

PTA

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1256
Szymański M. Hydraulic Gypsum (Flooring Plaster) and its Use in
Building Practice.
„Gips hydrauliczny (estrichgips) i jego zastosowanie w budowni-
ctwie”. Materiały Budowlane. No. 4, 1951, pp. 84—89, No. 5, 1951, pp.
116—120, 7 figs., 7 tabs.

Properties of hydraulic gypsum. Production diagram for an inten-
ded Soviet gypsum plant (with an output of 8250 tons p. a.). Gypsum
as ingredient for mortars, method of preparation of mortars, com-
position and range of application. Gypsum as an ingredient for con-
crete, method of preparation and range of application. Methods
of preparing floorings from hydraulic gypsum. The use of vibrators.

(over)

SZYMANSKI, M.

615. Szymanski, M., Computation of foundation stability
by means of diagrams (in Polish), *Inżyn. Budown.* 9, 11, 107, 1972.
No. 1072.

The author presents diagrams obtained by Russian scientists
M. I. Gorbunov-Pozdny and V. V. Gretchmer for computation
of foundations. The diagrams are designed for calculation of
critical unit soil pressures allowable under strip foundations.
These diagrams can be used only for cohesionless soils spread in
deep layers.

The paper states that the diagrams are based on the theory of
limit equilibrium.

The diagrams are presented in the form of a series of curves.
For a given value of the angle of internal friction, the diagrams
show the relationship between the unit soil pressure and the depth
of the foundation.

M. Szymanski, Poland

SZYMIANSKI, M.

" Porous Concrete Without Sand." p. 60 (Inzyniera I Budownictwo, Vol. 11, No. 2, Feb. 1954, Warszawa)

SO: Monthly List of East European Accessions, Vol. 3, No. 6, Library of Congress, June, 1954, Uncl.

SZYMAŃSKI, M.

Applying light porous autoclaved concrete to the production
of big blocks. P. 26 MATERIALY BUDOWLANE (Naczelna Organizacja
Techniczna) Warszawa Vol. 11, no. 1, Jan. 1956

SOURCE: REAL LC Vol. 5, no. 7, July 1956

MIYANISHI, H.

"Residential Buildings of Foam Concrete", p. 257, "The Problem Session of the Polish Academy of Science on the Subject of Building Materials", p. 259, (INZYNIERIA I BUDOWNICTWO, Vol. 11, No. 8, Aug. 1954, Warszawa, Poland)

EO: Monthly List of East European Accessions, (EEL), LC, Vol. 4, No. 5, May 1955, Encl.

1711 1111, .

Glass fibers for concrete reinforcement.

B. 432. (I WIMIDRIA I WOPRISLSTO) (Warszawa, Poland) Vol. 14, no. 12, Dec. 1957

30: Monthly Index of East European Accession (ESAI) LC Vol. 7, No. 5, 1958.

SZYMANSKI, M.

Pneumatic constructions in the building industry. p. 79.

INZYNIERIA I BUDOWNICTWO. (Naczelna Organizacja Techniczna i Polski Związek Inżynierów i Techników Budowlanych) Warszawa, Poland.
Vol. 16, no. 2, Feb. 1959.

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

S/035/62/000/009/044/060
A001/A101

AUTHOR: Szymański, Marian

TITLE: The role of a geodesist in development of the plan of division of built-up territories in rural country

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 9, 1962, 13, abstract 9G93 ("Przegł. geod.", 1961, v. 33, no. 11, 426 - 430, Polish)

TEXT: The author describes the composition, content and sequence of development of preliminary and detailed projects for division into parcels of built-up rural territories. He enumerates necessary geodetic materials and field measurement works for transferring the project to the country. Samples of a project are presented. ✓

G. L.

[Abstracter's note: Complete translation]

Card 1/1

SZYMANSKI, Marian

Poland

Magister Inzynier

no affiliation given

Warsaw, Przegląd Geodezyjny, Vol 34, No 10, Oct
1962, pp 419-421.

"Surveying in Agriculture".

SZYMANSKI, Marian, mgr inż.

Problems in the scope of provincial and county agencies of surveying
services in the agricultural administration. Przegl geod 34 no.10:
419-421 0 '62.

SZYMANSKI, M., mgr inż.

Designs of joining prefabricated building parts in apartment
houses. Inz i bud 20 no.3:116-120 Mr '63.

SZYMANSKI, Michal, mgr. inz.

Recording of land and the administrative managing of land in
cities and suburb settlements. Przegl geod 34 no.6:244-246
Je '62.

