AUTHOR: Belov, N. A. SOV/32-24-9-36/53

TITLE: An Automatic Device for Gas Conveyance in Hand-Operated Gas Analyzers (Avtomaticheskoye ustroystvo dlya perekachivaniya gaza v gazoanalizatorakh ruchnogo deystviya)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 9, pp 1147-1148 (USSR)

ABSTRACT: A diagram of the arrangement is given. It can be seen from it that the main parts of the apparatus are a measuring buret (100 ml), surrounded by a water jacket, 2 absorption burets of the types VTI, GIAP, and an orsat apparatus (orsa), as well as a "power vessel" (150-180 ml). The vessel is filled with a sealing liquid (saturated sodium sulfate solution), and connected by it with the measuring buret (400-450 ml). The air volume of the "power vessel" is connected with a rubber balloon in a water tank. By means of an elaborate arrangement the rubber balloon is squeezed together by the water pressure, and thus exerts pressure upon the sealing liquid. A detailed description of the operation of the arrangement is given, as well as are equations for the calculation of the results. More than 100 gas analyses for CO_2, the sum of unsaturated hydrocarbons, oxygen, and carbon monoxide were performed, the apparatus always

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An Automatic Device for Gas Conveyance in Hand-Operated Gas Analyzers

functioning properly. The time required for analysis is stated to be 10-15 minutes.
There is 1 figure.

Card 2/2

BELOV, N.A.

Combined die for forging bottom boxes. Stan.i instr. 27 no.9:36 S '56. (MLRA 9:11)

(Dies (Metalworking))

BELOV, N., kand.geograf.nauk, starshiy nauchnyy sotrudnik; VEDERNIKOV, V., kand.geograf.nauk, mladshiy nauchnyy sotrudnik

New data on the drifting of the "North Pole-7" station. Mor.flot 22 no.4:34-35 Ap '62. (MIRA 15:4)

1. Arkticheskiy i Antarkticheskiy nauchno-issledovatel'skiy institut (for Belov).
(Arctic regions—Sea ice)

BELOV, N. A.

USSR/ Geology - Arctic regions

Card 1/1 Pub. 86 - 2/38

Authors : Sake, V. N., Prof.; Belov, N. A.; and Lapina, N. N.

Title : Modern conceptions of the geology of the central Arctics

Periodical : Priroda 44/7, 13 - 22, Jul 1955

Abstract : The formation of the Arctic basin is traced to the Paleozoic era. The subsequent changes in land elevations and shore lines resulting from the folding of the earth's crust are analyzed and explained. The structure of the ocean's bottom in the Artics is discussed. The results of findings as to the material constituting the floor of the ocean are presented along with a discussion of the instruments and methods used in this research. One USSR reference (1954). Illustrations; maps; graph; diagrams.

Institution : .....

Submitted : .....

Translation D 349969

BELOV, N.A.; LAPINA, N.N.

Bottom deposits in the region covered by the "North Pole 2" drifting station. Izv.AN SSSR. Ser.geol. 21 no.7:3-16 Jl '56.
(MLRA 9:10)

1. Glavnoye Upravleniye Severnogo morskogo puti, Arkticheskiy nauchno-issledovatel'skiy institut, Leningrad.
(Arctic Ocean--Ocean bottom)

BELOV, N.A.; LAPINA, N.N.

Bottom sediments in the central part of the Arctic Ocean.
Trudy nauch.-issl. inst. geol. Arkt. 85:90-116 '58.
(MIRA 12:8)

(Arctic Ocean--Sediments (Geology))

AUTHORS: Belov, N. A., Lapina, N. N. SOV/20-122-1-32/44

TITLE: New Data on the Stratification of the Bottom Sedimentation of the Arctic Ocean Basin (Novyye dannyye o stratifikatsii donnykh otloznemiy Arkticheskogo basseyna Severnogo Ledovitogo okeana)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 1, pp 113-118 (USSR)

ABSTRACT: The stratification of the Arctic basin as mentioned in the title was described for the first time by members of the expeditions of the Arkticheskiy nauchno-issledovatel'skiy institut (Scientific Research Institute for the Arctic Region) in the years from 1948 to 1954. N. A. Belov succeeded, however, only in 1955 in taking a 412 cm high column from a depth of 5 044 m for the first time during the mentioned expedition aboard the ice-breaker "F. Litke" north of Spitsbergen and Franz Josef Land (Shpitsbergen, Zemlya Frantsa Iosifa) (Fig 1). The obtained results confirmed the entire scheme of stratification which had been found already in earlier investigations (Refs 1,5). On the strength of the stratification of the sediments and of the radium content the absolute age may be determined and the correlation can be carried out between these sediments and A. I.

Card 1/5

New Data on the Stratification of the Bottom Sedimentation of the Arctic Ocean Basin

Moskvitinov's and S. A. Yakovlev's schemes for the Quarternary on the continent. They are: 1) Recent deposits from present time until 9 000 - 10 000 years ago. 2) Finiglacial, or the fourth new glaciation in Europe and the Sartanskaya glaciation in Siberia (Sibir'); 9 000 - 10 000 and as far as 16 000 - 17 000 years ago. 3) Sediments of the heat period 16 000 - 17 000 to 20 000 years old. 4) Deposits from the cold period of the Ostashkovskoye or third new glaciation in Europe and the second stage of the Zyryanskoye glaciation in Sibir' are 20 000 to 30 000 - 32 000 years old. 6) The sediments of the next cold period which obviously corresponds to the Kalininskoye or second new glaciation in Europe and the first stage of Zyryanskoye glaciation in Sibir' are 50 000 - 52 000 to 65 000 - 70 000 years old. 7) The sedimentation of the deposits underneath which date from the heat period took place during the boreal encroachment (Mikulinskiy period), e.g. 65 000 - 70 000 to 110 000 years ago. 8) The sediments which are below the mentioned ones were already deposited during the Moskovskoye or first new glaciation in Europe and the Tazovskoye in Sibir'

New Data on the Stratification of the Bottom Sedimentation of the Arctic Ocean Basin

between 110 000 and 140 000 - 150 000 years ago. 9) Those strata were formed during the last heat period of the Middle Quarternary, e.g., 150 000 years ago and earlier. The beginning of that period could not be determined. There are 1 figure and 6 references, 6 of which are Soviet.

ASSOCIATION: Arkticheskiy institut. Institut geologii Arktiki (Arctic Institute. Institute of Arctic Geology)

PRESENTED: February 5, 1958, by A. M. Straknov, Member, Academy of Sciences, USSR

SUBMITTED: April 20, 1958

Card 3/3

BELOV, N. A.

PHASE I BOOK EXPLOITATION SOV/5331

International Geological Congress. 21st, Copenhagen, 1960.

Morskaya geologiya (Marine Geology) Moscow, Izd-vo AN SSSR, 1960. 205 p. 2,500 copies printed. (Series: Doklady sovetskikh geologov, problema 10)

Editorial Board: P. L. Bezrukov, Resp. Ed.; A. V. Zhivago, V. P. Zenkovich and G. B. Udintsev; Ed. of Publishing House: V. S. Sheynman; Tech. Ed.: V. Karpov.

PURPOSE: This book is intended for geologists and oceanographers.

COVERAGE: The book contains 18 articles representing the reports given by Soviet geologists at the 21st. International Geological Congress. Individual articles deal with the bottom topography, sedimentation, and tectonics of oceans (Western Pacific and Southern Indian), as well as the geomorphology and tectonics of the Black and Caspian Seas and Soviet sectors of the Baltic. An English résumé accompanies each article. No personalities

Card 2/3

(2)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000204510005-4"

BELOV, N.A.; LAPINA, N.N.; SAKS, V.N., red.; DROZHZHINA, L.P., tekhn. red.

[Bottom sediments of the Arctic Sea basin] Donnye otlozheniia Arkticheskogo basseina. Pod red. V.N.Saksa. Leningrad, Izd-vo "Morskoi transport," 1961. 151 p. (MIRA 15:5)

1. Chlen-korrespondent Akademii nauk SSSR (for Saks).
(Arctic regions—Deep-sea deposits)

BELOV, N., inzh.

Establish a new program of ship repairs. Rech. transp. 22 no.11: 28-29 N '63. (MIRA 16:12)

BELOV, N.A.; YEROFEYEV, P.N.

Suspended matter of the Laptev Sea. Trudy AANII 264:76-79 '63. (MIRA 17:6)

BELOV, N.A.

Practice in the application of the piston ground pipe at the drifting station "North Pole-[illegible]" 1958-1959. Trudy AANII 248: 85-91 '63. (MIRA 17:6)

BELOV, N.A.

New types of materials. Put' i put.khoz. 10 no.1:9 '66. (MIRA 19:1)

1. Starshiy inzh. Vsesoyuznogo nauchno-issledovatel'skogo instituta transportnogo stroitel'stva.

BEIYER, V.A., prof.; BELOV, N.A.

Modifications in the bone marrow and peripheral blood in burns.
Probl.gemat.i perel.krovi 1 no.1:23-29 Ja-F '56. (MIRA 14:1)

1. Iz kafedry fakul'tetskoy terapii (nach. - prof. V.A. Beiyer)
i kafedry gospital'noy khirurgii (nach. prof. I.S. Kolesnikov)
Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.
(BURNS AND SCALDS) (BLOOD CELLS)

BELOV, N. A. and BEYER, V. A., Prof.
from the Department of the Faculty of Therapy (Director - Prof. V. A. Beyer) and the Department of Hospital Surgery (Director - Prof. I. S. Kolesnikov) of the Kirov Military Medical Academy of the Order of Lenin.

"Changes in Bone Marrow and in Peripheral Blood, in Burns", Prob. Hematol. i Blood Transfus., No. 1, 1956

abstract--B-99405

BEYER, V. A., Prof. and BELOV

BELOV, NA.

"Changes in the Internal Organs in Burns," p. 32 Military Medicine 1956

lecture delivered at a conference of Soviet military physicians at the Military Medicical Academy im. S.M. Kirov, Leningrad, 29-October - 2 Nov 56.

USSR/Human and Animal Physiology. Effects of Physical Factors.
Thermal Factor. T-13

Abs Jour: Ref Zhur-Biol., No 12, 1958, 56155.

Author : Beyer, V.A., Belov, N.A.
Inst :
Title : Changes of the Bone Marrow and of Peripheral Blood in Diseases Caused by Burns.

Orig Pub: Probl. genatol. i perelivaniya krovi, 1956, 1, No 1, 23-29.

Abstract: No abstract.

Card : 1/1

Belov, N. A.

SHURYGIN, D.Ya., dotsent; MURCHAKOVA, A.F., kand.biologicheskikh nauk; BELOV, N.A. (Leningrad)

Eosinopenic reaction following stimulation of adrenocortical function; experimental and clinical investigations [with summary in English, p.124] Jl-Ag '57. (MIRA 10:12)

1. Iz kafedry fakul'tetskoy terapii (nach. - prof. V.A.Beyyer) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.

(BURNS, physiology,
eosinophil count & urinary 17-ketosteroids (Rus))
(EOSINOPHIL COUNT, in various diseases,
burns, with urinary 17-ketosteroids changes (Rus))
(17-KETOSTEROIDS, in urine,
in burns, with eosinophil count changes (Rus))

BELOV, N.A.,

BELOV, N.A., mayor meditsinskoy sluzhby; BELYAYEV, V.Ye., podpolkovnik meditsinskoy sluzhby

Functional changes in the internal organs in burns. Voen-med.zhur. no.8:11-15 Ag '57. (MIRA 10:12)
(BURNS, physiology, internal organs (Rus))

BELOV, N.A.

Thrombocytopenic changes in burns. Probl. gemat. i perel. krovi 4 no.5:50-51 My '59. (MIRA 12:7)

1. Iz kafedry fakul'tetskoy terapii (nahc. - prof. V.A. Beyer) i kafedry gospital'noy khirurgii (nach. - prof. I.S. Kolesnikov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

(BURNS, blood in,
platelet count (Rus))
(BLOOD PLATELETS,
count in burns (Rus))

BELOV, N.A., mayor meditsinskoy sluzhby

Hypochromic anemia following burns. Voen.med.zhur. no.5:59-64 My '59. (MIRA 12:8)

(BURNS, compl.
hypochromic anemia (Rus))
(ANEMIA, IRON DEFICIENCY, etiol. & pathogen.
burns (Rus))

KOROVKIN, B.F., kand.med.nauk, podpolkovnik meditsinskoy sluzhby; BELOV, N.A., kand. med. nauk, podpolkovnik medsinskoy sluzhby; KANTOROVICH, A.S.

Diagnostic value of transaminase and aldolase in the blood serum in acute coronary insufficiency. Voen.-med. zhur. no.5:30-33 My '60. (MIRA 13:7)

(CORONARY VESSELS—DISEASES) (TRANSAMINASE) (ALDOLASE)

KOROVKIN, B.F.; BELOV, N.A.; KANTOROVICH, A.S.

Problem of early diagnosis in acute myocardial infarct. Lab.delo 6 no.1:3-7 Ja-Fe '60. (MIRA 13:4)

1. Iz Leningradskogo okruzhnogo voyennogo gospitalya (nachal'nik N.S. Sokolov).
(HEART--INFARCTION) (ENZYMES)

BELOV, N. A. and GIKALOV, G. S.

"Myocardial Infarct in Young Persons as a Result of Acute Physical Overexertion" p. 39

Voyenno Meditsinskiy Zhurnal, No. 10, 1962

SHILOV, Pavel Ivanovich, prof.; PILYUSHIN, Petr Viktorovich, kand. med. nauk; Prinimal uchastiye BELOV, N.A., kand. med. nauk; KOMAROV, F.I., red.; KHARASH, G.A., tekhn. red.

[Internal pathology in burns (thermal)] Vnutrenniaia patologiia pri ozhogakh (termicheskikh). Leningrad, Medgiz, 1962. 294 p. (MIRA 15:5)

(BURNS AND SCALDS)

BELOV, N.A.; LAPINA, N.N.

Twenty-five years of geological studies of the bottom of the Arctic Ocean. Probl.Arkt.i Antarkt. no.11:97-104 '62.
(MIRA 16:2)
(Arctic Ocean—Ocean bottom)

BELOV, N.A., kand. med. nauk (Leningrad); GIKALOV, G.S. (Leningrad); KAZAKOV, N.F. (Leningrad)

Changes in the blood system in Botkin's disease and treatment with steroid hormones. Sov. Med. 26 no.9:48-52 S '62. (MIRA 17:4)

BELOV, N.A., kand.med.nauk; ROMANOV, V.K. (Leningrad).

Unique beginning of acute leukemia. Vrach. delo no.11:120-121 N'63 (MIRA 16:12)

BEZRUKOV, A.M.; BELOV, N.A.; BARSUKOV, M.M., inzh.

