

GEVORGYAN, B.A.; KATSMAN, Yu. N.; LIMONOV, G.Ye.; SAMKOV, V.S.; KATKOV,
V.P.; VINOGRADOVA, L.V.; MAMYKINA, A.D.; POPOV, G.I.; DOROKHOV,
A.A.; FALEYEV, G.A., inzh., retsenzent; BOGATAYA, L.M., red.;
ZARSHCHIKOVA, L.N., tekhn. red.

[Press method for meat boning and deveining] Obvalka i zhilovka
miasa pressovaniem. [By] B.A.Gevorgian i dr. Moskva, Pishche-
promizdat, 1963. 31 p. (MIRA 16:8)
(Meat industry--Equipment and supplies) (Sausages)

KATSMAN, Z.Ya.

Yarn count system for thrown silk ("Handbook on silk, reeling of cocoons and silk spinning" by GIZLEGPROM. Reviewed by Z.IA.Katsman). Tekst.prom. 19 no.8:91 Ag '59.
(MIRA 13:1)

1. Nachal'nik laboratorii fabriki "Krasnaya krutil'shchitsa."
(Silk manufacture)

KORITYSSKIY, Ya. I.; KORNEV, I. V.; ODINTSOVA, A. P.; KATSMAN, Z. Ya.

FDKV apparatus for testing bobbins. Tekst.prom. 20 no.9:23-26 S
'60. (MIRA 13:10)

1. Sotrudniki Vsesoyuznogo nauchno-issledovatel'skogo instituta tekstil'nogo i legkogo mashinostroyeniya (for Koritysskiy, Kornev).
2. Rabotniki fabriki "Krasnaya krutil'shchitsa" (for Odintsova, Katsman).

(Bobbins (Textile machinery)--Testing)

ZHURAVLEV, A.M., inzh.; KATSMAN, Z.Ya., inzh.; KNYAZEVA, A.F., inzh.; SYRNIKOVA,
L.N., inzh.; TSIRIL'SON, V.A., inzh.

Mechanization of conveying operations at the "Krasnaia Kravchik
shchitsa" Plant. Mekh. i avtom.proizv. 19 no.1s23-25 Ja '66.

(MIRA 1863)

GERSHENTSVIT, R.S.; Primali uchastiye: GERASIMOVA, studentka; ZELIKMAN, student; KATSNEL'SON, student

Investigation of the stability of fat bases in pharmacy. Trudy Len.khim.-farm.inst. no.13:259-263 '62. (MIRA 15:10)

1. Kafedra analiticheskoy khimii (zav. prof. V.P.II'inskiy) Leningradskogo khimiko-farmatsevticheskogo instituta. (OILS AND FATS)

KATSNEL'SON, A., inzh.

Standard designs of motortruck repair shops for province
automotive transportation trusts. Avt. transp. 36 no. 7:20-22
Jl '58. (MIRA 11:8)
(Motortrucks--Maintenance and repair)

KATSNEL'SON, A.A.; KHMEL'NIK, V.M.

Combination of glaucoma and acute highmoritis. Zdrav. Bel. 7
no. 4:75 Ap '61. (MIRA 14:4)

1. Iz zheleznodorozhnoy bol'nitsy stantsii Luninets Belorusskoy
zheleznoy dorogi (nachal'nik bol'nitsy M.S. Vaysman).
(NOSE, ACCESSORY SINUSES OF--DISEASES)

KATSNEL'SON, A. A.

USSR/Physical Chemistry - Crystals, B-5

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 167

Author: Ivernova, V. I., and Katsnel'son, A. A.

Institution: Academy of Sciences USSR - *Moscow State Univ*

Title: Distortions in the Crystal Lattice of Solid Solutions of Cobalt and Palladium in Iron

Original

Periodical: Dokl. AN SSSR, 1954, Vol 99, No 3, 391-394

Abstract: The distortions in the crystal lattices of Fe-Pd (4 at percent Pd) and Fe-Co (5, 10, 20, 30, 35, and 50 at percent Co) alloys have been studied. The existence of distortions and their nature were investigated by the weak ring of the atomic scattering function (f-curve) of the alloys indicated by comparing it with the values for the pure metals at various temperatures. The f-curve was calculated from X-ray photographs obtained by the standard powder method with Fe-K α and Co-K α radiation. An increase was detected in the distortion in Fe-Co alloys when the Co concentration was increased up to 20%, after

Card 1/2

USSR/Physics - Metals, Radiography

FD-2835

Card 1/1 Pub. 153-18/30

Author : Iveronova, V. I. and Katselson, A. A.

Title : Problem of Mosaic of Crystals in Polycrystalline Metals

Periodical : Zhur. Tekh. Fiz, 25, 696-699, 1955

Abstract : Starting with a certain annealing temperature of plasticity deformed polycrystalline solid solutions, an intense growing of mosaic blocks occurs, leading to weakening of intensity of first lines of the radiogram. A method facilitating the separation of the extinction effect on variation of the ratio of line intensities allows determining the distortion of the crystalline lattice. Six references, 3 foreign.

Institution :

Submitted : September 8, 1955

Katsnelson, A.A

70-3-15/20

AUTHOR: Iveronova, V.I., Zvyagin, A.P. and Katsnelson, A.A.

TITLE: The distortion of the crystal lattice in solid solutions.
(Iskazheniya kristallicheskoy reshetki v tverdykh rastvorakh)

PERIODICAL: "Kristallografiya" (Crystallography), 1957,
Vol.2, No.3, pp. 414 - 418 (U.S.S.R.)

ABSTRACT: The values of the mean square static displacement of atoms were calculated by means of the elastic model of solid solution. A comparison of the results of calculations with the experimentally measured values of U_{st}^2 are given. The values of U_{st} determined experimentally agree in order of magnitude with the calculated values; however, the theoretically required proportionality in the difference of atomic radii is not observed. An analysis of the probable causes of this divergence is given. The most essential must be the comparison of the values of the mean square displacements with the short-range order, determined according to the intensity of the background of the X-ray pattern.

Card 1/2 The dependence of the value of the mean square static displacements was studied in Cu-Sn, Fe-Co, Ni-Cr, Ni-Ti and Fe-C alloys. For low concentrations all the curves show a

Katsnel'son, A.A.

AUTHOR: Katsnel'son, A.A.

70-5-26/31

TITLE: Monochromatization of the Reflected Beam of X-rays
(Monokhromatizatsiya otrazhennogo puchka rentgenovskikh
luchey)

PERIODICAL: Kristallografiya, 1957, Vol.2, No.5, pp. 700-702 (USSR)

ABSTRACT: Because of the excitation of fluorescent radiation, it is normally impossible to obtain satisfactory measurements from Fe-containing specimens in the YPC-50-V diffractometer when Cu radiation is employed with a crystal monochromator between the anode and the specimen. The Geiger counter arm of the diffractometer was modified by the insertion between the counter and the specimen of a pentaerithritol crystal with the appropriate slit assemblies so that monochromatization took place after the X-rays had been scattered by the specimen. In this way, all fluorescence radiation excited by the incident rays, which was not of the wavelength for which the monochromator was set could be excluded. Sample traces are given showing the improved line to background ratios which result when using this arrangement for an Fe specimen and incident radiation from a Cu anode. The integrated intensity of the 211 line of Fe rose from 400 to 600 Card1/2mpulses and the nearby background fell from 6 000 to 800 impulses.

