

LEVITINOV, S.D., dotsent; POLYAKOV, G.V., inzh.; ASTRAKHANTSEV, N.Ya.,
inzh.; POGORELOV, G.M., inzh.

Recuperative braking on commercial electric locomotives in open-
pit mines. Izv. vys. ucheb. zav.; gor. zhur. 6 no.4:122-135 '63.
(MIRA 16:7)

1. Chelyabinskiy politekhnicheskiy institut. Rekomendovana
kafedroy elektroprivoda i avtomatizatsii promyshlennykh ustanovok.
(Mine railroads--Brakes)

ASTRAKHANTSEV, S. M.: Master Tech Sci (diss) -- "Investigation of the processes of liquidating submicroporosity in powder materials and the appearance of this porosity in certain alloys, using the method of X-ray dispersion at small angles". Moscow, 1958. 17 pp (Min Higher Educ USSR, Moscow Order of Labor Red Banner Inst of Steel in I. V. Stalin, Chair of Roentgenography and the Physics of Metals), 120 copies (KL, No 3, 1959, 109)

AUTHORS: Astrakhantsev, S. M. Umanskiy, Ya. S. SOV/163-58-3-37/49

TITLE: The Microporosity of Beryllium Oxide Powder (Mikroporistost' poroshka okisi berilliya)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 3, pp 226 - 230 (USSR)

ABSTRACT: Beryllium oxide produced in the thermal decomposition of complex compounds is characterized by the low bulk weight and the inferior pressing properties. The present paper deals with the investigation of the causes of the deterioration of the pressing properties of beryllium oxide. Beryllium oxide with a bulk weight of $0,107 \text{ g/cm}^3$ is pressed into briquets at a pressure of 1 - 1,5 t/cm^2 . It was found that the amount of pressure applied does not change the properties of the pressed articles. The microporosity of the beryllium oxide sample was investigated as dependent on the sintering temperature. The main cause for the inferior pressing and the low bulk weight of beryllium oxide powder is the high microporosity of the sample. The decrease of the micropores begins at temperatures of $750^\circ - 800^\circ$, further increases to

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The Microporosity of Beryllium Oxide Powder

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1250° - 1300°, and practically ends at 1600°. An increase of the density of beryllium oxide does not only bring about a decrease of the microporosity but also a change of the grain size. The properties of the initial beryllium were investigated by means of a small-angle x-ray analysis. There are 4 figures, 2 tables, and 4 references, which are Soviet.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: October 1, 1957

Card 2/2

SOV/149-58-6-13/19

AUTHORS: ~~Astrakhar'tsev, S.M.~~ and Umanskiy, Ya.S.

TITLE: Investigation of Microporosity in Certain Metals, Alloys and Oxide Powders by the Method of Small-angle X-ray Scattering (Issledovaniye mikroporistosti v nekotorykh metallakh, splavakh i proshkakh okislov metodom malougol'nogo rasseyaniya rentgenovskikh luchey)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, 1958, Nr 6, pp 115 - 125 (USSR)

ABSTRACT: The authors studied the mechanism of the closure of micropores during heating of a number of refractory oxides and of the formation of pores during annealing of electro-deposited nickel and during distillation of zinc from brass. The method of small-angle X-ray scattering was used and the calculations were based on the formula given by Guinier and Fournet (Ref 5):

$$I_{PMY} = Nn^2 e^{-\frac{K^2 R_0^2}{5}} \quad (1)$$

where: I_{PMY} - intensity of X-rays scattered at low angles by particles with the effective size R_0 ;

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- N - the number of sub-microscopic non-homogeneities participating in the small-angle scattering;
 n - the difference between the electron densities of the non-homogeneous domains and of the matrix;

$K = 2\pi(\varphi/\lambda)$ (φ - angle of scattering, λ - X-ray wavelength). Tangent of the angle of the slope of the straight line:

$\lg I_{\text{PMY}} = f(\varphi^2)$ equal to $\alpha = 5.715 R_0^2/\lambda^2$ was used for calculating R_0 from the formula:

$$R_0 = \lambda \cdot \sqrt{\frac{\lg I_{\text{PMY}}}{\varphi^2}}$$

in which, for the experimental conditions employed, A was equal to 1700. The collimation correction was introduced in the calculations by the method used by Filippovich (Ref 8), i.e. by means of graphs (reproduced

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in Figure 1) showing the actual size (\AA) of the pores, R_0 , as a function of the calculated value R_{OVM} .

These graphs were plotted for Mo, Cu and Fe radiation (Figures 1, a, b and B, respectively), graphs 1, 2 and 3 corresponding to the ratio X_0/D equal to 0.0015, 0.0008 and 0.0004, respectively, where $2X_0$ - the width of the primary X-ray beam, D is the distance between the specimen and the radiation intensity counter. In the present investigation Cu radiation was mostly used with $X_0/D = 0.0008$. Before proceeding to study the effect of heating on the microporosity of Al_2O_3 , B_2O_3 and MgO powders, the authors proved that particles of these substances in the $1.5 - 3 \mu$ size range produced the same small-angle X-ray pattern and that while the size of the original blocks of MgO and BeO was the same as that of the non-homogeneity domains, the rate of growth on heating was faster in the former than in the latter case (the effect

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of the temperature on the size of BeO and MgO powders is shown in Table 1). They proved also by means of pycnometric measurements the presence of micropores in the interior of single grains of these oxides, thus showing that the small-angle scattering produced by the investigated substances was, in fact, due to microporosity only. The composition of the experimental powders is given in Table 2 which shows also the optimum thickness (mm) of the specimens (converted to compact materials). The powders were heated in air, at temperatures ranging from 500 to 1 900 °C. After heating, specimens of the optimum thickness were prepared by pressing. The ionisation curves of the MgO powder heated for 15 min, at 1 - 800, 2 - 1 000, 3 - 1 300 and 4 - 1 500 °C are shown in Figure 2 (monochromatic Cu radiation was used - speed of the counter 0.5 /min., speed of the film 9 600 mm/h. $\phi = 5$). Figure 3 shows the variation of the average size, \bar{R}_0 , of the micropores (in Å) and of the porosity, Γ (in %), of oxides heated for 15 min at various temperatures :

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a) - Al_2O_3 ; b) - BeO (1 - FeK_α , 2 - CuK_α , 3 - MoK_α radiation); c) - MgO . The effect of the duration of heating (min) on \bar{R}_0 of the investigated oxides treated at a) - 1300 and b) - 800 °C is shown in Figure 4. Finally, the effect of temperature on the value of the ratio N_{kp}/N_m , where N_{kp} and N_m are, respectively, the numbers of large and small pores in powders heated for 15 min, is illustrated in Figure 5. Commenting on their results, the authors state that microporosity in oxide powders obtained by reduction or dissociation of more complex compounds can be attributed to the fact that they are obtained at comparatively low temperatures (30-40% of their melting points) at which the nobility of the atoms in the lattice is low. For this reason, when compounds of the MgCO_3 type dissociate, the evolved gas is driven off at a rate faster than that at which the crystal lattice of the oxide is formed. As a result, voids and lattice vacancies are present in the particles of oxide. Since

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the concentrations of vacancies near the large and small micropores are different, a diffusion current should develop (Ref 11) resulting in the growth of the large pores and elimination of the small ones, which has been confirmed by the results of the present work. In the case of electro-deposited nickel, the lattice irregularities are caused by excess atoms or by vacant lattice sites and are referred to (Ref 12) as "positive" and "negative" dislocations. When electrolytic nickel is annealed, coalescence of the vacancies should result in the formation of, at first, submicroscopic and, later, microscopic pores. Such an effect has been reported (Ref 13) but, since there was a possibility that the observed macroporosity was due to coalescence of crevices and voids formed during quenching or deformation, further study of this problem was undertaken by the present authors. The experimental X-ray specimens consisted of layers of Ni (5 - 7 μ thick) electro-deposited on both sides of copper supports (22 - 25 μ thick) from an electrolyte

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treatment which indicated rapid growth of the pores. Since similar effects were obtained on Ni specimens deposited on nickel supports and on test pieces consisting of the electro-deposited layers detached from the supports, it was concluded that the main cause of the formation of pores during annealing of electro-deposited nickel is the relaxation of the lattice distortions (coalescence of vacancies). In the last stage of the investigation, the formation of pores in brass heated in vacuo was studied. Cold-rolled specimens (30-35 μ thick) of commercial quality brass L-62 were used for the measurements. The results are plotted in Figure 7 showing: (on the left) R_0 as a function of $\tau^{1/2}$, and porosity Π , (%) as a function of τ , for specimens annealed in vacuo at 1 - 500, 2 - 600, 3 - 700 and 4 - 800 $^{\circ}$ C. It was concluded that when a volatile constituent is distilled off from an alloy, the formation of the pores is a diffusion process even in the early stages of the distillation and that at low temperatures the number of the pores can increase without an increase of their size due to coalescence.

