A New Method of Synthesizing 2-Aralkyl Indandiones-1,3

acids (Ref 14). Neither the physical properties nor the yields of the 2-benzyl indandione-1,3 thus produced are given in reference 11, the authors worked out a new method: the substances mentioned in the title are produced (IV) by the hydration of the 2-arylidene indandiones-1,3 (III). Aromatic aldehydes may be easily condensed with indandione-1,3 and form 2-arylidene indandiones-1,3 (III). Further transformations of the 2-benzal indandione-1,3 (III Ar = C_6H_5) under the action of sodium hydrogen sulfite (V) by the Wojack reaction (Refs 11, VI) are given. Table 1 shows the seven aralkyl indandiones produced by the hydrogenation of the arylidene indandiones with sodium hydrogen sulfite. Dialkyl amino arylidene indandiones do not form bisulfite compounds, therefore the yields of the dialkyl amino benzyl indandiones are higher. Good yields were obtained by the hydrogenation of the benzal indandione by hydrogen in the presence of skeleton nickel. A special communication on this topic follows. An experimental part gives the usual data. There are 1 table and 16 references, 6 of which are Soviet.

SOV/20-125-3-23/63

A New Method of Synthesizing 2-Aralkyl Indandiones-1,3

ASSOCIATION: Institut organicheskogo sinteza Akademii nauk Latviyskoy SSR (Institute of Organic Synthesis of the Academy of Sciences of the Latviyskaya SSR)

SUBMITTED: December 12, 1958

Card 3/3

VANAG, G.[Vanags, G.](Riga); DUMPIS, T.(Riga); ZUTERE, L.(Riga)

2-aminobenzylindandione-1,3. Vestis Latv ak no.6:73-80 '60.
(KRAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut organicheskogo sinteza.

(Benzylindandione) (Amino group)

DUMPIS, T.T.; VANAG, G. Ya.

Nitration of 2-benzyl-1,3-indandiones. Zhur. ob. khim. 31 no.3:911-915 Mr '61. (MIRA 14:3)

1. Institut organicheskogo sinteza AN Latviyskoy SSR.
(Indandione) (Nitration)

DUMPIS, T.T.; VANAG, G.Ya. [Vanags, G.], akademik

Synthesis of 2-aralkyl-1, 3-indandiones by the catalytic hydrogenation of 2-aralkylidene-1,3-indandione. Dokl. AN SSSR 141 no.5:1093-1096 D '61. (MIRA 14:12)

1. Institut organicheskogo sinteza AN Latviyskoy SSR. 2. AN Latviyskoy SSR (for Vanag).
(Indandione)

DUMPIS, T.T.; VANAG, G.Ya. [Yanags, G.], akademik

Production of 2-aryl-1-indan-3-ols by the catalytic hydrogenation of 2-aryl-1,3-indandiones. Dokl. AN SSSR 142 no.1:92-95 Ja '62. (MIRA 14:12)

1. Institut organicheskogo sinteza AN Latviyskoy SSR. 2. AN Latviyskoy SSR (for Vanag).

(Indanol) (Indandione)

DUMPIS, T.T.; VANAG, G.Ya. [Vanags, G.], akademik

Catalytic hydrogenation of 2-substituted 1,3-indandiones to corresponding 1,3-indandiols. Dokl. AN SSSR 142 no.2:362-365 Ja '62. (MIRA 15:2)

1. Institut organicheskogo sinteza AN Latviyskoy SSR.
2. AN Latviyskoy SSR (for Vanag).
(Indandione)
(Indandiol)

DUMPIS, T.T.; VANAG, G.Ya. [Vanags, G.] akademik

Production of 2-aralkyl-1-indanone-3-ols by the catalytic hydrogenation of 2-aryliden-1,3-indandiones. Dokl. AN SSSR 142 no.6:1308-1311 F '62. (MIRA 15:2)

1. Institut organicheskogo sinteza AN Latviyskoy SSR.
2. AN Latviyskoy SSR (for Vanag).
(Indanone)
(Indandione)

STRADYN', Ya. [Stradins, J.]; ERMANE, E.; DUMPIS, T.; LINABERG, Ya. [Linabergs, J.]; VANAG, G. [Vanags, G.]

Protolysis of substituted derivatives of 2-benzyl-1,3-indandione and its analogs. Zhur.org.khim. 1 no.2:388-395 F '65. (MIRA 18:4)

1. Institut organicheskogo sinteza AN Latviyskoy SSR.

SOV/137-58-10-20699

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 52 (USSR)

AUTHORS: Dumskaya, A.F., Pavlov, A.V.

TITLE: Complex Treatment of Nepheline Rocks of New Occurrences (Kompleksnaya pererabotka nefelinovykh porod novykh mestorozhdeniy)

PERIODICAL: V sb.: Legkiye metally. Nr 4. Leningrad, 1957, pp 43-51

ABSTRACT: An examination is made of 2 methods of dressing nepheline syenites of different compositions, viz., magnetic concentration in a weak magnetic field and chemical concentration consisting of treatment of ground nepheline rock with a caustic alkaline solution. The conditions for treatment of the resultant concentrates to derive alumina by sintering are specified with greater precision. With the object of utilizing nepheline rocks without prior concentration, a flowsheet is proposed that eliminates sintering and is based upon hydrochemical treatment of the rock with a strong caustic alkaline solution of up to 500 g ROH/liter. Examination is made of the treatment of the unconcentrated rock by sintering, with addition of solid reductant (anthracite, coke) to the mix. 1. Nephelite ore--Processing T.S.

Card 1/1

DUMSKAYA, A.F.

Studies on the selection of a method of processing Uzhur syenites for the Achinsk Alumina Plant carried out in 1952-1954. Trudy Vost.-Sib. fil. AN SSSR no.13:160-177 '58. (MIRA 12:12)

1.Vsesoyuznyy alyuminiyevo-magniyevyy institut.
(Uzhur region (Kuznetsk Ala-Tau)--Syenite)

DUMSKAYA, A.F.; SHVARTSMAN, B.Kh.

Conference on prospects of utilizing alkali products obtained during the production of alumina from nepheline rocks. TSvet. met. 34 no.11:83-84 N '61. (MIRA 14:11)
(Aluminum industry—By-products)

DUMULESCU, Moise, diriginte de santier

High productivity by simple means. Constr Buc 16 no. 752: 3 6 June '64.

NEAGU, Eduard, ing., corespondent; DUMULESCU, Moise, corespondent; DOMONDI, Ioan, corespondent; HARIGA, Gheorghe, corespondent.

Improvement of the organization of the work. Constr Bus 16 no.767:3 19 Sept '64.

GIRLEANU, Nicolae, ing.; DUMULESCU, Moise

The thousandth prefabricated apartment. Constr Buc 16 no.745:1
18 Ap '64.

1. Seful serviciului organizarea muncii de la Trustul Regional de Constructii de Locuinte, Banat. 2. Diriginte de santier, Trustul Regional de Constructii de Locuinte, Banat.

DUMULESCU, Moise; EPUREANU, Mircea, corespondent

Work ready for use. Constr. Buc 16 no.758:1 18 J1'64.

DUMULESCU, Moise, corespondent

Extension of the Resita stadium. Constr Bio 16 no.7691
3 Oct '64

NEAGOIE, Vlad, ing.; DUMULESCU, Moise, diriginte de santier

Better and better quality projects. Constr Buc 16 no.771:1 17 O '64.

1. Investment Office, City Management Enterprise, Resita (for Neagoie).

[redacted], Helen, tabulation

Effect of professional improvement. Constr Rec 17 no.782 5 Ja '65.

DUMULESCU, Molse, coresp.

Prefabricated large panels for constructions in Timisoara.
Constr Buc 17 no.801:1 15 My '65.

BELOUSOV, S.P., insh. (Stalinskaya oblast USSR); DUN, A.S. (Stalinskaya oblast USSR); NIKBERG, I.I., sanitarnyy vrach (Stalinskaya oblast' USSR)

Use of a series of chambers for the complete combustion of industrial gases before discharge into the air. Gig. i san. 24 no.4:70-71 Ap '59. (MIRA 12:7)
(AIR POLLUTION, purification, serial burning chambers in indust. (Rus))

18.3000

77680
SOV/148-60-1-3/34

AUTHORS: Dun, E.S., Filippov, S. I.

TITLE: Study of Factors Limiting Oxidation of Carbon in Molten Iron

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, 1960, Nr 1, pp 16-23 (USSR)

ABSTRACT: This is a study of kinetic factors and a determination of limiting conditions during the interaction between the stream of oxidizer and the surface of molten metal. The experiments were conducted on an installation shown in Fig. 1.

