KORKIEWICZ, Z.; MARCINIAKK, B.; ZELAZNA, I.

Effect of certain factors on formation of L forms. Acta microb.
polon 5 no.1-2:27-31 1956.

1. Z Zakladu Mikrobiologii Ogolnej UMCS w Lublinie.
     (PROTEUS VULGARIS,
          L form, eff. of various factors on formation (Pol))

LORKIEWICZ, Zbigniew; ZELAZNA, Irena; PRZYBOJEWSKA, Barbara

Alkaline phosphatase activity of Rhizobium trifolii mutants.
Acta microbiol. Pol. 14 no.3/4:225-229 '65.

Catalytic action of salts on the velocity of ionic reactions. Specific action of ions on the velocity of the reaction $CH_3ClCO_2^- + S_2O_3^{--} \rightarrow S_2O_3CH_2CO_2^- + Cl^-$. K. Hekler and Z. Zelazna, *Rocseniki Chem.* 14, 994-1003 (1934).—The reaction is accelerated by cations in the diminishing order K^+, Na^+, Li^+; Ba^{++}, Sr^{++}, Ca^{++}, and by anions in the order Br^-, Cl^-, NO_3^-, SO_4^{--}. The activities of Na^+, Cu^{++} and La^{++} are as 1:1.5:3.25.

B. C. A.
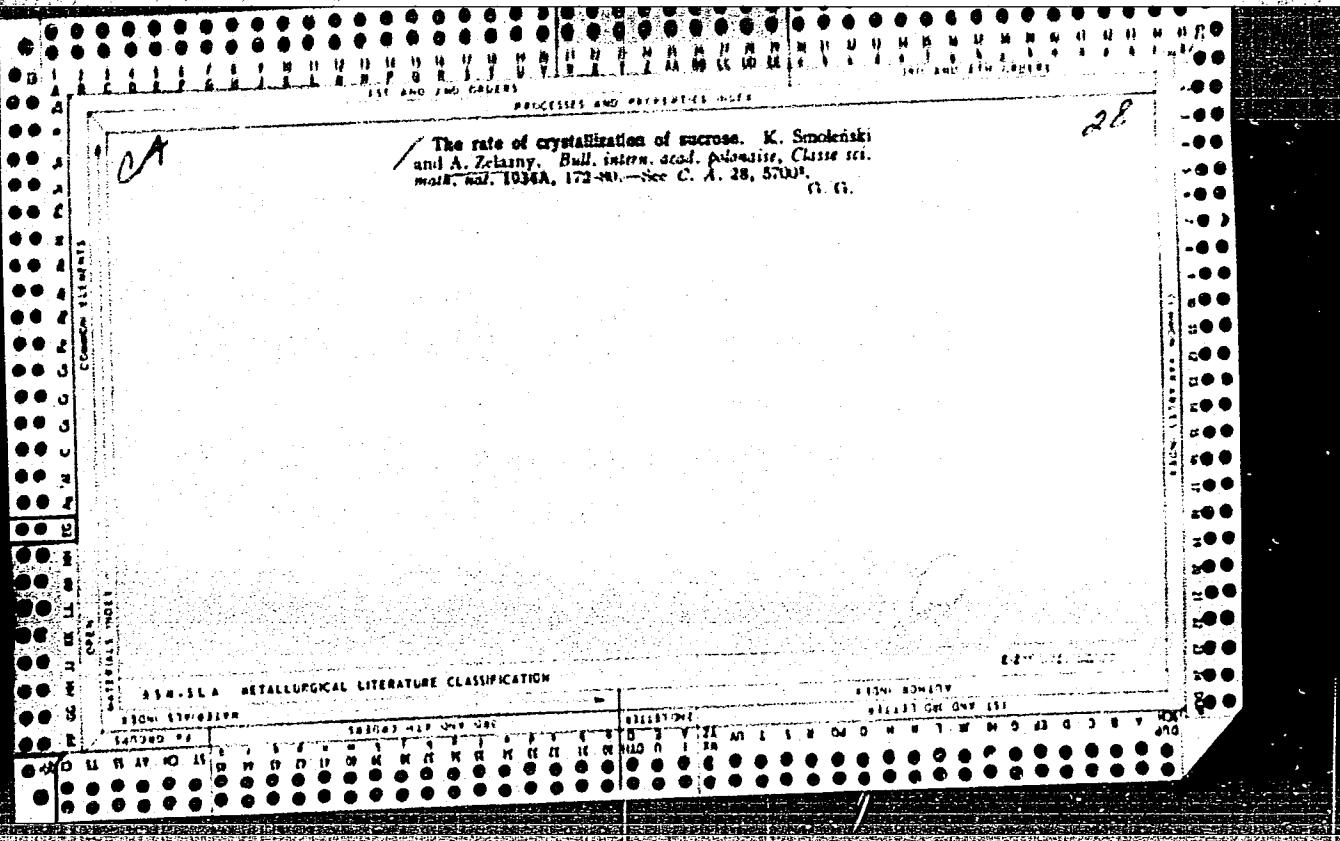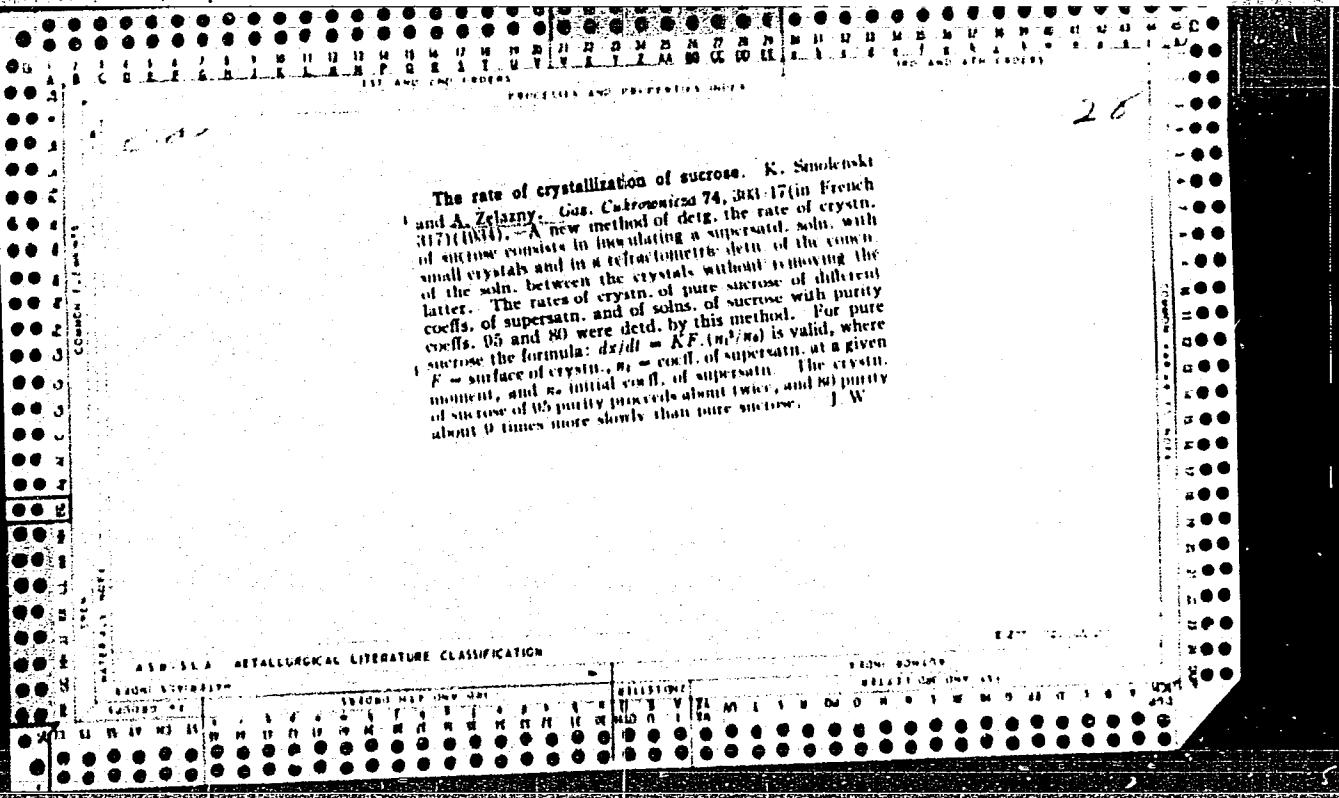
ZELAZNOWSKI, Wladyslaw

Fractures with dislocations of the tarso-metatarsal joints.
Chir.narzad. ruchu ortop. pol. 29 no.1:43-48 '64

1. Z Oddzialu Chirurgii Urazowej Stacji Pogotowia Ratunkcwego
w Krakowie; ordynator: dr. T.Krezel.

28

The rate of crystallization of sucrose. K. Smolenski
and A. Zelazny. *Bull. intern. acad. polonaise, Classe sci.
math. nat.* 1034A, 172-80.—See C. A. 28, 5700[1]. (). G.

