

CHUPILKO, V.A.

Moments of minima of eclipsing variables. Per. zvezdy 14 no.6:  
503 D '63. (MIRA 18:5)

1. Odesskaya astronomicheskaya observatoriya.

CHUPILKO, V.I.

Feed kitchen for preparing yeast feeds. Mekh. sil'. hosp. 14 no.10:  
13-14 0 63. (MIRA 17:2)

1. Upravlyayushchiy otdelom sovkhoza "Chervoniy Perekop" Khersons-  
koy oblasti.

CHUPILKO, V.S.; RESHETNIKOV, V.K.; SOSNIN, M.V.

Attachment to the SKGN-6 drill for peanut planting. Trakt. i  
sel'khoz mash. no.8:26-27 Ag '64. (MIRA 17:11)

1. Kubanskiy nauchno-issledovatel'skiy institut ispytaniya  
traktorov i sel'skokhozyaystvennykh mashin.

CHUPIN, A., ekonomist

Economic accountability within plant sections of the combine<sup>1</sup>  
Ust'-Katun' Grain Receiving Station. Muk.-elev.prom. 26 no.7:  
19-20 J1 '60. (MIRA 13:8)

1. Ust'-Katunskiy khlebopriyemnyy punkt Altayskogo kraya.  
(Altai Territory--Grain elevators)

CHUPIN, A., ekonomist; SAGIMBAYEV, M., inzh.-ekonomist

We are improving the economy of grain receiving enterprises. Muk.-elev.  
prom. 28 no.8:22-23 Ag. '62. (MIRA 17:2)

1. Ust'-Katunskiy khlebopriyemnyy punkt Altayskogo Kraya (for Chupin).
2. Khlebopriyemnyy punkt 86-go raz'yezda Atbasarskogo rayona (for Sagimbayev).

CHUPIN, A.A.

Direct determination of the sensitivity of the intestinal microflora to antibiotics. Lab.delo 8 no.5:42-43 My '62.

(MIRA 15:12)

1. Laboratoriya antibiotikov (zav. - prof. N.I.Leonov)  
Vsesoyuznogo nauchno-issledovatel'skogo instituta zhivotnovodstva,  
Moskva.

(ANTIBIOTICS) (INTESTINES---MICROBIOLOGY)

CHUPIN, A.A.

Grisein resistivity of intestinal micro-organisms. Mikrobiologiya  
31 no.3:486-489 My-Je '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva.  
(GRISEIN) (INTESTINES--MICROBIOLOGY)

TRESHNIKOV, Aleksey Fedorovich, kand.geograf.nauk. Primalni uchastiye:  
MATVEYCHUK, Georgiy Ivanovich; CHUPIN, Nikolay Petrovich; ARALOV,  
Dmitriy Petrovich; TIKHOMIROV, Igor' Ivanovich, vrach-stomatolog;  
MANSUROV, Sergey Mikhaylovich; KRICHAK, Oskar Grigor'yevich, kand.  
geograf.nauk; SHUMSKIY, Petr Aleksandrovich, doktor geograf.nauk;  
SHESTERNIKOV, Nikolay Pavlovich, mladshiy nauchnyy sotrudnik, gidro-  
log. DROZHZHINA, L.P., tekhn.red.

[Second Continental Expedition, 1956-1958; general description]  
Vtoraia kontinental'naya ekspeditsiia, 1956-1958 gg.; obshchee opi-  
sanie. Pod red. A.F.Treshnikova. Leningrad, Izd-vo "Morskoi  
transport," 1960. 205 p. (Sovetskaya antarkticheskaya ekspeditsiia,  
no.8).  
(MIRA 13:7)

1. Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'-  
skiy institut. 2. Nachal'nik Vtoroy kontinental'noy ekspeditsii  
(for Treshnikov). 3. Zamestitel' nachal'nika Vtoroy kontinental'noy  
ekspeditsii po administrativno-khozyaystvennoy chasti; nachal'nik  
beregovoy bazy (for Matveychuk).

(Continued on next card)



TRESENIKOV, Aleksey Fedorovich --- (continued) Card 2.

4. Glavnyy inzhener Vtoroy kontinental'noy ekspeditsii (for Chupin).
5. Nachal'nik otryada svyazi i radionavigatsii Vtoroy kontinental'noy ekspeditsii (for Aralov).
6. Starshiy vrach Vtoroy kontinental'noy ekspeditsii (for Tikhomirov).
7. Nachal'nik geofizicheskogo otryada Vtoroy kontinental'noy ekspeditsii (for Mansurov).
8. Nachal'nik aerometeorologicheskogo otryada Vtoroy kontinental'noy ekspeditsii (for Krichak).
9. Nachal'nik glyatsiologicheskogo i vnutrikontinental'nogo otryada Vtoroy kontinental'noy ekspeditsii.
10. Nachal'nik otryada pribrezhnoy gidrologii Vtoroy kontinental'noy ekspeditsii (for Shesterikov).

(Antarctic regions--Russian exploration)

CHUPIN, A.N., smenny inzhener stroitel'stva

Erecting the lining using precast, dismantable formwork.  
Transp. stroi. 13 no.2:22-23 F '63. (MIRA 16:3)  
(Tunnel lining)

USSR/Farm Animals - Swine.

Q-4

Abs Jour : Ref Zhur - Biol., No 18, 1958, 83424

Author : Chupin, P.S.

Inst : -

Title : Effects of Various Kinds of Feedings for Swine upon the Quality of Their Offspring.

Orig Pub : Svinovodstvo, 1958, No 2, 35-37.

Abstract : One group of sows and boars received "semi-grain" feeds (grass, hay, and tubers composed 40-60 percent of their rations). Another group received "grain" feeds (75-80 percent of their rations were composed of grain feeds). Thereafter, the sows were mated according to groups: in the first group, "semi-grain" females were crossed with "grain" males; in the second group, "grain" females were crossed with "grain" males; in the third group, "semi-grain" females were crossed with "semi-grain" males; and the fourth group, "grain" females were crossed with

Card 1/2

CHUPINA, L.N. . .

~~Palynological complex~~ of the Mousterian site Karasu-1 from the  
Arystandy Valley (western Tien Shan). Mat po ist. fauny i flory  
Kazakh. 4:243-257 '63. (MIRA 16:9)  
(Arystandy Valley— Pollen, Fossil)

CHUPIREV, D. A.

Proektirovanie i teplovye raschety statsionarykh parovykh turbin [Planning and thermal calculations of stationary steam turbines]. Moskva, Mashgiz, 1953. 192 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 5, August 1953

*CHUPIREV, D.A.*  
CHUPIREV, D.A., inzh.

Turbine manufacturing in the Hungarian People's Republic. Energo-  
mashinostroenie 4 no.1:45 Ja '58. (MIRA 11:1)  
(Hungary--Steam turbines)

CHUPIN, I.Ya. (Leningrad, ul. Gertsena, 46, kv.18)

Use of radioactive colloidal gold in carcinomatosis of the peura  
and peritoneum. Vop. onk. 9 no.7:56-62 '63 (MIRA 16:12)

1. Iz radio-onkologicheskogo otdeleniya (zav. - starshiy nauchnyy  
sotrudnik A.I. Strashinin) Tsentral'nogo nauchno-issledovatel'-  
skogo instituta meditsinskoy radiologii Ministerstva zdравoekhra-  
neniya SSSR (dir. -Ye.I.Vorob'yev).

CHUPIN, I.Ya., (Leningrad, ul. Gertsena, 46, kv.18); SHCHERBAN', E.I.  
(Leningrad, V.O., 14-ya liniya, 25, kv.15)

Distribution of radioactive colloid gold (Au<sup>198</sup>) in intracavitary administration. Vop. onk. 9 no.9:3-8 '63.

(MIRA 17:9)

1. Iz radioonkologicheskogo otdeleniya (zav.- kand. med. nauk A.I. Strashinin) i otdeleniya patologicheskoy anatomii (zav.- prof. L.V. Funshteyn) Tsentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii (dir.- Ye.I. Vorob'yev), Ministerstva zdravookhraneniya SSSR.



GHUPINA, L.N.