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Investigation of Microporosity in Certain Metals, Alloys and
Oxide Powders by the Method of Small-angle X-ray Scattering

There are 7 figures, 2 tables and 15 references, 12 of
which are Soviet, 2 English and 1 French.

ASSOCIATION: Moskovskiy institut stali. Kafedra metallofiziki
i rentgenografii (Moscow Institute of Steel. Chair
of Metal Physics and Radiography)

SUBMITTED: June 23, 1958

Card 9/9

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S/149/61/000/002/012/017
A006/A001

AUTHORS: Astrakhantsev, S.M., Mozzhukhin, Ye.I., Umanskiy, Ya.S.

TITLE: Investigation of Sintered Alloys on Metallic NiAl Compound Base

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, 1961, No. 2, pp. 110 - 115

TEXT: The authors developed a technology for obtaining Ni-Al alloys by powder metallurgy methods, and investigated the properties of the alloys obtained. Alloys of the single-phase NiAl and the bi-phase NiAl-Ni₃Al range were studied. The technology employed was different from previous methods (Ref. 5, 6) where the alloys had been prepared from powders whose composition corresponded to that of the alloys. In the present investigation the alloys were produced from Ni-Al addition alloys and nickel powder, whereby the Al content in the addition alloy exceeded that in the alloy. The addition alloys were melted in high-frequency induction furnaces in a magnesite crucible. The experiments were made with four single-phase alloys containing Al (in atomic %): 1) - 52.5; 2) - 50; 3) - 45; 4) - 40. Alloy 1 was a solid solution of Al subtraction in NiAl; alloy 2 corresponded to the NiAl compound of stoichiometric composition; alloys 3 and 4 were solid solutions

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of Ni in NiAl (alloy 4 is close to the boundary of Ni solubility in Ni₃Al). Alloys of the bi-phase NiAl-Ni₃Al range were also studied, containing Al (weight %): 5) - 20; 6) - 19.5; and 7) - 17.5. The addition alloy and nickel powder were mixed in alcohol for 72 hours and pressed under 3 t/cm² pressure. Sintering was performed in a ТББ -2 (ТВВ-2) vacuum furnace mainly in a "hydrogen" vacuum which was maintained at $\approx 4 - 5 \cdot 10^{-3}$ mm Hg during the rise of temperature and the sintering temperature. To produce specimens of minimum porosity sintering was carried out at maximum temperatures which were experimentally determined for each alloy (1,490 - 1,500°C for alloy 1; 1,510 - 1,520°C for alloy 2; 1,490 - 1,500°C for alloy 3; and 1,430 - 1,440°C for alloy 4). Relative densities of pressed briquets and sintered specimens are given in Table 1. The sintered alloys were subjected to bending and break and tested as to their microhardness and endurance strength. Results are given in Figures 2, 3, 4. It was found that the bending strength of single-phase NiAl alloys at room temperature increased with a higher nickel content in the NiAl compound; maximum strength is offered by an alloy which is on the boundary of the single-phase NiAl and the bi-phase NiAl+Ni₃Al range. At high temperatures, the poorest strength characteristics are shown by alloys being near the boundary of the single-phase NiAl range, from the nickel and the aluminum side as well.

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Table 1: Relative densities of pressed and sintered specimens, volumetric and linear shrinkage for single-phase alloys

| Alloy | After pressing | | | After sintering | | | | |
|-------|---|---|--------------------------------|---|--|--------------------|------------------------|--------------------|
| | Specific weight of briquets g/cm ³ | Spec. weight of compact charge material g/cm ³ | Relative density of briquets % | Spec. weight of specimens g/cm ³ | Spec. weight of compact alloy material g/cm ³ | Relative density % | Volumetric shrinkage % | Linear shrinkage % |
| 1 | 3,75 | 5,15 | 72,8 | 5,2 | 5,65 | 92,5 | 30 | 10,5 |
| 2 | 4,05 | 5,20 | 78,0 | 5,5 | 5,93 | 93,0 | 28 | 8,5 |
| 3 | 4,18 | 5,55 | 75,5 | 5,9 | 6,20 | 95,0 | 30 | 9,5 |
| 4 | 4,25 | 5,80 | 73,0 | 6,4 | 6,50 | 98,5 | 35 | 9,0 |

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Investigation of Sintered Alloys on Metallic NiAl Compound Base

Figure 2:

Dependence of strength during bending (for 20°C) from the composition of sintered alloys obtained in the present investigation (1) and in the study described in Ref. 5 (2)

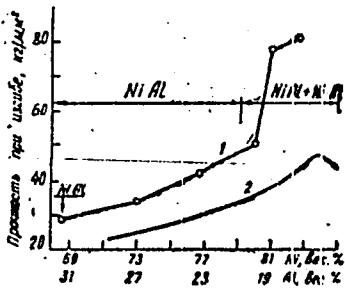
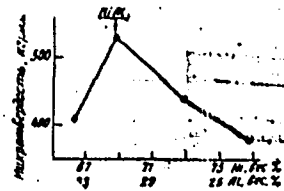


Figure 3:

Microhardness of sintered single-phase NiAl alloys



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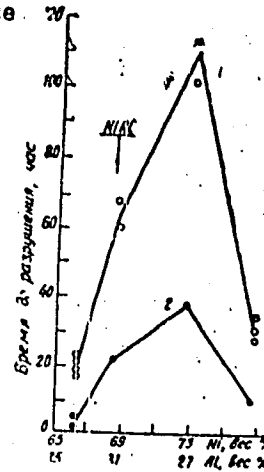
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A006/A001

Investigation of Sintered Alloys on Metallic NiAl Compound Base

Figure 4:

Strength of NiAl alloys during stretching (5 kg/mm² load) for 800°C (1) and 850°C (2).

There are 2 tables, 4 figures and 12 references; 4 Soviet and 8 non-Soviet.



ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute). Kafedra rentgenografii (Department of Roentgenography)

SUBMITTED: April 29, 1960

Card 5/5

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S/129/61/000/007/014/016
E075/2535AUTHOR: Serdyantsev, S.M., Gramova, S.P., Kalikhman, V.L.
and Manskiy, Ya. S.TITLE: Influence of Diffusion Porosity in a Nichrome Alloy
on the Sintering of Nickel and Chromium PowdersPERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov,
1961, No. 7, pp 52-54