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

The rate of crystallization of sucrose. K. Smolenski and A. Zelazny. Gas. Cukrowniczd 74, 3(1)-17(in French 3(17)(1934)). A new method of detg. the rate of crystn. of sucrose consists in inoculating a supersatd. soln. with small crystals and in a refractometric detn. of the concn. of the soln. between the crystals without removing the latter. The rates of crystn. of pure sucrose of different coeffs. of supersatn. and of solns. of sucrose with purity coeffs. 95 and 80 were detd. by this method. For pure sucrose the formula: $dx/dt = KF.(n_1^2/n_0)$ is valid, where F = surface of crystn., n_1 = coeff. of supersatn. at a given moment, and K = initial coeff. of supersatn. The crystn. of sucrose of 95 purity proceeds about twice, and 80 purity about 9 times more slowly than pure sucrose.   J. W.

S.A.

A 53

7-

60. Velocity of Crystallisation of Sucrose. K. Smoleński and A. Zelazny. *Acad. Polonaise Sci. et Lettres. Bull. 3-4.A. pp. 172-189.* March-April, 1934. *In French.*—The procedure employed consists in seeding a supersaturated solution of sucrose with a certain quantity of " fine grain " and in determining the quantity of sugar crystallising out by measuring the concentration of the mother-liquor refractometrically. This can be done without separating the crystals from the solution. The velocity of crystallisation of sucrose at 25° (I) in pure solutions with supersaturation coefficients varying between 1·1 and 1·5, and (2) in solutions with added molasses and with degrees of purity ranging from 95 to 80. In pure solutions, without shaking, the velocity is expressed exactly by : $v = dx/dt = KF(n_0 - x)F/n_0$ where F is the surface area of the crystals, n_0 the initial supersaturation and x the amount of sugar crystallised per 100 gm. of water. Crystallisation of solutions of purity 95-80 is difficult to express by any simple formula. When the coefficient of initial supersaturation is 1·3.

ASM.-SLA   METALLURGICAL LITERATURE CLASSIFICATION

CA

2s

Rate of crystallization in final massecuite. A. Zelazny.
Gas. Cukrownicza 88, 315–320(1948); *Sugar Ind. Abstracts*
11, 18(1949).—Crystn. data obtained in the factory, in the
second half of a season, are tabulated for massecuite (1) when
entering the mixers, and (2) just before centrifuging.
R. D. H.

1951

Sulfitation of cossettes in the Bréac-Kujawski plant. A. Zelazny. Gas. Cukrownicza 80, 321-7(1937).—A method of handling the SO_2 is given, using Pb piping. The SO_2 had no corrosive effects on the knives, piping or cutting app. The flow of SO_2 was regulated by an automatic Pritsch flow-meter. Best results were obtained with 0.005-7% SO_2. The coke of the beet did not change with 0.007% SO_2, whereas with 0.003% SO_2, it changed in 3 hrs., and without SO_2 in 20 min. This behavior is attributed to the power of SO_2 of either killing the bacteria or forming a colorless dye. The juices were 20% lighter in color; the diffusion juices with sulfitation were wine-yellow, whereas the unsulfured juices were very dark. Sulfitation caused a fall in the p_H of the diffusion juices (from 6.1 to 5.8), a lowering of the acidity (from 0.082 to 0.022% CaO), a fall of invert sugar in the juice (from 30 to 27 mg. Cu/10 g. juice), and a decrease of alc.-pptd. substances (1.68 to 1.24 g./100°Bx.). During sulfitation the lack of foam in the diffuser and saturators was noticeable, but little difference was to be noticed in the filter presses. No ill effects of the SO_2 were noticed.

Frank Gouet

ZELAZNY, ALEKSANDER

Poland/Chemical Technology - Chemical Products and Their Application.   Carbohydrates
and Refinement, I-26

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63499

Author: Zelazny, Aleksander; Nitschke, Zbigniew

Institution: None

Title: Crystallization of Sugar by Seeding

Original
Periodical: Vawiazywanie krysztalu cukru na zasypke. Gaz. cukrown., 1955, 57,
No 11, 215-216; Polish

Abstract: Experiments carried out on laboratory and plant scale have shown that
for the production of well formed and uniform crystals it is necessary
to seed at a low coefficient of supersaturation (CS) of the syrup.
The use of such a CS permits to regulate beforehand the amount of
crystal formed. At higher CS (above 1.25) even with a small amount
of seed crystals the amount of crystals formed is fortuitous since
under these conditions even small changes in CS (which are not readily
detected in practice) greatly affect the amount of crystal nuclei
formed.
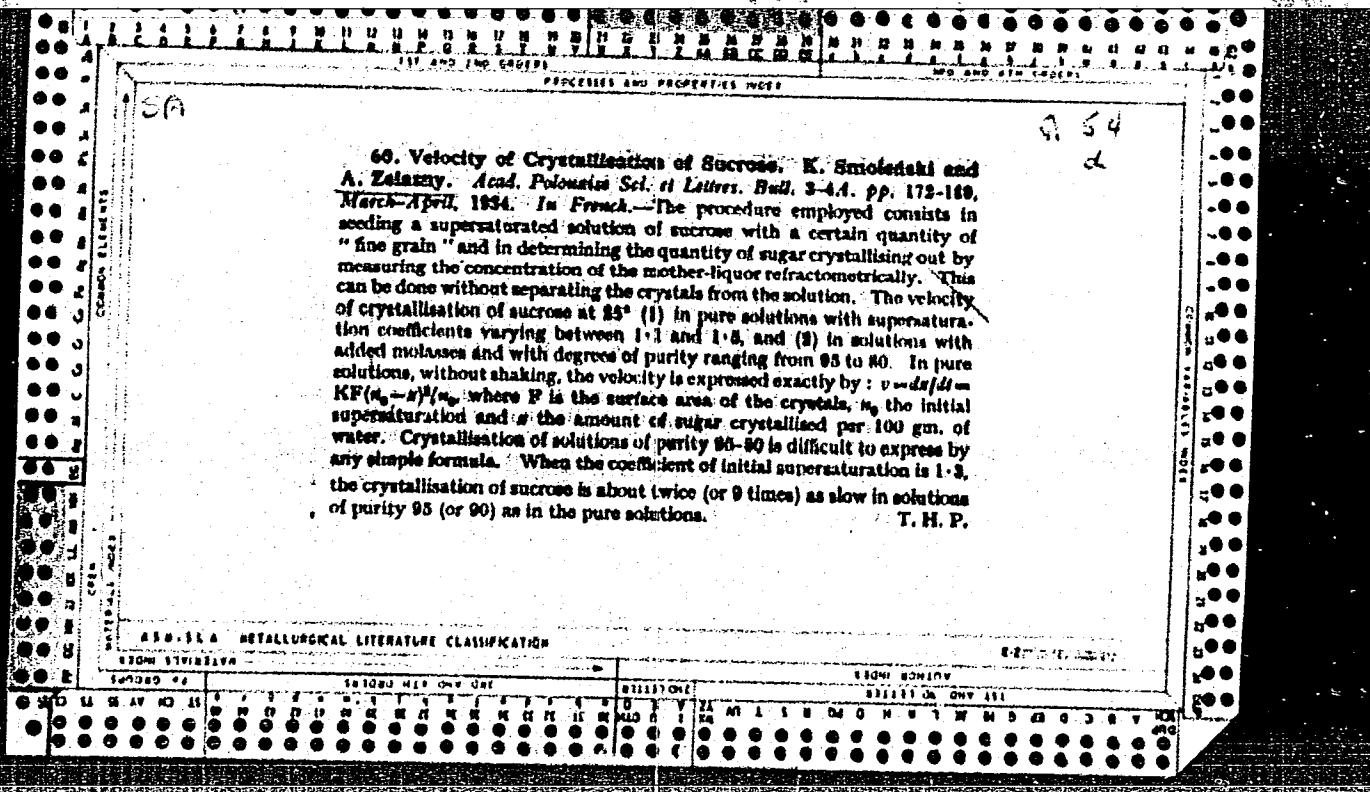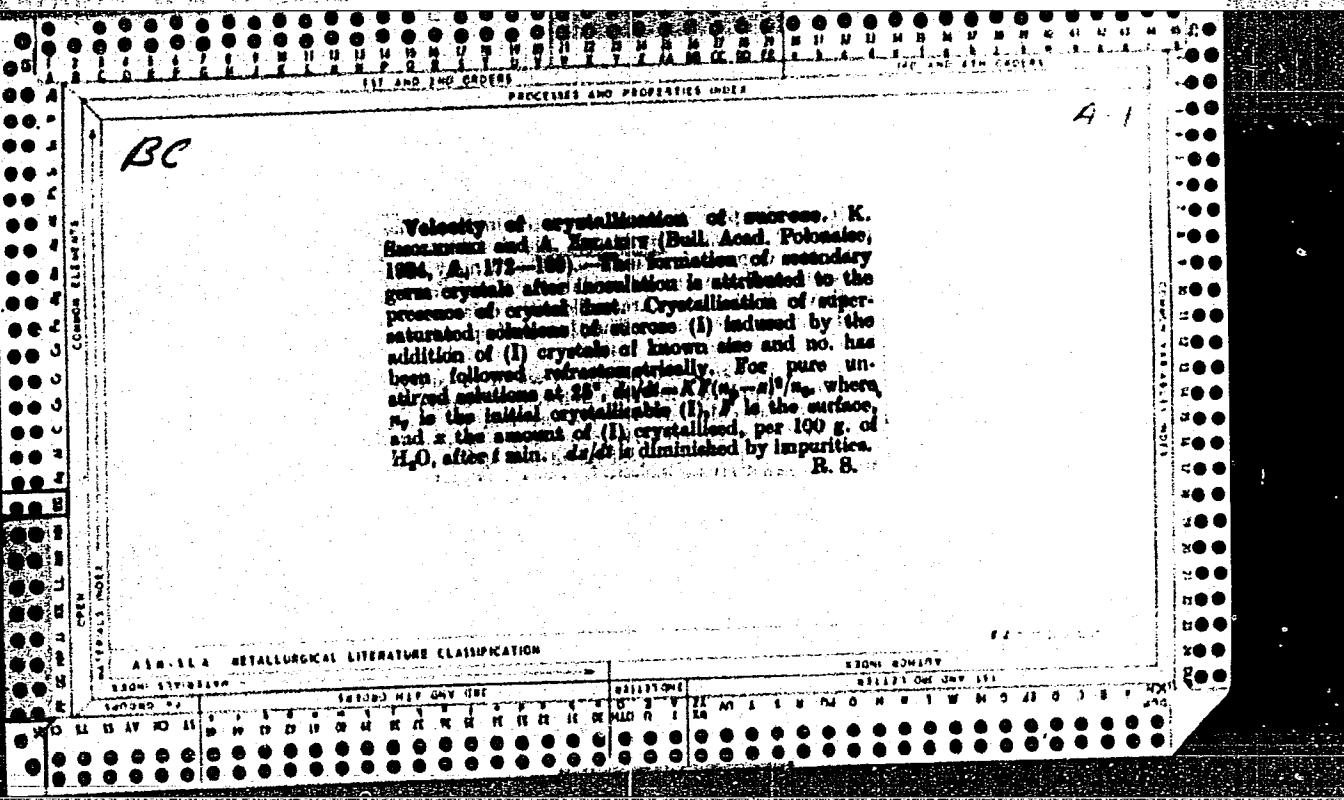
Card 1/1