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Study of Factors Limiting Oxidation of Carbon in Molten Iron

77680
SOV/148-60-1-3/34

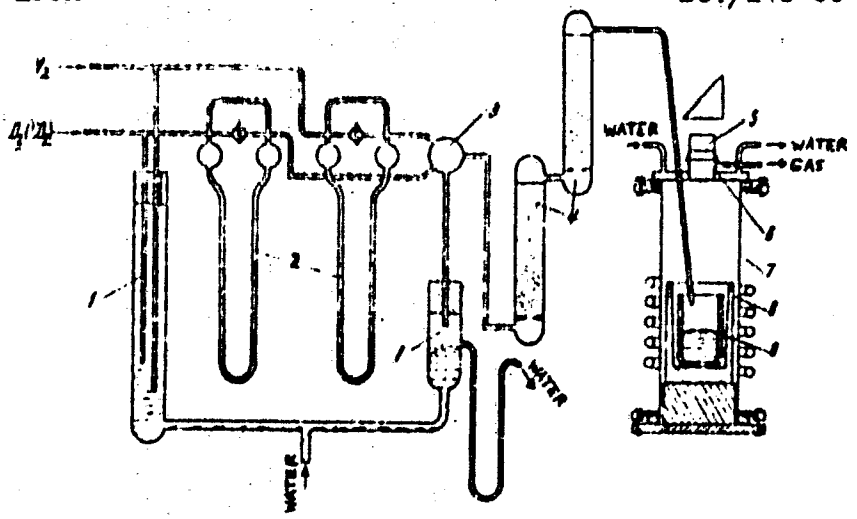

Fig. 1. Schematic diagram of the installation: (1) monostat; (2) rheometers; (3) mixer; (4) driers; (5) glass hood; (6) furnace cap; (7) quartz tube; (8) screen; (9) crucible with metal.

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The rate of feeding the components (forming the oxidizing mixture) was kept constant by the rheometers. A special arrangement of monostats provided a constant differential of pressures and a steady flow of blast to metal (notwithstanding the fluctuations of pressure during the test melt). The initial metal (soft iron) had the following chemical composition (%): 0.014 C; 0.14 Mn; 0.02 Si; 0.029 S; and 0.014 P. It was melted by the high-frequency heating in porous magnesite crucible (45 x 90 mm). The weight of metal was 400-600 g. The experimental results and some characteristic relationships are given in Figs. 2-6. The main kinetic factors of the investigated process are shown in Fig. 2.

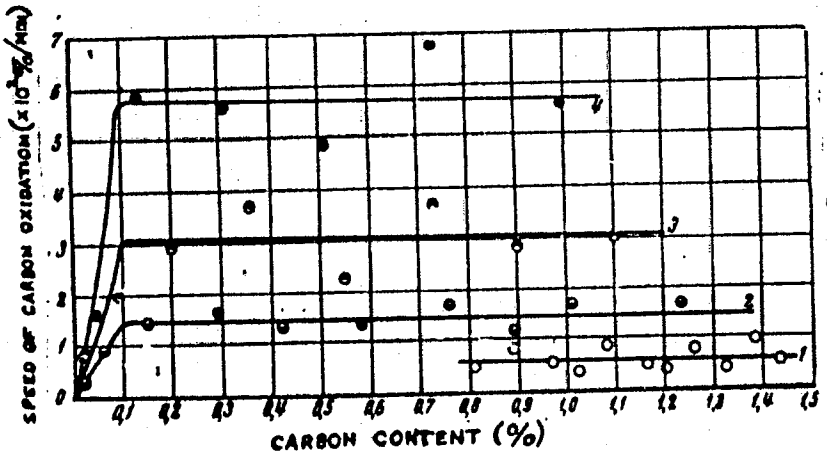
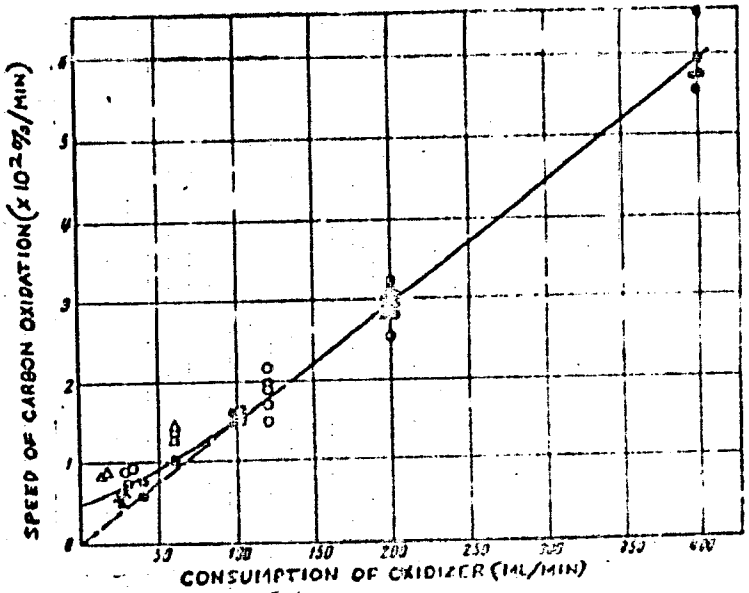


Fig. 2. The effect of blast composition on the speed of decarbonization of metal (at 1,000 ml/min): (1) 4% O_2 in blast; (2) 10% O_2 in blast; (3) 20% O_2 in blast; (4) 40% O_2 in blast.

Card 4/13



Card 5/13 See Card 6/13 for caption to Fig. 3.

See Card 5/13 for Fig. 3.

Fig. 3. Relationship between the speed of carbon oxidation and the intensity of feeding the oxidizer to metal: (○) oxidizer O_2, consumption 300 ml/min; (●) 500 ml/min; (●) 1,000 ml/min; (△) oxidizer CO_2, consumption 300 ml/min; (▲) 1,000 ml/min.

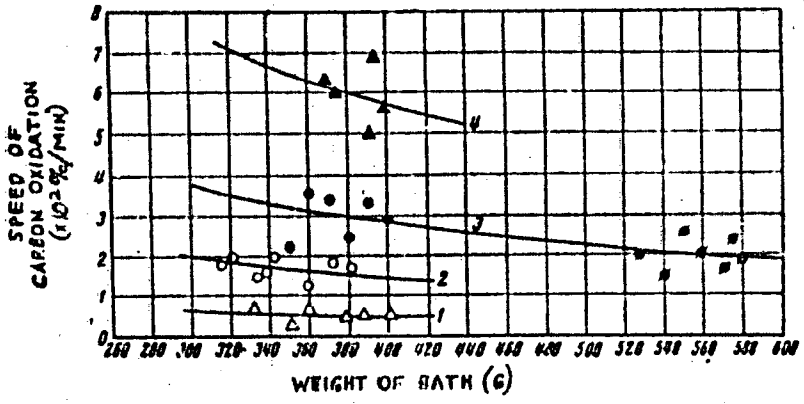
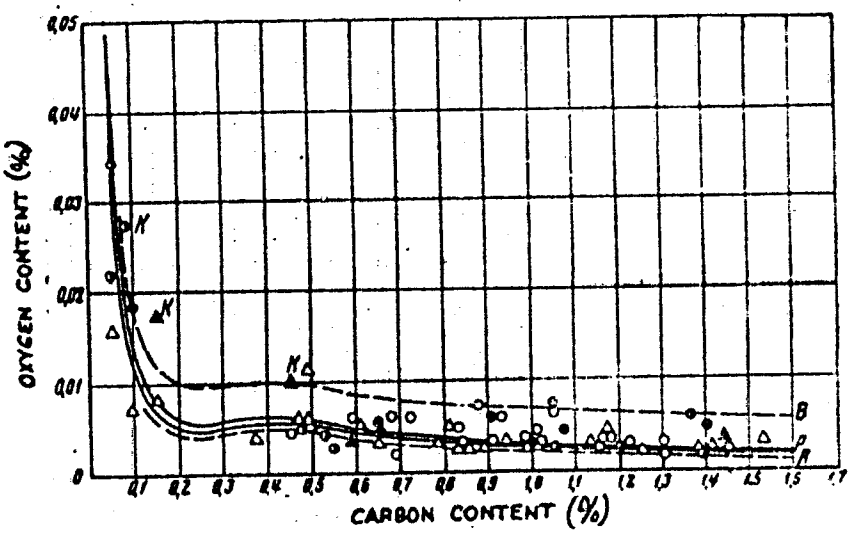


Fig. 4. Relationship between the speed of decarburization of metal and the weight of metal bath (1) 5% CO_2, 1,000 ml/min; (2) 10% O_2, 1,000 ml/min; (3) 20% O_2, 1,000 ml/min; (4) 40% O_2, 1,000 ml/min.

