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NAVRADY, Hugone; BORNAI, Tibor

Raglan pattern prepared from printed furs. Bor cipo 13 no.4: 129-131 Jl '63.

1. Pannonia Szormekeszito es Konfekcionalo Vallalat.

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PROCESSES AND PROPERTIES INDEX

Influence of Quenching and Tempering Temperatures on the Mechanical Properties of Steel. I. I. Bornatzkii. (Metallurgist, Russia, 1937, vol. 12, No. 5, pp. 44-50). (In Russian). The critical points, and the mechanical properties after overheating before quenching and after tempering at various temperatures, were determined for the following steels: *U*-4 (carbon 0·49%, manganese 0·62%); *U*-7 (carbon 0·74%, manganese 0·28%); *U*-8 (carbon 0·78%, manganese 0·25%); *E*-10 (carbon 0·40%, chromium 1·51%, nickel 3·76%); *5-KhVS* (carbon 0·53%, chromium 1·20%, tungsten 2·28%). In the case of the first three steels cited, overheating to 1050–1100° C. does not impair the mechanical properties; even the impact value is unaffected. The mechanical properties of the last-mentioned steel are appreciably affected even by overheating to 950° C. Tempering above 900° C. decreases the impact strength and yield point of steel *U*-4, and the impact strength of *E*-10. It appears that overheating prior to quenching is not likely seriously to injure the mechanical properties of steels of the types examined if they are afterwards subjected to a high-temperature tempering treatment.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS — PROCESSES AND PROPERTIES INDEX — 3RD AND 4TH ORDERS

S

18

The Ageing of Super-Cooled Austenite in High-Speed Steel. I. I. Bornatskiy. (Metallurg, 1939, No. 3, pp. 56–64). (In Russian). The object of the investigation was to study the effect of the precipitation-hardening of supercooled austenite on the microstructure, position of the martensite point, hardness and the cutting properties of high-speed steel of the following composition: Carbon 0·75%, manganese 0·30%, silicon 0·30%, chromium 4·2%, tungsten 17·4%, vanadium 0·62%, sulphur 0·016%, phosphorus 0·019% and nickel 0·08%. The critical points Ac_1, Ac_2 and Ac_3 of the steel were between 820° and 870° C. As the quenching temperature was raised, the hardness of the steel fell off owing to an increase in the amount of residual austenite and a decrease in the amount of primary martensite. The quenching temperature for steel to be subjected to triple tempering at 560° C. should not be lower than 1250° C. The maximum quenching temperature should be some 20–30° C. below the temperature of formation of ledeburite. On heating, the transformation of α-iron to γ-iron occurs at 820–870° C. On air-cooling, the martensite point (upper temperature of Ar interval) is lower the higher the temperature to which the specimens had been heated and the longer the holding time. Experiments on the ageing of supercooled austenite (quenched from 1300° C.) on holding at temperatures of 600–700° C. were carried out. An increase in the latter temperature and the holding time intensifies the precipitation of carbides and results in a raising of the martensite point. At 700° C. the austenite grains become surrounded by a broad network

ASM/SLA METALLURGICAL LITERATURE CLASSIFICATION — E-2

MATERIALS INDEX — AUTHOR INDEX — 1ST AND 2ND LETTER — 2ND LETTER — 3RD AND 4TH ORDERS — 5TH ORDER

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of troostite. The cutting tests showed that the ageing of supercooled austenite in molten lead at 580–600° C. for 40 min. increases the tool life by 20%, as compared with steel quenched in crude petroleum. Ageing at 650° C. for 3 hr. increases the tool life by 60% as compared with the petroleum-quenched tools. Ageing in each case was followed by air cooling.

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PROCESSES AND PROPERTIES INDEX

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19

Improving the Resistance of High-Speed Steel Tools. I. Borpatskiy. (Stal, 1939, No. 6, pp. 44-46). (In Russian). The investigations were conducted on a steel containing 0·75% of carbon, 0·30% of manganese, 0·30% of silicon, 0·016% of sulphur, 0·019% of phosphorus, 4·30% of chromium, 0·08% of nickel, 17·4% of tungsten and 0·62% of vanadium, with the object of determining: (a) The effect of the maximum temperature and of the holding time on the temperature at which the martensite transformation began; (b) the influence of the temperature and holding time during the ageing of the austenite on the martensite point; and (c) the effect of the heat-treatment conditions on the life of cutting tools. The ageing of super-cooled austenite is accompanied by the precipitation of carbides along the austenite grain boundaries and a rise in the temperature of the martensite transformation on subsequent quenching. Machining tests showed the particularly beneficient results of stepped quenching (heating to 1280-1300° C., cooling in molten lead at 500° C. and holding for 3 min., transferring to a muffle furnace and holding at 650° C. for 3 hr. and final cooling in air) which increased the life of the tools to about 90% longer than that of tools quenched in the ordinary way.

A59-11A METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Physical properties and heat-treatment of chrome-silicon-vanadium EI 172 steel. I. I. Romatskii. *Metallurg* (U. S. S. R.) 14, No. 8, 50-9(1939); *Chimie & industrie* 43, 212.—EI 172 steel contains C 1.04, Cr 11.25, Si 1.65, V 2.5 and Mn 0.28%. It belongs to the ledeburitic group. In it, aging of the supercooled austenite is most intense above 650°, the range of relative stability of the austenite corresponds to temps. below 500°. The hardness is max. after quenching from 1225 to 1250° and triple annealing. During heat-treatment it undergoes less oxidation than normal high-speed tool steel.

A. Papineau-Couture

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BORNATSKIY, I. I.

Bornatskiy, I. I. and Alferov, K. S. "The problem of reduction in the heterogenoity of heavy ingots of bubbling steel," Trudy Stalinskogo obl. otd-niya VNITOM, No. 1, 1949, p. 39-46

SO: U-5241, 17 December 1953, (Letopis 'Zhurnal 'nykh Stateyy, No. 26, 1949)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, Ivan Ivanovich, kandidat tekhnicheskikh nauk; KAZACHKOV, Ye.A., redaktor; SHOROPIN, V.D., redaktor; ATTOPOVICH, M.K., tekhnicheskiy redaktor.

[Desulfuration of Marten steel] Desul'firatsiia martenovskoi plavki. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1955. 113 p. (MLRA 8:12)
(Steel--Heat treatment)

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BORNATSKIY, I.I.

Burning a new bottom in a large open-hearth furnace with a basic roof. V. O. Kulikov and I. I. Bornatskii (Met. Plant, Makeevka). *Stal'* 15, 597-600(1955).—A bottom of a 370-ton open-hearth furnace was burnt on using 2-10 mm. magnesite and open-hearth slag in 13 layers at 1680° which required from 12 hrs. and 35 min. to 17 hrs. and 5 min. for burning each layer. Amts. and proportions of refractories used for each layer, their final compn. as compared with theoretical, and method of application are given. The compn. digressed from theoretical uniformly, being higher in MgO and lower in CaO and SiO_2. Bottom delays recorded during the first 7 months were 1.56 times lower than those of a bottom made in an identical furnace but having a silica-brick roof.

J. D. Gat

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BORNATSKIY, I.I.

Performance of large all-basic open-hearth furnaces. V. O. Kulikov, I. I. Bornatskiĭ, and A. P. Yargin. *Stal'* 15, 801-6(1955). — Performance of 350-ton all-basic furnaces for five campaigns is presented in detail and compared with that of similar furnaces but having an acid roof. Detailed data can be summarized by stating that the use of basic roofs shortened the time of heats by 23.5%, increased daily production by 16.2% and that of the furnace campaign by 66.9% and lowered fuel consumption by 12.3%. Higher temp. of waste gases calls here for replacing the first 2-2.25 m. from the top of checkers with forsterite brick, even if it cracks badly in operation. I. D. Gat

MG

4

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BORNATSKIY, I.

Deoxidation of open steels with ferromanganese in the ladle. I. I. Bornatskii, K. S. Alferov, and V. I. Prilepskii (Steel Works, Makeevka). *Stal'* 16, 977-83(1956).—A comparative study of 195 heats made in 185- and 350-ton all-basic furnaces showed that deoxidation in the ladle with FeMn crushed to pass a 80-mm. screen leads to a uniform distribution of Mn and saving of 22% of it as compared with furnace deoxidation. The practice does not affect boiling in the molds, top scrap, blooming mill scrap, uniformity of the compn. nonmetallic content, and mech. properties.

J. D. Gat

3

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Fettling a New Hearth on a Large Open-Hearth Furnace with a Basic Roof. V. O. Kulikov and I. I. Bernatskii (Stal', 1953, (7), 597–600). [In Russian] An account is given of the fettling of a new hearth in a 370-ton all-basic [illegible] and of the chemical and petrographic [illegible] thirteen fettled layers. The fettling mixture consisted [illegible] magnesite, O.H. slag and scale. It was found that with a roof temperature of 1650–1700° C the compositions of the layers from four to twelve, inclusive, differed regularly from those calculated, the MgO-content being higher and the CaO and SiO_2-contents being lower. The refractoriness of the first fettled layer was 1870° C, that of the others being [illegible] The use of the all-basic construction has resulted in considerable reductions of hot-repair time. 1700° C is the highest advisable roof-temperature for fettling. [illegible]

2

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BORNATSKII, I. I.