Recent spore and pollen spectra of southern Kazakhstan. Vest. AN  
Kazakh.SSR 21 no.2:12-22 F '65. (MIRA 18:3)

85974

S/126/60/010/005/029/030

E032/E414

24.2200 (1385,1144,1162)

AUTHORS: Kaganov, M.I., Tsukernik, V.M. and Chupis, I.Ye.TITLE: Theory of Relaxation Processes in Antiferromagnetics ↗PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol.10, No.5,  
pp.797-798

TEXT: The method put forward by Akhiezer (Ref.1) and Kaganov and Tsukernik (Ref.2) is used to calculate the mean probabilities of processes associated with the interaction between spin waves in ferromagnetics. The theory holds in the temperature region

$$\omega_c \left( \frac{\mu_0 M_0}{\omega_c} \right)^{1/2} \ll T \ll \omega_c$$

in which the energy of the spin wave is given by the well-known expression

$$\varepsilon_\lambda = \omega_c (ak_\lambda)$$

Card 1/3

85974

S/126/60/010/005/029/030  
E032/E414

Theory of Relaxation Processes in Antiferromagnetics

The notation is defined in the previous paper by the present authors (Ref.3). The processes considered are: (a) combination of two spin waves into one, and (b) collision of two spin waves. The probability of other processes, for example combination of three spin waves into one, have zero probability since energy and momentum conservation laws cannot be satisfied at the same time. It is found that the mean probabilities for the above two processes are respectively given by



$$\bar{W}_3 \approx \frac{\Theta_c}{h} \left( \frac{\mu_0 M_0}{\Theta_c} \right)^{5/2} \frac{T^3}{\Theta_c} \quad (3)$$

$$\bar{W}_4 \approx \frac{\Theta_c}{h} \left( \frac{T}{\Theta_c} \right)^5 \quad (4)$$

Comparison of these two probabilities shows that in the above  
Card 2/3

85974

S/126/60/010/005/029/030  
E032/E414

Theory of Relaxation Processes in Antiferromagnetics

temperature region the non-homogeneous exchange interaction is responsible for setting up the thermodynamic equilibrium in a spin wave system. Acknowledgments are expressed to V.G.Bar'yakhtara for valuable discussions. There are 3 Soviet references.

ASSOCIATIONS: Fiziko-tekhnicheskiy institut AN USSR  
(Physical-Technical Institute AS UkrSSR)  
Khar'kovskiy gosudarstvennyy universitet  
im. A.M.Gor'kogo (Khar'kov State University  
im. A.M.Gor'kiy)

SUBMITTED: April 18, 1960

Card 3/3

L 10192-63

EWT(1)/BDS/EEC(b)-2--AFPTC/ASD--IJP(C)

ACCESSION NR: AP3000070

S/0056/63/044/005/1695/1702

AUTHOR: Kaganov, M. I.; Chupis, I. Ye.

TITLE: Threshold absorption of magnetic energy in a uniaxial antiferromagnet 2)

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 44, no. 5, 1963, 1695-1702

TOPIC TAGS: antiferromagnets, magnetic energy absorption, threshold absorption

ABSTRACT: The absorption coefficient of an alternating magnetic field polarized along the preferred axis of a uniaxial antiferromagnet is calculated. It is shown that for frequencies close to threshold (the threshold frequency is equal to  $2gH_0$ , where  $g$  is the gyromagnetic ration and  $H_0$  is the external magnetic field) the absorption coefficient is proportional to the square root of the difference between the frequency and the threshold frequency, and that the absorption coefficient attenuates exponentially with rising frequency. The lower the temperature, the finer the "absorption line." The behavior at relatively high temperatures (much above the activation energy) is investigated. The Hamiltonian of the ferromagnet is diagonalized in the appendix, under some very

Card 1/2

I. 10192-63

ACCESSION NR: AP3000070

3

general assumptions. "In conclusion, we take the opportunity to thank A. S. Borovik-Romanov, I. M. Lifshits, and V. M. Tsukernik for useful discussions."  
Orig. art. has: 45 formulas and 1 figure.

ASSOCIATION: none

SUBMITTED: 25Dec62      DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: PH      NR REF SOV: 001

OTHER: 000

bm/Ch  
Card 2/2

ACCESSION NR: AP4012559

S/0056/64/046/001/0307/0319

AUTHOR: Chupis, I. Ye.

TITLE: Contribution to the theory of relaxation processes in a uniaxial antiferromagnetic dielectric

SOURCE: Zhurnal eksper. i teoret. fiz., v. 46, no. 1, 1964, 307-319

TOPIC TAGS: antiferromagnetic dielectric, uniaxial antiferromagnetic dielectric, relaxation processes, relaxation time, interaction between spin waves, spin wave phonon interaction, spin wave decay, spin spin interaction, spin phonon interaction, exchange interaction, inhomogeneous exchange interaction

ABSTRACT: The purpose of the investigation is to find the temperature dependence of the relaxation times in the interactions of spin waves (whose number is not conserved) with one another and with phonons. The relaxation times due to the decay of one spin wave into

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ACCESSION NR: AP4012559

two spin waves (or the inverse process) and due to the interaction between spin waves and phonons are calculated for two limiting cases, one for the absence of a magnetic field and one for fields in which the dipole-dipole interaction can be neglected in the spin-wave spectrum. It is pointed out that the decay of the spin wave into two involves effect of third order in the spin-wave creation and annihilation operators, whereas magnetic anisotropy and exchange forces give rise to fourth-order terms. The relaxation picture in antiferromagnetic dielectrics turn out to be much more complicated than in ferromagnets. In antiferromagnets the exchange interactions influence the establishment of the equilibrium magnetic moment and can lead to a broadening of the resonant line. The relativistic interactions are weaker than all other interactions for both high and low temperatures. The probability of spin-phonon interactions may exceed the probability of the interaction of spin waves with one another. Decisive among all the possible spin-spin and spin-phonon interactions at high temperatures are the inhom-

Card 2/3



ACCESSION NR: AP4012559

geneous exchange interactions which have the highest probabilities.  
"In conclusion I take the opportunity to thank M. I. Kaganov for  
help with the work and valuable advice, and also V. M. Tsukernik  
for useful discussions." Orig. art. has: 4 figures and 21 formulas.

ASSOCIATION: None

SUBMITTED: 21Jun63

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 006

OTHER: 000

Card 3/3

KAGANOV, M.I.; CHUPIS, I.Ye.

Threshold absorption of sound in a uniaxial antiferromagnetic.  
Zhur. eksp. i teor. fiz. 45 no.5:1581-1584 N '63. (MIRA 17:1)

CHUPIS, I.Ye.

Theory of relaxation processes in a uniaxial antiferroelectric.  
Zhur. eksper. i teor. fiz. 46 no.1:307-319 Ja'64.

(MIRA 17:2)

ACCESSION NR: AP4030655

S/0048/64/028/004/0741/0747

AUTHOR: Kaganov, M. I.; Chupis, I. Ye.

TITLE: Threshold and relaxation effects in uniaxial antiferromagnets Report, Symposium on Ferromagnetism and Ferroelectricity held in Leningrad 30 May-5 June 1963

SOURCE: AN SSSR. Izv. Ser.fiz., v.28, no.4, 1964, 741-747

TOPIC TAGS: antiferromagnetism, spin wave, antiferromagnet spin wave, spin wave interaction

ABSTRACT: The propagation and interaction of spin waves in antiferromagnetic materials are discussed. The notation is taken from an earlier review (I. I. Aikhizer, V. G. Bar'yakhtar and M. I. Kaganov, Uspkhi fiz.nauk, 71, 533, 1960) in which presumably the necessary derivations can also be found. In the present paper formulas are for the most part simply quoted, and in some cases their physical consequences are briefly discussed. The energy of the spin wave is a two-valued function of the wave vector (i.e., there are two types of spin waves), and for each branch it depends on the direction of propagation. This anisotropy is due to the relativistic interactions, the exchange interaction being regarded as isotropic. A future discussion of anisotropic

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ACCESSION NR: AP4030655

exchange interaction in antiferromagnets is promised. The following interaction processes are possible: decay of a spin wave into two spin waves; scattering of a spin wave by another spin wave; creation or absorption of a phonon by a single spin wave; and annihilation of two spin waves with the production of a phonon. These processes are discussed and their probabilities are given. Decay of spin waves involves a threshold effect that should be observable by inelastic scattering of slow neutrons. The threshold depends on the strength of the applied magnetic field. In contrast to the behavior of spin waves in ferromagnets, here the probability for creating or absorbing phonons is greater than that for a spin wave to decay into two. The scattering of two spin waves is even more probable, however, and for many purposes the spin waves and the phonons can be treated as "quasi-independent". An almost resonant absorption of energy from an oscillating magnetic field is possible, with the transformation of a spin wave from one type to the other. Similar absorption of acoustic energy can also occur. These processes are discussed in less detail than the others. "In conclusion, we desire to express our gratitude to V.M. Tsuker-nik for very useful discussions." Orig.art.has: 15 formulas and 5 figures.