Card 7/ 13

Study of Factors Limiting Oxidation of Carbon in Molten Iron

77680
SOV/148-60-1-3/34



See Card 9/13 for Caption

Card 8/13

See Card 8/13 for Fig. 5.

Fig. 5. Oxygen content in metal of various compositions of bath and speeds of decarburization: (P) equilibrium data according to Ref 3 (S. I. Filippov, Theory of the Process of Steel Decarburization, Metallurgizdat, 1956); (A,B) boundaries of test values; (O) $v_c <$ 0.01%/min; (△) v_c = 0.01-0.02%/min; (●) v_c = 0.02--0.03%/min; (●) v_c = 0.03-0.04%/min; (▲) v_c = 0.05-0.06%/min. Where v_c = actual consumption based on oxidation speed of carbon. Points at the curve indicated by the letter K fix the composition of easily rimming metal.

Study of Factors Limiting Oxidation of Carbon in Molten Iron

77680
SOV/148-60-1-3/34

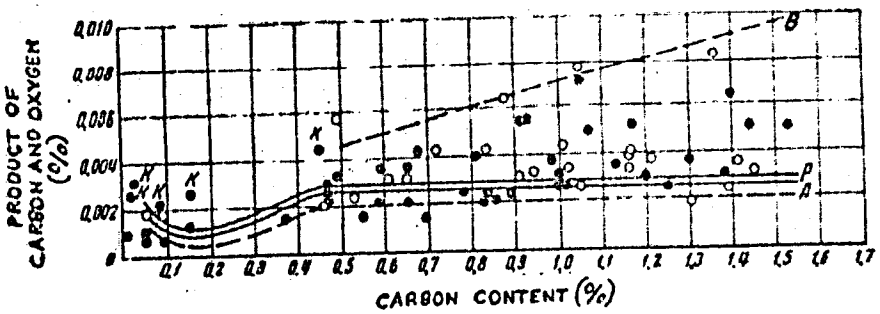


Fig. 6. The value of the product of carbon and oxygen concentrations using various compositions of bath and oxidizers: (P) equilibrium data according to Ref 3; (A,B) boundaries of test values; (O) oxidizer CO_2; (●) oxidizer O_2.

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All of the above studies brought the authors to the conclusion that the process of oxidation of carbon, which is dissolved in liquid iron, develops in the diffusion region of reaction. Until approximately 0.1% C (carbon content in metal) the limiting condition is the introduction of oxidizer from the gas phase to the reaction surface. The tests were conducted under the conditions eliminating any bubble formation or rimming of metal bath. The surface of reaction practically coincided with the surface of the bath. The speed of the chemical reaction proper (including the adsorption of reagents in the reaction layer and the desorption of the product of reaction, carbon monoxide) should be sufficiently high. The gaseous particles of oxidizer arrive at the metallic surface, they are adsorbed on it, and they instantly enter into a chemical reaction with the sufficiently abundant carbon. The carbon monoxide, which is formed in this process, is desorbed in the gas phase. When carbon content in the bath is below the critical value (about 0.1% C), the delivery of carbon from the

metal to the reaction surface becomes a limiting condition. The amount of carbon inflow becomes insufficient for a given flow of oxidizer. Such a change of one limiting condition to another (with sufficient amount of oxidizer) is closely related to the change of structure of the surface reaction layer. The established individual mechanisms of speed can be generally written into a kinetic equation:

$$-\frac{dc}{d\tau} = \frac{1}{V_M}\eta w P_0, \qquad (10)$$

where $\frac{dc}{d\tau}$ = speed of decarbonization of metal mole/cm^3. sec; V_M = volume of metal bath cm^3; w = blast consumption cm^3/sec; η = coefficient of utilization of oxidizer; P_o = a content of active particles of oxidizer in the blast, mole/cm^3. There are 6 figures; and 3 references,

Study of Factors Limiting Oxidation of Carbon in Molten Iron

77680
SOV/148-60-1-3/34

2 Soviet, and 1 U.S. The U.S. reference is: R. Taylor, Journal of the American Chemical Society, Vol 59, Nr 9, 1937, 1605.

ASSOCIATION: Moscow Steel Institute (Moskovskiy institut stali)

SUBMITTED: February 5, 1959

Card 13/13

18.3200

77682
SOV/148-60-1-5/34

AUTHORS: Dun, E.[5] and Filippov, S. I.

TITLE: The Laws Governing the Absorption of Nitrogen by Metal During Oxidation Smelting

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, 1960, Nr 1, pp 28-32 (USSR)

ABSTRACT: This is a study of nitrogen absorption by the steel under the conditions of oxidizing smelting with direct interaction of blast with the surface of the metal bath. The initial material was commercial iron with addition of graphite. The reaction gaseous phase consisted of nitrogen and oxygen or carbon dioxide in a given proportion. In most of the cases the interaction was taking place on a killed metal surface without rimming. The method of investigation and the installation was previously described (Dun, E. and S. I. Filippov. Study of the factors limiting the oxidation of carbon in molten iron.

Card 1/9

The Laws Governing the Absorption of Nitrogen by Metal During Oxidation Smelting

77682
SOV/148-60-1-5/34

Scientific papers of the higher school, Metallurgy, 1960, Nr 1, p 16). The results of investigation show a pretty clear picture of absorption of nitrogen by the metal simultaneously with decarburization. Figure 1 shows that nitrogen content in the bath (under the action of a blast) is continuously increasing and it takes a sharp dip only at the rimming of the bath.

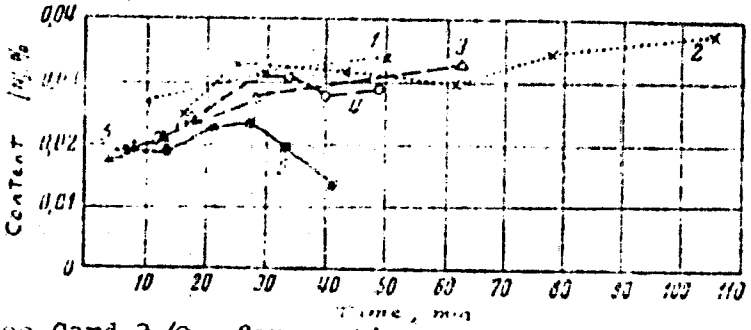

Fig. 1

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See Card 3/9 for caption.

Caption to Fig. 1.

Fig. 1. The change in nitrogen content in metal during oxidizing melting with various nitrogen content in the blast and at various temperatures (blast consumption 1000 ml/min): (1) 96% N_2, 1600 C; (2) 96% N_2, 1465 C; (3) 90% N_2, 1480 C; (4) 80% N_2, 1480 C; (5) 60% N_2, 1490 C; (6) 60% N_2, 1595 C. (The crossed points indicate rimming of bath.)

The direct relation between the completeness of nitrogen absorption by metal, decarburization, and composition of the bath is shown in Fig. 2.

The Laws Governing the Absorption of Nitrogen by Metal During Oxidation Smelting

77682
SOV/148-60-1-5/34

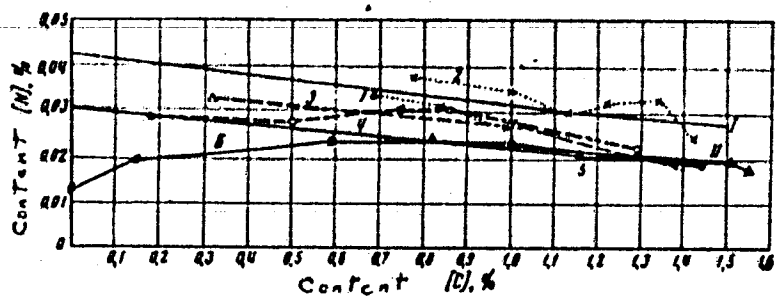

Fig. 2. Saturation of metal by nitrogen depending on carbon content in metal at various nitrogen contents in the blast and at various temperatures (same designations as in Fig. 1).