3

2654* (Russian.) Reducing Rimmed Steel in the Ladle With Ferromanganese. Praktika raskisleniia kipiashchei stali v kovshe ferromarganitsem. I. I. Bornatskii, K. S. [illegible] V. I. Prilepskii. Stal' v. 16 [illegible] Nov. [illegible]

Test results indicate that the [illegible] with an average saving in ferromanganese [illegible]

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, I. I.

BEDA, N.I.; BORNATSKIY, I.I., kandidat tekhnicheskikh nauk; BUL'SKIY, M.T., inzhener; SVIRIDENKO, F.F., inzhener; BERILOV, N.T., inzhener; ZHETVIN, N.F.

Metallurgical plant laboratories in 1957. Metallurg 2 no.8:1-5 Ag '57. (MLRA 10:9)

1. Nachal'nik TSentral'noy zavodskoy laboratorii zavoda im. Petrovskogo (for Beda). 2. Zamestitel' nachal'nika TSentral'noy zavodskoy laboratorii Makeyevskogo metallurgicheskogo zavoda im. Kirova (for Bornatskiy). 3. Zavod "Azovstal'" (for Bul'skiy, Sviridenko, Berilov). 4. Nachal'nik TSentral'noy zavodskoy laboratorii zavoda "Serp i molot" (for Zhetvin).

(Metallurgical laboratories)

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SOV/137-58-9-19393

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 178 (USSR)

AUTHORS: Kustanovich, V.S., Braynin, I.Ye., Bornatskiy, I.I.

TITLE: An Improved Heat-treatment Process for Punches of 6KhV2S Steel (Utochneniye rezhima termicheskoy obrabotki puansonov iz stali 6KhV2S)

PERIODICAL: Sb. nauchn. rabot stud. Donetsk. industr. in-t, 1957, Nr 2, pp 101-104

ABSTRACT: The purpose of the investigation was the increase in the strength of punches of 6KhV2S steel for piercing holes in rail braces by means of establishing optimum temperatures for their quenching and tempering. The critical points were established by means of quenching from 740-1040°C specimens of steel of the composition (in %) of: C 0.57, Mn 0.34, Si 0.66, W 2.51, Cr 1.08, Ni 0.11, S 0.022, and P 0.016. After quenching the hardness, microstructure, and appearance of the fracture were determined. To study the effect of the tempering temperature and of the rate of cooling after tempering relative to a_k and R_C the specimens, after quenching, were tempered at 180-600° keeping a constant temperature for one hour every

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SOV/137-58-9-19393

An Improved Heat-treatment Process for Punches of 6KhV2S Steel

40 or 50°. It was established that the optimum conditions of the heat treatment of 6KhV2S-steel punches is quenching from 980° (holding the temperature for 15 min) followed by tempering in a lead bath kept at the temperature of the gold-colored oxide film (250-260°).

A.B.

1. Industrial equipment--Production 2. Steel--Mechanical properties 3. Steel --Processing 4. Steel--Test results

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

AUTHORS: Bornatskiy, I.I., Belousova, E.E., and Pavlenko, N.M., (Engineers).

130-5-11/22

TITLE: Increasing the durability of rings for rolling a recurrent shape. (Povysheniye stoykosti kolets dlya prokatki periodicheskogo profilya).

PERIODICAL: "Metallurg" (Metallurgist), 1957, No.5, pp.24 - 25, (U.S.S.R.).

ABSTRACT: The adoption of Type 35ХГСА steel for making the rings fitted onto rolling-mill rolls for producing recurrent shapes has improved productivity and ring life. The rings were previously made of Type 45 steel. The composition of the newly adopted steel is: 0.36% C, 1.25% Si, 0.87% Mn, 0.022% S, 0.032% P and 1.23% Cr. The steel was melted in a basic electric furnace, the ingots were rolled into 200 x 200 mm square billets and the rings were forged of these latter. The forging was completed at a temperature not lower than 800-850 C and, after slow cooling, annealing and heat treatment was carried out on the rings. To avoid decarburization the rings were heated in boxes with spent carburizer before hardening. There are 2 figs., 1 table.

Card 1/2

ASSOCIATION: Makeevskiy Metallurgical Works (Makeevskiy Metallurgi-

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Increasing the durability of rings for rolling a recurrent shape. (Cont.) 130-5-11/22

cheskiy Zavod).

AVAILABLE:

Card 2/2 Mekeyevskiy metallurgicheskiy zavod

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

AUTHOR: Bornatskiy, I.I., Candidate of Technical Sciences. 133-5-26/27

TITLE: Research work of the Makeyevsk Metallurgical Works. (Issledovatel'skiye Raboty Makeyevskogo Metallurgicheskogo Zavoda)

PERIODICAL: "Stal'" (Steel), 1957, No.5, pp. 475-476 (U.S.S.R.)

ABSTRACT: 1) An increase of the output of a sinter strand to 2 000 tons/day. In order to obtain such output the sinter mix should contain 2.0 - 2.5% of lime.
2) An increase in the output of blast furnaces. An increase in sinter basicity from .73 to 1.04 increased the output of No.1 furnace by 5%. Increasing the proportion of sinter in the burden from 66.7% to 80.3% increased the output by 7% and decreased the coke rate from 887 to 846 kg/ton. Decreasing manganese content from 1.8 - 2.3% to 1.0 - 1.2% increased the output by 1.8 to 2.5%.
3) Steel-making with application of oxygen (in co-operation with the Ukrainian Institute of Metals)..The use of oxygen in openhearth furnaces (185-370 tons) started in 1956. Initially oxygen was supplied to the flame. Later 26 heats in a 185 ton furnace were carried out in which oxygen was supplied to the bath during charging and heating periods (60-75 min). The duration of the melting period decreased by 1.8 hours, the output of the furnace increased by 18.8% and the consumption

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133-5-26/27
(Cont.)

Research work of the Makeyevsk Metallurgical Works.

of fuel decreased by 20.6%, the consumption of oxygen 6-7 m^3/t (to bath) and 27-28 m^3/ton (to flame).

4) Prolongation of the campaign of open hearth furnaces with basic roofs. In 1954, the mean campaign of 185 ton open hearth furnaces was 315 heats and 370 ton furnaces - 271 heats. Some improvements in suspension of roof refractories, change in the slope of the back walls on the sector opposite the end charging doors, transfer to evaporation cooling, etc., increased the duration of the campaign which in 1956 was 406 heats for 185 ton furnaces and 379 heats for 370 ton furnaces.

5) An increase in the durability of large ingot moulds by reinforcing. The use of bands from steel 20 decreased the consumption of ingots from 26.7 kg/ton to 12.7 kg/ton.

6) A decrease of the depth of shrinkage cavity and a decrease in the proportion of cut off metal. The introduction of rectangular 7 ton ingots instead of square 6.2 ton ingots and the use of 1.5 kg/ton of bunkerite for heating the top permitted the decreasing of the proportion of the cut off metal by 2.5% (14% for ordinary steel and 15.5% for quality steels). An experimental application of bipyramidal shrinkage tops indicated that a further 1% decrease can be obtained.

7. An increase in the output of blooming mills (carried out in

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Research work of the Makeyevsk Metallurgical Works. (Cont.)

co-operation with TsNIIChM). An increase in output was obtained by increasing the weight of ingots to 7 tons and increasing the degree of reduction (11 passes instead of 13).

8) Improvement in the durability of rolling rolls. By supplying cooling water only during breaks and a systematic checking of the level of the mill the consumption of rolls was decreased by 32%.

9) Improvement in the durability of rings for rolling a periodic profile. The durability of rings was increased by a factor of 3-4 by manufacturing them from steel 35XГC instead of steel 45.

10) The use of radio-active isotopes in research work. Radio-active isotopes of Co, Ca, Fe and P were used for the control of the wear of lining in a blast furnace hearth and bottom of open hearth furnaces, for studies of processes of slag formation, velocity of melting of scrap during the melting period, etc. From the result obtained the following conclusion regarding open hearth furnaces were drawn: in order to speed up the formation of slag (under operating conditions of the Kirov Works) a layer of ore should be charged between two portions of lime; the wear of the bottom of a 120 ton open hearth furnace is about 1.5 - 2 mm per heat; fettling of holes up to

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Research work of the Makeyevsk Metallurgical Works. (Cont.) 133-5-26/27

250 mm deep in one layer has no negative influence on the durability of the bottom.

11) The use of X-ray structural analysis for the determination of stresses in cast iron rolls. Stresses of the second order were determined on polished specimens cut out from various parts of a roll: in layers of white iron these stresses were 18-20 kg/mm^2, while in layers of grey iron - 4-6 kg/mm^2. Casting stresses in individual rolls determined by this method varied between 20-80 kg/mm^2. After annealing at 600 $^{\circ}$C for 8 hours (without loss of hardness) the sum of tangential and axial stresses decreased to 3-10 kg/mm^2, i.e. by the factor of 7-10.

