

BRANTL, F.; SVOBODA, J.

"Stratigraphy and Tectonics of the Lower Paleozoic of Mt. Dardil Near Tetin",
P. 381, (SBORNIK. ODBIL GEOLOGICKY, Vol. 20, 1953, Praha, Czech.)

SO: Monthly List of East European Accessions, (EEML), IC, Vol. 4, No. 3,
Mar 1955, Uncl.

FRANTL, F.

"Science, the lawmaker of human society." (p.147). RISE HVEZD. (Ceskoslovenska spolecnost astronomicka) Praha. Vol. 34, No. 7, Sept. 1953.

SO: East European Accessions List, Vol. 3, No. 8, Aug 1954.

PRANTL, F.

"Some Devonian amphiporids and corals from Hranice and Becnou in Moravia,"

p. 290 (Casopis Pro Mineralogii A Geologh. Vol. 2, no: 3, 1957, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7. No. 2,
February 1958

PROCESSES AND PROPERTIES INDEX

Geological section through the ore formation at Skalka
 near Mnítek. J. Svoboda and P. Pránil. *Věstník Státní
 geol. Ústavní Rep. Českoslov. 21, 313-31 (in English, 332-33
 (1940)). This includes petrographic descriptions of oolitic
 Fe ore, contg. hematite, siderite, and green chlorite.
 Michael Fleischer*

ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

FROM CLASSIFICATION

ELEMENTS

MINERALOGY

PROCESSES AND PROPERTIES INDEX

COMMON ELEMENTS

1ST AND 2ND CROSS

3RD AND 4TH CROSS

5TH AND 6TH CROSS

7TH AND 8TH CROSS

9TH AND 10TH CROSS

11TH AND 12TH CROSS

13TH AND 14TH CROSS

15TH AND 16TH CROSS

17TH AND 18TH CROSS

19TH AND 20TH CROSS

21ST AND 22ND CROSS

23RD AND 24TH CROSS

25TH AND 26TH CROSS

27TH AND 28TH CROSS

29TH AND 30TH CROSS

31ST AND 32ND CROSS

33RD AND 34TH CROSS

35TH AND 36TH CROSS

37TH AND 38TH CROSS

39TH AND 40TH CROSS

41ST AND 42ND CROSS

43RD AND 44TH CROSS

45TH AND 46TH CROSS

47TH AND 48TH CROSS

49TH AND 50TH CROSS

51ST AND 52ND CROSS

53RD AND 54TH CROSS

55TH AND 56TH CROSS

57TH AND 58TH CROSS

59TH AND 60TH CROSS

61ST AND 62ND CROSS

63RD AND 64TH CROSS

65TH AND 66TH CROSS

67TH AND 68TH CROSS

69TH AND 70TH CROSS

71ST AND 72ND CROSS

73RD AND 74TH CROSS

75TH AND 76TH CROSS

77TH AND 78TH CROSS

79TH AND 80TH CROSS

81ST AND 82ND CROSS

83RD AND 84TH CROSS

85TH AND 86TH CROSS

87TH AND 88TH CROSS

89TH AND 90TH CROSS

91ST AND 92ND CROSS

93RD AND 94TH CROSS

95TH AND 96TH CROSS

97TH AND 98TH CROSS

99TH AND 100TH CROSS

PRANTL, F.

75th anniversary of Joachim Barrande's death. p. 113.

CASOPIS; ODDIL PRIRODOVEDNY. Praha, Czechoslovakia. Vol. 127, no. 2, 1958.

Monthly list of East European Accessions (EEAI) LC, Vol. 9. no. 1, January 1960.
Uncl.

PRANTL, F.

Systematic position of the genus Hercynella Kayse. p. 159.

GASOPIS; ODDIL PŘIRODOVEDNÝ. Praha, Czechoslovakia. Vol. 127, no. 2, 1958.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1, January 1960.
Uncl.

FRANTL, F.

"Notes on micropalaeontologic methods."

p.380 (Vestník, Vol. 32, no. 6, 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

PRANTL, FERDINAND

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: /not given/

Affiliation: Department of Paleontology, Geological Institute, CSAV /Ceskoslovenska Akademie ved; Czechoslovak Academy of Sciences/ (Geologicky ustav CSAV, sektor paleontologie), Prague

Source: Prague, Vestnik Ustredniho Ustavu Geologickeho, Vol XXVI, No 5, June 1961, pp 385-388.

Data: "Some new Tentaculites Genera of the Devonian of Bohemia." /In German/

Authors: BOUCEK, Bedrich

PRANTL, Ferdinand

PRANTL, Ferdinand

International Meeting of German Paleontological Societies in Berlin.
Vestnik CSAV 68 no.5:677-680 '59.

1. Glen korespondent Ceskoslovenske akademie ved.

PRANTL, J.

Smoothing blast apparatus HYF 4430. Stroj vyr 9 no.7:358-359 '61.

1. Kovo-Finis, n.p., Praha.

ACC NR: AF6034934

(A)

SOURCE CODE: UR/0236/66/000/001/0161/0166

AUTHOR: Prantskyavichyus, G. A.—Pranckevicius, G.; Yurenas, V. L.—Jurenas, V.;
Dauknis, V. I.—Dauknys, V.; Yodis, A. P.—Juodis, A.; Mayauskas, I. S.—Majauskas, J.

ORG: Institute of Power and Electrical Engineering, Academy of Sciences Lithuanian
SSR (Institut energetiki i elektrotechniki, Akademii nauk Litovskoy SSR)

TITLE: Heat resistance of refractory materials. 1. High temperature apparatus for
investigation of heat resistance

SOURCE: AN LitSSR. Ser B. Fiz-matem khim geol i tekhn n, no. 1, 1966, 161-166

TOPIC TAGS: heat resistant material, metallurgic testing machine, aluminum oxide,
zirconium compound

ABSTRACT: The article describes an original piece of apparatus for investigating the
heat resistance of refractory materials with a temperature drop from 2500 to 300°K.
The apparatus has two heating elements: the upper high temperature element is made of
sheet tungsten, and the lower low temperature element of sheet molybdenum. The heating
temperature of the samples in the zone of the upper element can be regulated in the
interval from 600 to 2500°, and in the zone of the lower element from 400 to 1800°K.
By replacing the molybdenum heater by a coil, cooled by countercurrent water, a
temperature near 300°K can be reached in the lower zone. Cyclic change in temperature

Card 1/2

ACC NR: AP6034934

is achieved by displacing the sample from the high temperature zone to the low temperature zone and back with the aid of an electromagnetic device. The test medium can be either a vacuum or an inert gas (argon or helium). The total power requirement of the apparatus is 10 kilowatts. Investigations of the heat resistance of samples of refractory materials based on refractory oxides of aluminum and zirconium have shown that the apparatus is suitable for both long and short term cyclic tests. Orig. art. has: 4 figures.

SUB CODE: 11/ SUBM DATE: 08Dec65/ ORIG REF: 002

Card 2/2

PA - 2416

PRANTSOV, V. P.

AUTHOR

GNUCHEV S.M., PRANTSOV V.P., MORENKO G.F., KOMISSAROV G.K., KLOCHKOVA Z.V.

