S/070/63/008/002/017/017
E039/E435

AUTHORS: Yamzin, I.I., Kuz'minov, Yu.S., Staritsyn, V.Ye., Mal'tsev, Ye.I.

TITLE: A neutron diffractometer

PERIODICAL: Kristallographiya, v.8, no.2, 1963, 302-304

TEXT: This instrument differs from the earlier miniature diffractometer made at the Institute of Crystallography in that it is universal and intended for the investigation of poly and single crystals. The mechanical loading requirement in the design is stringent, e.g. the axial load on the sample stage is about 2 tons. A fairly detailed description of the apparatus is given. Its main dimensions are: length of baseplate 2800 mm, width 1050 mm, height 550 mm, distance from center of sample stage to the end of the cantilever 2000 mm, distance from the center of the stage to the end of the counterweight 650 mm. Overall weight without the electromagnet is about 3 tons. The base is of cast iron with parallel ways for the displacement of the carriage. The latter is moved by means of a worm drive. Ball bearings are used throughout to facilitate operation and ensure long service. All

A neutron diffractometer

S/070/63/008/002/017/017
E039/E435

control is remote except for the reversal of the drive and displacement of the carriage. It has been used with the ВВР-М (VVR-M) reactor at the Physico-technical Institute. A collimated beam of neutrons is incident on a monochromator consisting of a single crystal plate of lead cut at an angle of 6° to the (111) plane; dimensions 100 x 175 x 10 mm, before entering the diffractometer. The whole of the neutron beam from the channel to the sample is contained in a borated-paraffin shield with lead bricks outside. The shield thickness is about 1 m. A СНМО-5 (SNMO-5) counter placed in a cylindrical channel in borated-paraffin is used as a neutron detector on the carriage of the diffractometer. It is used in conjunction with a monitoring counter to correct for fluctuations in the intensity of the primary beam. The resolution $\Delta\lambda/\lambda = 0.035$ for $\lambda = 1.13$ Å. Results obtained from a polycrystalline sample of yttrium ferrite are given. The sample size is diameter 20 mm and length 100 mm. There are 2 figures.

ASSOCIATIONS: Institut kristallografii AN SSSR (Institute of Crystallography AS USSR) Fiziko-tekhnicheskiy

Card 2/3

A neutron diffractometer

S/070/63/008/002/017/017
E039/E435

institut AN SSSR (Physico-technical Institute AS USSR)

SUBMITTED: October 1, 1962

Card 3/3

YAMZIN, I.I.; SIZOV, R.A.

Double coordinate neutron diffractometer. Kristallografiia 9 no.6:946-948 N-D '64. (MIRA 18:2)

1. Institut kristallografii AN SSSR.

AUTHOR: Sizov, R. A.; Yamzin, I. I.

TITLE: The effect of particle size on extinction in neutron diffraction.

L 24377-66 EWT(m)/EWA(d)/T/EWP(t) IJP(c) JD
ACC NR: AP6010980 SOURCE CODE: UR/0056/66/050/003/0595/0604

AUTHORS: Yamzin, I. I.; Sizov, R. A.; Zheludev, I. S.; Perekalina, T. M.; Zalesskiy, A. V.

ORG: Institute of Crystallography, Academy of Sciences SSSR (Institut kristallografii Akademii nauk SSSR)

TITLE: Spin ordering and magnetocrystalline anisotropy in single crystals of $BaCo_xFe_{18-x}O_{27}$ ferrites

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 3, 1966, 595-604

TOPIC TAGS: ferrite, single crystal, magnetic anisotropy, neutron diffraction, nuclear spin, Curie point, temperature dependence, spin wave theory

ABSTRACT: This is a continuation of earlier work by the authors (ZhETF v. 46, 1985, 1964). In this paper new data are presented on the magnetic anisotropy energy of the ferrite system under discussion. The crystals were grown by the Verneuil method and were the same as

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L 24377-66
ACC NR: AP6010980

used in the earlier investigation. In view of the fact that the ferrites investigated exhibit various types of magnetic anisotropy at low temperatures, the authors used a neutron diffraction method to investigate the influence of the cobalt ions on the positions of the spin ordering axis in these crystals in the temperature range from 77K to the Curie temperature. The temperature dependence of the magnetic anisotropy constants was investigated in the same range of temperatures and compared with the theory. The same samples were used to obtain neutron diffraction patterns as were used in the investigation of the magnetic anisotropy. The results show that the spin directions coincide with the directions of the total magnetization vectors of the crystals. The data also indicate that the experimental results can be fully reconciled with a theoretical formula deduced by Ye. A. Turov from the phenomenological theory of spin waves (Fizicheskiye svoystva magnitouporyadochennykh kristallov [Physical Properties of Mangetically Ordered Crystals], AN SSSR, 1963), without need to make allowance for any particular structure model. Orig. art. has: 7 figures, 3 formulas, and 3 tables.

SUB CODE: 20/ SUBM DATE: 25Oct65/ ORIG REF: 003/ OTH REF: 009

Card 2/2 UDC

L 29785-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6015089 SOURCE CODE: UR/0020/66/168/001/0090/0093

AUTHOR: Sizov, R. A.; Yamzin, I. I.

ORG: Institute of Crystallography, Academy of Sciences, SSSR (Institut kristallografii Akademii nauk SSSR)

TITLE: Neutron diffraction study of the magnetic structure of hexagonal ferrites of the Co_xW system

SOURCE: AN SSSR. Doklady, v. 168, no. 1, 1966, 90-93

TOPIC TAGS: neutron diffraction, ferrite, cobalt compound, barium compound, iron compound, magnetic ~~property~~ structure, crystal, polycrystal, nuclear spin

ABSTRACT: In order to determine the spin ordering in ferrites of the Co_xW system ($BaCo_x^{2+}Fe_{2-x}^{3+}Fe_{16}^{3+}O_{27}$), the authors carried out a neutron diffraction analysis on single and polycrystals with compositions x = 0, 0.5, 1.0, 1.5, and 1.75, in the range from 77 to 770°K. The correct values of the magnetic contributions to the diffraction pattern and absolute values of the saturation magnetization were obtained. The model of spin ordering in its general features and the angle between

Card 1/2 UDC: 539

L 29785-66

ACC NR: AP6015089

S

the spin axes and axis c were determined by analyzing the neutron diffraction patterns of polycrystalline specimens. Additional information was obtained from observations of the temperature dependence of the intensity of magnetic reflections from single crystal specimens. The paper was presented by Academician Belov, N. V., 20 Sep 65. Authors thank T. M. Perekalina and R. A. Vaskanyan for providing the specimens, Yu. Z. Nozik for constant interest in the work and useful suggestions, and Prof. J. Bacon for a helpful discussion of the results. Orig. art. has: 2 figures and 2 tables.

SUB CODE: 20/ SUBM DATE: 07Sep65/ ORIG REF: 003/ OTH REF: 007

Card 2/2

L 42814-66 EWT(m)

ACC NR: AP6024675 SOURCE CODE: UR/0070/66/011/004/0695/0698

AUTHOR: Abov, Yu. G.; Aleshko-Ozhevskiy, O. P.; Yermakov, O. N.; Yamzin, I. I.

ORG: Institute of Crystallography, AN SSSR (Institut kristallografii AN SSSR)

TITLE: The generation of a beam of polarized monochromatic neutrons

SOURCE: Kristallografiya, v. 11, no. 4, 1966, 695-698

TOPIC TAGS: neutron beam, ~~reactor neutron~~, neutron polarization, nuclear reactor component, neutron reaction, thermal neutron, magnetic property

ABSTRACT: In recent years, investigations of magnetic properties of a substance have made extensive use of polarized thermal neutrons. Heretofore, the Soviet Union had only installations on which the polarized neutrons were generated by reflection from a magnetized cobalt mirror. However, many problems require a polarized beam of monochromatic neutrons. In this article, the authors describe an assembly developed at the ITEF GK IAE jointly with the Institute of Crystallography, AN SSSR (Institut kristallografii AN SSSR). The circuit of the installation is shown in Fig. 1. There is sometimes a need to have a beam of neutrons with an opposite polarization. The authors used the radiofrequency method for the reorientation of spin orientation. A value of 0.98 ± 0.02 was obtained for the spin reorientation probability.

