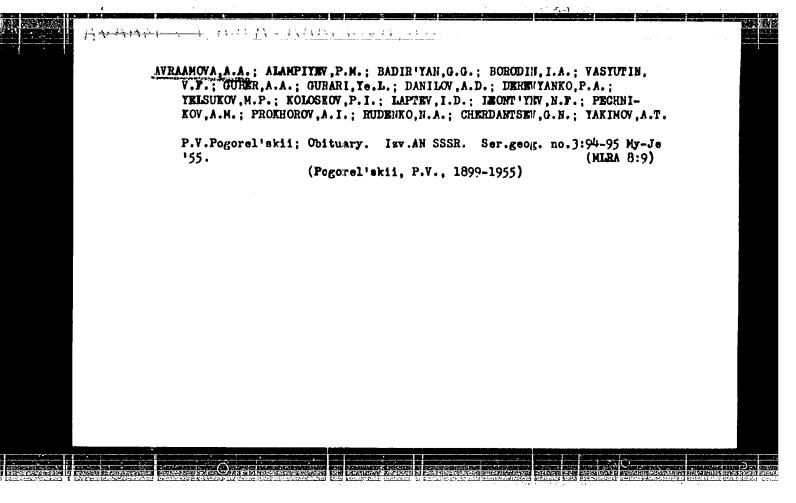






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atio of the grain-bounds	ry and surface contr	ermine more accurately the ribution to the crystal-	
rowth moving force during	g different stages o	of secondary recrystallizing action of inclusions	28- 55
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Marsham, A. A.

"Problems of the development and location of animal husbandry in the Mongolian Feorle's Republic.", "in Education. "oscow State Fedagogical Inst iment V. I. Lenin. Moscow, 1996 (Dissertation for the degre of Candidate in Geographical Sciences)

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No. 25, 1956. "oscow

22099

S/035/61/000/003/025/048 A001/A101

6.4700

AUTHOR:

Avraamova, G.V.

TITLE:

Determination of meteor radiants by the method of undamped oscilla-

tions

PERIODICAL:

Referativnyy zhurnal, Astronomiya i Geodeziya, no. 3, 1961, 49, ab-

stract 3A428 ("Byul, In-ta astrofiz, TadzhSSR", 1959, no. 27, 31-36)

The methods of measuring coordinates of radiants of individual mete-TEXT: ors by radar operating in pulses, which are employed at present, necessitate determination of time shifts and meteor speeds from diffraction patterns. Distortions of diffraction patterns by the effect of turbulent atmospheric winds lead to the following result: the number of echoes which can be used for measuring radiant coordinates amount to a few per cent of the total number of echoes, and coordinates are obtained with large errors. Employment of the method of undamped oscillations makes it possible to utilize the sections of a trail corresponding to meteor flight at the point of mirror reflection. Therewith the probability of distorting diffraction patterns is considerably reduced. The author presents formulae for determining coordinates of meteor radiant by means of a transmitter

Card 1/2

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Determination of meteor radiants ...

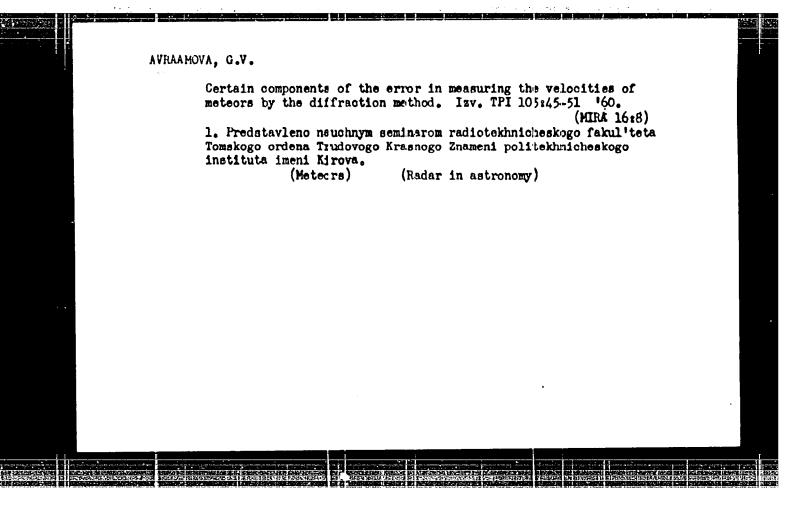
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operating by continuous emission and three outdoor receivers which retransmit signals received by the central station. The relation between the frequency of amplitude fluctuations and time, f(t), is determined from diffraction patterns. Temporal shifts between signals are determined by examining f(t) curves. Meteor speed is determined by conventional methods. The block-diagram of such a station is presented.