SZYMANSKI, M.

Land inventories. p. 403

PRZEGLAD GEODEZYJNY. (Stowarzyszenie Naukowe-Techniczne Geodetow Ploskich)
Warszawa. Vol. 15, no. 10, October 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 2, Feb. 1960

Uncl.

SZYMANSKI, M.

(4)

Warsaw, Prace Geologiczne, Vol. 33, No. 9, September 1961.

1. Hand Booklet on the Importance for the National Economy.
M. Szymanowski, pp. 381-385.
2. Problems of the 1st Land Registry. M. Szymanowski, pp. 385-389.
3. Technical Problems in Establishing and Conducting Land Registry. M. Szymanowski, pp. 390-392.
4. An Air Survey with Greater Accuracy Instead of Forward Vision Survey. M. Szymanowski, pp. 392-395.
5. Municipal Underground Installations, Part II. M. Szymanowski, pp. 395-399.
6. The Use of Old Geological Data on the Territory of the Silesian Coal Basin. M. Szymanowski, pp. 399-401.
7. Investigating the Quality of Geologic Work. M. Szymanowski, pp. 401-403.

SZYMANSKI, M., mgr inz.

Application of 18-m, span cylindrical coats made of reinforced concrete. Inz i bua 19 no.8:331-332 Ag '62.

SZYMAŃSKI, Michał, mgr inż.

Several examples of prefabricated ferroconcrete roofs over large areas. Inz i bud 19 no.11:448-451 N '62.

SZYMANSKI, Michal, mgr inz.

Prefabricated ferroconcrete coverings in the form of hyperbolic paraboloids 6 X 18 m for roofs of industrial buildings. Inz i bud 19 no.12:484-486, 492 D '62.

SZYMANSKI, M., mgr inz.

Causes of failure of a conveyer trestle in a potassium
combine. Inz i bud 21 no.8:290-293 Ag '64.

SZYMANSKI, Pawel, inz.

A photocell switching the factory lights on and off. Przegl
techn 86 no.9:10 28 F '65.

Szymanski, Piotr

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Szymański, Piotr

POL.

✓ Rozwiązanie Przybliżone Równania
Warstwy Przysłennej Prandla (An Ap-
proximate Solution of Prandtl Equation of
Fluid Motion in the Boundary Layer).
Piotr Szymański, Arch. Mech. Stos-
owanej (Warsaw), No. 7, 1956, pp. 34-61.
In Polish, with summaries in English and
Russian.

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SZYMANEKI, Z.

"When the Cost Index Rises", P. 309, (GOSPODARKA MIESZNA, Vol. 6, No. 10,
Oct. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), IC, Vol. 4, No. 5,
May 1955, Uncl.

SZYMANSKI, Roman, mgr

Designing organizational documentation for new capital
investments in industry. Przegl techn 85 no. 16:1,3
19 Ap '64.

J. EYSZYN, Kazimierz; SZYMANSKI, Ryszard

Phospholipids in the treatment of chronic glomerulonephritis with nephrotic syndrome. Polski tygod. lek. 16 no.50:1946-1949 11 D '61.

1. Z Kliniki Nefrologicznej; kierownik: prof. dr Zdzislaw Wiktor --
III Katedry Chorob Wewnętrznych A.M. we Wrocławiu; kierownik: prof.
dr Edward Szczeklik.

(PHOSPHOLIPIDS ther) (NEPHROTIC SYNDROME ther)
(GLOMERULONEPHRITIS ther)

KOSSOWSKI, Leszek; SZYMANSKI, Ryszard

Value of Sternheimer-Malbin cells in pyelonephritis. Pol. tyg. lek.
17 no.7:258-261 12 F '62.

1. Z Kliniki Nefrologicznej AM we Wroclawiu; kierownik: prof. dr
Z. Wiktor i z III Katedry Chorob Wewnetrznych AM we Wroclawiu; kierownik
prof. dr E. Szczeklik.

(PYELONEPHRITIS urine)

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Operation analysis of electric installations on factory trawlers.
Bud okretowe Warszawa 8 no.5:176-179 My '63.

1. Ośrodek Badawczy Centralnego Biura Konstrukcji Okretowych
Nr 1, Gdansk.

SZYMANSKI, S.

Fifteen years of activities of the Transportation and Communication
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SZYMANSKI, Stanislaw, inż.

Development of the staff of graduate engineers and technicians.
Przełł techn 84 no.16:5 21 Ap '63.