Monochromatisation of the Reflected Beam of X-rays. 70-5-26/31

The overall tube to counter distance is reduced by about 15% as compared with the corresponding distance in the commercial model.

There are 2 figures and 3 references, 1 of which is Slavic.

ASSOCIATION: Moscow State University im. M. V. Lomonosov (Moskovskiy Gosudarstvennyy Universitet im. M. V. Lomonosova).

SUBMITTED: January 13, 1957.

AVAILABLE: Library of Congress.
card 2/2

KATSNEL'SON A.A.

AUTHORS: Zhuravlev, N.N. and Katsel'son, A.A. SOV/70-3-5-21/24

TITLE: An X-ray Diffraction (Powder) Camera for Studying Crystals in the Temperature Interval - 175° to +300° C (Rentgenovskaya kamera dlya issledovaniya kristallov v intervale temperatur - 175° - + 300° C)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 5, pp 632-634 (USSR)

ABSTRACT: An X-ray powder camera of simplified but conventional design is described. A detachable side plate can carry either a tube for blowing cold air evaporated from liquid air in a dewar flask by a submerged heater or a heating coil embedded in a ceramic tube. In each case, the temperature is measured to $\pm 10^\circ\text{C}$ by a thermocouple mounted as close to the specimen as possible and a radiation screen protects the film. There is no provision for controlling the atmosphere surrounding the specimen, nor apparently, for adjusting the position of the specimen. As a check, the temperature factor for metallic nickel was measured at 215°, 20° and -175° C. $R(215, -175)$, $B(20, -175)$ and $B(215, 20)$ had the

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An X-ray Diffraction (Powder) Camera^{SOV/70-3-5-21/24} for Studying Crystals in the
Temperature Interval -175° to $+300^{\circ}$ C

experimental values of 0.42, 0.20 and 0.22, as compared
with the corresponding theoretical values of 0.43, 0.17
and 0.26.

There are 3 figures, 1 table and 3 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni
M.V. Lomonosova
(Moscow State University imeni M.V. Lomonosov)

SUBMITTED: December 9, 1957

Card 2/2

AUTHORS: Iveronova, V. I. and Katsnel'son, A. A. SOV/70-4-1-4/26

TITLE: Short-range Order and Characteristic Temperature of the Alloy Ni₃Pt (Blizhniy poryadok i kharakteristicheskaya temperatura splava Ni₃Pt)

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 1, pp 25-29 (USSR)

ABSTRACT: Parallel measurements of short-range order and characteristic temperature of the alloy Ni₃Pt have been made. It has been established that annealing for four hours at 700°C after plastic deformation leads to an increase in characteristic temperature and short-range order. It is proposed that changes in the characteristic temperature should not be connected only with changes in short-range order. A hypothesis on the influence of "the Cotterell atmosphere" in changing the characteristic temperature in certain alloys is enunciated. The polycrystalline Ni₃Pt specimens were prepared by melting in an h.f. furnace under argon. They were homogenised for 50 hours at 900°C. The concentration of 25.5 at.% Pt was found from the lattice dimensions. Plastic deformation was produced by coarse polishing

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SOV/70-4-1-4/26

Short-range Order and Characteristic Temperature of the Alloy
Ni₅Pt

and was followed by 1 and 20 hours at 700°C in a vacuum furnace. The diffuse scattering was measured with a URS-50I diffractometer with FeK_α radiation monochromatised in the reflected beam. The diffuse scattering is due to (a) scattering connected with correlation in the positions of atoms in the alloy (short-range order, segregation, etc.), (b) scattering due to atomic displacements because of differences in the atomic radii of the components, and (c) scattering from the overlapping of the tails of the lines due to lattice distortion on plastic deformation. These were separated because of their different angular dependences. Characteristic temperature was measured from powder photographs (Zr-filtered Mo radiation) taken at +20 to -160°C. For various treatments the results were:

	Plastically deformed	$\alpha_1 = -0.06 \pm 0.02$	$n_1^{PtNi} = 9.5$	$\theta = 315^\circ \pm 15^\circ$
	Annealed 700° 1 hour	-0.19 ± 0.01	10.7	$450^\circ \pm 50^\circ$
	" 700° 20 hours	-0.18 ± 0.01	10.7	$360^\circ \pm 20^\circ$
Card 2/3	Fully ordered	-0.33	12.0	-
	Fully disordered	-	9.0	-

SOV/70-4-1-4/26

Short-range Order and Characteristic Temperature of the Alloy
Ni₃Pt

Here α_1 is the short-range order parameters for the first sphere, n_1^{PtNi} is number of Ni atoms in the first sphere round a Pt atom. In the plastically deformed state Θ agrees within the experimental limits with

$$\left[\frac{3}{4} m_{\text{Ni}} + \frac{1}{4} m_{\text{Pt}} \right] \Theta^2 = \frac{3}{4} m_{\text{Ni}} \Theta_{\text{Ni}}^2 + \frac{1}{4} m_{\text{Pt}} \Theta_{\text{Pt}}^2,$$

where m_{Ni} and m_{Pt} are the atomic concentrations.

There are 1 figure, 1 table and 21 references, 13 of which are Soviet, 4 English and 4 international.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni
M. V. Lomonosova (Moscow State University imeni
M. V. Lomonosov)

SUBMITTED: July 10, 1958

Card3/3

AUTHOR: Katsnel'son, A.A. S/055/59/000/04/014/026
B014/B005

TITLE: Investigation of the Temperature Dependence of the Short-range Order¹⁸
in the Alloy Ni₃Pt¹

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki,
astronomii, fiziki, khimii, 1959, Nr 4, pp 131-140 (USSR)

ABSTRACT: The investigations described here were carried out by measuring the
diffuse scattering of X-rays on polycrystals. Quantitative
characteristics of the short-range order were obtained. Describing
the method, the author briefly explains the monochromatization of
X-rays carried out by a pentaerythrite crystal. Details of the
X-ray tube (33 kv, 9 ma) and the MST-17 counter are given. The method
was checked with pure Ni. The diffuse scattering is composed of a
Compton background and a temperature background; formulas are given
for both. The diagram in figure 1 shows the measurement results of
diffuse scattering obtained for pure deformed and annealed samples.
The reduction of diffuse scattering on annealing after plastic
deformation determined does not agree with the results found by
Mitchell (Ref 7). It is stated that the experimental values agree
with those found by formulas (1) and (2) if the reflected beam had
been monochromatized. The experimental values exceeded the theoretical

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Investigation of the Temperature Dependence of the
Short-range Order in the Alloy Ni₃Pt

S/055/59/000/04/014/026
B014/B005

ones if the primary beam had been monochromatized. The amount of this difference did not depend on the reflection angle. On the basis of these investigations, a method is suggested for determining the characteristic temperature by measuring the diffuse scattering. This determination is carried out for Ni according to the diagram in figure 3. Estimates of the root mean square deviation in plastically deformed Ni gave results that agreed with those found by other authors. Further it is shown that diffuse scattering in solid solutions can be represented as the sum of four terms. The first two are the temperature and the Compton scattering, further there is a term related with the short-range order, and a term related with the lattice distortions. As the first two terms can be assumed to be equal to those of pure metal, the experimental values easily define the portion referring to the last two terms only. Calculation of the parameters of the short-range order from the measurement results is carried out by the method of least squares of error, and explained. The above-described method may be used to determine the temperature dependence of the parameters of the short-range order. It was applied to the alloy Ni₃Pt, and it was shown that the parameter α_1 of the short-range order slowly decreases with increasing temperature. Finally, the author thanks V.I. Iveronova for her interest in the work and for the dis-

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Investigation of the Temperature Dependence of the
Short-range Order in the Alloy Ni₃Pt

S/055/59/000/04/014/026
B014/B005

cussions. There are 6 figures, 1 table, and 16 references, 10 of
which are Soviet.