The growth of the sugar crystals when boiled with the addition of sugar powder. Nickenova, Zinaida Savvishna. *Sakhar* 57

The crystallizate was studied of supersatd. sugar syrups after the addn. of powd. sugar passed through a 0.75 mm screen in the amt. of 0.1 g powder for 1 l. of syrup. The added powder particles induce the nuclei of sucrose crystals in the sirup. The extent of the nucleation depend on the coeff. of unsatn. how coeff. The increase of the nuclei formn. it increases with an increase of the coeff. and rises rapidly at a supersatn. of 1.20 and above. For example, the sirups of 94°, purity and having coeffs. of unsatn. of 0.91, 0.62, 0.11, 0.36, and 0.24 contained 12.0, 13.9, 77.7, 101.3, and 253.9 × 10⁶ sugar nuclei 100 ml. sirup (with added 0.1 g sugar powder), resp. A simple method is described to det. the extent of the nucleation.   P. Myerbecki

60. Velocity of Crystallisation of Sucrose. K. Smoleński and A. Zelazny. *Acad. Polonaise Sci. et Lettres. Bull.* 3-4.A. pp. 172-189, March-April, 1934. *In French.*—The procedure employed consists in seeding a supersaturated solution of sucrose with a certain quantity of " fine grain " and in determining the quantity of sugar crystallising out by measuring the concentration of the mother-liquor refractometrically. This can be done without separating the crystals from the solution. The velocity of crystallisation of sucrose at 25° (1) in pure solutions with supersaturation coefficients varying between 1·1 and 1·5, and (2) in solutions with added molasses and with degrees of purity ranging from 95 to 80. In pure solutions, without shaking, the velocity is expressed exactly by : $v = dq/dt = KF(n_0 - n)^2/n_0$, where F is the surface area of the crystals, n_0 the initial supersaturation and n the amount of sugar crystallised per 100 gm. of water. Crystallisation of solutions of purity 95–80 is difficult to express by any simple formula. When the coefficient of initial supersaturation is 1·3, the crystallisation of sucrose is about twice (or 9 times) as slow in solutions of purity 95 (or 90) as in the pure solutions.   T. H. P.

BC

A-1

Velocity of crystallisation of sucrose. K. Smosarski and A. Zmaczyński (Bull. Acad. Polonaise, 1934, A, 172—180).—The formation of secondary germ crystals after inoculation is attributed to the presence of crystal dust. Crystallisation of supersaturated solutions of sucrose (I) induced by the addition of (I) crystals of known size and no. has been followed refractometrically. For pure unstirred solutions at 25°, $dx/dt = KF(n_1-n)^2/n_0$, where n_1 is the initial crystallisable (I), F is the surface, and x the amount of (I) crystallised, per 100 g. of H_2O, after t min. dx/dt is diminished by impurities.
    R. S.

POLAND/Chemical Technology - Carbohydrates and Their   H-26
          Processing.

Abs Jour   :   Ref Zhur - Khimiya, No 24, 1958, 83194

Author   :   Zelazny, A., Nitschke, Z.
Inst   :   -
Title   :   The Influence of Syrup and Sugar Concentrate Coloration
                Upon the Color of Sugar Crystals.

Orig Pub   :   Gaz. cukrown., 1957, 59, No 12, 334-335.

Abstract   :   The influence of syrup and sugar concentrate coloration
                upon the color of sugar has been investigated. The color
                of the syrup, raw sugar and crystals was determined (after
                a layer of syrup has been removed before hand by a washing
                with a saturated solution of pure sugar). A considerable
                increase was found in the coloring matter in a syrup layer
                directly adjascent to the crystals. Data is given speci-
                fying the color of a thick syrup, sugar concentrate and
                sugar which has been prepared therefrom.

Card 1/2

LAZOWSKI, Zygmunt; ZELAZNY, Halina; BALDYGA, Alicja

Serum seromucoid as the index of rheumatic activity in children treated in sanatoria. Reum. Pol. 2 no. 2:137-142 '64.

1. Z Oddzialu Dzieciecego Instytutu Reumatologicznego (Kierownik Oddzialu: prof. Dr med. E. Wilkoszewski; Dyrektor Instytutu: dr med. W.Brühl).

ZELAZNY, J.

TECHNOLOGY

Periodicals: PRZEGLAD TECHNICZNY. Vol. 79, no. 17, Sept. 1958

ZELAZNY, J. Some remarks on the activity of the understanding Committee
of the Central Technical Organization in Bydgoszczy. p. 836.

Monthly List of East European Accessions (EEAI) LC; Vol. 8, No. 2,
February 1959, Unclass.

KOSSAKOWSKI, Mieczyslaw, inz.; RUSSOCKI, Andrzoj, mgr inz.; ZELAZNY, Jerzy, inz.

Mining Machine Works in Piotrkow Trybunalski. Przegl mech 22
no.7/8:238-240 10-25 Ap '63.

1. Mining Machinery Works, Piotrkow Trybunalski.

ZELAZNY, R.
DABROWSKI, C.

Controlled thermonuclear reactions at the 2d International Conference on the
Peaceful Uses of Atomic Energy in Geneva.   p. 39

KOSMOS. SERIA B: PRZYRODA NIEOZYWIONA. (Polskie Towarzystwo Przyodnikow im. Kopernika)
Warszawa. Vol. 5, no. 1, 1959
Poland/

Monthly List of East European Accessions Index (EEAI), LC, Vol. 8, no. 6, June 1959
Uncl.

ZELAZNY, R.; DABROWSKI, C.

Reactor physics at the 2d Conference on the Peaceful Uses of Atomic Energy in 1958.
p. 137.

KOSMOS. SERIA B: PRZYRODA NIEOZYWIONA. (Polskie Towarzystwo Przyrodnikow im.
Kopernika) Warszawa, Poland. Vol. 5, No. 2, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 8, August, 1959.
UNCL

19

4

Polynomial approximation in neutron transport theory. J. Mika and R. Zelazny (Inst. Badań Jadrowych Warsaw). *Bull. acad. polon. sci., Ser. sci., Math., astron. et phys.*, 8, 69-02(1960)(in English).—One-velocity Boltzmann equation for the angular distribution of neutrons, P, is formally solved by expanding P in Jacobi polynomials. An example is given with the 1st approxn. for Gegenbauer polynomials. J. Stecki

P/046/60/005/007-8/003/007
A224/A026

AUTHOR: Żelazny, Roman

TITLE: Applied Reactor Theory in the Institute of Nuclear Research

PERIODICAL: Nukleonika, 1960, Vol. 5, No. 7-8, pp. 439-459

TEXT: The paper presented at the reactor conference of Socialist Coun-
tries, convened at Rossendorf on June 13 to 18, 1960, and written in English
language, reviews the operation of the Reactor Theory Group. The group is
a section of the Reactor Engineering Department at the Institute of Nuclear
Research of the Polish Academy of Sciences. During the last two years, the
group has been occupied with several reactor design problems, including the
following: development of methods applicable to calculations of heavy water-
and graphite-moderated reactors; computations of radiation loops with liquid
gamma carrier; and the neutron transport theory. The purpose of the research
program was to obtain data required for the building of the second Polish ex-
perimental reactor. There are 6 tables, 11 figures and 22 references: 19
English, 2 Polish and 1 Soviet.
ASSOCIATION: Polish Academy of Sciences, Institute of Nuclear Research, Warsaw,
            Reactor Engineering Department.
SUBMITTED: May 9, 1960
Card 1/1

ZELAZNY, R.