1. Przewodniczący Zarządu Okręgowego Stowarzyszenia Inżynierów i
Techników Górnictwa, Wrocław.

SZYMANSKI, Stanislaw

The influence of overgrowth and wolves upon the growth rate and suppression of untended trees in a pine thicket. Sylwan 106 no.3:11-24 '62.

1. Zaklad Ogolnej Hodowli Lasu, Wyzsza Szkola Rolnicza, Poznan.

DYMOWSKA, Zofia; SZYMANSKI, Stanislaw

Studies on the survival of *Leptospira canicola* in the organism of ticks
Ixodes ricinus. Med. dosw. mikrobiol. 14 no.4:379-382 '62.

1. Z Zakladu Parazytologii Lekarskiej PZH w Warszawie.
(LEPTOSPIRA CANICOLA) (TICKS) (INSECT VECTORS)

DEPODZ, Jan; SZYMANKI, Stanislaw

Further data on the incidence and ecology of *Dermacentor pictus* Hertz. in the Rajgród-Kobiela region. Wied. parazyt. 11 no. 5:493-495 '65.

1. Zakład Parazytologii Państwowej AM i Zakład Parazytologii Lekarskiej Państwowego Zakładu Higieny, Warszawa.

SZYMANSKI, Stanislaw; SZCZERBINSKI, Wieslaw; GNIWSZEW, Irena

Influence of Quality of pine seedlings on the height growth
and morphological differentiation of four-year-old plantations.
Sylvan 104 no.4:17-33 Ap '60.

1. Zaklad Ogolnej Hodowli Lasu, Wyzsza Szkola Rolnicza, Poznan.

SZYMANSKI, Stanislaw; SZCZERBINSKI, Wieslaw

Effect of treatments to render unharmed the outgrowths and
expanders on the growth of trees in a pure pine sapling stand.
Prace nauk roln i lesn 17 no.3:515-535 '65.

1. Institute of General Forest Cultivation of the School of
Agriculture, Poznan.

SZYMANSKI, Stanislaw

Development dynamics of uncultivated pine thickets. Prace
nauk roln i leśn 15 no. 3:341-404 '63. [publ. '64]

1. Institute of General Forest Cultivation, College of Agriculture, Poznan.

KOZLOWSKI. Slawomir; SZYMANSKI, Stanislaw; ZOLTOWSKI. Zbigniew; ZUPOWSKI
Kazimierz; PRZESMYCKI, Feliks; PIELOWSKI. Zygmunt; RYSZKOWSKI,
Leslaw.

A search for arborviruses previously not known to occur in
Poland. III. Preliminary arachno-entomologic study of the
Kampinos Forest and adjoining areas. Przegl. epidem. 18
no.4:391-399 '64.

SZYMANSKI, Wojciech

Isotopic exchange in the system $\text{Ca}_2\text{FeCy}_6 (\text{s}) - \text{Cu}^{++}$.
Rocz chemii 37 no.5:581-583 1963.

1. Department of Physical Chemistry, Nicholas Copernicus
University, Torun.

SZYMANSKI, Stefan

The importance of phosphorus and humate compounds in the feeding of plants. Acta agrobotan 9 no.1:195-198 '60.

SZYMANSKI, Stefan

Studies on phosphate-humin acid compounds, their characteristics and importance for plant feeding with phosphor. Prace nauk roln i lesn
11 no. 2:31-87. '62

1. Department of Plant Physiology, Agricultural College, Poznan
Chairman: prof. dr. Jan Wojciechowski.

SZYMANSKI, T.

Chemical industries at the 27th Poznan International Fair, p. 779

PRZEGLED TECHICZNY (Naczelna Organizacja Techniczna)
Warszawa, Poland
Vol. 79, no. 16, August 1958.

Monthly list of East European Accessions Index (EEAI), LC Vol. 8, No. 11
November 1959
Uncl.

SZYMAŃSKI, Tadeusz

Advertisement problems in the chemical industries. Przem chem
39 no.8:494-496 Ag '60.

1. Centrala Handlowa Przemysłu Chemicznego, Warszawa

SZYMANSKI, W. ; RYSZKOWSKI, J.

"Hog fattening", p. 8, (GOSPODARKA MIESNA, Vol. 5, No. 1, January, 1953, Warszawa, Poland)

SO: Monthly List of East European Accessions, L.C., Vol. 3, No. 4, April, 1954

SZYMANSKI, Wacław

Observations of a ring-like solar flare. Urania 33 no.4:117-
118 Ap '62.