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The Laws Governing the Absorption of Nitrogen by Metal During Oxidation Smelting

77682
SOV/148-60-1-5/34

The experimental data, obtained at the maximum partial pressure of nitrogen in the blast, were developed by the method of least squares. Hence, an equation of the upper limit of nitrogen solubility for investigated range of temperatures was written as:

$$\lg[N] = -1,3679 - 0,1275[C]. \quad (1)$$

Card 5/9

The Laws Governing the Absorption of Nitrogen by Metal During Oxidation Smelting

77682
SOV/148-60-1-5/34

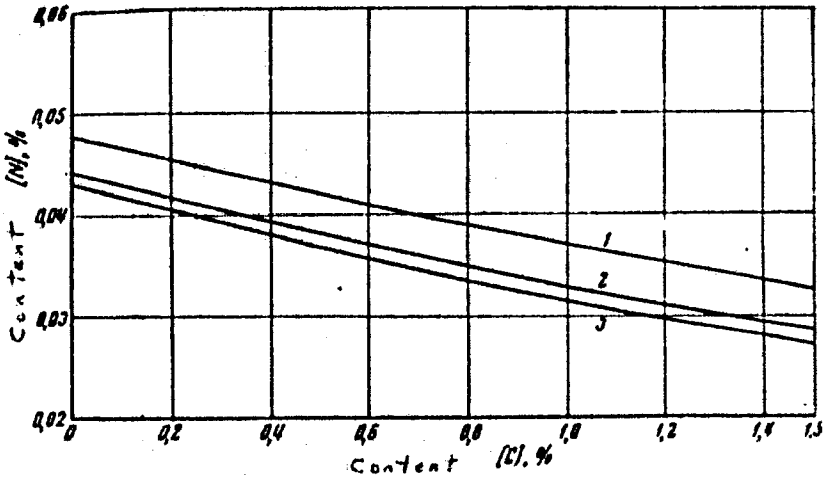

Fig. 3

Card 6/9 Caption to Fig. 3 on Card 7/9

Caption to Fig. 3.

Fig. 3. The curves of maximum absorption of nitrogen by metal, depending on carbon content P_{N_2} = 1 atm: (1) oxidizer CO_2; (2) oxidizer O_2; (3) data by T. Kootz.

The results were favorably compared with data of Kootz T. Kootz, Archiv. f. d. Eisenhuettenwes., 15, 2, 77-82, 1941/42 and I. Dardel. Metal Progress, 1947, 52, 2, 252-256). The authors derived an equation of solubility of nitrogen in Fe-C melts for 1,460-1,600° C range of temperatures.

$$\lg[N] = -1{,}3538 + \frac{1}{2}\lg P_{N_2} - 0{,}1275[C]. \qquad (4)$$

where (N) nitrogen content in metal, %; (P_{N_2}) partial pressure of nitrogen in the atmosphere, atm.; (C) carbon concentration in metal.

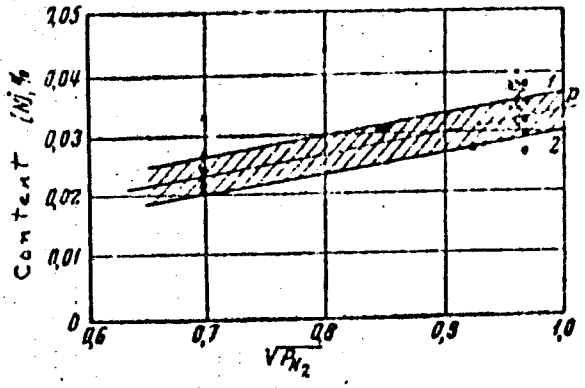

Fig. 4

Card 8/9

Caption on Card 9/9

The Laws Governing the Absorption of Nitrogen by Metal During Oxidation Smelting

77682
SOV/148-60-1-5/34

Caption to Fig. 4.

Fig. 4. Solubility of nitrogen in iron depending on the nitrogen pressure in the blast: (●) deoxidizer O_2; (X) deoxidizer CO_2; (P) calculated equilibrium curve.

It follows that experimental points of oxygen blast are located between straight lines 1 and 2 on parallel lines P calculated by equation (4) for an average carbon content of 95%. There are 4 figures; and 5 references, 3 Soviet, 1 German, 1 U.S. The U.S. reference is: I. Dardel, Metal Progress, 1947, 52, 2, 252-256.

ASSOCIATION: Moscow Steel Institute (Moskovskiy institut stali)

SUBMITTED: February 11, 1959

Card 9/9

DUN, L.; LUSHNIKOV, G.; YAKOBSON, A.

Flaw detection. Znan.sila 35 no. 11:38-40 N '60.
(MIRA 13:12)

1. Sotrudniki Instituta metallurgii im.Baykova AN SSSR.
(Metallography) (Ultrasonic testing)

DUN, L.M.; LEBEDEVA, M.F.

Effect of the photoelectromotive force in polycrystalline cadmium sulfide. Trudy Inst.met. no.3:262-267 '58. (MIRA 12:3)
(Cadmium sulfide)
(Photoelectricity)

LEONESCU, M., dr.; PEREDERI, S., dr.; BUTOIANU, C., dr.; DUMA, F., dr.; LAMBA, N., dr.; In colaborare cu: DINESCU, G., dr.

Catamnestic data in dysentery. Med. intern. 15 no.10:1219-1223 '63.

1. Lucrare efectuata in Clinica I de boli contagioase I.M.F. (director: prof. M. Voiculescu). 2. Spitalul de boli contagioase "Colentina" (for all but Dinescu).
(DYSENTERY) (DIAGNOSIS)

DUNAI, E.

DUNAI, E.

"Report on the Results and Experiences of Our Innovators' Movement During the Last Year", p. 4 (UJITOK LAPJA, Vol. 6, no. 5, Mar. 1954, Budapest, Hungary).

Source: Monthly List of East European Accessions, LC, Vol.3, no. 5, May 1954/Uncl.

DUNAI, E

DUNAI, E.

"Discipline in the Innovators' Movement," p. 3, (UJITAS LAPJA, Vol. 5, No. 19, May 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

DUNAI, E.

DUNAI, E.

"Innovators in the Contest Organized in Honor of the Party Congress," p. 4, (UJITOK LAPJA, Vol. 7, No. 10, May 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

DUNAI, E.

DUNAI, E.

Our next tasks. p. 3. (UJITOK LAPJA, Budapest, Hungary), Vol. 6, No. 19, Oct. 1954.

SO: Monthly List of East European Accessions, (EEAI), LC, Vol. 4, No. 5, May 1955.

DUNAITSEV, A.F.; PETRUKHIN, V.I.; PROKOSHKIN, Yu.D.; RYKALIN, V.I.

Experimental evaluation of the $\pi^+ \to \pi^0 + e^+ + \nu$ decay probability. Dubna, Ob"edinennyi in-t iadernykh issl. 1961. 10 p.
(No subject heading)

C/026/62/018/004/007/009
F050/F003

AUTHOR: Dunaitsev, A. F., Pantuyev, V. S., Prokoshkin, Yu. D., Tang, Hsiao-wei (0781/1321/1218), and Khachaturyan, M. N.

TITLE: Measurement of the Panofsky ratio by the method of gamma-gamma coincidences

PERIODICAL: Wu Li Hsüeh Pao, v. 18, no. 4, 1962, 218-219

TEXT: There are two capture processes of stopped π^- mesons in hydrogen

$$\pi^- + p \longrightarrow \pi^0 + n \longrightarrow \gamma' + \gamma'' + n \qquad (1)$$

$$\pi^- + p \longrightarrow \gamma + n. \qquad (2)$$

where p is proton and n is neutron. The ratio of probability of these two processes is called the Panofsky ratio P. A new method was devised by the authors for measuring the Panofsky ratio by means of γ - γ coincidences. Procedures follow (see

Card 1/2

Fig. 1): The injected π^- mesons are stopped in the target of liquid hydrogen. The γ-photons and γ'-photons produced respectively in reaction (2) and reaction (1) are measured by counter (A). The γ''-photons produced in reaction (1) are measured by counter (B). The ratio of reaction (2) and reaction (1) can be determined. In this experiment the energy of π^- meson beams was 6.5 Mev. The experimental P result was found to be 1.40 ± 0.08. This value agrees with the data in photoproduction and scattering of π^- mesons. Author Tang Hsiao-wei thanks Professor Wang Kan-ch'ang (3769/3227/2490) in particular for his interest and discussions. There are 3 figures.

SUBMITTED: January 15, 1962

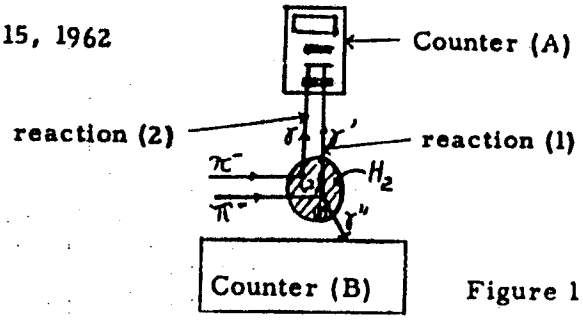

Figure 1

Card 2/2

DUNAIVITSER, B.I.