Card2/3

ACCESSION NR: AP4030655

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: GP

DATE ACQ: 30Apr64

NR REF SOV: 005

ENCL: 00

OTHER: 002

Card 3/3

VENTSEL', S.V., doktor tekhn.nauk, prof.; CHUPIS, N.M., dotsent

Using the method of ground holes in determining the wear of  
machine parts. Vest.mashinostr. 43 no.8:29-30 Ag '63.  
(MIRA 16:9)

(Mechanical wear--Testing)

VENTSEL', S.V.; CHUPIS, N.M. [Chupys, M.M.]; LELYUK, V.A. [Leliuk, V.O.]

Effect of the oxidation of oil on the process of running-in the  
ring-socket pair of internal combustion engines. Dop. AN URSR  
№ 499-502 '64. (MIRA 17:5)

l. Khar'kovskiy inzhenerno-stroitel'nyy institut. Predstavleno  
akademikom AN UkrSSR F.P.Belyankinym [Beliiankin, F.P.].



VENTSEL', S. V. doktor tekhn.nauk, prof.; KUZNETSOV, Ye., kand.tekhn.nauk;  
CHUPIS, N.; LEVCHENKO, P.

Using niger oil in chassis lubrication units. Avt.transp. 42  
no.12:15-16 D '64. (MIRA 18:4)

USSR / Zooparasitology. Mite and Insect Vectors of  
Disease Agents. Insects. G

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 19728

Author : Chupis, T. S.

Inst : The Sumy State Pedagogic Institute

Title : Study of the Fauna and Ecology of Horse-  
flies in the Left-Bank Regions of the Ukraine

Orig Pub : Nauk. zap. sumsk. derzh. ped. in-t, 1957,  
7, 3-24

Abstract : Investigation results of the species composi-  
tion and ecological characteristics of the  
local horsefly populations. The faunal in-  
vestigations embrace the basin of Psel  
River, the upper course of the Sula, the low-  
lands of the North Donetz, Vorskla, the  
navigating regions of the Dnieper near

Card 1/2

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USSR / Zooparasitology. Mite and Insect Vectors of  
Disease Agents. Insects.

G

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 19728

Zaporozh'ye and separate collections from the neighborhood of Osipenko City. The seasonal and 24-hour infestation activity was studied in the water-meadow biotopes of the Psla Valley (Sumskaya Oblast') and in the navigating regions of the Dnieper (in the vicinity of Zaporozh'ye). Data on the first and last captures for the majority of the studied species are submitted, as well as data on pupation and the imago emergence obtained under laboratory conditions, and also a graphic representation of seasonal dynamics and intensity of the infestation.

Card 2/2

ACC NR: AP7010682

SOURCE CODE: UR/0089/66/021/003/0197/0201

AUTHOR: Chupka, Sh.; Petrashova, M.; Tsarakh, I.

ORG: Regional Sanitation Epidemiological Station, Bratislava

TITLE: Content of  $^{90}\text{Sr}$  and  $^{137}\text{Cs}$  in agricultural products during 1963 and 1964 in West Slovakia

SOURCE: Atomnaya energiya, v. 21, no. 3, 1966, 197-201

TOPIC TAGS: agriculture crop, isotope, radioactive fallout, plant circulation

SUB CODE: 02,18,06

ABSTRACT: Analysis of the  $^{90}\text{Sr}$  and  $^{137}\text{Cs}$  level in agricultural products in West Slovakia during 1963 and 1964 showed the highest content of these isotopes in grain cultures comparatively lower content in leguminous, and the lowest in tuberous plants. The  $^{137}\text{Cs}:$  $^{90}\text{Sr}$  ratio depended on the sorptive ability of plants and the amount of radioactive fallout in the vicinity of nuclear power plants of the region. Orig. art. has: 7 tables.

[NA]

1. 01425-05 LAT(m)/EWA(h) DM  
ADMISSION NR: AP5020186

UR/DOX84 68 1.8. 05-0496/0499

AUTHOR: Chupka, Sh.; Petrashova, M.; Tsarakh, I.

TITLE: Content of <sup>90</sup>Sr in radioactive fallout over west Slovakian territory

SOURCE: Atomnaya energiya, v. 18, no. 5, 1965, 496-499

TOPIC TAGS: strontium, radioactive fallout, isotope, stratosphere, atmospheric radioactivity

ABSTRACT: The absolute and relative content of <sup>90</sup>Sr in radioactive fallout was measured at four points of western Slovakia during 1962-1963. A considerable rise (up to 12%) was observed during November and December 1963. It was concluded that the present radioactive fallout consists of strontium isotopes with long half life. Orig. art. has: 3 tables, 1 graph.

ASSOCIATION: Oblastnaya san.-epid. stantsiya, Bratislava (District Medical-Epidemiological Station)

SUBMITTED: 22Jul64  
NR REF SOV: 000

ENCL: 00  
OTHER: 006

SUB CODE: NP, ES  
NA

Card 1/1

*ЧУПОВА, В.П.*

KUL'SKIY, L.A.; SHEVCHENKO, M.A.; CHUPOVA, V.P.

Stabilizing water on a suspended aluminum hydroxide - chalk bed.  
Ukr.khim.zhur. 22 no.4:542-545 '56. (MIRA 10:10)

1. Institut obshchey i neorganicheskoy khimii AN USSR.  
(Water--Purification)

*CHUPOVA, V. P.*

KUL'SKIY, L.A.; SHEVCHENKO, M.A.; ~~CHUPOVA, V.P.~~

Stability of odors of biological origin in water [with summary in English]. Gig. i san. 22 no.5:16-22 My '57. (MIRA 10:10)

1. Iz Instituta obshchey i neorganicheskoy khimii AN SSSR.  
(WATER SUPPLY,  
odors of biol. origins, difficulties in control (Rus))  
(ODORS,  
in water, difficulties in control (Rus))

SHEVCHENKO, M. A.; BARASHENKOV, G. B.; CHUPOVA, V. P.

Seasonal changes in the properties of aqueous humus. Ukr. khim.  
zhur. 28 no.3:403-409 '62. (MIRA 15:10)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

(Humus)



CHUPR, Z. [Cupr, Z.]; KUCHERA, F. [Kucera, F.]

Male pseudohermaphroditism, the syndrome of total testicular feminization. Probl. endok. i gorm. 11 no.6:50-53 N-D '65. (MIRA 18:12)

1. II akushersko-ginekologicheskaya klinika (zav. - dotsent M. Uger) meditsinskogo fakul'teta Brnenskogo universiteta imeni Purkin'ye, Chekhoslovatskaya Sotsialisticheskaya Respublika.

1ST AND 2ND ORDER

PROCESSES AND PROPERTIES INDEX

CHUPRAKOV, N.M.