V. Lebedinets

[Abstracter's note: Complete translation]

Card 2/2



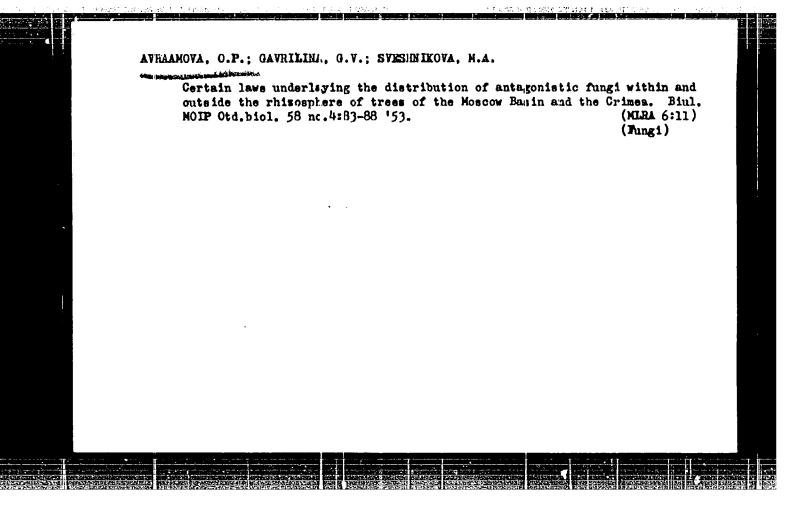
STREBELEY, Yo.Ye.; AVRANIOVA, L.S., red.

[Use of heterosis in vegetable and vine crop growing; bibliographical list of Soviet literature published from 1959 to 1964 comprising 182 items] Ispol'zovanie geteronical verochekevodstve is bakhchevodstve; bibliograficheskil spisok otochestvennoi literatury v kolichestve 3/2 mazvanii za 1959-1964 gg. Moskva, Akad. sel'khoz. mauk 1965. 23 p. (MIRA 18:10)

1. Moscow. TSontral naya nauchnaya sel skokhogyaystvennaya biblioteka. Sprayechno-bibliografichaskiy otdal.

[Soilless growing of farm plants; index of Soviet literature published from April 1 to December 31, 1964] Vyrashchivanie sel'skokhoziaistvennykh rastonii bez pochwy; ukazatel' otechestvennoi literatury al aprela po 31 dekabria 1964 g. Moskva, 1965. 43 p. (MRA 18:10)

1. Moscov. TSentral'mya nauchnaya sel'skokhomyaystvennaya biblioteka. Spravochno-bibliograficheskiy otdol.



TREASURED DESIGNATION OF THE BOARD DESIGNATION

Antagonistic fungi in soils of the plant communities of Central Asian plains. Bot. zhur. 46 no. 5:651-661 My '61. (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva.

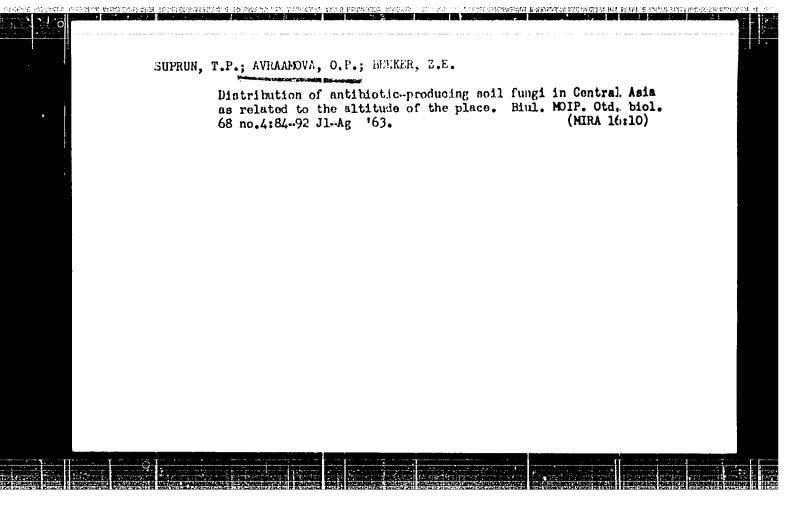
(Sovie: Central Asia-Soil micro-organisms)