Rhomboid graft for plastic surgery after radical operation on the ear. Vest.otorin. 22 no.3:58-60 My-Je '60.
(MIRA 13:10)

(TYMPANIC MEMBRANE—SURGERY)

LEDOCHOWSKI, Zygmunt; LEDOCHOWSKI, Andrzej; BOGUCKA, Maria; ORLOWSKI, Wlodzimierz; WOJTANIA, Jerzy; DUNAJ, Tadeusz; ADAMCZEWSKI, Benedykt

Research on tumor inhibiting compounds. VI. Synthesis of some 4-(dimethylaminoalkylamino)- quinolines. Rocz chemii 34 no.3/4: 953-957 '60. (EEAI 10:3)

1. Katedra Technologii Srodkow Leczniczych Politechniki, Gdansk.
(Tumors) (Aminodimethylaminoquinoline)
(Alkyl groups)

POZNIAK, Zbigniew; DUNAJ, Weronika

Attempted acceleration of union of fractured bones in the light of modern views. Chir. narzad. ruchu ortop. pol. 28 no.3:275-284 '63.

1. Z Kliniki Ortopedycznej w Gdansku Kierownik: doc. dr A. Senger.

(FRACTURES) (THERAPEUTICS)

FACZYNSKI, Andrzej; SZCZEKOT, Jozef; DUNAJ, Weronika; WOJCIK, Tadeusz

Excessive physiological mobility of the cervical spine in children as a cause of diagnostic difficulties. Chir. narzad. ruchu ortop. Pol. 28 no.7:787-791 '63

1. Z Kliniki Ortopedycznej Akademii Medycznej w Gdansku (Kierownikt doc. dr. A. Senger).

DUNAJ, Weronika; BISKUPSKI, Eligiusz

Microscopic studies on the sternocleidomastoid muscle in congenital myogenic torticollis. Chir. narzad. ruchu ortop. Pol. 29 no.2:243-250 '64.

1. Z Kliniki Ortopedycznej Akademii Medycznej w Gdansku (Kierownik: doc. dr. med. A. Senger).

ZONEK, Weronika; MIROSLAWSKA, Barbara; OKONIEWSKI, Roman

Multiple epiphyseal dysplasia. Chir. narzad. ruchu ortop. Pol. 29 no.3:397-401 '64.

1. Z Kliniki Ortopedycznej Akademii Medycznej w Gdansku (Kierownik: prof. dr. med. W. Grabowski [deceased]).

DUNAJSKI, Ladislav

SURNAME, Given Names

(2)

Country: Czechoslovakia

Academic Degrees: [not given]

Affiliation: Department of Physics (Katedra fysiky), Faculty of Natural History of J E Purkyne University (Prirodovedecka fakulta University J E Purkyne), Brno and Department of Mathematics and Physics (Katedra matematiky a fyziky), Agricultural College (Vysoka skola polnohospodarska), Nitra

Source: Bratislava, Matematicko-Fizikalny Casopis, Vol 11, No 3, 1961, pp 203-207

Data: "Phase Changes on the Boundary."

GPO 981643

DUNAJSKY, L.

Physical fundamentals of rocket technique. p. 689.

POKROKY MATEMATIKY, FYSIKY A ASTRONOMIE. (Jednota ceskeslovenskych matematiku a fysiku) Praha, Czechoslovakia. Vol. 3, no. 6, 1958.

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

DUNAJSKY, L.

Answer to the "Remarks on equation of rocket motion" by L. Janka.
Cs cas fys 12 no.1:87-89 '62.

1. Katedra matematiky a fyziky, Vysoka skola polnohospodarska, Nitra.

DUNAJSKY, Ladislav,

Phase changes on the boundary. Mat fyz cas SAV 11 no.3: 203-207 '61.

1. Katedra matematiky a fyziky, Vysoka skola polnohospodarska, Nitra, Lysenkova 10.

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E024/E420

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AUTHOR: Dunajský, L. (Nitra)

TITLE: The principle of reversibility and of reflectivity in the optics of thin films

PERIODICAL: Matematicko-fyzikálny časopis, no.4, 1962, 301-308

TEXT: Some unexplored aspects of the principle of reversibility in the optics of thin films are investigated. From Maxwell's equations for a conducting isotropic medium, equations can be derived which are invariant for the transformations in Table 1. From transformations a) and b) the following equations can be derived for a wave travelling from the left into an arbitrary system of thin films which describe reversibility conditions at interfaces

$$r_{1s}r_{1s} + t_{s1}t_{1s} = 1, \quad (16)$$

$$t_{1s}r_{1s} + r_{s1}t_{1s} = 0. \quad (17)$$

The sign ~ refers to coefficients for a simple interface. From transformations c) and d) are obtained:

$$r'_{1n}r^{*}_{1n} + t'_{n1}t^{*}_{1n} = 1, \qquad (18)$$

$$t'_{1n}r^{*}_{1n} + t'_{n1}t^{*}_{1n} = 0. \qquad (19)$$

The dash means that the coefficients for a simple interface and have to be replaced by their complex conjugates. Differential equations which describe microscopic events are reversible, i.e. they are invariant for the transformation $t \rightarrow -t$. Macroscopic irreversibilities are explained by statistics. In the past it was required that the transformation $t \rightarrow -t$ should leave all those parameters positive where a negative sign would violate the second law of thermodynamics (e.g. σ). Thus the principle of reversibility was not applied to absorbing layers. Such a principle of reversibility may be termed classical or thermodynamic. P.G.Kard, I.Šantavý and Z.Knittle use the transformation $\sigma \rightarrow -\sigma$. These authors call transformations of type a) and b) the generalized principle of reversibility. The relations derived from this principle are correct, although they are in disagreement with the second law of thermodynamics. The explanation of this disagreement lies in the statistical nature of the second law. The generalized principle of reversibility becomes thermodynamic

under two conditions: 1 - $\sigma = 0$, i.e. in a dielectric; 2 - at a simple (Fresnel) interface under certain conditions. For the transformations c) and d) the time remains positive but the refraction vector changes sign. Such a transformation may be visualized by considering it as a reflection from a perfect mirror. The term "principle of reflectivity" has therefore been suggested for these transformations by Z. Knittl. The relationship of transformations c) and d) with the second law of thermodynamics is similar to that for transformations a) and b). Author's remark: A medium with negative conductivity also has negative absorption and this is a necessary condition for maser action. There is 1 table.

ASSOCIATION: Katedra matematiky a fyziky Vysokej školy poľnohospodárskej v Nitre (Department of Mathematics and Physics, Agricultural High School, Nitra)

SUBMITTED: May 6, 1961

Card 3/4

The principle of reversibility ...

Table 1.

Typ \ Veličina, ktorú treba zmeniť	t	$\vec{E}$	$\vec{H}$	σ	ϱ	$\vec{m}$	$\varkappa$
a)	$-t$	$\vec{E}$	$-\vec{H}$	$-\sigma$	ϱ	$\vec{m}$	$-\varkappa$
b)	$-t$	$-\vec{E}$	$\vec{H}$	$-\sigma$	$-\varrho$	$\vec{m}$	$-\varkappa$
c)	t	$\vec{E}^{\circ}$	$-\vec{H}^{\circ}$	$-\sigma$	ϱ	$-\vec{m}^{\circ}$	$\varkappa^{\circ}$
d)	t	$-\vec{E}$	$\vec{H}^{\circ}$	$-\sigma$	$-\varrho$	$-\vec{m}^{\circ}$	$\varkappa^{\circ}$

The first line shows the parameter which changes in the various transformations a) - d) into the parameter shown in the respective line in the same column.

Card 4/4

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AUTHOR: Dunajský, L. (Nitra)

TITLE: The problem of phase shifts at interfaces

PERIODICAL: Matematicko-fyzikálny časopis, no.4, 1962, 309-311

TEXT: The present paper extends the work of the present author (Mat.-fyz. časopis 11 (1961), 203) and I.N.Škľarevskij (ŽTF 26 (1956), 333). The condition of maximum transmission of light through a thin film of ZnS ($n = 2.4$) deposited on Ag ($\underline{n}_3 = n_3 - i\underline{k}_3 = 0.16 - i3.67$), with air ($n_1 = 1$) as the first medium, is (case A)

$$2n_2d_2 - \frac{\delta_{23}}{2\pi} = m\lambda \qquad (1)$$

where d_2 is the thickness of the film, λ the wavelength in vacuum and the integer m is the order of interference. If both sides of the ZnS layer are silvered, i.e. $\underline{n}_1 = \underline{n}_3$, we obtain (case B)

$$2n_2d_2 - \frac{\delta_{23}}{\pi} = m\lambda \qquad (2)$$

Card 1/4

The problem of phase ...