ASSOCIATION: Kafedra obshchey fiziki (Chair of General Physics)

SUBMITTED: April 8, 1959

Card 3/3

KATSNEL'SON, A. A., Cand Phys-Math Sci -- (diss) "X-ray investigation of parameters of the short-range order and the characteristic temperature of Ni-Pt alloys." Moscow, 1960. 11 pp; (Moscow State Univ im M. V. Lomonosov, Physics Faculty); 150 copies; price not given; (KL, 17-60, 139)

KATSNELSON, A. A., IVERONOVA, V. I.

"Short Order and X-ray Debye Temperature of Ni₃Pt."

report presented at the Fifth International Congress of the International Union of Crystallography, Cambridge, UK, 15-24 Aug 1960.

24.7000

78101
SOV/70-5-1-10/30

AUTHORS: Iveronova, V. I., Katsnel'son, A. A.

TITLE: Short-Range Order and Characteristic Temperature of
Ni₃Pt Determined According to the X-Ray Data

PERIODICAL: Kristallografiya, 1960, Vol 5, Nr 1, pp 71-78 (USSR)

ABSTRACT: Earlier studies by the authors and others have disclosed that short-range order parameter a_1 , which characterizes the varying number of B atoms on the first sphere around an A atom, is not proportional to the characteristic temperature $\Theta_{X\text{-ray}}$ determined according to the X-ray data. $\Theta_{X\text{-ray}}$ proved to increase during the initial brief period of annealing of Ni-Pt alloys and then to drop, while a_1 having reached certain level remained constant in the course of further annealing even for 20 hr. The authors have now extended the study on the distribution of B atoms to the second sphere around A atoms and sought to

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Short-Range Order and Characteristic
Temperature of Ni₃Pt Determined

78101
SOV/70-5-1-10/30

According to the X-Ray Data

determine a_1 and a_2 as functions of the mean square of dynamic atomic displacements at varying temperatures and durations of annealing. Ni₃Pt was obtained in a high-frequency furnace, homogenized at 900°C for 50 hr, checked for composition measuring identity period, cut into plates of 16 x 20 x 2 mm, deformed plastically by rough grinding, annealed at 700°C to 1,050°C for 20 hr under vacuum better than 0.001 mm, and quenched in water to fix the achieved state. The X-ray diffraction photographs were taken at 20 and -160°C with Mo radiation; the computations were based on diffuse scattering data (Fig. 1) at glancing angles (θ) from 7 to 42°, within which two maxima corresponded to a_1 and a_2 . The increase of annealing temperature from 700 to 1,050°C proved slowly to

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Short-Range Order and Characteristic
Temperature of Ni₃Pt Determined
According to the X-Ray Data

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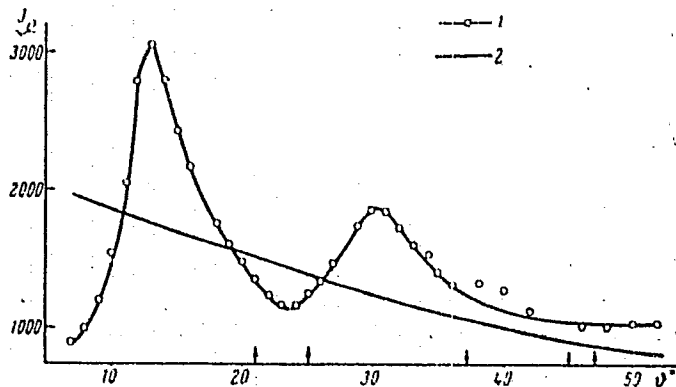


Fig. 1. Diffuse scattering by alloy Ni₃Pt annealed at 700° C for 20 hr: (1) experiment; (2) background scattering by disordered alloy.

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Short-Range Order and Characteristic
Temperature of Ni₃Pt Determined

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According to the X-Ray Data

reduce a_1 and increase a_2 . The improved order in the structure after annealing is more precisely defined by the sum $\Delta n_1^{PtNi} + \Delta n_2^{PtNi}$, the terms of which, respectively, denote the numbers of Ni atoms on the first and second spheres around Pt in excess of the respective numbers before annealing (disordered state). The first term reaches a maximum within an hour of annealing at 700° C and then remains constant, while the second term (a negative value) continues to rise even after 20 hr. Annealing at 1,000° C establishes the second term also at a maximum, pointing to the restoration of order and equilibrium in the deformed alloy within both spheres. The higher the temperature of annealing, the sum approaches zero in both cases. At lower temperatures the sum shows a sharp maximum at brief annealing.

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According to the X-Ray Data

This obviously is an effect of bond energy W_2^{NiPt} which forces Ni atoms to move from the third sphere and to concentrate on the second, while greater atomic mobility at a higher temperature provides for rapid motion of Ni atoms into the first sphere at the expense of the second, where consequently no Ni concentration takes place. The first term becomes sooner stabilized at a constant value since the constant in this case means the establishment of equilibrium between only two spheres, while the second term involves the equilibrium between first, second, and third spheres. The table below demonstrates that characteristic temperature θ_{X-ray} changes proportionally to the above sum. The sixth column shows mean squares of dynamic atomic displacements whose increase with the temperature and duration of annealing reduces the sum. Thus, a_1 cannot define characteristic temperature alone

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Short-Range Order and Characteristic
Temperature of Ni₃Pt Determined

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According to the X-Ray Data

since both a_1 and a_2 affect it, while the sum

$\Delta_{n_1} \text{PtNi} + \Delta_{n_2} \text{PtNi}$ defines it accurately. There

are 4 figures; 1 table; and 12 references, 10 Soviet,
1 Danish, 1 U.S. The U.S. is: B. E. Warren,
B. L. Aberbach, B. W. Roberts, J. Appl. Phys, 22,
1493-1496 (1951).