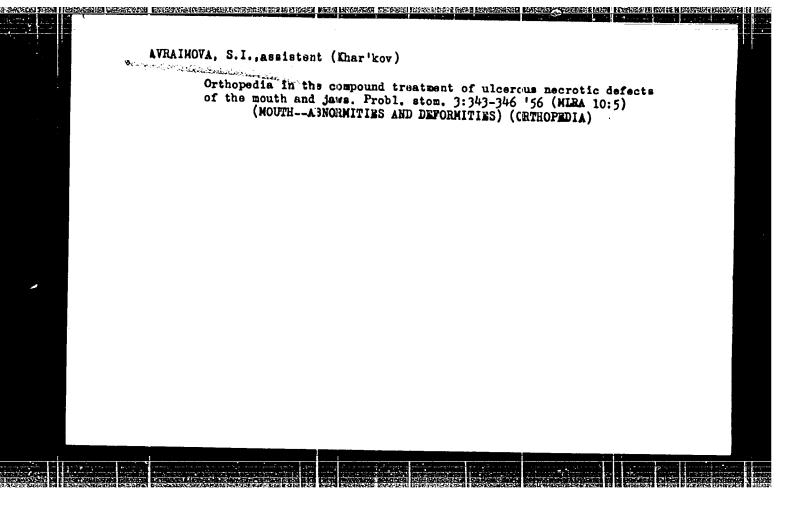
BEKKER, Z.E.; SUPRUN, T.P.; YANGULOVA, I.V.; AVRAAMOVA, O.P.;
RODIONOVA, Ye.G.

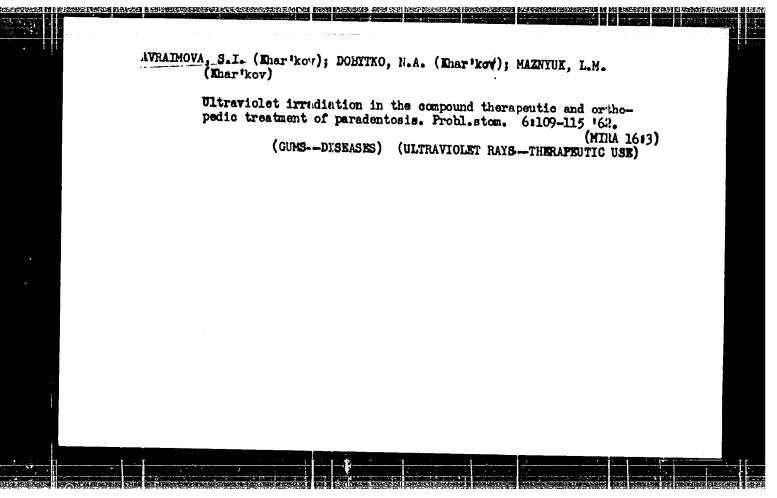
Studies on antagonistic fungi inhabiting the soils of alpine plant formations of Central Asia. Bot. zhw: 46 no.11:1(27-1637 N '61. (MIRA 15:2)

1. Vsesoyuznyy mauchno-issledovatel'skiy institut antibiotikov, Moskva.

(Soviet Central Asia-Soil micro-organisms)







AVENUEV. P. 1., inch.: (AVIPSON, V.Nc., motsent, ASTED)s, V.R., inch.; EOVALUSEE, V.R., incn.; STACEV, A.A., inch.; STACEVA, b.N., inch.

Crushing of iron ore by normal impact against a metal barrier.

Izv. vys. ucheb. zsv.; gor. zhur. 8 no.1:142-145 165.

(MEA 18:3)

1. Imepropetrovskiy gosudarstvonnyy universitet. Rekomenicvana kafedrov aeromekhariki i teorii uprugcati.

CIA-RDP86-00513R000102620003-7 "APPROVED FOR RELEASE: 06/06/2000

USSR/Fnarmacology, Toxicology. Adrenergic Drugs

77-4

Abs Jour : Ref Zhur - Biol., No 5, 1958, No 23294

Author

: Avrakhova

Inst

: Not Given

Title

: On the Comparative Evaluation of Some Properties of Sympathe-

ticotropic Drugs.