The phase shift δ_{23} is given by

$$r_{23}e^{i\delta_{23}} = \frac{n_2 - n_3}{n_2 + n_3} \qquad (3)$$

The value of δ_{23} is approximately arc 120°. From Eq.(1) and (2) we obtain

$$n_2d_2 = \frac{3m + 1}{6}\lambda \qquad (4) \qquad n_2d_2 = \frac{3m + 2}{6}\cdot\lambda \qquad (5)$$

The transmission is (e.g. A. Vašíček, Optics of thin films, Amsterdam, 1960, 325)

$$\tau = \frac{n_3}{n_1}\,\frac{t_{12}t_{23}}{1 + r_{12}^2r_{23}^2 + 2r_{12}r_{23}\cos(2x - \delta \quad -\delta \quad)} \qquad (6)$$

where $x = \frac{2\pi}{\lambda} n_2d_2$. A similar relation holds if we consider the amplitude coefficient of reflection with a sign opposite to that in Eq.(3). The relevant phase shifts we write as δ^-.

Card 2/4

The problem of phase ...

The condition for maximum transmission is

$$2x - \delta_{12} - \delta_{23} = (2m + 1)\pi \qquad (7)$$

For case A, $\delta_{12} = \pi$ and δ_{23} = arc 120°; $\delta_{12}^{-} = 0$ and δ_{23}^{-} = arc 300°. After rearrangement, we obtain in both cases Eq.(4). For case B, δ_{12} = arc 300° and δ_{23} = arc 120°; δ_{12}^{-} = arc 120° and δ_{23}^{-} = arc 300°. Both cases lead to Eq.(5). If instead of $\underline{n}_3$ we use its complex conjugate, we obtain

$$\tau = \frac{n_3}{n_1} \frac{t_{12}t_{23}}{1 + r_{12}^2 r_{23}^2 + 2r_{12}r_{23}\cos(2x + \delta_{12}^{*} + \delta_{23}^{*})} \qquad (8)$$

Similar relations hold for δ^{-*}. The condition for maximum transmission is

$$2x + \delta_{12}^{*} + \delta_{23}^{*} = (2m + 1)\pi \qquad (9)$$

Case A, $\delta_{12}^{*} = \pi$, δ_{23}^{*} = arc 240°; $\delta_{12}^{-*} = 0$, δ_{23}^{-*} = arc 60°.

Card 3/4

Case B, $\delta_{12}^{M} = \text{arc } 60°$, $\delta_{23}^{M} = \text{arc } 240°$; $\delta_{12}^{-M} = \text{arc } 240°$, $\delta_{23}^{-M} = \text{arc } 60°$. Eq. (4) and (5) can be obtained from (9). Both types of phase shifts, if used consistently, lead to identical results.

ASSOCIATION: Katedra matematiky a fyziky Vysokej školy poľnohospodárskej v Nitre (Department of Mathematics and Physics, Agricultural High School, Nitra)

SUBMITTED: September 28, 1961

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AUTHOR: Dunajský, L.

TITLE: The concept of non-reflected light (Letter to the Editor)

PERIODICAL: Československý časopis pro fysiku, no. 4, 1962, 380-381

TEXT: Z. Knittl (Czech. J. Phys., 9, 1959, 133) obtains symmetry in the law of conservation of energy at the interface between a metal and a dielectric. This can be obtained by a different method. The law of conservation of energy on an arbitrary simple interface can be written in the form (see notation in work of Knittl):

$$P_i - P_r + P_{ir} = P_t, \qquad (1)$$

where $P_{ir} = Re\{E_i H_r^* - E_r H_i^*\}$ is the interference Poynting vector. The energetic coefficients of reflection, refraction and interference are defined as:

$$R = \frac{P_r}{P_i}, \quad T = \frac{P_t}{P_i}, \quad I = \frac{-P_{ir}}{P_i}, \qquad (2a,b,c)$$

Eq. (1) can then be rewritten in the form:

$$R + T + I = 1 \qquad (3).$$

Card 1/3

The concept of ....

At the interface between metal and dielectric the following holds: $R_L = |r_L|^2$, $T_L = \frac{\eta_1}{\eta_2}|t_L|^2$, $I_L = 0$. (4a,b,c)

$R_R = |r_R|^2$, $T_R = \frac{\eta_2}{\eta_1}|t_R|^2$, $I_R \neq 0$. (5a,b,c).

In Eq. (3) we may put: $T + I = \hat{T}$. (6)

and call T the energetic coefficient of non-reflected light. For the direction L, $\tilde{T}_L = T_L$. Analogous to relations (4b) and (5b), we introduce an amplitude of non-reflected light for the direction R:

$$\tilde{T}_R = \frac{\eta_2}{\eta_1}|\tilde{t}_R|^2. \quad (7).$$

From this equation it follows that:

$$|\tilde{t}_R| = \frac{2\eta_1}{\sqrt{[(\eta_1 + \eta_2)^2 + \kappa_1^2]}}. \quad (8).$$

For the direction L, we obtain $|\underline{\tilde{t}}_L| = |\underline{t}_L|$. The law of conservation of energy for both directions can be written in a symmetrical form:

Card 2/3

The concept of ....

$$|r_R|^2 + |t_R|\,|\tilde{t}_L| = 1, \qquad (9)$$

$$|r_L|^2 + |\tilde{t}_L|\,|t_R| = 1. \qquad (10)$$

Professor A. Vašíček has used these results in his works (Optics of Thin Film, North Holland Publ.Co., Amsterdam, 1960, 307; Izv. AN SSSR, ser. fiz.mat. i t.n., IX, 1960, 242; Zeitschrift für Physik 161, 1961, 26) prior to their publication. Abstracter's note: this is a complete translation.]

ASSOCIATION: Katedra matematiky a fyziky VSP, Nitra
(Department of Mathematics and Physics, VSP, Nitra)

SUBMITTED: January 8, 1962

Card 3/3

DUNAJSKY, Ladislav (Nitra)

Agricultural physics. Pokroky mat fyz astr 7 no.6:350-354 '62.

DUNAJSKY, Ladislav

Principle of reversibility and reflexibility in the optics of thin films. Mat fys cas SAV 12 no.4:301-308 '62.

1. Katedra matematiky a fyziky, Vysoka skola polnohospodarska, Nitra, Lysenkova 10.

DUNAJSKY, Ladislav

Problem of phase shifts on boundary lines. Mat fys cas SAV 12 no.4:309-311 '62.

1. Katedra matematiky a fyziky, Vysoka skola polnohospodarska, Nitra, Lysenkova 10.

HUSTY, Zdenek (Brno); VEJSADA, Frantisek (Ceske Budejovice); LEPIL, Oldrich (Gottwaldov); KOUBOVA, Miroslava (Karlovy Vary); DUNAJSKY, Ladislav (Nitra); HRADECKY, Frantisek (Praha); KLEIN, Tomas (Zvolen)

Report on the activity of branches of the Association of Czechoslovak Mathematicians and Physicists. Pokroky mat fys astr 8 no.2:99-106 '63.

DUHAJSKY, I.

Invariant description of light reflection and the meaning of the transformation of such description. Chekhosl fiz zhurnal 13 no.11:857 '63

1. Katedra fyziky, Vysoka skola polnohospodarska, Nitra.

DUNAJSKY, L'dislav

Probability interpretation of energy balances in thin film optics. Cs cas fys 14 no.6:493-500 '64.