Card 1/3 UDC: 548.7

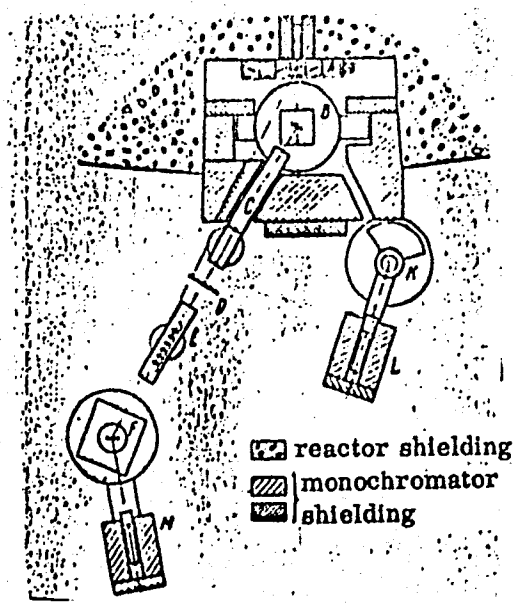


Fig. 1. Circuit of an assembly of two diffraction meters on a reactor channel.

A - stage of replaceable monochromators
B - magnet of the crystal-polarizer
C - first section of the driving field
D - diaphragm, or "shim"
E - second section of the driving field with a radiofrequency coil
F - magnet of the analyzer crystal
K, L - small diffraction meter
M - neutron detector of the large diffraction meter

L 42814-66
ACC NR: AP6024675

3

Measurements of the polarization and of the probability of its reorientation in the center and at the edge of the beam (± 15 mm from the center) agreed. The authors express their sincere gratitude to V. A. Lyubimtsev, P. M. Shishkin, and S. F. Dubinin for assistance in making the measurements and assuring the operation of the equipment. Orig. art. has: 4 figures and 2 formulas. [26]

SUB CODE: 18/ SUBM DATE: 14Nov64/ ORIG REF: 006/ OTH REF: 005/ ATD PRESS: 5067

Card 3/3

SHAMONIN, Yu.Ya.; YAN, S.A.

Solvation of paramagnetic ions in alcohol aqueous solutions studied by means of nuclear magnetic resonance of high resolution. Dokl. AN SSSR 152 no.3:677-679 S '63. (MIRA 16:12)

1. Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR. Predstavleno akademikom A.Ye.Arbuzovym.

SHAMONIN, Yu.Ya.; YAN, S.A.

Solvation of Cu , Mn and Cr ions in alcohol-water solutions studied by the method of nuclear magnetic resonance. Dokl. AN Arm. SSR 38 no.5:289-293 '64. (MIRA 17:6)

1. Fiziko-tekhnicheskiy institut Kazanskogo filiala AN SSSR i TSentral'naya nauchno-issledovatel'skaya fiziko-tekhnicheskaya laboratoriya AN Armyanskoy SSR. Predstavelno chlenom-korrespondentom AN Armyanskoy SSR N.M.Kocharyanom.

YANA Aron

Country : USSR
Category: Forestry. Forest Management.

Abs Jour: RZhBiol., No 11, 1958, No 48745

Author : Yana, Aron
Inst : Moscow Forest Technology Institute
Title : Spruce Increment by Growth and Development Classes.

Orig Pub: Nauchn. tr. Mosk. lesotekhn. in-ta, 1957, vyp. 5, 83-88

Abstract: These observations were made at Sverdlovsk forest range of the Shchelkovo Experimental Training Leskhoz. The age of the plantation was 70 years; its composition was 10 Spruce Aspen; density - 1.0. The soil was turf - slightly podzolic light clayey. It was found that the outward morphological characteristics of the trees, on which the classification was

Card : 1/2

Country : USSR
Category: Forestry. Forest Management.

Abs Jour: RZhBiol., No 11, 1958, No 48745

based, correspond to the rate of current increment. Regardless of the great density and age of the plantation, 45.1% of the trees had not passed the culminating point of the growth increment. The article gives tables on the current increment by height and diameter, by growth and development classes for the past 5 years and for the 5 years preceding them. Observations confirm that the old-stage trees with declining growth increment are felled and the young-stage trees (according to V.G. Nesterov system) are retained, the productivity and quality of the plantations rise. Their viability and resistance to diseases also increase. -- V.V. Protopopov

Card : 2/2

YANA, ARON, Cand Tech Sci -- (diss) "Investigation of the process of mechanizing soil treatment in forests under conditions existing in the Stalingrad, Orenburg, and Moscow Oblasts," Mos ow, 1960, 20 pp, 160 cop. (Moscow Forest Management (Lesotekh) Institute) (KL, 42-60, 115)

YANACH, K. [Janac, K.] (Praga)

Solution of probability problems using simulation. Avtom. i telem. 25 no.1:83-90 Ja '64. (MIRA 17:2)

L 23316-66

ACC NR: AT6004211 SOURCE CODE: BU/2503/65/013/001/0193/0200 18 B+1

AUTHOR: Yanachkova, Iv.; Danchev, Iv.; Petrov, P., Stefanov, D.; Ivanov, S.; Dzhoglev, D.; Bizheva, L.

ORG: none

TITLE: Influence of impurities on the semiconductor properties of thermistors composed of MnO_2-Co_2O_3-Ni_2O_3

SOURCE: Bulgarska akademiya na naukite. Fizicheski institut. Izvestiya na Fizicheskiya institut s ANEB, v. 13, no. 1, 1965, 193-200

TOPIC TAGS: thermistor, electric property, resistor, semiconductivity

ABSTRACT: Heat-sensitive resistors with a negative temperature coefficient are obtained from metal oxides in a ratio of MnO_2-60%, Co_2O_3-29.7% and Ni_2O_3-1.3%. The oxide mixture is doped with solutions of Li_2CO_3, $Cu(NO_3)_2$, CsCl, $CeCl_3$, $Ce(SO_4)_2$ compounds of concentrations of the order of 10^{-6}, 10^{-5}, 10^{-4}, 10^{-3}, 10^{-2}, 10^{-1}, 10^{0} wt % of the metal activator. The obtained mixture is wet-milled

Card 1/2

L 23316-66

ACC NR: AT6004211

dried at 80C and then dry-milled again. The electrical properties of the thermistors obtained by pressing, sintering at 1150C and again at 120C for 200 hours are investigated. By increasing the concentration of the activator the resistance R_{20} of the samples activated by Li^{+} and Cu^{2+} decrease from the order of 1 to 3.5, while the R_{20} of those activated with Cs^{1+}, Ce^{3+} and Ce^{4+} showed no significant changes. The thermistors have a temperature coefficient a_{20}. The X-ray investigation indicated a new phase in the form of tetragonal spinel $CoMn_2O_4$. No structural changes were produced by small amounts of activators. Orig. art. has: 2 figures and 4 tables. [Based on author's abstract]

SUB CODE: 09/ SUBM DATE: none ORIG REF: 002/ SOV REF: 001/
OTH REF : 004/

Card 2/2 LC

L 23315-66
ACC NR: AT6004210 SOURCE CODE: BU/2503/65/013/001/0185/0192

AUTHOR: Stefanov, D.; Danchev, Iv.; Yanachkova, Iv.; Petrov, P.; Ivanov, S.; Dzhoglev, D.; Bizheva, L.

ORG: none

TITLE: X-Ray structural studies of thermistors obtained from the three-component systems MnO_2-Ni_2O_3-Co_2O_3 and MnO_2-Ni_2O_3-ZnO

SOURCE: Bulgarska akademiya na naukite. Fizicheski institut. Izvestiya na Fizicheskiya institut s ANEB, v. 13, no. 1, 1965, 185-192

TOPIC TAGS: thermistor, spinel, mineral, x ray investigation

ABSTRACT: Thermistors baked at a temperature of 1150C, which have been studied in detail in earlier papers are the object of detailed X-ray structural investigations. The X-ray structural data obtained have shown that after baking new chemical compounds are formed of the type of spinels. According to the chemical composition of the mixtures studied, different spinels are formed. The cubic spinel

Card 1/2

L 23315-66
ACC NR: AT6004210

$NiMn_2O_4$ has been established for the mixture I and for the two oxide systems. The intermediary mixtures, II to V included, are represented by cubic spinels of a variable cation composition. Mixture VII is represented by the tetragonal spinels $CoMn_2O_4$ and $ZnMnO_2$. On the basis of data from the literature on the position of the metal cations in $NiMn_2O_4$ and $CoMnO_4$ an attempt has been made to elucidate the distribution of the cations in the spinel structures of thermistors studied by the authors. Orig. art. has: 3 figures and 2 tables. [Based on author's abstract]

SUB CODE: 09, 07/SUBM DATE: none ORIG REF: 002/ SOV REF: 004/

Card 2/2 UVR

L 30155-66 EWP(t)/ETI IJP(c) JD

ACC NR: AP6020620 SOURCE CODE: BU/0011/65/018/003/0227/0230

43
B

AUTHOR: Kurchatov, M.; Yanakiyev, N.