Method for restoring the strength of dowels. Put' i put. khoz. 7 no.11:18 '63. (MIRA 16:12)

1. Nachal'nik Kazatinskoy distantsii puti Yugo-Zapadnoy dorogi (for Bezrukov). 2. Starshiy inzh. Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Belov). 3. Kazatinskaya distantsiya puti Yugo-Zapadnoy dorogi (for Barsukov).

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)

BELOV, N.D.; RAKHLIN, I.Ye.; ALESHIN, L.I.; SEREGIN, I.I.; POGODIN, A.I.; PONTYAR, A.A.; PETRUKHOV, P.I., red.

[Georgievskaya Highway with track pavement made of reinforced concrete slabs in the Belozersk Logging Enterprise of Vologda Province] Georgievskaia avtomobil'naia doroga s koleinym pokrytiem iz zhelezobetonnykh plit v Belozerskom lespromkhoze Vologodskoi oblasti. Vologda, Severo-Zapadnoe knizhnoe izd-vo, 1964. 36 p. (MIRA 18:5)

1. Nauchno-tekhnicheskoye obshchestvo lesnoy promyshlennosti i lesnogo khozyaystva. Vologodskoye oblastnoye pravleniye. 2. Belozerskoye lesopromyshlennoye khozyaystvo (for Seregin, Pontyar, Petrukhov).

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 166 (USSR) SOV/137-59-1-1217

AUTHOR: Belov, N. F.

TITLE: Investigation of the Machinability of 45-R and 45G2 Steels (Issledovaniye obrabatyvayemosti staley marok 45 R i 45G2)

PERIODICAL: Tekhn.-ekon. byul. Sov. nar. kh-va Chelyab. ekon. adm. r-na, 1958, Nr 3, pp 20-22

ABSTRACT: A concise communication on a comparative investigation of the machinability of 45-R and 45G2 steels. It is established that additions of B improve the machinability (relative to cutting operations), the hardenability, and the fatigue strength of these steels. The cutting speed permissible with 45G2 steel is 40% greater than that afforded by 45-R steel.

T. F.

Card 1/1

BELOV, N.F., inzh.

Investigating the wear of surfaces machined on lathes and grinding machines. Sbor. st. CHPI no.9:41-56 '58. (MIRA 11:10)
(Surfaces (Technology)--Testing)

S/121/61/000/006/008/012
D040/D112

AUTHORS: Proskuryakov, Yu.G., Belov, N.F., and Petrov, V.N.

TITLE: Cooling cutting tools by atomized cutting fluid

PERIODICAL: Stanki i instrument, no.6, 1961, 25-29

TEXT: The authors give the results of experiments with atomized cutting fluid in boring, thread-cutting, planing and milling, carried out at the cutting laboratory of the Chelyabinskiy politekhnicheskiy institut (Chelyabinsk Polytechnic Institute). The effect of the volume and chemical composition of the atomized fluid, the method of feeding the fluid to the cutting zone, nozzle shape and air pressure was studied. The experimental machine (Fig.1) made possible different combinations of fluid components, fluid quantity and air pressure. Wear of carbide-tipped cutters was measured by the wear on the main rear tool flank with the use of an МИР-1 (MIR-1) microscope, and wear of high-speed steel cutters by the depth of the pit forming on the cutter face. A different experimental unit was employed for milling cutters (Fig.8). The conclusion was made that the wear-preventing effect of atomized cutting fluid is higher than that ~~of atomized cutting fluid is higher than that~~ of flowing fluid. A higher quantity of cutting fluid

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(emulsion and "sulfofrezol" were used) had a positive effect, but 400-600 g/hr of 5% emulsion or 200 g/hr of "sulfofrezol" caused thick fog in the shop. Increased air pressure also improved the effect. The Chelyabinsk Polytechnic Institute, in conjunction with the ChTZ, developed new atomizer designs - the ЧПИ-6 (ChPI-6) and ЧПИ-7 (ChPI-7) (Fig.12) and at the same time a theoretically-based calculation method for atomizers. In the ChPI-7 (Fig.12), air from the main air pipe of the plant flows through the cock (4) and nipple (5) into the atomizer head (2) where the stream splits and some of the air flows through the duct (7) into the container (1) and exerts pressure on the surface of the fluid in it. The pressure difference causes the fluid to move through the pipe (6) into the head (2). The rest of the air flows straight through the injector where it is atomized and fed through the nipple (8) and a flexible hose to the tool edge. The flow is adjusted by the needle valve (3). The fundamental data for calculation are: the velocity (U_2) and air flow per second (Q_{air}) needed for the tool cooling; fluid flow per second (Q_{fl}); compressed air pressure (P) applied to the atomizer; the lengths of separate sections of the atomizer and the pipes. The formula for the diameter (d) of the intake pipe (6) is

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$$\frac{d^4}{(G+\alpha)} = - \frac{16 Q_{fl}}{\pi^2 g} \frac{\Delta Q_{fl}}{\Delta H_{max}} , \qquad (1)$$

Cooling cutting tools by atomized cutting fluid

where ΔQ_{fl} is the permissible reduction of the fluid flow; ΔH_{max} - the maximum distance from the injector axis to the fluid level; g - the gravity acceleration; G - the resistance factor of the intake pipe; α - the kinetic energy factor (at laminar flow $\alpha_{lam}=2$, at turbulent flow $\alpha_t=1.06 \div 1.12$). The nozzle outlet diameter (d_2) is determined by Q_{air} and U_2 of the air jet by the equation

$$d_2 = 2 \sqrt{\frac{Q_{air}}{\pi U_2}} . \qquad (2)$$

The velocity is found by the Bernoulli equation. The calculation results prove that the main factor ensuring dependable operation (stable fluid flow) is the presence of a constant positive difference between pressure in the fluid container and in the narrow section of the double-cone pipe. The formula for this difference is:

$$\Delta P_{min} = \gamma H \left(1 - \frac{1}{2} \cdot \frac{\frac{\Delta H_{max}}{H}}{\frac{\Delta Q_{fl}}{Q_{fl}}} \right) \qquad (4)$$

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where γ is the specific weight of fluid and H - the distance between the axis of the double-cone pipe and the fluid level. The formula determining the initial cross-section area as well as the diameter of the double-cone pipe (assuming a continuous airflow) is:

$$d_1 = d_2 \left(\frac{P_2}{P_1}\right)^{\frac{1}{2k}} \sqrt{\frac{U_2}{U_1}} \qquad (5)$$

where k is the adiabatic curve factor and γ_1, γ_2 are the volumetric weights of the air in the initial cross-section of the two-cone pipe at entry and exit from the nozzle respectively. The dimensions of the narrow section of the double-cone pipe are determined in accordance with the pressure gradient needed for moving the fluid from the container into the main pipe, using the Bernoulli equation. Calculation confirmed that the fundamental parameters of the ChPI-6 atomizer were selected correctly, but it still needs some debugging. An improved modification, the ChPI-7 has been produced. Its technical data are: working air pressure 2-5 at; air consumption (at 3 gauge atmospheres) 4 m^3/hr; cutting fluid consumption 50 -900 g/hr. After the atomizers had been in use for 1 year, it was established that the wear resistance of boring tools tipped with T15K6 (T15K6) alloy increased 1.5

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Cooling cutting tools by atomized cutting fluid

S/121/61/000/006/008/012
D040/D112

to 2 times and cutting efficiency 50%. Surface finish improved by approximately one ГОСТ 2789-59 (GOST 2789-59) class. There are 12 figures.

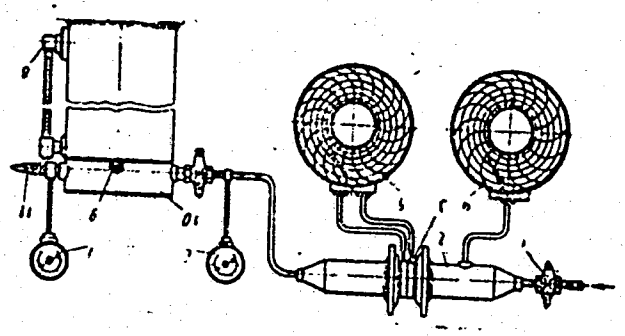

Fig. 1: The experimental atomizer unit.

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PROSKURYAKOV, Yu.G.; BELOV, N.F.; PETROV, V.N.

Using atomized fluids for cooling metal-cutting tools. Stan.i instr. 32 no.6:25-29 Je '61. (MIRA 14:6)
(Metal-cutting tools—Cooling)
(Metalworking lubricants)

1. BELOV, N. I.

2. USSR (600)

4. Coal-Mining Machinery

7. Experience in working thin seams with combines model UKMG-1. Ugol' 27, no. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

BYCHKOV, B.M., inzhener; BELOV, N.I., inzhener.

The ShBM-1u combine in the mines of the Donets basin. Mekh.trud.rab. 7 no.6:22-27 Je '53. (MLRA 6:6)
(Mining machinery)

BELOV, N.I.

Provide new machinery more rapidly for Donets Basin mines. Mekh. trud. rab. 9 no.10:8 O '55. (MLRA 9:1)

1.Zamestitel' nachal'nika Tekhnicheskogo upravleniya Ministerstva ugol'noy promyshlennosti USSR.
(Donets Basin--Coal mining machinery)

GUREVICH, G.P., kand.biologicheskikh nauk; BELOV, N.M., nauchnyy sotrudnik

Enriching milk with iodine by feeding algae and fish meal to cows. Veterinariia 38 no.1:71-72 Ja '61. (MIRA 15:4)

1. Primorskaya opytnaya sel'skokhozyaystvennaya stantsiya.
(Milk--Composition) (Algae as food)
(Fish meal) (Iodine)

BELOV, N. M.

5678. BELOV, N. M. Semenovodstvo Ovoshchnykh Kul'tur i Kormovykh Korneplodov. Petrozavodsk, Gosizat Kfssr, 1954, 365 s Ill. 20sm. 20,000 Ekz 35k (55-1018) p. 635/ 633.4) : 631.52 (47.20)

SO: Knizhnaya Letopis, Vol. 1, 1955

TITLE: Seminar "The Normalization and Specialization on Parts in Machine-Building"

PERIODICAL: Standartizatsiya, 1959, Nr 12, pp 7-15 (USSR)

ABSTRACT: The seminar was organized by the Moskovskiy dom nauchno-tekhnicheskoy propagandy im. Dzerzhinskogo (The Moscow House of Scientific and Technical Propaganda imeni Dzerzhinskiy) and Komitet standartov, mer i izmeritel'nykh priborov (The Committee of Standards, Measures and Measuring Devices). The purpose was to generalize the experience of sovnarkhozes, industry and research institutes in specialization and cooperation in the machine-building industry and to convey this experience to the industry technicians. More than 300 delegates from organizations and plants were present and 18 reports were read on the problems of specialization and cooperation of the plants and the normalization of the most important machine component units and parts.

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S.A. Tillez made a report "On the Technico-Economic Effect of Normalization", in which it was mentioned that VNIINMASh has developed and prepared for publication the rules for the calculation methods (selection of the optimum series and power exponents) with practical calculation examples and data facilitating the necessary calculation work. To determine the required normalization, a nomenclature of machine parts and component units is needed, and the Kafedra detaley mashin (The Machine Parts Chair) of Moskovskiy stankoinstrumental'nyy institut (Moscow Machine Tool and Tool Institute) developed such a nomenclature for 164 machines which are "characteristic" for different machine-building industry branches. So-called "economic characteristics" of technologic processes can be set up and the minimum production program can be determined (graphically or analytically) for which the application of a certain process variation would be expedient. The

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production zones could then be combined into groups in which the process variation is suitable. The following facts were stated in the report by Ye.S. Yampol'skiy, "Parts Specialization in the Moscow Sovnarkhoz". Thirty seven small plants producing fasteners have been closed in Moscow in the course of plant specialization since the second half of 1959; only two plants instead of the former 25 are producing metal electrodes; cutting tools will now be manufactured at only 4 plants instead of 58; and 3 plants will produce die blocks for 25 plants. Centralized production of drills, threading taps, milling cutters and threading dies is under preparation. "USP" (for Universal'no-Sbornyye Prisposobleniya, or "universal composite attachments") attachments are produced at a group of plants and used extensively at the Moscow [illegible]

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report by V.M. Palov, "Part Specialization in Machine-Building in the Sverdlovsk Economic Region", it was mentioned that the manufacturing of small metal products, electrodes, fittings, standard cutting tools, gear reductors, spare parts for drilling, mining and other equipment is being centralized. Only two plants, Atigskiy and Krasnoural'skiy, will make small metal

Card 11/14

products (instead of the present 46 plants).
A.V. Zelik, in his report "Organization of Standardization and Normalization Work for Pipe Fittings", stated the following. Of the total produced in 1959, 73.6% of types and parameters were standardized. It is planned to issue 42 new standards and revise 5 during the period 1959-1965. Standards for the normal series of the basic pipe fittings are of particular importance as they are produced by more than 100 plants in different regions of the USSR. In 1960, standards have to be worked out for steel flange valves for a pressure of 40 kg/cm² and a 40-200 mm diameter, cast iron parallel gate valves with fixed spindle, etc. Development of 10 "normal" standards is envisaged by the plan of "interbranch normalization" for water main fittings. At the present time, there is one only interbranch "normal" for fittings - "Fittings, Pipeline, Classification of Fittings by the Tightness of Sealing". There are 200 "otraslevykh normaley" (branch normals) [illegible] development of "normals" [illegible] is planned for the period [illegible].

Card 13/14

4

GUSEV, Mikhail Nikolayevich, prepodavatel'; ZILIST, Petr Sigizmundovich, prepodavatel'; LEV, Yevgeniy Semenovich, prepodavatel'; LOPYREV, Nikolay Kirillovich, prepodavatel'; MARDENSKIY, Vladimir Prokop'yevich, prepodavatel'; NEMKOV, Petr Petrovich, prepodavatel'; NIKITIN, Gennadiy Mikhaylovich, prepodavatel'; SHELUCHENKO, V.M., dotsent, kand.tekhn.nauk, retsenzent; BELOV, N.M., inzh., retsenzent; GOLOVANOV, N.V., red.; VOLCHOK, K.M., tekhn.red.

[Technology of marine engineering and ship repairs] Tekhnologiia sudovogo mashinostroeniia i sudoremonta. Pod obshchei red. M.N. Guseva. Leningrad, Izd-vo "Rechnoi transport," Leningr.otd-nie. Pt.2. [Technology of ship repairs] Tekhnologiia sudoremonta. 1960. 470 p. (MIRA 13:4)

1. Kafedra tekhnologii sudostroyeniya i sudoremonta Leningradskogo instituta vodnogo transporta (for Gusev, Zilist, Lev, Lopyrev, Mardenskiy, Nemkov, Nikitin).
(Ships--Maintenance and repair)

BELOV, N.M. inzh.