Green functions of the mixed Cauchy problem of the Gordon-Klein equation and their connection with advanced and retarded Green functions. Bul Ac Pol mat 8 no.10:709-712 '60.

1. Institute of Theoretical Physics, University, Warsaw, and Institute for Nuclear Research, Polish Academy of Sciences. Presented by L. Infeld.

(Functions)   (Equations)

ZELAZNY, R.; KUSZELL, A.

Milne's problem for two adjacent half spaces. Bul Ac Pol mat 9
no.3:219-220 '61.

1. Institute for Nuclear Research, Polish Academy of Sciences and
Institute of Theoretical Physics, Warsaw University. Presented by
L. Infeld.

(Spaces, Generalized)

ZELAZNY, R.; KUSZELL, A.

A special model of a two-group approach in Neutron transport theory.
Bul Ac Pol Mat 9 no.6:461-466 '61.

1. Institute of Nuclear Research, Polish Academy of Sciences and Institute of Theoretical Physics, University, Warsaw. Presented by L. Infeld.

ZELAZNY, R.

Eigenfunction expansion method in neutron transport theory.
Nukleonika 9 no.7/8:563-573 '64

1. Institute of Nuclear Research, Warszawa-Swierk.

ZELAZNY, R.; KUSZELL, A.

Milne's problem for two adjacent half spaces. Bul Ac Pol mat
9 no.3:217-220 '61.

1. Institute of Nuclear Research, Polish Academy of Sciences,
Warsaw, and Institute of Theoretical Physics, University,
Warsaw. Presented by L. Infeld.

S/044/62/000/006/048/127
B156/B112

$\partial 4.6500$

AUTHORS: Zelazny, R., Kuszell, A.

TITLE: A special model of a two-group approach in neutron transport theory

PERIODICAL: Referativnyy zhurnal. Matematika, no. 6, 1962, 96, abstract 6B404 (Bull. Acad. polon. sci. Ser. sci. math., astron. et phys., v. 9, no. 6, 1961, 461-466)

TEXT: A method is proposed for solving the equation for neutron transfer, which is confined to the two-group method. It is assumed that the free path lengths do not depend on the number of the group. A solution to the problem is sought using a Fourier transformation of a geometrical variable. The result is to reduce the problem to solving a system of integral equations for functions depending only on an angular component. When a system of eigenfunctions has been found, the solution to the problem is written in the form of a Neumann series. Various applications of the method are discussed, the most interesting of them being the results of solving the Milne problem in a two-group approximation and of solving the

Card 1/2

A special model of a two-group ...

S/044/62/000/006/048/127
B156/B112

problem of the critical dimensions of a reactor in the form of an infinite layer. [Abstracter's note: Complete translation.]

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Card 2/2

39394
S/044/62/000/006/049/127
B156/B112

24 6500
26.2242

AUTHORS: Zelazny, R., Kuszel, A., Mika, J.

TITLE: Solution of the one-velocity Boltzmann equation with first-order anisotropic scattering of neutrons in plane geometry

PERIODICAL: Referativnyy zhurnal. Matematika, no. 6, 1962, 96, abstract 6B406 ([Referat] Inst. badań jadrow. PAN, v. 9, no. 216, 1961)

TEXT: The Keys method of solving one-velocity transfer equations is applied to the case of anisotropic scattering. The case of a linear scattering indicatrix is examined in detail. The solution if sought by separating the variables. To find the unknown functions, the parameters of the solution, a system of two singular integral equations is set up. Systems of orthogonal functions of an angular variable are studied in detail and used for solving the problem. In conclusion, an example of the solution to the problem of finding the reflection factor of a semispace is given. It is stated in this article that the algorithm developed here can also be applied to the case of a more complex scattering indicatrix. [Abstracter's note: Complete translation.]
Card 1/1

24.4600.

S/044/62/000/005/029/072
C111/C333

AUTHORS: Żelazny, R., Kuszell , A.

TITLE: Milne's problem for two adjacent half-spaces

PERIODICAL: Referativnyy zhurnal, Matematika, no. 5, 1962, 86-87,
               abstract 5B395. ("Inst. badań jądrow. PAN", 1961, no.
               219/IX, 4 pp.)

TEXT: The solution of the inhomogenous Milne problem for two
adjacent half-spaces with different diffusion characteristics is ex-
pressed in every half-space by the eigen function of corresponding
analogous problems (Keys method). It is assumed that the scattering is
isotropic, the half-spaces are homogeneous and the sources (constant)
are uniformly and isotropically distributed in every half-space. The
continuity condition on the separation surface and the natural condi-
tions of the decrease of the solution on $\pm \infty$ allow the arbitrary
constants of the solution to be determined from some algebraic relation-
ships.

[Abstracter's note: Complete translation.]

Card 1/1

RYLL-NARDZEWSKI, Czeslaw [deceased]; ZOLKIEWICZ-RODZIEWICZ, Helena;
    MITURSKA, Maria; MODZELEWSKA, Irena; ZELAZNY, Stanislaw

Result of the treatment of mycoses with griseofulvin according to
material of the Dermatological Clinic of the Academy of Medicine in
Lublin. Przegl. derm. 49:225-227 '62.

1. Z Kliniki Dermatologicznej AM w Lublinie Kierownik: prof. dr
Cz. Ryll-Nardzewski Z Kliniki Neurologicznej AM w Lublinie Kierownik:
prof. dr W. Stein.
                (GRISEOFULVIN)

ZELAZNY, T.

The problems of rural building require more care and quick changes.

p. 17 (BUDOWNICTWO WIEJSKIE) Poland, Vol. 8, No. 6, June 1956

SO: Monthly Index of East European Accessions (AEEI) Vol. 6, No. 11, November 1957

POLACZEK-KORNECKI, Tadeusz; POLACZEK-KORNECKA, Barbara; ZELAZNY, Tadeusz

Bronchoscopy and the bacterial flora of the trachea and
bronchial tree. Pol. tyg. lek. 19 no.3:89-91   20 Ja'64

1. Z III Kliniki Chirurgicznej AM w Krakowie (kierownik: prof.
dr. Jerzy Jasienski [deceased]) ; z Oddzialu Chirurgii Klatki
Piersiowej MSS w Krakowie (ordynator: dr. med. Michal Juszczynski)
i z Pracowni Bakteriologicznej-analitychnej MSS (kierownik:
dr. Janusz Rapczewski).

*

POLACZEK-KORNECKI, Tadeusz; ZELAZNY, Tadeusz.

Preliminary observations on the use of neuroleptoanalgesia.
Pol. tyg. lek. 18 no.45:1683-1685   4 N'63.

1. Z III Kliniki Chirurgicznej AM w Krakowie; kierownik prof.
dr. med. Jerzy Jasienski.

POLACZEK-KORNECKI, Tadeusz; ZELAZNY, Tadeusz

Anesthesia in cardiac catheterization. Pol. tyg. lek. 18 no.50:
1890-1891   9 D'63

1. Z III Kliniki Chirurgicznej AM w Krakowie; kierownik: prof.
dr. med. Jerzy Jasienski [deceased].

POLITOWSKI, Mieczyslaw; ZELAZNY, Tadouss

Use of vasculat in the treatment of atherosclerosis obliterans
of the extremities. Przegl. lek. 21 no.6:434-436 '65.

1. Z III Kliniki Chirurgicznej AM w Krakowie (Kierownik: Doc.
dr. med. M. Politowski).

KRAWCZYNSKI, Jerzy; ZELAZOWSKA, Maria

Application of the so-called dry tests in urinalysis in diagnostic
laboratories and in general practice. Polski tygod. lek. 13 no.45:
1788-1793 10 Nov 58.

1. Z Centralnego Laboratorium Klincznego PSK Nr 13 Lublinie; kierownik:
doc. dr med. Jerzy Krawczynski. Adres: ul. Staszica 16. Centralne
Laborat Kliniczne P.S.K. nr 1.
        (URINE
            urinalysis by dry tests, review (Pol))

ZELAZOWSKA-MAJOR, ZOFIA

POLAND/Chemical Technology, Chemical Products andTheir   H-28
        Application, Part 3. - Food Industry.

Abs Jour: Referat. Zhurnal Khimiya, No 10, 1958, 34229.

Author   : Zofia Żelazowska-Major, Alicja Dąbrowska.
Inst   : Not given.
Title   : Influence of Ratio of Lactic and Volatile Acids on
           Taste of Bread.