ORG: Institute of General and Inorganic Chemistry, BAN

TITLE: Study of iron oxide reduction by solid carbon using methods for the simultaneous observation of the kinetic and temperature curves

SOURCE: Bulgarska akademiya na naukite. Doklady, v.18, no.3, 1965, 227-230

TOPIC TAGS: chemical reduction, thermal analysis, chemical kinetics, iron oxide, carbon

ABSTRACT: Although several researchers studied the reduction of iron oxides by solid carbon (see, e.g., A. K. Ashin, S. T. Rostovtsev, Izv. vysshikh uchebnykh zavedeniy, Kh. M., 1964, No 4, 11), The kinetics and the mechanism of this process are still subject to differing interpretations. The majority of the approaches does not take into account the real temperature of the reduced sample although the reaction proceeds with a considerable endothermic effect. Consequently, the authors carried out a simultaneous determination of the reduction rate by the amount and composition of the outgoing gases, and of the thermal effects by a modified method of differential thermal analysis. Results are shown in graphic form. This article was presented by Academician D. Ivanov on 30 October 1964. [Orig. art. in Russian] [JPRS]

SUB CODE: 07 / SUBM DATE: 30Oct64 / ORIG REF: 005 / OTH REF: 001 / SOV REF: 005

Card 1/1

L 32217-66 EWP(t)/ETI IJP(c) JD

ACC NR: AP6020814 SOURCE CODE: BU/0011/65/018/006/0541/0544

AUTHOR: Kurchatov, M. S.; Lambiyev, D.; Yanakiyev, N.

ORG: Institute of General and Inorganic Chemistry, BAN

TITLE: Influence of thermal effects of reactions on the course of carbon reduction of iron oxides. 21

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 6, 1965, 541-544

TOPIC TAGS: thermal effect, iron oxide, thermogravimetric analysis, chemical reduction, carbon, reaction temperature

ABSTRACT: Correct conclusions concerning the kinetics and mechanisms of chemical processes may be extracted from experimental data only if the experiments are carried out at constant temperature and concentration. This is an admittedly difficult task. In one of their earlier papers, two of the authors (Lambiyev, Kurchatov, Dokl. BAN, 17, 1964, No 8, 729) showed during thermogravimetric studies of reduction of copper oxides by carbon oxide and hydrogen that the actual temperature of the sample may rise by several hundreds of degrees during the reduction process. It became perfectly clear that the S shaped appearance of the kinetic curves is basically caused by self-heating. The present paper describes similar tests involving iron oxides and solid carbon. After a preliminary work using the same equipment as the one described in the reference, the authors developed a new instrument - oven described in a separate article (Kurchatov, Stal', 23, 1964, No 3, 212). A comprehensive presentation of the results is followed by a discussion of the possible explanations. Results indicate that the course of reduction is significantly affected by the heat effects of the reaction, the mass of the reacting mixture, and the heating rate. This paper was presented by Academician D. Ivanov on 19 February 1965. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 07, 20/SUBM DATE: 19Feb65/ ORIG REF: 002/ SOV REF: 001

Card 1/1 LS

YAHANIS, S.V.

The conscious and automatic elements in skills and habits. Vop. psikhol.3 no.1:144-148 Ja-F '57. (MLRA 10:3)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut im. A.I. Gertsena.

(Ability) (Habit)

MAKAROV, A.D.; YANATAROV, R.A.

Relationship between the dimensional wear of cutting tools and the diameter of boring. Stan. i instr. 35 no.6:28-29 Je '64 (MIRA 17:8)

YANAK, Ya. [Janak, J.]; GRZHIVNACH, M. [Hrivnac, M.]

Presence of indole in naphthalene oil and its products. Koks i khim. no.7:48-50 '65. (MIRA 18:8)

1. Akademiya nauk Chekhoslovatskoy Sots'alisticheskoy Respubliki, analiticheskaya laboratoriya.

YAKOVLEV, Nikolay Nikolayevich, prof.; KOROBKOV, Anatoliy Vital'yevich; YANANIS, Stanislav Vladimirovich; BERZIN, A.A., red.; MANINA, M.P., tekhn. red.

[Physiological and biochemical principles in the theory and methodology of sports training] Fiziologicheskie i biokhimicheskie osnovy teorii i metodiki sportivnoi trenirovki. Izd.2., perer. i dop. Moskva, Gos.izd-vo "Fizkul'tura i sport," 1960. 405 p. (MIRA 14:12)

(PHYSICAL EDUCATION AND TRAINING)

YANASH, G. G.

Tree Planting

Appearance of interspecie mutual aid in forest planting on dry dune sands of the Buzuluk pine forest. Les. khoz. 5 no. 2 (41), 1952

Monthly List of Russian Accessions, Library of Congress, JULY 1952. Unclassified.

YANAT'YEV, P. B.

584 opyt mekhanizatsii i elektrifizkatsii soukhoza "metallist" Stalinskogo svinovodmoltresta Ministerstva sovkhozov USSR. [m.], 1954. 8 s 20 sm. (M-vo sel'skogo khozyastva SSSR. M-vo sovkhozov SSSR. Vsesoyuz. nauch inzh-tekhn. o-vo energetikov. Nauch.-tekhn. soveshchaniye po mekhanizatsii i elektrifikatsii trudoyemkikh protsessov v zhivornovodstve). 1.000 ekz. Bespl.-- /54-54646/ p 636.0025 (47.715)

SO: Knizhnaya Letopis, Vol. 1, 1955

L 23201-66 EWT(1)/FCC/EWA(h) GW

ACC NR: AP6004981 SOURCE CODE: UR/0031/66/000/001/0079/0085

AUTHOR: Kanonidi, Kh. D.; Yenatkhanov, F. N.

43
41
B

ORG: none

TITLE: Magnetic observatories in Kazakhstan

SOURCE: AN KazSSR. Vestnik, no. 1, 1966, 79-85

TOPIC TAGS: earth magnetic field, ionospheric physics, magnetic field measurement

ABSTRACT: The first magnetic observatory in Kazakhstan started operation in April, 1963, in the Alma-Ata district. In July, 1964, construction was started on the Karagandinsk magnetic observatory and, at the start of December, on the third magnetic observatory in Kazakhstan -- the Kazalinsk observatory. All these observatories form part of complex ionosphere stations which, in turn, are subordinated to the Ionospheric Section of the AN KazSSR. The observatories are constructed in the form of three "pavilions," and are completely built with domestic equipment. The article contains a description of each of these three stations. The Alma-Ata observatory is located at a distance of 20 kilometers from the city, in the mountains at an altitude of 1300 meters above sea level.