1. Chair of Physics, Higher School of Agriculture, Nitra.

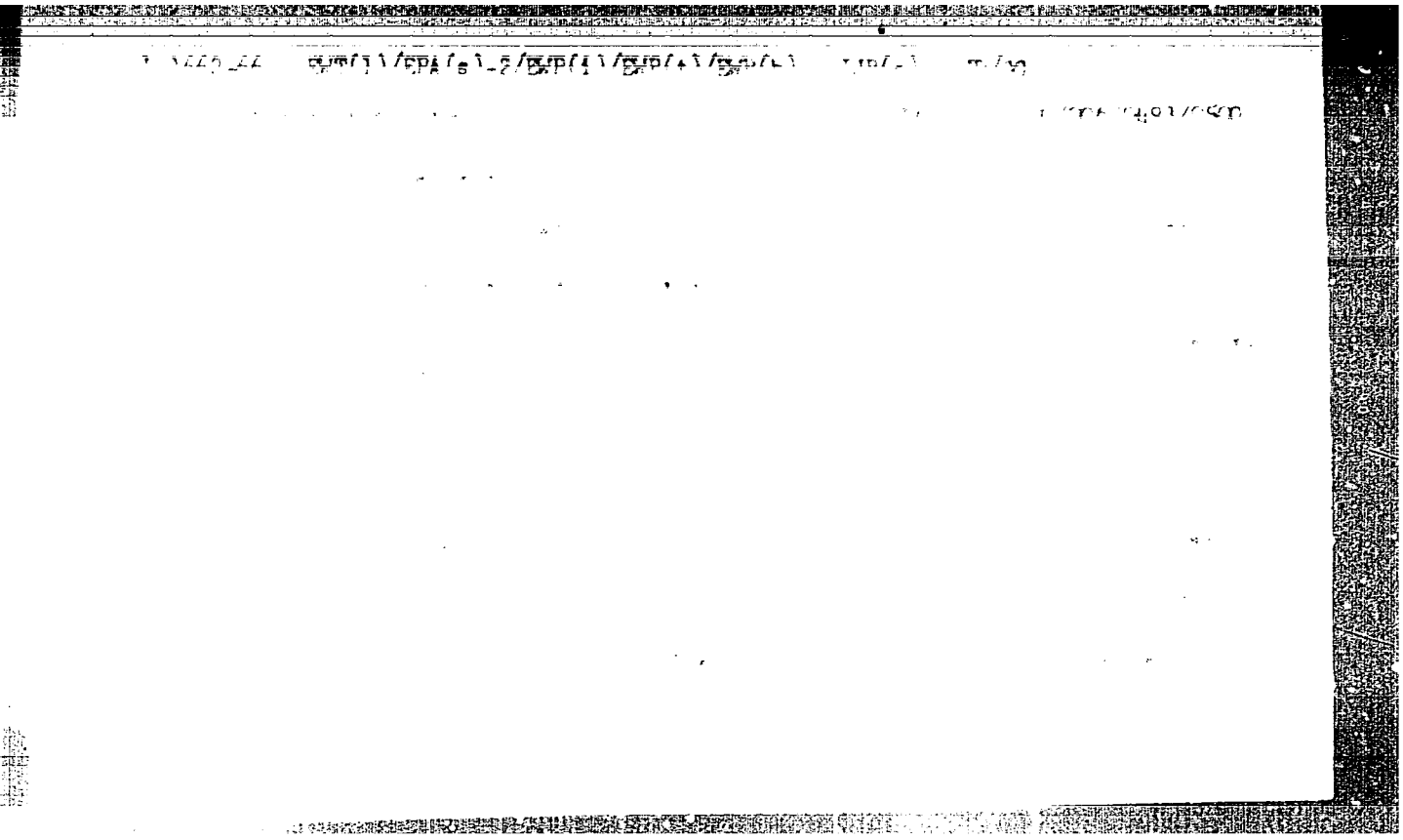
HUSTY, Zdenek (Brno); VEJSADA, Frantisek (Ceske Budejovice); BODLAK, Vaclav (Karlovy Vary); DUNAJSKY, Ladislav (Nitra); [illegible], Oldrich (Olomouc); HORACEK, Rudolf (Olomouc); HRADECKY, Frantisek (Praha); [illegible], Milada (Trnava); PROCHAZKA, Jiri (Usti nad Labem)

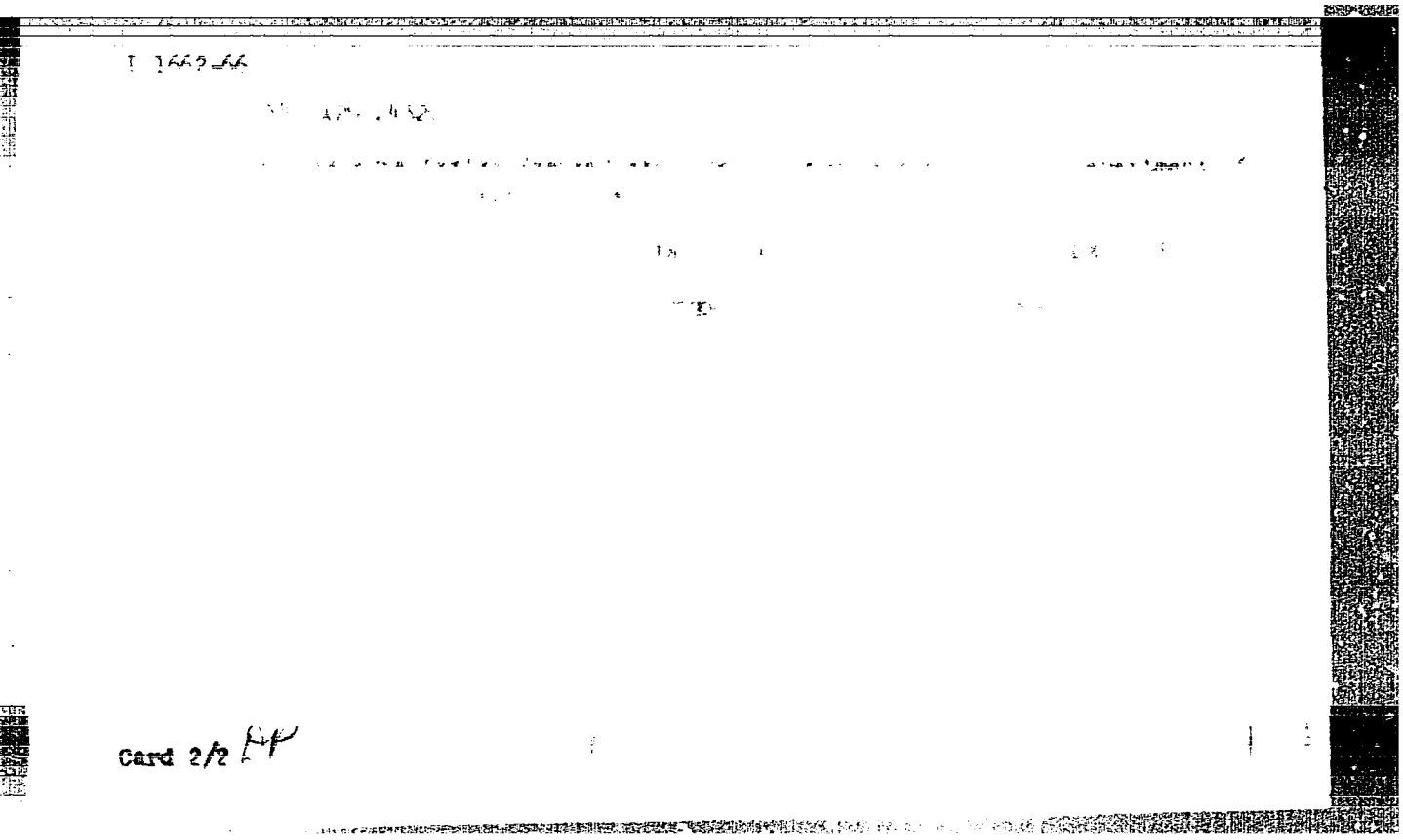
Reports from local organizations of the Union of Czechoslovak Mathematicians and Physicists. Pokroky mat fyz astr 9 no.2:134-141 '64.

DUNAJSKY, Ladislav

"Light reflection from absorbing mediums" by A. V. Frolivalko. Reviewed by Ladislav Dunajsky. Pokroky mat fyz astr 9 no.4:251-252 '64.

"Tables for determining optical constants from the intensity of reflected light" by A. Vasicek. Reviewed by Ladislav Dunajsky. Ibid.: 252





Card 2/2

DUNAKOVSKIY, M.D.; KHOMUTOV, A.S.; KOGAN, N.G.

For wider use of asbestos ballast. Put' i put.khoz. 5 no.4:7-9 Ap '61. (MIRA 14:7)

1. Zamestitel' nachal'nika Sverdlovskoy dorogi (for Dunakovskiy).
2. Glavnyy insh. sluzhby puti Sverdlovskoy dorogi (for Khomutov).
3. Nachal'nik tekhnicheskogo otdela sluzhby puti Sverdlovskoy dorogi, predsedatel' Obshchestvennogo redaktsionnogo soveta Sverdlovskoy dorogi (for Kogan).

(Ballast (Railroads)) (Asbestos)

DUNARE, NICOLARE MARIN

Protul popular din Bihor, Ed. 1

Bucuresti, Rumania, Editura de Stat pentru Literatura se Arta, 1958, 62 p.