Orig Pub: Klinich. meditsina, 1957, 35, No 5, 50-56

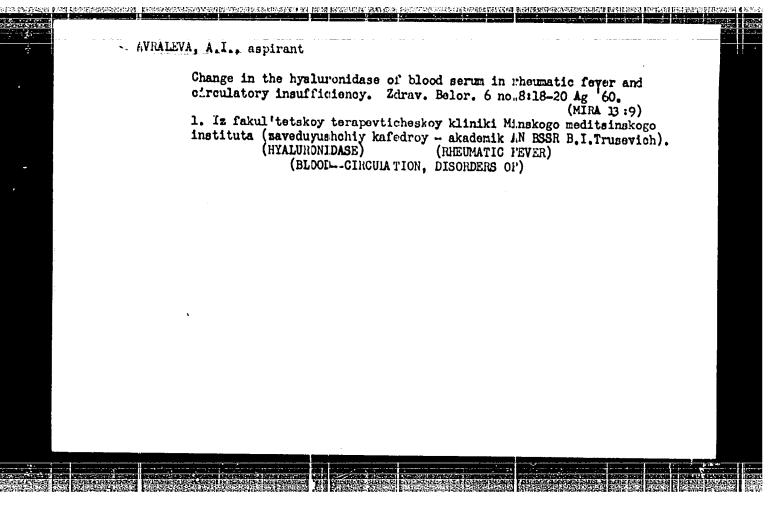
Abstract : By the B.E. Votchal digit plethysmography method, applied to 105 patients with normal or moderatly decreased arterial pressure, it was found, that mezatone (I) had a much stronger pressor action, than adrenalin (II) and pthedrine (III). I decreased the pulse frequency by 10-44 beats per minute; II and III increased it approximately by 20 beats in one minute. The action of 1 lasted 12 hours. The decrease in arterial pressure and in the peripheral vascular tone in the second phase was observed under II's influence. I and III did not produce taxiphylaxis. Side effects of I were short-time palpitation of the heart and headaches.