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BORNATSKIY, I.I.

133-9-6/23

AUTHOR: Bornatskiy, I.I. Candidate of Technical Sciences and Zubkov, A.P., Prilepskiy, V.I., Engineers.

TITLE: Increasing the Capacity of Stock Yard and Mould Preparation Shop. (Povysheniye propusknoy sposobnosti shikhtovogo dvora i uchastka podgotovki sostavov izlozhnits)

PERIODICAL: Stal', 1957, No.9, pp. 796 - 800 (USSR).

ABSTRACT: The introduction of chrome-magnesite roofs, evaporation cooling and the use of oxygen increased the output of the melting shop so that the capacity of the stock yard and mould preparation shop became a bottleneck in the further increase in the production of steel. In the paper, the experience gained in increasing the throughput capacities of the above auxiliary services is discussed. The following participated in the work: V.O. Kulikov, S.V. Vasil'yev, M.M. Khil'ko, V.S. Kaprov, K.S. Al ferov, D.P. Zhidetskiy, V.Ya. Chetverikov, A.YE.Biryukov, L.L. Gobach and others. There are 3 figures.

ASSOCIATION: Makeyevka Metallurgical Works im.Kirov (Makeyevskiy Metallurgicheskiy Zavod im. Kirova)

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Bornatskiy, I.I.

KHODAKOVSKIY, V.V.; YEFIMOV, V.A., kand. tekhn. nauk, starshiy nauchnyy rabotnik; KOSENKO, P.Ye., kand. tekhn. nauk; KAZAKEVICH, S.S.; LAPITSKIY, V.I., prof., doktor tekhn. nauk; FILIP'YEV, O.V.; STROGANOV, A.I., kand. tekhn. nuk, dots.; DEMIDOVICH, A.V.; BORNATSKIY, I.I., kand. tekhn. nauk; MEDZHIBOZHSKIY, M.Ya., dots.; KOCHO, V.S., prof., doktor tekhn. nauk; RYN'KOV, V.I.; LOMAKIN, L.M., mladshiy nauchnyy sotrudnik; KOKAREV, N.I., dots.; KLYUCHAREV, A.P.; PLYUSHCHENKO, Ye.A.; KAPUSTIN, Ye.A., kand. tekhn. nauk, dots.; KOBEZA, I.I., kand. tekhn. nauk, nauchnyy sotrudnik; SHIROKOV, G.I.; UMRIKHIN, P.V., prof., doktor tekhn. nauk; LEZHAVA, K.I.; ZHIGULIN, V.I.; MOROKOV, P.K.; KHLEBNIKOV, A.Ye., prof., doktor tekhn. nauk, starshiy nauchnyy sotrudnik; TARASOV, N.S.; NIKOLAYEV, A.G.

Discussions. Biul. TSNIICHM no.18/19:40-66 '57. (MIRA 11:4)

1. Starshiy inzhener Glavspetsstali Ministerstva chernoy metallurgii SSSR (for Khodakovskiy). 2. Institut gaza (for Yefimov). 3. Direktor Dneprodzerzhinskogo metallurgicheskogo instituta (for Kosenko). 4. Nachal'nik laboratorii Leningradskogo instituta ogneuporov (for Kazakevich). 5. Zaveduyushchiy kafedroy metallurgii stali Dnepropetrovskogo metallurgicheskogo instituta (for Lapitskiy). 6. Nachal'nik laboratorii Giprostali (for Filip'yev). 7. Chelyabinskiy politekhnicheskiy institut (for Stroganov). 8. Nachal'nik teplotekhnicheskoy laboratorii Severskogo metallurgicheskogo zavoda (for Demidovich). 9. Zamestitel' nachal'nika TSentral'noy zavodskoy laboratorii Makeyevskogo metallurgicheskogo zavoda (for Bornatskiy).

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KHODAKOVSKIY, V.V.---(continued) Card 2.

10. Sibirskiy metallurgicheskiy institut (for Medzhibozhskiy). 11. Zaveduyushchiy kafedroy metallurgii stali Kiyevskogo politekhnicheskogo instituta (for Kocho). 12 Ispolnyayushchiy obyazannosti glavnogo inzhenera Beloretskogo metallurgicheskogo kombinata (for Ryn'kov). 13. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki (for Lomakin). 14. Ural'skiy politekhnicheskiy institut (for Kokarev). 15. Zamestitel' nachal'nika teplotekhnicheskoy laboratorii Nizhne-Tagil'skogo metallurgicheskogo kombinata (for Klyucherov). 16. Nachal'nik teplotekhnicheskoy laboratorii TSentral'noy zavodskoy laboratorii zavoda im. Voroshilova (for Plyushchenko). 17. Zhdanovskiy metallurgicheskiy institut (for Kapustin). 18. Institut metallurgii im. Baykova AN SSSR (for Kobeza). 19. Nachal'nik laboratorii martenovskikh pechey Vsesoyuznogo nauchno-issledovatel'skogo instituta metallurgicheskoy teplotekhniki (for Shirokov). 20. Zaveduyushchiy kafedroy metallurgii stali Ural'skogo politekhnicheskogo instituta (for Umrikhin). 21. Nachal'nik metallurgicheskoy laboratorii TSentral'noy zavodskoy laboratorii Zakavkazskogo metallurgicheskogo zavoda (for Lezhava). 22. Zamestitel' glavnogo inzhenera zavoda im. Petrovskogo (for Zhigulin). 23. Nachal'nik martenovskogo tsekha Kuznetskogo metallurgicheskogo kombinata (for Morokov). 24. Institut metallurgii im. Baykova AN SSSR (for Khlebnikov). 25. Glavnyy inzhener Petrovsk-Zabaykal'skogo metallurgicheskogo zavoda (for Tarasov). 26. Nachal'nik tsekha Magnitogorskogo metallurgicheskogo kombinata (for Nikolayev).

(Open-hearth ...

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, I. I.

32-8-54/61

AUTHORS Bornatskiy, I. I., Malykh, L., Candidates of Technical Sciences

TITLE On the Rôle Played by Works Laboratories in the Technical Progress of Industry (of the U.S.S.R.)
(O roli zavodskikh laboratoriy v tekhnicheskom progresse promyshlenno s ti - Russian)

PERIODICAL Zavodskaya Laboratoriya, 1957, Vol 23, Nr 8, pp 1005-1007 (U.S.S.R.)

ABSTRACT The works laboratory of the "Makeyevka-Metallurgy-Works, Kirov" is mentioned here as a model. The mentioned laboratory was in recent time enlarged to a great extent the report says. First-rate technical-scientists are working here. At present the laboratory is divided into several departments: technological laboratory for agglomerations and blast furnaces production, laboratories for steel casting and rolled metals, laboratories for metallurgy, for physical metal research methods with rich apparatus equipment for radio structural analysis, works with radioactive isotops and other laboratories which are also equipped with the most recent apparatus. It is pointed out that the works owe the numerous practical innovations carried out here to their laboratories as it is described here: production of the ferric manganese agglomerate, application of the liquified agglomerate in the blast furnaces which makes the work of the latter much more productive, strengthening of the ingot molds by steel bands, siphon-like reduction of the steel casting from the ingot molds, innovations in the metal rolling which in the course of 1956 saved 5,4 million roubles;

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On the Rôle Played by Works Laboratories in the Technical Progress of Industry (of the U.S.S.R.) 32-8-54/61

introduction of chromsilicate manganese steel rings for the rolling of the metals in periodic profiles, numerous new methods of examination and control (as semi-microchemical, photocolorimetric and various accelerated methods); desoxidation of the boiling steel smelting by ferromanganese; rolling of the steel cast pieces up to a weight of 7 tons, etc. The experience of the mentioned laboratories confirmed their practical importance. In the case of larger works they were developed to important scientific centres and have the advantage of being based upon practical fundaments of a direct connection with production. Here, however, a reproach is raised against the leaders of several works: they are said to consider the laboratories as merely secondary institutions of their works. Here the party is appealed to for protection, which appreciated the scientific research institutions of the works in their proper light. Finally criticism is made of the work of laboratories in that they are not very eager to establish a connection with the scientific corresponding institutes in order to collaborate with them.

ASSOCIATIONS: Tsentral'naya Zavodskaya laboratoriya Makeyevskogo metallurgicheskogo zavoda im. Kirova Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, I. I.

