

DELEKTORSKIY, N.V.; NAUMENKO, M.F.

Let us meet the 22d Congress of the CPSU in a worthy manner. Med.
prom. 15 no.9:3-8 S '61. (MIRA 14:9)

(DRUG INDUSTRY)

DELEKTORSKIY, N.V.

Results of the use of glass pipelines at the "Akrikhin" plant.
Med. prom. 17. no. 4: 56-59 Ap '68 (MIRA 16:7)
(PIPE, GLASS) (DRUG INDUSTRY--EQUIPMENT AND SUPPLIES)

NAUMENKO, M. F.; DELEKTORSKIY, N. V.; FILIPPOV, G. G.; AVERBAKH, K. I.

Information. Khim prom no. 3:234-237 Mr '64. (MIRA 17:5)

OVCHINNIKOV, N.M., prof.; DELEKTORSKIY, V.V.

Ultrathin sections of *Treponema pallidum* under the electron microscope. Vest. dermat. i ven. no. 1: 50-53 '65.

(MIRA 18:10)

1. Mikrobiologicheskiy otdel (zav. prof. N.M. Ovchinnikov)
Tsentral'nogo nauchno-issledovatel'skogo kozhno-venereologicheskogo
instituta (dir. kand. med. nauk N.M. Turanov) Ministerstva
zdravookhraneniya SSSR, Moskva.

SHKVARUK, Nikolay Matveyevich [Shkvaruk, M.M.], doktor sel'khoz.
nauk, prof.; ~~DELEMENCHUK, Nikolay Il'ich~~ [Lelenchuk,
M.I.], kand. sel'khoz. nauk, dots.; BELOUSOVA, G.F.,
red.

[Soil science] Hruntoznnavstvo. Kyiv, Urozhai, 1965. 387 p.
(MIRA 19:1)

1. Umanskiy sel'skokhozyaystvennyy institut (for Shkvaruk,
Lelenchuk).

DELENKO, A. (Zaporozh'ye)

Secret of success. Nauka i zhyttia 12 no.9:10-11 3 '62.

(MIRA 16:1)

(Zaporozh'ye Province—Steel industry)

L 24212-65 EWT(m)/EPF(c)/EPF(n)-2/EPR Pr-4/Ps-4/Pu-4 DM

ACCESSION NR: AP5001265

S/0089/64/017/006/0439/0448

AUTHOR: Polushkin, K. K.; Yemel'yanov, I. Ya.; Delens, P. A.; Zvonov, N. V.;
Aleksenko, Yu. I.; Grozdov, I. I.; Kuznetsov, S. P.; Sirokikh, A. P.; Tokarev,
Yu. I.; Lavrovskiy, K. P.; Brodskiy, A. M.; Belov, A. R.; Borisjuk, Ya. V.;
Gryazev, V. M.; Tetukov, V. D.; Popov, D. N.; Koryakin, Yu. I.; Filippov,
A. G.; Petrochuk, K. V.; Khoroshavin, V. D.; Savinov, N. P.; Meshcheryakov,
M. N.; Pushkarev, V. P.; Suroyegin, V. A.; Gavrilov, P. A.; Podlazov, L. N.;
Rogozhkin, I. N.

TITLE: Atomic electric power installation "Arhus"¹⁹ with organic coolant and
moderator

SOURCE: Atomnaya energiya, v. 17, no. 6, 1954, 439-446

TOPIC TAGS: small nuclear reactor, organic coolant, organic moderator, react-
or economy, nuclear reactor

ABSTRACT: The paper is a summary of the SSSR # 307 report at the Third Inter-
Cord 1/2

L 24212-55

ACCESSION NR: AP5001285

national Conference on Peaceful Uses of Atomic Energy, 1964. It describes an installation of a reactor in which organic liquid serves as the coolant, and as the moderator. The low-power reactors of about 5 Mw are expected to be economical in the remote regions where the usual energy sources are not available. A regeneration system is described for the coolant which removes the products of radiolysis. Orig. art. has: 7 figures

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: NP

NR REF SOV: 000

OTHER: 000

Card 2/2

DELEON, Asher.

Common problems and common ways of solving them. Vsem.prof.dvizh.
no.12:43-45 D '56. (MLBA 10:2)
(Trade unions)

26(1)

YUG/1-59-1-4/67

AUTHOR: Deleon, Eli, Engineer and Assistant (Beograd)
TITLE: Some Trends in the Development of Aircraft Propulsion Units

PERIODICAL: Tehnika, 1959, Nr 1, pp 14-20 (YUG)

ABSTRACT: The article deals with the supersonic speed of modern aircraft, the types of aircraft engine, i.e. piston engine, turboprop engine, jet engine with afterburner, ram-jet engine and rocket engine. A description of the main types of propulsion units, i.e. turbo-jet and ram-jet engines is given. There are 14 graphs, 2 tables, 2 diagrams and 3 English references.

ASSOCIATION: Mašinski fakultet Univerziteta u Beograd (Mechanical Engineering Dept. of Beograd University).

SUBMITTED: October 10, 1958

Card 1/1

1

14
 3
 Petrographic investigations of Yugoslav chromites.
 Gavrilc Dolezn. *Terminski radovi geol. inst. "Jovan Zmajević"*
 8, 333-334 (1965) (English summary).—English partly unpub-
 lished analyses give the following values: Cr₂O₃ 80.17-
 88.08; Al₂O₃ 5.83-20.41; FeO 11.87-27.14; and MgO
 2-16.10%. Ten samples were investigated spectroscopically
 and traces were found of Mn, Ni, V, Ti, Cu, Zn, and
 Ca. Pb was found in 7 samples. Zn very likely replaces
 Fe²⁺ in the crystal lattice, which is probably also the case
 with Pb. The presence of Pb is interesting in that it had
 not been found in chromites. Both elements are supposed
 to have entered the crystal lattice of the chromite during the
 magmatic differentiation. S. Mihalj.

DELEON, Gavriilo

Structural characteristics of the antimony-arsenic ore of the Lojane
Mines. Glas Prirodnoz A no.11:109-120 '59.

(Yugoslavia--Antimony) (Yugoslavia--Arsenic)

VOKRACHKO, Yuriy Georgiyevich; DELERZON, Boris Samuilovich; IL'IN, Andrey Aleksandrovich; SALIVON, Stepan Alekseyevich; FAL'KOVICH, Boris Moiseyevich; FEDOROV, Yuriy Viktorovich; CHISTYAKOV, Ivan Pavlovich; OKUNEV, Yu.K., podpolkovnik, red.; SOKOLOVA, G.F., tekhn. red.

[Textbook for the second-class military driver] Uchetnik voennogo voditelia vtorogo klassa. [By] IU.G.Vokrachko i dr. Moskva, Voenizdat, 1963. 376 p. (MIRA 16:6)
(Automobile drivers)

L 46120-66 EWT(1)/EEC(k)-2/T IJP(c)

SOURCE CODE: UR/0251/66/042/003/0547/0550

ACC NR: AP6024547

AUTHOR: Gogava, L. A.; Nakashidze, G. A.; Delerzon, N. M.; Dzhaparidze, Ye. G.;
Kakhabrishvili, I. V.; Ter-Sarkisova, A. G.