SA

3873. Effectiveness of the organizational and technical measures adopted in the "Uzbekenergo" hydroelectric power stations. CHUPRAKOV, N. M. *Gidrotekhn. Stroit.*, 1-5 (Feb., 1949) In Russian.— A report on the successful interconnection of hydro-power stations in Uzbekistan, resulting in great administrative and technical simplification and economies. 3 or 4 power stations situated on the same river system are usually interconnected. The arrangement of the equipment and distribution of personnel are shown diagrammatically. The economy in personnel amounts to 40%, whilst telecontrol operation would halve the necessary staff. Fully automatic operation with telecontrol is estimated to require only  $\frac{1}{2}$  or  $\frac{1}{3}$  of the normal staffing. 88% of the savings result from automatic operation, and only 12% from telecontrol. The reduction in primary cost of the plant obtained by all these measures for the Uzbekenergo was 16%. R. F. K.

B64  
x

AS 5-51A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDER

CHU/PRAKOV, N. M.

PA 162T18

USSR/Electricity - Heating, Gate Rack  
Power Stations

Jun 50

"Economy in Electric Power Used for Gate Rack Heating in Hydroelectric Power Stations," N. M. Chuprakov, Engr

"Elek Stants" No 6, pp 11-13

States that average of 20-35% of total electric power required for internal consumption by hydroelectric power stations of Uzbekenergo is used for gate rack heating. Proposes various ways in which this high percentage can be reduced, most important of which is fitting of indicator permitting gate rack heating to be switched off until temperature is sufficiently low to cause ice blockage. Includes table giving existing and recommended spacing between bars of trash rack.

162T18

CHUPRAKOV, N.M.

USSR/Engineering - Power Stations

Jan 51

"Automatization and Telemechanization of Hydroelectric Power Stations," N. M. Chuprakov, Engr

"Gidrotekh Stroi" No 1, pp 5-9

Reviews and discusses subject activity. Gives several tech and organizational suggestions for improving activity. Article represents an abridged report delivered at 3d All-Union Conference on Exploitation of Hydroelec Power Stations in Sep 50.

199T32

CHUPRAKOV, N.M.

YERMAKOV, V.S.; SPIRIN, S.A.; CHIZHOV, D.G.; UGORETS, I.I.; LAVRENEKO, K.D.;  
SMIRNOV, G.V.; CHUPRAKOV, N.M.; MKHITARYAN, S.G.; ASMOLOV, G.L.;  
KOTILEVSKIY, A.H.; MOLOKANOV, S.I.; SYROMYATNIKOV, I.A.; FAYERMAN, S.Ts.;  
SOKOLOV, B.M.; KOMISSAROV, Yu.P.; MALYUTIN, I.P.; POBEGAYLO, K.M.;  
MORYAKOV, A.V.; MELAMED, M.F.; KUMSIASHVILI, P.G.; GARKAVAYA, L.A.;  
LIVSHITS, E.M.; NEKRASOV, A.M.

Moisei Vul'fovich Safro; obituary. Elek.sta. 24 no.11:60 N '53.

(MLBA 6:11)

(Safro, Moisei Vul'fovich, ?-1953)

CHUPRAKOV, N. N.

YERMAKOV, V.S.; KLOCHKOV, I.M.; CHIZHOV, D.G.; KOGTEV, G.I.; LAVRENN-  
KO, K.D.; NEKRASOV, A.M.; SPIRIN, S.A.; VESELOV, H.D.; KOTILEVSKIY, D.G.;  
SMIRNOV, G.V.; MARINOV, A.M.; MAKSIMOV, A.A.; IVANOV, M.I.; NEMOV, A.P.;  
CHUPRAKOV, N.M.; AVTONOMOV, B.V.; SYROMYATNIKOV, I.A.; MOLOKANOV, S.I.;  
FAIRMAN, S.T.S.; GORSHKOV, A.S.; GOL'DENBERG, P.S.; SOKOLOV, B.M.; MA-  
KUSHKIN, Ya.G.; MKHITARYAN, S.G.; RASSADNIKOV, Ye.I.; GRUDINSKIY, P.G.;  
POMICHEV, G.I.; SHCHERBININ, B.V.; ZAYTSEV, V.I.; KOKOREV, S.V.; KLYU-  
SHIN, M.P.; PESCHANSKIY, V.I.; SAFRAZERKYAN, G.S.; i dr...

IUrii Prokhorovich Komissarov; obituary. Elek.sta. 25 no.5:60 My '54.  
(Komissarov, IUrii Prokhorovich, 1910-1954) (MLRA 7:6)

*CHUPRAKOV, N.M.*

AID P - 3030

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 17/33

Author : Chuprakov, N. M., Eng.

Title : Main problems of automation of hydroelectric power stations

Periodical : Elektrichestvo, 7, 100-102, J1 1955

Abstract : The author discusses the development of parallel operation of power systems of the central and south regions of the European parts of the USSR and the Ural. This will be made possible by putting into operation of the Kuybyshev, Stalingrad, and Kakhovka hydroelectric power stations, and completion of the 400 kv network. The total capacity of hydroelectric power stations in the USSR forms about one fifth of all regional power stations; that figure will gradually grow, and this will favorably influence the operational mobility of the whole system. This will help the

AID P - 3030

Elektrichestvo, 7, 100-102, J1 1955

Card 2/2 Pub. 27 - 17/33

automation of frequency and power control and creation of reliable reserves. The author goes into technical details of automation as based on experience.

Institution : Glavyuzhenergo (Main Southern Power System Administration)  
of the Ministry of Electric Power Stations, USSR

Submitted : Ap 16, 1955



CHUPRAKOV, N. M.

AID P - 1790

Subject : USSR/Hydraulic Engineering Construction

Card 1/2 Pub. 35 - 2/17

Author : Chuprakov, N. M. Engineer, Stalin Prize Winner

Title : ~~For improving the operation performance of hydro-power plants~~  
For improving the operation performance of hydro-power plants

Periodical : Gidr. stroi., v.24, no.1, 5-8, 1955

Abstract : The author discusses the advantages of having automatic and remote control equipment installed at power plants and mentions that all hydro-power plants under the jurisdiction of the Ministry of Power Plants were fully automatized in 1952, which resulted in substantial financial savings and a decrease in failures. Large hydro-power developments with several power plants placed in series and operated simultaneously are listed. Details of improved automatic equipment are described. Deficiencies in the planning of auxiliary shops, settlements, warehouses, etc. are criticized. Insufficient

AID P - 1790

Gidr. stroi., v.24, no.1, 5-8, 1955

Card 2/2 Pub. 35 - 2/17

Abstract : research and study on some aspects of construction are pointed out. Inaccurate forecasting of water stages and flow conditions precludes satisfactory operations and results in losses of energy. The installations of water-gauging instruments at power plants is strongly recommended.

Institution: None

Submitted : No date

CHUPRAKOV, N.M., inzhener.

Technical and economic effectiveness of automatization and tele-  
mechanization of hydroelectric power stations, substations and  
electric power systems. Elek. sta. 26 no.1:26-30 Ja '55.  
(Hydroelectric power stations) (MLRA 8:3)  
(Electric substations)(Automatic control)(Remote control)

CHUPRAKOV, N.M., inzhener (Moskva)

Power engineering in France. Elektrichestvo no.2:76-81 F '56.  
(MLRA 9:5)

(France--Power engineering)

CHUPRAKOV, N.M., inzhener (Moskva)

Power engineering in India. Elektrichestvo no.10:83-87 0 '56.  
(MLRA 9:11)  
(India--Power engineering)

CHUPRAKOV, N.M., red.; SHVETSOV, M.P., tekhn. red.