Card 1/2

L 23201-66

ACC NR: AP6004981 2

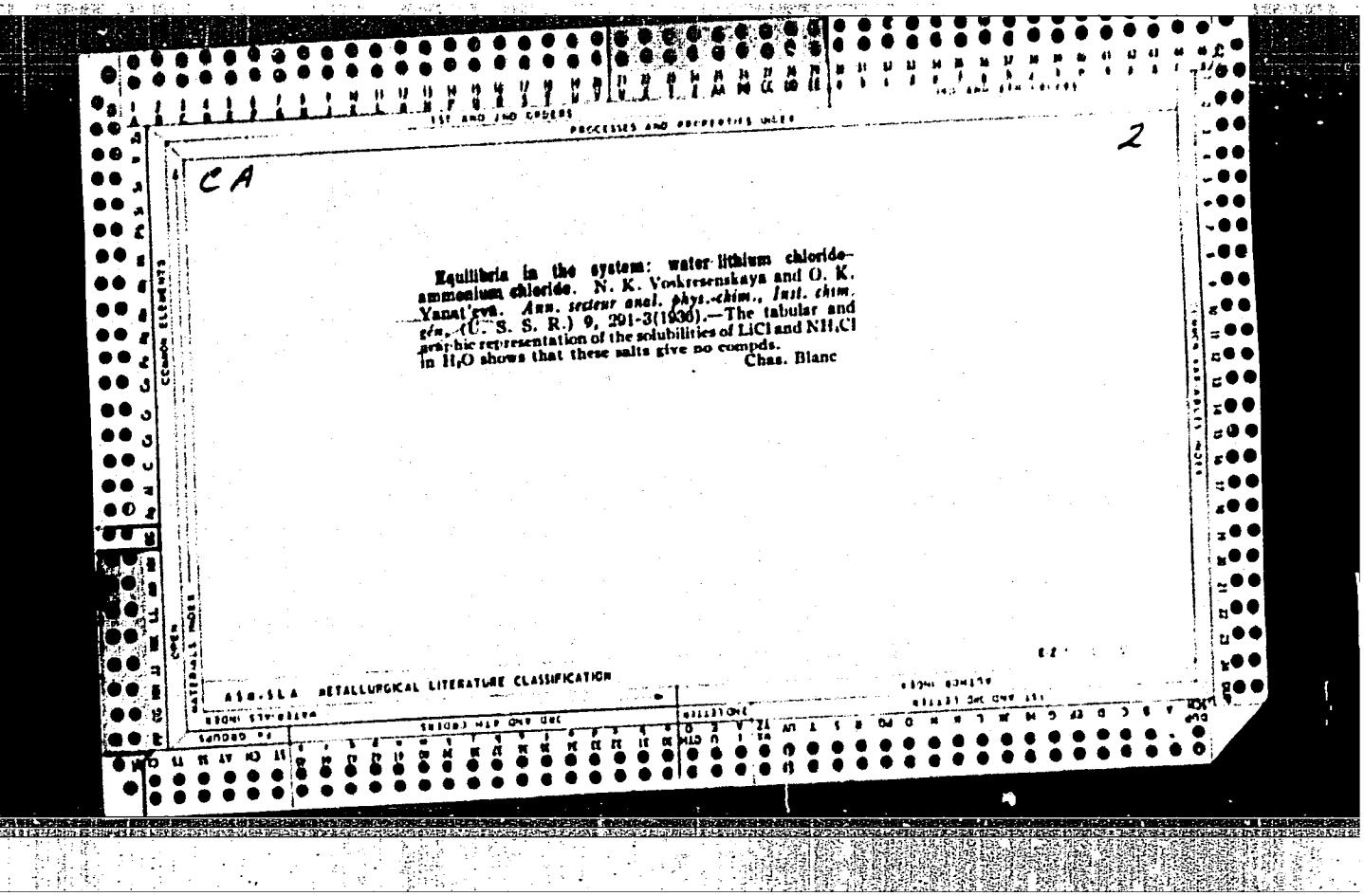
The magnetic complex is in the form of three pavilions, the distance between the centers of which is 25-27 meters. The article gives a diagram of the electrical circuit and recordings of actual measurements. The Karagandinsk magnetic observatory is located in the Bereznyaki district, 20 kilometers from the city and 70 kilometers from Karaganda. The Kazalinsk magnetic observatory is located 3 kilometers from the city of Novo-Kazalinsk. The article gives the same type of data on these last two observatories as for the Alma-Ata establishment. Orig. art. has: 5 figures.

SUB CODE: 08/ SUBM DATE: none.

Card 2/2 PB

YANAT'YEVA, O.K.; ORLOVA, V.T.; KUZNETSOV, V.G.

Nature of the glaserite phase in the system K_2SO_4 - Na_2SO_4 - H_2O.
Zhur. neorg. khim. 8 no.7:1756-1765 Jl '63.
(MIRA 16:7)
(Alkali metal sulfates) (Aphthitalite)