Standardization fo ship types and its economic aspects. Rech. transp. 18 no.11:15-16 N '59. (MIRA 13:4)
(Shipbuilding--Costs) (Ships)

L 44240-66

ACC NR: AP6012152 SOURCE CODE: UR/0413/66/000/007/0070/0070

INVENTOR: Belov, N. M.; Bulanov, N. V.; Mukin, V. V.

ORG: none

TITLE: Device for measuring temperature differences. Class 42, No. 180381 [announced by the Scientific Research Institute of Atomic Reactors (Nauchno-issledovatel' skiy institut atomnykh reaktorov)

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, 70

TOPIC TAGS: temperature instrument, temperature measurement, resistance thermometer, electronic amplifier

ABSTRACT: An Author Certificate has been issued describing a device for measuring temperature differences (see Fig. 1). The device contains a bridge measuring circuit with two platinum resistance thermometers connected to the input of an electronic amplifier, on the output of which a reversible motor is attached. To compensate for the errors originating as a consequence of the nonlinear characteristics of the platinum

Card 1/2 UDC: 536.531.083.4

L 41240-66

ACC NR: AP6012152

O

resistance thermometers, the measuring circuit is in the form of a double balanced-unbalanced bridge with a double power supply. A balancing resistance thermometer is connected to one arm of the unbalanced bridge. Orig. art. has: 1 figure. [Translation] [NT]

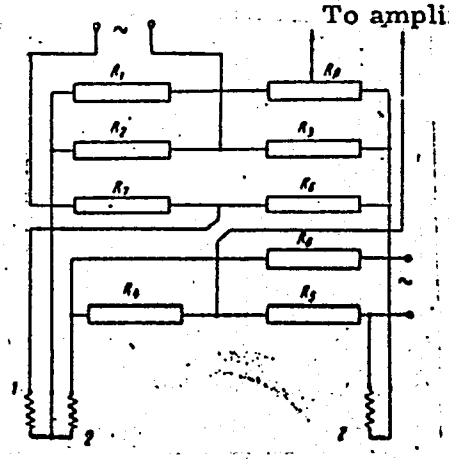


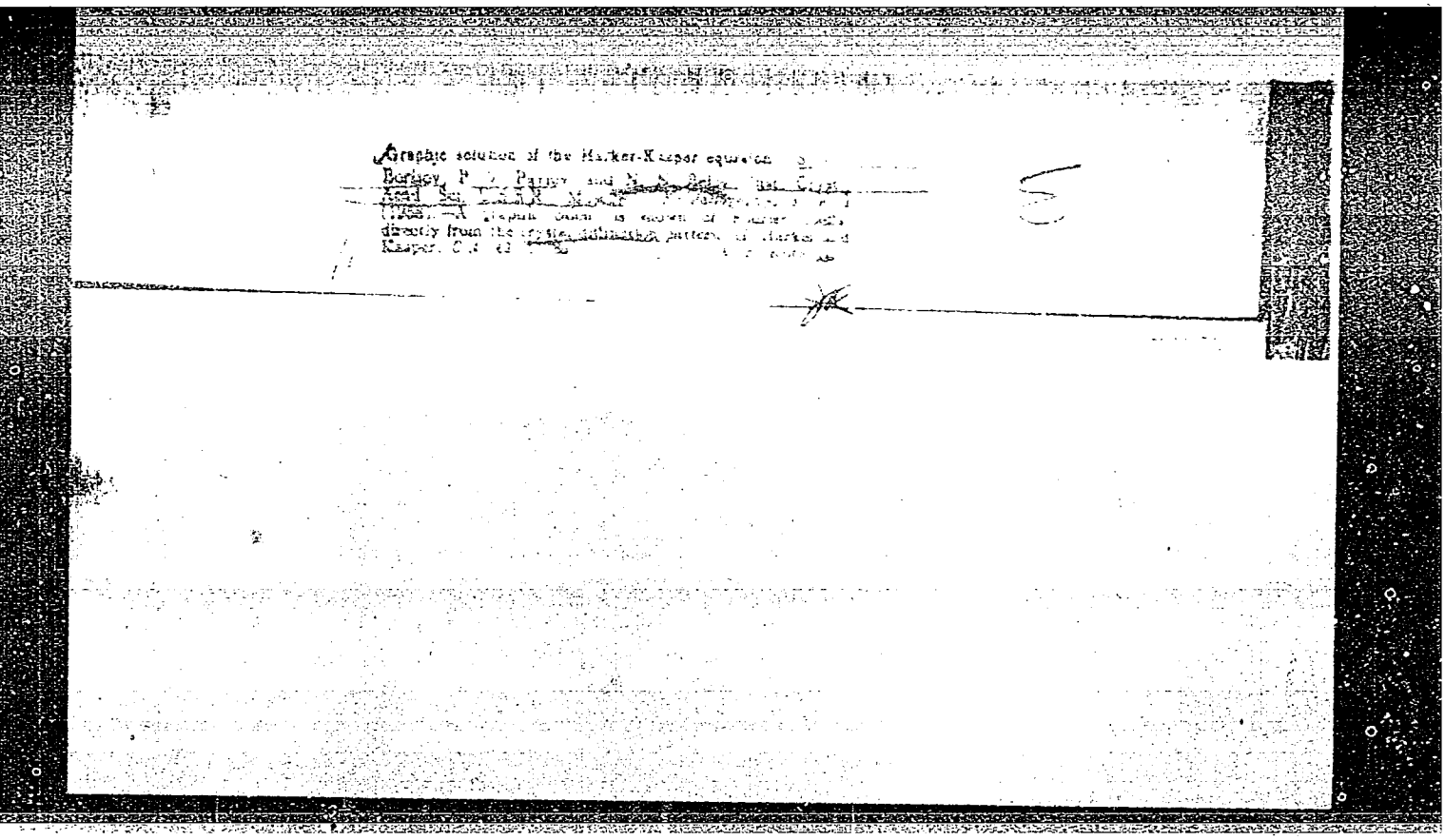
Fig. 1. Device for measuring the temperature differences; 1—Balanced resistance thermometer; 2—resistance thermometer.

SUB CODE: 20,14,09/ SUBM DATE: 27Jan65/

Card 2/2 MJ

BELOV, N.N.

Advanced methods of reinforcing foundation beds of buildings.
Nov. tekh. zhil.-kom. khoz.:Zhil. khoz. no.2:12-17 '63.
(MIRA 18:6)



BELOV, N.N.; BOL'SHAM, Ya.M.; GORDEYEV, A.N.; GRACHEV, V.A.; YERMILOV, A.A.; ZALESSKIY, A.M.; KIZEVETTER, Ye.N.; KNORRING, G.M.; KONSTANTINOV, B.A.; KOPYTOV, N.V.; LEVIT, G.O.; MILLER, G.P.; NAYFEL'D, M.P.; PRINTSEV, A.A.; SERBINOVSKIY, G.V.; SOKOLOV, B.A.; STASILOYTS, A.B.; TAYTS, A.A.; KHRAMUSHIN, A.M.

Mikhail Konstantinovich Kharchev; obituary. Belov and others. Prom. energ. 12 no.12:33 D '57. (MIRA 10:12)
(Kharchev, Mikhail Konstantinovich, 1896-1957)

BELOV, N.N.

Using electric silicification for strengthening fine sand. Sbor. nauch. rab. AKKH no.16:29-41 '62.

Raising the supporting power and stability of foundation beds in buildings by means of soil stabilization. Ibid.:43-52 (MIRA 17:8)

BUROV, G.G., inzh.; BELOV, N.P., inzh.

Results of industrial tests of the new OMK machinery unit in mines the Tula Economic Council. Ugol' 35 no.8:12-15 Ag '60. (MIRA 13:9)

1. Mosbassgiprogormash.
(Tula Basin--Coal mining machinery)

BOBKOV, Vasiliy Ivanovich; POCHUYEV, Yuriy Grigor'yevich; BUROV, Georgiy Georgiyevich; BELOV, Nikolay Pavlovich; NOSOV, Yuriy Pavlovich; SEROV, Vyacheslav Alekseyevich; BARANOVSKIY, F.I., otv. red.; KOVAL', I.V., red. izd-va; IL'INSKAYA, G.M., tekhn. red.

[OMKT mechanized stoping unit] Ochistnoi mekhanizirovannyi kompleks OMKT; rukovodstvo po ekspluatatsii i remontu. Moskva, Gosgortekhizdat, 1963. 242 p. (MIRA 16:8)
(Stoping (Mining))--Equipment and supplies)

MADONOV, A.A.; BELOV, N.P.

Textile industry of the European socialist countries belonging to the Council of Mutual Economic Aid. Tekst.prom. 23 no.4:7-9 Ap '63. (MIRA 16:4)

1. Sovetnik sekretariata Soveta ekonomicheskoy vzaimopomoshchi (for Madonov). 2. Starshiy referent sekretariata Soveta ekonomicheskoy vzaimopomoshchi (for Belov).
(Communist countries—Textile industry)

BELOV, N.P.; LEVINA, V.I.; ZHUKOVA, R.A.; ROYZIN, M.B.; PEREVERZEV, V.N.; MANAKOV, K.N.; BARANOVSKAYA, A.V., kand. geol.-miner., red.; ZAMOTKIN, N.Ya., red.; CHEREVATYY, P.P., tekhn. red.

[Soils of Murmansk Province and the improvement of their fertility] Pochvy Murmanskoi oblasti i povyshenie ikh plodorodiia. [By] N.P.Belov i dr. Kirovsk, Izd-vo "Kirovskii rabochii," 1963. 117 p. (MIRA 17:3)

BELOV, N.P.

Vessels of the fundus oculi in pregnancy nephropathy based on photocalibrometric data. Akush. i gin. 40 no.5:65-69 S-O '64.
(MIRA 18:5)

1. Kafedra akusherstva i ginekologii (zav. - prof. A.A.Lebedev) pediatricheskogo fakul'teta II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova.

BELOV, N.S.; BIRYUKOV, I.V.; VERBLYUDOV, N.N.; GORBUNOVA, M.N.; YESIPOVA, M.M.; IL'ICHEV, A.I.; IGNAT'YEVA, N.Ya.; KOVACHEVICH, P.M.; LYTKIN, A.M.; LOSKUTOV, V.G.; MAZYUKOV, A.S.; MIROSHNICHENKO, N.Ya.; NEFEDOV, A.Ya.; OSIPOV, K.V.; OSIPOV, P.M.; PETROV, N.G.; PETRACHKOV, M.I.; PINEVICH, K.M.; POPOV, B.E.; POTAPOV, P.V.; PREDEIN, F.Ye.; PUKHOV, A.F.; CHUSOVITINA, Ye.I.; ANGEL'SKIY, N., tekhn.red.

[The Kuznetsk Basin in the sixth five-year plan] Kuzbass v shestoi piatiletke. [Kemerovo] Kemerovskoe knizhnoe izd-vo, 1956. 125 p. (MIRA 10:12)

(Kuznetsk Basin)

BELOV, N.S., polkovnik

Conversation with a flier. Vest. Vozd. Fl. no.10:37 O '61.
(MIRA 15:2)
(Flight training)

L 14534-63 EWT(1)/BDS APFTC/ASD/SSD

ACCESSION NR: AP3004903 S/0120/63/000/004/0118/0119

AUTHOR: Belov, N. S.; Bronshteyn, A. M.; Ozerov, L. N.; Rafal'son, A. E. 56 55

TITLE: Electron multiplier with magnetic focusing for a rapid-action mass spectrometer with time-of-flight ion separation

SOURCE: Pribory* i tekhnika eksperimenta, no. 4, 1963, 118-119

TOPIC TAGS: electron multiplier, mass spectrometer, magnetic focusing, time-of-flight separation, rapid-action mass spectrometer, ion separation

ABSTRACT: An electron multiplier for use in registering small pulsed currents of a rapid-action time-of-flight mass spectrometer is described. The multiplier uses crossed electric and magnetic fields to focus secondary electrons from dynode to dynode (see Fig. 1 of Enclosure). A photograph of the device is shown in Fig. 2. The potential difference between stages of the multiplier is 260 v; and field strength is 4350 v/cm. Uniform electric field distribution is achieved by positioning the dynodes in 0.6-mm steps. A magnetic field of 410 oe is produced by a permanent magnet. Two models with 15 and 19 stages, respectively, were studied. Ion current was produced by a rapid-action mass spectrometer with an ion source capable of pulsed and constant-current operation. The mean amplification factor,

Card 1/2

L 14534-63

ACCESSION NR: AP3004903

determined as the ratio of input and output current ratios, was 1.2×10^8 for the 15-stage multiplier and 4×10^8 for the 19-stage multiplier. Output pulse voltage was a linear function of gas pressure. Daily operation of the multipliers using gas and hydrocarbon mixtures with periodic heating to 150—200C and periodic exposure to the atmosphere did not lead to any substantial change in the amplification factor. Disassembly, cleaning, and reassembly with full restoration of the original parameters were easily accomplished. Orig. art. has: 3 figures.