66
B

ORG: Academy of Sciences, Georgian SSR, Institute of Cybernetics (Akademiya nauk
Gruzinskoy SSR, Institut kibernetiki)

TITLE: Photoelectric characteristics of a two-terminal p-n-p-n type transistor switch

SOURCE: AN GruzSSR. Soobshcheniya, v. 42, no. 3, 1966, 547-550

TOPIC TAGS: electronic switch, germanium transistor, photosensitivity, volt ampere
characteristic, pn junction, photoelectric property

ABSTRACT: The article deals with the method of fabrication and photoelectric characteristics of germanium-base p-n-p-n type transistor switches. The starting material was a p-type wafer with a resistivity of 5 ohms·cm and dimensions of 1.3x1.3x0.08 mm. Two p-n junctions were obtained by diffusing antimony into both surfaces of the original wafer and the third, by alloying indium into one of the diffused layers. Ohmic contact on the opposite side was accomplished by doping with tin (Fig. 1). In the presence of a fixed bias lower than the switching

Card 1/3

L 4612C-66

ACC NR: AP6024547

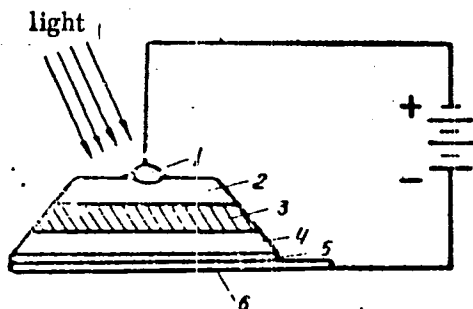


Fig. 1. Structure of two-terminal p-n-p-n type switch;

1 - rectifying nickel contact; 2, 4 - diffused n-layers; 3 - original p-type germanium; 5 - ohmic contact (tin); 6 - nickel holder

voltage the device is in the "off" state (point A on V-I characteristic in Fig. 2) and displays a high resistance of the order of several megohms. On illumination the switch changes from "off" state to "on" state (point B in Fig. 2) considering that the fixed bias voltage is then sufficient for breakdown of the center p-n junction. In this position the resistance of the device is of the order of several ohms. An investigation of V-I characteristics in the presence of darkness and various degrees of illumination conclusively proved that switching voltage decreases with increasing illumination. The minimum illumination required to switch the device is of the order of 100-150 lux. Further improvements in the design and fabrication of transistor switches should make it possible to develop more photosensitive and stable devices

Card 2/3

L 46120-66

ACC NR: AP6024547

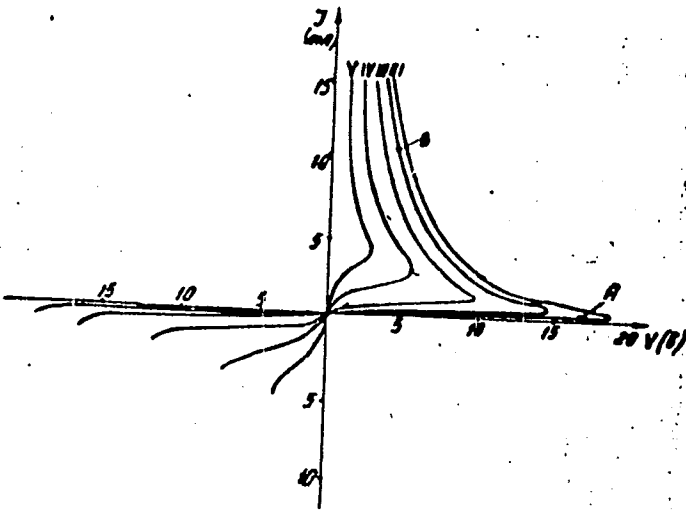


Fig. 2. V-I characteristic of p-n-p-n switch in the presence of varying degrees of illumination:

I - darkness; II - illumination of 460 lux; III - 920 lux; IV - 1840 lux; V - 2760 lux; VI - 5060 lux

of this kind with a switching time of less than 10^{-6} sec. Orig. art. has: 5 figures and 1 table.

SUB CODE: 09,20/

SUBM DATE: 25Jun65/ ORIG REF: 002/ OTH REF: 001

Card 3/3

POLON

Preparation of chloride and nitrate of 1-(1-naphthyl-
 methyl)imidazole. *Z. Naturforsch.* **19**, 363-4
 (1963) (English summary). — The method consists of con-
 densing 1-C₁₀H₇CH₂CO₂H (I) with (H₂NCH₂)₂NH (II) in the
 presence of HCl. In three-neck flask, with stirrer, dropper,
 and condenser were placed 27 g. powd. NaCN and 35 ml.
 H₂O, the flask warmed in H₂O bath until the NaCN dis-
 solved, 72 g. 1-C₁₀H₇CH₂Cl in 100 g. EtOH added dropwise
 for 30-45 min., the mixt. warmed to boiling 5 hrs. with
 const. stirring, cooled, the NaCl filtered off, washed with
 30 ml. EtOH, the latter distd. off, and the remainder distd.
in vacuo. The product, 1-C₁₀H₇CH₂CN, 54.2 g., b_p 170-
 81°, 40 g. NaOH, 200 ml. H₂O, and 80 ml. EtOH in a flask
 were heated to boiling 3.5 hrs., the EtOH was distd. off, the
 remainder decolorized with C, and pptd. with 20% H₂SO₄,
 yielding 50.3 g. I, crystd. from H₂O, m. 120-1°. To 180 g.
 I in distn. flask was added slowly 80 g. (H₂NCH₂)₂NH, H₂O,
 then 113 g. concd. HCl, and the mixt. distd., on the bath,
 increasing the temp. to 240° in 1 hr. The theoretical amt.
 of H₂O distd. within 1 hr. The temp. of the bath was kept
 1 hr. at 240-50° and then another hr. at 250-70°. The
 brown, glassy, residue was washed with 2500 ml. hot H₂O,
 the suspension heated to boiling, the residue (80 g.) filtered
 and washed with 100 ml. hot H₂O, the filtrate decolorized
 with activated C, alkalinized with 100 g. NaOH in 150 ml.

DVER

Z. BANKOWSKA

H₂O, yellow oil sepd., and the soln. extd. several times with 100-ml. portions of C₆H₆. The exts. were added to the yellow oil, the combined soln. dried with KOH, then at 90°, and crystd. giving 108.6 g. 2-(1-naphthylmethyl)imidazole (III), m. 116-20°. To 15 g. III dissolved in 20 ml. EtOH 7.7 g. concd. HCl was added, the soln. heated several min. to boiling, decolorized with C, the resulting III.HCl filtered to pptd. from the soln. with Et₂O, yielding almost 100% HCl salt, crystg. from anhyd. EtOH, m. 253-5° (decompn.), sol. in EtOH and H₂O. Similarly, III.HNO₃, m. 152° (decompn.) was obtained by mixing 4.2 g. III in 2 ml. H₂O and 2.2 g. concd. HNO₃ in 4 ml. EtOH.

Gene A. Wozny

2/2

[Handwritten signature]

DELES, JADWTGA

COUNTRY : Poland

CATEGORY : Organic Chemistry--Theoretical organic chemistry.

ABS. JOUR. : RZKhim., No. 22 1959, No. 78497

AUTHOR : Deles, J. and Polaczkowa, W.