ABSTRACT: In studying the process of sintering of nickel and chromium the authors discovered some unusual changes of the lattice period and the shape of the lines on X-ray diffraction patterns of the nichrome 147 (X₂₀) (880x29) for the investigations. Specimens of various densities (porosities 10-15, 25-30 and 40-55%) were prepared by cold pressing. The specimens were sintered in a hydrogen stream at 1150°C for 8 hours. X-ray diffraction patterns were made using a molybdenum reference standard with copper radiation. The lattice period was calculated from the line (4,0). It was found that during sintering the lattice period did not change monotonously but in jumps. Fig. 1 shows the dependence of the lattice period, a , of sintered
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nichrome on the sintering time, hours, for the following initial periods: curve 1 - 15-20%, curve 2 - 30%, curve 3 - 40-45%. During the first three hours of sintering the maxima and minima of the lattice periods did not coincide for specimens with various porosities; however, during the later stages of sintering they are synchronous for all the specimens. There is a similar change in the blurring of the lines on the X-ray diffraction patterns: the lines are blurred or sharp right up to the division of the K_1 doublet. The sharp lines correspond to larger lattice periods. Similar phenomena were observed by G. S. Gorelik (Ref. 1: Nauchnyye doklady vysshey shkoly, metallurgiya, No. 2, 1959) during sintering of Lunco alloy. These phenomena indicate that sintering of nickel and chromium powders does not change monotonously the uniformity of the solid solution. This can be explained on the basis of results of the study of the formation and growth of sub-microporosities in the nichrome alloy. Porosity was observed in an alloy of a similar composition (21 Cr) during the distillation of chromium in vacuum at various temperatures. The dimensions of the sub-micropores were determined by studying the low angle scattering of X-rays. Fig. 2 shows the test file
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EO73/E535

used for studying the low angle scattering (1 - X-ray tube, 2 - monochromator, 3 - specimen, 4 - collimator, 5 - Geiger-Muller counter, 6 - counting circuit). It was found that sub-microscopic pores of a size of several hundred Angstrom form in the nichrome during the process of evaporation of chromium. Fig.3 shows the dependence of the average pore dimensions, \bar{R} , $\bar{\lambda}$, and of the total porosity (loss in weight), ΔP , mg, in nichrome subjected to vacuum evaporation at various temperatures as a function of time, $\sqrt{\tau}$, min for the sintering temperatures 1200°C (plot a) and 1350°C (plot b). The dimensions of the sub-micropores also did not change monotonously; the lower the evaporation temperature the larger will be the number of extremal points on the curve $R_0 = f(\sqrt{\tau})$. The observed phenomenon can be explained only by the healing of the formed sub-micropores, since the maximum dimension of the pores was considerably below 1000 Å. Healing proceeds as a result of chromium diffusion; its partial diffusion coefficient in nichrome is considerably higher than the diffusion coefficient of nickel (Ref.4: S. Dashman: "Scientific fundamentals of vacuum engineering", Russian translation, 1950).

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E073/E535

In this case healing is possible if the flow of chromium atoms to the pore is larger than the flow of vacancies. After the pores have healed, sections will remain which are chromium enriched and the internal flow of vacancies will cease. The appearance of concentration non-uniformities leads to blurring of the lines on the X-ray pattern and to a reduction of the lattice period. By means of low angle scattering it is also possible to detect the decrease in the pore dimensions. Then, the chromium concentration begins to equalize in the alloy and the concentration of vacancies will increase; this produces a narrowing of the lines on the Debye pattern. An increase in the concentration of the vacancies leads to the formation of new and growth of remaining pores. The concentration of vacancies will decrease in jumps and the process of healing of the pores will start afresh. This process appears to continue until a certain quantity of chromium is evaporated from the alloy. There are 3 figures and 4 references: 3 Soviet and 1 a Russian translation.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

Card 4/6

ASTRAKHANTSEV, S. M.

(5)

KONOBYEVSKIY, S. T., PRAVDYUK, N. F., ASTRAKHANTSEV, S. M.,
KARPUKHIN, V. I., SKVORTSOV, V. V., NIKOLAYENKO, V. A.,

"Investigation of Certain Processes in UO₂ Dispersed in a Matrix"

Report submitted for the Conference on New Nuclear Materials Technology
including Non-Metallic Fuel Elements (IAEA), Prague, 1-5 July 1963

L 8569-66 EPF(n)-2/EWA(h)/ENP(b)/T/EWP(t)/EWP(w)/EWT(m) GG/JE

ACC NR: AT5023789

SOURCE CODE: UR/0000/62/000/000/0121/0126

AUTHOR: Astrakhansev, S. M.; Konnov, Yu. I.

ORG: none

TITLE: Effect of neutron irradiation on inhomogeneous solid solutions

SOURCE: Soveshchaniye po probleme deystviye yadernykh izlucheniya na materialy. Moscow, 1960. Deystviye yadernykh izlucheniya na materialy (The effect of nuclear radiation on materials); doklady soveshchaniya. Moscow, Izd-vo AN SSSR, 1962, 121-126

TOPIC TAGS: nickel base alloy, chromium²⁷ containing alloy, alloy structure, alloy electric resistivity, neutron irradiation, neutron irradiation effect, /Kh20Ni80 alloy*ABSTRACT: *Kh20Ni80⁶ nickel-base alloy (21% Cr, 0.32% Ti) rolled with an 80% reduction to 0.1-mm thick strip was irradiated with an integrated flux of 1×10^{17} — 1.4×10^{20} thermal neutrons per cm^2 at about 100°C. The irradiation-induced changes in the structure of the alloy in rolled, annealed, and slowly cooled, and annealed and quenched conditions were then investigated by electrical resistivity measurements. The effect of irradiation on the Kh20Ni80* alloy became noticeable with an integrated irradiation dose greater than 1×10^{17} n/ cm^2 . The

Card 1/2 + [Probably the proper designation is Kh20Ni80.]

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ACC NR: AT5023789

resistivity of the alloy irradiated after annealing decreased 4% as the irradiation dose increased to 1.4×10^{20} n/cm², probably because of the transition of the alloy from an inhomogeneous (K-state) to a more homogeneous condition during irradiation. Rolled alloys and annealed and quenched alloys, i.e., alloys in which the K-state was absent or only partially present before irradiation, exhibited different behavior. Increasing the irradiation dose from 1×10^{17} to 1.6×10^{20} n/cm² increased the resistivity of the rolled alloy by 10% and that of the quenched alloy by 3%. This behavior of the Kh20Ni80* alloy during irradiation was probably associated with a decreasing homogeneity of the alloy, i.e., with the appearance of the K-state, and was analogous to the behavior of ordering alloys under irradiation. Annealing of the irradiated Kh20Ni80 alloy in all the investigated conditions increased the resistivity to a value very close to that preceding irradiation. Annealing also brought about alloy equilibrium by promoting the formation of the K-state. Thus, on the basis of the obtained data on the annealing of the Kh20Ni80 alloy, it can be assumed that neutron irradiation of inhomogeneous solid solutions resulted not so much in the perfection of the crystal lattice as in the promotion of the processes in it. [MS]

SUB CODE: MM, SS/ SUBM DATE: 18Aug62/ ORIG REF: 011/ OTH REF: 005

JW

Card 2/2

L 26670-66 EWP(m)/EPP(n)-2/EWA(d)/EWP(t)/EWA(h) IJP(;) JD

ACC NR: AP6010404

SOURCE CODE: UR/0126/66/021/003/0384/0387

AUTHORS: Astrakhanov, S. M.; Konnov, Yu. I.; Konakhovich, Yu. Ya.

ORG: none

TITLE: Neutron diffraction study of polycrystalline nichrome alloy

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 3, 1966, 384-387

TOPIC TAGS: nickel alloy, chromium alloy, nichrome alloy, neutron diffraction, tempering, electric resistance, polycrystal

ABSTRACT: A neutron diffraction study of annealed and cold worked polycrystalline nichrome alloy (containing 22 at. wt % Cr) was carried out. The electrical resistance of the specimens was also determined. A schematic of the neutron diffractometer is presented, and the experimental results are tabulated and are graphically summarized (see Fig. 1). The neutron diffraction pattern exhibited superstructural maxima corresponding to the formation of antiphase domains, the existence of which was first suggested by B. G. Livshits, G. A. Rymashevskiy, and N. P. Kosyreva (Izv. vuzov, Chernaya metallurgiya, 1961, No. 5). Tempering was found to lead to an ordering of the domains after the Ni₂Cr type. The authors thank N. F. Pravdyuk for evaluation of the experimental results.