POLAND / Physical Chemistry. Electrochemistry.

B

Abs Jour: Ref Zhur-Khimiya, No 21, 1958, 70205.

Author : Basinski, A. Szymanski, W.

Inst : Not given.

Title : Determination of the Solubility of Cadmium Ferrocyanide in Water by Measuring Specific Electrical Conductance of a Saturated Solution at 25° C

Orig Pub: Roczn. chem., 1958, 32, No 1, 23 - 27.

Abstract: The specific electrical conductance χ of a saturated aqueous solution of $\text{Cd}_2\text{Fe}(\text{CN})_6$ (I) at 25°C has been measured; $\chi = (3.85 \pm 0.08) \cdot 10^{-6}$. Assuming I to be a strong electrolyte the authors calculated the solubility of I according to Onsager's equation to be $5.35 \cdot 10^{-6}$ mole/l.

Card 1/1

SZYMANSKI, W.

New method of determining the mobility of ions from resistance measurements. Wiad chem 16 no.8:518-519 Ag '62.

SZYMANSKI, Wojciech

Binodal curve of the ternary system $\text{MgCl}_2 - (\text{CH}_3)_2\text{CO} - \text{H}_2\text{O}$. Rocz
chemii 33 no.4/5:1137-1140 '59. (EEAI 9:9)

1. Katedra Chemii Fizycznej Uniwersytetu M.Kopernika, Torun.
(Magnesium chloride) (Acetone) (Water)
(Systems (Chemistry))

BASINSKI, Antoni; SZYMANSKI, Wojciech; MALEK, Gertruda

Isotopic exchange in the system $\text{Ag}_4[\text{Fe}(\text{CN})_6]$ (st) - Ag^+ .
Rocz chemii 36 no.7/8:1147-1149 '62.

1. Department of Physical Chemistry, N. Copernicus University,
Torun.

BASINSKI, Antoni; SZYMANSKI, Wojciech; DUDZIK, Malgorzata; KRYGIER, Alicja.

Determination of the solubility of cobalt ferrocyanide and
manganese ferrocyanide by the tracer method using ^{60}Co and
 ^{54}Mn . Roczniki chemii 36 no.7/8:1139-1142 '62.

1. Department of Physical Chemistry, N.Copernicus University,
Torun.

BASINSKI, Antoni, SZYMANSKI, Wojciech, SZABLEWSKI, Lech

Solubility of thallium ferrocyanide in water and in some organic solvents as determined by the tracer method. *Rocz chemii* 36 no.7/8:1255-1257 '62.

1. Katedra Chemii Fizycznej, Uniwersytet im. M.Kopernika, Torun.

BASINSKI, Antoni; SZYMANSKI, Wojciech; STERANKIEWICZ, Emilia

Isotopic exchange in the system $\text{Hg}_2\text{FeCy}_6(\text{s}) - \text{Hg}^{++}$. *Rocz chemii* 37 no.5:585-587 '63.

1. Department of Physical Chemistry, Nicholas Copernicus University, Torun.

BASINSKI, Antoni; SZYMANSKI, Wojciech; KRYGIER, Alicja; ZAPLOWSKA, Gabriela

Conductometric and radiometric studies on the composition of mercuric ferrocyanide. *Rocz chemii* 37 no.11:1345-1350 '63.

1. Department of Physical Chemistry, N. Copernicus University, Torun.

WROBLEWSKA-MULARCZYKOWA, Zofia; ZOLTOWSKI, Zbigniew; DOBRZYNSKI, Leszek;
PRZESMYCKI, Feliks; SZYKULA, Roman; OLKOWSKA, Danuta; SWOBODZINA,
Ewa; SZYMANSKI, Stanislaw; KOZLOWSKI, Slawomir; ZUKOWSKI, Kazimierz.

A search for arborviruses previously not known to occur in
Poland. II. Serologic and virologic studies in selected areas
of Warsaw and Bialystok. Przegl. epidem. 18 no.4:381-390 '64.

SZYMANSKI, Waldemar

Peroperative pneumoperitoneum as a prevention of postresectional
air space. Gruzlica 33 no.6:487-490 Je '65.

1. Z Kliniki Chirurgii Klatki Piersiowej Studium Doskonalenia
Lekarzy w Zakopanem (Kierownik: prof. dr. W. Rzepecki).

SEYMOUR, E.