INST. : Not given

TITLE : On the Mechanism of the Reaction of the Methyl Ester of p-Bromocinnamic Acid with Hydrazine

ORIG. PUB. : Roczniki Chem, 32, No 6, 1243-1255 (1958)

ABSTRACT : The reaction of $N_2H_4 \cdot H_2O$ (I) with 4-BrC₆H₄CH=CHCOOCH₃ (II), depending on the conditions used, gives : 4-BrC₆H₄CH=CHCONHNH₂ (III), 4-BrC₆H₄CH(NHNH₂)CH₂CONHNH₂ (IV), 5-(p-bromophenyl)-pyrazolidone-3 (V), and (4-BrC₆H₄CH=CHCONH₂) [sic] (VI). Apparently V is formed from IV or from 4-BrC₆H₄CH(NHNH₂)CH₂COOCH₃ (VII) which has not been isolated and the hydrazinolysis of which proceeds markedly more readily than that of II. Depending on the concentration of I, the intermediate reacts either

CARD: 1/10

Politechnika, Warsaw

COUNTRY : Poland G-1
CATEGORY :
ABS. JOUR. : RZKhim., No. 22 1959, No. 78497
AUTHOR :
INST. :
TITLE :
ORIG. PUB. :
ABSTRACT : with I or by intramolecular hydrazinolysis with the formation of V. The cyclization of IV proceeds at a markedly slower rate than that of VII. The presence of water lowers the rate of hydrazinolysis and inhibits the intramolecular reaction to a greater extent than the intermolecular reaction. 4-BrC₆H₄CH=CHCOOH (VIII), mp 264-265°, is prepared by the reaction of 4-BrC₆H₄CHO with CH₂(COOH)₂ in C₅H₉N in the presence of a small amount of piperidine, yield 64.8%. The methyl-

CARD: 2/10

117

COUNTRY : Poland
CATEGORY :
ABS. JOUR. : RZKhim., No. 22 1959, No. 78497
AUTHOR :
TITLE :
ORIG. PUB. :
ABSTRACT : tion of VIII with CH_2N_2 or CH_3OH gives II, mp 87-89°. About 0.025 mol II and 0.075 mol of 100% I in 10 ml CH_3OH are refluxed for 15 min. evaporated over H_2SO_4 to dryness, and the residue is rinsed with ether; the yield of IV is 65.5%, mp 81.5-13° (decomp; from alcohol), diacetyl ac-
rivative (DAP) mp 234-235° (from aqueous alc).
The combined ether extract yields 0.2 gm III, mp 163-166.5°. The same reaction with 2 hr reflux gives 3 gms of crude product which on
CARD: 3/10

COUNTRY : Poland
CATEGORY : G-1
ABS. JOUR. : RZKhim., No. 22 1959, No. 78497
AUTHOR :
JFM. :
TITLE :
ORIG. PUB. :
ABSTRACT : and 0.4 gm of an apparent mixture of IV and V. 0.05 mol II in 50 ml CH₂OH is treated with 0.15 mol of 20% I, the solution is allowed to stand for 4 days at about 20°, after which the filtrate is gradually evaporated in a desiccator, the precipitate being removed from time to time; the yield of III is 40.2%, mp 157.5-169° (from alc); 1.7% of impure VI and 26.3% of IV, mp 79-82° (decomp) are also obtained. About 0.01 mol III in 50 ml CH₂COOH is cooled to 5°, 0.01 mol

CARD: 5/10

COUNTRY : Poland
CATEGORY :

ABS. JOUR. : RZKhim., No. 22 1959, No.

78497

AUTHOR :
INSP. :
TITLE :

ORIG. PUB. :

ABSTRACT : giving 35% of unreacted II, 18.8% III, and 19% IV; the alcoholic mother liquor on evaporation of the solvent and acetylation of the residue gives 0.4 gm of the AP of V, corresponding to a yield of V of 5.8%. About 25 mmol II and 75 mmol I in 50 ml CH₃OH are refluxed for 15 min: fractional crystallization gives 15% unreacted II, 26.6% III, and 28.3% V. About 25 mmol II and 25 mmol I in 7 ml CH₃OH are refluxed for 15 min, leaving a residue of 2.5 gms of unreacted II;

CARD: 7/10

COUNTRY	: Poland	
CATEGORY	:	G-1
ABS. JOUR.	: RZKhim., No. 22 1959, No.	
AUTHOR	:	78497
INST.	:	
TITLE	:	
ORIG. PUB.	:	
ABSTRACT	: the solution on dilution with water, extraction with ether, and fractional crystallization gives 0.45 gm III, 1.3 gm V, and 0.2 gm VI; the residue recovered from the ether extract after the solvent is distilled off (0.7 gm) on acetylation gives 0.3 gm of unreacted II and 0.2 gm of a mixture of the AP of V and the AP of III. 0.2 mol 4-BrC ₆ H ₄ CH=CHCOOK in 250 ml abs CH ₂ Cl ₂ is treated (with cooling) with 6 ml of a 1% solution of C ₂ H ₅ N in CH ₂ Cl ₂ and with 0.02 mol	
CARD:	8/10	

DELES, Jadwiga; POLACZKOWA, Wanda

On the reaction of hydrazine with ring substituted derivatives of methyl cinnamate. Roczniki chemii 35 no.4:843-852 '61.

1. Department of Organic Chemistry, Institute of Technology, Warsaw.

DELES, Jadwiga; POLACZKOWA, Wanda

On the mechanism of the reaction of hydrazine with cinnamic acids
esters. II. Roczniki chemii 35 no.4:853-860 '61.

1. Department of Organic Chemistry, Institute of Technology, Warsaw.

DELES, Jadwiga

The effect of ring substituents on the reaction rates of substituted methyl cinnamates with hydrazine and on the cyclization tendency of β -hydrazinoacids hydrazides to pyrodolizones. Roczniki chemii 35 no.4:861-867 '61.

1. Department of Organic Chemistry, Institute of Technology, Warsaw.

DELESEGA, I.

DELESEGA, I. From my experience with the excavator. p. 3.

Vol. 7 no 289, July 1955
CONSTRUCTORUL
Bucuresti, Rumania

So: Eastern European Accession Vol. 5 No. 4 April 1956

DELESHKOV, G.G.

Technological progress is the most important condition for increasing labor productivity in the shipbuilding industry. Trudy LKI no.32:5-12 '60. (MIRA 15:2)

1. Kafedra politicheskoy ekonomii Leningradskogo korablestroitel'nogo instituta.

(Shipbuilding--Technological innovations)

DELETS, A.

In the forests of Polesye. Posh. delo 4 no.5:22 My '53.
(Polesye—Guerrillas) (MIRA 11:5)

DELETS, A.; ANTOSHKIN, B. (Grodno); ORLOV, Ye. (Bryansk)

Readers' letters. Pozh. delo 5 no.10:29 0 '59.

(MIRA 13:2)

1. Rayonnyy pozharanny inspektor, Brestskaya oblast' (for Delets).
(Fire prevention)

DELEUR, G.A. [Deleur, H.]

Attract a broad selection of local active participants to plan rural districts. Sil'. bud:ll no.12:8-10 D '61. (MIRA 15:2)

1. Kerivn'k viddilu planuvannya i zabudovi sil Naukovo-doslidnogo institutu mistobuduvannya Akademii budiwnitstva i arkhitekturi URSS. (Ukraine---Regional planning)

DELEUR, G. A.