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UDC: 539.292:548.4

L 26670-66

ACC NR: AP6010404

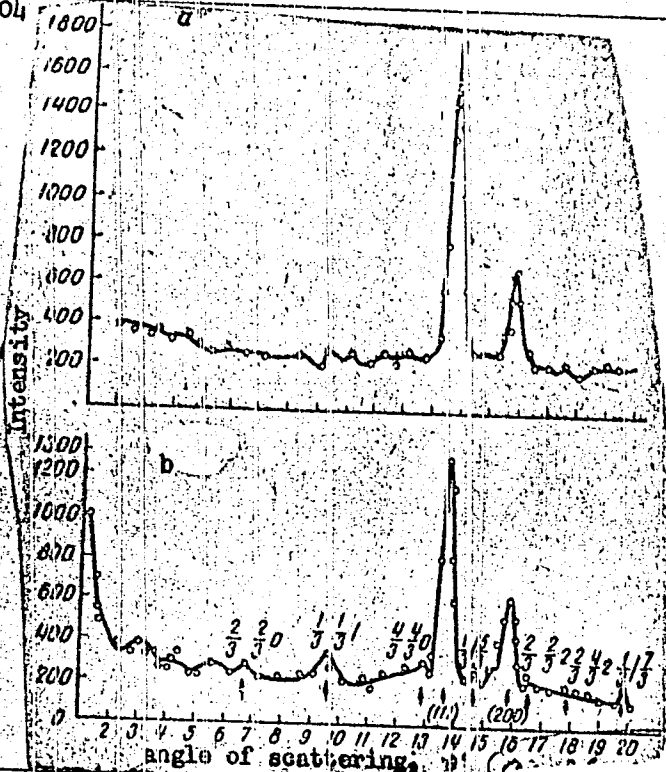


Fig. 1. Neutron diffraction patterns of the alloy Ni + 22 at. wt. % Cr before (a) and after (b) achieving K-state.

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L 26670-66

ACC NR: AP6010404

Orig. art. has: 1 table and 3 graphs.

SUB CODE: 11,20/ SUBM DATE: 08Jun65/ ORIG REF: 006/ OTH REF: 006

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Card 3/3 BLG

ASTRAKHANTSEV, V.I.

Machine for washing laboratory vessels. Lab. delo 7 no.3:53-56
Mr '61. (MIRA :14:3)

1. Kafedra farmakologii Moskovskoy veterinarnoy akademii.
(LABORATORIES--APPARATUS AND SUPPLIES)
(WASHING MACHINES)

ASTRAKHANTSEV, V. I. and GOREV, E. L. (Moscow Veterinary Academy)

"Tetracycline antibiotics in the organism of animals and birds"
Veterinariya, vol. 39, no. 5, May 1962 p. 73

ASTRAKHANTSEV, V. I.

ASTRAKHANTSEV, V. I.- "Mutual Connection Between the Rated Flow Velocity and Intensity of Deformation of the Beds of Channels." Acad Sci USSR, Eastern Siberia Branch, Irkutsk, 1955 (Dissertations For Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

ASTRAKHANTSSEV, V. I

124-11-12703

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr. 11, p. 54 (USSR)

AUTHOR: Astrakhansev, V. I.

TITLE: Problems in the Calculation of Erodible Channel Beds.
(Nekotoryye voprosy rascheta razmyvayemykh rysel kanalov)

PERIODICAL: Tr. Aralo-Kaspiysk. kompleksnoy ekspeditsii A. N. SSSR, 1956, Nr 7,
pp 70-78.

ABSTRACT: An evaluation of the problems and the stability characteristics of a river bed is made, together with a classification of deposits; a number of suggestions are made relative to the suitability of a stream for transportation.
Bibliography: 19 references.

Card 1/1

ASTRAKHANTSEV, V. I., G.V. LOPATIN, P. S. KOZIN and V. S. MEZENTSOV

Delivered a report on questions of hydrological partitioning.

report presented at the 3rd All-Union Hydrological Congress, 7-17 Oct 1957,
Leningrad.

{Izv. Ak Nauk SSSR, ser geograf., 3, pp3-9, '58}

ASTRAKHANTSEV, V.I.

Principles underlying the division of Siberia and the Far East into hydrologic regions. Izv. Sib. otd. AN SSSR no.2:99-108 '58. (MIRA 11:9)

1. Vostochno-Sibirskiy filial AN SSSR.
(Siberia---Hydrology)

ASTRAKHANTSIN, V.I.

Coordination of hydrogeological investigations. Geol. 1
geofiz. no. 8:122-123 '68. (MLA 14:2)
(Water, Underground)

ASTRAKHANTSEV, V.I.

Hydrogeologic and engineering geology problems in Siberia and the
Far East. Geol. i geofiz. no.2:126-127 '62. (MIRA 15:4)
(Siberia--Water, Underground--Congresses)
(Siberia--Engineering geology--Congresses)

ASTRAKHANTSEV, V.I.; PINNEKER, Ye.V.

Third Conference on the Underground Waters and Engineering Geology
of Siberia and the Far East. Sov.geol. 5 no.4:143-146 Ap '62.
(MIRA 15:4)

1. Vostochno-Sibirskiy geologicheskii institut.
(Siberia--Water, Underground--Congresses)
(Siberia--Engineering geology--Congresses)

ASTRAKHANTSEV, Maximin Ivanovich; ZONOV, B.V., otv.red.; ZAVOZIN, L.F.,
red.; LUT, V.G., tekhn.red.

[Angara and its basin; outline of the hydrology] Angara i ee
bassin, gidrologicheskii ocherk. Moskva, Izd-vo Akad. nauk
SSSR. 1962. 90 p. (Akademiia nauk SSSR. Sibirsko otделение.
Vostochno-Sibirskii geologicheskii institut. Trudy, no.12).
(MIRA 15:11)

(Angara Valley--Hydrology)

TKACHUK, V.G., *otv. red.*; TOLSTIKHIN, N.I., *red.*; POPOV, I.V., *red.*;
ZAYTSEV, I.K., *red.*; YEFIMOV, A.I., *red.*; PAL'SHIN, G.B.,
red.; GRECHISHCHEV, Ye.K., *red.*; ASTRAKHANTSEV, V.I., *red.*;
PERLOVICH, B.F., *red.*; PECHERSKAYA, T.I., *tekh. red.*

[Transactions of the Second Conference on Underground Waters
and the Engineering Geology of Eastern Siberia held in Chita,
1958] Trudy Soveshchaniia po podzemnym vodam i inzhenernoi
geologii Vostochnoi Sibiri. Irkutsk, Irkutskoe knizhnoe izd-
vo. No.4. 1961. 161 p. (MIRA 16:4)

1. Soveshchaniye po podzemnym vodam i inzhenernoy geologii
Vostochnoy Sibiri. 2d, Chita, 1953.
(Siberia, Eastern--Water, Underground)
(Siberia, Eastern--Engineering geology)

ASTRAKHANTSEV, V.I.; GOREV, E.L.

Tetracycline antibiotics in the organism of animals and poultry.
Veterinariia 39 no.5:73-76 My '62 (MIRA 18:1)

1. Moskovskaya veterinarnaya akademiya.

ODINTSOV, M.M., doktor geol.-min. nauk, otv. red.; PAL'SHIN, G.B.,
kand. geol.-min. nauk, red.; LOGACHEV, N.A., red.;
FINNEKER, Ye.V., red.; GRECHISHCHIN, Ye.K., kand. tekhn.
nauk, red.; ASTRAKHANTSEV, V.I., red.; VOLOGODSKIY, G.P.,
red.; KUKUSHKIN, I.P., red.; FEDOROV, I.P., red.; TIZDEL',
R.R., red.; SEDOVA, N.G., red.; YERMAKOV, V.F., red.;
ASTAF'YEVA, G.A., tekhn. red.; POLYAKOVA, T.V., tekhn. red.

[Bratsk Reservoir; engineering geology of the territory]
Bratskoe vodokhranilishche; inzhenernaia geologiya territorii.
Moskva, Izd-vo AN SSSR, 1963. 274 p. (MIRA 16:12)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut zemnoy
kory.
(Bratsk Reservoir region--Engineering geology)

ASTRAKHANTSEVA, A. (g. Ryasan')

An economy of ten thousand meters of fabric. Prom.koop. no.1:23
Ja '57. (MLRA 10:4)

1. Tekhnoruk arteli im. Krasnoy Armii.
(Clothing industry)

ASTRAKHAIMSEVA, A. (g. Ryazan')

Hand operations are becoming a thing of the past. Prom.koop.
13 no.8:18 Ag '59. (MIRA 12:12)

1. Tekhneruk arteli im. Krasnoy Armii.
(Ryazan--Tailoring)

ASTRAKHANTSINVA, A.