133-58-3-26/29

AUTHORS: Braynin, I.Ye., Professor, Bornatskiy, I.I., Candidate of Technical Sciences and Alferov, K.S., Engineer

TITLE: Increasing the Durability of Large Ingot Moulds by Means of Reinforcement (Povysheniye stoykosti krupnykh izlozhnits putem armirovaniya)

PERIODICAL: Stal', 1958, Nr 3, pp 267 - 270 (USSR)

ABSTRACT: In the open-hearth melting shop of the Makeyevsk Works, two types of ingot moulds were in general use: wide end up, closed bottom with hot tops for ingots weighing 6.2 tons and both ends open moulds for rimming steel for ingots weighing 6.7 tons (data in Table 1). The service life of the first type of mould was 27 casts (consumption 42.5 kg/t of steel) and of the second type 68 casts (18.9 kg/ton). Efforts to increase the life of moulds by suitable adjustment of the chemical composition of iron did not produce any substantial results. As the next step, the use of reinforcing bandages was tried without any change in the design of the moulds. As the results obtained were encouraging, various designs of bandages were tried (Fig.1) with simultaneous increase in the wall thickness of moulds. The final design adopted for both types of moulds is shown in Figs. 2 and 3. These modifications considerably improved the life of the moulds (approximately 2.2 - 2.5 times). The

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133-58-3-26/29

Increasing the Durability of Large Ingot Moulds by Means of Reinforcement

comparison of the consumption of moulds without and with reinforcing bandages is given in Table 2. The following members of the NTOChM participated in the work: S.V. Vasil'yev, V.S. Kaprov, Ye.I. Baranov, L.Z. Yemets, V.I. Kharina and L.B. Dolmat. There are 2 tables and 3 figures.

ASSOCIATION: Donetskiy industrial'nyy institut (Donets Industrial Institute) and Makeyevskiy metallurgicheskiy zavod (Makeyevka Metallurgical Works)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, Ivan Ivanovich; KOTROVSKIY, Mikhail Mikhaylovich; YARGIN, Aleksandr Pavlovich; LEBEDEV, A.I., red.; YABLONSKAYA, L.V., red.izd-va; MIKHAYLOVA, V.V., tekhn.red.

[First assistant steelmaker in open-hearth furnace plants] Pervyi podruchnyi stalevara na martenovskikh pechakh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 365 p. (MIRA 12:12)

(Open-hearth process)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, Ivan Ivanovich; FILLIPOV, S.I., prof., doktor tekhn. nauk, red.; ZINGER, S.L., red. izd-va; KARASEV, A.I., tekhn. red.

[Physical chemistry of the basic open-hearth process] Fizicheskaia khimiia osnovnogo martenovskogo protsessa. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 292 p. (MIRA 14:6)

(Open-hearth process)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, I.I.

Heating the open-hearth furnaces of the Ukraine with natural gas. Metallurg 6 no.10:15-18 O '61. (MIRA 14:9)

1. Gosudatstvennyy planovyy komitet Soveta Ministrov Ukrainskoy SSR.

(Ukraine--Open-hearth furnaces)
(Gas, Natural)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, Ivan Ivanovich; CHUMACHENKO, T.I., red.; SHAFETA, S.N., tekhn. red.

[Use of natual gas for the operation of open-hearth furnaces] Primenenie prirodnogo gaza dlia otopleniia martenovskikh pechei. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1962. 105 p. (MIRA 15:4)

(Open-hearth furnaces) (Gas, Natural)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, Ivan Ivanovich; GROMOV, N.D., red. izd-va; ATTOPOVICH, M.K., tekhn. red.

[Brief handbook for steelmakers] Kratkii spravochnik staleplavil'shchika. Moskva, Metallurgizdat, 1962. 286 p. (MIRA 16:10)

(Steel--Metallurgy)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, I.I.; TERESHCHENKO, N.A.

On the road of technical progress. Metallurg 7 no.7:7-8 Jl '62. (MIRA 15:7)

1. Gosplan USSR.
(Ukraine—Iron and steel plants)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATKI, I.I. [Bornatskiy, I.I.]

Heating of Martin furnaces with natural gas in Ukraine. Analele metalurgie 16 no.2:58-63 Ap-Je '62.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, I.I.; TERESHCHENKO, N.A.

Expansion of the oxygen-converter production of steel.
Metallurg 8 no.5:1-2 My '63. (MIRA 16:7)

1. Gosplan Ukrainskoy SSR.
(Bessemer process)
(Oxygen--Industrial applications)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

KARP, Igor' Nikolayevich; KONYUKH, Vasiliy Yakovlevich; BORNATSKIY, I.I., kand. tekhn.nauk, retsenzent; CHUMACHENKO, T.I., red.izd-va; KRIVORUCHKO, P.F., tekhn. red.

[Firing open-hearth furnaces with high-calorie gas] Otoplenie martenovskikh pechei vysokokaloriinym gazom. Kiev, Gostekhizdat USSR, 1963. 178 p. (MIRA 17:2)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, Ivan Ivanovich; TERESHCHENKO, Nikolay Aleksandrovich; POGREBNYAK, I.T., inzh., retsenzent; CHUMACHENKO, T.I., red.izd-va; BEREZOVYY, V.N., tekhn. red.

[Expansion of ferrous metallurgy in the Ukrainian S.S.R.] Razvitie chernoi metallurgii Ukrainskoi SSR. Kiev, Gostekhizdat, USSR, 1963. 268 p. (MIRA 17:3)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, I.I., kand. tekhn. nauk

Improving the preparation of raw materials for steel smelting. Met. i gornorud. prom. no.5:14-17 S-O '63. (MIRA 16:11)

1. Donetskiy nauchno-issledovatel'skiy institut chernoy metallurgii Gosplana UkrSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, I.I., kand.tekhn.nauk

Improving the technology of smelting and reducing 09G2 and 14G2 low-alloy steels. Met. i gornorud. prom. no.3:25-28 My-Je '63. (MIRA 17:1)

1. Gosplan UkrSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

LEVIN, Semen Lazarevich; KOCHO, V.S., doktor tekhn. nauk, retsenzent; MYLKO, S.N., kand. tekhn. nauk, retsenzent; BORNATSKIY, I.I., kand. tekhn. nauk

[Steel smelting processes; physicochemical and technological principles] Staleplavil'nye protsessy; fiziko-khimicheskie i tekhnologicheskie osnovy. Kiev, Gostekhizdat USSR, 1963. 403 p. (MIRA 17:9)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNATSKIY, I.I., kand. tekhn. nauk

Steelmaking in the Ukrainian S.S.R. during the first three years of the current seven year plan. Met. i gornorud. prom. no.6:8-11 N-D '62. (MIRA 17:8)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

KULIKOV, V.O.; BORNATSKIY, I.I.; ZARUBIN, N.G.; DOROFEYEV, G.A.; KALUZHSKIY, Ye.A.; KAZAKOV, A.A.; KOVAL', R.F.; KORNEVA, N.K.; TRET'YAKOV, Ye.V.; TRUNOV, Ye.A.; Prinimali uchastiye: ANDREYEV, V.L.; GORDIYENKO, V.V.; GRINEVICH, I.P.; GUBAR', V.F.; DOLINENKO, V.I.; ZHERNOVSKIY, V.S.; ZHIGALOVA, Z.I.; KOMOV, N.G.; KURAPIN, B.S.; OLESHKEVICH, T.I.; PRIKHOZHENKO, Ye.

Mastering the operations of 650- and 900-ton (mega - gram) capacity open-hearth furnaces at the Il'ich metallurgical plant. Stal' 25 no.8:805-807 S '65. (MIRA 18:9)

1. DONNIICHERMET i Zhdanovskiy metallurgicheskiy zavod imeni Il'icha.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEAS, M.

About some domains of the applicability of polyoperators. p. 45

Academia Republicii Populare Romine. Baza de Cercetari Stiintifice, Timisoara. STUDII SI CERCETARI STIINTIFICE. SERIA I: STIINTE MATEMATICE, FIZICE, CHIMICE SI TEHNICE.
Vol. 2, No. 1/4, Jan./Dec. 1955

Timisoara, Rumania

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

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Borneas, M

RUMANIA/Theoretical Physics B-5

Abs Jour : Referat Zhur - Fizika, No 5, 1957, No 10877

Author : Borneas, M., Kremmer, I.

Inst : O

Title : The Use of Poly-Operators.

Orig Pub : Studii si cercetari stiint. Acad. RPR. Baza Timisoara Ser. 1, 1955, 2, No 1-4, 51-58

Abstract : The concept of the poly-operator, introduced by one of the authors earlier (Bornes, M., Studii si cercetari stiint. Acad. RPR, Baza Timisoara, 1953) are formulated in the following manner. The poly-operator $\hat{\hat{B}}$ is determined by the matrix B_{ik}, which satisfies the relation $(\hat{\hat{B}}\psi)_i = \hat{B}_{ik}\psi_k$, where $\psi_k = \psi(\underset{\sim}{x}, t, s_k)$ are values

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RUMANIA/Theoretical Physics B-5

Abs Jour : Referat Zhur - Fizika, No 5, 1957, No 10877

assumed by the wave function $\psi(x, t, s)$ of a system with an internal degree of freedom s. Using this concept, the authors establish the poly-operator form of the Dirac equation, which differs substantially from the usual one in view of the diagonal nature of the momentum poly-operator $\hat{\hat{p}}_{\mu}$.

Next, the authors find the poly-equation for a particle with negative mass and calculate the energy of the non-relativistic magnetic electron in an external magnetic field. In conclusion, considerations that relate the method of poly-operators with the method of associated matrices are raised.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEAS, M.