[Automatic control in power systems and electric power stations]  
Avtomatizatsiia energosistem i elektrostantsii. Pod.red. N.M.  
Chuprakova. Moskva, Gostekhnika SSSR, 1957. 105 p. (MIRA 11:7)

1. Vsesoiuznyy institut nauchnoy i tekhnicheskoy informatsii.  
(Automatic control) (Electric power plants)  
(Electricity--Power distribution)

AUTHOR: Chuprakov, N.M., Engineer SOV/91-58-3-1/28

TITLE: Problems of the Complex Automation of Thermoelectric Power Plants (Voprosy kompleksnoy avtomatizatsii teplovykh elektrostantsiy)

PERIODICAL: Energetik, 1958, Nr 3, pp 1-4 (USSR)

ABSTRACT: The author describes the processes which are to be automated at thermoelectric power plants. The complex-automation system must be introduced according to the 6th Five-Year Plan. All the processes in the boiler-turbine-generator chain, in workshops, all laborious and/or unhealthy operations are to be automated. Some successes of Soviet automation in the field of power stations are quoted. Groups of 2, 3 or even more boilers are controlled by one man whereas prior to this period every boiler needed at least 2 men. Processes are mentioned whose automation is not yet solved, e.g. self-unloading RR trucks. Only such processes are considered as liable to automation which are able to repay the costs within 3 years. Exceptions are made for hard-labor operations and automations which raise the reliability of the plant's operation. New power plants with 150 to 200 MW units, having one boiler for one turbine, will be equipped with simple thermal

Card 1/2

SOV/91-58-3-1/28

Problems of the Complex Automation of Thermoelectric Power Plants

circuitry in which the steam locking and regulating armature will be reduced to the minimum. This system, however, is only in the designing stage. Experiments have shown that it is possible to start the operation of a unit (boiler-turbine-generator) 3 times quicker, because it is possible to make the turbine start revolving simultaneously with the rise in pressure in the boiler. In the field of automatic regulation of frequency and active power, experiments are being conducted to carry out this regulation with the aid of thermal power plants, if hydropower plants are under high-water. The first results are to be available in 1958. There are still many technical problems to be solved to achieve a perfect automation of thermoelectric power plants.

Card 2/2



AUTHOR: Chuprakov, N.M., Engineer 91-58-5-1/35

TITLE: On the Need for Increasing the Nominal Voltage in Operating Electric Power Lines (O neobkhodimosti povysheniya nominal'nogo napryazheniya na deystvuyushchikh liniyakh elektroperedachi)

PERIODICAL: Energetik, 1958, Nr 5, pp 1-3 (USSR)

ABSTRACT: The electric power lines are a bottle neck in the energy system of the USSR. The lack of branched power lines forces many towns and villages to build their own electric power stations, which are small and not economical. It is proposed to use the interior reserves of the existing lines by transforming the operating lines of 35-220 kv to a higher voltage. The capacity of these lines may be readily increased 1.5 - 3 times without great expenditures of equipment, materials, and work. In the Odessa grid, either a new 110 kv line is to be constructed, or the voltage of the existing 35 kv line will be upped to 110 kv. The transformation of the existing line to a higher voltage costs less. Similar measures are underway in the Moscow, Gor'kiy, Rostov, Arkhangel'sk, etc. grids. It is also possible to transform lines of 90 - 120 kv to 150 kv, and 150 kv to

Card 1/2

91-58-5-1/35

On the Need for Increasing the Nominal Voltage in Operating Electric Power Lines

220 kv. A new voltage of 330 kv will be used in the future. This opens the possibility of transforming 220 kv lines to this new voltage. The transformation of existing lines to a higher voltage is made possible by the production of big autotransformers of 110-150 and 150/220 kv. Short-circuits in the new lines are repaired by automatic switches in 80 - 90% of all cases. Table 1 shows that in the transformation of 110 kv lines to a higher voltage the number of elements in an insulator need not to be increased. The average yearly losses for various voltages are represented in Table 2. There are 2 tables.

AVAILABLE: Library of Congress

Card 2/2 1. Electric power production - USSR

~~CHUR~~ OV, N.M., obshchiy red.; BOZHKO-STEPANENKO, G.M., red.; LARIONOV,  
G.Ye., tekhn.red.

[Problems pertaining to the operation of the hydroelectric power  
stations] Voprosy ekspluatatsii gidroelektrostantsii. Pod obshchei  
red.N.M.Chuprakova. Moskva, Gos.energ.izd-vo, 1959. 354 p.  
(MIRA 12:12)

1. Russia (1923- U.S.S.R.) Glavnoye energeticheskoye upravleniye.  
(Hydroelectric power stations)

14(6)

AUTHOR:

Chuprakov, N.M., Engineer

SOV/98-59-3-6/17

TITLE:

The Increased Utilization of Water Stream Energy  
(Povysheniye ispol'zovaniya energii vodotoka)

PERIODICAL:

Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 3, pp  
34-38 (USSR)

ABSTRACT:

The author lists different measures and means to increase the output of hydro-electric power plants. The most efficient measure for such increase is the raising of the water level in reservoirs. A rise of only 60 cm in the Tsimlyanskoye reservoir gives 100,000,000 more ~~kwhr~~, that is, increases the GES annual output by 22%. Important losses of energy are also caused by decreased water pressure on protective grates when they are covered with rubbish or ice. Different tools used at present to keep them clean are not efficient enough. Timely checking and repair of turbines is also recommended.

Card 1/1

8(6)

SOV/98-59-5-1/21

AUTHOR: Chuprakov, N.M., Engineer

TITLE: Increasing Operational Qualities of Hydrostations

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 5, pp 1-7 (USSR)

AUTHOR: The author stresses necessity of constant increase of operational efficiency of the hydrostations, such as increasing speed with which reserve units can be put into service. The author describes the work done in the USSR in this respect and sums up the results in a table. He then states that automation of controls of the power plants, belonging to the Ministry of Electro-stations, was completed in 1952. This work now covers about 400 units of the 110 large and medium size sta-tions with an aggregate capacity of 10 million kw. One half of them are now operated by remote telemecha-nical controls over a distance of several hundred km, so that Rybinsk and Uglich plants are controlled from Moscow; Svir' plants from Leningrad; Kakhovskaya plant

Card 1/3

SOV/98-59-5-1/21

Increasing Operational Qualities of Hydrostations

from Rostov; Khramskaya from Tbilisi; Mungechaur-skaya from Baku; Stations of Sevanskiy cascade from Yerevan ; and Farkhadskaya from Tashkent. Automation and telemechanization resulted in an aggregate reduction of personnel from 7,000 to 4,000, while personnel on duty at the plants was reduced by half or more or sometimes dispensed with altogether (at Urals and in Armenia). Automation and telemechanization enabled grouping of the plants into cascades of from 2 to 5 plants each. Each cascade supervised individual plants so that more than half of the present plants are grouped into 22 cascades. These automatic systems are more reliable and simpler than those in use in the U.S.A., Sweden, France, Italy, Germany, and Finland. But automation, already applied at the Soviet power plants, does not cover all the operation of the plants. There is room for its expansion, for instance in cleaning of filter grates (now operating at Narva plant only), in automatic regulation of frequency (enabling an economic distribution of a load

Card 2/3

SOV/98-59-5-1/21

Increasing Operational Qualities of Hydrestations

between the units); in controlling water flow through locks, etc. A number of subsidiary operations are quoted (such as cooling of transformers, charging of batteries, fire alarm) as open for automation as well as inspection, maintenance and repair operations. The author lists organizations which should be brought into this work, namely: factories and research organizations of the Ministry of Power Plant Construction, Hidroenergoprojekt, Hidroprojekt, VNIIG, TNISGEI, Orgenergostroy, VNILE, MEI, MISI, VIGM, ORGRES and institutes of the Academies of Science of the USSR and the Union Republics. There is 1 table.

Card 3/3

CHUPRAKOV, N.M.

Electric power systems and unified high-voltage networks in  
the United States and Western Europe. Biul.tekh.-ekon.  
inform. no.3:86-89 '60. (MIRA 13:6)  
(United States--Electric power)  
(Europe, Western--Electric power)



CHUPRAKOV, N.M., inzh.

Role of the Volga Hydroelectric Power Station (22nd Congress of the CPSU) in the unified power supply system of the European part of the U.S.S.R. Gidr. stroi. 32 no.10:12 0 '61. (MIRA 14:10)

(Electric power distribution)  
(Interconnected electric utility systems)

BOYARINOV, Boris Yevgen'yevich; ~~CHUPIS, Nikolay Maksimovich;~~  
GORHENKO, V.L., kand. ~~tekh. nauk, otv. red.;~~  
DEREVYANCHENKO, R.M., red.