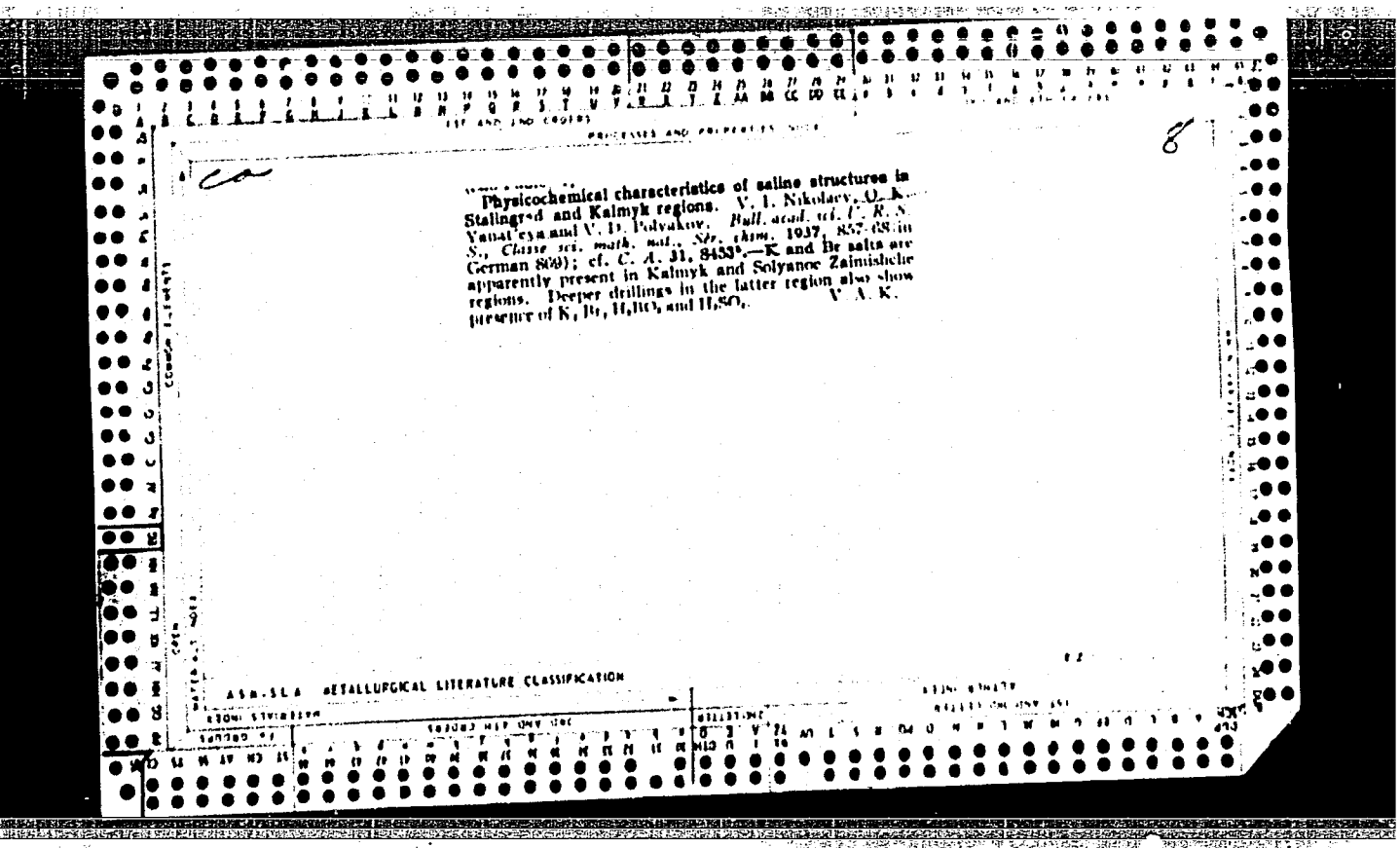


CA

2

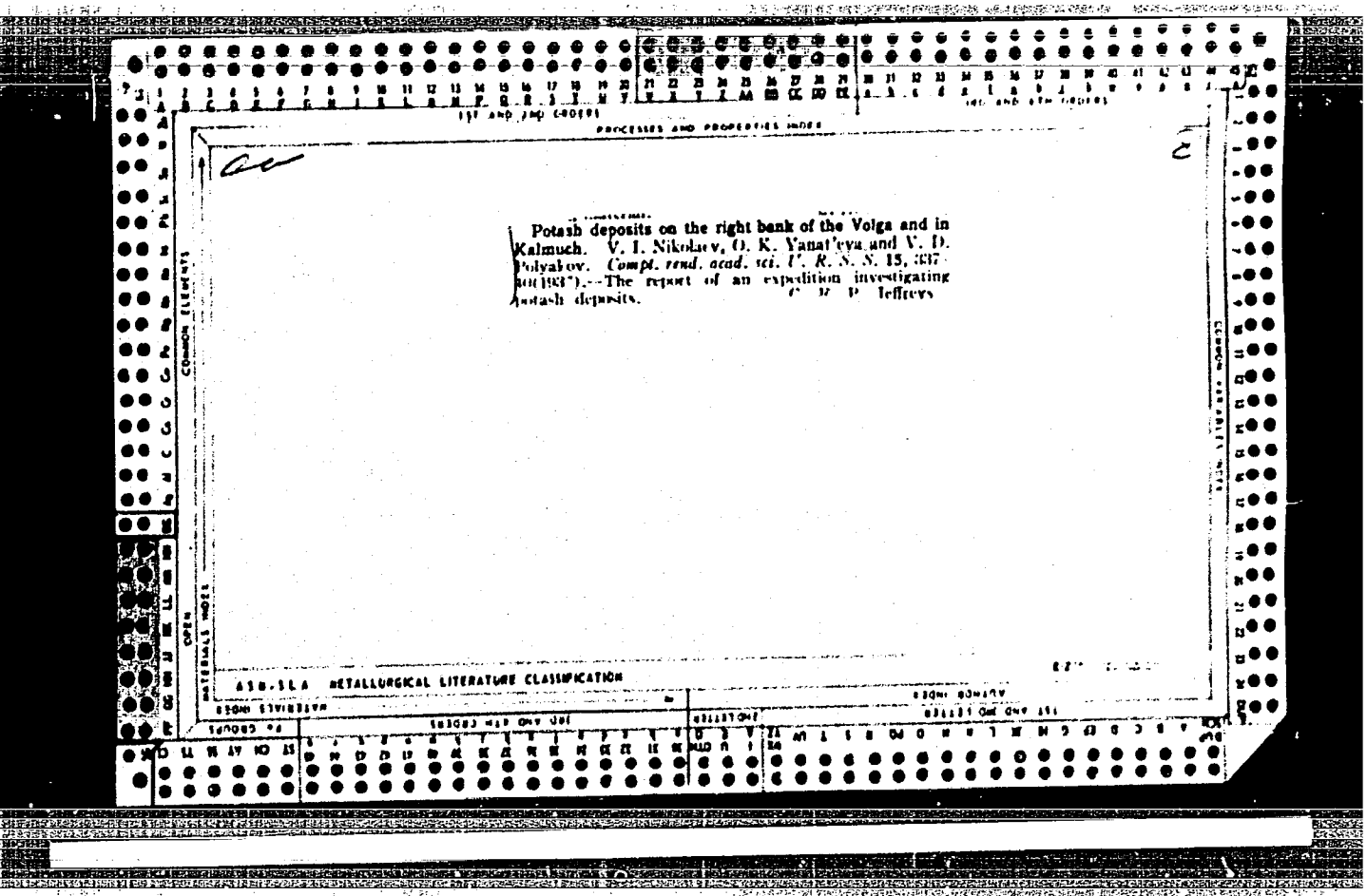
Equilibria in the system: water–lithium chloride–ammonium chloride. N. K. Voskresenskaya and O. K. Yanat'eva. *Ann. secteur anal. phys.-chim., Inst. chim. gén.* (U. S. S. R.) 9, 291-3(1936).—The tabular and graphic representation of the solubilities of LiCl and NH_4Cl in H_2O shows that these salts give no compds.

Chas. Blanc

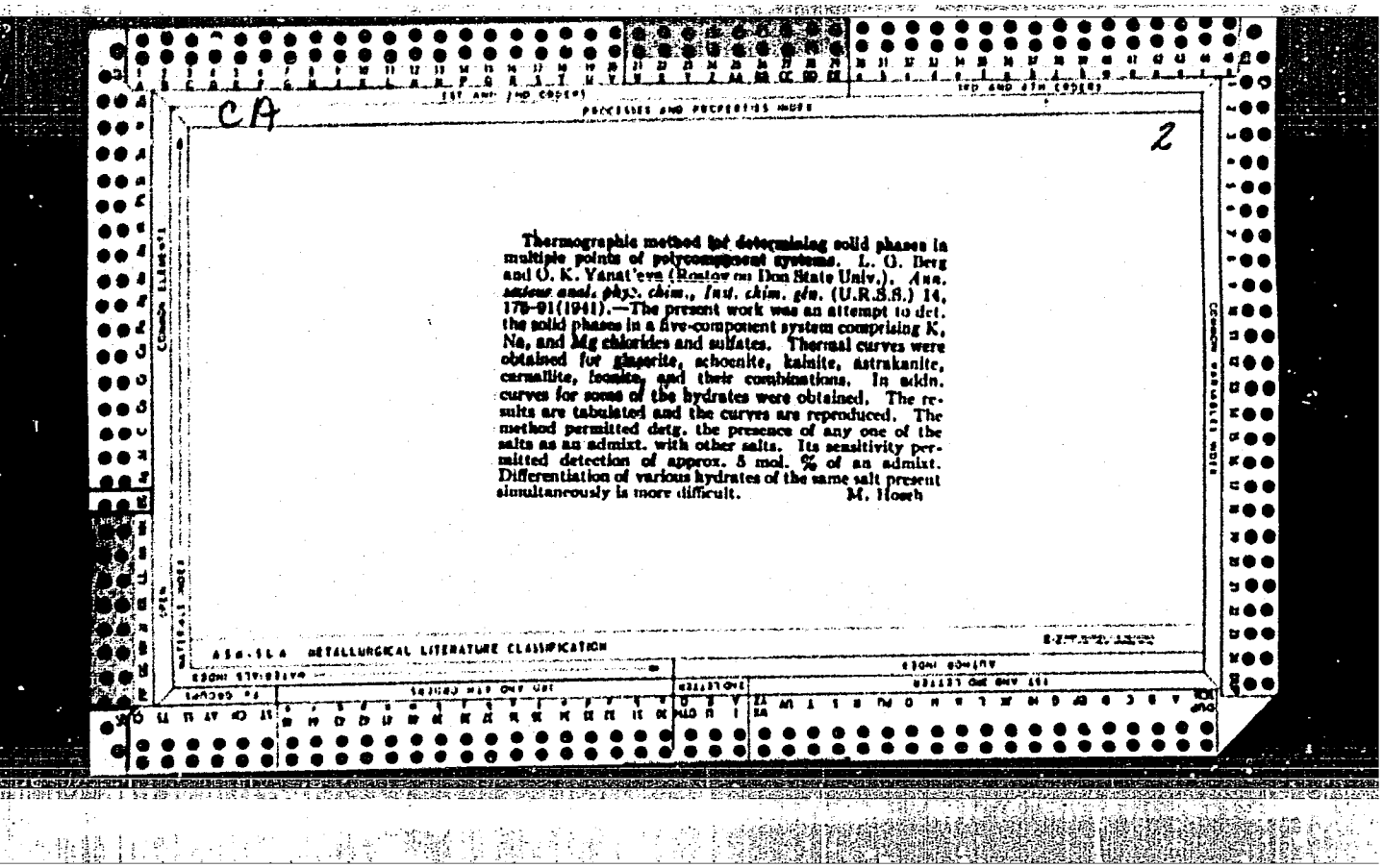


Physicochemical characteristics of saline structures in Stalingrad and Kalmyk regions. V. I. Nikolaev, O. K. Yanat'eva and V. D. Polyakov. *Bull. acad. sci. U. R. S. S., Classe sci. math. nat., Sér. chim.* 1937, 857-68 (in German 869); cf. *C. A.* 31, 8433⁹.—K and Br salts are apparently present in Kalmyk and Solyanoe Zaimishche regions. Deeper drillings in the latter region also show presence of K, Br, H_2BO_3, and H_2SO_4. V. A. K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Potash deposits on the right bank of the Volga and in Kalmuch. V. I. Nikolaev, O. K. Yanat'eva and V. D. Polyakov. *Compt. rend. acad. sci. U. R. S. S.* 15, 537-40(1937).—The report of an expedition investigating potash deposits.