New aspect of the motion of particles. II. p. 427. Academia Republicii Populare Romine. Institutul de Fizica. STUDII SI CERCETARI DE FIZICA. Bucuresti. Vol. 6, no. 3, July/Sept. 1955

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

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

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I-FW

Borneas, M. Sur quelques domaines d'applicabilité des polynômes. Acad. R. P. Romine. Baza Cerc. Şti. Timişoara. Stud. Cerc. Şti. Ser. I. 2 (1955), 45-50 (Romanian. Russian and French summaries)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEAS, M.

SCIENCE

Periodicals: STUDII SI CERCETARI DE FIZICA. Vol. 6, no. 2, Apr./June 1955

BORNEAS, M. New aspect of the movement of particles. p. 299

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

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

RUMANIA/Atomic and Molecular Physics - Statistical Physics. Thermodynamics D-3

Abs Jour : Ref Zhur - Fizika, No 8, 1958, No 17734

Author : Borneas M.
Inst : ~~Not Given~~
Title : Balance for Direct Determination of the Density of Solids

Orig Pub : Comun. stiint. si tehn., 1956, 2, 79-80

Abstract : No abstract

Card : 1/1

13

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEAS, M.; BABUTIA, I.

On the superficial tension of [illegible]yl alcohol. Acta physica Pol 18 no.5:521-522 '59.

1. Laboratoire de Physique, Institut Polytechnique, Timisoara.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEAS, M.

G

RUMANIA/Electricity - General Problems.

Abs Jour : Ref Zhur Fizika, No 1, 1960, 1303

Author : Borneas, M.
Inst : -
Title : On Ponderomotive Interactions Between Two Point Charges

Orig Pub : Studii si cercetari, Acad. RPR, Baza Timisoara. Stiinte tehn., 1958, 5, No 1-2, 239-244

Abstract : Contradictions are indicated, which appear when using the Lorentz formula in the case of an interaction between two point charges. Starting with the representation of Guntherschulze (Guntherschulze A., Z. Phys. 1932, 74, 692), the author gives a correction for the Lorentz formula, which makes it possible to obtain the correct results.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEAS, M.; BABUTIA, I.

On the superficial tension of liquids in rotary motion, and its dependence on temperature. Studii chim Timisoara 6 no.1/2:153-155 Ja-Je '60. (EEAI 10:3)
(Liquids) (Surface tension) (Temperature)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEAS, M.; BABUTIA, I.; KALMAN, E.

Studies on the superficial pellicle of some liquids in rotation.
Studii mat Timisoara 7 no.1/2:221-223 Ja-Je '60. (EEAI 10:4)
(Surface tension) (Liquids)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEAS, M.; BABUTIA, I.

The surface tensions of liquids in rotatory motion in relation to the decreasing temperature. Studii chim Timisoara 7 no.3/4:353-358 Jl-D '60. (EEAI 10:9/10)

(Liquids) (Surface tension)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEAS, M.; BABUTIA, I.

On the surface tension of rotating liquids. Acta physica Pol 20 no.3:187-196 '61.

1. Physical Laboratory, Polytechnic Institute, Timisoara, Roumania.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEAS, M.

On Lagrangians with high derivatives. Acta physica Pol 24 no.4:471-475 O '63.

1. Physical Laboratory, Polytechnic Institute, Timisoara, Rumania.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMAN, B.A.

BORNEMAN, B.A. and S.K. OVCHINNIKOV. ...Geologiia Zaalaiskogo khrebta (severnyi sklon tsentral'noi chasti)...Leningrad, Izd. Tadzhisko-Pamirskoi ekspeditsii, 1936. 63, (1) p. (Tadzhiksko-Pamirskaia ekspeditsiia 1934 g. Trudy ekspeditsii, vyp. LXV).

Bibliographical foot-notes.

Summary in English. DLC: QE315.B6

SO: LC, Soviet Geography, Part II, 1951, Unclassified

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

SOV/137-58-11-23836

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 281 (USSR)

AUTHOR: Borneman, I. D.

TITLE: Employment of Cellulose Sorbent for the Separation of Titanium From the Sum of Niobium and Tantalum and for the Separation of the Latter Two (Primeneniye sorbenta tsellyulozy dlya otdeleniya titana ot summy niobiya i tantala i dlya razdeleniya poslednikh)

PERIODICAL: V sb.: Materialy Soveshchaniya po primeneniyu ionnogo obmena v tsvetn. metallurgii. Moscow, 1957, pp 80-82

ABSTRACT: A method was developed for separating Ti from Nb and Ta and for separating Ta and Nb. A study was made of their distribution between the organic and aqueous phases in cellulose (C). The aqueous phase is the water contained in the C, the organic phase consists of the organic solvents passing through the C. To separate Nb, Ta, and Ti they are transformed into fluorides. Methylethylketone (I) is used as the solvent. To separate the sum of the rare-earth acids ("earth acids" in the original. Trans. Note) the column with the solutions of these elements is treated with I containing 15% HF. The experiments

Card 1/2

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SOV/137-58-11-23836

Employment of Cellulose Sorbent for the Separation of Titanium From the Sum (cont.)

were conducted with a column 20 cm long filled up to 14-15 cm with an adsorbing layer of C. The column is filled with a paste prepared by mixing C in a Pt dish with a 15% HF solution in I. The material analyzed is transformed into fluorides by decomposition with HF and evaporation to a volume of 6 cc. The technique developed was used for the determination of the sum of Nb and Ta in synthetic mixtures, slags, rocks, and a number of minerals.

O. B.

Card 2/2

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BORNEMAN, I.D., doktor geol.-mineral.nauk, otv.red.; VOLYNETS, M.P., red.-izd.-va; LEBEDEVA, L.A., tekhn.red.

[Methods for the chemical analysis of minerals. Vol. 1.]. Metody khimicheskogo analiza mineralov. Moskva, Izd.-vo Akad. nauk SSSR, 1961. 99 p. (Akademiia nauk SSSR. Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii. Trudy, no. 64). (MIRA 15:10)

(Mineralogy, Determinative)

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1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

8

BORNEMAN-STARYNKEVICH, I.D.

Composition of lovchorrite and kondrikite. I. D. Borneman-Starynkevich. *Khibina Apatite* 6, 114-18, 270-5(1933); *Mineralog. Abstracts* 6, 341-2.—*Vudyavrite* (I) $Ce_4(Ti_2O_6)_3.nSiO_2.mH_2O$ is yellow, amorphous and glassy with d. 2.40-2.50. *Kondrikite* $mNa_2Al_2Si_3O_{10}.nCe_4(Ti_2O_6)_3.10Ca_3Si_2O_6$ is an opaque yellowish mass, apparently a natrolite; compn. SiO_2 39.10, TiO_2 4.81, ZrO_2 0.10, ThO_2 0.59, $(Ce, La, Di)_2O_3$ 7.24, Al_2O_3 20.65, Fe_2O_3 0.15, $(Ca,Sr)O$ 1.22, Na_2O 10.16, CO_2 + H_2O 14.50%. It contains microscopic inclusions of an unknown mineral, and also of *carbo-cer* d. 1.7, which on heating burns, leaving 25.6% of its weight as ash which consists of SiO_2 5.7, rare earths 8.2, Al_2O_3 1.5, Fe_2O_3 0.3, CaO 2.5, Na_2O 1.8 and insol. 5.6. For lovchorrite the formula $Ce_4(Ti_2O_6)_3.10Ca_3Si_2O_6.10$ 11NaF is proposed.

C. A. Silberrad

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1ST AND 2ND ORDERS I. D.

BORNEMAN-STARYNKEVICH

Ca

8

PROCESSES AND PROPERTIES INDEX

Lovchorrite and its analogs. I. D. Borneman-Starynkevich. *Mat. Geochem. Khibina Tundra, Acad. Sci. U. S. S. R.* **1935**, 43-65; *Mineralog. Abstracts* **6**, 342 3.—The following analyses of lovchorrite (I), rinkolite (II), vudyavrite (IV and V) and *calcium-rinkite* (VI) are given:

	I	II	III	IV	V	VI
SiO_2	20.78	20.44	23.43	18.07	23.89	29.78
TiO_2	11.90	11.00	10.51	15.36	18.51	12.19
ZrO_2	0.14	0.16	0.05	0.15	0.03	0.35
ThO_2	0.72	0.46	0.90	1.14	1.17	—
Ce_2O_3	6.83	7.02	9.70	10.28	15.02	—
$(La,Di)_2O_3$	7.26	7.60	12.08	11.78	5.33	—
Y_2O_3	2.73	1.80	1.87	4.00	2.71	—
Al_2O_3	0.25	1.52	0.41	0.23	0.39	2.16
Fe_2O_3	0.05	0.06	0.14	0.14	1.88	0.40
MnO	0.11	0.12	0.16	0.23	0.61	2.10
MgO	0.15	—	0.19	0.19	0.12	trace
CaO	27.02	26.38	5.12	4.88	2.68	38.32
SrO	1.12	1.62	1.22	0.95	0.10	1.28
Na_2O	6.35	6.52	1.35	0.86	0.78	6.11
K_2O	0.21	0.42	0.24	0.12	0.09	0.18
F	4.75	5.98	0.19	0.17	—	7.23
H_2O	1.23	1.78	26.10	26.92	20.40	1.16

In I there is also U_3O_8 0.10; in V Ce_2O_3 as CeO_2 15.02%. These minerals with rinkite, mosandrite, johnstrupite, rosenbuschite and pectolite form an isomorphous series, related to pectolite in the pyroxene group, the end members of which are $Ce_2(TiO_3)_3.10CaSiO_3.2CeF_3$ and $Ca_3(TiO_3)_3.10CaSiO_3.3CaF_2$, the latter of which is Ca rinkite.