TITLE

Melting of Structural Steel in the Electric Furnaces with the Use of Oxygen Lance. (Vyplavka konstruktsionnoy stali v elektropetchakh s proizvodkoy kislorodom. Russian)

PERIODICAL

Stal' 1957, Vol 17, Nr 3, pp 228 - 232 (U.S.S.R.)
Received: 5/1957

ABSTRACT

The investigation of the technology of the production of structural steel by means of the addition of greater quantities of calcium during the melting and on the occasion of the use of gaseous oxygen during the oxidation period in place of iron ore showed the following results: the phosphorus content in the metal after complete smelting of the burden amounted to 0,015 - 0,025 % in the case of experimental smeltings instead of 0,050 - 0,060 % in the case of the usual smelting. The oxygen content in the metal before the removal of the oxidation slag at 0,055 - 0,22 % C amounted to 0,0490 - 0,0190 %. The MgO content in the slag at the end of the oxidation period varied between 9,90 and 15,51 %, which does not point in the direction of an increased destruction of the bottom during the blowing. The oxygen content in the metal of the experimental

CARD 1/2

PA - 2416

Melting of Structural Steel in the Electric Furnaces with the Use of Oxygen Lance:

smeltings on the occasion of tapping amounted to 0,0032-0,0082% and the hydrogen content to 3,9 - 7,0 cbcm/100 g of the metal. The chemical composition of the slag before tapping does not depend on the kind of oxidation (ore or oxygen). The saving of electric energy during the oxidation period on the occasion of the experimental smeltings were on the average 30 kc/t of usable ingots. Oxygen-consumption was 6-12 cm/t. The quality of the finished metal in the case of oxygen blowing meets the demants set up by the technological standards of the factory. (With 5 tables, 3 illustrations and 6 citations from slav publications.)

ASSOCIATION: Central Scientific Research Institute for Iron Production

PRESENTED BY: -

SUBMITTED: -

AVAILABLE: Library of Congress

CARD 2/2

DAUKNIS, V.I. [Dauknys, V.]; PRANTSKYAVICHYUS, G.A. [Pranckevicius, G.]

Size factor in determining resistance to abrasive wear.
List ak darbai B no.4:221-227 '61.

1. Institut energetiki i elektrotehniki AN Litovskoy
SSR.

PRANULIS, M.F.

Chemical method of cleaning heat exchangers of oil and gas
refining units. Trudy VNIITB no.11:86-108 '59. (MIRA 15:5)
(Heat exchangers)

PPANULIS, Mikhail Faddeyevich; KUSHELEV, V.P., retsenzent; DZHORDZHI,
A.N., ved. red.; YAKOVIEVA, Z.I., tekhn. red.

[Safety measures in petroleum refineries] Tekhnika bezopasnosti
na neftezavodakh. Izd.2., perer. i dop. Moskva, Gostoptekh-
izdat, 1962. 208 p. (MIRA 16:2)
(Petroleum refineries--Safety measures)

PRANULIS, M.F.

Safety measures in using the 21-10-type semicontinuous coker.
Trudy VNIITB no.10:55-64 153. (MIRA 15:5)
(Petroleum refineries--Safety measures) (Petroleum coke)

FRANULIS, Mikhail Fadayevich; KUSHELEV, V.P., inzh., retsenzent; ROMANOVA,
N.V., vedushchiy red.; POLOSINA, A.S., tekhn.red.

[Safety engineering in oil and gas plants] Tekhnika bezopasnosti
na neftiannykh i gazovykh zavodakh. Moskva, Gos. nauchno-tekhn.
izd-vo neft. i gorno-toplivnoi lit-ry, 1955. 217 p. (MIRA 11:5)
(Oil industries--Safety measures)

FRANULIS, M.F.

3

1954. SAFETY PRECAUTIONS IN PETROLEUM AND GAS REFINERIES. (TEKHNIKA BEZOPASNOSTI NA NEFTYANYKH I GAZOVYKH ZAVODAKH). Franulis, M.F. (Moscow: Gosoptekhizdat, 1955, 218pp., 6.10 rub; abstr. In Gosoptekhizdat Book List on Oil Refining, 1957).

gtrb
MT

SAMARCHYAN, R.S.; MUKHINA, V.N.; SULTANOV, K.I.; PRANULIS, M.F.

Torch lines and safety valves in oil and gas refineries. Azerb.
neft.khoz. 35 no.10:33-35 0 '56. (MIRA 10:1)
(Petroleum--Refineries)

FRANULIS, M.F.

Safety measures in dismantling and repairing submersible condenser
boxes in petroleum refineries. Trudy WHITE no.13:90-96 '60.

(MIRA 14:12)

(Condensers (Vapors and gases)—Maintenance and repair)

EULGARIA/Diseases of Farm Animals. General Problems. R

Abs Jour: Ref Zhur-Biol., No 9, 1956, 40598.

Author : Franszhev, I., Shoshkov, D.

Inst : Higher Institute of Veterinary Medicine.

Title : The Problem of the Curdling of Milk from Healthy Cows and Goats.

Orig Pub: Nauchn. tr. Vissh. veterinarnomed. in-t, 1956, 4, 279-285.

Abstract: Cases were observed when milk obtained from clinically healthy cows and goats curdled on boiling. After the animals were treated with urotropin which was administered internally three times daily in doses of five grams for cows and of one gram for goats for a period of three days, the milk ceased

Card : 1/2

BULGARIA/Diseases of Farm Animals. General Problems.

Ats Jour: Ref Zhur-Biol., No 9, 1958, 40598

to curdle. Examination showed that there is more fat and albumen content and less casein in curdled milk than in milk which did not curdle and which has been obtained from the same animals after urotropin treatment; also, in this case the relationship between casein and albumen content is smaller.

Card : 2/2

2

PRANULIS, M.F.; FRIDMAN, Ye.Ye.

Efficient method of cleaning equipment of thermal cracking
units. Trudy VNIITB no.11:109-115 '59. (MIRA 15:5)
(Cracking process)

BRĂFORESCU, D.

Use of radioactive isotopes in the construction industry and for construction materials. p. 3. TEHNICA NOUA. (Asociatia Stiintifica a Inginerilor si Tehnicienilor) Bucuresti. Vol. 2, no. 25, Nov. 1955.

So. East European Accessions List Vol. 5, No. 9 September, 1956

PRAPCFGESCU, N.

A generalization of the θ function and its utilization in the
elliptic function study. It. 2. Studii cerc mat 16 no.9:1163-
1174 '64.

PRAPORDZHESKU, N. [Praporgescu, N.]

On the probabilities changing in chain and connected in time. Rev
math pures 4 no.3:403-423 '59. (EEAI 10:9)

(Probabilities) (Statistical mechanics)
(Functional equations) (Time-series analysis)

PRAPORGESCU, N.

Generalization of the θ function and its use in elliptic function
study. Studii cerc mat 14 no.3:423-451 '63.

SECRET

NAME: [redacted], in a group of internal operations. p. 58.

Vol. 1, no. 3, July/Aug. 1967
POLITICAL SCIENCE
SCIENCE
MATH

See: East European Collection, Vol. 1, no. 3, Aug 1967

PRAPORGESCU, N.

110

Praporgescu, N. Sur une classe d'équations intégrales et leurs applications à la statistique. Bull. Math. Phys. Éc. Polytech. Bucarest 10 (1938-39), 64-103 (1940); 11, 146-150 (1940).

The author considers (A) integral equations of the form $\phi(s) - \int_a^b K(t)\phi(s+t)dt = f(s)$, where f is known and either ϕ or K may be unknown, (B) the problem of minimizing an integral $\int_a^b [u(s) - \int_a^b K(t)\phi(s+t)dt]^2 ds$ by a suitable choice of K , u and ϕ being given. For (B), he finds that K must satisfy a certain integral equation of the first kind. The results are stated to have applications to statistics.

G. E. H. Reuler (Manchester).

Source: Mathematical Reviews,

Vol 10 No 8

PRAPORGESCU, N.