Orig Pub: Przegl. piekarn. cukiern., 1957, 5, No 10, 16-19.

Abstract: The sour taste of bread increases together with the
          increase of the amount of volatile acids in relation
          to lactic acid.

Card   : 1/1

WAWRZOSEK, A.; ZELAZOWSKI, K.

Analytical problems in the Lublin rural district. Farmacja Pol
18 no.15/16:356-357 Ag '62.

1. Wydzial Zdrowia i Opieki Spolecznej, Lublin. Kierownik
Wydzialu: dr.med. K.Zelazowski.

*

ZELAZNOWSKI, Ignacy, mgr inz.

Open end pillaring in the Nowy Dwor mine. Rudy i metale 8 no.3:
97-101 Mr '63.

TYSZKIJKIEWICZ, D.; ZELAZOWSKI, K.

Cutaneous changes caused by consumption of Atriplex hortense.
Pol. tyg. lek. 19 no.30:1166-1167   27 Jl'64

1. Z Kliniki Dermatologicznej Akademii Medycznej w Lublinie:
kierownik: doc. dr. med. Roman Michalowski.

ZELAZOWSKI, Kazimierz; TYSZIUKIEWICZ, Danuta

2 cases of purpura following smallpox vaccination (postvaccinal
purpura). Pol. tyg. lek. 19 no.20:766-769   11 My '64.

1. Z Kliniki Dermatologicznej Akademii Medycznej w Lublinie
(kierownik: doc. dr. med. Roman Michalowski).

KUDEJKO, Teresa; KUDEJKO, Jan; SZYSZKO, Janusz; ZELAZOWSKI, Kazimierz

Granuloma gangraenescens. Przegl.derm. Warsz. 47 no.6:469-478
N-D '60.

1. Z Kliniki Dermatologicznej A.M. w Lublinie, Kierownik: prof.
dr Cz. Ryll-Nardzewski. Z Zakladu Anatomii Patologicznej A.M. w
Lublinie, Kierownik: prof. dr S.Mahrburg.
          (GRANULOMA in inf & child)
          (NOSE dis)

KUDEJKO, Jan; KUDEJKO, Teresa; ZELAZOWSKI, Kazimierz

Granulomatosis pathergica cum reactione pseudoleucaemica. Przegl.
derm., Warsz. 47 no.4:281-288 Jl-Ag '60.

1. Z Kliniki Dermatologicznej A.M. w Lublinie Kierownik: prof. dr
Cz.Ryll-Nardzewski.
            (GRANULOMA diag)
            (LUNG DISEASES diag)
            (LEUKEMIA diag)

ZELAZWSKI, Kazimierz; TYS LUKIEWICZ, Danuta

Jichen striatus. Przegl. derm. 51 no.1:33-38 Ja-F '64

1. Z Kliniki Dermatologicznej Akademii Medycznej v Lublinie
(Kierownik: doc. dr. R. Michalowski).

L 05312-67   EWP(1)   IJP(c)   GG/BB

ACC NR: AM6013864   (A)   Monograph   PO/

73
70

Iwaszkiewicz, Arnold; Stolarski, Maciej; Zelazowski, Wladyslaw

Automation and cybernetics in the modern army (Automatyka i cybernetyka
we wspolczesnej armii) Warsaw, Wyd-wo MON, 1965. 343 p. illus.,
biblio., index. Errata slip inserted. 1780 copies printed.

TOPIC TAGS: automation, cybernetics, bionics, operations research,
analog computer, digital computer, command and control system, fire
control system, automated air navigation system

PURPOSE AND COVERAGE: This book is intended mainly for military
personnel dealing with cybernetics and automation. It deals mainly
with the operation and maintenance of computers and complex automatic
equipment. The book may also be used by civilian scientific and
technical personnel working in this field. It is based on a series
of lectures presented to the Polish Armed Forces by the authors during
the 1960-1962 period. Chapters I and II deal with the
fundamentals of automation and cybernetics. Special attention is
paid in Chapter III to a very important branch of military science,
i.e., combat-operations research. This old, but modernized method
of troop control is being scientifically studied by means of careful
calculations. Using such a method, a commanding officer should be able to know

Card 1/5

ACC NR.AM6013864

3

how to handle all of tne decisive problems under complex conditions while simultaneously taking the hazardous aspects of the operation into consideration. In addition to the problems of making an optimal decision, fundamental information on probability theory are given in this chapter. Chapter IV deals with computers, and describes their construction, operating principles, potential, and prospects for further development. Chapter V is devoted entirely to large-scale automation systems. In Chapters VI and VII a number of specific examples of command and control systems are discussed with special emphasis on antiaircraft artillery and infantry fire-control systems. General Marian Graniewski, Doctor of Sciences Henryk Greniewski, and Master of Sciences Maria Domanska provided comments and advice to the author of this book. There are 68 references: 38 Polish, 25 Soviet, and 5 English . References to each chapter are listed separately in the Bibliography.

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ACC NR: AM6013864

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ACC NR: AM6013864

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SUB CODE: 06, 13/ SUBM DATE: 21Oct65/ ORIG REF: 027/ OTH REF: 003/

SOV REF: 027

KH

Card 5/5

ZELBA, B.

TECHNOLOGY

Periodicals: GAZETA CUKROWNICZA. Vol. 60, No. 10, October 1958.

GORALCZYK, W.; ZELBA, B. Application of steelon in the sugar industry. P. 304.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 2,
February, 1959, Unclass.

ZEL'BERG, G.M.; RYBIN, V.

Removal of impurities and grit from carbon black. Gaz.prom.
4 no.6:35-38 Je '59.   (MIRA 12:8)
                        (Carbon black)

ZEL'BERG, G.M.

Accelerating the process of furnace carbon black production.
Gaz.prom. no.8:26-29 Ag '56.   (MIRA 10:7)
                              (Carbon black)

Zel'berman G. Ye

USSR/Magnetism - Diamagnetism. Paramagnetism   F-3

Abs Jour   : Referat Zhur - Fizika, No 5, 1957, 11977

Author   : Zel'berman, G. Ye.
Inst   : —
Title   : The de Haas-van-Alphen Effect for Strongly Bound Electrons
               in a Lattice.

Orig Pub   : Fiz. metallov i metallovedeniye, 1956, 3, No 1, 18-21

Abstract   : The author considers the oscillation of the thermodyna-
               mic, quantities of a metal in a magnetic field at low tem-
               peratures, on the basis of the strongly-bound electron
               model. He obtains the oscillation periods with the vari-
               ation of the magnetic field for the particular case of
               strongly-bound electrons in a cubic lattice, and determi-
               nes the dependence of the periods on the degree of filling
               of the energy band. The criterion of band filling is in-
               dicated.

Card 1/1

137-58-6-13475D

AUTHOR: Zel'bet, B. M.

TITLE: Heat-treatment Deformations in ShKh-15 Steel (Deformatsiya
            stali ShKh-15 pri termicheskoy obrabotke)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree
            of Candidate of Technical Sciences, presented to the Mosk. in-t
            stali (Moscow Steel Institute), Moscow, 1957

            1. Steel--Deformation   2. Steel--Heat treatment

Card 1/1

ZEL'BET, B. M., cand Tech Sci -- (diss) "Deformation of ShKh15 steel during ~~thermic~~ heat treatment." Mos, 1957. 16 pp (Min of Higher Education USSR, Mos Order of Labor Red Banner Inst of Steel im V. I. Stalin), 100 copies (KL, 52-57, 106)

Zel'bet, B M

AUTHORS: Gulyaev, A.P., Doctor of Technical Sciences Prof., and
         Zel'bet, B.M. Engineer.   129-9-8/14

TITLE: Change in the dimensions of bearing rings during heat
         treatment. (Izmeneniye razmerov podshipnikovykh kolets
         pri termicheskoy obrabotke).

PERIODICAL:"Metallovedeniye i Obrabotka Metallov" (Metallurgy and
         Metal Treatment), 1957, No.9, pp.28-36 (U.S.S.R.)