ASSOCIATION: SKB Analiticheskogo priborostroyeniya AN SSSR (SKB of Analytical Instrument Construction, AN SSSR)

SUBMITTED: 03Sep62 DATE ACQ: 28Aug63 ENCL: 02

SUB CODE: PH, SD NO REF SOV: 001 OTHER: 003

Card 2/2

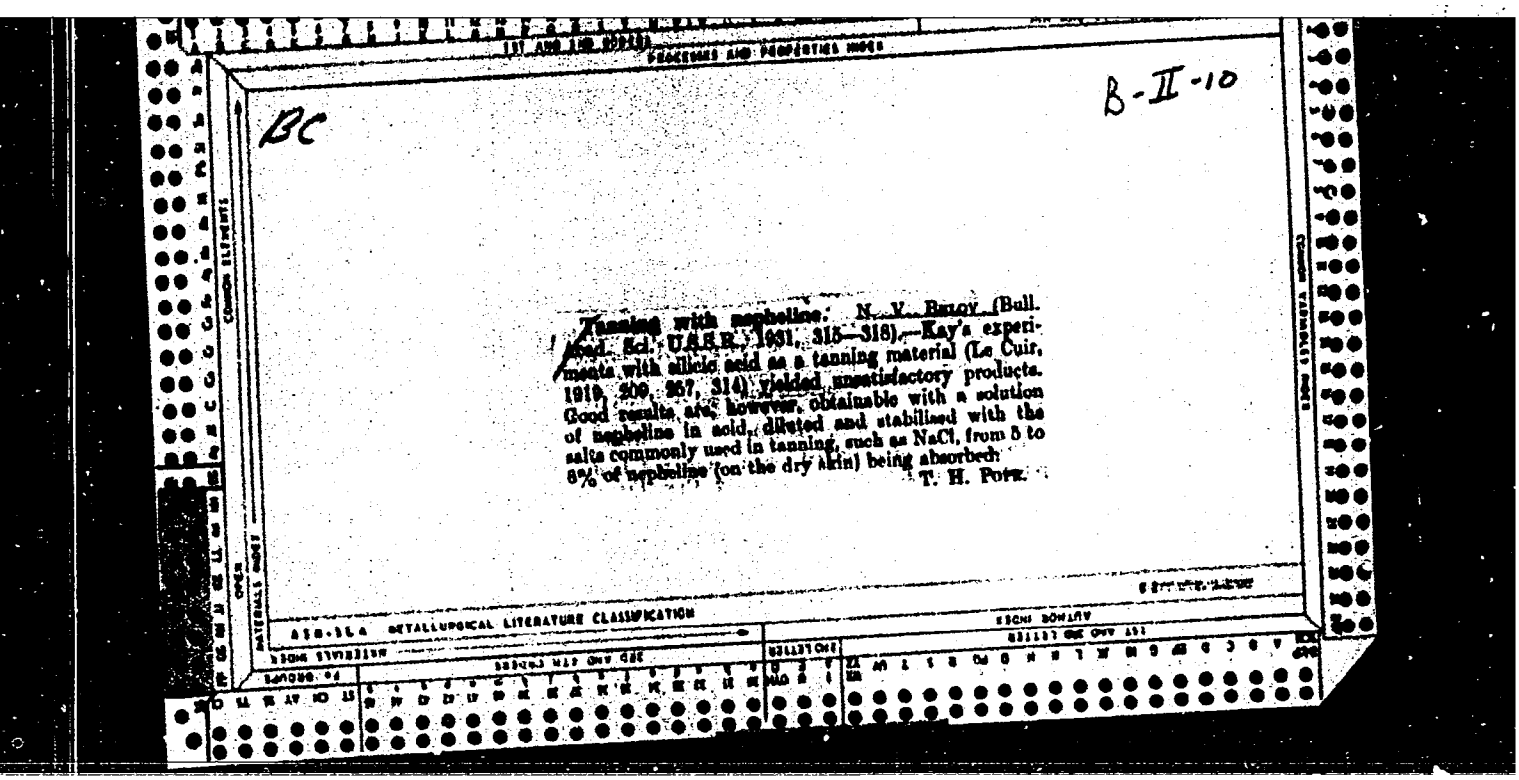
BELOV, N.S.; BRONSHTEYN, A.M.; OZEROV, L.N.; RAFAL'SON, A.E.

Electron multiplier tube with magnetic focusing for a high-speed mass spectrometer with separation of ions in flight. Prib. i tekh. eksp. 8 no.4:118-119 Jl-Ag '63. (MIRA 16:12)

1. Spetsial'noye konstruktorskoye byuro analiticheskogo priborostroyeniya AN SSSR.

BELOV, N.S.; SOLOV'YEV, L.N.

Analysis of the parameters and arrangement of a new series of roll-turning lathes. Stan. i instr. 36 no.11:9-11 N '65. (MIRA 18:11)

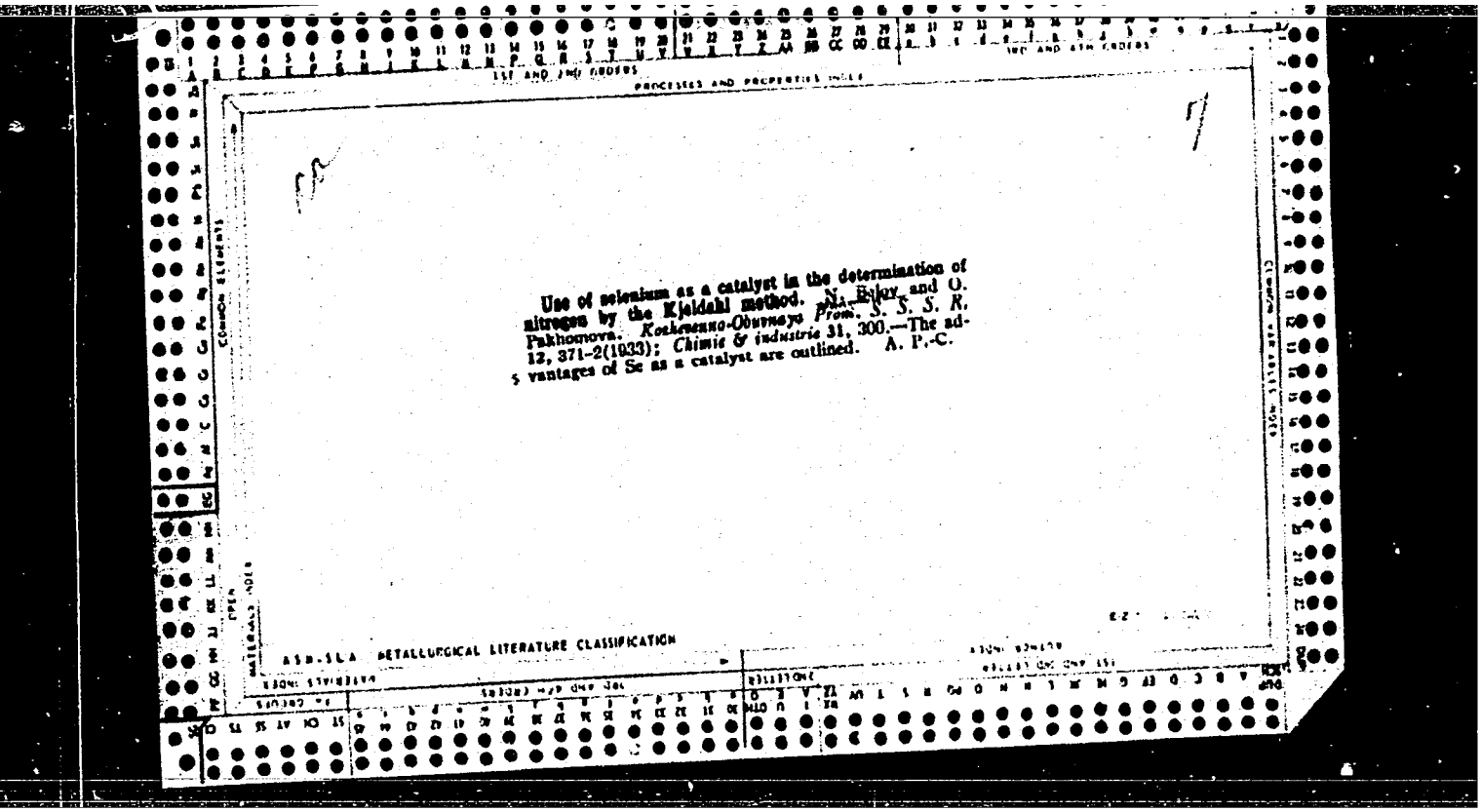


BC

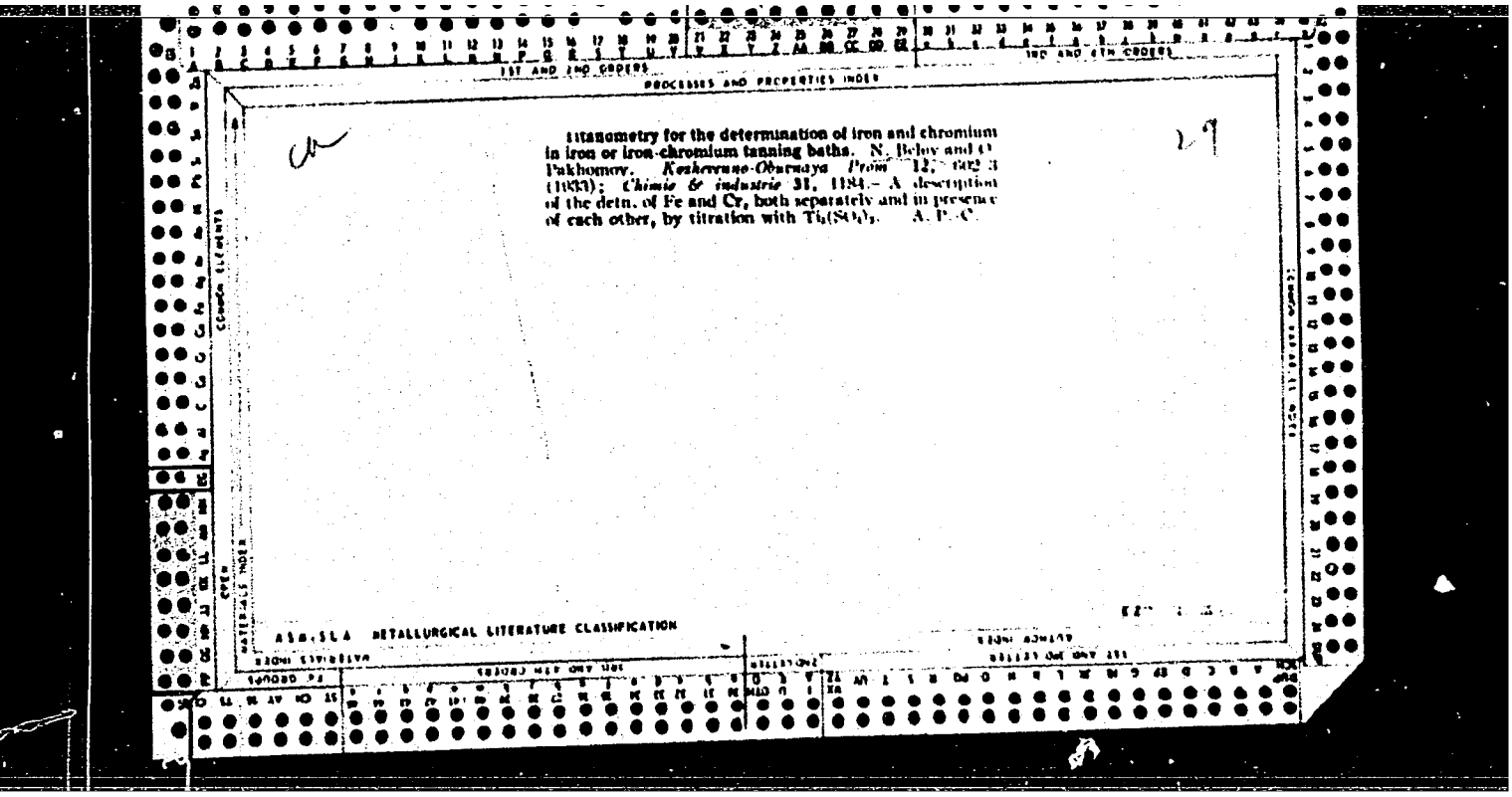
B-II-10

Tanning with nepheline. N. V. Belov (Bull. Acad. Sci. U.S.S.R., 1931, 315—318).—Kay's experiments with silicic acid as a tanning material (Le Cuir, 1919, 200, 267, 314) yielded unsatisfactory products. Good results are, however, obtainable with a solution of nepheline in acid, diluted and stabilised with the salts commonly used in tanning, such as NaCl, from 5 to 8% of nepheline (on the dry skin) being absorbed.

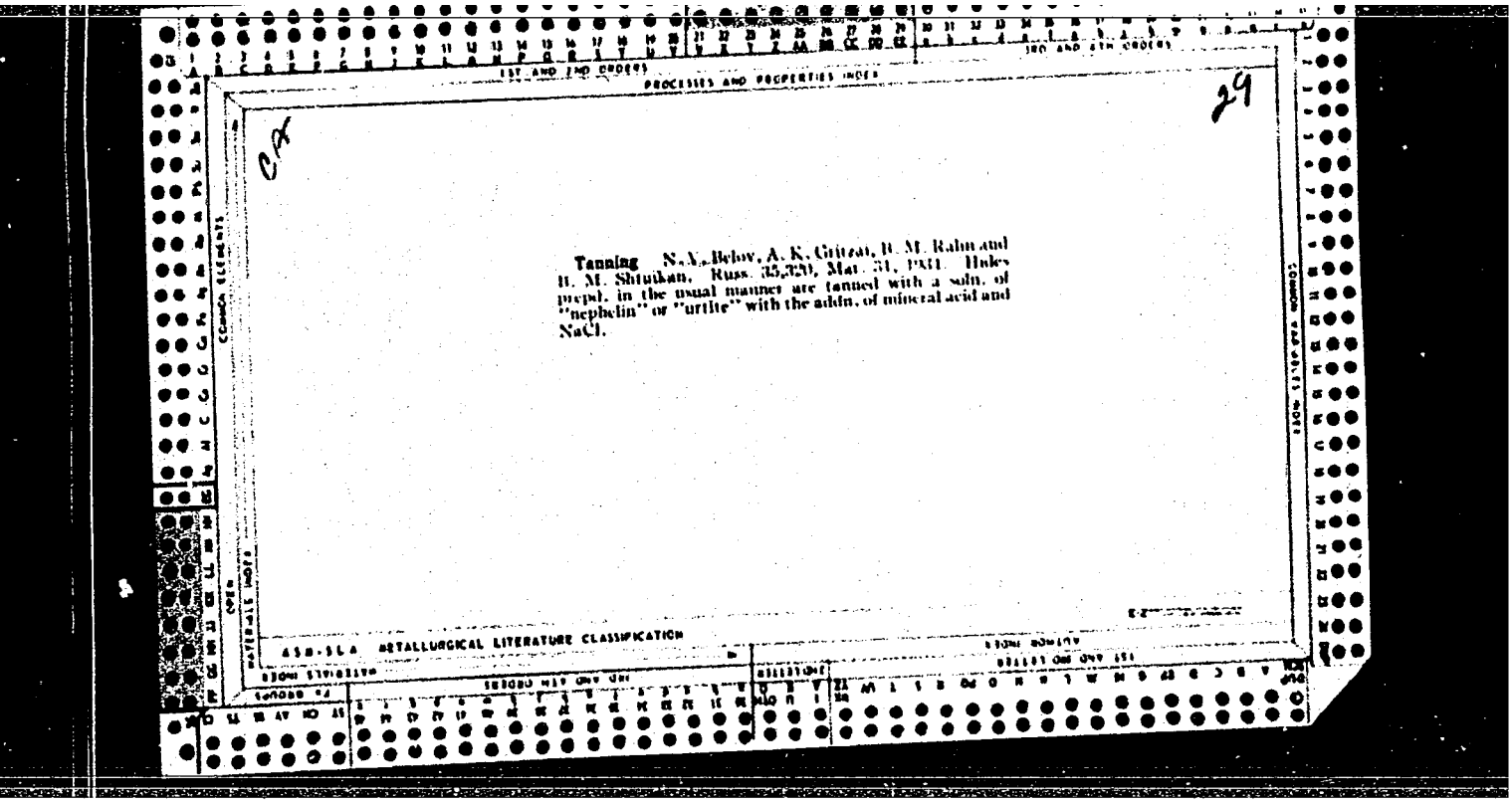
T. H. Pope.