C. A. Silberrad

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

BORNEMAN-STARYNKEVICH, I.D.

PROCESSES AND PROPERTIES INDEX

8

Composition of several titanosilicates from the Khibin tundras. I. D. Borneman-Starynkevich. *Vernadsky Jubilee Vol., Acad. Sci. U. S. S. R.* 2, 735-55(1936); *Mineralog. Abstracts* 7, 209.—Sphene is liable to contain $NaCbSiO_5$ and $YtFeSiO_5$. In an analysis of fersmanite (Labuntzov, *C. A.* 25, 4493) Cb was overlooked; a new analysis gives: SiO_2 23.30; TiO_2 21.72; Cb_2O_5 15.00; Ta_2O_5 0.36; Fe_2O_3 0.52; CaO 25.88; SrO 0.32; MnO 0.20; MgO 0.12; Na_2O 7.02; K_2O 0.02; F 4.56; H_2O 1.80 = 102.14 − 9; O 1.92 = 100.22; sp. gr. 3.30. Fersmanite consists predominantly of varying proportions of Na_2CbSiO_5F, $Ca(NaH)TiSiO_5F$, $Ca(Ca,Mn)TiSiO_5$ and $CaNaCbSiO_5$. Cb was detected also in ramsayite, to which the formula $Na_2(TiCb)_2(SiAl)_2O_8$ is assigned. Astrophyllite is predominantly $Fe_2KTiSi_2O_{11}(OH)$, but with some Na, Ca, Mn and Mg. C. A. Silberrad

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BORNEMAN-STARYNKEVITCH, I. D.

BC

A-1

Isomorphous substitutions in apatite. I. D. Borneman-Starynkevitch (Compt. rend. Acad. Sci. U.R.S.S., 1938, 19, 253—255).—The chemical formula for fluoapatite, $3Ca_3(PO_4)_2.CaF_2 = 2Ca_3O_9O_{12}F$, can be written in the general form $A_5B_3X_{13}$. To include recorded isomorphous substitution products A may be Ca, Sr, Co, Mn, Na, K, C; B, P, As, V, C, Si, S; and X, F, Cl, OH, O. Two new compounds are reported as constituents of Khibin apatites, viz., $Ca_5CaP_3SiO_{12}F$ and $Ca_5CeNaP_3O_{12}F$. Analyses are given for Khibin apatites from two beds, francolite, and ellestadite; these and revised data on a pure fluoapatite are discussed.

W. R. A.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

BC

A-3

Isomorphic substitutions in apatite. I. D. [illegible] (Compt. rend. Acad. Sci. U.R.S.S., 1939, 22, 113—115; cf. A., 1938, I, 421).—The author upholds his own views on the structure of apatite against those of McConnell (A., 1939, I, 284), which are considered to disregard the chemical nature of the compound within the lattice. From his calculations it is shown that the sums of the positive and negative charges are unequal and this is regarded as unacceptable. F. R. G.

COMMON ELEMENTS

COMMON VARIABLES INDEX

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1ST AND 2ND LETTER

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

Decomposition of cassiterite by fusion with borax and some details of its complete chemical analysis. I. D. Borneman-Starynkevich. *Compt. rend. acad. sci. U. R. S. S.* 24, 353-6(1939)(in English).—Fusion of cassiterite with borax led to a series of reactions the last of which is expressed by the formula $NaBF_4 + H_2SO_4 = BF_3 + HF + NaHSO_4$. The remaining fused Na pyrosulfate contains all the components of cassiterite; it dissolves when treated with tartaric acid. A *spectroscopic analysis* shows the presence of Sn, Si, Ti, Zr, Cb, Ta, Fe and Mn. Detn. of Sn and the other components is described in detail. 6 references. A. H. Krappe

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES

8

CA

Isomorphic substitutions in carbonate-apatite. I. D. Borneman-Starynkevich and N. Belov. *Compt. rend. acad. sci. U. R. S. S.* **26**, 804 6(1940)(in English); cf. *C. A.* **33**, 5325[3].—The calcd. ratio Ca/P is plotted against calcd. percentage of CO_2 for various theoretical carbonate-apatites obtained by substituting values for x and y in the formula $xCa_{10}P_6O_{26}F_2 + yCa_{10}C_6O_{18}F_2$. It is shown that points representing the compn. of natural carbonate-apatites fall, in the majority of cases, close to the calcd. curve. This is presented as evidence that the substitution is C for P and not, even in part, C for Ca (cf. McConnell, *C. A.* **34**, 3208[4], 6193[5]). The compd. $Ca_{10}P_5CO_{23}(F, OH)_2$ seems to be the end member in the substitution series.

D. W. Pearce

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1ST AND 2ND ORDERS

PROPERTIES AND PROPERTIES INDEX

CA

110

Rare earths in plants and soils. I. D. Borneman-Starynkevich, S. A. Borovik and I. B. Borovskii. *Doklady Akad. Nauk S. S. S. R.* **30**, 227-31(1941).—The authors investigated the technique of estn. and identification of rare earths in various plants and soils, as part of a program of study of distribution of these metals in living matter. The metals of the group were pptd. as a group by their isomorphous replacement of Ca in pptn as oxalate. The members of the rare earths present in the ppt. were identified by spectroscopy. The specimens used for the work included soils from widely scattered parts of U. S. S. R. and a variety of plants. The value of total rare earths for soils gave a fairly const. value of 0.02%; ash of whole plants yielded a concn. of 3×10^{-4} to 2×10^{-4}, while the ash of green parts of plants gave 0 to 5×10^{-4}. Taken as a whole the specimens showed the presence of the entire group of rare earths; individual specimens, generally, contained six or more rare earths. No generalizations were possible with the data on hand, except the notable predominance in all specimens of the cerium group of rare earths. G. M. Kosolapoff

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BC

A-1

Rare earths in plants and soils. I. D. Horneman-Starinkevitsch, S. A. Borovik, and I. B. Borovski (*Compt. rend. Acad. Sci. U.R.S.S.*, 1941, **30**, 220—223).—The chemical method used for the separation is based on the isomorphism of the rare earths with Ca. Sm was not determined in most cases. Tests of the method by addition of known quantities of spectroscopically pure Eu_2O_3 showed the method to be suitable for small quantities of rare earths. There is some accumulation of rare earths in *Lupinus* and in beet and maple leaves. All soils examined contain ~0·02% and the occurrence in rock is widespread. The Ce group prevails in all cases. The Y group was determined spectroscopically in the absence of Ce in soils from Leningrad and Chibiny: middle lines of Eu and Lu (odd at. nos., 63 and 71) were found in both cases. J. O'M-H.

Inst. Geol. Sci.

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BC

A-1

Analysis and chemical formula of aeschynite. I. D. Borneman-Starinkevitsch (*Compt. rend. Acad. Sci. U.R.S.S.*, 1941, **30**, 234—237).—The spectroscopic, *X*-ray, and chemical analyses of aeschynite (I) are reported. The formula is deduced by considering (I) to be a solid solution of chemical compounds of the type AB_2X_6 and finding the simplest formula consonant with the valencies of the ions present. This is expressed as: $x|(Co^{IV}, Th)||Ti_2|O_6 + y|T.R.||NbTi|O_6 + z|Ca||Nb_2|O_6 + u|Ca||Fe^{+++}Nb|O_6(OH)_3$, where T.R. represents the total rare-earth content.

J. O'M-B.

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Ca

8

The analysis and the chemical formula of eschynite. I. D. Borneman-Starynkevich. *Doklady Akad. Nauk S. S. S. R.* 30, 232-5(1941).—In order to establish the chem. constitution of eschynite, the author subjected this long-known mineral to chem., spectroscopic and x-ray analyses. The mineral was considered as a solid soln. of chem. compds. of a similar type. The final formula arrived at by B. is that of AB_2X_6 type: $x(Ce^{IV}, Th)(Ti_2)(O_6) + y(T.\ R.)(CbTi)O_6 + z(Ca)(Cb_2)O_6 + u(Ca)(Fe^{+++}Cb)O_4(OH_2)$. The rare earths (T. R.) are in the ratio: Ce:La:Nd:Pr = 1:0.71:0.43:0.24. G. M. K.