Clothing workers improve production. From.koop. 14 no.8:15
Ag '60. (MIRA 13:8)

1. Tekhnoruk arteli im.Krasnoy Armii, Ryazan'.
(Ryazan--Clothing industry)

PAULLER, O.F.; ASTRAKHANTSEVA, A.M.; BUELENKO, V.A.

Case of cat fleas attacking people in uninhabited rooms. Dokl.
Irk. gos. nauch.-issl. protivochum. inst. no. 58177-179 '63
(MIRA 18&1)

ASTRAKHANTSEVA, G.I.; BUKHARIN, V.A.

Two cases of tetralogy of Fallot with a left-type electrocardiogram.
Grud. Ybir. 3 no.2:101-104 '61. (MIRA 14:4)
(TETRALOGY OF FALLOT) (ELECTROCARDIOGRAPHY)

ASTRAKHANTSEVA, G.I.; SAVEL'YEV, V.S.

Complications in puncture of the left auricle and catheterization of the left heart. Khirurgia 37 no.1:34-39 Ja '61. (MIRA 14:2)

1. In fakul'tetskoy khirurgicheskoy kliniki imeni S.I. Spasokotskogo (dir. - akad. A.N. Bakulev) II Moskovskogo gosudarstvennogo meditsinskogo instituta imeni N.I. Pirogova i Instituta grudnoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akad. A.N. Bakulev) AMN SSSR.
(MITRAL VALVE--DISEASES) (AORTA--DISEASES)
(CARDIAC CATHETERIZATION)

ASTRAKHANTSIEVA, G. I.

Intracavitary electrocardiography in cardiac catheterization.
Grud. khir. no.5:32-38 '61. (MIRA 15:2)

1. Iz laboratorii funktsional'noy diagnostiki (zav. - kandidat
meditsinskikh nauk G. G. Gel'shteyn) Instituta grudnoy khirurgii
(dir. -- prof. S. A. Kolesnikov, nauchnyy rukovoditel' - akad.
A. N. Bakulev) AMN SSSR.

(ELECTROCARDIOGRAPHY) (HEART)
(CARDIAC CATHETERIZATION)

BUKHARIN, V.A.; KHUAN SYU-CHZHUN [Huang Hsin-chung]; ASTRAKHANTSEVA, G.I.

Complete atrioventricular communication in conjunction with stenosis
of the pulmonary artery. Grud. khir. 6 no.2:23-29 Mr-Apr '64.
(MIRA 18:4)

1. Otdeleniye vrozhdennykh porokov serdtsa (zav. - doktor med. nauk
V.I. Burakovskiy) Instituta serdechno-sosudistov khirurgii AMN SSSR.
Moskv'

SAVEL'YEV, V.S. (Moskva, Pervomayskaya ul., d. 122. kv.2); ASTRAKHANTSEVA, G.I.

Disturbances of cardiac activity during the catheterization of the heart for congenital vitia cordis. Grud. khir. l. no.2:57-64. Nr-Ap '59. (MIRA 16:7)

1. Iz fakul'tetskoy khirurgicheskoy kliniki imeni S.I.Spasokukotskogo (dir.-prof. A.N. ~~Bakulev~~) II Moskovskogo meditsinskogo instituta imeni N.N. Pirogova i Instituta grudnoy khirurgii (dir.-prof. A.A. Basalov) AMN SSSR.

(CARDIAC CATHETERIZATION)

KOLESNIKOV, S.A.; NEZLIN, V.Ye.; IVANITSKAYA, M.A.; PETROSYAN, Yu.S.;
LEONT'YEVA, N.S. ASTRAKHANTSEVA, G.I.

Clinical observations on mitral stenosis patients with
active hypertension of the lesser circulation. Grud.khir.
4 no.6: 3-9 N-D'62. (MIRA 16:10)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof.
S.A.Kolesnikov; nauchnyy rukovoditel' - akademik A.N.Bekulev)
AMN SSSR. Adres avtorov: Moskva, V-49, Leninskiy prospekt, d.8,
Institut serdechno-sosudistoy khirurgii AMN SSSR.
(MITRAL VALVE--DISEASES) (HYPERTENSION)

KOLESNIKOV, S.A., prof.; TSUKERMAN, G.I., kand.med.nauk; LEONT'YEVA, N.S.,
kand. med.nauk; MEYTYNA, R.A., kand. med. nauk; PETROSYAN, Yu.S.,
kand.med.nauk; GOLYA, B.F.; ASTRAKHANTSEVA, G.I.

Characteristics of the operative and immediate postoperative
period in mitral commissurotomy in patients with severe pul-
monary hypertension. *Sovet. med.* 27 no.6:14-20 Je'63.

(MIRA 17:2)

1. Iz Instituta serdetsno-sosudistoy khirurgii (direktor - prof.
S.A. Kolenikov, nauchnyy rukovoditel' - akademik A.N. Bakulev)
AMN SSSR.

ASTRAKHANTSEVA, E.A.

Osnovy uchenia I.P. Pavlova
na urokakh zoologii (Principles of I.P. Pavlov's doc-
trine in zoology classes). Moskva, Uchpedgiz, 1953.
39 p. (Opyt peredovogo uchitelia).

SO: Monthly List of Russian Accessions, Vol. 7, No. 5, August 1954

GRIDUNOV, I. T.; PRYAKHINA, S. F.; ASTRAKHANTSEVA, N. I.

Temperature resistance of the nairit rubber and chlorosulfonated polyethylene. Izv. vys. ucheb. zav.; khim. i khim. tekhn. 5 no.5:821-826 '62. (MIRA 16:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova, kafedra tekhnologii reziny i tekhnologii pererabotki polimerov.

(Chloroprene—Thermal properties)
(Polyethylene—Thermal properties)

I, 10528-63

EPR/EMP(j)/EIF(c)/EWT(m)/BDS--AFFTC/ASD--Ps-4/Pt-4/

Pr-4--RM/WW/MAY

ACCESSION NR: AP000077

S/0153/63/006/001/0142/0146

AUTHOR: Gridunov, I. T.; Astrakhantseva, N. I.

74
73

TITLE: Nonburning heat-resistant rubbers from nairit and chlorosulfonylated polyethylene

SOURCE: Izv. VUZ Khimiya i khim. tekhnologiya, v. 6, no. 1, 1963, 142-146

TOPIC TAGS: nonburning rubber, nairit, chlorosulfonylated polyethylene, US-17Q, chlorinated paraffin, ZnO, rubber property, tensile strength, elongation, residual elongation, Defo plasticity, Shore hardness, wear resistance, heat resistance

ABSTRACT: Nonburning heat- and wear-resistant rubbers with satisfactory physical and mechanical properties have been prepared from nairit and chlorosulfonylated polyethylene (CSPE) rubber mixes loaded with the US-17Q light-colored filler. The effect of CSPE on the properties of nairit rubbers was studied for vulcanizates with varying contents of mix I (nairit, 100.0; ZnO, 5.0; MgO, 10.0; chalk, 5.0; and chlorinated paraffin, 5.5 parts) and mix II (CSPE, 100.0; MgO, 20.0; rosin, 2.5; captax, 2.0; and diphenylguanidine, 0.5 parts); a mixture

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L 10528-63

ACCESSION NR: AP300477

containing 80% of mix I and 20% of mix II was selected for study of the effect of various fillers on the nonflammability and physicochemical properties of the rubbers. The best results were obtained with the US-170 filler. With 10 to 20 parts of this filler, the rubbers are almost nonburning; with 50 parts they are fully nonburning and exhibit good physicochemical properties. However, the structure-forming effect of US-170 reduces the plasticity of mixes, and an additional amount of chlorinated paraffin must be introduced in US-170-filled mixes. Study of the effect of various metal oxides on the properties of vulcanizates showed that ZnO does not affect their heat resistance or other properties. The characteristics of a number of rubbers are given. For example, a mixture of 80% of mix I and 20% of mix II containing US-170, 50.0; chlorinated paraffin, 4.4; ZnO, 4.0; and MgO, 12 parts has a Defo plasticity of 9250 g. Its vulcanizates are nonburning, heat-resistant at 1000, and exhibit the following properties: tensile strength, 193 kg/cm²; elongation, 415%; residual elongation, 22%; wear, 370 cm³/km²-hr; Shore hardness, 89. Orig. art. has: 8 tables and 1 figure.