Use of selenium as a catalyst in the determination of nitrogen by the Kjeldahl method. N. Erlov and O. Pakhomova. *Koksnenno-Obuvnaya Prom. S. S. S. R.* 12, 371–2(1933); *Chimie & industrie* 31, 300.—The advantages of Se as a catalyst are outlined. A. P.-C.



titanometry for the determination of iron and chromium in iron or iron-chromium tanning baths. N. Belov and G. Pakhomov. *Kozhevenno-Obuvnaya Prom.* 12, 602-3 (1933); *Chimie & industrie* 31, 1184.—A description of the detn. of Fe and Cr, both separately and in presence of each other, by titration with $Ti_2(SO_4)_3$. A. P.-C.

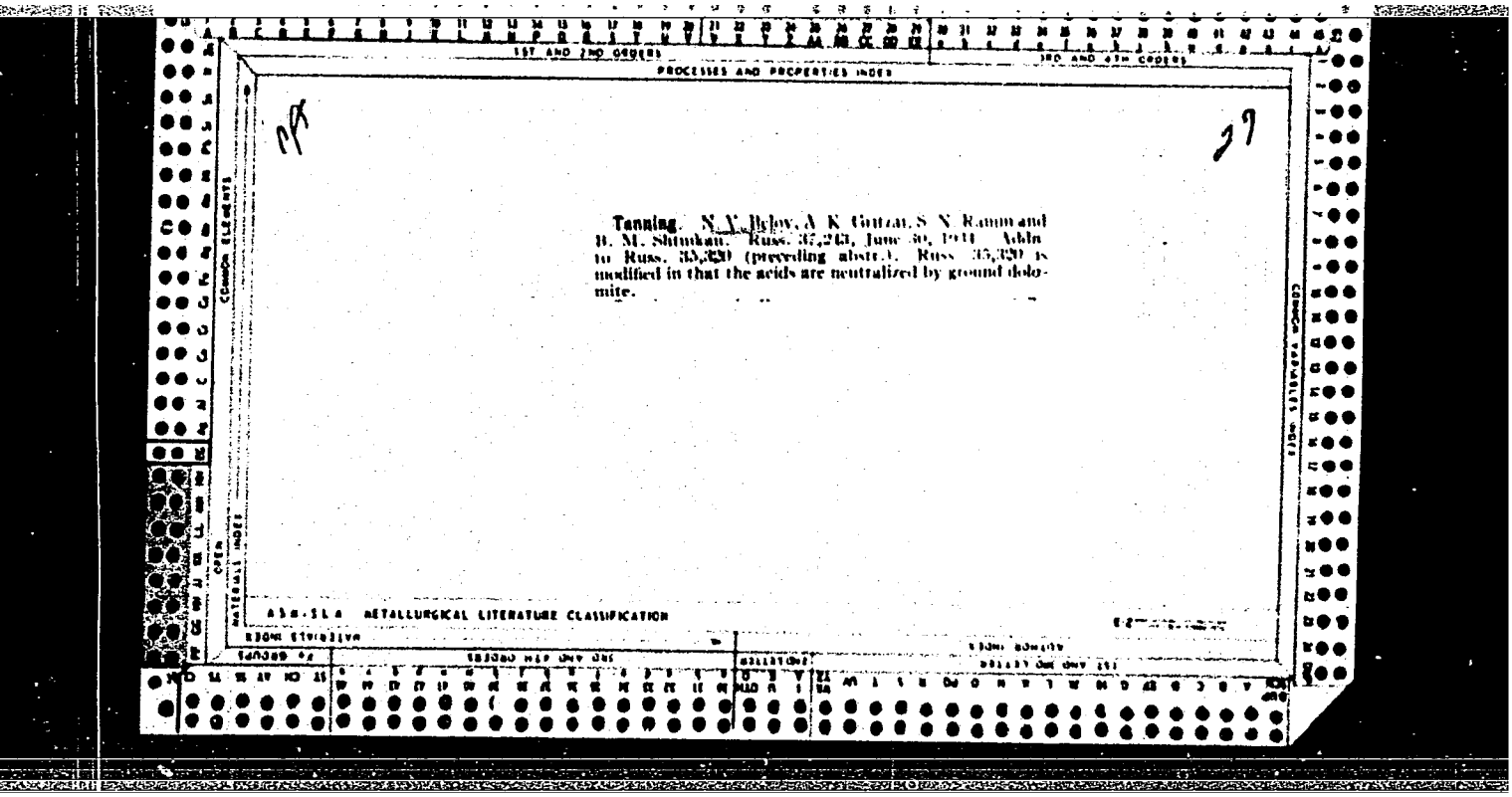


PROCESSES AND PROPERTIES INDEX

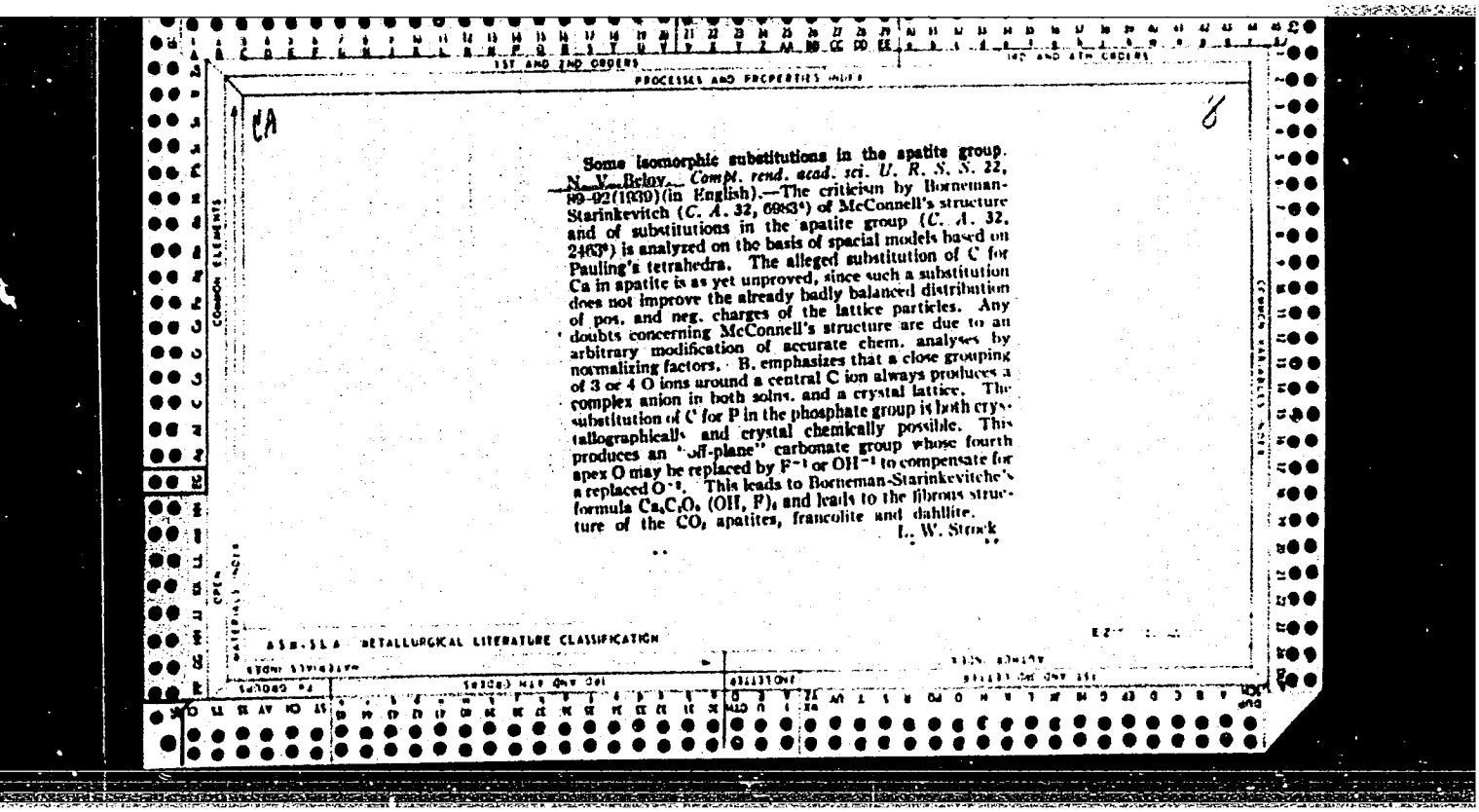
29

Tanning N. A. Belov, A. K. Gritzai, B. M. Rabin and B. M. Shtutkan, Russ. 35,730, Mar. 31, 1941. Hides prepd. in the usual manner are tanned with a soln. of "nephelin" or "urtite" with the addn. of mineral acid and NaCl.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

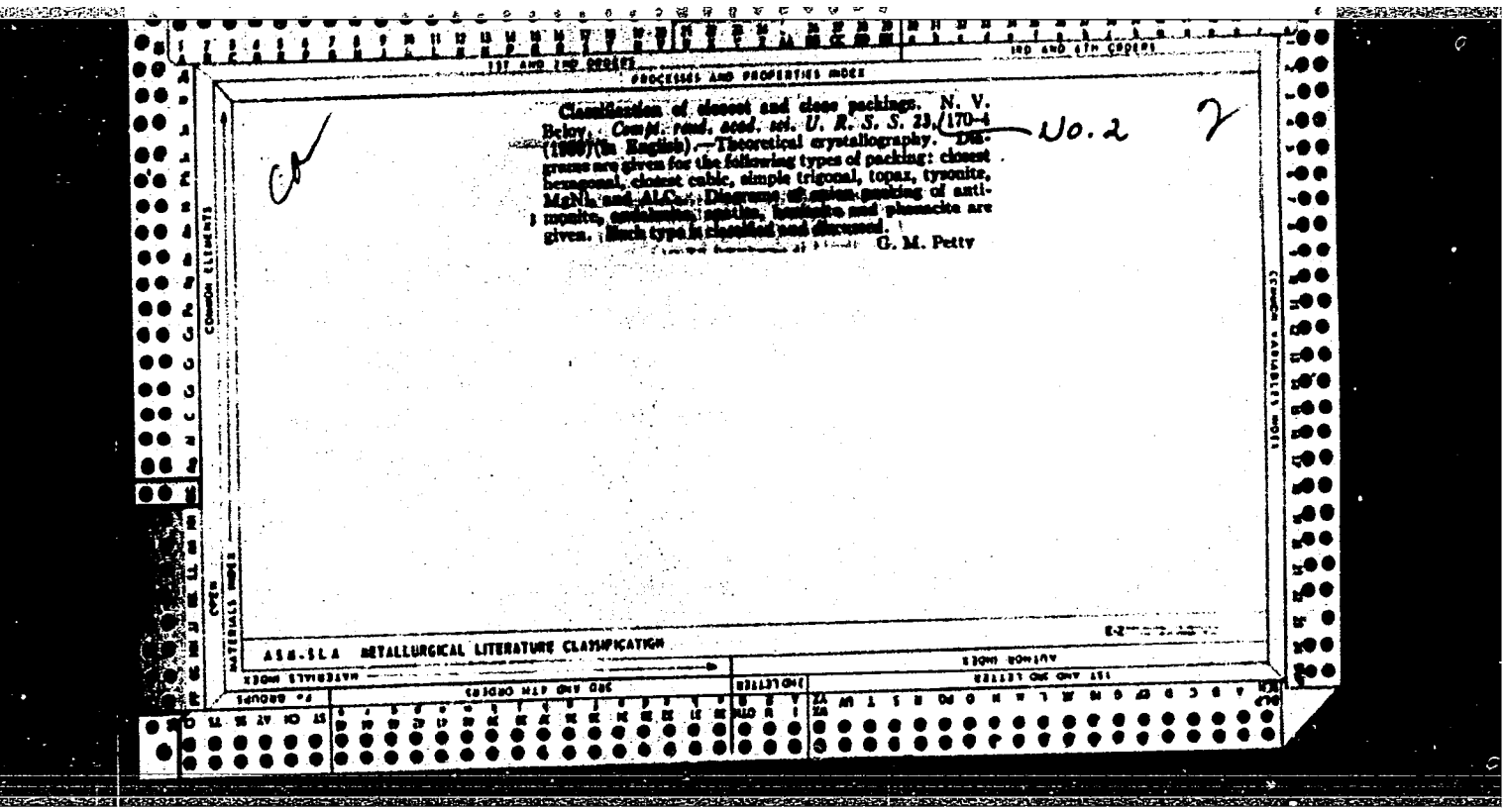


Tanning. N. V. Ilyin, A. K. Gurari, S. N. Ramm and B. M. Shimkan. Russ. 37,243, June 30, 1941. Addn to Russ. 33,339 (preceding abstr.). Russ. 33,339 is modified in that the acids are neutralized by ground dolomite.



Some isomorphic substitutions in the apatite group. N. V. Belov. *Compt. rend. acad. sci. U. R. S. S.* 22, 89–92 (1939) (in English).—The criticism by Borneman-Starinkevitch (*C. A.* 32, 6983⁴) of McConnell's structure and of substitutions in the apatite group (*C. A.* 32, 2463⁸) is analyzed on the basis of spacial models based on Pauling's tetrahedra. The alleged substitution of C for Ca in apatite is as yet unproved, since such a substitution does not improve the already badly balanced distribution of pos. and neg. charges of the lattice particles. Any doubts concerning McConnell's structure are due to an arbitrary modification of accurate chem. analyses by normalizing factors. B. emphasizes that a close grouping of 3 or 4 O ions around a central C ion always produces a complex anion in both solns. and a crystal lattice. The substitution of C for P in the phosphate group is both crystallographically and crystal chemically possible. This produces an "off-plane" carbonate group whose fourth apex O may be replaced by F^{-1} or OH^{-1} to compensate for a replaced O^{-2}. This leads to Borneman-Starinkevitche's formula $Ca_4C_2O_6(OH, F)_4$ and leads to the fibrous structure of the CO_3 apatites, francolite and dahllite.

L. W. Strock



Classification of closest and close packings. N. V. Belov. *Compt. rend. acad. sci. U. R. S. S.* 23,(170-4 (1939)(In English).—Theoretical crystallography. Diagrams are given for the following types of packing: closest hexagonal, closest cubic, simple trigonal, topaz, tysonite, MgNi$_2$ and AlCu$_2$. Diagrams of spinel-packing of antimonite, arsenolite, rutile, fluorite and phenacite are given. Each type is classified and discussed.