Inst Geol Sci

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

Isomorphic replacement in clinohumite. I. D. Borneman-Starynkevich and V. S. Myasnikov (Inst. Geol. Sci., Acad. Sci. U.S.S.R.) *Doklady Akad. Nauk. S.S.S.R.* 71, No. 1, 137–40(1950).—Beside the structural analogy of the minerals of the norbergite-clinohumite group, the authors discuss the distinct replacement of Mg by Ti (in octahedral coördination) in the clinohumite of six Uralian occurrences (analyses given). Ti does not replace Si, but shows a complete substitution of MgF_2 by the isostructural clinohumites, but TiO_2 cannot replace $Mg(OH)_2$. As the Ti-richest clinohumite in the end members, the mol. $nMg(OH,F)_2.4Mg_2SiO_4 + m\ Mg(OH,F)_2.4Mg_2TiO_4$ is assumed, and the linear function of the OH content with the Ti content is an important evidence for this theory. In the place of Mg_2TiO_4, $(Mg,Fe)_2SiO_4$ may also be introduced in the clinohumite constitution, but the Fe may never be present as FeF_2. The analyses show that the pure titanate clinohumite (with 12.4% TiO_2) is not formed in nature, but the max. TiO_2 content observed was 5.4%; the MgO content is reduced with increasing TiO_2, from 56.0% to 51.7%, and the water content from 2.2% to 1.8%. W. Eitel

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BORNEMAN-STARYNKEVICH, I. D.

USSR/Minerals - Solutions Nov/Dec 51

"Isomorphic and Non-Isomorphic Replacements in Minerals," I. D. Borneman-Starynkevich

"Iz Ak Nauk SSSR, Ser Geol" No 6, pp 153-157

Similarly as in the case of liquid solns 2 types of hard solns exist: (1) true single-phase; (2) colloidal hard solns consisting of 2 phases, one of which is finely dispersed in the basic mass of the other. As example of latter, author cites mineral lomonosovite -- titano-silicate-phosphate of sodium, one phase of which is easily replaced by water in laboratory conditions. In natural state a watery, phosphate-less titano-silicate of sodium, murmanite, is to be found. 205T89

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BORNEMAN-STARYNKEVICH, I. D.

"Carbonate Apatites," by I.D.Borneman-Starynkevich and N.V.Belov, Cor. Mbr., Acad. Sci., USSR, Dok AN SSSR, Vol 90, No 1, pp 89-92, May 53

Authors state that since 1938-1940 they have succeeded 3 times (DAN SSSR, 19, No 4, 255, 1938); ibid., 22, No 2, 90, 1939; ibid., 26, No 8, 811, 1940) in pointing out objections to the possibility of isomorphic substitution of calcium by carbon in CO_2 apatites (francolites); this possibility was proposed in 1937 by Americans J.W. Grüner and D. McConnell. 259T44

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BORNEMAN I.D.

LASSIEUR, Arnold; BORNEMAN-STARYNKEVICH, I.D. [translator]; ZAKHAR'YEVSKIY, V.A., redaktor; NIKIFOROVA, A.N., tekhnicheskiy redaktor

[Analysis of silicates; rocks, glasses, glazes, and refractory materials] Analiz silikatov; gornykh porod, stekl, glazurei, ogneuporov. Perevod s frantsuzskogo I.D.Borneman-Starynkevich. Moskva, Izd-vo inostrannoi lit-ry, 1954. 150 p. (MLRA 7:9)
(Silicates)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

Britholite in skarns of Western Transbaikalia. E. A. Nechaeva and I. D. Borneman-Starynkevich. [illegible] Ore Deposits, Petrog., Mineral. and Geochem. [illegible] Zapiski Vsesoyuz. Mineral. Obshchestva 83, 509-14(1954). Highly complex intrusions of granitoids in the cryst. schists of the foothills of the Gazurinsk range are chiefly characterized by quartz-plagioclase-pyroxene rocks with inverted lenses and layers of limestones, further of intrusive alaskite granites with albite-oligoclase, microcline-perthite, biotite, and rich accessorial minerals, chiefly magnetite, sphene, allanite, apatite, and zircon, and in slightly albitized metasomatic formations also aegirine. Similar granodiorites, alk. quartz porphyries, and alaskites occur in the valley of the river Oronga. The carbonatic intercalations are intimately assocd. with granular actinolite-garnet-pyroxene skarns in which britholite occurs assocd. with pyroxene, sphalerite, chalcopyrite, spinel, and dispersed rare earth minerals (not defined). The black andraditic garnet is interesting because of its content of 2.73% $(Y, Ce)_2O_3$ (n = 1.896; d. 3.853), and 0.54% V_2O_5, besides 1.27% H_2O+. In this garnet Ce^{3+} evidently replaces Ca^{2+}; the spectral analysis shows the presence of Y, Ce, La, Nd, Pr, Yb, Sc, Sn, and Zn. The scarce britholite forms prismatic hexagonal crystals, 0.1-0.5 mm. in length, brownish or greenish yellow, d. 4.052, uniaxial, ω = 1.770; ϵ = 1.772, often with zonal structure, and more or less changed to a fine, scaly mineral aggregate. Analysis: $(Y,Ce)_2O_3$ 56.98; Fe_2O_3 2.41; CaO 11.61; Na_2O 1.50; P_2O_5 3.84; SiO_2 17.28; H_2O +0.04; H_2O −0.50%; no F. The rare earths, detd. by x-ray spectrography, are Ce 20; La 10; Y 7; Nd 3.5; Pr 1; Yb 1.5%. Traces of Ti, V, Pb, Be, and Mg were detd. by spectrography. Approx. formula of this britholite: $(Ca, Ce, Na)_5[(Si,P)O_4]_3(OH)$.

W. Eitel

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BORNEMAN, I.D.

SAFIANO, Tat'yana Alekseyevna; KORZHINSKIY, D.S., akademik, redaktor; [redacted] doktor geologo-mineralogicheskikh nauk, redaktor; VAKHRAMEYEV, V.A., doktor geologo-mineralogicheskikh nauk, redaktor; GROMOV, V.I., doktor geologo-mineralogicheskikh nauk, redaktor; KELLER, B.M., doktor geologo-mineralogicheskikh nauk, redaktor; LEBEDEV, A.P., doktor geologo-mineralogicheskikh nauk, redaktor; KHAIN, V.Ye., doktor geologo-mineralogicheskikh nauk, redaktor; SHTREYS, N.A., doktor geologo-mineralogicheskikh nauk, redaktor; YABLOKOV, V.S., kandidat geologo-mineralogicheskikh nauk, redaktor; MERKLIN, R.L., kandidat biologicheskikh nauk, redaktor; VAYSMAN, L.S., nauchnyy sotrudnik, redaktor; SLAVYANOVA, N.F., nauchnyy sotrudnik, redaktor; LEPESHINSKAYA, Ye.V., redaktor; TUMARKINA, N.A., tekhnicheskiy redaktor

[English-Russian geological dictionary] Anglo-russkii geologicheskii slovar'. Pod red. D.S.Korzhinskogo i dr. Moskva, Gos. izd-vo tekhniko-teoret.lit-ry, 1957. 528 p. (MIRA 10:7)
(English language--Dictionaries--Russian)
(Geology--Dictionaries)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMAN I.

AUTHOR: Borneman, I. 11-58-4-14/16

TITLE: Pëtr Andreyevich Volkov (deceased)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1958, Nr 4, pp 103 (USSR)

ABSTRACT: This is an obituary notice on P.A. Volkov, Candidate of Chemical Sciences, senior scientific collaborator of the Institute of Geological Sciences.

Card 1/1 1. Obituaries - Volkov, P. A.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

75-13-2-22/27

AUTHOR: Borneman, I.

TITLE: In Memory of Petr Andreyevich Volkov (Pétr Andreyevich Volkov) (Deceased)

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1958, Vol. 13, Nr 2 pp. 259-259 (USSR)

ABSTRACT: Petr Andreyevich Volkov was born on October 21, 1889 at Cherepovets. In 1921 he completed his studies at the Chemical Department of the Polytechnical Institut in Leningrad. Since 1918 he worked at the Academy of Science and was called to the State Radium-Institute in 1922. In 1929 he moved to the Institute for Geological Sciences where he worked as oldest collaborator until the end of his life. P.A. Volkov was awarded the order " Znak Pocheta" and the order "Lenin" as a reward for many years of services. P.A. Volkov was an analytical chemist and a talented technologist. He was

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75-13-2-22/27

In Memory of Pétr Andreyevich Volkov

one of the first pioneers in the field of radium investigation in Russia. He made his first scientific report under the supervision of V.G. Khlopin and N.S. Kurnakov. The great work by P.A. Volkov on the production of high-per-cent radium- preparations formed the foundation for obtaining the first high-per-cent radium reserves of the Soviet Union in the radium-works the construction of which was carried out under the supervision of Volkov. He also organized a chemical laboratory in a mine which ran for 2 years under his supervision. P.A. Volkov composed a voluminous report on ores and slate and described a new mineral "Tangeit". From 1926 to 1943 P.A.Volkov dealt successfully with the problem of sulfur; from 1933 to 1941 he dealt with technological problems: Methods for the decomposition of nepheline with sulfuric acid and sulfurous acid for

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In Memory of Petr Andreyevich Volkov

the production of silica-gel and alum, further a method for the isolation of rare earths from Lovchorrit and apatite, a method for extracting CaO from apatite and others. During world war II the Analytical Laboratory of the Ural-Branch of the AS in Sverdlovsk was under the supervision of P.A.Volkov and since 1944 the Central Chemical Laboratory in the Institute for Geological Sciences was under his supervision. In 1946 P.A.Volkov was charged by the government for working in a special group which he directed until the end of his life. Under his supervision, methods of determination for small admixtures in pure metallic uranium, as well as a simple, accurate and rapid method of determination for uranium were elaborated which is widely known in practice by the term "Method by Volkov". P.A. Volkov enjoyed general recognition and enthusiastic admiration by his work comrades and numerous students.