✓ Anupra Unei Clase de Ecuații Integrale
N. Praporgescu, *Bul. Societ. Științ.
Mat. Fiz.*, July-Sept., 1956, pp. 549-610
10 refs. In Rumanian. Study of a class
of integral equations, using methods and
results obtained for linear equations with
finite differences.

1
Soc
Sci

CZECHOSLAVAKIA / General Problems of Pathology. Human U
Tumors.

abs Jour: Ref Zhur-Biol., No 9, 1958, 42180.

Author : ~~Prarak, J.~~

Inst : Not given.

Title : The Arrest of Growth of Recurring Carcinoma of
the Urinary Bladder following Unilateral Uretero-
sigmoid Anastomosis.

Orig Pub: Rorhl chirurg., 1957, 36, No 10, 666-669.

Abstract: A case of recurring carcinoma of the urinary
bladder is described. Following establishment
of a left uretero-sigmoid anastomosis, further
growth of the tumor was arrested.

Card 1/1

37

PRAPORTNIK, Joza

We selected new workers councils: young producers, young managers.
PTT zbor 16 no.5:143-144 My '62.

PRAPROVNIK, Jož

The eighth general meeting of the Post, Telegraph, and Telephone
Alpine Society of Ljubljana. PTT zbor 16 no.3:65-70 Mr '62.

LAUBENBERGER, H., Dipl. Chem.; PRAPOTNIK, Joze, inz. [translator]

Plastic mass in ship building. Brodogradnja 13 no.2:55-62
'62.

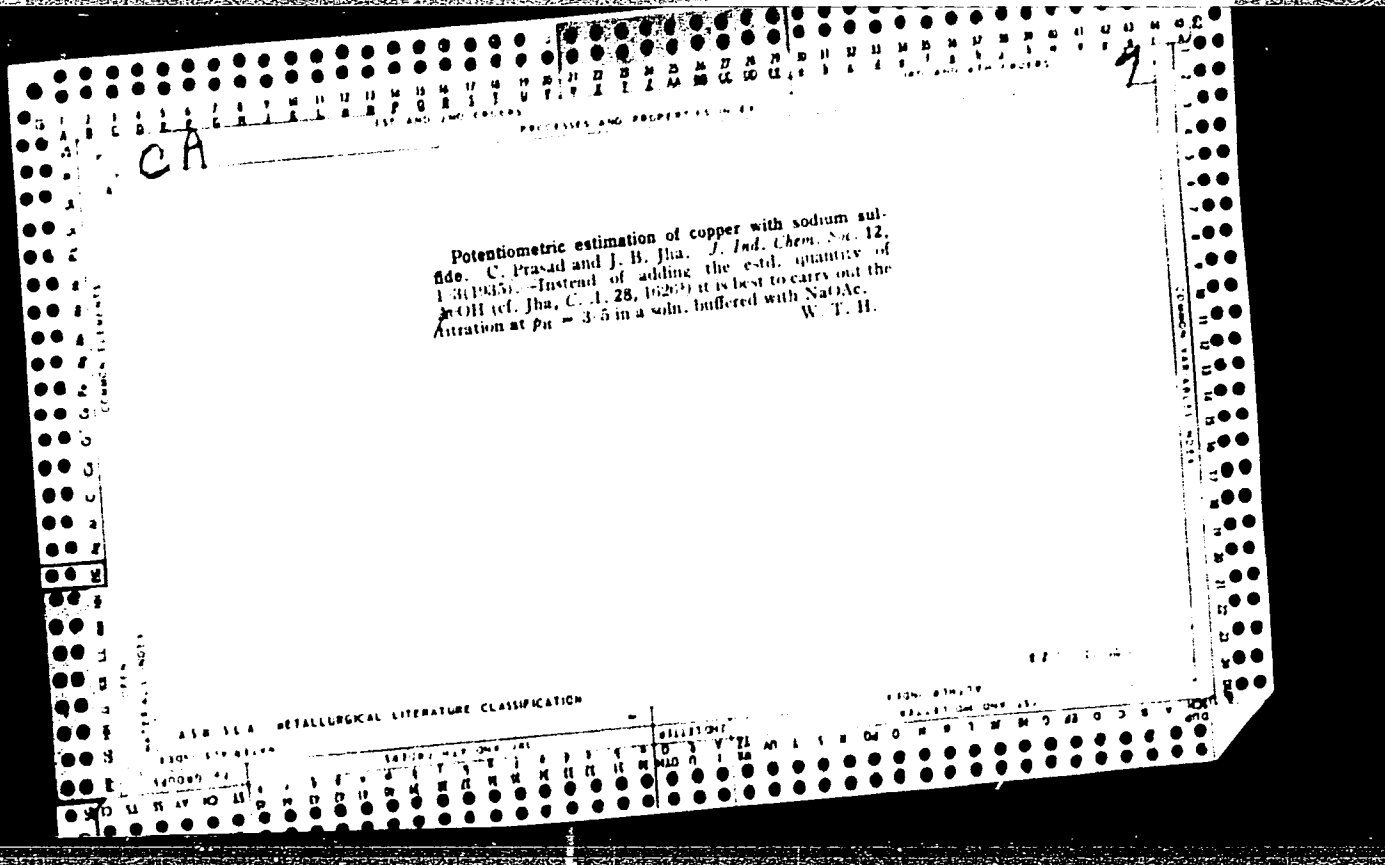
PRAPROTNIK, Viljem, ing. (Ljubljana)

Power, energy, and economic problems in the use of complex water
streams. Vodoprivreda Jug 2 no.4/5:21-24 '59. (EEAI 9:10)
(Yugoslavia--Water)

PRAPROTNIK, Viljem, ing. (Ljubljana)

Economical factor in water-power designs. Vodoprivreda Jug 2 no.4/5:
112-116 '59. (EEAI 9:10)

(Yugoslavia--Water)



1ST AND 2ND CODES

PROCESS AND PROPERTIES INDEX

A 1

BC

Viscosity of thorium arsenate gels during setting. M. Prasad and B. G. Sawalakar (J. Indian Chem. Soc., 1948, 27, 588-594).—The viscosity (η) of Th arsenate gel-forming mixtures [Th(NO₃)₆ + HAsO₄] increases with time, slowly at first, then rapidly, and finally in many cases reaches limiting value. The η after a certain time is decreased by increase in [Th(NO₃)₆] in the mixture, addition of non-electrolytes (alcohol or glycerol), or rise of temp., but is increased by increase in the [HAsO₄] or by addition of electrolytes (KCl or BaCl₂). The results confirm that the sol → gel transformation is a continuous process.

I. W. S.

3RD AND 4TH CODES

MATERIALS INDEX

METALLURGICAL LITERATURE CLASSIFICATION

5TH AND 6TH CODES

1ST AND 2ND CODES

3RD AND 4TH CODES

5TH AND 6TH CODES

1ST AND 2ND GROUPS PROCESSES AND PROPERTIES INDEX

BC

AI

Effect of flow on the electrical constant of liquids. S. P. Prasad, B. N. Singh, and B. D. Singh (*Nature*, 1941, 167, 712).—When flowing through condenser plates of small separation, xylole (a mixture of *o*-, *m*-, and *p*-), Et₂O, EtOH, and C₂H₆ show small, but distinct, decreases in the value of ϵ . For a given separation, the change increases in magnitude with increase of rate of flow. Polar as well as non-polar liquids show the effect, but a viscous liquid, e.g., C₂H₅OH, shows it to a much smaller extent. L. S. T.

1ST AND 2ND GROUPS PROCESSES AND PROPERTIES INDEX

GROUPS METALLURGICAL LITERATURE CLASSIFICATION

GROUPS METALLURGICAL LITERATURE CLASSIFICATION

PRASAD, H. dr., G.B.V.C. (Pal). D.v.P. (Madras) D.A.P.E. (London)
Ph. D. (London)

Studies on the Coccidia of some Ophidian hosts. Act. veter
Hung 13 no.1:81-88 '63.