"Electrodynamics with Higher Derivatives as a Particular Case of Electrodynamics with Nonlinear Equations", P. 167, (POLSKA AKADEMIA NAUK, Vol. 2, No. 4, 1954, Warsaw, Poland)

EC: Monthly List of East European Accessions (EMAL), LC, Vol. 4, No. 3, March 1955, Uncl.

SZYMAŃSKI, Z.

Poland/Theoretical Physics - Quantum Electrodynamics

B-5

Abst Journal : Referat Zhur - Fizika, No 12, 1936, 33767

Author : Szymanski, Z.

Institution : Warsaw University, Poland

Title : Electrodynamics with Higher Derivatives as a Particular Case of
Nonlinear Electrodynamics

Original

Periodical : Byul. Pol'skoy AN, Division 3, 1954, 2, No 4, 165-167

Abstract : Infeld and Plebanski (abstract 33764) constructed a formalism, from which one obtains (generally nonlinear) equations for the electromagnetic field. The characteristic feature of this formalism is the use of the electromagnetic field tensor without employing potentials. The electromagnetic potential appears in this theory as a derived quantity. The Maxwell equations follow from this theory as a limiting case when the variational principle is used with a supplementary condition.

Card 1/3

Poland/Theoretical Physics - Quantum Electrodynamics

B-5

Abst Journal : Referat Zhur - Fizika, No 12, 1956, 33767

The author shows that it is possible analogously to construct a theory with higher derivatives. Here one introduces the antisymmetrical tensor of the electromagnetic field $p_{\alpha\beta}$ (determined by the vectors D and H) and the current j_α is determined:

$$p_{\alpha\beta} = -p_{\beta\alpha}, \quad j_\alpha = (1 + a^2 \square) p_{\alpha\beta, \beta}$$

(a is a constant with dimensionality of length). If the Lagrangian H depends only on 2 invariants: $H = H(P, \rho)$, where $P = -1/4 p_{\alpha\beta} p_{\beta\alpha}$, $\rho = (j_\alpha j_\alpha)^{1/2}$, then the variational principle leads to the following equations:

$$f_{\alpha\beta} = A_{\beta\alpha} - A_{\alpha\beta},$$

$$f_{\alpha\beta} = (\partial H / \partial P) p_{\alpha\beta}, \quad A_\alpha = (1 + a^2 \square) [(\partial H / \partial \rho) j_\alpha / \rho],$$

i.e., the new antisymmetric field tensor $f_{\alpha\beta}$ (determined by the vectors E and B) is a 4-curl of a certain 4-vector.

Card 2/3

SZYMANSKI, Z.

Szymański, Z. On linear electrodynamics with higher derivatives. Bull. Acad. Polon. Sci. Cl. III. 3, 217-222 (1955).

~~2 - F/W~~

The author considers generalizations of classical electrodynamics in which the Lagrangian density contains derivatives of the four-vector potential, $A_\alpha(x)$, $\alpha=1, \dots, 4$, up to the n th order. Under the assumptions of 1) relativistic invariance, 2) gauge invariance, 3) linearity of the field equations, he shows that the most general field equation can be written in the form

$$(1) \quad \prod_{j=1}^{n-1} (\square - \mu_j^2) A_\alpha(x) = 0.$$

This shows that the formalism assumed can give no more general equations than (1), which was the starting point of the quantum-mechanical investigation of Pais and Uhlenbeck [Phys. Rev. (2) 79, 145-165 (1950); MR 12, 227].

A. S. Wightman (Princeton, N.J.).

Revised

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situation's equation and its role in the theory of gases. p. 501

Compendium INDIAN JOURNAL vol. 5, no. 4, 1955

referred

so. INDIAN JOURNAL OF PHYSICS vol. 5, no. 10 Oct. 1956

SLYMANSKI, Zdzisław

3

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Phys

Równanie Boltzmann'a i jego znaczenie
w Teorii Gazów. Zdzisław Szymanski.
Rozprawy Inżynierskie (Warszawa), No. 4,
1955, pp. 501-553. 30 refs. In Polish,
with summaries in English and Russian.
Analysis of gas phenomena using phe-
nomenological hydrodynamics, kinetic
theory, and statistical mechanics. Funda-
mental assumptions of the kinetic theory
of gases are represented by the kinetic
distribution function. Boltzmann equation
is solved by the Maxwell velocity dis-
tribution law, and the Enskog-Chapman-
Burnett theory is used to determine ki-
netic coefficients.

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SZYMANSKI, Z.