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In Memory of Petr Andreyevich Volkov 75-13-2-22/27

1. Scientific personnel--USSR

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BORNEMAN-STARYNKEVICH, I.D.

Chemical formulas of minerals. Report No.1: The formula of irinite. Zap.Vses.min.ob-va 88 no.2:207-212 '59. (MIRA 12:8)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.
(Mineralogical chemistry) (Irinite)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMAN-STARYNKEVICH, I.D.

Chemical formulas of minerals. Part 3: Formulas of gel-bertrandite and beryllite. Zap.Vses.min.Ob-va 88 no.3:349-356 '59. (MIRA 12:11)

(Bertrandite) (Beryllite)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMAN-STARYNKEVICH, I.D.

Chemical formulas of minerals. Part 4. Amphiboles. Zap.Vses. min.ob-va 89 no.2:236-247 '60. (MIRA 13:7)
(Amphibole)

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GRIGOR'YEV, D.P.; BONSHTEDT-KUPLETSKAYA, E.M.; BORNEMAN-STARYNKEVICH, I.D.; GRITSAYENKO, G.S.; TATARSKIY, V.B.; FRANK-KAMENETSKIY, V.A.

To all mineralogists of the Soviet Union. Zap.Vses.min.ob-va 90 no.5:607-608 '61. (MIRA 14:10)

1. Predsedatel' Komissii po novym mineralam Vsesoyuznogo mineralogicheskogo obshchestva (for Grigor'yev). 2. Komissiya po novym mineralam Vsesoyuznogo mineralogicheskogo obshchestva (for all).
(Mineralogical societies)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMAN-STARYNKEVICH, I.D., doktor geol.-min. nauk, otv. red.;

[Chemical analysis of minerals and their chemical composition] Khimicheskii analiz mineralov i ikh khimicheskii sostav. Moskva, Izd-vo "Nauka," 1964. 141 p. (MIRA 17:6)

1. Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMAN-STARYNKEVICH, Irina Dmitriyevna; BELOV, N.B., akademik, otv. red.

[Handbook for the calculation of mineral formulas] Rukovodstvo po raschetu formul mineralov. Moskva, Izd-vo Nauka, 1964. 222 p. (MIRA 17:8)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

ALYAVDIN, V.F.; BONSHTEDT-KUPLETSKAYA, E.M.; GODLEVSKIY, M.N., doktor geol.-mineral.nauk; KOMKOV, A.I.; KUKHARENKO A.A., prof.; SAL'DAU, E.P.; SMOL'YANINOVA, N.N.; BORNEMAN-STARYNKEVICH, I.D.; TATARSKIY, V.B., prof.; FRANK-KAMENETSKIY, V.A.

From the Commission on New Minerals of the Minerological Society of the U.S.S.R. Zap.Vses.min.ob-va 94 no.5:555-565 '65. (MIRA 18:11)

1. Komissiya po novym mineralam Vsesoyuznogo mineralogicheskogo obshchestva. 2. Predsedatel' Komissii po novym mineralam Vsesoyuznogo mineralogicheskogo obshchestva (for Frank-Kamenetskiy). 3. Zamestitel' predsedatelya Komissii po novym mineralam Vsesoyuznogo mineralogicheskogo obshchestva (for Bonshtedt-Kupletskaya). 4. Sekretar' Komissii po novym mineralam Vsesoyuznogo mineralogicheskogo obshchestva (for Sal'dau).

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BORNEMISZA, G.; GORECZKY, L.; LUDANY, G.; VAJDA, G.

Effect of pain on serumal bactericidal properties. Magy. sebeszet 4 no.4:262-264 1951. (CIML 21:4)

1. Doctor. 2. Second Surgical Clinic (Director--Prof. Dr. Endre Hedri) of Budapest Medical University and the Laboratory (Head--Dr. Laszlo Goreczky) of Hungarian State Railways Hospital, Budapest.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMISZA, G.:KOKAS, F.:LUDANY, G.:ZOLNAI, I.

The effect of pain provocation on glucose resorption from the intestines. Kiserletes orvostud. 4 no. 5:374-376 Oct 1952. (CLML 23:5)

1. Doctors. 2. Second Surgical Clinic and Pathophysiology Institute of Budapest Medical University.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMISZA, Gyorgy, dr.

Studies on vascular replacements by acrylic tubes. Magy. sebeszet 7 no.4:271-279 Aug 54.

1. A Debreceni Orvostudomanyi Egyetem Sebeszeti Anatomiai es Mutettani Intezetenek kozlemenye. Tansvezekveseto: Bornemisza Gyorgy dr. egyet. tanar.
(ACRYLIC RESINS
vasc. prosth.)
(BLOOD VESSELS, surg.
acrylic prosth.)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMISZA, Gyorgy, dr.; SZILAGYI, Imre, dr.; BAKO, Geza, dr.; KISS, Antonia, dr.; RESSMANN, Valeria; TOTH, Ferenc, dr.

Replacement of vascular defects with lyophylized vascular grafts. Magy. sebeszet 7 no.6:418-426 Dec 54.

1. A Debreceni Orvostudomanyi Egyetem Sebeszeti Anatomiai es Mutettani Intezetenek kozlemenye. Tanszekvezeto: dr. Bornemisza Gyorgy.

(BLOOD VESSELS, transpl.
homografts, lyophilized)
(TRANSPLANTATION
vasc. homografts, lyophylized)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

Action of pain stimulus on histamine in blood. Gy. Bornemisza, L. Csalay, G. Horváth, and G. Ludány (Univ. Med. School, Szeged). *Acta Med. Acad. Sci. Hung.* 8, 187–92(1955)(in German).—Elec. stimulation of the sciatic nerve caused an increase in the histamine content of the blood, the greatest effect occurring within 5 min. Removal of the adrenals eliminates the effect. C. Riegel

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMISZA, Gy.; CSALAY, L.; HORVATH, G.; LUDANY, G.

Effect of pain stimulus on blood histamine. Acta med. hung.8 no.2: 187-192 1955

1. Pathophysiologisches Institut der Medizinischen Universitat, Budapest. Acta med. hung. 8 no.2:187-192 1955

(PAIN, experimental,
eff. on blood histamine)
(HISTAMINE, in blood,
eff. of pain stimulus)
(BLOOD,
histamine, eff. of pain stimulus)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMISZA, Gyorgy, dr.,; CSALAY, Laszlo, dr.,; HORVATH, Gabriella, dr.; LUDANY, Gyorgy.

Effect of pain stimulus on histamine in blood. Orv. hetil. 96 no.104: 410-412 10 Apr 55.

1. A Budapesti Orvostudomanyi Egyetem Korelettani Intezetenek (igazgato: Sos Jozef dr. egyetemi tanar) kozlemenye.

(BLOOD, histamine,
eff. of pain stimulus)
(HISTAMINE, in blood,
eff. of pain stimulus)
(PAIN, experimental,
eff. on blood histamine)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BAKOS, Laszlo,; BORNEMISZ, Gyorgy,; LUDANY, Gyorgy,; VAJDA, Gyula.

Effect of novocaine on phagocytosis. Kiserletes orvostud. 7 no.3: 225-231 May 55.

1. Budapesti Orvostudomanyi Egyetem Korelettani Intezete es a MAV korhaz laboratoriuma.

(PROCAINE, effects,
on phagocytosis)
(PHAGOCYTOSIS, effect of drugs on,
procaine)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206420009-8

BORNEMISZA, Gyorgy, dr.; SZILAGYI, Imre, dr.; KISS, Antonia; FARKAS, Laszlo

Bone transplantation with lyophylized homografts. Magy. sebeszet 9 no.1:38-46 Feb 56.

1. A Debreceni Orvostudomanyi Egyetem Sebeszeti Anatomiai es Mutettani Intezetenek (tanszekveszeto: Bornemisza Gyorgy dr.) es a Magyar Tudomanyos Akademia Kiserleti Orvostudomanyi Intezet Antibiotikum Osztalyanak (osztalyveszeto Valyi-Nagy Tibor dr.) kozlemenye.

(TRANSPLANTATION
bone homografts, preserv. by new lyophylisation method & use in exper. (Hun))
(BONE TISSUE, transpl.
preserv. of homografts by new lyophylisation method & use in exper. (Hun))

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