ASSOCIATION: Kafedra tekhnologii pererabotki polimerov i tekhnologii reziny*
Moskovskogo instituta tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova

Card 2/2 Moscow U. of Fine Chemical Tech.

ASTRAKHONTSEV, S. M.

90

PHASE I BOOK EXPLOITATION

SOV/6176

Konobeyevskiy, S. T., Corresponding Member, Academy of Sciences
USSR, Resp. Ed.

Deystviye vadernykh izlucheniy na materialy (The Effect of
Nuclear Radiation on Materials). Moscow, Izd-vo AN SSSR,
1962. 383 p. Errata slip inserted. 4000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk; Otdeleniye fiziko-matematicheskikh nauk.

Resp. Ed.: S. T. Konobeyevskiy; Deputy Resp. Ed.: S. A. Adasinskiy; Editorial Board: P. L. Gruzin, G. V. Kurdyumov, B. M. Levitskiy, V. S. Lyashenko (Deceased), Yu. A. Martynyuk, Yu. I. Pokrovskiy, and N. F. Pravdyuk; Ed. of Publishing House: M. G. Makarenko; Tech. Eds: T. V. Polyakova and I. N. Dorokhina.

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The Effect of Nuclear Radiation (Cont.)

SOV/6:76

PURPOSE: This book is intended for personnel concerned with nuclear materials.

COVERAGE: This is a collection of papers presented at the Moscow Conference on the Effect of Nuclear Radiation on Materials, held December 6-10, 1960. The material reflects certain trends in the work being conducted in the Soviet scientific research organization. Some of the papers are devoted to the experimental study of the effect of neutron irradiation on reactor materials (steel, ferrous alloys, molybdenum, zirconium, graphite, and nichromes). Others deal with the theory of neutron irradiation effects (physico-chemical transformations, relaxation of internal stresses, internal friction) and changes in the structure and properties of various crystals. Special attention is given to the effect of intense γ -radiation on the electrical, magnetic, and optical properties of metals, dielectrics, and semiconductors.

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The Effect of Nuclear Radiation (Cont.)

SOV/6176

- Astrakhontsev, S. M., and Yu. I. Konnov. Effect of Neutron Irradiation on Inhomogeneous Solid Solutions 121
Specimens of X20H80 [Ni80Cr20] alloy were irradiated at a temperature not exceeding 100° [C?] by a thermal neutron flux of $1 \cdot 10^{17}$ to $1.4 \cdot 10^{20}$ n/cm².
- Sayenko, G. P. Effect of Neutron Irradiation on Ordering Fe₃Al Alloy 127
Specimens were irradiated by fast neutrons and measurements were made of electric resistance, lattice parameters, and the intensity of superlattice lines.
- Ivanov, A. N., and N. P. Pravdyuk. Effect of Neutron Irradiation on Electrical Resistance in Certain Metals 136
- Pravdyuk, N. F., and P. A. Plastonov. Study of Long-Time Strength of Copper After Irradiation 153
The investigation was conducted before and after irradiation with a neutron flux of $\approx 10^{20}$ n/cm².

Card 7/14

ASTRAKHOV, Yu.V.

The ME7 electric erosion machine. Biul.tekh.-ekon.inform. no.10:
43-44 '61. (MIRA 14:10)

(Electric cutting machinery)

GRIGOR'YEV, Lev Yakovlevich; ASTRATOV, N.A., kand. tekhn. nauk,
retsenzent; NARTOV, I.M., kand. tekhn. nauk, nauchn.
red.; YEROMITSKAYA, Ye.Ye., red.

[Ship vessels operating under pressure; determination
of stresses and deformations] Sudovye sosudy, rabotaiushchie
pod davleniem; opredelenie napriazhenii i deformatsii. Le-
ningrad, Sudostroenie, 1965. 194 p. (MIRA 18:6)

ASTRATOV, N.A., dotsent, kand.tekhn.nauk, Inzhener-kapitan 2-go ranga

Improvement of water softening on submarine boats. Mor.sbor.
46 no.2:70-73 F '63. (MIRA 16:2)

(Sea water, Distillation of)
(Submarine boats—Equipment and supplies)

KALININ, Georgiy Yevgen'yevich; SULOYEV, A.V., kand. tekhn. nauk
retsenzen | ASTRATOV, N.A., kand. tekhn. nauk; BOGOMOLOV,
V.S., kand. tekhn. nauk, nauchn. red.; VARKOVETSKAYA, A.I.,
red.

[Model tests of marine turbines and engines] Model'nye ispy-
taniya sudovykh turbin i mashin. Leningrad, Sudostroenie,
1965. 193 p. (MIRA 18:11)

ASTRATOV, N.A., dotsent, kand. tekhn. nauk, inzh.-kapitan 2 ranga

Training of students in school laboratories, a basis of
practical instruction. Mor. sbor. 48 no.2:39-42 F '65.
(MIRA 18:11)

ASTRATOVA, Ye.

Third All-Union Coordination Conference on Polyolefins.
Plast. massy no.8:71 '63. (MIRA 16:8)

(Plastics--Congresses) (Olefins) (Polymers)

SADOYAN, V.S.; MINASYAN, G.A.; ASTRATSATRYAN, D.L.

Effect of motor regimen on the function of the cardiovascular
system in patients with myocardial infarct. Zhur. eksp. i
klin. med., 5 no.1:78-84 '65. (MIRA 13:10)

S/026/62/000/009/002/006
D037/D113

AUTHOR: Astratyan, E.A., Corresponding Member of the AS USSR

TITLE: The conditioned reflex and related phenomena

PERIODICAL: Priroda, no. 9, 1962, 37-43

TEXT: Some problems of the higher nervous activity discussed at the Vsesouznoye soveshchaniye fiziologov, psikhologov i filosofov (All-Union Conference of Physiologists, Psychologists and Philosophers) in Moscow are commented on in the light of Pavlov's reflex theory. Two forms of the adaptive change in congenital reflex activity are described: (1) the switching reflex in more highly developed living organisms; (2) the summation reflex or Banung-dominant, which is the concrete expression for (a) the motor and adaptive reactions of one-celled animals, bacteria, some species of plants, lower invertebrates and some lower vertebrates and (b) for some other phenomena erroneously called conditioned reflexes. The biological role of the variability of congenital reflexes in the adaptation of the organism to the various constantly changing environmental factors is explained. The opinion of foreign scientists that even the lower part

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The conditioned reflex and related phenomena

S/026/62/000/009/002/006
D037/D113

of the spinal cord can elaborate conditioned reflexes and that reticular formation of the brain stem is the basic organ for their elaboration, has been refuted by Soviet scientists.

Card 2/2

CHURAKOV, Konstantin Ivanovich; ASTRAT'YANIS, N., red.

[Construction projects of the seven-year plan] Stroiki
semiletki. Makhachkala, Dagestanskoe knizhnoe izd-vo,
1964. 62 p. (MIRA 18:5)

ASTRAUSKAS, V. I., Cand of Med Sci -- (diss) "Certain physiological laws governing antibodies during the use of various methods of immunization." Vil'nyus, 1957, 28 pp (Institute of Experimental Medicine, Academy of Sciences Lithuanian SSR), 250 copies (EL, 31-57, 105)

ASTRAUSKAS, Yu. P., Cand Tech Sci -- (diss) "Study of the ^{operation} ~~work~~
of the D-35 Motor According to the Gas-Liquid Process." Kaunas,
1957. 24 pp (Min of Agr WSSR, Lithuanian Agr Acad), 130 copies
(KL, 52-57, 106)

- 43 -

POPOV, Vasilii Aleksyevich; ASHREIN, Avenir Arkad'yevich; UZDIN, David
Konstantinovich; GURVICH, Natan Borisovich; SOKOLOV, V.G., red.;
OTOICHEVA, M.A., red. izd-va; LELYUKHIN, A.A., tekhn. red.