DELEUR, G. A.: "Basic outlines of the planning and construction of rural villages in the southern part of the Ukrainian SSR." Academy of Architecture Ukrainian SSR. Inst of the Construction of Cities. Kiev, 1956. (Dissertation for the Degree of Candidate in Architectural Sciences)

Source: Knizhnaya letopis' No. 28 1956 Moscow

POKROVSKAYA, Yelena Vladimirovna; DELEUR, G.A., redaktor; LYUBOVSKIY, A.,
redaktor; ZELNIKOVA, Ye., ~~redaktor~~ ^{tekhicheskiy} redaktor

[Planning, building and laying out machine-tractor stations]
Planirovka, zastroika i blagoustroistvo mashinno-traktornykh stantsii.
Pod obshchei red. G.A.Deleura. Kiev, Gos. izd-vo lit-ry po stroit. i
arkhitekture USSR, 1956. 284 p. (ML3A 9:8)
(Machine-tractor stations)

DELEUR, Ye.N., dotsent; SUNHOV, S.A., dotsent

Using a cathode ray oscillograph for investigating the processes
of breaking in machine parts. Nauch.trudy OIIMF no.16:95-102 '58.
(MIRA 11:11)

(Cathode ray oscillograph) (Mechanical wear)

DELEV, D.

DELEV, D. Standardization and giving account of expended materials and reserve parts. p. 46. Vol. 8, no. 6, 1956. TRANSPORTNO DELO. Sofia, Bulgaria

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

DELEV, N.

New urinary bladder from the sigmoid colon, Khirurgia, Sofia 11 no.3:
279-281 Mar 58.

1. Iz Khirurgichnoto otdelenie na Okrushnata bolnitsa D-r Racho Angelov--
Sofia.

(BLADDER, surg.

substitute bladder with ureteral implant into sigmoid (Bul))

DELEV, N.

Formation of a new urinary bladder from the sigmoid. Khirurgia, Sofia
11 no.5-6:544-546 1958.

1. Iz Khirurgichnoto otdelenie na Okruzhnata bolnitsa Dr Racho Angelov
--Sofia.

(BLADDER, surgery,
sigmoidocystoplasty (Bul))
(COLON, surgery,
same)

DELEV, N.

Tumors of the urachus. Khirurgiia (Sofia) 18 no.3:357-360 1965.

1. Okruzhna bolnitsa "Er. Rachev Angelov", Sofia (gl. lekar
T. Mikhailov).

DELEVI, L.B., inzhener.

~~XXXXXXXXXXXXXXXXXXXX~~

Catching lacquer dust by means of cloth blinds. Der.i lesokhim.
prom.3 no.1:25-26 Ja '54. (MLRA 7:2)

1. Dnepropetrovskiy mebel'nyy kombinat im. Khalturina.
(Lacquer and lacquering)

DELEVI, L. B.

How we increased the productivity of the paint spraying shop.
Dor. 1 lesokhim.prom. 3 no.7:24 J1 '54. (MIRA 7:7)

1. Dnepropetrovkiy mebel'nyy kombinat izeni Khalturina.
(Spray painting)

DELIV, N.B., inzhener.

Apparatus for cutting longitudinal grooves in columns. Der. 1
lesokhim. prom.3 no.11:22 N '54. (MLRA 7:12)

1. Dnepropetrovskiy mebel'nyy kombinat im. Khalturina.
(Woodwork)

DELEVI, V.G.; SHUL'MAN, P.A.

Effect of diamond grinding on the surface layers of hardened
R18 steel. Metalloved. i term. obr. met. no.4:49-50 Ap '65.
(MIRA 18:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut sverkhverdykh
materialov.

DELEVSKIY, P. S.

"A Stand for Intravenous Narcosis," Khirurgiya, No 8, 1949.

2nd Surgical Clinic, Ukr Inst. Advanced Training for Physicians

DELEVSKIY, P.S., dotsent

~~_____~~
Fifth years in the distinguished role of surgeon; life and activities
of A.I.Meshchaninov. Vest. khir. 75 no.1:90-91 Ja-F '55. (MLRA 8:4)
(MESHCANINOV, ALEXSANDR IVNAOVICH, 1879-)

MESHCHANINOV, A.I., prof. (Khar'kov, ul. Sverdlova, d.152, kv.1);

DELEVSKIY, P.S., dots.

Nonparasitic cysts of the liver. Vest.khir. 81 no.12:80-81

D '58.

(MIRA 12:2)

1. Iz khirurgicheskoy kliniki (zav. - prof. A.I. Meshchaninov)
9-y Khar'kovskoy gorodskoy klinicheskoy bol'nitsy (glavnyy vrach -
L.S. Sycheva).

(LIVER, cysts

nonparasitic (Rus))

DELEVSKIY, Yu.P., kand. med. nauk; SHCHERBAK, G.A.

Results of the use of plastic packages in tissue preservation.
Ortop., travum. i protez. 26 no.8:62-65 Ag '65. (MIRA 18:9)

1. Iz laboratorii konservirovaniya tkaney (rukovoditel'-
Yu.P. Delevskiy) Khar'kovskogo instituta protezirovaniya,
ortopedii i travmatologii imeni M.Ye. Sitenko (dir.- chlen-
korrespondant AMN SSSR prof. N.P. Novachenko). Adres avtorov:
Khar'kov 24, Pushkinskaya ulitsa, dom 80, Institut protezirovaniya,
ortopedii i travmatologii.

DECEMBER, 1954

Chemical Abst.
Vol. 48
Apr. 10, 1954
Analytical Chemistry

Didežal, J., and Šimon, V. Základy kvantitativní semi-
mikroanalýzy. Prague: Nakladatelství Československé
akad. věd, 1953. 127 pp. 20 Kcs. Reviewed in Chem.
Listy 47, 120 (1954).

DELIZZEL, B.; RAKUSAN, B.; URBANEK, G.; VYSTRČIL, A.; ZICHA, K.; ZICHA, O.

Floristen as a drug in the treatment of inflammation. Cesk. farm.
3 no.7:247-248 Sept 54.

1. Z Vyzkumneho ustavu lecivych rostlin v Prase.

(PLANTS,

Hypericum perforatum extract, ther. of inflamm.)

(INFLAMMATION, therapy,

Hypericum perforatum extract)

DELFIN, Boris, inz.

Development and problems of the construction industry in the
Sisak District. Gradevinar 16 no. 1:23-28 Ja '64.

DELFIN, S.

DELFIN, S. Prospects for development of the chemical industry in Croatia.

Vol. 4, No. 3, March 1955 KEMIJA I INDUSTRIJA

SO: Monthly List of East European Accessions, (EREA), IC, Vol. 5, No. 3
March, 1956

DELFIN, S.

DELFIN, S. Meeting of the Union of Chemists and Technologists of Yugoslavia.

Vol. 4, No. 10, Oct. 1955

KEMIJA U INDUSTRIJI

SO: Monthly list of East European Accessions, (EEAL) IC, Vol. 5, No. 3
March, 1956

AUTHOR: Delfin, Slava, Engineer

YUG/2-59-1-16/22

TITLE: Production of Artificial Fertilizers in the Federal People's Republic of Yugoslavia (Proizvodnja umjetnih gnojiva u FNRJ)

PERIODICAL: Kemija u industriji, 1959, Nr 1, pp 21 - 26

ABSTRACT: The author emphasizes the need for more extensive use of fertilizers and increase in their production and gives a description of the chemical composition, import and the present and planned production of various fertilizers.