[New metals, metal alloys and compounds and semiconductor materials] Novye metally, metallicheskie splavy i soedineniia i poluprovodnikovye materialy. Khar'kov, Izd-vo Khar'kovskogo univ., 1965. 60 p. (MIRA 18:12)

L 10997-66

ACC NR: AP6001978

SOURCE CODE: UR/0105/65/000/003/0090/0091

AUTHOR: Neporozhniy, P. S.; Finogenov, Ya. I.; Lavrenenko, K. D.; Veselov, N. D.; Savinykh, A. I.; Sapozhnikov, F. V.; Serdyukov, N. P.; Chuprakov, N. M.; Nekrasov, A. M.; Borovoy, A. A.; Kotilevskiy, D. G.; Steklov, V. Yu.; Kulebakin, V. S.; Bogdanov, N. P.

ORG: none

14  
B

TITLE: Petr Ivanovich Voyevodin

SOURCE: Elektrichestvo, no. 3, 1965, 90-91

TOPIC TAGS: electric engineering personnel, political personnel

ABSTRACT: P. I. VOYEVODIN died on 25 November 1964; one of the oldest bolshevik-Leninists, he was a member of the CPSU already in 1899. He fought in the early battles of the revolution, was imprisoned and sent to Siberia in 1905. After the October Revolution he became an economic adviser to Lenin on matters pertaining to Siberia and the entire Soviet Union as well. He was active in planning and organizing GOELRO. In 1921 he was assigned to set up the new Russian cinema industry, later he turned to the problems of electrification: spreading Lenin's ideas, publishing books and periodicals on the subject. He was the first Soviet editor of "Elektrichestvo" and then the editor of "Elektrifikatsiya." He partici-

Card 1/2

UDC: 621.311

L 10997-66

ACC NR: AP6001978

participated in the International Power Conferences in Berlin 1930 and in Belgrade 1956. His entire life was devoted to faithful service in the interests of the Communist Party; in 1964 he was duly awarded the Order of Lenin and was named a Hero of Socialist Labor. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 05, 09 / SUBM DATE: none

OC  
Card 2/2

ACC NR: AP7007595

SOURCE CODE: UR/0104/66/000/008/0095/0096

AUTHOR: Chuprakov, N. M.; Borovoy, A. A.; Postnikov, N. A.; Malychev, A. A.;  
Magidson, E. M.; Sin'chugov, F. I.; Zeylidzon, Ye. D.; Barchaninov, G. S.;  
Yermolenko, V. M.; Vasil'yev, A. A.; Sokolov, N. I.; Ul'yanov, A. S.;  
Fedoseyev, A. M.; Sarkisov, M. A.; Rokotyan, S. S.; Azar'yev, D. I.; Arson,  
G. S.; Dubinskiy, L. A.; Zhulin, I. V.; Kolpakova, A. I.; Antoshin, N. N.  
Krikunchik, A. B.; Kuchkin, M. D.; Preobrazhenskiy, N. Ye.; Reut, M. A.;  
Kheyfits, M. E.; Sharov, A. N.; Yakub, Yu. A.; Gorbunov, N. I.; Shurmukhin,  
V. A.; Beschinskiy, A. A.

ORG: none

TITLE: Boris Sergeyovich Uspenskiy (on his 60th birthday)

SOURCE: Elektricheskiye stantsii, no. 8, 1966, 95-96

TOPIC TAGS: hydroelectric power plant, electric engineering personnel.

SUB CODE: 10

ABSTRACT: B. S. Uspenskiy was born in June 1906. He graduated from the State Electric Machine Building Institute in 1928 as an electric installation engineer. He worked in the State Electro-Technical Trust for four years, then in the All-Union ElectroTechnical Union, where he planned power construction units. Plans which he made up at that time for the electrical portion of electrical stations and sub-stations are still being used. He was involved in planning and installation of the electrical portion of hydro-electric power stations and powerful pumping stations in the Moscow-Volga Canal. During the war, he was in charge in installation of the Krasnogorskaya Heat and Electric Power Station, the planning of the Urals Hydro-Electric Power Station and other projects. He

Card 1/2

ACC NR: AP7007595

has been the author of thirty-three printed works, a great number of  
reviews, etc. Orig. art. has: 1 figure. JPRS: 38,330

Card 2/2

CHUPRAKOV, P. x

~~CHUPRAKOV, P.~~  
On the Altai virgin lands. Pozh.delo 3 no.8:2-3 Ag '57. (MIRA 10:8)

1. Zamestitel' nachal'nika Upravleniya pozharney okhrany.  
(Altai Territory--Fire prevention)

CHUPRAKOV, P.

CHUPRAKOV, P.

Consider all accomplished work. Pozh.delo 3 no.12:9 D: '57.  
(MIRA 10:12)

1. Zamestitel' nachal'nika Upravleniya pozharney okhrany  
Altayskogo kraya, Barnaul.  
(Altai Territory--Fire prevention--Inspection)



CHUPRAKOV, V.

AUTHOR: Bugarev, L. and Chuprakov, V.

136-5-1/14

TITLE: Twenty-five years of Soviet Aluminium. (25 let Sovetskogo alyuminiya)

PERIODICAL: "Tsvetnye Metally" (Non-ferrous Metals), 1957, No.5, pp. 1 - 8 (U.S.S.R.)

ABSTRACT: In 1932, the first commercial aluminium was produced in the Soviet Union. The events leading up to this and the subsequent course of the aluminium industry and related activities in the U.S.S.R. are discussed in the present article. Many people connected with the development of the aluminium industry in the U.S.S.R. are mentioned by name, but no references are given. Figures on energy requirements, production costs and productivities are given. The development of aluminium-remelting (a 5-fold increase from 1945 to 1955) is briefly mentioned: the quality of this product will soon equal that of primary aluminium. The article concludes with a brief review of future plans, which, in the sixth Five Year Plan, are to be based on the utilisation of hydro-electric power from Eastern Siberian rivers, the Kuzbass and Eastern Siberian fuel resources and Turgayskiy-deposit bauxites as well as new sources of alumina-yielding raw materials (alunites from Azerbaydzhan and Krasnoyarsk nephelites). Equipment to be installed

Card 1/2

Twenty-five years of Soviet aluminium. (Cont.) 136-5-1/14  
in plant built in the sixth Five Year Plan will include rotary  
furnaces 4.5 - 5 m in diameter and 100 - 150 m long, tube  
mills 3.2 m in diameter and 15 m long and high-current mercury  
rectifiers. The use of fluidisation techniques are to be used  
for the treatment of ores. A method for the preparation of  
aluminium alloys directly from concentrates by reduction in  
electric furnaces is also to be adopted.

AVAILABLE:

Card 2/2

CHUPRAKOV, V-Ya

PROCESSES AND PROPERTIES INDEX

Comparison of acid converter, basic converter and open-hearth steel. P. P. Chichkanov and V. Ya. Chuprakov. *Metallurg* 11, No. 10, 78-83 (1931). - Heavy machinery of converter steel, either acid or basic, developed cracks when stored at -25°. Open-hearth steel was not susceptible. The impact resistance of converter steel compared favorably with that of open-hearth steel at temp. above -25°, but below that the impact resistance of converter steel dropped rapidly while that of open-hearth steel remained nearly const. H. W. Rathmann

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

COMMON ALIASES

COMMON GROUPS

COMMON GROUPS

AGEYEV, P.Ya.; ALABYSHEV, A.F.; BAYMAKOV, Yu.V.; BELYAYEV, A.I.; BATASHEV, K.P.;  
BUGAREV, L.A.; VASIL'YEV, Z.V.; GUPALO, I.P.; GUS'KOV, V.M.; ZHURIN, A.I.;  
VETUYUKOV, M.M.; KOSTYUKOV, A.A.; LOZHKIN, L.N.; OL'KHOV, N.P.;  
OSIPOVA, T.V.; PERTSEV, I.I.; RUMYANTSEV, M.V.; STRELETS, Ye.L.;  
FIRSANOVA, L.A.; CHUPRAKOV, V.Ya.

Georgii Alekseevich Abramov. TSvet.net. 27 no.2:72-73 Mr-Apr '54 (MLRA 10:10)  
(Abramov, Georgii Alekseevich, 1906-1953)

CHUPRAKOVA, A. Ya.