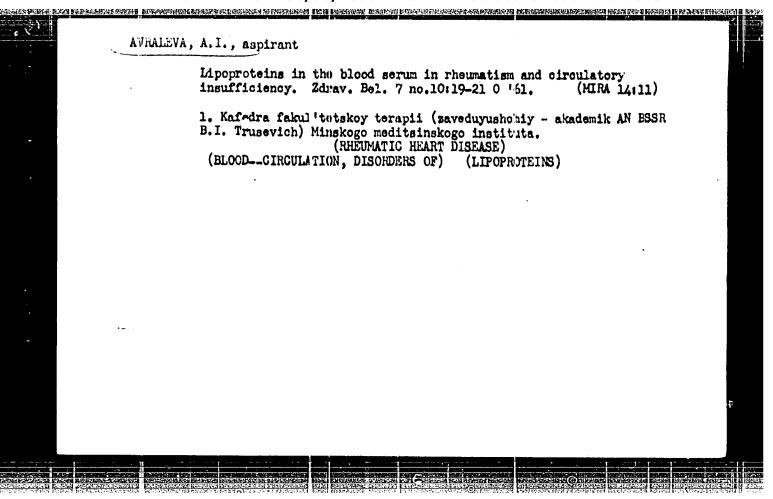
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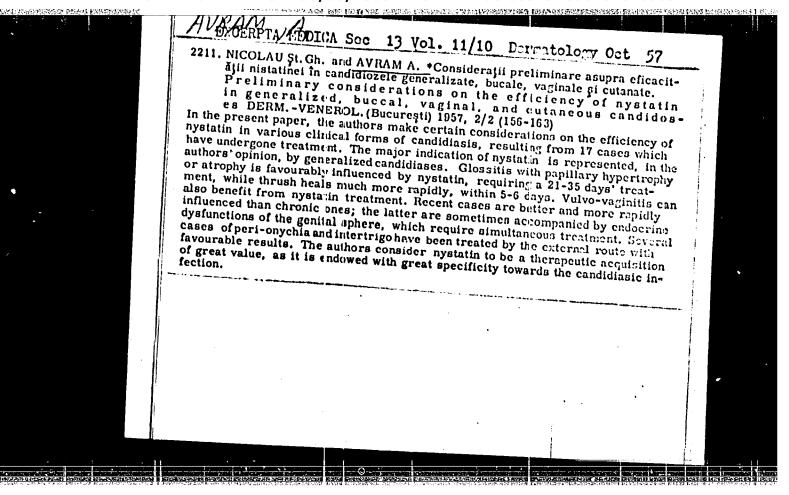
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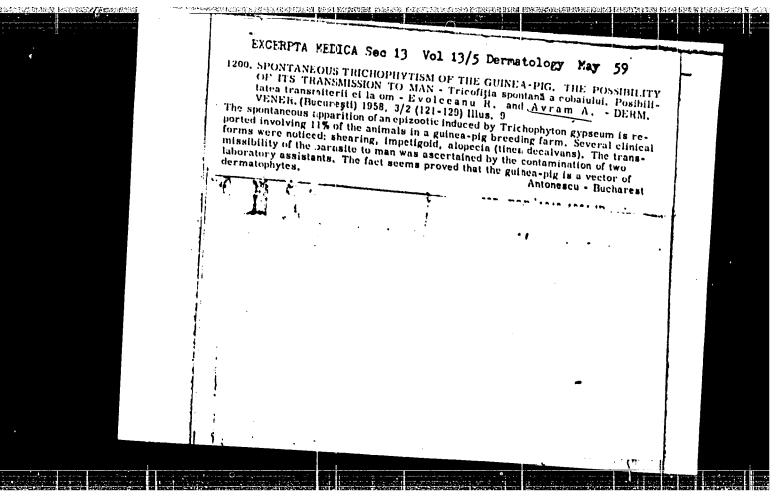
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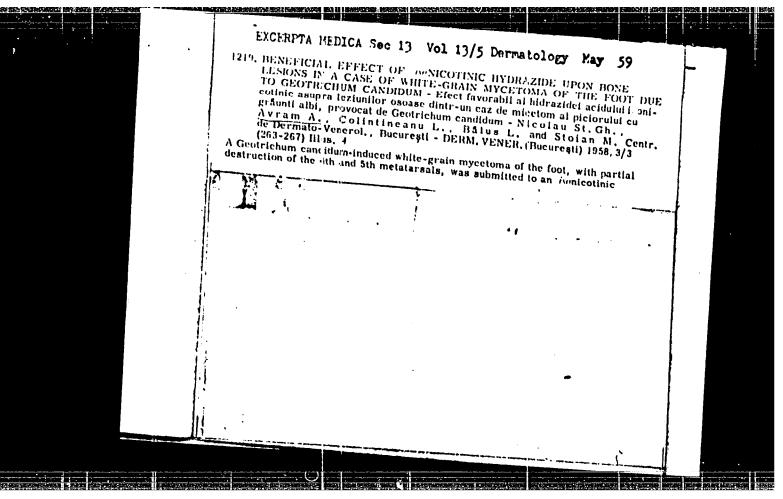
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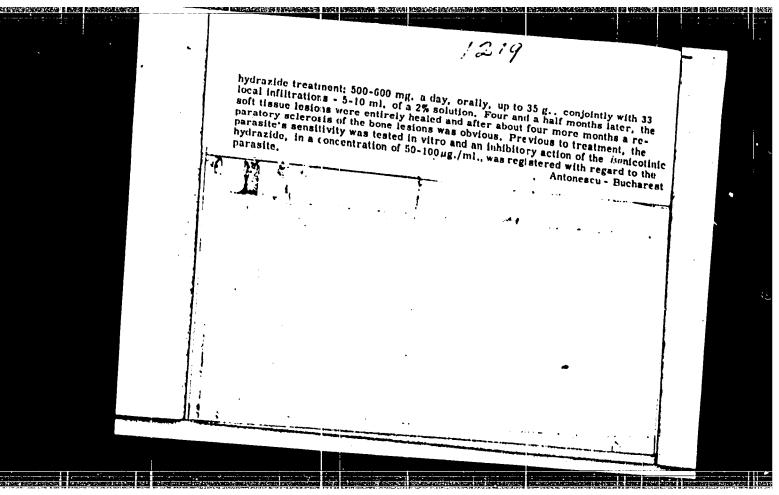