SZYMANSKI, Z. Use of machines and tools in track service. p. 61

Vol. 8, no. 3, Mar. 1956
PRZEGLAD KOLEJOWY DROGOWY
TECHNOLOGY
Warszawa, Poland

So: East European Accession, Vol. 6, no. 2, 1957

Z. Szymanski

Distr: 4E3c/4E3d

19 17
/ Nucleon-surface interaction and the (p,n) reactions.
J. Sawicki and Z. Szymanski (Polish Acad. Sci., Warsaw).
Nuovo cimento [10], 3, 1777-84 (1957) (in English); cf. C.A.
50, 16144b.---Theoretical. The contribution of the interac-
tions of the reacting nucleons with the surface of the core
in (p,n) reactions is calcd. In $\text{Si}^{28}(p,n)\text{P}^{28}$, the relative
contribution of this effect to ΔV for $\theta = 0$ amounts to 12%.
G. L. Cunningham

R.L.C.

SZYMAJSKI, ZDZISLAW

FLOW FLOW OF POLYMER OF PURIFIED GASES.

due to molecule gas flow, and the case of flow
past a sphere. The method of calculation used to
solve the last problem is described. Analytical re-
sults are compared with experimental data.

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POLAND/Nuclear Physics - Nuclear Reactions.

C

Abs Jour : Ref Zhur Fizika, No 8, 1959, 17397
Author : Sawicky, V., Szymanski, Z.
Inst : -
Title : Nucleon-Surface Interaction and the (p,n) Reactions
Orig Pub : Bul. Inst. politehn. Iasi, 1957, 3, No 3-4, 53-60
Abstract : See Referat Zhur Fizika, 1958, No 3, 5508; 1959, No 1, 471.

Card 1/1

- 36 -

~~ZDYSLAW SZYMANSKI, Z~~
APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001754610014-2"
POLAND/Nuclear Physics - Structure and Properties of Nuclei

Abs Jour : Ref Zhur - Fizika, No 6, 1958, No 12636
Author : Szymanski Zdyislaw
Inst : Not Given
Title : Collective Motion of Nucleons in the Atomic Nucleus
Orig Pub : Postepy fiz., 1957, 8, No 4, 437-455
Abstract : No abstract

Card : 1/1

SZYMANSKI Z.

POLAND/Nuclear Physics - Structure and Properties of Nuclei.

C.

Abs Jour : Ref Zhur - Fizika, No 8, 1959, 17329

Author : Szymanski, Z.

Inst : -

Title : Excited Levels of Nuclei with Mixed Configurations.

Orig Pub : Nukleonika, 1958, 3, Spec. Number, 18-27

Abstract : The paper is a reprint of two previously published articles by the author (Referat Zhur Fizika, 1959, No 7, 14884; Abstract 17328)

Card 1/1

- 31 -

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001754610014-2"

POLAND/Nuclear Physics - Structure and Properties of Nuclei.

Abs Jour : Ref Zhur - Fizika, No 7, 1959, 14884

Author : Szymanski, Z.

Inst : Institute of Nuclear Research, Polish Academy of Sciences

Title : Excited Levels of Nuclei with Mixed Configuration. I.
Method of Calculation

Orig Pub : Bull. Akad. polon. sci. Ser. sci. math., astron. et phys.,
1958, 6, No 5, 343-348, XXVI

Abstract : Using the Racah algebra the author writes an expression for the matrix element of the interaction between the neutron and proton configurations j_n^n and j_p^p in the case $j_n \neq j_p$. The author proposes to carry out several calculations for the region $30 \leq A \leq 130$, particularly for even-even nuclei, in order to analyze, within the shell model, the schemes of levels which in the generalized

Card 1/2

POLAND/Nuclear Physics - Structure and Properties of Nuclei.

C

Abs Jour : Ref Zhur Fizika, No 8, 1959, 17328

Author : Szymanski, Z.

Inst : Institute of Nuclear Research, Polish Academy of Sciences

Title : Excited Levels of Nuclei with Mixed Configurations. II.
Numerical Example.

Orig Pub : Bull. Acad. polon. sci. Ser. sci. math., astron. et phys.,
1958, 6, No 7, 469-475, XXVII

Abstract : The Racah method, which was expounded by the author in
the preceding article (Referat Zhur Fizika, 1959, No 7,
14884) as applied to the calculation of mixed configura-
tions, is used for the calculation of the levels of Zn
(configuration $N_p j_p)^2 (N_n j_n)^2$, $N_p j_p = 2p_{3/2}$; $N_n j_n =$
 $= 1 f_{5/2}$).