1. Veterinary College, Patna Bihar, India.

ACCESSION NR: AP4016593

Y/0001/64/000/002/0327/0335

AUTHOR: Radovanovic, Slobodan (Chief); Prasad, T. V. (Senior scientific officer)

TITLE: Sintering of some natural magnesites at temperatures between 1300 and 1700°C

SOURCE: Tehnika, no. 2, 1964, 327-335

TOPIC TAGS: low temperature magnesite sintering, silica refractory matrix, sintering, sintering natural magnesite, natural magnesite, magnesite impurity, periclase

ABSTRACT: Magnesite samples with different representative quantities of impurities were taken from four localities in Yugoslavia and heated to temperatures between 1300 and 1700°C, with intervals of 100°, to observe the effect of the impurities upon sintering. Sample I had a high Fe₂O₃ and CaO content; and Sample IV had a high SiO₂ content. The finely ground samples were mixed with a sugar solution and pressed into cylinders which were kept for one hour

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ACCESSION NR: AP4016593

at the extreme temperature and then cooled in a slightly shorter time. Physical and mineralogical examinations showed that sintering was accompanied by an increase in density, in the percentage of linear shrinkage, and in the dimensions of the periclase crystals, by a decrease in the total active surface and in the total volume of pores, and by more complete formation of the silica refractory matrix and more uniform silica distribution through the periclase crystals. The oxides, Fe_2O_3 , SiO_2 , and Al_2O_3 , speeded up sintering. CaO inhibited sintering and decreased the positive effect of good mineralizers. The small amount of impurities serving as mineralizers in very pure magnesite (Sample II) was insufficient for sintering such magnesite at low temperatures. Depending on the molar ratio of CaO/SiO_2 , during sintering, magnesium, calcium-magnesium, and pure calcium silicates were formed to make a refractory matrix between the periclase crystals. Sample IV, which was highest in SiO_2 , and lowest in CaO , and whose matrix substance was largely highly refractory forsterite, proved the most suitable of the four samples for sintering. Orig. art. has: 5 tables, 6 figures, and 7 microphotographs.

ASSOCIATION: Mineralosko odeljenje Instituta za vatrostalne materijale,
Kraljevo (Mineralogical Department of the Institute for Refractory Materials);

Card 2/3

ACCESSION NR: AP4016593

odeljenje za vatrostalne materijale Nacionalne metalurske laboratorije,
Jamshedpur, India (Department for Refractory Materials of the National
Metallurgical Laboratory)

SUBMITTED: 15Apr63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: MA, ML

NO REF SOV: 001

OTHER: 004

Card 3/3

OPIENSKA-BLAUTH, Janina; PRASAL, Zbigniew

Comparative studies on the determination of amino nitrogen in body fluids. Ann.Univ.Lublin; sec. D 14:117-126 '59.

1. Z Katedry Chemii Fizjologicznej Wydziału Lekarskiego Akademii Medycznej w Lublinie Kierownik: prof. dr. Janina Opienska-Blauth.
(AMINO ACIDS urine)

~~Zbigniew~~ PRASAL, Zbigniew

10906

Alkanol derivatives of arylsulfonarythalsides. II. N-
 β,γ -dihydroxypropylbenzenesulfonamide. Anna Chra-
 szczyńska, Wanda Miecznikowska-Stolarczyk, and Zbigniew
 Prasad (Univ. Lodz, Poland). *Koczniki Chem.* 24, 419-6
 (1953) (English summary); cf. *C.A.* 50, 5552i. N-(β,γ -
dihydroxypropyl)benzenesulfonamide, m. 123.6-5.3° (from
 H₂O, 30% EtOH, and C₆H₆), was prepd. in: 64% yield by
 heating 12 g. benzenesulfonamide (I) 1 hr. and 8 g. KOH
 (II) in 100 ml. of iso-AmOH with 12.7 g. of HOCH₂CH-
 (OH)CH₂Cl (III); 71% yield by heating 34 g. N- β,γ -dihy-
 droxypropylamine (IV) 0.5 hr. in 150 ml. C₆H₆ with 18 g.
 PhSO₂Cl (V); 69% yield by heating 2.4 g. I and 1.3 g. II in
 30 ml. H₂O 0.5 hr. with 2.6 g. III; 52% yield by heating 17
 g. IV, 10 g. NaOAc, and 60 ml. H₂O to 95°, and adding 18 g.
 V over a 15-min. period. P. Dreifuss



AB
RISK

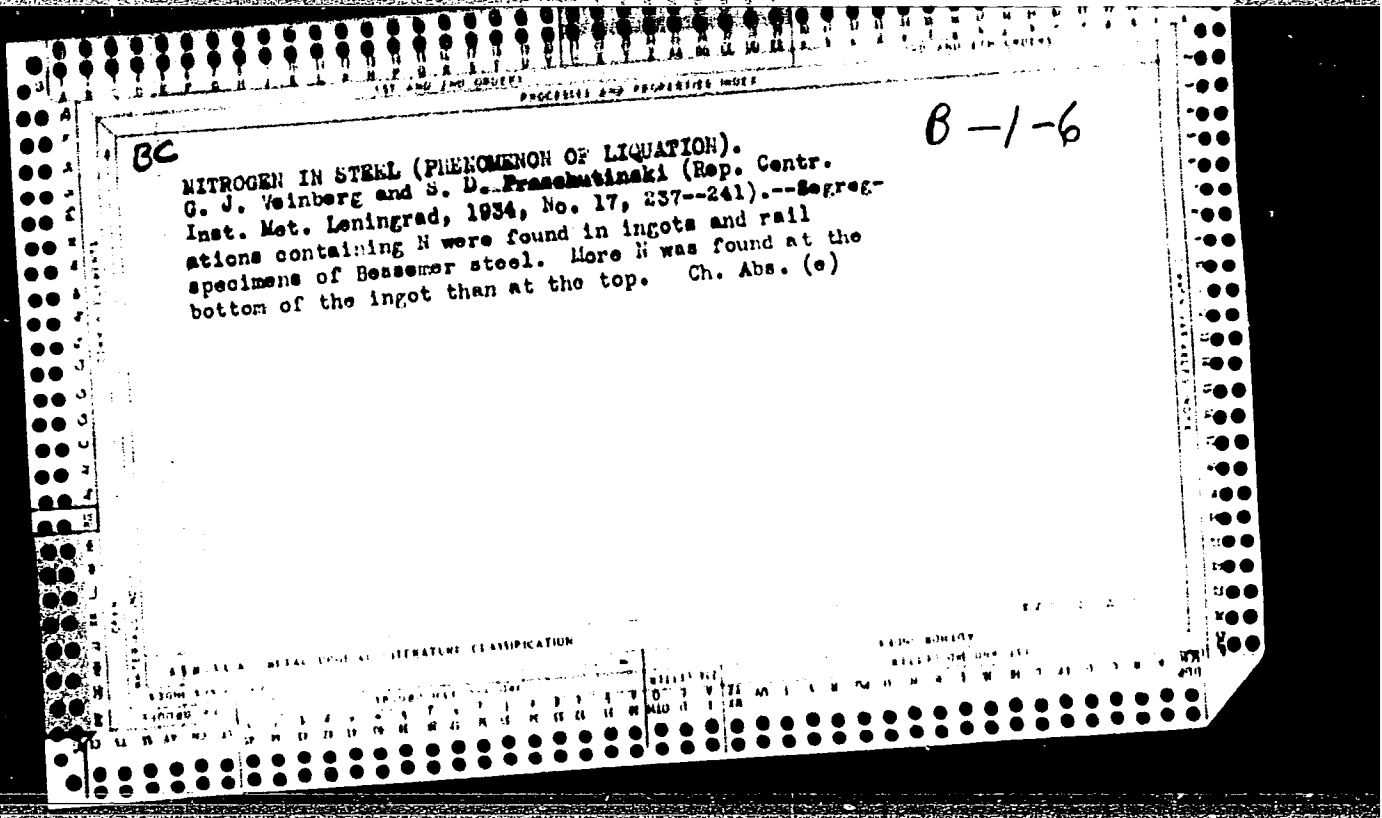
RUSSIA, E.