Monthly of East European Accessions (EEAI) LC, VOL. 8, No. 11, November 1959
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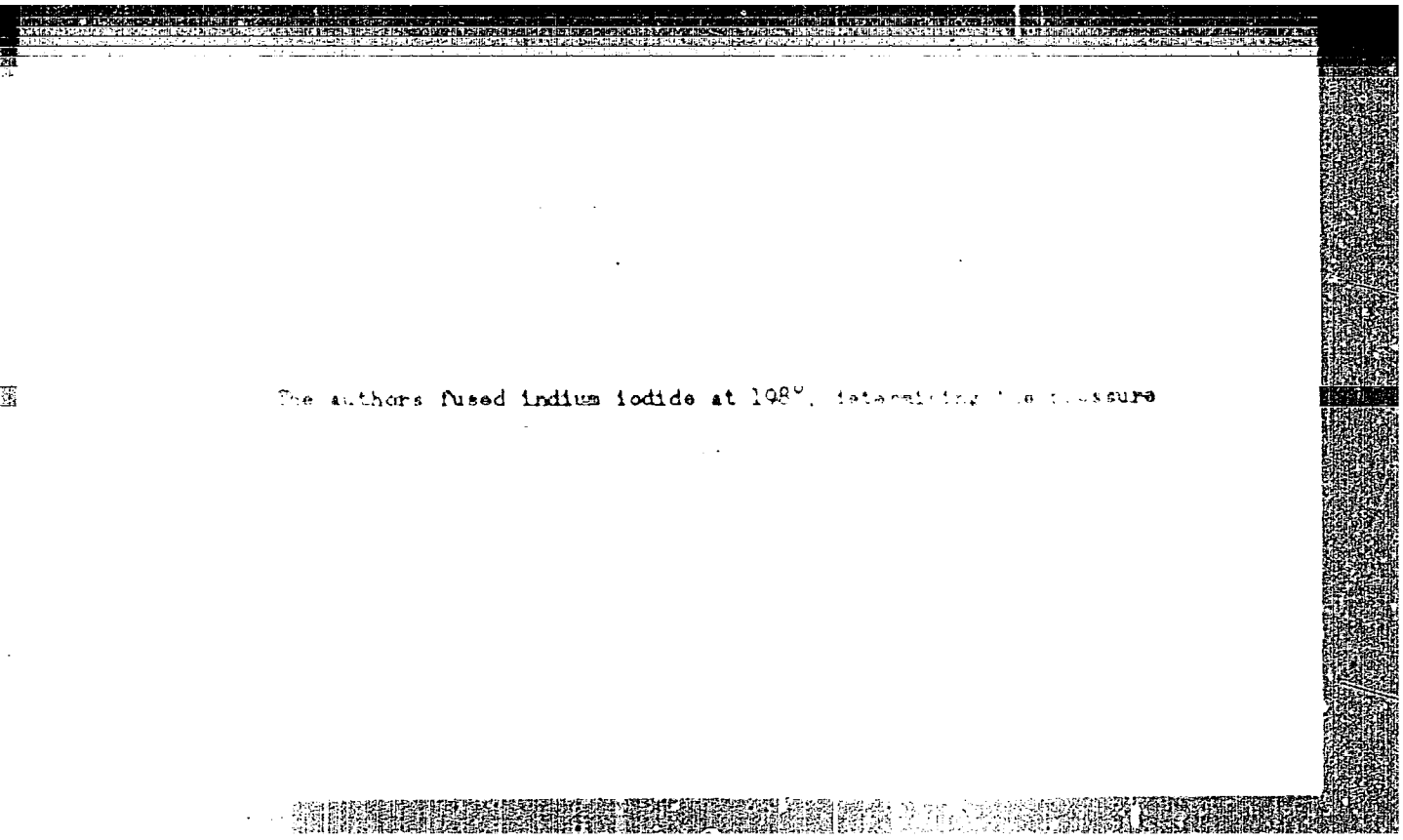
DUNAREANU, A.

From Quesnay to Keynes, or the vulgarity of the macroeconomic theory. "Macro-Economics" by Th.F. Dernburg and D.M. McDougall. Reviewed by A. Dunareanu. Probleme econ 15 no.3:147-152 Mr '62.

GIRBEA, St , prof.; POPESCU, D., prof.; TURCHANU, L., conf.; DUMARENU,O., dr.; POPOVICI, V., dr.

The role of diseases of mothers in pregnancy, labor and the puerperium in the origin of deafness in the newborn. Otorinolaringologie (Bucur) 10 no.1:80-88 Ja-Mr'65.



The authors fused indium iodide at 198°, determining the pressure

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ACC NR: AT6033589 SOURCE CODE: RU/0023/65/010/004/0343/0347

AUTHOR: Lupascu, Gh. E.--Lupashku, G. Ye. (Doctor); Rozemberg, L.-(Doctor); Banica, A.--Banike, A. (Doctor); Dunareanu, H.--Duneryanu, Kh. (Doctor); Radulescu, M.--Redulesku, M. (Doctor)

ORG: "Prof. Dr. Victor Babes" Hospital for Contagious Diseases, Bucharest (Spitalul de boli contagioase "Prof. Dr. Victor Babes"

TITLE: Observations on current aspects of infections with pseudomonas aeruginosa [This paper was presented at the Symposium of Pediatrics at Region "Tudo Vladimirescu", Bucharest.]

SOURCE: Microbiologia, parazitologia si epidemiologia, v. 10, no. 4, 1965, 343-347

TOPIC TAGS: bacteria, antibiotic, infective disease, bacteriology

ABSTRACT: The authors summarize the main aspects of B. pyocyanic infections occurring under pathologic suprainfection conditions, with a view to their classification. Special emphasis is placed on the effect of the introduction of antibiotics on the equilibrium of microbial flora, and on the need for a sustained control of organism reactivity. [Based on authors' Eng. abst.] [JPRS: 32,913]

SUB CODE: 06 / SUBM DATE: 16Jun65 / OTH REF: 009

Card 1/1 fdk UDC: 616-022.711.32-053.3

GIRBEA, St.; SALAMON, M.; BOIMA, I.; ALSU, B.; SUCEAVA, I.; BOLZA, R.; DUMARMANU, O.; VASIU, I.

The treatment of laryngeal cancer at the ORL Clinic, Timisoara. Rumanian M. Rev. 3 no.1:68-72 Jan-Mar 59.

(LARYNX, neoplasms surg. statist.)

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Distribution of the European stone pine (Pinus cembra L.) in the Faragas Mountains. Ukr. bot. zhur. 17 no.5:50-53 '60.
(MIRA 13:12)

1. Institut geologii, geofiziki i geografii AN Rumynskoy Narodnoy Respubliki, Bukharest.
(Faragas Mountains—Pine)

DUMASHEV, N. V.

24403 DUMASHEV, N. V. K voprosu o pronikayushchikh raneniyakh grudnoy kletki (Po opytu Velikoy Otechestvennoy voyny), Trudy Glav. voyen. Gospitalya Vooruzh. Sil SSSR im. Akad. Burdenko. VIP. 6. M., 1949, S. 92-98. Bibliogr: 17 nazv.

SO: Letopis, No. 32, 1949.

DUNASHEV, N. V.

Role of Russian surgeons in the development of urology.
Khirurgiia, Moskva no.7:49-58 July 1951. (CIML 21:1)

1. Candidate Medical Sciences.

DUNASHEV, M.V.

[Urological diseases] Ob urologicheskikh zabolevaniiakh. Moskva, Medgiz, 1953. 21 p. (MLRA 8:5)
(Urinary organs -- Diseases)

DUNASHEV, N.V.

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Ob urologicheskikh zabolevaniiakh
(Urological diseases). Moskva, Medgiz, 1953. 22 p.
(Nauch.-popul. med. literatura).

SO: Monthly List of Russian Accessions, Vol. 7, No. 5, August 1954

DUMASHEV, N.V., podpolkovnik meditsinskoy sluzhby

Changes in renal functions in burns. Voen.med.zhur. no.12:72-73 D '56. (MLRA 10:3)

(KIDNEYS--DISEASES) (BURNS AND SCALDS)

HORN, Artur; DOHY, Janos; BOZO, Sandor; DUNAY, Antal

A modernized method for evaluating the physical appearance of cattle. Allattenyesztes 11 no.2:97-101 J1 '63.

1. Allattenyesztesi Kutatointezet Szarvasmarhatenyesztesi Osztalya, Budapest. 2. "Allattenyesztes" szerkeszto bizottsagi tagja (for Horn).

DUNAY, N. F.

29732

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Sov Letopis' No. 40