[Operation, maintenance and repair of trolley bus rolling stock]
Ekspluatatsia i remont podvizhnogo sostava trolleibusa. Pod
obshchei red. V.A.Popova. Moskva, Izd-vo M-va kommun.khoz.
NSFSR, 1961. 471 p. (MIRA 15:3)

(Trolley buses)

KOVALENKO, M.; MILYUKOV, D.; ASTREINOV, N.

Using thin-walled mesh-reinforced concrete slabs or shells in industrial construction. Prom.stroi. i inzh. soor. 4 no.4: 43-44 J1-Ag '62. (MIRA 15:9)

1. Donetskii nauchno-issledovatel'skiy institut nadshakhtnogo stroitel'stva, Akademii stroitel'stva i arkhitektury UkrSSR (for Kovalenko, Milyukov).
2. "Metallurgkhimashstroy" (for Astreinov). (Precast concrete construction)
(Open-hearth furnaces--Foundations)

KOVALENKO, M.A., inzh.; MILYUKOV, D.A., inzh.; ASTREINOV, N.I., inzh.

Use of thin-walled mesh-reinforced concrete slabs or shells.
Prom. stroi. 40 no.5:44-45 '62.. (MIRA 15:5)
(Reinforced concrete construction)

L 11519-66 EWT(1)/EWT(n)/EWP(m)/EPP(n)-2/EPG(m)/EWA(s)/FCS(k)/EWA(1) WW/JD
 ACC NR: AT6003085 SOURCE CODE: UR/3181/63/000/015/0185/0189 71
 AUTHOR: Kudryashev, L.I. (Professor, Doctor of technical sciences);
 Astrelin, B.N. B+1

ORG: None

TITLE: Effect of the unsteady state on the coefficient of heat transfer
in flow around a spherical body in the region of very small Reynolds
numbers 21,44,55
 1,55

SOURCE: Kuybyshev. Aviatzionnyy institut. Trudy, no. 15, pt. 2, 1963.
 Doklady kustovoy nauchno-tekhnicheskoy konferentsii po voprosam mekhaniki
 zhidkosti i gaza (Reports of the Joint scientific-technical conference
 on problems of the mechanics of liquid and gas), 185-189

TOPIC TAGS: convective heat transfer, Reynolds number, heat conduction,
 heat transfer coefficient, unsteady flow

ABSTRACT: The problem is formulated using the following differential
 equation for heat conduction (applicable to the spherical problem):

$$\frac{\partial t}{\partial t} = a \left(\frac{\partial^2 t}{\partial r^2} + \frac{2}{r} \cdot \frac{\partial t}{\partial r} \right) \quad (1)$$

The boundary conditions are the following:

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I 14519-66

ACC NR:

AT6003085

$$\tau = 0, t = \theta_w - \theta_f = t_w; \quad (2)$$

where θ_w is the initial temperature of the particle; θ_f is the stream temperature at the start of the process. After an extended mathematical treatment, the authors arrive at a formulation which, it is stated, makes it possible to take into account the effect of the unsteady state on the heat transfer coefficient in flow around a very small spherical body. This effect is extremely substantial, since even an average result leads to a twofold increase in the heat transfer coefficient compared to the value for a steady-state Nusselt regime. Orig. art. has: 21 formulas.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 002/ SOV REF: 000/ OTH REF: 000

TS
Card 2/2

ASTRELIN, M.M., agronom.

Storing sunflower seed from varieties with a high oil content. Masl.-zhir.
prom. 18 no.6:9 Je '53. (MLRA 6:6)

1. Nevinomysskiy maslozavod.
(CA 47 no.22:12844 '53)

(Sunflower seed oil)

ASTRESHKINA, L. I. (g. Sumy Ukrainskoy SSR)

Breeding Trichogramma on the nature study plot. Est. v shkole
no. 2:77-82 Mr-Apr '56. (MIRA 9:7)
(Insects, Injurious and beneficial--Biological control)
(Chalcid flies)

ANDREYEV, Yu.A.; ASTRAKHANSKIY, I.N.

New example of peaceful cooperation. Mor.sbor. 44 no.2:27-32 F
'61. (MIRA 14:4)

(Hodeida, Yemen--Harbor)

ASTRETSOV, A. I.

Organizatsiia chertezhnogo khoziaistva. (Vestn. Mash., 1950, no.9, p. 71-73)

Organization of the drafting room practice.

DLC: TN4.V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

ASTRETSOV, A.I.

More on drawing room practice in machinery design. Standartizatsia
no.1:73-75 Ja-Fe '56. (MLRA 9:2)

1. Zamestitel' nachal'nika otdela mashinostroyeniya Komiteta standartov,
mer i ismeritel'nykh priborov.
(Machinery--Design) (Drawing-room practice)

ASTRETSOV, A.I.

AUTHOR: Astretsov, A.I.

28-5-19/30

TITLE: On the Revision of Standards for Handling Drawings (A review of letters received by the editors)
(K peresmotru standartov na sistemu chertezhnogo khozyaystva - Obzor pisem, postupivshikh v redaktsiyu)

PERIODICAL: Standartizatsiya, 1957, # 5, p 75-77 (USSR)

ABSTRACT: The Committee of Standards, Measures and Measuring Devices and the periodical "Standartizatsiya" have received a large quantity of letters on this subject. The Leningrad branch of the All-Union Technological Project Institute (Vsesoyuznyy proyektno-technologicheskii institut) has been commissioned to revise the entire group of standards "ГОСТ 5290-50" and "5302-50" for handling drawings. It must finish this work during the first half of 1958.

Some remarks and suggestions made by 14 authors of letters are here reviewed. The requirements of some separate "ГОСТ" paragraphs are not clear, and this has caused the ministries and even single industrial plants to issue additional explanations.

The numbers of standards for materials have to be given in the specifications on the drawings. This means additional work to designers. The changes of standard numbers cause additional

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28-5-19/30

On the Revision of Standards for
received by the editors)

Handling Drawings (A review of letters

work (the author of this letter suggests transferring this data from the drawing sheets into the general technical conditions for the work).

The "ГОСТ 5294-50"-"Designations for Drawings of Basic Production. Basic Principles" should be revised, since it establishes no order in the designation of materials.

Many authors of letters consider it necessary that the Committee of Standards, Measures and Measuring Devices issue a "Collection of Sample Drawings" in accordance with the requirements of standards, as well as books and booklets explaining how to introduce the standards and giving methodical instructions.

AVAILABLE: Library of Congress

Card 2/2

ASTRETSOV, A.I.

Ribbon looms and reeling machines. Standartizatsiia 26

no.7:42-43 J1 '62.

(MIRA 15:7)

(Looms---Standards) (Reels (Textile machinery))

ASTRETSOV, A.I.

Spinning machines for wool and flax. Standartizatsiia 27
no.2:40-41 F '63. (MIRA 16:4)

(Spinning machinery--Standards)

ASTRETSOV, A.I.

Using the term "surface roughness." Standartizatsia 27
no.3:62 Mr '63. (MIRA 16:4)
(Surfaces (Technology))

ASTRETSOV, A.I.

Standardization of machines and equipment for light industry.
Standartizatsiia 27 no.9:10-12 S '63. (MIRA 16:10)

ASTRETSOV, A.I.

Automatic looms. Standartizatsia 28 no.1:42-43 Ja '64.
(MIRA 17:1)

ASTRETSOV, V.; KOROVIN, V.; DUBROVIN, N.

Readers comments on S.I. Shcherbakov's book "Milling wheat and rye." Reviewed by E. Lykov, V. Astretsov, V. Korovin, N. Dubrovin. Muk.-elev.prom. 20 no.8:30-31 Ag '54. (MIRA 7:9)
(Wheat milling) (Rye milling) (Shcherbakov, S.I.)