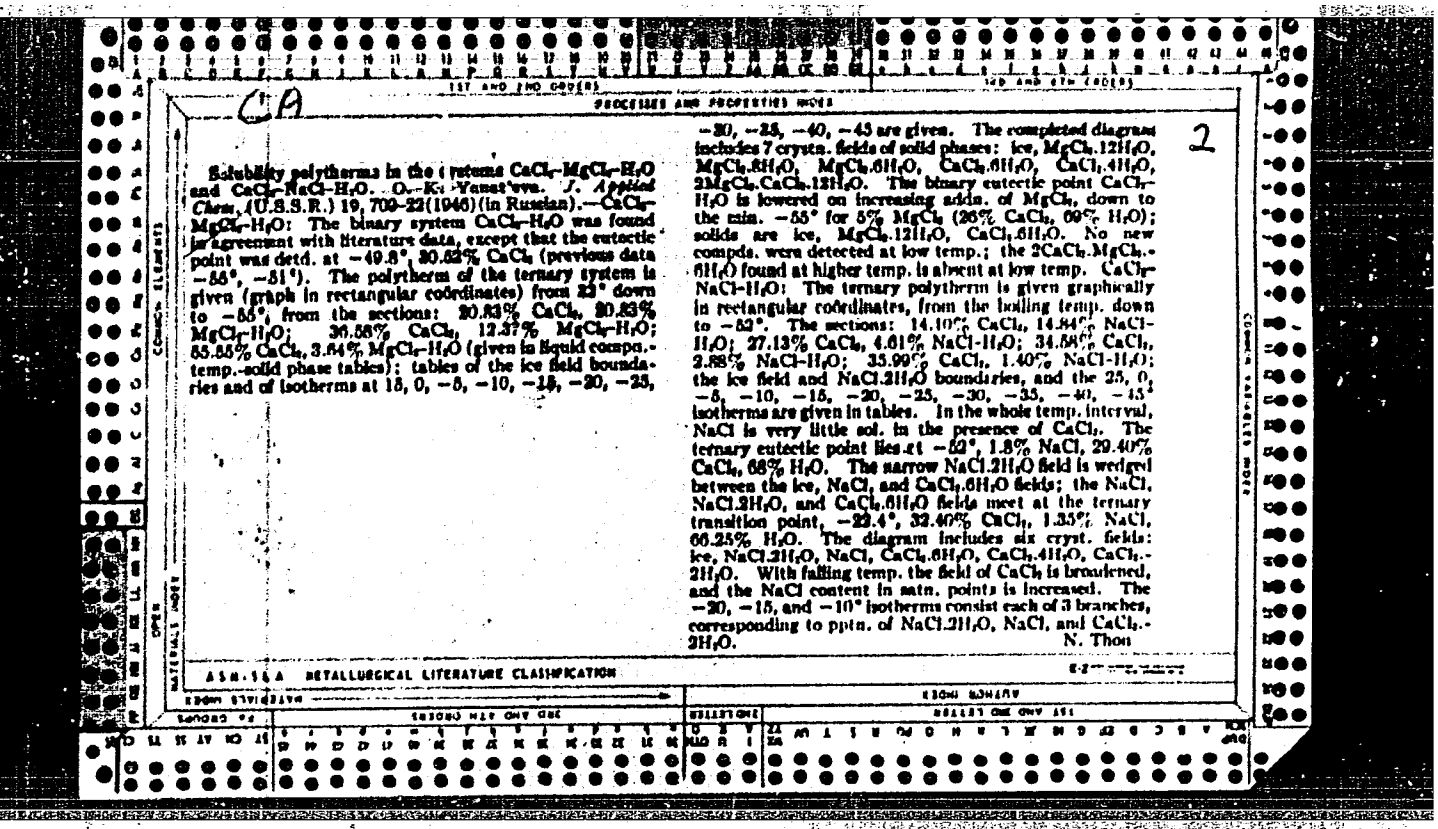


CA

2

Thermographic method for determining solid phases in multiple points of polycomponent systems. L. G. Berg and O. K. Yanat'eva (Rostov-na-Don State Univ.). *Ann. sektora analiz. fiziko-khim., Inst. obshch. neorg.* (U.R.S.S.) 14, 178-91(1941).—The present work was an attempt to det. the solid phases in a five-component system comprising K, Na, and Mg chlorides and sulfates. Thermal curves were obtained for glaserite, schoenite, kainite, astrakanite, carnallite, leonite, and their combinations. In addn. curves for some of the hydrates were obtained. The results are tabulated and the curves are reproduced. The method permitted detg. the presence of any one of the salts as an admixt. with other salts. Its sensitivity permitted detection of approx. 5 mol. % of an admixt. Differentiation of various hydrates of the same salt present simultaneously is more difficult. M. Hosch