ASSOCIATION: Moscow State University imeni M. V. Lomonosov
(Moskovskiy gosudarstvennyy universitet imeni M. V.
Lomonosova)

SUBMITTED: July 2, 1959

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Short-Range Order and Characteristic
 Temperature of Ni₃Pt Determined
 According to the X-Ray Data

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Table

T, °C	t, hr.	Δn_1^{PtNi}	Δn_2^{PtNi}	$\Delta n_1^{PtNi} + \Delta n_2^{PtNi}$	$u^2 (\text{Å}^2)$	θ, K
700	20	1,4	-1,1	0,3	0,011	330
800	20	1,4	-1,1	0,3	—	—
900	20	1,3 _s	-1,1 _s	0,2	—	—
1050	20	1,1 _s	-1,3	-0,1 _s	0,016	270
<i>deformed</i>		0,0	-0,7	-0,1	0,014	280
700	1	1,4	-0,9	0,5	0,006	410
700	20	1,4	-1,1	0,3	0,011	330
700	50	1,4	-1,1	0,3	—	—

Card 7/7

S/070/60/005/005/024/026/XX
E132/E160

AUTHORS: Iveronova, V.I., and Katsnel'son, A.A.

TITLE: The Methodology of Measuring the Intensity of the Diffuse Scattering from Polycrystalline Materials

PERIODICAL: Kristallografiya, 1960, Vol.5, No.5, pp.795-797

TEXT: Measurement of the diffuse scattering from powders is more difficult than from single crystals. A method must have three elements: a means for excluding the parasitic components of the background (white radiation, fluorescence, $K\beta$ lines, harmonics of the lines, scattering by materials other than the specimen); a means of measuring the background with at worst 2-3% error; the possibility of putting background intensity measurements on an absolute (electron units) scale. A technique has been worked out for measuring diffuse scattering using a γ PC -50W (URS-50I) diffractometer without employing a vacuum camera. Radiation incident on the specimen is monochromatized by reflexion (002 plane) from a crystal of pentaerithritol where harmonics (004, 006 intensities) are very low. A counter with some discrimination against unwanted wavelengths is used. Specimens were pressed into a plate 18 x 14 x 2 mm without binder. Air scatter was reduced with a special collimating system

Card 1/2

S/070/60/005/005/024/026/XX
E132/E160

The Methodology of Measuring the Intensity of the Diffuse Scattering from Polycrystalline Materials

and the residual scatter could be estimated from tests without a specimen. Estimates of the efficiency of the general arrangement were made by working with and without collimator and with and without monochromator and measuring the ratio of line intensity to background intensity. A specimen of Ni₃Pt was studied with Fe radiation after checking the measured diffuse scattering from Ni with the theoretical values. The agreement is very satisfactory and confirms the accuracy and utility of the apparatus. There are 3 figures and 7 references: 4 Soviet and 3 English.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im.
M.V. Lomonosova
(Moscow State University imeni M.V. Lomonosov)

SUBMITTED: March 13, 1960

Card 2/2

BODNEVA, Ye.I.; KATSNEL'SON, A.A.

Width of a microphotometer slit during the photometric recording
of the light intensity of roentgenograms. Zav.lab. 26 no.8:1014-
1015 '60. (MIRA 13:10)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Photometry) (X-rays)

S/126/61/011/001/004/019
E032/E314

AUTHORS: Iveronova, V.I. and Katsel'son, A.A.
TITLE: The Dimensional Effect in X-ray Diffraction by Polycrystalline Materials

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol. 11, No. 1, pp. 40 - 45

TEXT: Diffuse scattering by polycrystalline alloys, whose atoms are displaced from their ideal positions in the lattice, has been treated by Warren et al (Ref. 1) and Gouska and Averbach (Ref. 2). However, these authors assumed that the magnitude of the displacements depends only on the type of the atoms under consideration and not on the type of their nearest neighbours. Krivoglaz (Ref. 3) has also treated this problem without the introduction of the above restrictions. However, the latter author was concerned only with the diffuse background in the neighbourhood of reflections. The present authors extend the theory of diffuse scattering by polycrystalline materials to any angles of reflection. The discussion is based on the formula:

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E032/E314

The Dimensional Effect in X-ray Diffraction by Polycrystalline
Materials

$$I_M = N c_A c_B \left[\sum_{l=0}^{\infty} \sum_{j=0}^{\infty} \alpha_{lj} \cos k R_{lj} \right] e^{-2\sigma_{cr} \left(\frac{\sin \theta}{\lambda} \right)^2} \left[f_B - f_A + \frac{a_x \sqrt{k} e^{-\sigma}}{|g|} \right]^2 \quad (1)$$

which was derived by Krivoglaz in Ref. 4 for the case of diffuse scattering by a monocrystal and is free from the limitations introduced in Refs. 1 and 2. This formula consists of two parts, the first of which is due to the difference in the scattering power of the components of the alloy and their atomic radii and the second part represents scattering due to the displacement of the atoms from their positions in a perfect lattice, i.e. the so-called

Card 2/4

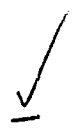
S/126/61/011/001/004/019
E032/E314

The Dimensional Effect in X-ray Diffraction by Polycrystalline Materials

dimensional effect. Expressions are derived for the intensities of diffusely scattered X-rays associated with the above two effects. The intensity associated with the first of these effects is found to be a quasiperiodic function of the angle of reflection and is in qualitative agreement with the results of Warren et al (Ref. 1). In the case of the second effect the intensity increases with angle. It is found that the positions of the maxima and minima in these distributions depend on the type of crystal lattice, the scattering power and radii of the atoms of the components of the alloy as well as on the magnitude of the short-range order parameters. There are 3 figures and 7 references: 3 Soviet and 3 non-Soviet. ✓

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S/126/61/011/001/004/019
E032/E314



The Dimensional Effect

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im.
M.V. Lomonosova (Moscow State University im.
M.V. Lomonosov)

SUBMITTED: June 24, 1960

Card 4/4

IVERONOVA, V.I., KATSNEL'SON, A.A.

Short-range order and physical properties of single-phase solid solutions (survey). Zav.lab. 27 no.11:1354-1361 '61.

(MIRA 14:10)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Solutions, Solid)

IVERONOVA, V.I.; KATSNEL'SON, A.A.

Determination of the characteristic temperature based on the
diffuse scattering of polycrystals. Kristallografiia 7 no.4:
616-618 J1-Ag '62. (MIRA 15:11)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Crystals--Thermal properties)

IVERONOVA, V.I.; KATSNEL'SON, A.A.

Effect of preliminary treatment on the kinetics of short-range
ordering. Issl.po zharopr.splav. 8:9-13 '62. (MIRA 16:6)
(Nickel-platinum alloys--Metallography)

IVERONOVA, V.I.; KATSNEL'SON, A.A.

Effect of preliminary treatment on the short-range order in the Ni₃Pt alloy. Ukr. fiz. zhur. 8 no.2:251-256 F '63. (MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Nickel-platinum alloys)

IVERONOVA, V.I.; KATSNEL'SON, A.A.

Effect of short range order on the hardness and characteristic temperature of Ni₃Pt. Fiz. met. i metalloved. 13 no.2:317-319 F '62. (MIRA 15:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Nickel-platinum alloys--Thermal properties)

KATSNEL'SON, A.A.