PORTNOV, Ya.; ASTRINTSOV, V.

Controlling the technological process at flour mills with
the help of instruments for automatic and remote control of
consumption. Muk.-elev.prom. 25 no.9:15-17 S '59.
(MIRA 12:12)

1. Sverdlovskiy mukomel'no-elevatornyy tekhnikum (for Portnov).
2. Mel'nitsa No.2 v Sverdlovске (for Astretsov).
(Measuring instruments)
(Flour mills--Equipment and supplies)

ASTREYEVA, O.M.

Report

Chemical Abst.
Vol. 48 No. 8
Apr. 25, 1954
Cement, Concrete, and Other
Building Materials

O.M.
Control of cement quality. O. M. Astreeva. *Tsiment*
19, No. 6, 11-12(1953).—Wt. per l. of cement does not
characterize quality of production, whereas petrographic
analysis can be used to det. extent of burning and thorough-
ness of mixing. Presence in the clinker of a small amt. of
alite and a large amt. of free lime indicates underburning.
High content of alite and free lime indicates very high coeff.
of satn. Large variations in alite content indicate poor mix-
ing. Data on alite content can be obtained with the aid of a
polarization microscope in 30-40 min. per sample. First,
the presence of free lime is detd. in a soln. of phenol in nitro-
benzene; then, with another sample in an immersion liquid
having an n_D of 1.680-1.700, the content of alite and belite in
the clinker is detd.
B. Z. Kiamich

АСТВЕЕВ, И. П.

PROCESSES AND PROPERTIES - 005

Mineralographic method of oxidizing cements by re-
 flected light O. M. Astveev. *Vysokoe Nauch. Is-*
sloushch. Inst. Tsvement, Sverdlovsk Rabot. No. 18, 857
(1967). Preliminary expts. with synthetic and factory
samples indicate that the method can be used to elucidate
the microstructure of special clinkers. Thus after treating
a sample consisting of 3CaO.SiO₂ (60%), CaO.Al₂O₃.
Fe₂O₃ (40%) and 3CaO.Al₂O₃ (10%) with a 10% soln. of
HNO₃ in EtOH the small hexagonal crystals of 3CaO.SiO₂
were found to be evenly distributed. B. C. P. A.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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| 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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ASTREYEVA, O.M.

V
M-1 Mineralogical composition and structure of some aluminous cements, O.M. Astreeva. *Izvestiya Vsesoyuz. Nauch.-Issledovatel. Inst. Tsvetn. Prom.* 1953, No. 7, 116-40; *Referat. Zhur., Khim.* 1955, No. 881.—The chem. and mineralogical compn. of 2 cements, one of high-Fe content and the other of low-Fe content, were studied. $Fe_2O_3 + FeO$ in the 1st of the cements was 17-32% and in the 2nd 8-17%. To the cements with high-Fe content the law of equil. melt crystn. was applicable. The Fe corpd. appeared predominantly as magnetite or metallic Fe, and small quantities of it combined as mono-Ca ferrite which appeared as a solid soln. in $CaO \cdot Al_2O_3$. Not all of the MgO and MnO was found as spinel; they were found partly as solid solns. within other minerals of the cement or its vitreous phase. In cements with the lower-Fe content the latter was found mostly as wüstite and in small quantities as di-Ca ferrite. TiO_2 entered the sol. part of samples, and only small quantities of it remained in the insol. residue as perovskite. Each of the phases crystd. continuously in one step without subdividing into distinct structural stages.
—M. H. Ross

ASTREYEVA, O.M., kandidat tekhnicheskikh nauk.
~~ASTREYEVA, O.M.~~

Light refraction of celite in clinker. Tsement 19 no.3:30 My-Je '53.
(MIRA 6:6)
(Cement--Testing)

ASTREYEVA, O. M.

B. T. R.
Vol. 3 No. 4
Apr. 1954
Ceramics and Concrete

4458* Problem of Controlling the Quality of Cement
(Russian.) *C. M. ASTREYEVA*, *Tsement*, v. 19, no. 8, Nov.-Dec.
1953, p. 11-12.
Data on alite content can be obtained by using the polarized
microscope. Table.

ASTREYEVA, O.M.

1955

✓ Influence of TiO_2 on clinker formation. S. M. ROYAK, O. M. ASTREYEVA, AND M. N. LUKINA. *Tsimenty*, 11 (3) 12-14 (1955).--717

In the presence of TiO_2 , there is intensive decomposition of $CaCO_3$ but slight formation of clinker minerals, resulting in as high as 30 to 31% free CaO . With the formation of liquid phase, TiO_2 dissolves and dilutes it, resulting in intensive assimilation of CaO ; free CaO drops to 4% and even to 1%. Clinkers containing TiO_2 are characterized by larger crystallization of minerals, particularly alite (120μ).

B.Z.K.

②
PM
2/24

ASTREYEVA, O.M.

4000

Structure of cement and strength of concrete during prolonged hardening. B. G. SKHANTAY, O. M. ASTREYEVA, AND L. YA. LOSITSNIKOVA. *Tekhn.* 21 [5] 9-12 (1963).--Portland cement

concretes 16 to 17 years old showed about same strength (800 to 778 kg./cm.²). The structure remained gel-like during a prolonged time. Newly formed crystalline products after 16 to 17 years are so small that optical constants and form of the crystals could not be determined. The structure retained fragments of cement clinker amounting to 30 to 40%. These fragments consist of crystals of alite and belite and an intermediate substance. There was no selective hydration of clinker minerals. During prolonged hardening, clinker minerals of slag Portland cement hydrated completely, but the fragments of slag glass did not change.

B.Z.K.

②
PM

ASTREYEVA, O. M.

USSR/Chemical Technology. Chemical Products and their Application.
Glass.Ceramics. Construction Materials.

J-12

Abs Jour: Referat Zh.-Kh., No 8, 1957, 27758

Author : O.M. Astreyeva, L. Ya. Lopatnikova.

Inst :

Title : Hydrosulfoaluminate Composition.

Orig Pub: Sb. nauchn. natot po khimii i tekhnol. silikatov. M., Prom-
stroyizdat, 1956, 34-37.

Abstract: It is established that they hydrosulfoaluminate of the compo-
sition $4\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot 0.2\text{Fe}_2\text{O}_3 \cdot 3\text{CaSO}_4$ is produced at the hydration
of C_4AF with gypsum, and the hydrosulfoaluminate $3\text{CaO} \cdot 2.3\text{Al}_2\text{O}_3 \cdot$
 3CaSO_4 aq. is produced at the hydration of CA with gypsum.

Card : 1/1

-112-

Translation from. Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 309 (USSR)

SOV/137-57-10-20546

AUTHOR: Astrejeva, O. M.

TITLE: Petrographic Method for the Evaluation of the Quality of a Slag
(Petrograficheskiy metod otsenki kachestva shlaka)

PERIODICAL: V sb.: Domennyye shlaki v str-ve, Kiyev, Gosstroyizdat
UkrSSR 1956, pp 78-84

ABSTRACT: The author proposes a petrographic method for the inspection of blast-furnace slags (S) in the course of their conversion into building material. It is established that S containing <30% helenite possesses weak binding properties, while S containing 15 - 25% is a conditioner but has a low mechanical strength. S with a low helenite content satisfies the requirements for a conditioning agent. In the manufacture of slag blocks it was discovered that their quality depends upon the structure of the test sample of the slag. The β phase of $2CaOSiO_2$ present in the slag is transformed into the γ phase upon being cooled slowly. The cooled S crumbles to different degrees depending on the amount of this phase. High-quality blocks consisted of melilite crystals, while a rapidly cooled test sample of

Card 1/2

SOV/137-57-10-20546

Petrographic Method for the Evaluation of the Quality of a Slag

S consisted of brownish glass containing minute grains of Mn sulfide. The test sample for the analysis is drawn with a ladle during the tapping of the slag and poured into a cast-iron mold.

Z. G.

Card 2/2