Card 1/2

- 30 -

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2
Deformability of nuclear cores. Zdzislaw Szymanski
(Univ. Warsaw). *Nuclear Phys.* 11, 484 (1959). The
self-consistent deformation of the nuclear core induced by
an outside nucleon has been calculated. It is shown that this
can account for the weak collective effects of heavy nuclei
near closed shells. N. E. Pickering

L 14379-63

EMT(m)/BDS AFPTC/ASD

ACCESSION NR: AP3001815

P/0045/63/023/005/0543/0551

AUTHOR: Szymanski, Z.

TITLE: Ground state equilibrium deformations of nonstable nuclei in the transuranic region

SOURCE: Acta physica polonica, v. 23, no. 5, 1963, 543-551

TOPIC TAGS: Ground state equilibrium deformation , unstable nuclei, transuranic region, nuclear quadrupole moment , deformed nucleus, spherical nucleus, quadrupole interaction, pairing interaction

ABSTRACT: Previous calculations of the equilibrium quadrupole moments and deformations in the transuranic region (Szymanski 1961) are extended to the whole region of unstable nuclei with $84 \leq Z \leq 100$ and $130 \leq N \leq 152$. Calculation of equilibrium deformation epsilon and quadrupole moment $Q_{sub 0}$ as applied to the transuranic region were found to account rather well for the general trend determined by the experimental data. The aim of the paper is to extend the calculation of deformations and quadrupole moments over the whole nuclear region

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ACCESSION NR: AP3001815

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bounded by the values $Z = 84$ to $Z = 100$ and $N = 152$. Table 1: "Equilibrium quadrupole moments and deformations." Col. 1: "Nucleus; col. 2: "calculated equilibrium quadrupole moment $Q_{sub 1}$ "; col. 3: "calculated equilibrium deformation"; col. 4: "experimental data on quadrupole moments taken from Beel et al. 1960."

"The author wishes to express his thanks to Professor H. R. Mottelson for suggesting the problem and for his numerous and valuable remarks."

Orig. has 11 graphs (in 3 figs.), 1 table, 5 numbered formulas.

ASSOCIATION: Instytut Badan Jadrowych, Warsaw (Institute of Nuclear Research)

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The investment policy of the coal mining industry. p. 20

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POLAND / Chemical Technology. Chemical Products and H-4
Their Application--Corrosion, Corrosion Control

Abs Jour: Ref Zhur--Khimiya, No 3, 1959, S602

Author : Bielski, J., Szymborski, A.

Inst : Not given

Title : Corrosion of Metals and Their Alloys in the
Oral Cavity

Orig Pub: Czasop. stomatol., 1958, 11, No 1, 33-37

Abstract: In preparing dental prosthetics, the exclusive use
of single-phase alloys is recommended, with pre-
ponderance of noble metals. Thus, in an alloy of
Au-Cu, the content of Au should be > 54 percent.
The alloys must be thermally treated and brought
to a glossy luster by polishing. An acid-resistant

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Szymborski S., Zubrzycki W. New Method of Technical Under-Water Documentation. 628.02:778.59

„Nowa metoda technicznej dokumentacji podwodnej”. Technika i Gospodarka Morska, No. 3, 1955, pp. 64—67, 5 figs.

This paper covers information on the development and results of the first experiments made in this country in the use of photography as a method for preparing technical plans of under-water structures. By means of under-water photography, an investigation was made of the surface of the concrete wall of a water barrage with view of detecting corrosion. A description is given of Polish made photographic appliances i.e. watertight protective cover for the camera, a flash lamp, under-water electron lamp, and a stand specially designed to slide on a concrete wall of the barrage. The development of operations and difficulties encountered during the work. Advantages of introducing colour photography.

GA. ①

"APPROVED FOR RELEASE: 07/13/2001

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87/012004, 8-0125-01

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Oceanographic Workshop of the Institute of Geophysics of the Polish
Academy of Sciences. p. 157

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A project of international maritime surveying; a report from the Conference of Advisors of the United Nations Educational, Scientific and Cultural Organization in Paris, September 22-23, 1958. p. 171

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Universal drilling and rack-cutting tools. p. 159. (Mechanik, Vol. 30, No. 4, Apr 1957, Warsaw, Poland)

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Ferrous Metallurgy

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~~Relation between durability of refractories and non-metallic inclusions in steel. W. Szymborski (Hulnia, Katowice, 1952, 19, No. 6, 213—215; J. Iron Steel Inst., 1953, 173, 199).—The amounts and compositions of non-metallic inclusions in steel were investigated. Furnace, ladle, and casting-pit refractories may be responsible for some inclusions, but may also remove inclusions formed during the deoxidation of steel by Al and Fe-Si. R. B. CLARKE.~~

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SO: Hutnik, No. 5, Stalinogrod, May 1953 (Air, Treasure Island # 144566, Feb. 1954, Unclassified.)