Effect of the relief and adjustment of specimen surfaces on
the intensity of diffusion scattering. Fiz. met. i metalloved.
13 no.5:681-685 My '62. (MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Powder metal processes)
(X rays—Scattering)

ACCESSION NR: AP3000785

S/0070/63/008/003/01-3/0165

AUTHOR: Iveronova, V. I.; Katsnel'son, A. A.

57
37

TITLE: Diffuse and double Bragg scattering of polycrystalline copper

SOURCE: Kristallografiya, v. 8, no. 3, 1963, 463-465

TOPIC TAGS: scattering, Compton effect, thermal scattering, Cu, secondary extinction

ABSTRACT: Electrolytic copper²⁷ in cakes of powder pressed at room temperature (at pressure of 1-2 tons/Sq cm, in cakes pressed at 800C and pressure of 1-2 tons/Sq cm) and in sintered samples was used. The results show that scattering from pressed samples, after long heating at 800C, was due to thermal scattering and diffuse scattering. Sintered samples and pressed samples annealed at 400C, substantially showed double Bragg scattering. The authors discovered a relationship between diffuse scattering and secondary extinction. The diffuse scattering was missing in the pressed cakes because of local orientation of units in the grains, each grain becoming essentially a single crystal. The total number of units in the zone of scattering thus becomes small and conditions for diffuse scattering disappear. In the sintered samples this situation does not arise, and double scattering is present. It is further concluded that diffuse scattering by
Card 1/2

L 1228y-03

ACCESSION NR: AP3000785

dense polycrystals is appreciably disturbed by the structure. Orig. art. has:
3 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University)

SUBMITTED: 05Jul62

DATE ACQ: 21Jun63

ENCL: 00

SUB CODE: 00

NO REF SOV: 005

OTHER: 108

Card 2/2

L 13586-63

EWT(1)/EWP(q)/EWT(m)/BDS/EED-2 AFYTC/ASD JD

ACCESSION NR: AP3004097

8/0070/63/008/004/0600/0603

AUTHOR: Katsnel'son, A. A.; Yatskul'yak, K.TITLE: X-ray investigation of Al²⁷, Co²⁷, Cr²⁷, and Sc²⁷ solid solutions in lanthanum and praseodymium orthoferrites

SOURCE: Kristallografiya, v. 8, no. 4, 1963, 600-603

TOPIC TAGS: lanthanum orthoferrite, praseodymium orthoferrite, aluminum ion, chromium ion, cobalt ion, scandium ion, ferric ion, bismuth ion, solid solution, lattice spacing, lattice parameter, x-ray diffraction line, line broadening, covalent bond, magnetic anisotropy, coercive force, magnetic moment, lanthanum ferrate(III), praseodymium ferrate(III)

ABSTRACT: The partial substitution of Al^{3+} , Cr^{3+} , Co^{3+} , or Sc^{3+} for Fe^{3+} in lanthanum ($LaFeO_3$) and praseodymium ($PrFeO_3$) orthoferrites [ferrates(III)], and the substitution of Bi ions for Pr ions simultaneously with the substitution of Al^{3+} for Fe^{3+} in $PrFeO_3$ have been studied by x-ray analysis to correlate the magnetic properties previously observed with structural changes in $LaFeO_3$ and $PrFeO_3$. Experimental data on lattice spacing (d), width, and intensity of x-ray diffraction lines were obtained with an RKU-114 camera and $CrK\alpha$ radiation.

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L 13586-ε3

ACCESSION NR: AP3004097

recorded on film in the URS-55 x-ray recorder. It was established that all samples acquire a single structure on crystallization. The a, b, and c lattice parameters of the magnetic lattice were found to decrease when Al^{3+} ions were substituted for Fe^{3+} and to increase when Co^{3+} was substituted. The changes were greatest along the b axis. Thus, the lattice structure is nearly cubic when Al^{3+} ions were substituted for 5-10% Fe^{3+} or Co^{3+} ions for 10% Fe^{3+} . On a further increase in Al^{3+} content, the symmetry moved away from the cubic. When Al^{3+} ions were substituted for Fe^{3+} , the intensity of lines with an even sum of indices decreased and that of lines with an odd sum of indices remained unchanged; such phenomena were not observed when Cr^{3+} or Co^{3+} ions were substituted for Fe^{3+} . An orderly arrangement of Al^{3+} ions in the orthorhombic lattice and a difference between the lattice parameters of Fe^{3+} and those of the substituting ions seem to be the cause of the intensity decrease. Line broadening was observed when Al^{3+} , Cr^{3+} , or Co^{3+} ions were substituted for the Fe^{3+} ions. X-ray analysis of the line profile showed that the line broadening by the sample to be the cause of the line broadening. A plot of unit cell volume versus substituting-ion radius indicated a strengthening of the covalent bond in an orthorhombic lattice in which Fe^{3+} is partially substituted. Fluctuations in magnetic anisotropy and in coercive force, observed during the

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L 13586-63

ACCESSION NR: AP3004097

5

with the lattice deformations in the partially substituted LaFeO_3 and PrFeO_3 , are explained in terms of variations in the magnetic moments of the respective magnetic sublattices. "Sincere appreciation is expressed to V. I. Iveronova for proposing an interesting subject of investigation and for valuable discussion, and to K. F. Belov, M. A. Zaytseva, and A. M. Kalomiseva for making available the data of their current magnetic investigations available and for their discussion of our results." Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 05Mar63

DATE ACQ: 15Aug63

ENCL: 00

SUB CODE: PH, MA

NO REF SOV: 004

OTHER: 004

Card 3/3

KATSNEL'SON, A.A.

Effect of plastic deformation on the short-range order in Ni-
Pt alloys. Fiz. met. i metalloved. 16 no.5:787-792 N '63.
(MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.

S/0181/64/006/001/0101/0107

ACCESSION NR: AP4011744

AUTHORS: Belov, K. P.; Iveronova, V. I.; Zaytseva, M. A.; Kadomtseva, A. M.;
Katsnel'son, A. A.; Yatskul'yak, K.

TITLE: Magnetic and structural properties of lanthanum orthoferrite during partial
replacement of Fe 3+ ions by other trivalent ions

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 101-107

TOPIC TAGS: magnetic property, structural property, orthoferrite, lanthanum,
lanthanum orthoferrite, Fe 3+, Al 3+, Sc 3+, Co 3+, thermoremanent magnetization,
magnetization intensity, hysteresis loop, crystal lattice

ABSTRACT: In these studies the Fe⁺³ ion was replaced, in part, by Al⁺³, Sc⁺³, Cr⁺³,
and Co⁺³. Thermoremanent magnetization of LaFeO₃ cannot be reduced to zero even in
a field of 20 000 oersteds, but if Al⁺³ ions replace some of the Fe⁺³ ions (LaFe_{0.9}
Al_{0.105}), introduced by orthorhombic distortion of the crystal lattice, thermo-
remanent magnetization almost disappears, and the hysteresis loops become symmetri-
cal. These changes may be explained by the finely dispersed character of the
samples. The change in magnetic properties on substitution of the indicated ions

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ACCESSION NR: AP4011744

is associated with change in degree of dispersion and with the orthorhombic distortion of the lattice. Along with these changes, an increase was observed in magnetization intensity. This is explained by the ordered distribution of Al^{+3} ions in the crystal lattice. Orig. art. has: 3 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 10Jul63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: FH

NO REF SOV: 002

OTHER: 002

Card 2/2

IVEFONOVA, V.I.; KATSNEL'SON, A.A.