Chraszczewski, A.; Maciejowski-Ostrowski, M. 1-alkoxy derivatives of aryl sulfonylides. II. N- β,γ -dihydroxypropyl-2-nitrobenzene sulfonamide. p. 471.
RUSKINI CHEM, Warszawa, Vol. 16, no. 2/3, 1955.

39: Monthly List of East European Accessions, (CEML), L., Vol. 4, no. 1, Oct. 1955,
Encl.

KHAMRABAYEV, I.Kh.; PRASAL, A. V.V.; IONOV, V.F.; NEYMENCHENVA, N. Ye.

Distribution of rare and minor elements in certain igneous rock
massifs of western Uzbekistan. Zap. Uzb. Vses. min. ob-va no. 15:
13-39 '63. (MIRA 17:10)



A 1

PROCESSES AND PROPERTIES INDEX

Peraluminates of the alkali and alkaline earth metals. (See also: Aluminates, 1830; 2, 653-661.) Sodium and potassium peraluminates, $M_2AlO_4 \cdot 2H_2O$ and $M_2AlO_4 \cdot 3H_2O$, have been prepared as soluble white crystalline powders by addition of hydrogen peroxide to a cold solution of the corresponding aluminate, and precipitation by alcohol; by heating at 100° the normal aluminates are formed. The stability of the solutions, which readily undergo hydrolysis and deposit aluminum hydroxide, decreases with increase of the active oxygen content. Normal lithium peraluminate has not been prepared, but the compound $LiAlO_4 \cdot 2H_2O$ separates on addition of hydrogen peroxide to a solution of lithium aluminate. Dehydration causes decomposition to hydrated base aluminates. By the action of peroxide substances on a solution of lithium aluminates and hydrogen peroxide the compound $Li_2Al_2O_7 \cdot 2H_2O$ is formed. Insoluble magnesium, calcium, strontium and barium peraluminates of the general formula $M_2AlO_4 \cdot nH_2O$ are precipitated on addition of peroxide substances to a solution containing the appropriate chloride and hydrogen peroxide, whilst $Ca_2Al_2O_7 \cdot 18H_2O$, $Sr_2Al_2O_7 \cdot 20H_2O$ and $Ba_2Al_2O_7 \cdot 20H_2O$ are formed by shaking these compounds with the hydroxide of the metal and water. The magnesium and alkaline-earth peraluminates are relatively stable, but at temperatures above 100° they decompose, yielding aluminates. The reactions of all these substances are typical of peraluminates; concentrated sulphuric acid liberates oxygen, whereas dilute acids liberate hydrogen peroxide. Consideration of the structure of the peraluminates based on *f.p.* determinations indicates that the anions formed in solution are $[Al(OH)_4 \cdot O-OH]^-$ and $[Al(OH)_6]^-$.

H. F. GILBE.

63-1514 METALLURGICAL LITERATURE CLASSIFICATION

FROM BOWLING

RESEARCH

SEARCHED

INDEXED

RECORDED

FILED

APR 1961

LIBRARY

PRASEK, Jaroslav (Bratislava, ul. Cs. armady 17.)

Embryostatic effect of nitrogen derivatives of carbon dioxide.
Neoplasma, Bratisl. 5 no.1:53-61 1958.

1. Onkologisches Forschungsinstitut, Bratislava
(CARBON DIOXIDE, rel. cpds.
nitrogen deriv., embryostatic eff. in fish (Ger))
(EMBRYO, eff. of drugs on
nitrogen deriv. of carbon dioxide, embryostatic eff. in
fish (Ger))

PROCESSES AND PROPERTIES OF
 A study of peraluminates of alkali and alkaline earth metals. J. P. A. K. *Collection Czechoslov. Chem. Comm.* 2, 653-64 (1960).—By the addition of the ~~hydroxide~~ of the aluminate, the following compounds were obtained: $K_2O \cdot Al_2O_3 \cdot 8H_2O$, $K_2O \cdot 2OAl_2O_3 \cdot 8H_2O$, and the corresponding Na compds. By mixing a soln of alk. earth chloride with H_2O with alkali aluminate, there were pptd. $Li_2O \cdot 2OAl_2O_3 \cdot 28H_2O$ and $Li_2O \cdot 2OAl_2O_3 \cdot 25H_2O$; $MgO \cdot 2OAl_2O_3 \cdot 10H_2O$, and the corresponding compds. of Ca, Sr and Ba. By shaking the last named with excess of hydroxide, $4CaO \cdot 2OAl_2O_3 \cdot 15H_2O$, $2SrO \cdot 2OAl_2O_3 \cdot 20H_2O$, $3BaO \cdot 2OAl_2O_3 \cdot 20H_2O$ were obtained. These peraluminates are

stable at ordinary temp., but lose O_2 at 110° , with dil. acids, H_2O is liberated. The alkali compds., which are sol., ionize thus: $2K^+ + [Al(OH)_4]^- + [Al(OH)_6]^-$ F. H. CANTON

ASD 514 METALLURGICAL LITERATURE CLASSIFICATION

FRANK, R.; NEUMANN, W.; KLEIN, J.

Cooled steam pressure gasification of lignite. Part 1. *Energy* 11:13-19. Jan 1965.

1. Research Institute of Fuels, Bochum.

PRASEK, K., KLIMA, J.; KRIZ, V.

Possibilities of increasing the gas production in pressure
gas plants. Paliva 45 no.2:33-38 P 165.

1. Research Institute of Fuels, Eechovice.

KLIMA, J.; PRASEK, K.

Intensification of the operation of compression generators. Paliva 44 no.5/6:142-144 My-Je '64.

Experiences in operating heavy duty compression generators and possibilities of increasing the efficiency of compression gasification. Paliva 44 no.5/6:145-147 My-Je '64.

1. Research Institute of Fuels, Bechovice.

FRASEK, K., inz., C.Sc.

Examination of solid drying agents. Paliva 42 no.3:73-82
Mr '62.

1. Ustav pro vyzkum paliv, Bechovice.

PRASEK, K.; KLIMA, J.; NEDOMA, W.

New possibility of gas production by using nuclear energy. Paliva
42 no.6:165-167 Je '62.

PRASEK, K.; KLIMA, J.; NEDOMA, W.

Technical and economic examination of lighting gas production
by gasification in generators with removal of fluid slag. Paliva
42 no.9:257-261 S '62.

NEDOMA, W.; PRASEK, K.; KLIMA, J.

Pressure gasification of fuel with liquid slag disposal. Patra 11
no.7:214-222 J1 '61.

← PRASEK, K., inz.; HEDOMA, W.

Protection of the internal surface of gas pipelines by plastic coatings. Paliva 41 no.7:235-236 JI '61.

FRASCH, K.; REINLY, R.

"Hygroscopicity of triethylene glycol."

PALINA. Praha, Czechoslovakia. Vol. 35, no. 1, Jan. 1955.