CHUPRAKOVA, A. Ya.: "Selection procedures in intra-farm tomato seedraising under kolkhoz conditions of the suburban zone of Sverdlovsk Oblast." Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev. Moscow, 1956. (Dissertation for the Degree of Candidate in Agricultural Science.)

Knizhnaya letopis', No. 30, 1956. Moscow.

CHUPRAKOVA, I.M., inzhener; BOLDYREV, Yu.N., inzhener.

~~CHUPRAKOVA, I.M., inzhener; BOLDYREV, Yu.N., inzhener.~~  
Mechanizing the loading of sand and gravel into filter presses. Bum.  
prom. 31 no.12:21-22 D '56. (MLBA 10:2)

1. Vtoroy Kaliningradskiy tsellyulozno-bumazhnyy kombinat.  
(Filter presses) (Material handling)

GHUPRAKOVA, I.M.; BOLDYREV, Yu.N., prepodavatel'.

Restoring flow of artesian wells. *Ann. prom.* 33 no.3:17-18 Mr '58.  
(MIRA 11:4)

1. Nachal'nik tsekha vodosnabsheniya vtorogo Kaliningradskogo kombinata (for Ghuprakova). 2. Kaliningradskiy tsellyulozno-bumazhnyy tekhnikum (for Boldyrev).

(Artesian wells)

CHUPRAKOVA, K.Ya.

Jejunocoloplasty in extensive resections of the transverse colon.  
Khirurgia 32 no.6:58-62 Je '56. (MLRA 9:10)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii  
(zav. - prof. N.N.Skobunova) Sverdlovskogo meditsinskogo instituta.  
(COLON, surg.)

Jejunoplasty in extensive resections)

(JEJUNUM

Jejunoplasty in extensive resections of colon)



S/180/62/000/003/005/016  
E111/E152

AUTHORS: Glazov, V.M., Stepanova, M.V., and Chuprakova, M.V.  
(Moscow)

TITLE: Contribution to the problem of the reaction between  
dissolved components in ternary solid solutions

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye  
tekhnicheskikh nauk. Metallurgiya i toplivo.  
no.3, 1962, 58-62

TEXT: Anomalies observed in the Al-Mg-Si system (Ref.2:  
V.G. Kuznetsov, Ye.S. Makarov, DAN SSSR, 3, 1939, 23) prompted  
the authors to investigate in detail the micro-hardness and  
electrical conductivity of solid solutions in the systems Al-Mg-Si  
(I), Al-Mg-Ge (II), Cu-Cr-Zr (III) and Cu-Ni-Be (IV). (I) was  
chosen to supplement available data for ternary systems at high  
temperatures; (II) to elucidate the nature of the reaction  
between magnesium and germanium; and (III) and (IV) for the above  
reasons and because of their possible application as heat-  
resisting alloys with a high electrical conductivity. The sections  
with 99 and 99.5 at.% Al were studied in systems (I) and (II)  
Card 1/2

Contribution to the problem of ... S/180/62/000/003/005/016  
E111/E152

respectively; those with 95.5 at.% Cu in (IV); and with 1 at.% Cu and 0.6 Zr in (III). Cast alloys were deformed and heat treated. Polished sections and conductivity test pieces were then prepared. The results indicate that there is chemical reaction between the alloying elements in ternary solid solutions which is especially marked when the ratio of alloying components corresponds to the appropriate compound. The nature of the property-composition diagrams obtained can be explained on the assumption that the chemical reaction leads to lattice disturbances localized at definite places, the distortion of the lattice as a whole being less than if the phenomenon was of totally random character. There are 4 figures.

SUBMITTED: January 2, 1962

Card 2/2

CHUPRAKOVA, N. P.

PROCESSES AND PROPERTIES INDEX

100 AND 47M 520121

20

The Influence of the Method of Quenching on the Amount of Retained Austenite in Structural Chromium-Nickel Steels. V. D. Sadovskiy and N. P. Chuparkova. (Metallurg, 1939, No. 10-11, pp. 80-89). (In Russian). The authors investigated the effects of different methods of quenching chromium-nickel steels on the amount of retained austenite. Basic open-hearth steels of the following compositions were used in the investigation:

	(1)	(2)	(3)
Carbon, %	0.38	0.40	0.30
Manganese, %	0.42	0.34	0.42
Silicon, %	0.34	0.16	...
Chromium, %	1.38	1.13	1.47
Nickel, %	3.07	3.20	3.6
Phosphorus, %	0.20	0.007	...

The amount of retained austenite was determined by a ballistic method, using as a standard a specimen quenched in ice-cold water and then cooled in liquid air to produce a minimum retained austenite content. Preliminary experiments showed that raising the maximum temperature from 825° to 950° C. had little effect on the amount of retained austenite. Quenching with incomplete cooling, followed by stepped tempering, resulted in a lowering of the martensite point of the retained austenite and when the tempering was sufficiently prolonged the martensite transformation on cooling to room temperature was completely eliminated. Quenching steel

A 58-51 A METALLURGICAL LITERATURE CLASSIFICATION

C-200-1000-1000

(1) from 830° C. in media with temperatures from 20° to 550° C. showed that two maxima in the retained austenite content were obtained at 200-250° C. and 325-400° C. with a sharp minimum at 300° C. The retained austenite formed at these two points behaved differently on subsequent cooling and tempering. The austenite in specimens quenched at 350° C. was much more resistant to tempering than that in those quenched at 200° C. Specimens of steel

(3) quenched in oil at 20° C. and in salt at 350° C. were studied with regard to the rates of decomposition of the retained austenite at tempering temperatures up to 700° C. In specimens quenched at 200° C. the austenite may pass through the first zone of rapid transformation at 300-400° C. to undergo isothermal decomposition at 650-700° C. Evidence was also obtained regarding changes during secondary quenching, i.e., cooling after high-temperature tempering.

LEDOVNIK, V. D.; CHUMAKOVA, N. P.

The Effect of Heat-Treatment on the Quantity of Residual Austenite and its  
Disintegration in the Tempering of Chromo-Nickel Structural Steels

Trudy UFAN 10, 139, 1941

ZYUZIN, V. I., CHUPRAKOVA, N. P.

The Effect of the Combination of Alloying Elements on the Kinetics of Isothermic Transformation of Austenite and the Critical Point of Hardening. Trudy IMM UFAN 5, 32, 1945.

SADOVSKIY, V. D. ; CHUPRAKOVA, N. P.

The Effect of Alloying Elements on the Impact Ductility of Structural Steels  
and the Phenomenon of Brittleness in Tempering.

Trudy IMM UFAN 6, 3, 1945.

CHUPRAKOVA, N. P.

PA 43/43T82

USSR/Metals Mar 1948  
Austenite  
Steel Ingots

"Effect of Heterogeneity of Ingots on Kinetics of Decomposition of Austenite," N. P. Chuprakova, Engr; Prof V. D. Sadovskiy, Dr Tech Sci, Inst Phys Metals UFAN, 2 pp

"Stal'" No 3

Zonal and dendrite heterogeneity of ingots is result of great effect on speed of perlite precipitation of overcooled austenite, and most noticeable on upper part of the ingot and at its axial points. Kinetics of transformation do not vary in relation to size of the ingot.

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CHUPRAKOVA, N. P.

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Effect of nonuniformity of an ingot on the kinetics of austenite decomposition. N. P. Chuprakova and V. D. Satovskii. *Stal* 8, 263-3(1948).—This study was carried out on specimens taken from various zones of a 4.5-ton ingot of a Cr-Ni-Mo basic-hearth steel contg. C 0.37, Mn 0.65, Si 0.37, Cr 1.63, Ni 1.54, Mo 0.24, P 0.020, and S 0.017%. The study was carried out magnetometrically and on the microstructure. No liquation of C, P, S, Cr, Ni, or Mo was observed in the various zones. There was a pronounced dendritic liquation. The transformation of austenite into pearlite-troostite was fastest in the upper part of the ingot. The austenite decompn. was more intense in the center than at the periphery. Bainite transformation was practically the same throughout the ingot as was the martensite point and the amt. of residual austenite. The sepn. of excess ferrite started in the axial regions of the dendrites, while the formation of pearlite-troostite started in the interaxial regions. The bainite transformation started in the axial regions of the dendrites and was not affected by nonmetallic inclusions.