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Szymborski W., Elmer K. Stabilised Dolomite Products.

"Wyroby dolomitowe stabilizowane", Szkło i Ceramika, No. 4, 1981, pp. 180-183, 3 figs., 3 tabs.

The authors quote the characteristics and chemical analysis of stabilised dolomite products resistant to moisture. They have developed a method of computing the composition of dolomite aggregates used for burning to clinker. Experiments carried out with stabilisers on a semi-technical and industrial scale, with a view to obtain clinker from dolomite and dolomite products, yielded positive results. The materials used for the manufacture of clinker were dolomite, quartzite schist and siliceous limestone. products used were — dolomite, magnesite and serpentine. The stabilisers used were 50-per cent phosphoric acid and phosphorites. Tables are given containing a list of chemical and physical properties of the products obtained in the course of the experiments.

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Szymorski W., Elner K. Production and Application of Stabilised Dolomite Products.

"O produkcji i stosowaniu wyrobów dolomitowych stabilizowanych".
Hutnik. No. 6, 1953, pp. 194-197, 2 figs., 4 tabs.

Properties and characteristic features of stabilised dolomite. Composition of stabilised dolomite and a short exposition of the technology of clinker processing and of production of articles by the process elaborated in the Metallurgical Research Institute. Physical properties of stabilised dolomite obtained on semi industrial and production scales: refractoriness under load 2 kg/cm^2 in $^\circ\text{C}$ — $1570 \div 1580$; 12°C — $1810 \div 1840$; cold compression strength kg/cm^2 — $837 \div 823$; apparent porosity volume per cent $19.2 \div 22.2$; bulk density g/cm^3 — 2.6; specific gravity $3.45 \div 3.47$; percentage linear reheat shrinkage at 1550°C for 4 hrs. from 0.4 to 1.2 per cent; specific heat $\text{kcal/g}^\circ\text{C}$ — 0.265; resistance to violent temperature changes: cooling by air blast, 2 to 5 changes (data refer to the production on industrial scale). Investigations over the effect of open hearth slag on stabilised dolomite: products manufactured of stabilised dolomite are only slightly less resistant than magnesite products to the corrosive action of slags but are more resistant than magnesite-forsterite and forsterite products. Some examples of application of products made from stabilised dolomite.

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"Appllication of Thermal Differential Analysis for Investigation of Clays Strzegom Deposits,"
Prace Instytutow Ministerstwa Hutnictwa, No..5-6, Ministry of the Metallurgical Industry,
1955.

Szymborski, W.

✓ New basic refractories. W. Szymborski (*Prace Inst. Minist. Hutnic*, 1955, 7, 85-90).—A description is given of the theoretical background and methods of production of stabilized dolomite clinker—using borates, phosphates and salts of type AXO_4 as stabilizers—and other materials such as magnesite-dolomite and chrome-magnesite utilizing sintered magnesite and chrome ore respectively, and of materials suitable for use in thermal-shock resistant refractories. These latter are based on formation of cryst interstitial phase (spinel) allowing of elastic deformation with changes of temperature on addition of small amounts of powdered technical Al_2O_3 to magnesite of correct grain-size and firing. S. Ksdt

Szymborski, W.

✓ Application of thermal differential analysis for the investigation of clays of the Strzegom deposits. St. Basilek-Pampuchowa and W. Szymborski. *Prace Inst. Mineralogii i Hutniczej*, 7, 278-32 (1955) (English summary).—All the clays investigated are used as refractories. Any change in the thermal differential curve found was rechecked by aid of x-ray diagrams in order to find out what the breaks in the curves signified. The clays investigated were a kaolin, a montmorillonite, a bentonite, a halloysite, and a kaolin with 5% peat, as this mixt. occurs naturally. In this way it was found that the presence of montmorillonite in any clay will cause an endothermic change at 150°, which otherwise is absent. Another endothermic change is noted at 600-820°, which corresponds to crystallographic changes of kaolinite; an exothermic reaction is noted at 970-980°, which signifies either the recrystn. of $\gamma\text{-Al}_2\text{O}_3$ or the formation of corundum.

Werner Jacobson