G. M. Petty

No. 2

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES

8

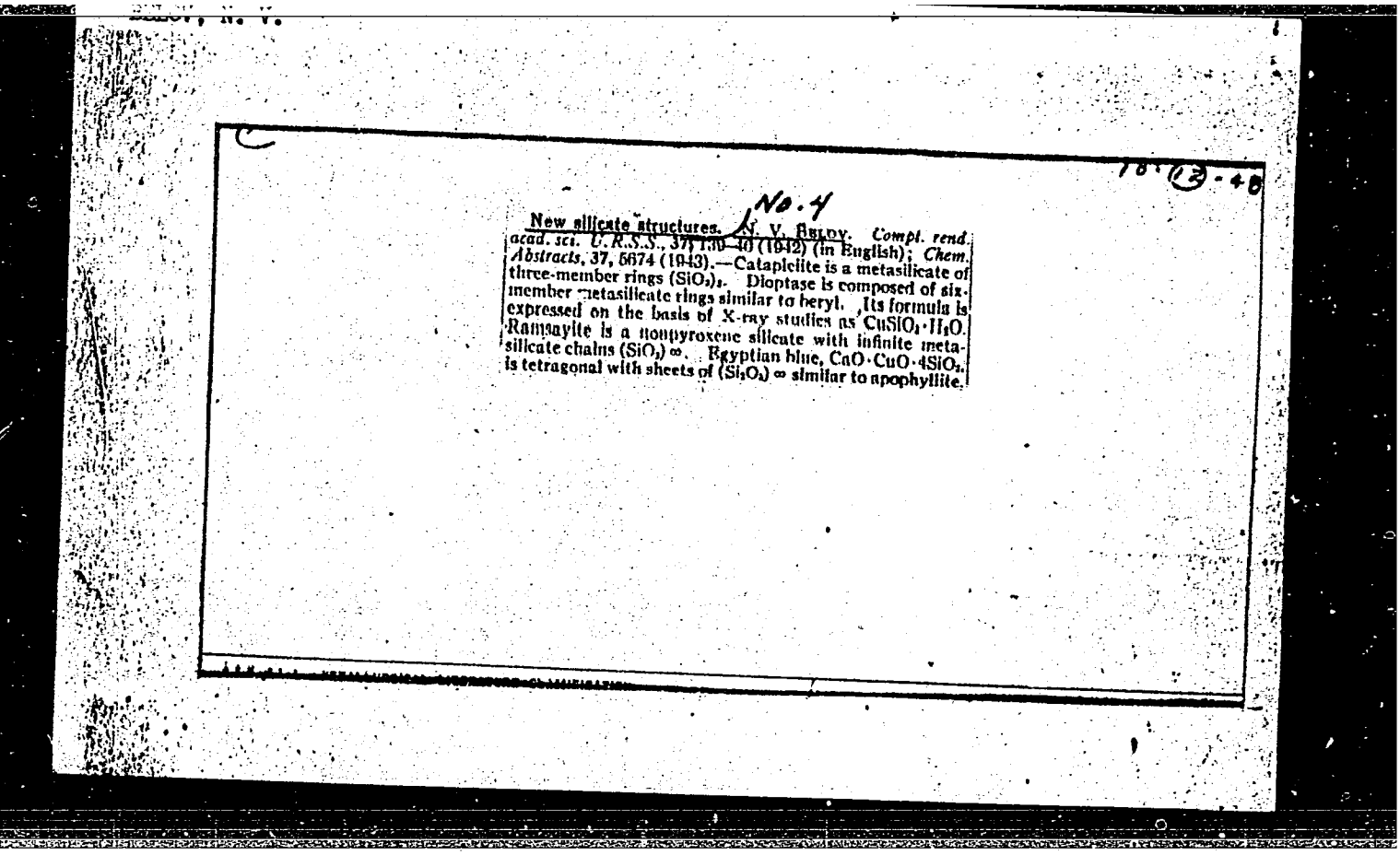
CA

No. 8

Isomorphic substitutions in carbonate-apatite. I. D. Borneman-Starynkevich and N. Belov. *Compt. rend. acad. sci. U. R. S. S.* 26, 804 (1940) (in English); cf. *C. A.* 33, 5125[2].—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 $xCa_{10}P_6O_{24}F_2 + yCa_{10}C_6O_{18}F_2$. 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[8]). The compd. $Ca_{10}P_4CO_{23}(F, OH)_2$ seems to be the end member in the substitution series.

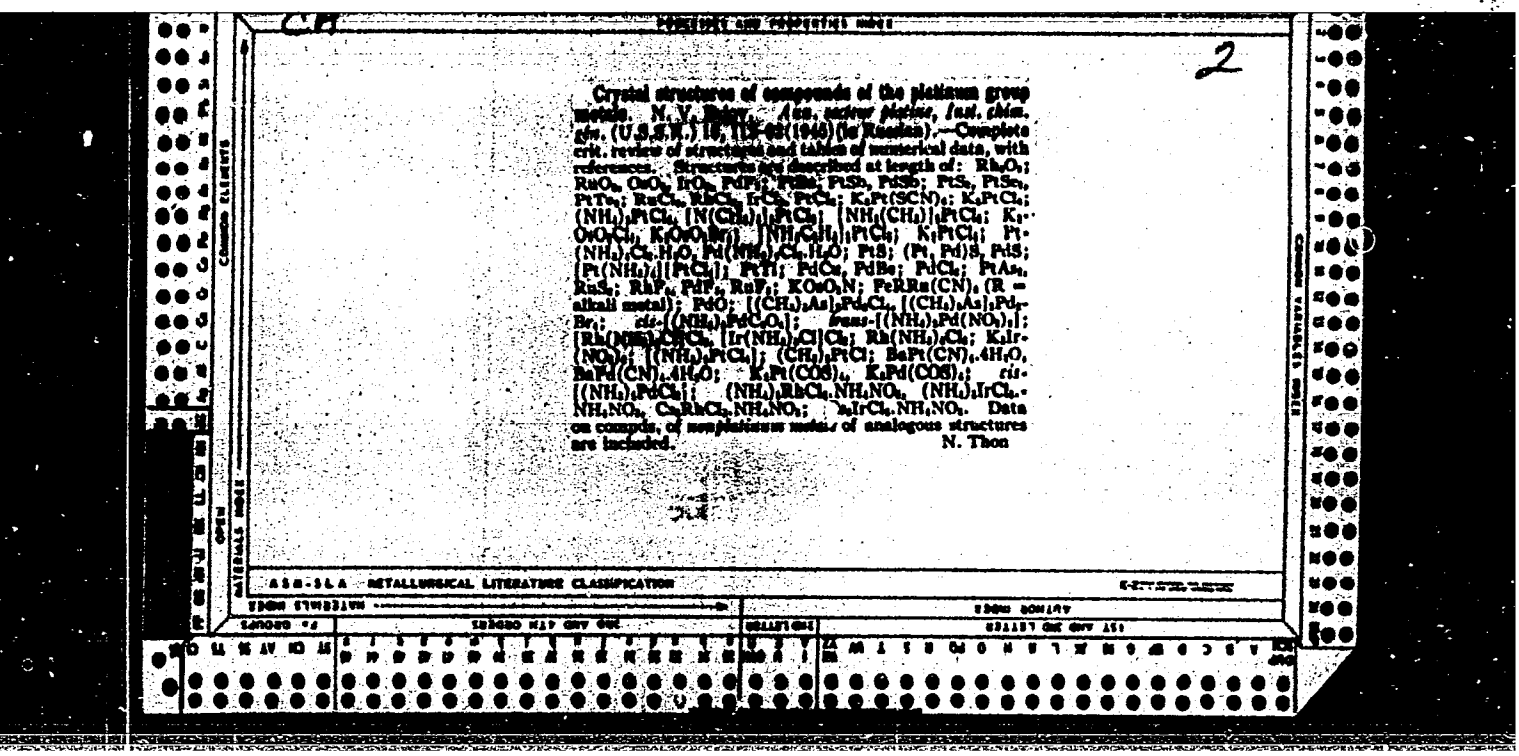
D. W. Pearce

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



No. 4

New silicate structures. N. V. Belov. *Compt. rend. acad. sci. U.R.S.S.*, 37] 1.30–40 (1942) (in English); *Chem. Abstracts*, 37, 5674 (1943).—Cataplciite is a metasilicate of three-member rings $(SiO_3)_3$. Dioptase is composed of six-member metasilicate rings similar to beryl. Its formula is expressed on the basis of X-ray studies as $CuSiO_3 \cdot H_2O$. Ramsayite is a nonpyroxene silicate with infinite metasilicate chains $(SiO_3)\infty$. Egyptian blue, $CaO \cdot CuO \cdot 4SiO_2$, is tetragonal with sheets of $(Si_2O_5)\infty$ similar to apophyllite.

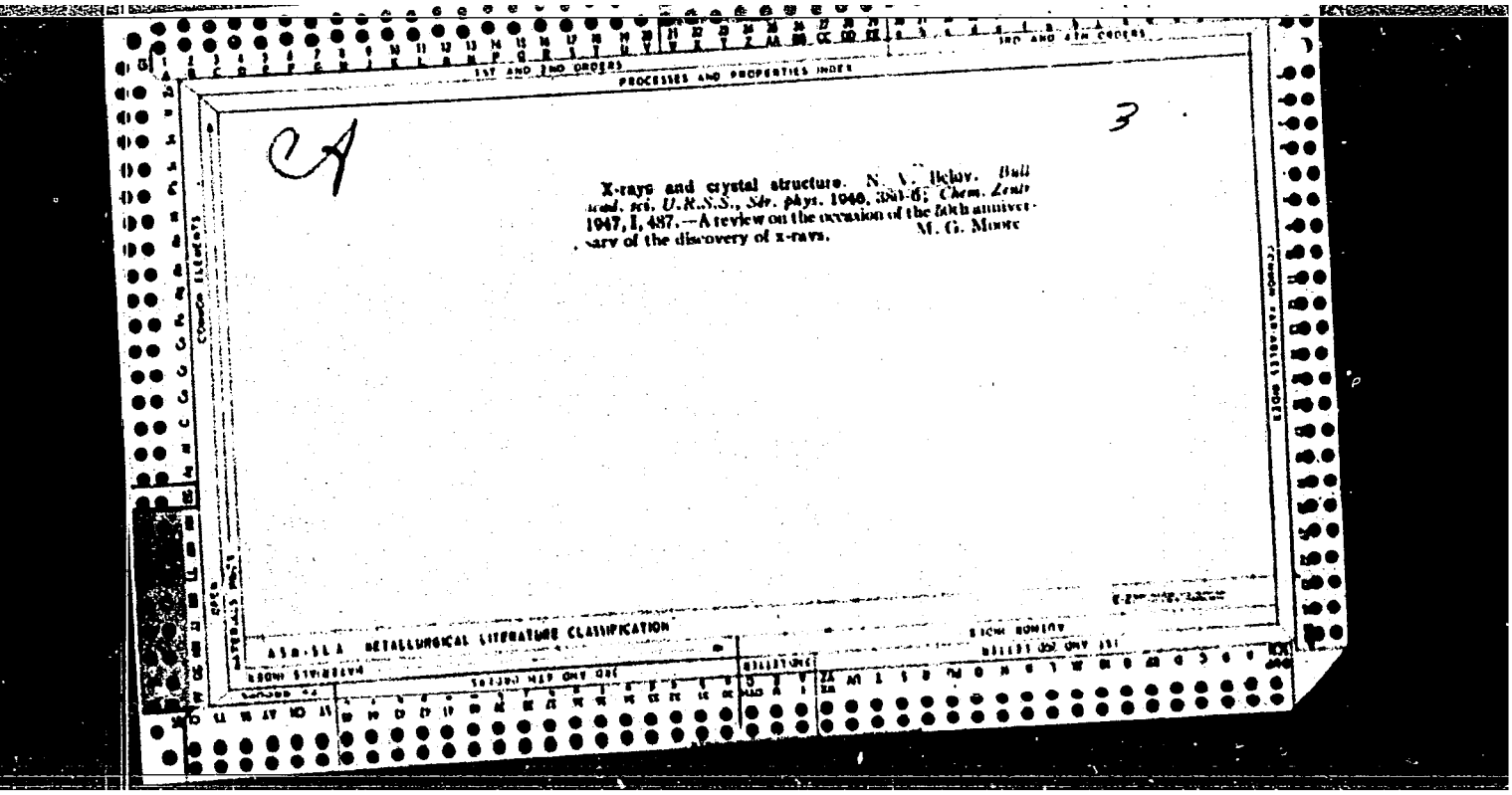


Crystal structures of compounds of the platinum group metals. N. V. Belov. *Acta, sector platine, Inst. chim. gén. (U.S.S.R.)* 13, 113-93(1940)(in Russian).—Complete crit. review of structures and tables of numerical data, with references. Structures are described at length of: Rh_2O_3; RuO_2, OsO_2, IrO_2, PdF; PdBr; PtSb; PdSb; PtS_2, $PtSe_2$, $PtTe_2$; $RuCl_3$, $RhCl_3$, $IrCl_3$, $PtCl_3$; $K_2Pt(SCN)_4$; K_2PtCl_4; $(NH_4)_2PtCl_4$; $[N(CH_3)_4]_2PtCl_4$; $[NH_3(CH_3)]_2PtCl_4$; $K_2[OsO_2Cl_4]$, $K_2[OsO_2Br_4]$; $[NH_3C_6H_5]_2PtCl_4$; K_2PtCl_4; $Pt(NH_3)_2Cl_2.H_2O$, $Pd(NH_3)_2Cl_2.H_2O$; PtS; (Pt, Pd)S, PdS; $[Pt(NH_3)_4][PtCl_4]$; PtTl; PdCu, PdBe; $PdCl_2$; $PtAs_2$, RuS_2; RhP_2, PdP_2, RuP_2; $KOsO_3N$; $FeR_2Ru(CN)_6$ (R = alkali metal); PdO; $[(CH_3)_3As]_2Pd_2Cl_4$, $[(CH_3)_3As]_2Pd_2Br_4$; *cis*-$[(NH_3)_2PdC_2O_4]$; *trans*-$[(NH_3)_2Pd(NO_2)_2]$; $[Rh(NH_3)_5Cl]Cl_2$, $[Ir(NH_3)_5Cl]Cl_2$; $Rh(NH_3)_3Cl_3$; $K_3Ir(NO_2)_6$; $[(NH_3)_2PtCl_2]$; $(CH_3)_2PtCl$; $BaPt(CN)_4.4H_2O$, $BaPd(CN)_4.4H_2O$; $K_2Pt(COS)_2$, $K_2Pd(COS)_2$; *cis*-$[(NH_3)_2PdCl_2]$; $(NH_4)_2RhCl_5.NH_4NO_3$, $(NH_4)_2IrCl_5.NH_4NO_3$, $Cs_2RhCl_5.NH_4NO_3$; $Cs_2IrCl_5.NH_4NO_3$. Data on compds. of nonplatinum metals of analogous structures are included.