ABSTRACT: The aim of the here described work was to study the
         relations governing the change in the dimensions of ball
         bearings during the heat treatment so as to permit taking
         these dimensional changes adequately into consideration in
         the machining additions. Ball bearing rings (races) are
         manufactured by machining from hot or cold rolled tubes,
         rods or forgings of the steel ШХ15 followed by hardening in
         oil from 840-850 C and tempering at 160 C followed by
         grinding to the final dimensions.   The influences were
         investigated of the geometrical parameters on the change in
         dimensions of the rings during heat treatment,
         of technological factors (variations in the heat treatment
Card 1/3 temperatures) on the change in dimensions and the warping
         of the rings and also the problem of taking into consideration
         deformations due to the hardening process in establishing the

Change in the dimensions of bearing rings during heat
treatment. (Cont.)   129-9-8/14

necessary grinding additions. The here given results relate
to rings made of hot rolled annealed tubes, rods and
forgings and they are not applicable to cold rolled non-
annealed tubes. Fig.2 gives the dependence of the
deformation of the ring on the diameter, the height and
the thickness; Fig.3 gives the dependence of the ovality
on the diameter and rigidity after heat treatment and after
machining; Fig.4 gives the change in ovality during heat
treatment as a function of the original ovality; Fig.5 gives
the dependence of the deformation and the ovality of rings
on the hardening temperature; Fig.6 gives the dependence
of the deformation and ovality of rings on the temperature
of the hardening medium; Fig.7 gives the influence of
preliminary normalisation annealing on the deformation and
the ovality of the rings after hardening and after tempering;
Fig.8 gives the influence of preliminary heat treatment;
Fig.9 gives the influence of tempering at 150 C; Fig.11
gives the dependence of the changes in ovality on the method
of loading (horizontal, vertical); Fig.12 gives the change
of the external diameter of the outside bearing rings during
heat treatment, whilst in the graph, Fig.13, the currently

Card 2/3

Change in the dimensions of bearing rings during heat
treatment. (Cont.)   129-9-8/14

applied machining additions (in grinding the outside
diameter) and the additions proposed by the author on the
basis of his experimental results are plotted. The results
show that warping (ovality) increases during heat treatment
proportionally with increasing diameter and decreasing
rigidity (ratio of wall thickness to diameter, S/D) of the
ring. Increase of the hardening temperature from 820 to
880 C and of the temperature of the cooling medium from
20 to 80 C and secondary hardening bring about an increase
in the ovality. The deformation of the ring depends
little on the fluctuation of the temperature during the heating
prior to quenching, the temperature of the quenching oil
and the preliminary heat treatment. The author proposes a
statistical method of determining the deformation of rings
and he recommends use of this method for establishing the
necessary grinding additions.
There are 13 figures and 2 Slavic references.

ASSOCIATION: Moscow Evening Engineering Institute. (Moskovskiy
    Mashinostroitel'nyy Institut).

AVAILABLE:

Card 3/3

AUTHORS: Gulyayev, A. P., Zel'bet, B. K.   SOV/163-58-1-44/53

TITLE: Diagrams of the State of Volume of Phases in Steels (Diagramma ob"yemnogo sostoyaniya faz v stali)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 1, pp 239-243 (USSR)

ABSTRACT: In the present paper the authors experimentally constructed the diagrams of the state of volume of phases with the determination of the martensite points as well as the specific volume of austenite and martensite at different temperatures on one and the same material. The steel ShKh5 [with 1% C, 1,4% Cr] was used as initial material. The samples of steel ShKh15 were heated to different temperatures within the temperature range from 800 to 960° and then were rapidly tempered in salt water. The phase state of the steel ShKh15 after tempering and as dependent on different temperatures was investigated. The results obtained supply a complete picture of the phase composition in tempered steel, the parameter magnitude of the lattices and partly also of the qualitative ratio prevailing. The specific volume of cementite was determined at room tempera-

Card 1/3

SOV/163-58-1-44/53

Diagrams of the State of Volume of Phases in Steels

ture in relation to the carbon content in solid solutions.
The coefficient of linear expansion α of martensite and austenite
within the range from 200 to 220°C was determined in relation
to the carbon content. It was shown that the α of martensite
and austenite practically does not depend on the carbon content
in these phases. The martensite transformation in steel begins
with the reaching of a certain difference between the specific
volume of austenite and martensite, viz., at $0,0044 \pm 0,0002$
cm^3/g, and at a certain difference in the interatomic distances
of austenite and martensite of $0,80$ Å. An empirical dependence
of the coefficient of expansion in volume of austenite and
martensite on the temperature was found, which can be calculated
by the following formula:

$$\beta_{t'_m} = 30,36.10^{-6} + 0,049.10^{-6}t; \quad \beta_{t_a} = 62,31.10^{-6} + 0,027.10^{-6}t$$

The constructed diagram of the state of volume of the phase of
steel ShKh15 may be used in practice in the investigation of the
rules governing the changes in volume in thermal treatment.
There are 2 figures, 5 tables, and 7 references, 6 of which
are Soviet.

Card 2/3

SOV/163-58-1-44/53

Diagrams of the State of Volume of Phases in Steels

ASSOCIATION: Moskovskiy vecherniy mashinostroitel'nyy institut (Moscow
               Evening School for Machine Building)

SUBMITTED: October 1, 1957

Card 3/3

ZEL'BET A. M

YEGOROV, M.Ye., doktor tekhn. nauk, prof.; GOKHVAT, L.Ya., inzh.; ZEL'BET,
B.M., inzh.

Optimum allowances in grinding antifriction bearing rings. Vest.
mash. 38 no.4:51-55 Ap '58.
            (Bearings (Machinery))   (Grinding and polishing)

SOV/126-6-5-13/43

AUTHORS: Gulyayev, A.P., and Zel'bet, B.M.

TITLE: Diagram of the Phase Volumes of Steel ShKh15
(Diagramma ob"yemnogo sostoyaniya faz v stali ShKh15)

PERIODICAL: Fizika Metallov i Metallovedeniya, 1958, Vol 6,
Nr 5, pp 843 - 848 (USSR)

ABSTRACT: Yur'yev's "phase volume diagram" (Ref 1) shows the
change in specific volume of individual phases in Fe-C
alloys (austenite, martensite, α and γ-iron and
cementite) with change in temperature. From a consider-
ation of this diagram he concluded that, irrespective
of carbon content, the transformation of austenite
into martensite commences at a definite specific volume
of austenite, which for carbon steel is

0.12590 ± 0.00010 cm^3/g. In general, this means that
austenite transforms at the moment when the iron atoms
in the γ-lattice, due to contraction on cooling, reach
a definite limiting distance. This agrees with earlier
assumptions by Sadovskiy and Yakutovich (Ref 2), who
specified 3.607 Å as the critical lattice parameter of
Card1/5 austenite at which martensite begins to form. However,

Diagram of the Phase Volumes of Steel ShKh15   SOV/126-6-5-13/43

other authors (Refs 3, 4 and 5) disagree with this view.
Taking Kurdyumov's mechanism of martensite transformation
(Ref 6) as the basis, Arkharov proposed certain crystal
geometry relationships which must be satisfied for the
initiation of martensite formation. The martensitic
$\gamma \to \alpha$ transformation, according to Kurdyumov, consists in
a regular shift of atoms in the γ-iron lattice relative
to each other by distances less than inter-atomic.
Arkharov developed this theory further and stipulated that
the distance between the closest atoms along the [101] and
[111] directions must attain a certain critical value for
the $\gamma \to \alpha$ change to take place. Figure 1 shows the
relationship between the austenitic lattice parameter and
temperature but from this diagram there is no evidence to
support the above theories, which are based only on
literature data. Hence, the authors of this paper decided
to construct experimentally a phase volume diagram and
determine the M_s point and the specific volumes of
austenite and martensite at various temperatures in one
material. The steel ShKh15 (1.0% C, 1.4% Cr) was chosen

Card2/5

Diagram of the Phase Volumes of Steel ShKh15

for this purpose. For the construction of the diagram the specific volumes of the phases (γ, α and cementite) at various carbon contents (for the γ and α-phases) and various temperatures must be known. This information was obtained by quenching the steel specimens from temperatures in the range 800 to 960 $^{\circ}$C in brine. As quenched, the steel structure consists of three phases – martensite, austenite and carbides. The quantitative relationship and composition of the first two phases change with quenching temperature. The results are given in Table 1. If the composition and the lattice parameters of the phases are known, their specific volumes can be calculated (Ref 1), the latter, at room temperature, are given in Table 2. If the coefficient of linear expansion for each phase is determined, the diagram can be constructed. These coefficients were derived experimentally and are given in Table 3. The diagram for the phase volumes of the steel ShKh15 is shown in Figure 2, the position of the M_s point in

relation to carbon content and quenching temperature is

Card3/5   given in Table 4 and the specific volumes of lattice

Diagram of the Phase Volumes of Steel ShKh15

parameters of austenite and martensite at the temperature
at which the martensitic transformation commences, in
Table 5. From a consideration of the above results the
authors arrived at the following conclusions: martensitic
transformation of any composition of a given steel does
not commence on attaining a constant specific volume, but
when a difference between the specific volumes of austenite
and martensite of 0.0044 ± 0.0002 cm^2/g and between the
interatomic distances along the combined directions of
austenite $[101]$ and martensite $[111]$ of 0.080 ± 0.003 $\overset{o}{A}$
has been attained. An experimental dependence of the
coefficients of volume expansion of austenite and martensite
on temperature is expressed by the formulae:

$$\beta_{t_M} = 30.36 \times 10^{-6} + 0.049 \times 10^{-6} \quad \text{and}$$

$$\beta_{t_A} = 62.31 \times 10^{-6} + 0.027 \times 10^{-6} \; .$$

The phase volume diagram for the steel ShKh15 may find
practical application for the study of volume changes
due to heat treatment.

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SOV/126-6-5-13/43

Diagram of the Phase Volumes of Steel ShKh15

>   There are 2 figures, 5 tables and 8 references, 7 of
>   which are Soviet and 1 German.