A56-51A METALLURGICAL LITERATURE CLASSIFICATION



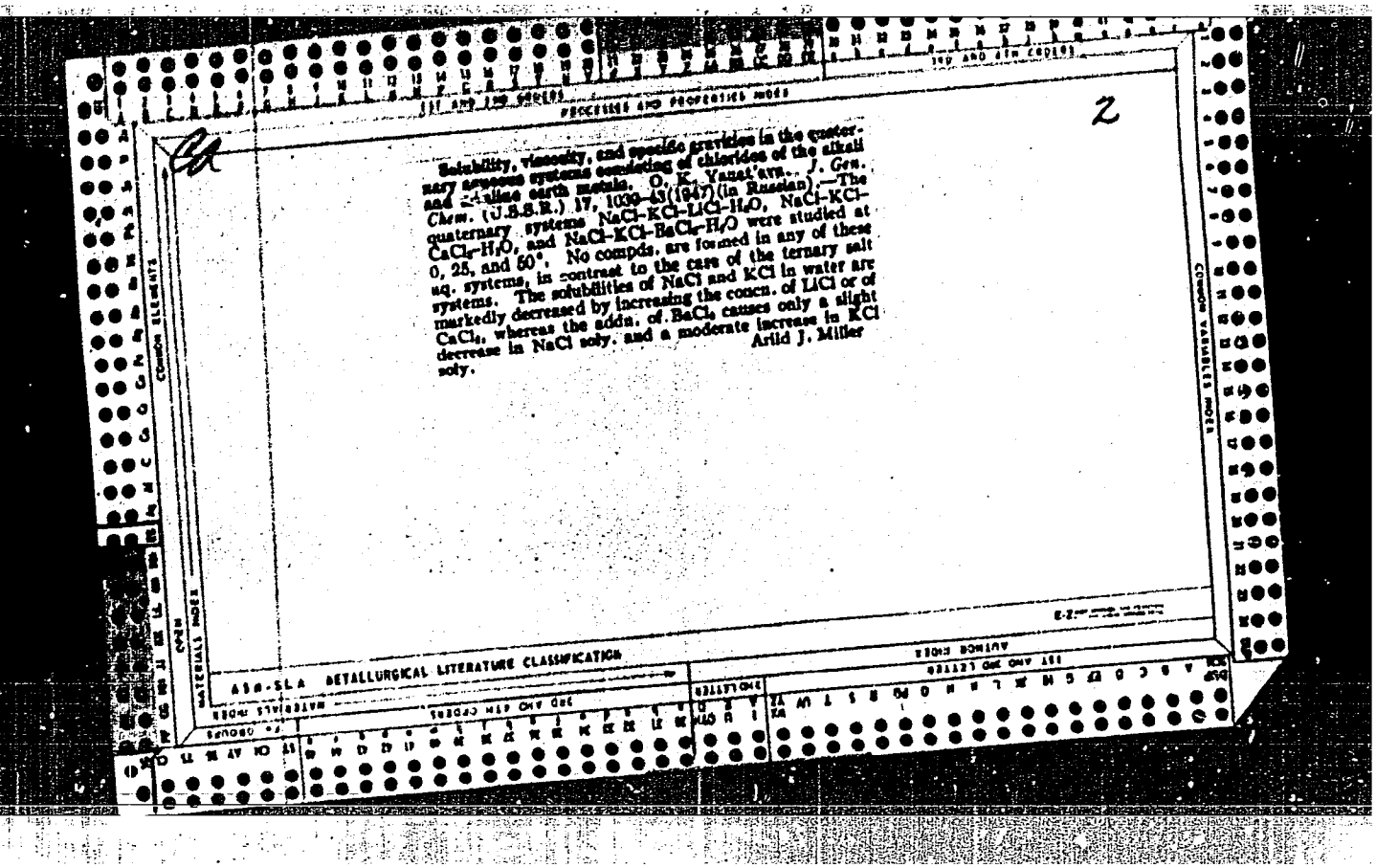
CA

2

Solubility polytherms in the systems $CaCl_2$–$MgCl_2$–H_2O and $CaCl_2$–NaCl–H_2O. O. K. Yanat'eva. *J. Applied Chem.* (U.S.S.R.) 19, 709–22(1946)(in Russian).—$CaCl_2$–$MgCl_2$–H_2O: The binary system $CaCl_2$–H_2O was found in agreement with literature data, except that the eutectic point was detd. at −49.8°, 30.62% $CaCl_2$ (previous data −55°, −51°). The polytherm of the ternary system is given (graph in rectangular coördinates) from 25° down to −55°, from the sections: 20.83% $CaCl_2$, 20.83% $MgCl_2$–H_2O; 36.56% $CaCl_2$, 12.37% $MgCl_2$–H_2O; 55.55% $CaCl_2$, 3.64% $MgCl_2$–H_2O (given in liquid compns.-temp.-solid phase tables); tables of the ice field boundaries and of isotherms at 15, 0, −5, −10, −15, −20, −25, −30, −35, −40, −45 are given. The completed diagram includes 7 cryst. fields of solid phases: ice, $MgCl_2.12H_2O$, $MgCl_2.8H_2O$, $MgCl_2.6H_2O$, $CaCl_2.6H_2O$, $CaCl_2.4H_2O$, $2MgCl_2.CaCl_2.12H_2O$. The binary eutectic point $CaCl_2$–H_2O is lowered on increasing addn. of $MgCl_2$, down to the min. −55° for 5% $MgCl_2$ (26% $CaCl_2$, 69% H_2O); solids are ice, $MgCl_2.12H_2O$, $CaCl_2.6H_2O$. No new compds. were detected at low temp.; the $2CaCl_2.MgCl_2.6H_2O$ found at higher temp. is absent at low temp. $CaCl_2$–NaCl–H_2O: The ternary polytherm is given graphically in rectangular coördinates, from the boiling temp. down to −52°. The sections: 14.10% $CaCl_2$, 14.84% NaCl-H_2O; 27.13% $CaCl_2$, 4.61% NaCl-H_2O; 34.58% $CaCl_2$, 2.88% NaCl-H_2O; 35.99% $CaCl_2$, 1.40% NaCl-H_2O; the ice field and $NaCl.2H_2O$ boundaries, and the 25, 0, −5, −10, −15, −20, −25, −30, −35, −40, −45° isotherms are given in tables. In the whole temp. interval, NaCl is very little sol. in the presence of $CaCl_2$. The ternary eutectic point lies at −52°, 1.8% NaCl, 29.40% $CaCl_2$, 68% H_2O. The narrow $NaCl.2H_2O$ field is wedged between the ice, NaCl, and $CaCl_2.6H_2O$ fields; the NaCl, $NaCl.2H_2O$, and $CaCl_2.6H_2O$ fields meet at the ternary transition point, −22.4°, 32.40% $CaCl_2$, 1.35% NaCl, 66.25% H_2O. The diagram includes six cryst. fields: ice, $NaCl.2H_2O$, NaCl, $CaCl_2.6H_2O$, $CaCl_2.4H_2O$, $CaCl_2.2H_2O$. With falling temp. the field of $CaCl_2$ is broadened, and the NaCl content in satn. points is increased. The −20, −15, and −10° isotherms consist each of 3 branches, corresponding to pptn. of $NaCl.2H_2O$, NaCl, and $CaCl_2.2H_2O$.

N. Thon

ASM-16A METALLURGICAL LITERATURE CLASSIFICATION



Solubility, viscosity, and specific gravities in the quaternary aqueous systems consisting of chlorides of the alkali and alkaline earth metals. O. K. Yanat'eva. *J. Gen. Chem.* (U.S.S.R.) 17, 1039–43 (1947) (in Russian).—The quaternary systems NaCl–KCl–LiCl–H_2O, NaCl–KCl–$CaCl_2$–H_2O, and NaCl–KCl–$BaCl_2$–H_2O were studied at 0, 25, and 50°. No compds. are formed in any of these aq. systems, in contrast to the case of the ternary salt systems. The solubilities of NaCl and KCl in water are markedly decreased by increasing the concn. of LiCl or of $CaCl_2$, whereas the addn. of $BaCl_2$ causes only a slight decrease in NaCl soly. and a moderate increase in KCl soly.

Arlid J. Miller

YANAT'YEVA, O. K.

PA 64T74

USSR/Oceanology
Sea Water

Jan 1948

"Research on the Equilibrium at 55° C of Na, Mg ‖ Cl, SO_4 - H_2O in a Marine System," O. K. Yanat'yeva, Inst of Gen and Inorg Chem, Acad Sci USSR, 9 pp

"Zhur Prik Khim" Vol XXI, No 1

Full studies of the five-component marine system: Answers obtained for problems of the crystallization of sea water, vacuum vaporization, and purification of brine during the process of obtaining manganese chloride products. Submitted 28 Apr 1947.

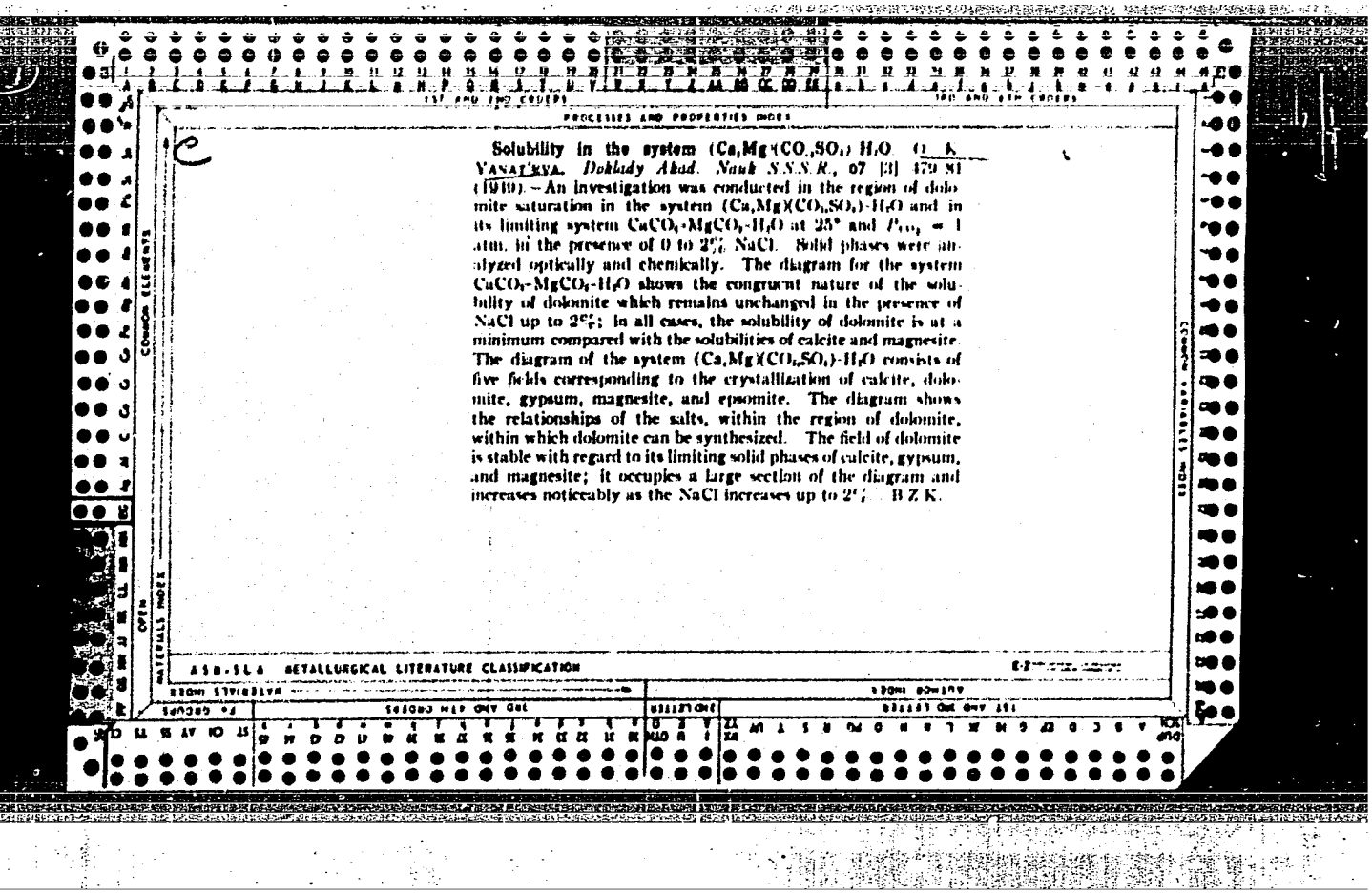
64T74

CA

2

Equilibria in the sea system K, Na, Mg || Cl, SO_4, H_2O at 25°. I. O. K. Yanat'eva (Inst. Gen. and Inorg. Chem., Acad. Sci. U.S.S.R.). *Trevil. Sektora Fiz.-Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R.* 17, 370–82(1949).—The expti. data were combined with data available in the literature, and on this basis was constructed a prismatic phase diagram for the five-component system at 25°. This diagram contains 15 spaces of salt crystn.