M. Hosh

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

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

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PHASE I BOOK EXPLOITATION

SOV/1340

Akademiya nauk SSSR. Ural'skiy filial. Institut fiziki metallov

Voprosy teorii zharoprochnosti metallicheskikh splavov (Problems in the Theory of Heat Resistance of Metal Alloys) Moscow, Izd-vo AN SSSR, 1958. 160 p. (Series: Its: Trudy, vyp. 19) 3,500 copies printed.

Eds.: Arkharov, V.I. and Sadovskiy, V.D.; Ed. of Publishing House: Rzheznikov, V.S.; Tech. Ed.: Novichkova, N.D.

PURPOSE: This book is intended for specialists in the field of physical metallurgy.

COVERAGE: (Abstract of Article 1) The articles in this book constitute reports on extensive studies, conducted between 1949 and 1954 by the Institute of Physical Metallurgy at the Urals Branch of the Academy of Sciences, USSR, and devoted to the development of a general theory of heat resistance. A strong need was felt for such a theory because of insufficient knowledge of the physical mechanism of deformation

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Problems in the Theory of Heat Resistance of Metal Alloys SOV/1340

phenomena occurring in materials at high temperatures and the resultant difficulty of explaining the frequent difference in behavior of materials under test conditions and under actual operating conditions. The studies centered around the investigation of two basic assumptions: 1) localization of the processes of high-temperature plastic deformation in the zones of structural heterogeneity in a solid body undergoing deformation 2) internal adsorption of certain dissolved addition agents in the vicinity of these heterogeneities. The combined effect of these two phenomena on the heat resistance of the material is very important, because they are both localized in the same zones of the alloy. Actually, deformation develops in zones where the composition of the alloy, as a result of internal adsorption, is quite different from the average composition of the alloy. Another important factor in this connection is the fact that the effect of internal adsorption depends on previous heat treatment. From this it follows that small additions, frequently even those

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too small to be detected by analysis, may considerably change the heat resistance of the alloy, in varying degrees, depending on the heat treatment. It may be concluded that the main factor determining the heat resistance of a crystal is the interatomic bonds in the lattice, which bonds change according to the composition of the solid solution. The first stage of the investigations has been completed and forms the subject matter of the present collection of papers. Results indicate that the basic assumptions have been verified to a considerable extent. These two phenomena, as related to such heterogeneities as transcrystallite joining in polycrystalline alloys (under specified conditions of deformation) have proved to be of decisive importance and can be used as the basis of a hypothesis on how heat resistance is affected by the localization of deformation and by internal adsorption of addition agents in the vicinity of the more minute structural heterogeneities, i.e., the elements of subcrystallite structure (further work is indicated in this direction). Article 2 of the collection gives an

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extensive treatment of the basis of attack on the problem of heat resistance as investigated at the Institute, together with a detailed discussion of the guiding principle underlying all aspects of the study. Articles 3 and 4 attempt to explain the high adsorbability of small additions of a number of elements (e.g., Mo, W, Nb, Ti, Al, B) in iron-chrome-nickel austenite. Article 4 is concerned specifically with the diffusional mobility of one of the main components of the alloy (nickel) in transcrystallite transition zones, an important characteristic as regards heat resistance, inasmuch as plastic deformation at high temperatures [apparently] proceeds by a diffusion-type mechanism. Confirmation of this hypothesis was obtained by analysis of experimental data on high-temperature stress relaxation. This analysis is the subject of Article 10, whereas Article 9 is directly concerned with experimental work on the measurement of stress relaxation. The correlation between data on the transcrystallite diffusional mobility of nickel and on stress relaxation in the investigated alloys is

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given in Article 11. Article 8 describes methods of measuring high-temperature stress relaxation. Article 5 gives experimental data on the effect of small additions of elements of high internal adsorbability on creep in solid solutions. In this study it is shown that under conditions of low stresses, when the deformation is markedly localized in the transcrystallite transition zones, the adsorption-prone addition agent exhibits a strengthening effect. With high stresses, when the deformation is mainly of the slip type and is distributed throughout the crystallite, internal adsorption of the addition element ceases, but in certain cases of high stress the addition element may lower the resistance of the material to flow. Additional data on this question are given in Articles 6 and 14. Article 7 presents the results of an attempt at experimental microinterferometric confirmation of the occurrence of changes in the distribution of strain in the grain of metal containing small amounts of addition agents. The first small additions produce a marked effect on the deformation, which (with low stresses) is

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localized at the intercrystallite boundaries; the alloy is strengthened. An increase in the amount of the addition agents results in a coarsening of the crystallites, which increase the rate of flow. These results also agree with the basic hypothesis concerning the effect of internal adsorption on heat resistance and supplement the hypothesis with indications of the range of strain conditions under which the adsorption phenomenon plays a significant role. In the course of investigating stress relaxation, an unusual effect was observed in certain alloys, namely "negative relaxation", consisting in the growth of stresses with time, instead of the usual natural decrease. This effect has been explained by assuming that under the conditions of the relaxation test a phase transformation takes place in the material, resulting in a lowering of the specific volume (discussed in Article 12). This effect received further confirmation in the study reported in Article 13. In Article 16 the author examines the possibility of extending the basic idea of these investigations to subcrystallite structural heterogeneities, especially to those which arise and develop in aging. Since the majority of heat-resistant alloys undergo aging, the internal-adsorption phenomenon becomes a problem of great importance.

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S/129/61/000/005/003/003  
EO73/E535

**AUTHORS:** Sokolkov, Ye. N., Petrova, S. N. and Chuprakova, N.P.

**TITLE:** Influence of Plastic Deformation in the Austenitic State on the Properties of Constructional Alloy Steels

**PERIODICAL:** Metallovedeniye i termicheskaya obrabotka metallov, 1961, No.5, pp.12-14

**TEXT:** The authors investigated the influence of high temperature plastic deformation on the mechanical properties under tension at sub-zero temperatures. In earlier work (Ref.1: L. V. Smirnov, Ye. N. Sokolkov, V. D. Sadovskiy, Trudy instituta fiziki metallov; No.18, 1956; Ref.2: Ye. N. Sokolkov, L.V.Smirnov, Metallovedeniye i obrabotka metallov, No.3, 1957) it was established that thermomechanical treatment weakens the tendency to temper brittleness. M. M. Shteynberg and A. A. Popov (Ref.3: Zavodskaya laboratoriya, No.11, 1952) found that constructional alloy steel, which is in the temper brittle state, fractures along the boundaries of the austenitic grain as a result of tensile stresses applied at low temperatures. For the experiments a Cr-Mn-Si steel of a high sensitivity to temper brittleness was chosen (composition: 0.30% C, 1.06% Cr, 1.2% Mn, 1.05% Si, 0.02% P, Card 1/ 4

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Influence of Plastic Deformation ... S/129/61/000/005/003/003  
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0.023% S). Plastic deformation was carried out at 900, 1000, 1100 and 1200°C on a laboratory hand-operated rolling stand. The rolling speed was 5.7 m/min, the reduction was 30%. Blanks 10 x 10 x 55 mm were heated to 1250°C in graphite tubes and held at this temperature for one hour (the increased heating temperature ensured observation of failures); following that, the blanks were cooled with the furnace to 1200, 1100, 1000 and 900°C. A part of the specimens were then subjected to rolling from these initial temperatures, whilst another part was quenched in oil. For fixing the structures produced as a result of plastic deformation, after rolling the specimens were rapidly (0.3 to 0.4 sec) quenched. From both types of specimens tensile test specimens of 3.5 mm diameter were produced. Preliminarily all the blanks were tempered at 550°C for 2 hours. The tensile tests at -195°C were carried out in a special attachment fitted to the test machine IM-4P (IM-4R). The results are plotted in Fig.1, the real breaking strength  $s_k$ , kg/mm<sup>2</sup>, the elongation  $\varphi$ , %,  $\delta$ , % vs. hot working temperature, °C; whereby the dashed lines apply to ordinary quenching (without hot working), whilst the continuous

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