Monthly list of East European Accessions (EMAI), LC, Vol. 8, No. 6, Jun 59, Michas

PRASEK, K.

Examination of solid desiccants. Prace vyzkum paliv 4:3-44
'62.

KLIMA, J.; PRASEK, K.; NEDOMA, W.

Study of ~~the~~ motion of a gasifying agent and cinder in a model of pressure generator. Paliva 42 no.1:3-11 Ja '62.

1. Ustav pro vyzkum paliv, Bechovice.

PRASEK, K.; NEDOMA, W.; KLUMKA, J.

Basic research on substance movements in pressure generator models. Prace Ust oaliv 8:5-38 '64.

AUTHOR: Prášek, Ladislav, *Mgr. Mat.* CZECH/34-59-6-6/23
TITLE: Mathematical Determination of the Internal Stresses in
Ingots and Forgings (Matematické určení vnitřních
pnutí v ingotech a vřkvcích)
PERIODICAL: Hutnické Listy, 1959, Nr 6, pp 489-493 (Czechoslovakia)

ABSTRACT: The author deals with determining the distribution of temperatures and internal stresses in large ingots caused by non-uniform cooling. To simplify calculations the ingot is substituted by an infinitely long cylinder of a constant radius and it is assumed that its surface is cooled at a constant speed h . It is further assumed that the constants of the material and the thermal parameters do not depend on the temperature and on time. States occurring in the steel after exceeding the yield point are not dealt with. The results in the given case are entered in diagrams using dimensionless parameters. The same calculating procedure can also be applied to forgings for the heating as well as for the cooling process. The heating speed is $+h$ during heating and $-h$ during cooling. During the further phases of the calculations

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CZECH/34-59-6-6/23

Mathematical Determination of the Internal Stresses in Ingots and Forgings

the ingot, or respectively the forging, is substituted by a finite circular cylinder or a body corresponding in profile to the real product. The cooling speed h will be a function of time, the thermal parameters and the constants of the material are assumed variable with the temperature. Particular attention is paid to analysing the stress state which is almost always elastic-plastic. Such cases are calculated by means of the difference method using a computer. The theoretical results will be verified experimentally and the accuracy of the solutions discussed. Only Type I internal stresses are dealt with, which are present throughout the body of the component. Type II stresses, existing within the limits of a few grain sizes, and Type III stresses, existing within the range of a few atomic spacings near faults in the lattice structure, are not dealt with. This article should be considered as an introduction to the problem, which is extremely complicated and requires the cooperation of several

Card 2/3

Mathematical Determination of the Internal Stresses in Ingots and Forgings

CZECH/34-59-6-6/23

branches of science. As an example the internal stresses are calculated in an octagonal Ni-V steel ingot weighing 48 tons, 270 cm long, 150 cm dia. at the bottom and 170 cm dia. at the top, with the following chemical composition: 0.45% C, 0.17% V, 0.50% Mn, 0.25% Si, 0.20% Cr, 2.2% Ni. The case is considered of removal of the ingot from the ingot mould and cooling it from 1450°C with a cooling speed of 50°C per hour to 700°C. The ingot is substituted by an infinitely long cylinder of 150 cm dia., as the thermal and material constants those are taken which correspond to a material of similar chemical composition at a temperature of about 800°C.

There are 4 figures and 8 references, 2 of which are Czech, 1 Soviet, 3 English and 2 German.

ASSOCIATION: Výzkumný a zkušební ústav Závodu V. I. Lenina, Plzeň
(Research and Test Institute of the V. I. Lenin Works,
Pilsen)

SUBMITTED: March 16, 1959 ✓
Card 3/3

PRASEK, L.

"Mathematical determination of internal stresses in ingots and forgings."

HUTNICKE LISTY, Brno, Czechoslovakia, Vol. 11, No. 6, June 1959.

Monthly List of East European Accessions (MEAL), LC, Vol. 8, No. 9, September 1959.

Unclassified.

PRASEK, Ladislav, Mg. mat.

Calculation of temperature distribution and of internal stress in ingots during cooling. Part 2. Hut listy 16 no.9:630-637 S '61.

1. Zavody V.I. Lenina, Plzen

PRASEK, Ladislav, Mg. mat.

Distribution of temperatures and residual internal stresses
during the cooling of cylindrical bodies. Aplikace mat 8 no.5:
367-384 '63.

1. Vyzkumny a zkusebni ustav V.I. Lenina, n.p., Plzen.

PRASEK, L., Mg. Mat.; KRATCCHVIL, P., promovany matematik

Calculating natural frequencies of turbine blade flexural vibrations on digital computers. Strojirenstvi 13 no.7:490-496 JI '63.

1. Vyzkumny a zkusebni ustav, Leninovy zavody, Plzen.

PRASEK, L., Mg. mat.

Calculation of the stress distribution in rotating disks of steam
and gas turbines. Strojirenstvi 14 no.9:643-652 S '64

1. Research and Testing Institute of the Zavody V.I. Lenina
National Enterprise, Plzen.

L 15224-65 EWT(a)/EWT(m)/EPA(bb)-2/T-2/EWP(w)/EWP(?) ASD(a)-5/ASD(f)-2/
ACCESSION NR: AP4045057 AFPC(b)/ESD(gp) EM Z/0032/64/014/009/0643/0652

AUTHOR: Prasek, L. (Master of mathematics)

TITLE: Calculation of stress distribution in the rotating wheels of steam and combustion turbines ^b

SOURCE: Strojirenstvi, v. 14, no. 9, 1964, 643-652

TOPIC TAGS: ¹⁶ stress calculation, rotating wheel, stress distribution calculation, steam turbine, combustion turbine, physical parameter, material parameter, geometric parameter, Grammel method, Hampl method, automatic computer

ABSTRACT: The calculation of the distribution of radial and tangential stresses in the rotating wheels of steam and combustion turbines is investigated. With the aid of the differential method expressions are derived which give the stress distribution in rotating wheels in relation to changing radius. The physical and material parameters are considered as varying with the radius. The stress distribution is solved in relation to changing wheel radius, since the axial dimensions of wheels are small in relation to the radius and it would have complicated the calculations to take into account the three-dimensional stress state, and

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ACCESSION NR: AP/045057

further, the physical and geometrical parameters are distributed symmetrically with respect to the wheel axis. Several sample cases were chosen and calculated and the results compared with the Grammel method and the method of Professor Hampl, in particular for the cases of thermal stresses, stresses from centrifugal forces, and from the pressure of the wheel on the shaft at rest. The same assumptions and given constants were used in all the methods compared. All three methods used give similar results with a maximum error of 4% in the region where the blade blends into the hub where various modifications of the methods were used. The calculations by both methods mentioned lasted 2 to 3 days and were programmed for an electronic computer. The setup program and the possibility of making the calculations on an electronic computer cut calculation time from 16--24 hours to 4--8 min in one case. The computer method is also advantageous in that it is possible to divide the profile into 20 parts equidistant from each other (instead of 10 parts), considerably increasing accuracy. The errors noted in the other methods of calculation are practically eliminated. It is possible to calculate several variants and choose the best, which was not possible before because of the time element; it is also possible to analyze the effect of certain physical constants. Engineering safety, however, has not yet been programmed for calculation. Orig. art. has: 7 figures, 1 table, and 29 formulas.