Existence of a short-range order in Au--Pd alloys. Kristallografiia 9 no.4:557-558 '64. (MIRA 17:11)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

IVERONOVA, V.I.; KATSNEL'SON, A.A.

Size effect in the Fe-W alloy. Fiz. met. i metalloved, 17
no.6:809-812 Je '64. (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721130008-9

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721130008-9"

modifications which have a lower effect on the

KATSNEL'SON, A.A.

Concentration dependence of short-range order in Ni - Pt alloys.
Kristallografiia 10 no.3:330-334 My-Je '65.

(MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet.

IVERGNOVA, V.I.; KATSNEL'SON, A.A.

Effect of plastic deformation on the diffusive scattering of X rays
by copper polycrystals. Fiz. met. i metalloved, 19 no.1:105-110 Ja
'65. (MIRA 18:4)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

1ST AND 2ND SEVERE PROCESSES AND PROPERTIES INDEX

CA 11E

Vitamin B₁₂ deficiency and eye ailments. A. B. Kats...
Gul'son. *Vestnik Oftalmol.* 25, No. 4, 18-23(1946).
Literature on B₁₂ deficiency is reviewed in connection with
visual abnormalities. It is pointed out, however, that
vascularization of the cornea does not necessarily mean
B₁₂ deficiency, but can be caused by many other factors
as yet imperfectly known. G. M. Kosolapoff

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

GROUPS	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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KATSNEL'SON, A. B. PROF

FA47T79

USSR/Medicine - Eyes

Jan/Feb 1948

Medicine - Penicillin

"Bacteriostatic Effect of Penicillin in the Moisture of the Camera and in the Vitreous Body with Various Methods of Injecting It into the Eyeball," Prof A. B. Katsnel'son; Dr T. M. Chabrova, Chelyabinsk Med Inst, 4 1/2 pp

"Vest Oftalmol" Vol XXVII, No 1

Describes various methods of introducing penicillin into the eye by local injection. Discusses effect of different concentrations of penicillin on the eye tissues. Includes case histories of some of patients who received penicillin treatment for eye wounds.

47T79

KATSNEL'SON, A. B.

Local glucose therapy of certain diseases of the eyes. Vest.
oft. 29:6, Nov.-Dec. 50. p. 37

L. Cholyabinsk.

CLML 20, 3, March 1951

KATSNEL'SON, A. B.;ZHAK, Ye. M.

Surgical treatment of xerophthalmia by means of transplan-
tation of the duct of Steno into the conjunctival sac.
Vest. oft., Moskva 30 no. 6:3-10 Nov-Dec 1951. (CJML 21:3)

1. Prof. Katsnel'son; Docent Zhak. 2. Of the Department of
Eye Diseases (Head -- Prof. A. B. Katsnel'son) of the Hospital
Surgical Clinic of Chelyabinsk Medical Institute (Director of
Institute and Head of Surgical Clinic -- Prof. G. D. Obratsov)
and of the Oblast Clinical Hospital (Head Physician -- S. Z.
Glukhovskiy).

EXCERPTA MEDICA Sec.12 Vol.12/5 **Ophthalmology** May 58

KATSNELSON, A.B.

847. HARADA'S DISEASE - UVEOMENINGEAL SYNDROME (Russian text) -
Katsnelson A. B. - ZH. OFTALM. 1956, 4 (229-234)

The author observed two cases of Harada's disease with characteristic uveomeningeal signs: acute onset, meningo-encephalitis, pleocytosis, involvement of the auditory nerves, bilateral serous uveitis. Each case had its own distinctive features. One exhibited the typical ophthalmic manifestations of the disease: bilateral detachment of the retina, with subsequent adherence, and characteristic degenerative foci. In this case diencephalic involvement, not previously described, was also present, manifesting itself by insomnia, amenorrhoea, polyuria and hypertension. In the other case severe retinal oedema was noted. The aetiology of this disease has not been established, but it would appear to be caused by a filtrable virus.

(S)

KATSUNELSON, A. B.

KATSEEL'SON, A.B.

[Anomalies of growth and diseases of the eye in young children]
Anomalii razvitiia i zabolevania glaz v rannem detskom vozraste.
Leningrad, Medgiz, 1957. 181 p. (MIRA 11:1)
(EYE--DISEASES AND DEFECTS)

KATSNEL'SON, A.B., prof. (Chelyabinsk)

Method of resetting a subluxated transparent lens. Oft.zhur.
14 no.4:200-202 '59. (MIRA 12:10)
(CRYSTALLINE LENS--SURGERY)

KATSNEL'SON, A.B., prof.

Current status of the problem of the etiology, pathogenesis, clinical aspects and treatment of herpetic keratitis. Vest. oft. 72 no.3: 27-33 My-Je '59. (MIRA 12:7)

1. Zaveduyushchiy klinikoy glaznykh bolezney Chelyabinskogo meditsinskogo instituta.

(KERATITIS

herpetic keratitis, review (Rus))

(HERPES

same)

KATSNEL'SON, A.B., prof.; KAPLUNOVICH, P.S., assistant

Treatment of hemophthalmia by the injection of cerebrospinal fluid
into the vitreous body. Vest.oft. 72 no.5:19-21 S-0 '59.

(MIRA 13:3)

1. Kafedra glaznykh bolezney (zaveduyushchiy - prof. A.B. Katsnel'son)
Chelyabinskogo meditsinskogo instituta.

(EYE, dis.)
(VITREOUS BODY)
(CEREBROSPINAL FLUID)

KATSEKEL'SON, Aleksandr Borisovich; TARASOV, G.A., red.; SHEVCHENKO,
F.Ya., tekhn.red.

[Vitamins in the physiology of and vitamin deficiency in the
pathology of the eye] Vitaminy v fiziologii i vitaminnaia
nedostatochnost' v patologii organa zreniia. Leningrad, Gos.
izd-vo med.lit-ry, Leningr.otd-nis, 1960. 149 p.

(MIRA 13:5)

(VITAMINS)

(EYE--DISEASES AND DEFECTS)

KATSNEL'SON, A.B.; KAPLUNOVICH, P.S.

Instruments for facilitating the transplantation of Stensen's duct
into the conjunctival sack. Med. prom. 14 no. 10:45-47 0 '60.
(MIRA 13:10)

1. Chelyabinskiy meditsinskiy institut.
(PAROTID GLANDS—SURGERY)
(EYE, INSTRUMENTS AND APPARATUS FOR)

~~KATSNEL'SON, A.B.,~~ prof.; BLINOVA, L.I., ordinator

Amount of vitamin C in the human cornea under normal conditions and following changes caused by disease. Oft.zhur. 15 no.7:396-400 '60.

(MIRA 13:11)

1. Iz kafedry glaznykh bolezney Chelyabinskogo meditsinskogo instituta i oblastnoy klinicheskoy bol'nitsy.

(ASCORBIC ACID)

(CORNEA--DISEASES)

KATSNEL'SON, A.B., prof.