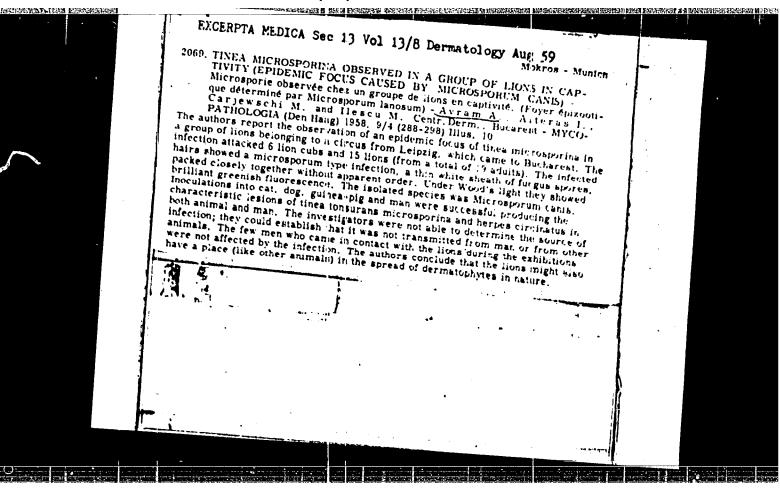






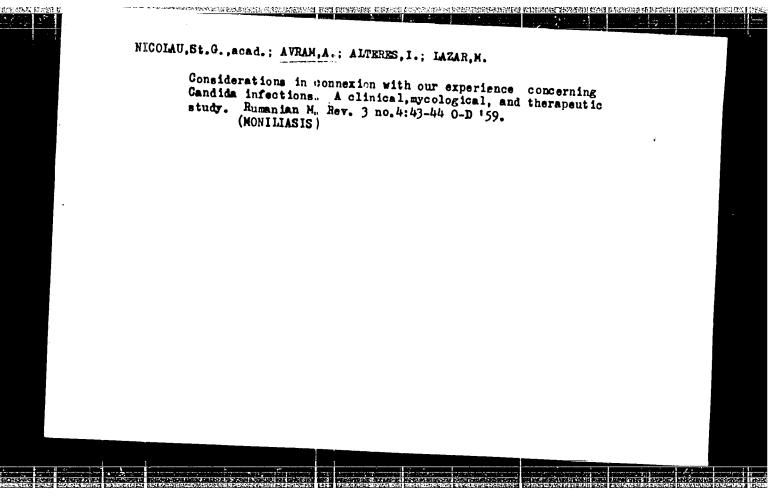


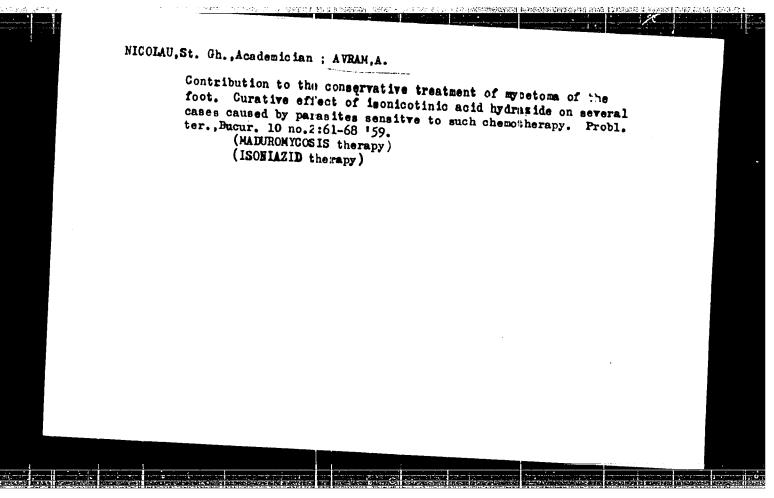


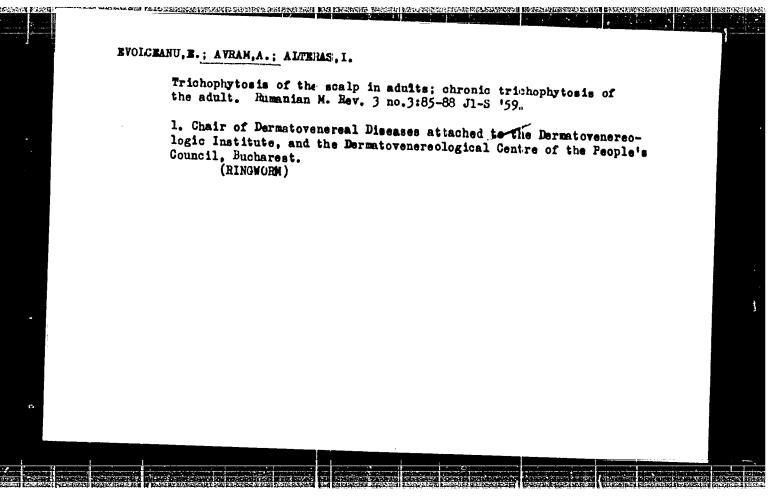


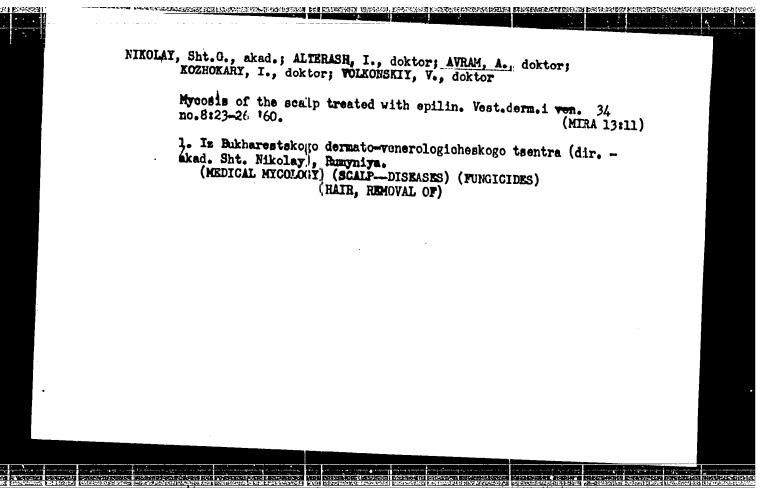
M SOUTH BEST

COUNTRY : RUMANIA CATEGORY : Chemical Technology. Chemical Products and Their Application. Sefety and Sanitation. ABS. JOUR. : RZhKhim., No 17, 1959, No. 61325 AUTHOR : Maislor, A.; Alteras, I.; Avram, A.: Schofer, A. INSTITUTE TITLE : Dermatites in the Chemico-Pharmaceutical Industry OFIG. PUB. ; Permato-veneral., 1958, 3, No. 4, 313-318 ABSTRACT : Described are cases of professional deventites (Ph) among workers as the result of contacts with hypochlorites, dinitro chlorobenzene, CC14, hexyl resorcinol, benzidine, and enlymes of pan-creas gland. The most common skip deseases were the dermaconiozos, skip errosion, eczema. Cnly in 2% of cases PD was accompanied by the temporary incapacitation. Bibliography includes 6 titles. -- N. Shumskaya Card: 1/1 11 16









NICOLAU, St. Gh.; AVRAM, A.; ALTERAS, I.; COJOCARU, I.

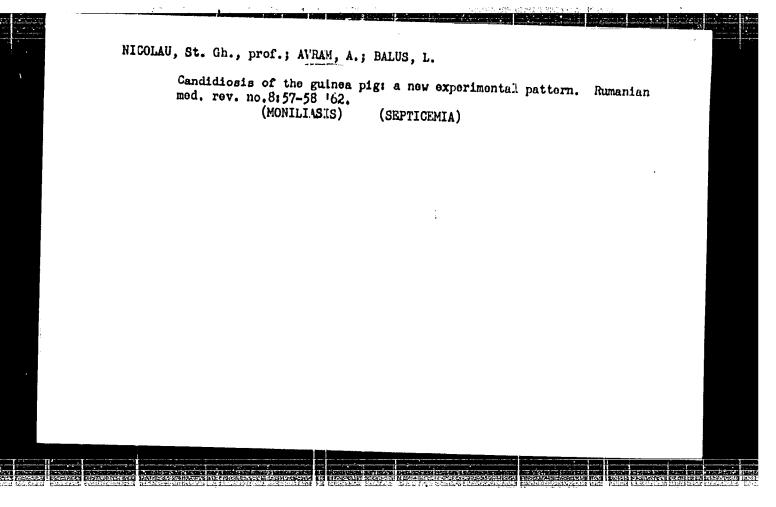
Clinical, mycological and epidemiological study of genital candidiasis.

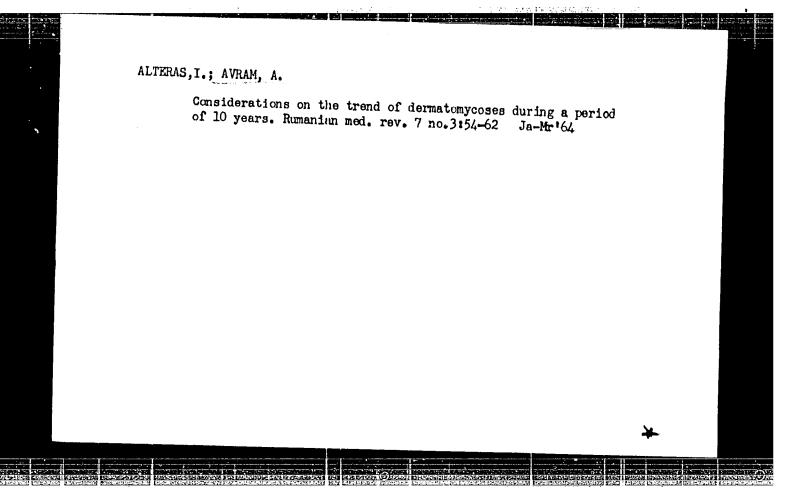
Rev. soi. med. 7 nc. 3/4;181-184 '62.