1. Nitrate fertilizers: a) calcium cyanamide is produced by the plant in Dugi Rat and the Tvornica dušika (Nitrogen Plant) in Ruše. Their total production capacity is 44,000 tons, but their actual production is only 50% of their capacity. With the construction of the new plant in Jegunovci this capacity will be increased by 33,000 tons, and should meet the requirements for this kind of fertilizer; b) ammonium sulfate is mainly produced as a component for mixed fertilizers by the Koksara (Coke Plant) "Boris Kidrič" and the coke plant in Zenica. The total yearly production of these two plants is 9 - 10,000 tons; c) ammonium nitrate of which the Fabrika azotnih jedinjenja (Nitrogen Compounds

Card 1/4

YUG/2-59-1-16/22

Production of Artificial Fertilizers in the Federal People's Republic of Yugoslavia

Plant) in Gorazde, with a yearly capacity of 24,000 tons, is the only producer. About 5 - 6,000 tons of the total yearly production is used for production of mixed fertilizers and the rest is divided between export and the supplies for the chemical industry. 2) Phosphate fertilizers:

a) superphosphate is produced by "Zorka" in Subotica, "Cinkarna" in Celje and "Zorka" in Šabac. Total capacity is 260,000 tons yearly, and expansion of these plants is planned; b) hyperphosphate, the production of which started in 1957 by the "Tovarna dušika" (Nitrogen Plant) in Ruše, is obtained by grinding imported crude phosphate. New plants should be constructed in the vicinity of the Adriatic ports to save the cost of double transport, since the Adriatic coastal area is the main consumer of this fertilizer.

3) Mixed fertilizers, i.e. "amonfos", "nitrofos", "nitrofoskal" and "KAS", are produced by "Zorka" in Subotica and "Tovarna dušika" (Nitrogen Plant) in Šabac. The raw materials required for the production of these fertilizers are

Card 2/4

YUG/2-59-1-16/22

Production of Artificial Fertilizers in the Federal People's Republic of Yugoslavia

imported, since the domestic resources are negligible. The total production of all three kinds of fertilizers, i.e. nitrate, phosphate and mixed, does not satisfy the need and individual mixed-fertilizer mixing stations are to be built in consumer centers. Since the new plants which are planned to be constructed by 1961 will not be completed by that date owing to the consistent refusal of the USSR to give the necessary loans, agriculture will still depend on imported fertilizers or on the import of raw materials for production of fertilizers. The import of potash fertilizers is a permanent feature of the Yugoslav economy since there are no adequate domestic sources of raw material for these fertilizers. The author emphasizes the need for planning for the period after 1961, for construction of phosphate fertilizer plants in the Western regions of Yugoslavia, and for the production of concentrated fertilizers, i.e. tricalcium phosphate and ammonium phosphate. The shortage of nitrate fertilizers could be overcome with the

Card 3/4

Production of Artificial Fertilizers in the Federal People's Republic of Yugoslavia

YUG/2-59-1-16/22

domestic sources of bonded nitrogen, i.e. natural gas and lignite. Crude phosphorus will still have to be imported and phosphoric acid required for various kinds of fertilizers could be produced by thermal process in locations with a seasonal surplus of hydropower. There are 7 tables and 10 references, 1 of which is French and 9 Yugoslav.

ASSOCIATION: Zavod za privredno planiranje NRH, Zagreb (Institute for Economic Planning of the Peoples Republic of Croatia, Zagreb)

Card 4/4

DELFIN, Slava, ing.

"Achema 1961". Kem ind 10 no.7:192 J1 '61.

DELFIN, Slava, ing.

Fair of plastics in Zagreb, April 13-22, 1962. Kem ind 10 no.10:
375-377 0 '61.

(Zagreb—Fairs) (Plastics)

DEL'FIN, Val' (UA3-18738)

Greetings from Cuban radio amateurs. Radio no.11:11
N '65. (MIRA 18:12)

DELI, K. A.

"Lymph Node Changes of the Mediastinum and Radix Pulmonis During Tuberculosis." Cand Med Sci, First Moscow State Med Inst, Moscow, 1953. (RZhBiol, No 6, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

S0: Sum. No. 521, 2 Jun 55

DELI, K. A., kand. med. nauk

Changes in the blood vessels of the brain in tuberculous meningitis. Probl. tub. no.3:94-100 '62. (MIRA 15:4)

1. Iz patologoanatomicheskogo otdeleniya (zav. -- prof. B. P. Ugryumov) Gosudarstvennogo nauchno-issledovatel'skogo instituta tuberkuleza Ministerstva zdravookhraneniya RSFSR (dir. -- V. F. Chernyshev, zam. dir. po nauchnoy chasti -- prof. D. D. Aseyev)

(BRAIN--BLOOD SUPPLY) (MENINGES--TUBERCULOSIS)

EELI, Laszlo, dr.

Clinical experience with the determination of gastric acidity
with "gastrotest". Orv.hetil. 102 no.6:262-263 5 F'61.

1. Debreceni Orvostudományi Egyetem, II. Belklinika.
(GASTRIC JUICE)

DELI, László, dr.

The hyperglycemia and glycosuria-inducing effect of thiazide derivatives in diabetics. Orv. hetil. 103 no.7:302-303 18 F '62.

1. Debreceni Orvostudományi Egyetem, II Belklinika.

(CHLOROTHIAZIDE ther)
(DIABETES-MELLITUS ther)
(GLYCOSURIA etiol)

[REDACTED]

DELL, János, Dr. and Sándor, Dr. DEVENYI, István, Dr; Medical University of Debrecen, II. Medical Clinic and Pathological Institute (Doktori Osztály, Debreceni Egyetem, II. Szakintézet és Kísérleti Intézet).

"Symptomatic Agranulocytosis in Lymphogranulomatosis."

Budapest, Ujvidi Hírlap, Vol 124, No 10, 10 Mar 1963, pages 10-12.

Abstract: [Authors' Hungarian summary] The authors report a case of lymphogranulomatosis (Lg.) which originated in the glands of the neck and manifested itself in the abdominal form of Lg. five years later. In this case pneumonia arose during which a transitional symptomatic agranulocytosis was observed. With recovery from the pneumonia, the neutrophils were again present in the blood, a week later an acute malignant pseudosepticemic form of Lg. developed and the patient died in a septic coma. The clinical data suggest that the symptomatic agranulocytosis in Lg. is facilitated by infection. The possibility that the transition of the abdominal form of the disease into the acute malignant pseudosepticemic was triggered by the infection is also proposed. 3 Western, 5 Eastern European references.

[1/1]

DELI, Laszlo, dr.; DAN, Sandor, dr.; DEVENYI, Istvan, dr.

Symptomatic agranulocytosis in Hodgkin's disease. Orv. hetil. 104
no.10:457-459 10 Mr '63.

1. Debreceni Orvostudományi Egyetem, II. Belklinika es Korbonctani
Intezet.

(HODGKIN'S DISEASE)

(AGRANULOCYTOSIS)

SZILAGYI Janos, dr.; ~~DELM~~, Lazzlo, dr.; OSVATH, Sandor, dr.; KANTOR,
Erzsebet, dr.; SIMAY, Attila, dr.

Pathophysiology and clinical picture of chronic cardiorespiratory
insufficiency. Orv. hetil. 106 no.20:921-925 16 My'65.