Card 2/3

L 15224-65

ACCESSION NR: AP4045057

ASSOCIATION: Vyskumny a zkusebni ustav ZVIL, Prague (Scientific and Experimental
Institute, ZVIL)

SUBMITTED: 00

ENCL: 00

SUB CODE: PR, AS

NO REF SOV: 005

OTHER: 016

Card 3/3

L 47950.66 EMP(0) EUP(0) W/12M
ACC NR: AT602(0) SOURCE CODE: CZ/0000/63/000/000/0388/0401

AUTHOR: Prasek, Ladislav (Graduate mathematician)

ORG: Research and Experimental Institute of the V. I. Lenin Works (Vyzkumny a zhusebni ustav, Zavody V.I. L.), Plzen

TITLE: Calculating critical speed of a turbine on URAL I computer

SOURCE: Celostatna konferencie o problemoch dynamiky strojov. 2d, Smolenice, 1961. Dynamika strojov (Dynamics of machines); sbornik prac z konferencie SAV. Bratislava, Vyd-vo SAV, 1963, 388-401

TOPIC TAGS: mathematic analysis, turbine rotor, vibration analysis,
computer application *26*

ABSTRACT: A method is described for calculating the critical speed of a system of rotors (of a turbo-set) on the URAL I computer. The calculation is based on Prohl's difference method which has been modified for computer application. The method is applicable for a system of a maximum of 10 shafts represented as fields, each field divided into a maximum of twenty sections. The given dynamic problem is defined by a differential equation with four boundary conditions. The

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L 47550-66

ACC NR: AT6029438

rigidity of bearings is considered as a function of the revolution of the shaft, expressed in the form of a third degree polynomial. A program is compiled for the floating point system, using an external magnetic memory. It was later established that the same calculation could have been done five times faster, i. e., in about three hours, by using the fixed point system, and in about one hour by using the URAL II computer. An example illustrating the theory is presented. Orig. art. has: 4 figures, and 12 formulas. [KP]

SUB CODE: 20/ SUBM DATE: none/

Card 2/2 vrb

L 36840-66 EWP(k)/T-2/EWP(w)/EWP(f)/EWP(v) IJF(c) EM/VW

ACC NR: AP6017040 SOURCE CODE: CZ/0041/66/000/001/0057/0074

AUTHOR: Prasek, Ladislav--Prashek, Ladislav (Master of mathematics);
Cendelin, Jiri--Tsendelin, Yirzhi (Engineer);

ORG: Research and Testing Institute, ZVIL, n.p., Plzen (Vyzkumny a zkusebni ustav ZVIL, n.p.)

TITLE: Calculation of the temperature distribution in the turbine disk and the turbine blade of an internal combustion engine

SOURCE: Strojnický casopis. no.1, 1966, 57-74

TOPIC TAGS: turbine blade, turbine disk, internal combustion engine, heat conductivity, temperature distribution

ABSTRACT: Two methods of calculation are described for determining the temperature distribution in the turbine disk and blade of an internal combustion engine. In the first case, the solution of corresponding differential equations is carried out for the heat conduction by a differential method and the variation in the parameters of the material in the radial direction is taken in consideration. A one-dimensional heat flow is proposed in the turbine disk and blade. Gas flows around the turbine blade while the latter is cooled by air at a

L 36840-66

ACC NR: AP6017040

constant temperature. In the second case, the Laplace's equation with the third boundary condition is solved by the relaxation method. Both methods are programmed for the National Elliot 803 computer. In an example, the calculation of a two-stage compressor turbine is given. The control measurement was carried out on a net-type analog circuit. The paper was presented by I. Plander, Engineer, Candidate of Sciences. Orig. art. has: 6 figures, 26 formulas, and 3 tables. [Based on author's abstract] [NT]

SUB CODE: 13,20/

SUBM DATE: 10Feb65/

ORIG REF: 001/ OTH REF: 00

na
Card 2/2

LACIGA, Zdenek, MUDr.; ZIDOVA, Vlasta, MUDr.; FISEROVA, Eva;
PRASEK, Ladislav, MgMat.

Normal levels of cerebrospinal proteins in electrophoretic
picture. Cesk. neur. 19 no.4:256-265 Nov 56.

1. Neurologicka klinika v Plzni, prednosta prof. Dr. V. Pitha
Interni Oddeleni OUNZ v Plzni, prednosta prim. Dr. O. Zwetschke.
(PROTEINS, in cerebrospinal fluid,
electrophoretic standards (Cz))

PRADEK, S.

Economic evaluation of operational tests with prototype of the NL-21-V loader. p.300.

RUDY. Vol. 4, no. 10, Oct. 1956

Praha, Czechoslovakia

SOURCE: East European List (EEAL) Library of
Congress, Vol. 6, No. 1, January 1957

PRASEK, Z.; FRANK, J.

PRASEK, Z.; FRANK, J. Technological and economic evaluation of the Manda-VVM boring machine. p. 75

Vol. 4, no. 3, Mar. 1956

RUDY

TECHNOLOGY

Praha, Czechoslovakia

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

YEVSTRATOV, V.; PRASHCHIKIN, V., inzh.; STRONGIN, M., inzh.

Scientific Research Institute of the Tire Industry. Avt.transp. 37
no.1:56-57 Ja '59. (MIRA 12:2)

1. Ispolnyayushchiy obyazannosti direktora Nauchno-issledovatel'skogo
instituta shinnoy promyshlennosti.
(Tires, Rubber--Research)

ABOLINA, I.; PRASHCHIKIN, V.

The R and RS new-design tires. Avt.transp. 40 no.11:38-41
N '62. (MIRA 15:12)

1. Nauchno-issledovatel'skiy institut shinnoy
promyshlennosti.

(Tires, Rubber)

PRASHCHIKIN, V.

Tires with a removable protector. Avt. transp. 38 no. 12:50-51
D '60. (MIRA 13:12)

(Automobiles--Tires)

PRASHCHIKIN, V.N.

Effect of the breaker design on some operational characteristics
of type "R" truck tires. Kauch. i rez. 23 no.9:16-18 S '64.

(MIPA 17:11)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

PRASHCHIKIN, V.N.

Analyzing the radial deformation of type "R" and "RS" truck
tires. Kauch. i rez. 23 no. 3:9-11 Mr '64. (MIRA 17:5)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

BEVSTRATOV, V.F., doktor tekhn. nauk; PRASHCHIKIN, V.N.

Tires of new design. Zhur. VESC 10 no. 2-164-168 '67. (MIRA 1966)

BUKHIN, B.L.; PRASHCHIKIN, V.N.

Tires with removable tread. Avt.prom. no.2:44 F '61. (MIRA 14:3)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Automobiles--Tires)

S/138/61/000/002/005/006
A051/A129

112320 also 2915

AUTHORS: Grinberg A. Ye.; Tsvetkov, A.I.; Yal'tseva, Ye.P.; Makeyeva, A.R.;
Peschanskaya R. Ya.; Prashchikina, N.P.; Prashchikina, A.S.; Kryu-
kova, A.B.

TITLE: Furfurhydramide and its vulcanization activity

PERIODICAL: Kauchuk i rezina, no. 2, 1961, 25 - 29

TEXT: The Soviet rubber industry uses diphenylguanidine as a nitrogen-con-
taining accelerator with a basic nature. Its production is based on toxic and
inflammable materials (aniline, carbon sulfide, lead silicagels and isopropyl al-
cohol). An attempt was made to find a cheaper nitrogen-containing organic base.
Furfurhydramide was tested in combination with sulfur accelerators as an accel-
erator of vulcanization. A method for producing the furfurhydramide from cheap and
accessible raw material was developed. It is an nitrogen-containing organic base
which can be used as a vulcanization accelerator in combination with altax, captax
or thiuram. In mixtures based on natural rubber and a series of synthetic rubbers
containing diphenylguanidine in combination with altax or captax, furfurhydramide
can be used instead of diphenylguanidine. It increased the durability of the

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20809

S/138/61/000/002/005/003

A051/A129

Furfurhydramide and its vulcanization activity

Commercial furfurhydramide melts at 110- 115°C. Its nitrogen content is 10.41% calculated and 10.20 - 10.30% found. Obtained data showed that when natural rubber is heated in the presence of furfurhydramide and sulfur, there is a significant decrease of the plasticity, whereas the plasticity of natural rubber containing only sulfur or furfurhydramide hardly changes at all when heated under the same conditions. It is concluded that furfurhydramide strengthens the structuralizing effect of sulfur. It does not affect the inclination of the mixtures to scorching. There are 3 tables, 4 figures and 8 references: 2 Soviet, 1 English and 2 German.