N. Thon

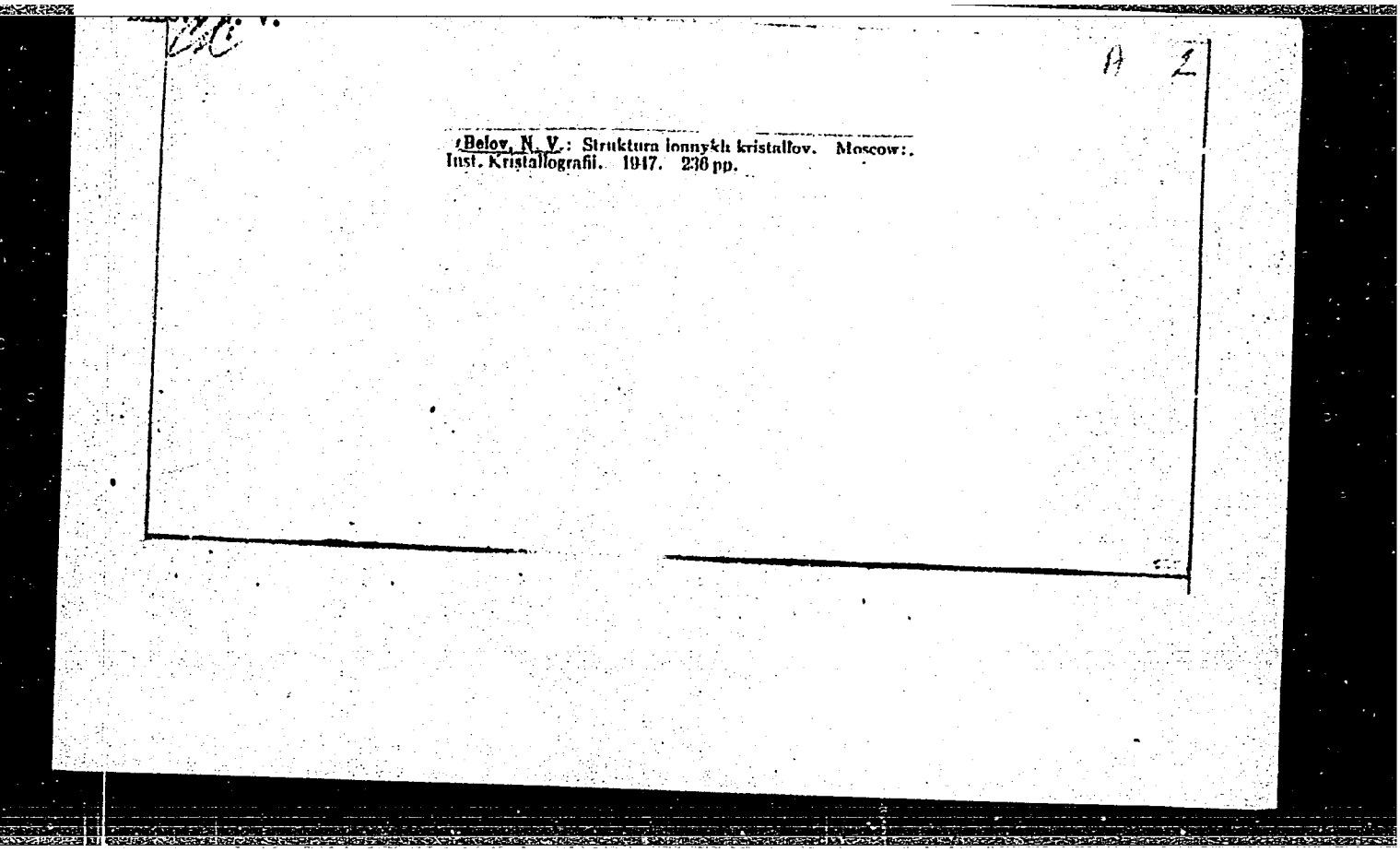
CRYSTAL STRUCTURES OF COMPOUNDS OF THE PLATINUM GROUP METALS. STRUCTURES OF RF_5, PdF_3 – TYPE FeF_3, AlF_3. N. V. Belov. Translated from Invest. Sektora Platiny i Drug. Blagorod. Metal. Inst. [illegible]

The crystal structures of the fluorides of the platinum group metals [illegible] are characterized by cubic close packing. These substances are almost cubic rhombohedrons. Cell dimensions and distances are given. C. W. H.



BELOV, Nikolay Vasil'yevich

"Structure of Ionic Crystals and Metallic Phases," and "The Structure of High Chalcocite Cu_2S," Dok. Akad. Nauk, Vol. 54, No. 8, 1946.



Belov, N. V.: Struktura ionnykh kristallov. Moscow:. Inst. Kristallografii. 1947. 238 pp.

BELOV, N. V. PA 15T18

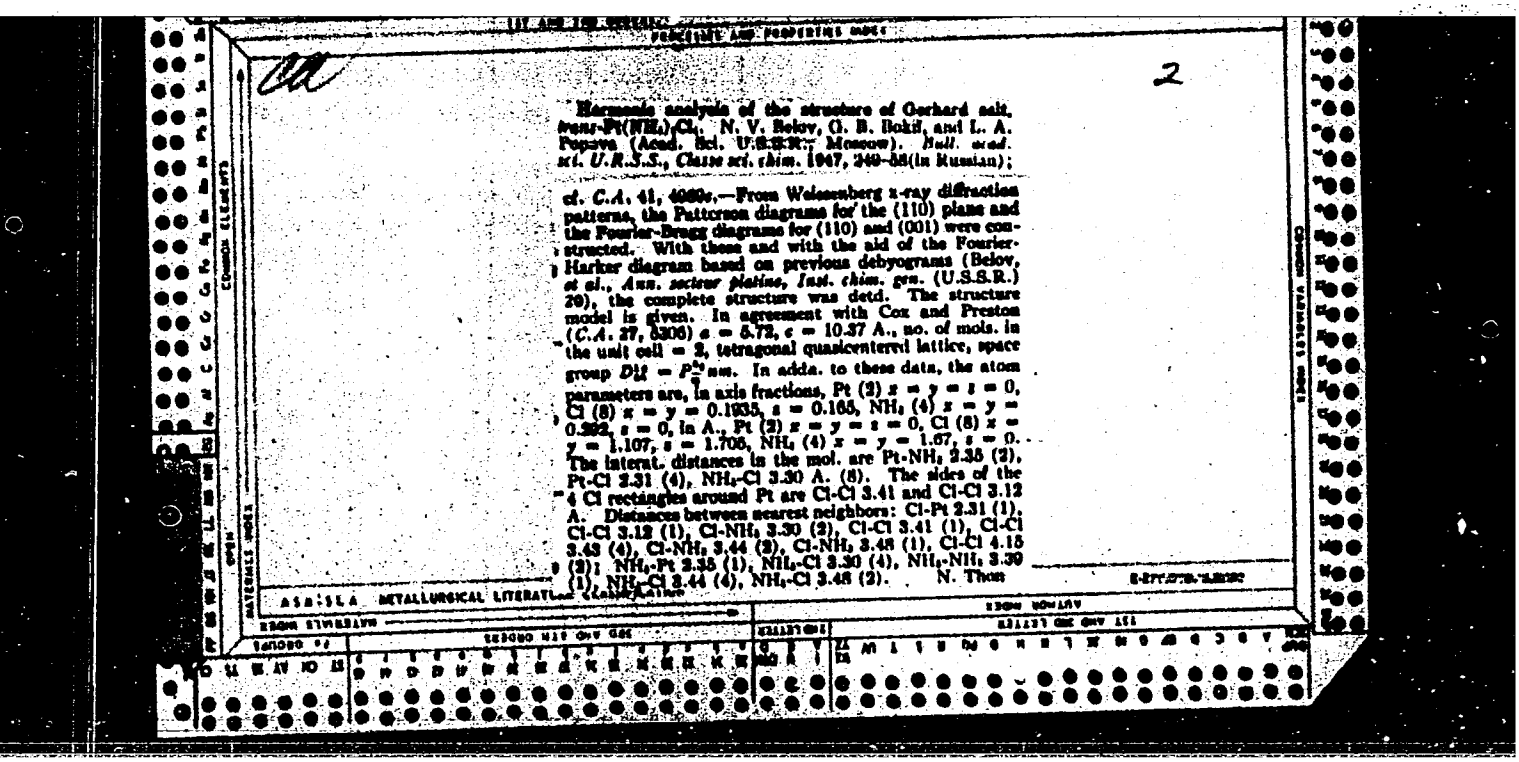
USSR/Chemistry - Gerhardt's Salt May/Jun 1947
Chemistry - Analysis

"Investigation of the Structure of Gerhardt's Salt by Harmonic Analysis," N. V. Belov, G. B. Bokiy, L. A. Popova, 10 pp

"Izv Ak Nauk Otd Khim Nauk" No 3

Determination of lattice constants, number of molecules in the unit cell, parameters of atoms, interatomic distances, and distances between the nearest atoms, for Gerhardt's salt ($Pt(NH_3)_2Cl_4$-trans).

15T18



Harmonic analysis of the structure of Gerhard salt, *trans*-$Pt(NH_3)_2Cl_4$. N. V. Belov, G. B. Bokii, and L. A. Popova (Acad. Sci. U.S.S.R., Moscow). *Bull. acad. sci. U.R.S.S., Classe sci. chim.* 1947, 249–58 (in Russian); cf. *C.A.* 41, 4080e.—From Weissenberg x-ray diffraction patterns, the Patterson diagrams for the (110) plane and the Fourier-Bragg diagrams for (110) and (001) were constructed. With these and with the aid of the Fourier-Harker diagram based on previous debyograms (Belov, *et al.*, *Ann. secteur platine, Inst. chim. gén.* (U.S.S.R.) 20), the complete structure was detd. The structure model is given. In agreement with Cox and Preston (*C.A.* 27, 5306) $a = 5.72$, $c = 10.37$ A., no. of mols. in the unit cell = 2, tetragonal quasicentered lattice, space group $D_{4h}^{17} = P\bar{4}'nm$. In addn. to these data, the atom parameters are, in axis fractions, Pt (2) $x = y = z = 0$, Cl (8) $x = y = 0.1935$, $z = 0.165$, NH_3 (4) $x = y = 0.392$, $z = 0$, in A., Pt (2) $x = y = z = 0$, Cl (8) $x = y = 1.107$, $z = 1.706$, NH_3 (4) $x = y = 1.67$, $z = 0$. The interat. distances in the mol. are Pt-NH_3 2.35 (2), Pt-Cl 2.31 (4), NH_3-Cl 3.30 A. (8). The sides of the 4 Cl rectangles around Pt are Cl-Cl 3.41 and Cl-Cl 3.12 A. Distances between nearest neighbors: Cl-Pt 2.31 (1), Cl-Cl 3.12 (1), Cl-NH_3 3.30 (2), Cl-Cl 3.41 (1), Cl-Cl 3.43 (4), Cl-NH_3 3.44 (2), Cl-NH_3 3.48 (1), Cl-Cl 4.15 (2); NH_3-Pt 2.35 (1), NH_3-Cl 3.30 (4), NH_3-NH_3 3.39 (1), NH_3-Cl 3.44 (4), NH_3-Cl 3.48 (2). N. Thon

BELOV, N.V., doktor khimicheskikh nauk.

The A.N.Bakh Prize awarded to G.S.Zhdanov for his works on "X-ray investigations of boron carbide and silicon carbide." investigations of boron carbide and silicon carbide." Khim.prom.no.9:270 S'47. (MLRA 8:12)

1. Chlen-korrespondent Akademii nauk SSSR.
(Silicon carbide) (Boron carbide)

CA

6

X-ray study of the structure of Gerard salt. N. [illegible] Ilchiy, Lic. B. Bokii, and G. L. Tiuevich. *Inst. Obshchei i Neorg. Fiziky i Drag. Blagorod. Metal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R.* (Ann. secteur platine, Inst. chim. gén.) No. 20, 124-31(1947); cf. Cox and Preston, C. 1. 27, 5300. Crystallographic data for $[Pt(NH_3)_4Cl_2]$ M Hoch are reported.

BELOV, Nikolay Vasil'yevich

"Determination of Crystal Parameters," Dok. Akad. Nauk, Vol. 57, No. 8, 1947.
Co-author: Vladimir P. Butuzov.

BELOV, N. V.

"The Fourth Index in the Hexagonal System," Dok AN SSSR, 58, No 3, 1947

Crystallography Inst., AS USSR

BELOV, N. V.

PA 53/49T86

USSR/Physics
Crystals
Silicon Carbide

May 48

"Discussion of N. V. Belov's Book 'The Structure of Ionic Crystals and Metallic Phases'" 2 pp

"Vest Ak Nauk SSSR" No 5

Subject book, which was awarded the Ye. S. Fedorov prize for 1947, considers all structures from the standpoint of the densest spherical packing of atoms (ions) in the crystal lattice. Professors G. S. Zhdanov and Z. G. Pinsker noted that the theory had helped them, respectively, in determining

[redacted]

53/49T86

USSR/Physics (Contd) May 48

the complex 51-layer structure of a silicon carbide modification and in determining variable laminated structures in the CdI_2-$CdBr_2$ system.

[redacted]

53/49T86

BELOV, N. V.