1. Membre de Lacademie de la R.F.R. (for Nicolau)

(MONILIASIS, VULVOVAGINAL) (URETHRITIN)

(GENITALIA, MALE) (MONILIASIS)





AVRAM, C.; GRUNDER, I.

AVR.I., C.; GRUNDER, I.

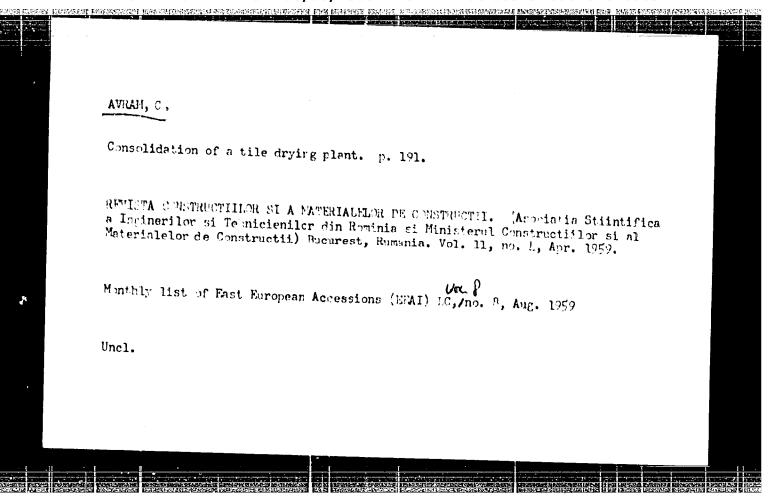
AVR.I., C.; GRUNDER, I.

AVR.I., C.; GRUNDER, I.

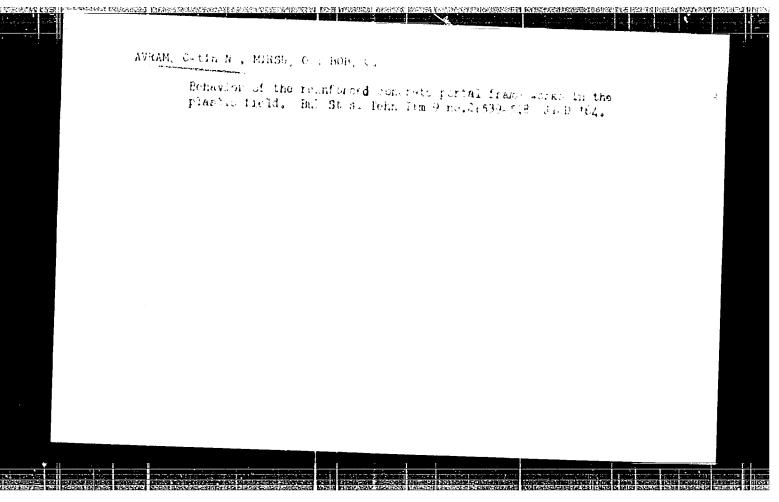
AVR.I., C.; GRUNDER, I.

Bo. 10, 1956
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TECHTOLOGY
RUFROLIA

So: East European Accession, Vol. 4, No. 5, Nay 1957



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	AUTHOR: latan, N. (Engineer); Avram, C. (Digine	er)	13	
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	powdered lime injection	big rion on	side the furnace	liy
	SOURCE: Metalurgia, no. 9, 1964, 391-394			
	TOPIC TAGS: pig iron, metal purification, lime			
	ABSTRACT: (Authors' English su mary modified): to 81 percent desulphurization by injecting 2 per	The mithous		
	of studies to determine the mail at 2.5 atmosphere	B as carrier,	They present res	3
	of studies to determine the relation between the abount of powdered line used. Frig. art. has l	B as carrier, degree of de figure, 4 gray	They present resulphurisation and ohs, 6 tables.	sults I the
	plg from, using compressed air it 2.5 atmosphere of studies to determine the relation between the abount of powdered line used. Frig. art. has l	B as carrier, degree of de figure, 4 gray	They present resulphurization and ohs, 6 tables.	sults I the
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