ASSOCIATION: Moskovskiy vecherniy mashinostroitel'nyy institut
>   (Moscow Evening Institute for Machine Building)

SUBMITTED: February 4, 1957

Card 5/5

S/129/62/000/006/007/008
E193/E383

AUTHORS: Kossakovskaya, N.N. and Zel'bet, B.M., Candidates
             of Technical Sciences

TITLE: Study of the heat-treatment procedure for steel
             R14_4 (R14F4)

PERIODICAL: Metallovedeniye i termicheskaya obrabotka
             metallov, no. 6, 1962, 53 - 54

TEXT: The steel R14F4, containing 1.2% C, 4.05% Cr, 13.0% W
and 3.43% V, is a high-speed cutting steel. The object of the
present investigation was to study the effect of a) quenching
temperature and b) time at quenching temperature on the room-
temperature hardness of this steel in the hardened and hardened
and tempered condition. The quenching temperature varied between 1 230 and
1 260 °C and the holding time between 6 and 18 sec per 1 mm of
the thickness of the specimen. Quenching was followed by
triple tempering at 560 or 580 °C. The hot-hardness was
measured at 600 - 700 °C. The durability of heat-treated milling
cutters of the steel studied was compared with that of similarly

Card 1/3

Study of the heat-treatment ....

S/129/62/000/006/007/008
E193/E383

heat-treated cutters made of steel ^18 (R18). The results can
be summarized as follows: 1) hardness of the steel studied in
the quenched condition (63-64 HRC) is not significantly affected
by variation in the quenching temperature or holding time.
2) Both these factors affect the hardness of steel in the
tempered condition. This is demonstrated in Fig. 2, where the
hardness (HRC) of test pieces after triple tempering at 560 $^{\circ}$C
(graph a) and 580 $^{\circ}$C (graph 5) is plotted against the holding
time (sec/mm) at quenching temperatures indicated by each curve.
3) The highest values of hot-hardness "Kp.60"= 625-635 are
attained after treatment entailing heating the steel to 1 260 $^{\circ}$C,
holding at the temperature for 15 - 18 sec/mm, quenching in oil
and triple tempering at 560 $^{\circ}$C. 4) The life of cutting tools
made of steel R14F4 and heat-treated under the optimum conditions
is 40% higher than that of tools made of steel R18. Milling
cutters (22 x 2 mm) made of both steels were used for cutting the
thread in bushings of radial bearings under the following
conditions: speed 0.204 - 0.223 m/min; 332 r.p.m.; feed -
201.9 - 219.4 mm/rev. The number of bushings threaded between
dressing operations was 340 for R14F4 and 244 for R18 steel.
Card 2/3
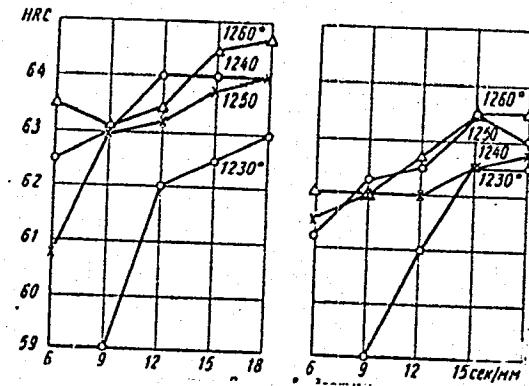
Study of the heat-treatment S/129/62/000/006/007/008
E193/E383

There are 2 figures and 1 table.

ASSOCIATION: Moskovskiy vecherniy mashinostroitel'nyy institut
                (Moscow Evening Machine-building Institute)
                2-y GPZ   (2nd GPZ)

Fig. 2:

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L 29362-66   EWT(m)/T/EWP(w)/EWP(t)/ETI   IJP(c)   DJ/JD
ACC NR: AR5019276   SOURCE CODE: UR/0277/65/000/007/0012/0013

AUTHOR: Zel'bet, B. M.; Laposhko, L. D.; Konter, L. Ya.; Piskareva,
V. G.

TITLE: Points of etching effect on the contact endurance of chromium
wide-bearings steel

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i
raschet detaley mashin. Gidroprivod. Otdel'nyy vypusk, Abs. 7.48.84

REF SOURCE: Tr. Vses. n.-i. konstrukt.-tekhnol. in-ta podshipnik.
prom-sti, no. 2 (38), 1964, 19-28

TOPIC TAGS: ball bearing steel, pickling, endurance test, metal
etching

ABSTRACT: Research data are given on the dependence of pickling
points (PP) on the metallurgical qualities of steel and of their
effect on the contact endurance of ShKh15SG steel. The depth of PP
on surfaces of bearings parts which had been subjected to cold pickling
may surpass the normal allowance for fine grinding or polishing. The
PP formed in areas of maximum porosity are breeders of fatigue chipping-
off which sharply decrease steel endurance. The PP formed in areas of
dense macrostructure does not, as a rule, cause a fatigue chipping-off.

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UDC 669.14.018.24:539.434

L 29362-66

ACC NR: AR5019276

The degree of PP effect on the contact endurance of steel decreases when steel density is increased. In particular one should expect a lesser PP effect on the contact endurance of steel which had been subjected to electroslag or vacuum remelting.* One of the reasons for PP formation on non-pickled surfaces of bearings parts is the con-tamination of steel by large inclusions which easily chip-off under grinding processes. 11 References.

SUB CODE: 11,13   SUBM DATE: ~~Jul65~~ none

* probably "or"

Card 2/2 CC

ZEL'BET, M. P.

Card 1/1   : Pub. 41-7/18   FD-1380

Author   : Gulyayev, A. P. and Zel'bet, M. P.

Title   : Metallographic study of the tempering process in hardened high-carbon steel

Periodical   : Izv. AN SSSR. Otd. tekh. nauk 3, 83-87, March 1954

Aubstract   : Studies austenite-matensite transformation by metallographic method using steel specimens with coarse grains of austenite. Diagrams, micrographs, three references.

Institution   :

Submitted   : February 10, 1954

ZEL'BET, M. P.

GULYAYEV, A.P.; ZEL'BET, M.P.

Metallographic investigation of the temper of high-carbon harde-
ned steel. Izv. AN SSSR Otd.tekh.nauk no.3:83-88 Mr '54.(MLRA 7:7)
(Steel--Metallography)

ZEL'BICH, L. Ye.

"Erroneous Diagnoses in Polyclinics and Clinics," Pediatrics, No. 3, 1948.
Docent, Chair Hosp. Pediatrics, Kiev Order Red Banner Labor Med. Inst., im.
A.A. Bogorol'ts, at Hosp. im. M.I. Kalinin, -cl948-.

ZEL'BOVICH, Ya. B.   PA 6517

USSR/Chemistry - Combustion   Jan 1948
    Chemistry - Conductivity, Thermal

"The Theory of the Expansion of a Flame," Ya. B. Zel'-
bovich, Combustion Sec, Inst of Chem Phys, Acad Sci
USSR, Moscow, 21 pp

"Zhur Fiz Khim" Vol XXII, No 1

Equations for thermal conductivity and diffusion based
on the chemical reactions in flame propagated by ex-
plosive mixture. Explains general properties of the
distribution of temperature in flame. Method solves
boundary value of speeds during expansion and thermal
conductivity. Establishes equations to calculate ex-
pansion of flames during chain reactions. Submitted
10 May 1947.
                                                    6517

SHEYKIN, M.I. (Leningrad); ZEL'BRANDT, V.A. (Leningrad)

Practical method of calculating the inflow of water into foundation pits through a multilayered medium. Osn., fund. i mekh. grun. 6 no.5:24-25 '64.

(MIRA 17:12)

GRINSHTEYN, V.Ya. [Grinsteins, V]; MEDNE, K.K.; ZAYEVA, S.P.; STOLYGVO,
N.S.; VEVERIS, A.P.; GERMANE, S.K.; ALBERTA, M.A.; GRIGALINOVICH,
G.A.; TEMMERE, V.A., ZELCHA, S.B. [Zelca, S.]

Tuberoolastatic properties of mixed thiosemicarbazone guanyl-
hydrazone 1,3-indandione, a representative of a new type of
antitubercular substances. Dokl. AN SSSR 147 no.5:1083-1095
D '62.

(MIRA 16:2)

1. Institut organicheskogo sinteza i Institut eksperimental'noy
i klinicheskoy meditsiny AN Iatviyskoy SSR. Predstavleno aka-
demikom A.N. Nesmeyanovym.
(TUBERCULOSIS)   (ANTIBIOTICS)   (KETONES)

BALTKAYS, Ya. [Baltkajs, J.]; VORONKOV, M.; ZELCHAN, G. [Zelcans, G.]