ASSOCIATION: Nauchno-issledovatel'skiy institut resinovykh i lateksnykh izdeliy
(Scientific Research Institute of Rubber and Latex Articles)

Card 3/3/

PRASHCHIKINA, A.S.; GRINBERG, A.Ye.; MAKAROVA, I.M.

Dependence between the chemical structure of some sulfur-containing compounds and their activity as accelerators of natural rubber plasticization. Vysokom.soed. 5 no.11:1641-1644 N '63.

(MIRA 17:1)

1. Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy.

ACCESSION NR: AP4009156

S/0190/64/006/001/0112/0117

AUTHORS: Prashchikina, A. S.; Gur'yanova, Ye. N.; Grinberg, A. Ye.

TITLE: The radical nature of breakup of a series of rubber plasticization organo-sulfur accelerators

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 1, 1964, 112-117

TOPIC TAGS: rubber, rubber plasticization, accelerator, organo sulfur accelerator, dibenzoyldisulfide, dibenzoylsulfide, diphenylpicrylhydrazyl, accelerator breakup, radical, radical breakup, mobile group

ABSTRACT: The plasticizing effect of derivatives of thiobenzoic acid was investigated to discover tendencies toward radical reactions and whether a breakup into radicals was essential for their performance. The exchangeability of RH groups was studied, using dibenzoyldisulfide (DBDS), tagged with the S³⁵ isotope, as the standard. Its interaction with dibenzoylsulfide, Zn-thiobenzoate, Ni-thiobenzoate, benzylthiobenzoate, and bis-thiobenzoatebenzilidene was studied, using equimolar ratios of 0.15 Mol/l solutions in toluene, at temperatures up to 140C for 30 minutes. It was found that these accelerators readily enter into reactions. The experiment was repeated, using ethanol, acetone, isopropylbenzene, toluene, and benzine as
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ACCESSION NR: AP4009156

solvents (at 55C). Since polar solvents did not accelerate the reaction, its homolytic character was stressed. In order to find out whether the reaction proceeded via exchange of sulfur atoms or via RS groups, the same thiobenzoic acid derivatives were reacted with a solution of elementary radioactive sulfur in toluene, which showed that the reaction with DBDS proceeded only at 125C and at a very slow rate (amounting to only 10% within 2 hours). The next experiment was intended to prove the mobility of the thiobenzoyl radical. The thiobenzoic acid derivatives were reacted with a solution of diphenylpicrylhydrazyl (DPH) in benzene at 20-22C, the optical density of DPH being checked at a wave length of 520 m μ by means of a SF-4 spectrophotometer. The results showed that the activity of the various derivatives of thiobenzoic acid varied greatly, depending on their composition and the structure of R. Parallel experiments were conducted with natural rubber, which was plasticized at 80-90C for 7 minutes on rolls in the presence of 10⁻² Mol RS/kg of rubber, the resulting plasticity being determined in Muni's viscosity units at 100C. This supports the view that the activity of the particular plasticizer is directly related to the ease of radical breakup, as established by the reaction with DPH. Since Zn-thiobenzoate proved to be the most effective plasticizer, a number of Zn-mercaptides were tested for their plasticization activity towards rubber and their reactivity with DPH, which confirmed their close correlation. Orig. art. has: 2 charts and 1 table.

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ACCESSION NR: AP4009156

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovy*kh i lateksny*kh izdeliy
(Scientific Research Institute of Rubber and Latex Products); Fiziko-khimicheskiy
institut im. L. Ya. Karpova (Physical and Chemical Institute)

SUBMITTED: 22Aug62

DATE ACQ: 10Feb64

ENCL: 00

SUB CODE: CH

NO REF SOV: 005

OTHER: 001

Card 3/3

PRASHCHIKINA, A.S.

EPSHTEYN, V.G.; PROKOF'YEV, Ya.N.; MAKEYEVA, A.P.; TSVETKOV, A.I.;
POZIN, A.A.; PRASHCHIKINA, A.S.

Butadiene-styrene resins as reinforcing agents for rubber mixtures.
Khim.prom. no.5:261-265 J1-Ag '57. (MIRA 10:12)

1. Nauchno-issledovatel'skiy institut rezinovykh izdeliy shirokogo
potrebleniya i Yaroslavskiy tekhnologicheskiy institut.
(Rubber, Synthetic)
(Resins, Synthetic)

PRASHCHIKINA, A.S.

83296

S/138/59/000/010/008/010
A051/A029

15 9130

AUTHORS: Grinberg, A.Ye.; Tsvetkov, A.I.; Makeyeva, A.R.; Prashchikina,
A.S.; Levitin, I.A.; Shapiro, A.L.; Mamayeva, I.A.

TITLE: The Synthesis and the Investigation of Rubber Mastication Accelerators

PERIODICAL: Kauchuk i Rezina, 1959, No. 10, pp. 35 - 39

TEXT: Numerous articles have been published on the subject of accelerating the mastication process both of natural and synthetic rubbers by using various organic compounds, such as mercaptanes, amines, nitro-compounds, nitroso-compounds, guanidines, etc. The present article deals with the different methods of obtaining them and the results of a comparative study of the action of dibenzoylsulfide and zinc thiobenzoate, which were the first substances to be recommended by the authors as accelerators (Ref. 4) in the mastication process in natural and synthetic [CKC-30 (SKS-30), CKH-26 (SKN-26)] rubbers. The effect of these two accelerators on the properties of the mixtures and vulcanizates were compared to Renacite IV and Peptone 22, two mastication accelerators used extensively in other countries. Dibenzoylsulfide and thiobenzoate are non-toxic and are more easily

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S/138/59/000/010/008/010

A051/A029

The Synthesis and the Investigation of Rubber Mastication Accelerators

and simply to obtain than Renacite IV and Peptone 22. Dibenzoylsulfide has also a higher activity. Other chemical properties of the latter compound are listed (Ref. 6). The synthesis of dibenzoylsulfide for this study is outlined and the obtained product described in detail. Thiobenzoate was obtained from sodium thiobenzoate and zinc sulfate by means of a mutual exchange of the salts in an aqueous solution (Formula 1). The laboratory procedure is explained (Formulae 2, 3 and 4), and the experimental results discussed. It was seen that dibenzoylsulfide as a mastication accelerator of natural rubber, on the rollers and in the rubber mixer, surpasses Renacite IV, Peptone 22 and zinc thiobenzoate. It also accelerates the thermomastication of SKS-30 and SKN-26. Zinc thiobenzoate as an accelerator of mastication of natural rubber is equivalent to Renacite IV and Peptone 22. Dibenzoylsulfide and zinc thiobenzoate just as Renacite IV and Peptone 22 have no effect on the properties of raw mixtures and on the physico-mechanical properties of the vulcanizates. Mass production of dibenzoylsulfide and zinc thiobenzoate should be started, since they are simple to manufacture and have a high activity as accelerators of rubber mastication. There are 8 graphs, 4 tables and 6 references: 4 Soviet and 2 German.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy
(Scientific Research Institute of Rubber and Latex Products)

Card 2/2