USSR/Physics
Crystallography
Structure Analysis

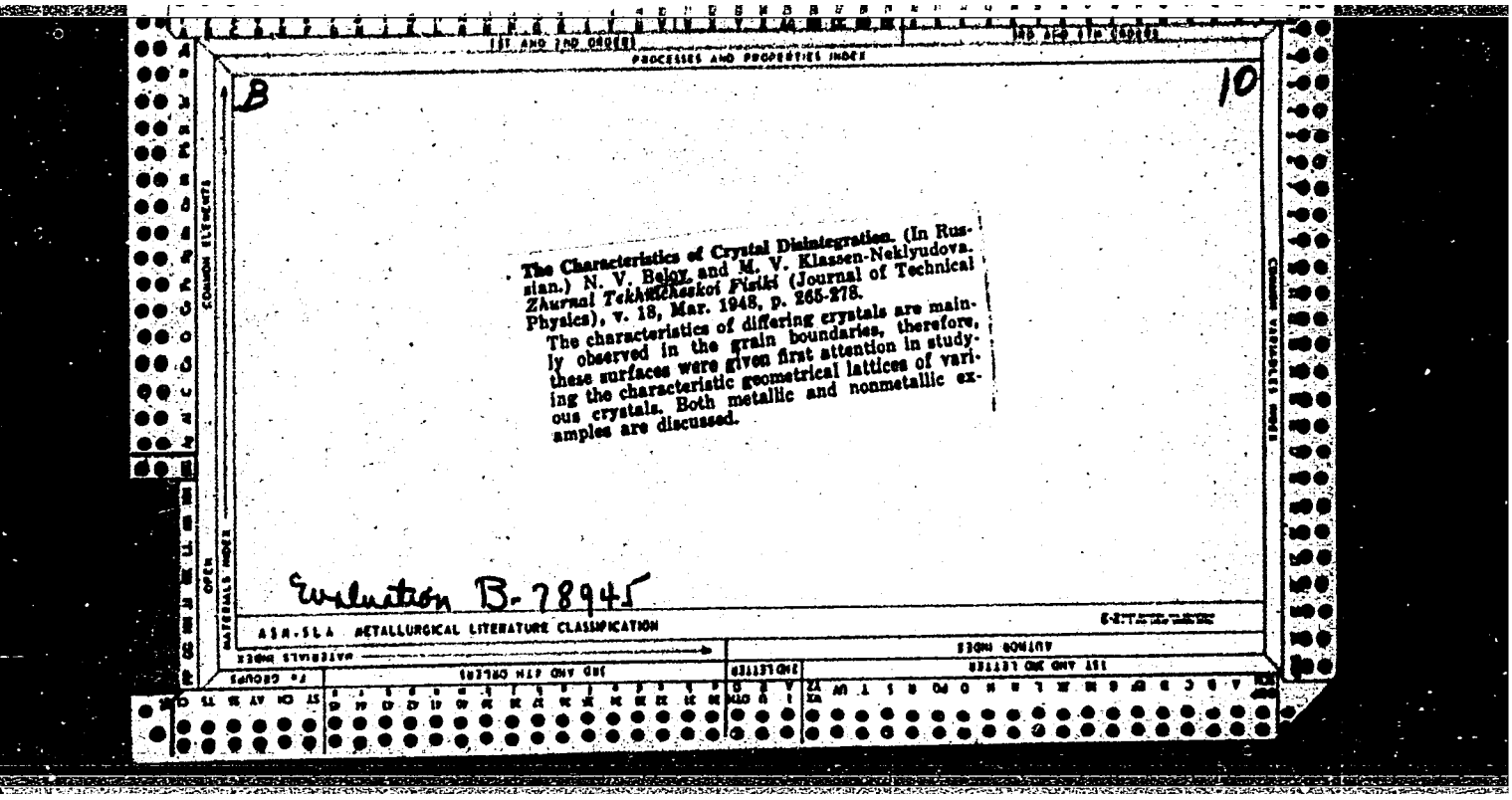
Mar/Apr 1948

"Review of 'Structure of Ionic Crystals and Metallic Phases' by N. V. Belov,"

Iz. Ak. Nauk SSSR, Ser. Fiz., Vol. XII, No. 2

Work is examined, chapter by chapter. After describing basic laws of crystalline structure, author shows how they must be modified for certain elements because of peculiarities of their electronic structure. This class includes such important systems as carbides of iron and chromium. Among other subjects discusses phenomena of twinning and pseudosymmetry. Book contains 174 drawings.

69T94



B

10

The Characteristics of Crystal Disintegration. (In Russian.) N. V. Belov and M. V. Klassen-Neklyudova. *Zhurnal Tekhnicheskoi Fiziki* (Journal of Technical Physics), v. 18, Mar. 1948, p. 265-278.

The characteristics of differing crystals are mainly observed in the grain boundaries, therefore, these surfaces were given first attention in studying the characteristic geometrical lattices of various crystals. Both metallic and nonmetallic examples are discussed.

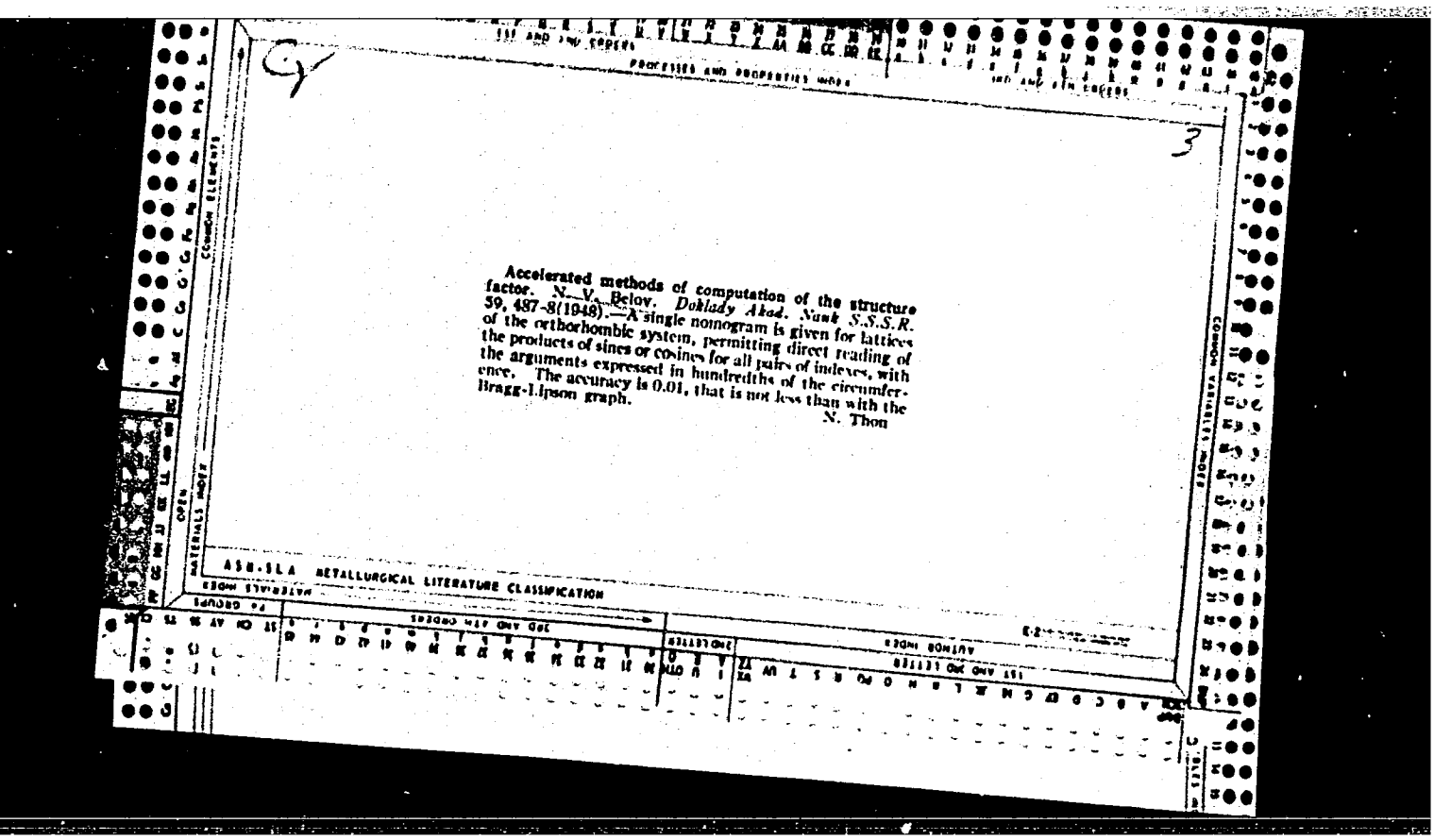
Evaluation B-7894S

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

BELOV, N. V.

"Struktura ionwikh kristalov i metallicheskikh faz" (Structure of Ionic Crystals and Metallic Phases).

Academy of Sciences of the USSR, Institute of Crystallography.
Uspekhi Fizicheskilsh Nauk, Vol XXXIV, No 3, 1948.



Accelerated methods of computation of the structure factor. N. V. Belov. *Doklady Akad. Nauk S.S.S.R.* 59, 487–8(1948).—A single nonogram is given for lattices of the orthorhombic system, permitting direct reading of the products of sines or cosines for all pairs of indexes, with the arguments expressed in hundredths of the circumference. The accuracy is 0.01, that is not less than with the Bragg-Lipson graph.

N. Thon

BELOV, N. V.

USSR/Physics
Crystals
Crystallography

Dec 48

"The Number and Composition of Abstract Groups which Encompass 32 Crystallographic Classes," by Ye. N. Belova, N. V. Belov, Corr. Mbr., Acad. Sci. Ussr, A. V. Shubnikov, Corr. Mbr., Acad. Sci., USSR, 4 pp.

Dok. Akad. Nauk SSSR, Vol. LXIII, No. 6

Two-page table shows the separation of 32 crystallographic classes into 18 abstract groups. Basic principle used for joining several crystallographic groups into one abstract group was the group identity of operation of even axes: rotary, specular, and inversion. Submitted 3 Nov 58

35/49T92

[illegible], N. V.

"Crystallographic (symmetrical) Methods of solving Geometrical Problems."
Dok. AN SSSR, Vol 59, pp 897-8. (1948)

Source: Mathematical Reviews, Vol 10 No. 6

BELOV, N. V.

35862 O dvoynikovykh zakonakh u slyud I slyudo podobnykh mineralov. Mineral. Sbornik (l'vou), no 3, 1949, s. 29-40.: Biblogr: 9 Nazv

SO: Letopis' Zhurnal'nykh Statey, No. 49, 1949

X-rays--Diffraction

Application of methods of harmonic analysis for establishing parameters of crystal structures based on standard powder X-ray diffraction patterns. Trudy Inst. krist. No. 5, 1949.

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED.

BELOV, N. V.

PA 152T37

USSR/Geology - Minerals, Structure
Physics - Atomic Structure

Nov/Dec 49

"Progress in Structural Mineralogy," N. V. Belov, 13 pp

"Iz Ak Nauk SSSR, Ser Geol" No 6

Lists accomplishments of structural mineralogy, chiefly in silicates, on the basis of the more recent results of X-ray structural analysis (work of Belov's laboratory, in particular).

[redacted]

152T37

(CA 47 no. 14:6823 '53)

BELOV, N. V.

USSR/Physics Apr 49
Crystals - Structure
Nuclear Physics - Uranium Compounds

"New Structural Types With the Most Dense Packing of Constituent Atoms," N. V. Belov, Corr Mem, Acad Sci USSR, 3 pp

"Dok Ak Nauk SSSR" Vol LXV, No 5

Discusses crystal structure of the following compounds: alpha-UF_5, alpha-UO_3, UO_2F_2, $CaUO_4$, UCl_6, and Cs_2PtCl_6. Submitted 16 Feb 49.

39/49T109

CA

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Crystal structure of tourmaline. N. V. Belov and E. N. Belova. *Doklady Akad. Nauk S.S.S.R.* 69, 185-8 (1949); cf. Hamburger and Buerger, C.A. 43, 8087c.—Previous x-ray measurements of the authors gave for dravite (Mg-tourmaline) the dimensions of the elementary cell: a_0 = 16.00 A.; c_0 = 7.21 A.; $c:a$ = 0.452, or a rhombohedron with the edge a_r = 9.52 A., α = 113°10', space group C_{3v}^5 = *R3m* with 1 mol. $NaR_3B_3Si_6(O,OH)_{30}$ in the unit cell. For the new detn. of the structure by the authors, the structural analogy of the rings in dioptase, milarite, and beryl have been highly conclusive; these crystal phases have about the same dimensions in the horizontal extension, while in the vertical direction the lengths are in the ratio 1:1:2 for the dioptase, tourmaline, and milarite, resp. Na^+ is situated, without parameters, in (000). By Patterson analysis the positions of the other atoms have been detd. The ditrigonal rings have a radius (Si – Si) of 3.67 A. in tourmaline (3.00 in beryl, 3.11 in milarite, 3.00 in dioptase); they are arranged in two distinct levels, one with 6 Si, the other with 3Al + 3B. Octahedral [MgO_6] units are arranged along trigonal screw axes, in chains extending through the entire framework. The structure has 29 parameters; the comparison with the structure given by Hamburger and Buerger is best if Na^+ is located not in (000) but with z = 0.855 A. Seven kinds of oxygen ions are distinguished, numbered for analogy with those authors II to VIII. The polarity of the annular units is evident, while the upper level is approx. hexagonal the lower level is distinctly ditrigonal, with a side length of about 2.0 diams. The Na^+ ions are located in wide octahedra between the double-ring arrangements; these have the formula $[Si_6Al_3B_3(O,OH)_{30}]$, with the distances Si – O varying between 1.57 and 1.78 A.; (Al, B) – O between 1.58 and 1.76 A., Mg – O between 1.97 and 2.27 A. In details of the positions of the ions, this structure is not in agreement with Hamburger's and Buerger's detns.; there are also many contradictory at. distances given, e.g. the too large distance for Al – O. While the authors find for Mg – O_I 2.53 A., Hamburger and Buerger give 2.10 A. Also in the intensity data, there are tremendous contradictions, e.g. for (1120) (101) is given 7 by Belov and Belova, 0 by H. and G.

W. Eitel

1957

No. 3

Crystal structure of milarite. N. V. Belov and T. N. Tarkhova. *Doklady Akad. Nauk S.S.S.R.* 69, 365-8 (1949).—Milarite, $KCa_2Be_4Al_2Si_{12}O_{30}$, is characterized by the Si:O ratio = 2:5, which is the same as in the layer structures of talc and micas, but it is different in its phys. properties. From rotation diagrams: a_0 = 10.43; c_0 = 13.85 A., the space group is $D_{6h}^4 = C_{6v}^4$. d. 2.55-2.59, 2 mols in the elementary cell. Intensities and Patterson analysis verified the independent parameters of the structure. The coordinates are: (2)K^+ in $x = 0$; $y = 0$; $z = 1/4$; (4)Ca^{++} in $x = 1/3$; $y = 2/3$; $z = 1/4$; (6)Be^{++} and Al^{+++} in $x = 0$; $y = 1/2$; $z = 1/4$; (24)Si^{++++} in $x = 0.083$, $y = 0.333$; $z = 0.115$; (12)O^{--} in $x = 0.00$; $y = 0.35$, $z = 0$; 24$(O)^{--}$ in $x = 0.30$, $y = 0.283$; $z = 0$; (24)O_{II} in $x = 0.11$; $y = 0.47$; $z = 0.18$. Characteristic are the hexagonal ring units (Si_6O_{18}) with distances Si – Si = 3.13 A.; they are highly similar to those in beryl. 4 Be^{++} and 2 Al^{+++} belong to every ring group. In the place of the (BeO_4) octahedra in beryl, milarite has in the trigonal axis directions (CaO_6) octahedra, and the horizontal diam. of the units in the structure is, therefore, wider by 11% than in beryl. Beryl and milarite are, therefore, not isomorphous, but only isostructural. While the basis projection shows the high analogy with beryl, that in the a axis direction makes evident the most characteristic difference: milarite has tetrahedral double-sheet units, with the plane of symmetry through the O ions common to both sheets. The condensation of 2 beryl radicals (Si_6O_{18}) to that of milarite, ($Si_{12}O_{30}$) hangs about this double sheet group, six O^{--} being eliminated. The K^+ ions in milarite occupy positions between the double sheet units, similar to their arrangement in K micas. The analogy to Cs beryl is notable. Ionic distances: Si – O = 1.58 to 1.61 A.; Be – O = 1.65 A.; Ca – O = 2.42 A.; K – O = 3.01 A. The Pauling postulates are strictly fulfilled. The structure is in agreement with the habit of the milarite, the absence of any cleavage, low sp. and d. W. Eitel