1. Debreceni Orvostudományi Egyetem, Tbc Klinika (mb. igazgató:
Pongor, Ferenc, dr.) ; II. Belgyógyászati Klinika (igazgató:
Petrányi, Gyula, dr.), Rtg. Klinika (mb. igazgató: Jona, Gabor, dr.).

DELI, Matild

"The Terek-Kuma Canal" by I.P.Krichevov. Reviewed by Matild
Deli. Hidrológiai közlöny 41 no.5:382 0'61.

OLLOS, Geza dr., a muszaki tudományek kandidátusa; DELI, Matild; SZOLNOKY, Csaba; KERÁDI, Gábor, dr., a muszaki tudományek kandidátusa

Results in model tests on lowering underground water level by means of vacuum wells. Hidrológiai közlöny 43 no.1:19-30 F '63.

1. Építési és Kezelési Műszaki Egyetem I.sz. Vízépítési Tanszéke (for Ollos, Deli, Szolnok). 2. "Hidrológiai Közöny" főszerkesztője (for Ollos).

OLLCS, G., Kandidat der technischen Wissenschaften; DELI, M.:
SZOLNOKY, Cs.

Results in model tests on ground water level lowering by
vacuum wells. Acta techn Hung 49 no.1/2:163-189 '64.

1. Lehrstuhl I. für Wasserbau an der Technischen
Universität für Bau- und Verkehrswesen, Budapest.

DELI, SZ.

"Basis Technological Principles of Preparing for the Weaving of Rayon Yarns on the Basis of their Physical-mechanical Properties." / (Magyar Textiltechnika.

p. 374

No. 11/12, Nov./Dec. 1953 Budapest.)

Vol. 3, no. 6

SO: Monthly List of East European Accessions, /Library of Congress, June 1954, Uncl.

DELI, S:z.

✓
107. New trends in the technology of walt winding in
the silk industry -- Sz. 11011. (*Magyar Textiltechnika*
-- 1955. No. 4, pp. 145-147, No. 5, pp. 173-180,
5 figs.)

HT
Many of the "hidden" defects in silk cloths in the
direction of the walt are due to the walt winding. The
cause of these defects is the excessive stress of the yarn.
With obsolete machines it was impossible to prescribe
a technology which could hold the yarn tension below
the limit of the elastic elongation. After treating the
main principles of technology the article gives a detailed
analysis of the kinematics of the generally used machine.
The tasks necessary to obtain an even spindle shaft
speed and thereby even yarn velocity are dealt with.
In order to ensure a constant stress below the limit of
elastic elongation the author suggests axial unwinding
instead of the hitherto practiced unrolling (crepe yarns).

DELIAN, Karl

~~DELIAN, Karl.~~

The position of young workers in Austria. Vsem. prof. dvizh. no.2:
7-9 F '58. (MIRA 11:2)
(Austria--Labor and laboring classes) (Youth)

MENKES, B.; SHANDOR, S.; MIKLIA, K.; DELIANU, M.

Experimental studies on homo- or heterological cells introduced into the embryonic organism. I. Behavior of Ehrlich ascites tumor cells introduced into the circulation of chick embryos. Rev. sci. med. 7 no.1/2:59-62 '62.

(CARCINOMA EHRLICH TUMOR) (EMBRYO)

DELIBALTOV, I.

Irrigation for cotton fields. p. 26.

KOOPERATIVNO ZEMEDELIE, Sofiya, Vol. 10, no. 7, July 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955,
Incl.

DELIBALTOV, Iosif; TSONEV, Ivan; KHRISTOV, Khristo; TSOLEV, Boian

Precipitations as asset in the soil moisture balance in
determining the irrigation norm. Selskostop nauka 2 no.1:
5-11 '63.

DELIBALTOV, Iosif IA., agr.

Irrigation of maize by sprinkling. Khidrotekh i melior 9 no.1:
32 '64.

DELIBASH, B. A.; SHIDLOVSKIY, M. F.; PEYVE, V. V. ; POLIKAROV, P. I.; BERG, A. Ya.;
BLEKHMAN, A. A.; OBRENSKIY, V. Ye. and VENETSIANOV, Ye. A. and MOVSESOV, N. S.;

"The Case for Explosion-proof Electrical Equipment in the Oil and Gas Industries."

report presented at the All-Union Scientific and Technical Conference on the
Electrical Equipment in Buildings and Outside Installations Liable to Explo-
sions, 14-19 April 1958, Stalino.
(Energet. Byulleten', 1958, No. 7, pp 29-33)

DELIBASH, B.A.; ZHIVOV, M.S.; TRUNKOVSKIY, L.Ye.; SOKOLOV, D.V.,
inzh., nauchnyy red.; VDOVENKO, Z.I., red. izd-va;
SHERSTNEVA, N.V., tekhn. red.

[Modern methods for conducting electrical equipment instal-
lation operations]Progressivnye metody proizvodstva elektro-
montazhnykh rabot. Moskva, Gosstroizdat, 1962. 134 p.
(MI.A 15:12)

(Electric wiring) (Electric lines)

DELIBASH, B.A., insh.; ZHIVOV, M.S., insh.; NAYFEL'D, M.R., inzh.

Experience in the installation of electrical equipment in large
cupola furnaces. Prom. energ. 18 no.3:34-40 Mr '63.

(MIRA 16:6)

(Cupola furnaces—Electric equipment)

VENETSIANOV, Yevgeniy Andreyevich; DELIBASH, B.A., red.; LARIONOV,
G.Ye., tekhn. red.

[Special features of the installation of explosion-proof
electrical equipment] Osobennosti montazha vzryvosashchi-
shchennogo elektrooborudovaniia. Moskva, Gosenergoizdat,
1963. 62 p. (Biblioteka elektromontera, no.102)
(MIRA 17:1)

DELIBASH, Boris Apostolovich; ZHIVOV, Mikhail Semenovich;
PROKHORENKOV, A.T., inzh., nauchn. red.; LYTKINA, L.S.,
red.; KASIMOV, D.Ya., tekhn. red.

[Installation of the electrical equipment of large cupola
furnaces] Montazh elektrooborudovaniia krupnykh domennykh
pechei. Moskva, Gosstroizdat, 1963. 105 p.
(MIRA 17:1)

VENETSIANOV, Vygeniy Andreyevich; RELEASE, S.A.; nauchn. red.;
KASHEVA, M.A., red.

[Installation of electrical wiring and electrical equip-
ment in premises with explosion hazards] Montazh elektro-
provodok i elektrooborudovaniya vo vzyvopasnykh pome-
shcheniyakh. Moskva, Stroiizdat, 1964. 139 p.
(NIRA 17:9)