"Problems in neuroophthalmology", Volumes 5 and 6. Edited by
I.I.Merkulova. Reviewed by A.B.Katsnel'son. Oft. zhur. 16 no.2:
123-127 '61. (MIRA 14:3)
(NEURO-OPHTHALMOLOGY) (MERKULOVA, I.I.)

KATSNEL'SON, A.B., prof.; SAUSHKINA, N.K.

Lamellar keratoplasty with a tattooing of the leukemia under the
transplant. *Ot. zhur.* 16 no.4:242-244 '61. (MIRA 14:7)

1. Iz kafedry glaznykh bolezney Chelyabinskogo meditsinskogo instituta.
(CORNEA--TRANSPLANTATION)

KATSNEL'SON, A.B., prof.

Graft fixation using sutures during transplantation of corneal discs of large size. Oft. zhur. 16 no.5:307-310 '61. (MIRA 14:10)

1. Iz kafedry glaznykh bolezney Chelyabinskogo meditsinskogo instituta.

(CORNEA--TRANSPLANTATION) (SUTURES)

KATSNEL'SON, A.B., prof.

New trends in the study of the pathogenesis and in the pathogenic
therapy of eye burns. Vest.oft. no.4:3-7 '62. (MIRA 15:11)

1. Chelyabinskiy gosudarstvennyy meditsinskiy institut.
(EYE--WOUNDS AND INJURIES) (BURNS AND SCALDS)

KATSNEL'SON, A.B., prof.; VOINOV, I.N.; KAPLINA, K.P. USSR

Studies on the etiology and pathogenesis of herpetic diseases of
the eye. Vest.sft. no.3:61-67 My-Je '62. (MIRA 15:8)

1. Kafedra glaznykh bolezney (zav. - prof. A.B. Katsnel'son) i
kafedra mikrobiologii (zav. - doktor med.nauk L.Ya. Ebert)
Chelyabinskogo meditsinskogo instituta.
(EYE--DISEASES AND DEFECTS) (HERPES)

KATSNEL'SON, A.B., prof.; VOINOV, I.N.

Ocular herpes. Vest. oft. 76 no.5:7-20 S-0 '63.

(MIRA 17:1)

1. Glaznaya klinika Chelyabinskogo meditsinskogo instituta.

DORMIDONTOVA, K.V.; KARANOV, S.K.; KATSNEL'SON, A.B.; KHAYUTIN, S.M.

The 19th International Congress of Ophthalmologists in
Delhi. Vest. oft. 76 no.3:73-79 My-Je '63. (MIRA 17:2)

KUTATLADEE, S.S., kandidat tekhnicheskikh nauk, redaktor; KATS-
HEL'SON, A.D., redaktor; ZABRODINA, A.A., tekhnicheskii redaktor.

[Problems of heat exchange in modifications of the aggregation
state of matter] Voprosy teploobmena pri izmenenii agregatnogo
sostoiانيا veshchestva. Sbornik statei. Moskva, Gos. energ.
izd-vo, 1953. 207 p. (MLRA 7:8)
(Heat)

KHVILIVITSKIY, T.Ya., SLUTSKINA, P.I., AVDASHEVA, L.P., AL'FER, Ye.G.
KATSNEL'SON, A.M., MIKHALENKO, I.N.

Using drugs with opposing action in combined insulin therapy for
schizophrenia [with summary in French]. Zhur.nevr. i psikh. 28
no.9:1096-1105 '58 (MIRA 11:11)

1. Psikhonevrologicheskiy institut imeni B.M. Bekhtereva (dir.
prof. V.N. Myasishchov) i 2-ya Leningradskaya psikhonevrologicheskaya
bol'nitsa (glavnyy vrach T.I. Nikolayeva).

(SCHIZOPHRENIA, ther.

insulin shock, in assoc. with drugs with opposing
action (Rus))

(SHOCK, THERAPY INSULIN, in var. dis.

schizophrenia, in assoc with drugs with opposing
action (Rus))

KATSNEL'SON, A. M., Candidate Tech Sci (diss) -- "A comparative investigation of the operation of a cupola furnace with various methods of high-temperature heating of air". Moscow, 1959. 19 pp (Min Higher Educ USSR, Moscow Automotive Mech Inst), 150 copies (KL, No 24, 1959, 137)

KATSNEL'SON, A.M.

18(5)

AUTHOR: Katsnel'son, A.M., Engineer

SOV/128-59-4-2/27

TITLE: Investigating Certain Methods of Cupola Blast Heating

PERIODICAL: Liteynoye Proizvodstvo, 1959, Nr 4, pp 3-8 (USSR)

ABSTRACT: One of the principal methods of improving the cupola operation is to increase the temperature of the cast iron. To accomplish this, increasing use is made of preheating the cupola blast. Plants were built which worked satisfactorily with a blast heated to 400-500°C. At the outlet the cast iron had a temperature of 1,500°C. This method is very interesting, because it is relatively cheap and increases the efficiency of the cupola. The installations to preheat the blast can be divided into four groups according to their source of heat: 1) Those using the heat of an additional fuel burnt in a special furnaces; 2) those using the heat of the cupola gases; 3) those getting the heat from the different layers within the cupola; 4) those using the heat both of the cupola gases and of an

Card 1/3

SOV/128-59-4-2/27

Investigating Certain Methods of Cupola Blast Heating

additional fuel. The temperature of the blast depends very much on the efficiency and the construction of the preheater. The existing plants mainly use metal recuperators as preheaters. Heaters that use an additional fuel always stand separately and usually are recuperators, although in some cases also generators are found. Heaters which utilize the cupola gases are always installed in the cupola itself, and they are always recuperators. Good results were attained with a recuperator, fitted into the shaft of the cupola, for it saved fuel, and the temperature of the cast iron increased. A number of installations with separate recuperators, using waste furnace gas, managed to heat the blast up to 500°C and the cast iron to 1,500°C. Each method to heat the blast finds its supporters among the molders, but it is certain that both have advantages over cupolas using a cold blast. The best method is the one which heats the metal to 1,500°C with a minimum consumption of fuel. In comparing the results of the different methods, it

Card 2/3

SOV/128-59-4-2/27

Investigating Certain Methods of Cupola Blast Heating

was investigated how the temperature of the cast iron, the temperature of the blast, and the output are related to the coke consumption. With a preheating temperature of 450-500°C it is possible to attain a cast iron temperature of 1,500°C with a coke consumption of only 13%. For all new and already existing plants, it is therefore recommendable to make use of the waste furnace gas with its high temperatures to preheat the blast. It is preferable to provide for separate heaters, so that it is possible to preheat the cupola before operation or in cases when work is interrupted. There are 2 sets of drawings and 9 graphs.

Card 3/3

KATSNEK'SON, A. Sh.