Atranes. Izv.AN Latv.SSR no.2:102-106 '64.   (MIRA 17:4)

1. Rizhskiy meditsinskiy institut i Institut organicheskogo sinteza
AN Latviyskoy SSR.

ACC NR: AP6033300   SOURCE CODE: UR/0409/66/000/004/0511/0514

AUTHOR: Voronkov, M. G.; Zelchan, G. I.
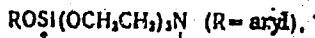
ORG: Institute of Organic Synthesis Academy of Sciences LatSSR, Riga
(Institut organicheskogo sinteza Akademii nauk LatSSR)

TITLE: Atranes. VIII. 1-Aryloxysilatranes
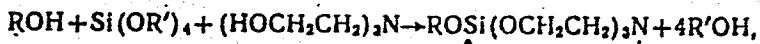
SOURCE: Khimiya geterotsiklicheskikh soyedineniy, no. 4, 1966, 511-514

TOPIC TAGS: aryloxysilatrane, biologically active compound phenyl
compound, heterocyclic base compound, esterification, aromatic hydrocarbon

ABSTRACT:The previously unreported 1-aryloxysilatranes (I)

$$ROSi(OCH_2CH_2)_3N \quad (R = aryl).$$

were obtained by the previously described transesterifica-
tion (USSR patent No. 165722, 1964):

$$ROH + Si(OR')_4 + (HOCH_2CH_2)_3N \rightarrow ROSi(OCH_2CH_2)_3N + 4R'OH,$$

where

$$R = aryl, R' = CH_3, C_2H_5.$$
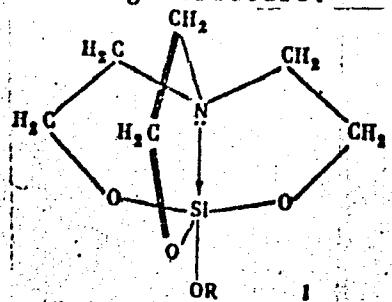
Card 1/5   UDC: 542.95+546.287+547.89

ACC NR: AP6033300

The reaction takes place on distilling an equimolar mix-
ture of tetraethoxy- or tetramethoxysilanes, triethanol-
amine, the appropriate phenol (or naphthol), an inert sol-
vent (xylene or toluene), and catalytic amounts of an
alkali metal hydroxide or without it. In the case of
phenol and its derivatives, the presence of the catalyst
increases the yield of I by 5—40%, while in the case of
nitrophenoxysilatrans, the yield of I decreased by 4—25%
in the presence of the catalyst. Composition, yields, and
melting points of I are given in the table. The 1-aryoxy-
silatranes are colorless crystals (with the exception of
1-nitrophenoxysilatrane, which is a yellow crystal), solu-
ble in organic solvents and to a certain extent in water.
Data on dipole moments and IR and PMR spectra indicate
that I have the following structure:

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ACC NR AP6033300

1-Aryloxysilatranes ROSi(OCH$_2$CH$_2$)$_3$N

R	m.p. °C	Formulas
C$_6$H$_5$	228—229.5	C$_{12}$H$_{17}$NO$_4$Si
2-CH$_3$C$_6$H$_4$	218—219.5	C$_{13}$H$_{19}$NO$_4$Si
3-CH$_3$C$_6$H$_4$	162.5—163.5	C$_{13}$H$_{19}$NO$_4$Si
4-CH$_3$C$_6$H$_4$	188—189	C$_{13}$H$_{19}$NO$_4$Si
4-(CH$_3$)$_3$CC$_6$H$_4$	252—253	C$_{16}$H$_{25}$NO$_4$Si
5-CH$_3$-2-(CH$_3$)$_2$CHC$_6$H$_3$	217.5—218.5	C$_{16}$H$_{25}$NO$_4$Si
4-ClC$_6$H$_4$	166—167	C$_{12}$H$_{16}$ClNO$_4$Si
2,4,6-Cl$_3$C$_6$H$_2$	230—230.5	C$_{12}$H$_{14}$Cl$_3$NO$_4$Si
2-O$_2$NC$_6$H$_4$	233—234	C$_{12}$H$_{16}$N$_2$O$_6$Si
3-O$_2$NC$_6$H$_4$	197.5—198.5	C$_{12}$H$_{16}$N$_2$O$_6$Si
4-O$_2$NC$_6$H$_4$	182.5—184	C$_{12}$H$_{16}$N$_2$O$_6$Si
2-C$_{10}$H$_7$	184.5—185.5	C$_{16}$H$_{19}$NO$_4$Si

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Table cont.

*Without a catalyst	Found, %					Calc'd, %			Yield %
	S	C	H	N	S	C	H	N	
	10.44 10.51	54.12	6.75	5.36	10.50	53.91	6.41	5.24	99 89*
	10.22 10.03	55.31	6.69	5.04	9.98	55.49	6.81	4.98	98 83*
	10.03	55.86	6.96	5.23	9.98	55.49	6.81	4.98	89 82*
	10.14	55.30	7.05	5.15	9.98	55.49	6.81	4.98	98 56*
	9.73 9.97	58.95	7.64	4.31	8.68	59.41	7.79	4.33	93
	8.89 8.89	59.60	7.59	4.53	8.68	59.41	7.79	4.33	90 81*
	8.74 8.81	47.61	5.60	4.59	9.31	47.76	5.34	4.54	~100 ~100*
	9.51 9.49	38.69	3.88	4.06	7.58	38.88	3.81	3.78	28
	7.47 7.48	45.93	5.33	8.73	8.99	46.14	5.16	8.65	58
	9.20 9.35	46.50	5.13	8.69	8.99	46.14	5.16	8.65	87 91*
	9.10 9.16	46.42	5.22	9.17	8.99	46.14	5.16	8.65	75 ~100*
	8.67	60.45	6.01	4.61	8.85	60.54	6.03	4.41	88
	8.95 8.97 8.98								

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ACC NR AP6033300

Physiological activity of I is considerably lower than that of 1-arylsilatranes, e.g., 1-phenoxysilatrane is 500 times less toxic than 1-phenylsilatrane. The introduction of substituents into aromatic ring of the aryloxysilatranes $(CH_3, (CH_3)_2CH, Cl,$ and $NO_2)$ further decreases their toxicity, as shown from the LD_{50} data obtained for white mice:

R	LD_{50}, mg/kg
C_6H_5	200
$p-NC_6H_4$	700
$p-ClC_6H_4$	1050
$p-CH_3C_6H_4$	1275
$5-CH_3-2-(CH_3)_2CHC_6H_3$	4000

Orig. art. has: 1 table

[WA-50; CBE No. 14]

SUB CODE: 07/ SUBM DATE: 12Feb65/ ORIG REF: 007

Card 5/5

KOCHISH, F.I.; ZEL'CHANE, O.Ya. [Zelcane, O.]

Preservability of vitamin C in artificially vitaminized milk
prepared by the Riga Milk Combine. Vop. pit. 23 no.1:82-83
Ja-F '64.   (MIRA 17:8)

1. Iz Respublikanskoy sanitarno-epidemiologicheskoy stantsii
Ministerstva zdravookhraneniya Latviyskoy SSR, Riga.

ZELCHINSKI, Mechislav (ZIELCZRNSKI, Mieczyslaw)

Utilization of the columnar rec--bination phenomenon for the
determination of the relative biological efficacy of radiation.
Nukleonika 7 no.3:175-182 '62.

1. Obyedinennyy institut yadernikh issledovaniy, Moskva.

ZELCSENYI, Geza

Answering Dr. Lajos Fialovszky's remark. Geod kart 14 no.5:370-376
'62.

1. Allami Foldmeresi es Terkepeszeti Hivatal fomernoke.

CSEBOTAREV, A.Sz.[Chebotarev, A.S.] prof, (USSR); LEBEDEV, N.N., a muszaki
tudomanyok kandidatusa, docens (USSR); ZELCSENYI, Geza (Hungary)

Soviet remarks about our 1st special issue. Geod kart 14
no.3:199-200 '62.

...the .... is used for measuring KRE.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Nuclear Research Institute

AUTHOR: Zol'chinskiy, M.

UR/0205/65/005/002/0161/0165

TOPIC TAGS: relative biological effectiveness, ionizing radia

L 5039-65

the ... ... is sufficient for total ...

... number of recombining ions does not depend ... ... have time to recombine.
rate, but ...

L 04509-67   EWT(m)/EWF(1)   IJP(c)

ACC NR: AP6035631   SOURCE CODE: UR/0089/66/020/005/0392/0396

AUTHOR: Lebedev, V. N.; Zel'chinskiy, M.; Salatskaya

ORG: none

TITLE: Experimental determination of radiation quality factors in the vicinity of high-energy accelerators

SOURCE: Atomnaya energiya, v. 20, no. 5, 1966, 392-396

TOPIC TAGS: high energy accelerator, synchrocyclotron

ABSTRACT: The results of some measurements of the effective quality factors for pulsed molticomponent radiation in the vicinity of a 10-Bev synchrophasotron are presented. The quality factors obtained by a recombination method varied from 3 to 11. These values are compared with values from other high-energy accelerators. Some data on values measured during experiments with a 680-Mev synchrocyclotron are also given. Orig. art. has: 1 figure and 2 tables. [NA]

SUB CODE: 20 / SUBM DATE: 21 Oct 65 / ORIG REF: 011 / OTH REF: 014

Card 1/1   mjs   UDC: 577.391

ZELCSENYI, G.

A geodetic and cartographic exhibition. p.309.
(Geodezia es Kartografia, Vol. 8, no. 4, 1956, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 9, Sept. 1957. Uncl.