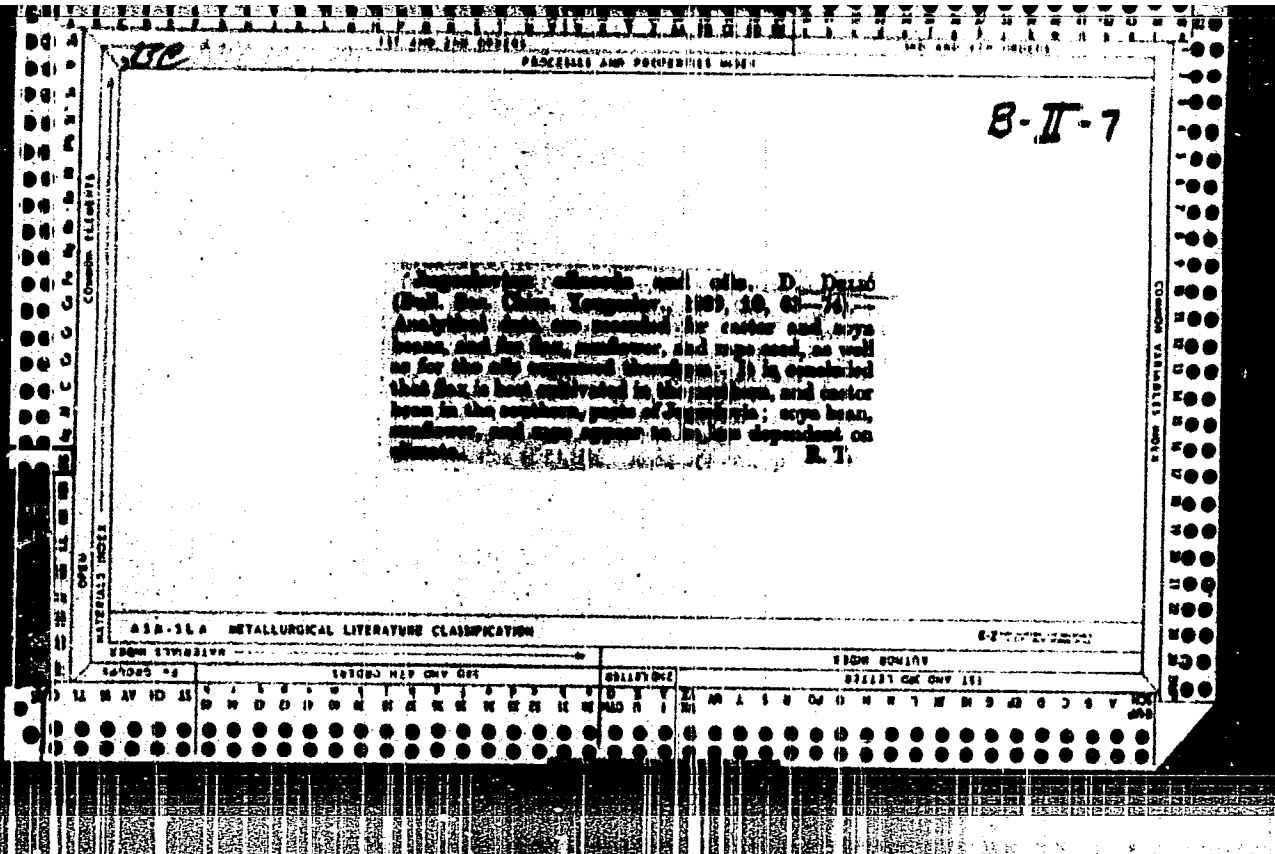
BOGDANOV, K.D.; DELIBASH, B.A.; VENETSIANOV, Ye.A.; GUREYEV, V.A.;
ZHIVOV, M.S.; ZEVAKIN, A.I.; NAYFEL'D, M.R.; NEYMAN, Kh.G.;
KUZNETSOV, N.P.; RIZOVATOV, A.V.; RUBINSHTEYN, Ya.A.;
TRIFONOV, A.N.; TRUNKOVSKIY, L.Ye.; KEROMCHENO, G.Ye.

[Organization and performance of electrical equipment installation operations] Organizatsiia i proizvodstvo elektromontazhnykh rabot. Moskva, Stroiizdat, 1964. 602 p.
(MIRA 18:3)

DELEBASHEV, A.

"Socialistic Realism In Industrial Architecture. p. 12" (ARKHITEKTURA I STROITELSTVO)
Vol. 2, No. 2, 1952, Sofiya, Bulgaria

SO: Monthly List of East European Accessions L.C. Vol. 2, Nov. 1953, Uncl.



DELIC, D.; GRIZO, A. ; NIKOLIC, Z.

Importance of determining free lime in cement, a survey
of methods of determination. p. 248. Vol. 11, No. 2,
1956. TEHNIKA. Beograd, Yugoslavia.

SOURCE: East European Accessions List, (EEAL) Library
of Congress, Vol. 5, No. 8, August, 1956.

DELIC, D.

- YUGOSLAVIA / Chemical Technology, Chemical Products and H
Their Application, Part 2. - Ceramics,
Glass, Binders, Concretes. - Glass.

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 61723.

Author : Dejan Delic, Milutin Jovanovic, Momcilo Rostic.
Inst : Not given.
Title : Theory of Glass Tempering and Its Practical Ap-
plication.

Orig Pub: Tehnika, 1957, 12, No 10, Hem. ind., 11, No 10,
153 - 158.

Abstract: Based on bibliographical data and the theory of
glass (G) tempering (T) developed by G. M. Bart-
enev, the following questions are discussed:
fundamental concepts of T mechanism; tempering
of a glass plate at its symmetrical cooling ac-

Card 1/2

38

YUGOSLAVIA / Chemical Technology, Chemical Products H
and Their Application, Part 2. - Ceramics,
Glass, Binders, Concretes. - Glass.

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 61723.

Abstract: cording to a specified regime; computation methods (equations and tables) of the heat transfer factor and optimum temperatures of tempering flat glass specimens. An example of a concrete application of the T theory based on computations obtained from practical data is presented.

Card 2/2

DELIC, D

- YUGOSLAVIA / Chemical Technology, Chemical Products H
and Their Application, Part 2. - Ceramics,
Glass, Binders, Concretes. - General Topics.

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 61649.

Author : Dejan Delic, Marija Tecilazic-Stevanovic,
Nada Petrovic.

Inst : Chemical Society, Yugoslavia.

Title : Some Researches Concerning Granulometric Com-
position of Clays.

Orig Pub: Glasnik Hem. drustva, 1957, 22, No 4, 245 - 251.

Abstract: The purpose of the work was to find the most
efficient method of determination of particle
size. The direct microscopic method and 4
(indirect) methods based on the rate of set-
tling of clayey suspension were checked by the

Card 1/2

25

YUGOSLAVIA / Chemical Technology, Chemical Products H
and Their Application, Part 2. - Ceramics,
Glass, Binders, Concretes. - General Topics.

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 61649.

Abstract: comparison method. The areometric method is
the simplest and the time necessary to carry
it out is the shortest compared with other
above mentioned methods. The accuracy of re-
sults obtained with that method is about 1.2%.

Card 2/2

DELIC, DE JAN

18
Influence of electrolytes on a separation of clay. J. Man-
delis and Aleksandra Gula. *Priznanija UMF. Belgrade*
Tijdschrift. *Formel. Ztg. d. Mineral. Band 81, 229-3*
(1957).--Graphs show variations of capacity and bending
strength as functions of electrolyte values between 0 and
0.8%. Electrolytes used were: NaCl, Na₂CO₃, NH₄
Cl, and Na₂SiO₃. Plastics and shalyage are also
covered, and the latter is tabulated. J. M. 208.

RUMANIA/Chemical Technology. Chemical Products and Their
Application. Ceramics. Glass. Binding Materials.
Concrete.

H-13

Abstr Jour: Ref Zhur-Khim., No 2, 1959, 5456.

Author : Delic, Dejan; Janackovic, Toma.
Inst : Belgrade University.
Title : Protection of Surface of Refractory Materials.

Orig Pub: Ind. uscaru, 1958, 5, No 5, 168-170.