Manometer with a strain gauge. Izv. tekhn. no. 5:18-19 My¹⁹⁶⁴
(MIRA 1787)

L 06396-67 EWT(d)/EWT(1)/EBC(k)-2/ENP(v)/ENP(k)/ENP(h)/ENP(1)

ACC NR: AP6025287

(A)

SOURCE CODE: UR/0119/66/000/007/0021/0023

AUTHOR: Katsnel'son, A. Sh. (Engineer); Mityashin, I. P. (Engineer)

21
B

ORG: none

TITLE: Reference instruments operating on a discrete force-compensation principle

SOURCE: Priborostroyeniye, no. 7, 1966, 21-23

TOPIC TAGS: measuring instrument, digital instrument, reference instrument

ABSTRACT: Developed by the NIITEplopribor Institute, the principle of discrete force compensation consists of the following: the torque produced by a sensor and applied to one arm of a two-arm lever is balanced by several torques applied to the other arm of the lever; the number of latter torques equals to the number of digits in the selected code while individual torques correspond to the code "weight coefficients". Thus, the sensor torque (or force) can be expressed as an output code equivalent. Application of this principle is illustrated by a 13-digit manometer whose block diagram, principal circuit, and time diagram are explained. The manometer range is 0--1 kg/cm²; error, 0.1%; measurement time, 5 sec. Claimed advantages: high speed, convenient digital reading, possibility of using digital printers. The principle is applicable also to pressure-drop gages, thermometers, flowmeters, level gages, etc. Orig. art. has: 4 figures and 1 formula.

SUB CODE: ¹⁴13, 09 / SUBM DATE: none. / ORIG REF: 001

Card 1/1 *hh*

UDC: 681.2.085

KATSNEL'SON, A.Sh.

Improving strain-measuring circuit used in mines. Izm.tekh.
no.3:23 Mr '63. (MIRA 16:4)
(Strain gauges)

KATSNELSON, A.Sh.

Measuring hinged pin. Izv, tekhn. no.6:21 Je '64.

(MIRA 17:12)

including battery-powered types. Pilot production is

KATSHEL'SON, B.A.

Prevention of silicosis in engineering plants. Gig. sanit., Moskva
No.12:30-32 Dec 51. (CIML 21:4)

1. Of the Medico-Sanitary Section of Chelyabinsk Tractor Plant imeni
Stalin.

KAMNEL'SON, B.A.

Machine-Shops Hygienic Aspects

Prevention of silicosis in the machine building industry. Gig. i san., No. 12, 1951

Monthly List of Russian Accessions, Library of Congress, March, 1952 UNCL.

KATSNEL'SON, B.A.

137-58-3-6316D

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 268 (USSR)

AUTHOR: Katsnel'son, B.A.

TITLE: Sanitation Problems Connected With the Charging of Modern Blast Furnaces (Voprosy gigiyeny truda pri zagruzke sovremennykh domennykh pechey)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Medical Sciences, presented to the In-t gigiyeny truda i profzabolevaniy Akad. med. nauk SSSR (Institute for Labor Hygiene and Environmental Diseases, Academy of Medical Sciences, USSR) Moscow, 1957.

ASSOCIATION: In-t gigiyeny truda i profzabolevaniya Akad. med. nauk SSSR (Institute for Labor Hygiene and Environmental Diseases, Academy of Medical Sciences, USSR), Moscow

Card 1/1

SOV/137-57-11-20

Translation from: Referativny zhurnal, Metallurgiya, 1957, Nr 11, p 304 (USSR)

AUTHOR: Katsnel'son, B. A.

TITLE: Experimental Study of the Pathogenic Properties of Certain Dusts Found in Ferrous-metallurgy Plants (Eksperimental'noye izucheniye patogennykh svoystv nekotorykh pyley, vstrechayu-shchikhsya na proizvodstvakh chernoy metallurgii)

PERIODICAL: Gigiyena truda i prof. zabolevaniya, 1957, Nr 2, pp 24-30

ABSTRACT: As a result of the investigation of the effect of sinter (S) and coke dusts (D) on experimental animals the following conclusions were made: 1) S and coke form a D capable of causing true pneumoconiotic modifications in the lungs, which according to the experimental data are considerably more benign than those caused by silica and require a more extensive exposure for their development; 2) carbon D (coke) and SD, when their free SiO₂ content is between 0 and 1% can cause in the lungs fibrotic changes (sometimes pronounced), which are probably caused to a considerable extent by the blocking off of the lymphatic ducts with D; 3) an insignificant percentage of free SiO₂ contained in D is capable of changing the character of th

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Experimental Study of the Pathogenic Properties (cont.)

reaction of the lungs, giving it the characteristics of pneumoconiosis with sidero-silicosis; 4) in the evaluation of the potential danger for workers exposed to D it is necessary to take into account the SiO_2 content in S, together with other conditions (concentration of D, duration of exposure, etc.).

Ye. L.

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SOV/137-58-8-16467

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 34 (USSR)

AUTHOR: Katsnel'son, B.A.

TITLE: Some Aspects of Hygiene During Charging of Modern Blast Furnaces (Nekotoryye voprosy gigiyeny truda pri zagruzke sovremennykh domennykh pechey)

PERIODICAL: V sb.: Domennoye proiz-vo Moscow, Metallurgizdat, 1958, pp 143-152

ABSTRACT: A presentation of results of an investigation on the pollution of air with dust in charging areas of modern blast furnaces at four plants. The investigations were performed by the Institute on Labor Hygiene and Occupational Diseases of the Academy of Medical Sciences, USSR. The greatest degree of dust pollution was observed at the platforms of the scale cars during loading of sinter, particularly when the latter contained small amounts of moisture. Even a slight wetting of the charge materials sharply reduces the degree of dust pollution in loading areas. Increased mechanical strength of sinter also produces favorable results. CaO and SiO₂ are essentially the harmful ingredients of the dust. A number of measures are proposed for prevention of

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Some Aspects of Hygiene During Charging of Modern Blast Furnaces

dust formation. Bibliography: 4 references. See also RZhMet, 1958, Nr 3, abstract 6316 D.

N.L.

1. Blast furnaces--Hazards
2. Particles (Airborne)--Physiological effects
3. Particles (Airborne)--Moisture factors

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truda i prof.zab. 3 no.6:49-54 N-D '59. (MIRA 13:4)

1. Institut gigiyeny truda i profpatologii.
(LUNGS-DUST DISEASES)

KATSNEL'SON, B.A. , kand.med.nauk

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published in recent years. Gig.i san. 26 no.1:90-94 Ja '61.
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1. Iz Sverdlovskogo instituta gigiyeny truda i profpatologii
(CARBON MONOXIDE TOXICOLOGY)

KATSNEL'SON, B.A.; KEDROV, B.D.; ROZENBLAT, V.V.

Radiotelemetric counting of respiration frequency under industrial conditions. Gig. i san. 26 no.11:61-65 N '61. (MIRA 14:11)

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no.1:56-57 Ja '60. (MIRA 15:3)
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KATSNEL'SON, B. A. (Sverdlovsk)

Survey of the foreign literature of recent years on problems in
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KEDROV, B.D.; KATSNEL'SON, B.A. (Sverdlovsk)

Method of measuring pulmonary ventilation in rabbits. Gig.
truda i prof. zab. 6 no.12:47-49 D'62. (MIRA 16:7)

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(MIRA 17:7)