Abstract: Work concerning the determination of the degree of
corrosion of aluminosilicate refractory materials by
 Na_2CO_3 , K_2CO_3 and slag containing alkalis was carried
out at the Belgrade university (Federal People's Republic
of Yugoslavia). 8 different refractory materials were
studied, they contained 36 - 39, 42-45, 45-50 and about
60% of Al_2O_3 and differed by the structure of the body

Card : 1/3

RUMANIA/Chemical Technology. Chemical Products and Their
Application. Ceramics. Glass. Binding Materials.
Concrete.

H-13

Abstr Jour: Ref Zhur-Khim., No 2, 1959, 5456.

(coarse-grained, medium-grained and fine-grained).
Specimens of the size 100 x 100 x 65 mm burned at
1400°C, in which holes had been drilled (according
to DIN 1069) were tested. The holes were filled
with weighed amounts of reagents and the specimens
were heated in a furnace to 1250°, this temperature
being maintained for 12 hours. After the burning
the specimens were cut and the corrosion was deter-
mined in cub.cm and in % in the relation to a whole
brick of 2000 cub.cm in volume. Also tests of the
corrosion of crucibles (made of the same bricks)
coated on the inside with a suspension of V_2O_5 in
water, which had been applied by atomizing with con-

Card : 2/3

RUM.NIL./Chemical Technology. Chemical Products and Their
Application. Ceramics. Glass. Binding Materials.
Concrete.

H-13

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5456.

pressed air, were carried out. Fine-grained refractory materials containing 42-45% of Al_2O_3 proved to be the most stable. The action of Na_2CO_3 is considerably stronger (1.2 - 1.5 times) than that of K_2CO_3 ; the action of slag is 6 - 10 times weaker than that of Na_2CO_3 . The coating of the surface of refractory materials with V_2O_5 raises the resistivity of refractory materials to the action of Na_2CO_3 considerably (1.5 - 2 times) and protects them from the action of slag completely. -
S. Glebov.

Card : 3/3

15.2670

26270
Y/001/60/000/005/002/002
D257/D304

AUTHOR: Delić, Dejan, Doctor of Engineering, Professor
and Ristić, Momčilo, Engineer

TITLE: Solid state reactions between metal heaters and ceramics
in electrically heated furnaces

PERIODICAL: Tehnika, no. 5, 1960, 971-972

TEXT: The authors outlined the reactions and mechanisms of Mo with the $Al_2O_3 - SiO_2$ system, and a Cr-Fe - Al alloy with the systems $Al_2O_3 - SiO_2$, $MgO - SiO_2$; they deal with their usefulness and that of "sintercorund" (pure Al_2O_3) as material for carriers. The report is in four parts: (1) The reactions of an alloy with Cr, Fe Al, [Abstrator's note: Cr/Fe/Al refers to the alloy: 30% Cr, 5% Al, 65% Fe, which erroneously appears in the original as: 30% Cr, 5% AC] with Al_2O_3 and $MgO - SiO_2$ ceramics. Alloy (30% Cr, 5% Al) is in popular use as a
Card 1/5

26270
Y/001/60/000/005/002/002
D257/D304

Solid state...

furnace element and was here used in wire form (TYP Cr Al 30.5 DIN 17470). Wires of different diameters were embedded into milled (0.3 - 0.6 mm bead size) Sipalox A and Sipalox C (60% Al_2O_3 and 70% Al_2O_3 respectively) materials, and then heated to an optimum temperature of 1300°C. Investigations showed that corundum powder in place of Sipalox A and C does not react with the wires at all. Reaction in the case of the alloy and Al_2O_3 is attributed to the presence of quartz in the Sipalox material. The mechanism is postulated as follows: on heating Al diffuses to the surface of the alloy where it oxidizes, forming an impermeable layer preventing further Al diffusion; but, with free quartz present, the oxide coat reacts with SiO_2 ; aluminum continues to diffuse to the surface, where it reacts with SiO_2 . The diffusion coefficient of Al in iron is greater than the diffusion coefficient of chromium in iron, which supports this theory. Determination of the Al contents of the alloy on heating with the ceramics

Card 2/5

26270

Y/001/60/000/005/002/002

D257/D304

Solid state...

also support this mechanism. The more rapid loss of Al and lower reaction time in thinner wires is due to a much smaller volume/area ratio, as compared to thicker wires. When the Al in the alloy is used up and can no longer form a surface layer, reaction between quartz and Cr and Fe oxides proceeds quickly. This mechanism also applies to MgO-SiO₂ type ceramics where free MgO can react with coats of Al₂O₃ to build spinels. (II) The reaction between Al₂O₃ - SiO₂ and Mo is due to the presence of free quartz in the ceramic mulls, together with the increased electrical conductivity of mulls above 1000°C. Short circuits thus arise the molybdenum spirals, melting the refractory former and thus giving rise to reactions. Quartz reacts with molybdenum oxide even at 1320°C, and to stop this, MgO has been added to remove free quartz. The pure Al₂O₃ carrier, "Sintercorund" is more efficient; it was found unreactive as a former even at 1950 C. (III) Reactions of Al₂O₃ with Mo, W, and Pt. In high vacua Al₂O₃ and Mo do not react, nor do they do so in pure H₂, but if the hydrogen contains traces of

X

Card 3/5

26270

Y/001/60/000/005/002/002

D257/D304

Solid state...

oxygen grey spots appear at the contacts; those spots increase with an increase in contamination, showing reaction. The electrical properties of tungsten were measured in high vacuum at 1500°C, when it showed no reaction with alumina. Platinum does not react, but in reducing atmospheres, minute amounts of quartz present transform to SiO₂, which reacts with Pt given platinosilicides, important in thermocouples of the Pt/Pt-Rh type. (IV) Reaction of C, W, Mo with ZrO₂ and MgO. Ceramics of the ZrO₂ and MgO type react with C, W, and Mo at high temperatures at pressures of 10⁻⁴ - 10⁻⁵ Torr. In fact all these materials react with each other at high temperatures and in intimate contact. In conclusion, a Cr-Fe-Al alloy reacts with Al₂O₃ - SiO₂ and MgO - SiO₂ type ceramic carriers only if free quartz is present. Mo if oxidized at the surface reacts even at 1300°C with quartz, to form molybdenum silicates. Hence the following systems can be used for construction of furnace heating elements: (1) Fe - Cr - Al alloy and ceramics free from quartz and MgO. (2) Mo heaters and sintered corundum (pure Al₂O₃).

Card 4/5

26270

Y/001/60/000/005/002/002

D257/D304

Solid state...

ZrO₂, or MgO. (3) Tungsten heaters and pure Al₂O₃, MgO, or ZrO₂.

(4) Pt heaters and pure Al₂O₃. There are 2 tables and 7 non-Soviet-bloc references. The reference to the English language publication reads as follows: P. Johnson, J. Amer. Cer. Soc. 33, 1950, 168-171.

ASSOCIATION: Tehnoloski fakultet univerziteta u Beogradu, Jugoslavija
(Technological Faculty, University of Belgrade, Yugoslavia)

SUBMITTED: November 25, 1959

Card 5/5

X

DELIC, Dejan M.; JOVANOVIĆ, Milutin A.

Changes on the glass surface due to the action of water at higher temperatures. Glas ~~Rev~~ dr 25/26 no.8/10:477-483 '60/'61.

1. Faculty of Technology, Institute of Inorganic Chemical Technology, Beograd.