M. Hosch



PROCESSES AND PROPERTIES INDEX

Solubility in the system $(Ca,Mg)(CO_3,SO_4)$ H_2O O K

VANAT'KVA. *Doklady Akad. Nauk S.S.S.R.*, 67 [3] 479 81 (1949). – An investigation was conducted in the region of dolomite saturation in the system $(Ca,Mg)(CO_3,SO_4)$-H_2O and in its limiting system $CaCO_3$-$MgCO_3$-H_2O at 25° and P_{CO_2} = 1 atm. in the presence of 0 to 2% NaCl. Solid phases were analyzed optically and chemically. The diagram for the system $CaCO_3$-$MgCO_3$-H_2O shows the congruent nature of the solubility of dolomite which remains unchanged in the presence of NaCl up to 2%; in all cases, the solubility of dolomite is at a minimum compared with the solubilities of calcite and magnesite. The diagram of the system $(Ca,Mg)(CO_3,SO_4)$-H_2O consists of five fields corresponding to the crystallization of calcite, dolomite, gypsum, magnesite, and epsomite. The diagram shows the relationships of the salts, within the region of dolomite, within which dolomite can be synthesized. The field of dolomite is stable with regard to its limiting solid phases of calcite, gypsum, and magnesite; it occupies a large section of the diagram and increases noticeably as the NaCl increases up to 2%. B Z K.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

YANAT'YEVA, O.K.

02

Solubility of dolomite in aqueous salt solutions. O. K. Yanat'eva. *Izvest. Sektora Fiz.-Khim. Anal., Akad. Nauk S.S.S.R.* 20, 252-08(1950).—The soly. of dolomite was studied in the presence of Ca and Mg carbonates and sulfates at 25° and P_{CO_2} = 1 atm. and in the presence of up to 2% NaCl. In all, 16 compns. were studied. First were obtained time *vs.* concn. curves, time running up to 284 days. In most but not in all of the studied compns. equil. was attained within this time. The effect of salts on the soly. of dolomite varied. Phase diagrams were constructed for the systems $CaCO_3$–$MgCO_3$–H_2O and ($CaCO_3$ + $MgSO_4$ = $CaSO_4$ + $MgCO_3$)–H_2O, both at equil. and non-equil. The crystn. field of dolomite is the largest on the diagram and is bordered by fields of calcite, gypsum, and magnesite. In the presence of NaCl the dolomite field extends in the direction of gypsum. NaCl also shrinks the field of calcite. On the univariant curves delineating the dolomite field, dolomite + calcite, dolomite + gypsum, and dolomite + magnesite crystd. These were stable pairs. The coexistence of dolomite and epsomite is prevented by the intervening field of magnesite even as the co-existence of calcite and magnesite is prevented by the intervening dolomite field. The triple points on the diagram correspond to epsomite + magnesite + gypsum, dolomite + gypsum + magnesite, and dolomite + gypsum + calcite. The 1st and 3rd of these points are eutonic and the 2nd a transition point. This diagram enables elucidation of the synthesis of dolomite, metamorphosis of brines, and estn. of the aggressive action of natural waters on carbonate rocks.

M. Hoseh

YANAT'YEVA, O. K.

"The Hydrated Form of Potassium Sulfate," by M. P. Shul'gina, O. S. Kharchuk, and O. K. Yanat'yeva, Doklady Akad. Nauk SSSR, 73, 1950 p. 507-510.

$K_2SO_4.H_2O$ is commonly supposed not to exist. New detns. of the polytherm of the system K_2SO_4-H_2O from 30° downwards, with mixts. differing by 0.05-0.15% K_2SO_4, showed a new crystn. branch beginning with a sharp inflection, at 9.7°, toward the temp. axis, and ending in the eutectic point at -1.8°. The transition point at 9.7° corresponds to 8.48% K_2SO_4, the eutectic at -1.8° to 7.09%. These results were confirmed by isothermal detns. at 2, 5, and 6°, which gave points lying exactly on the new branch. By cross-inoculation of 2 systems satd. at 6°, one of which had to be the stable, the other the metastable one, the new branch was shown to correspond to the stable system, the "old", i.e., the uninflected branch, with a eutectic point at -1.9°, being unstable. Crystals taken from the stable system lost 8.97-9.20% on drying at 150°; by the device of crystn. in the presence of KI, permitting a correction for the mother liquor adhering to the crystals, the H_2O content was detd., more accurately, to 9.20%; the theoretical value for $K_2SO_4.H_2O$ is 9.32%. Under the microscope, crystals of $K_2SO_4.H_2O$ are clearly distinguishable from K_2SO_4. Finally, thermography of crystals of $K_2SO_4.H_2O$ gave an arrest at - 1.8 (eutectic fusion) and a transition at 9.8° (dehydration).

N. Thon

Effect of mechanical pressure on reactions between salts in the solid state. L. G. Berg, O. K. Yanat'eva, and R. M. Savitskii. *Doklady Akad. Nauk S.S.S.R.* 73, 383-6 (1950).—Finely ground mixts. of the salts were subjected, at room temp., to a pressure of 6000 atm. for 5 min. (1) In the systems $CaCO_3 + MgCO_3$ and $K_2SO_4 + 2MgSO_4.H_2O$, thermograms taken before and after application of the pressure proved to be identical, indicating absence of a reaction (formation of dolomite or langbeinite; resp.), as expected from calcn. of the mol. vols. In the following systems, however, compression did result in the appearance of slight new thermal effects in the thermograms, which increased on repeated grinding and compression, and thus indicated some slight degree of chem. reaction. (2) In $CaCO_3 + MgSO_4.H_2O$, taken either in a 2:1 or a 1:10 mole ratio (the latter corresponding to equal vols.), compression resulted, in the 1st instance, in a new endothermal effect at about 750°, resembling that of dolomite; compression at 300° gave rise to an addn. effect at 650°, which might be ascribed to magnesite, although even pure kieserite sometimes shows a very slight endothermal effect at 620°. With a 1:10 mol. ratio, endothermal effects at 660 and at 740°, and a small exothermal effect at 770-90°, were observed both in the initial mixt. and after compression. The endothermal $CaCO_3$ dissocn. effect at 900° was occasionally suppressed, owing no doubt to superposition of an exothermal effect possibly due to interaction between CaO and $MgSO_4$. The amt. of reaction products in this system does not, at any rate, exceed 1-2%, and, consequently, these products cannot be detected by x-rays or crystalloöptic methods. (3) In $Na_2SO_4 + 3K_2SO_4$, compression causes the endothermal effect at 575° (polymorphic transition of K_2SO_4) to disappear, whereas the Na_2SO_4 effect at 240° remains unchanged. Furthermore, two new effects appear at 430° and at 450°; the first corresponds to decompn. of glaserite $3K_2SO_4.Na_2SO_4$, whereas the 2nd might belong to transition of K_2SO_4 at a temp. lowered owing to formation of solid soln. On 5 times repeated compression, the effect at 430° increased relative to the polymorphic transition effect at 520°. (4) In $Na_2SO_4 + CaSO_4.0.5H_2O$, formation of glauberite, $Na_2SO_4.CaSO_4$ was clearly indicated by the disappearance of the exothermal effect at 345°, ascribed to rearrangement of the lattice of anhyd. $CaSO_4$; the endothermal effects at 175 and at 240° (dehydration of $CaSO_4.0.5\ H_2O$ and transition of Na_2SO_4, resp.) remained unchanged. A slight endothermal effect, absent in the original mixt., appeared on compression at 540°. The amt. of glauberite formed increased on repeated compressions, and also on prolonged (6 hrs.) single compression. N. Thon

YANATYEVA, O.K.

USSR/Chemistry - Inorganic chemistry

Card 1/1 Pub. 40 - 24/27

Authors : Yanatyeva, O. K.

Title : Water solubility of dolomite in the presence of CO_2

Periodical : Izv. AN SSSR. Otd. khim. nauk 6, 1119-1120, Nov-Dec 1954

Abstract : A brief report is presented on the solubility of dolomite in water in the presence of CO_2. The relation between the dolomite solubility and the partial CO_2 pressure is explained. Some experimental results obtained in dissolving dolomite in the presence of CO_2 are described. Three references: 2 USSR and 1 USA (1940-1950). Table; graphs.

Institution : Acad. of Sc., USSR, The N. S. Kurnakov Institute of General and Inorganic Chemistry

Submitted : April 7, 1954

YANATYEVA, O. K.

USSR/Chemistry

Card 1/2

Author : Yanatyeva, O. K.

Title : Physico-chemical characteristics of certain carbonate species

Periodical : Dokl. AN SSSR, 96, Ed. 4, 777 - 779, June 1954

Abstract : The investigation of the physico-chemical and solubility characteristics of carbonate rocks, necessary in solving numerous problems connected with the exploitation of the sources of these rocks, is described. An equilibrium diagram of the system, which may serve as a means of characterizing certain carbonate rocks, containing small admixtures, of sulfates and traces of chlorided, is given. The solubility of the rock will be affected to a known degree by the admixtures, contained in it (humic acid, silica, clay, etc.), however, the general rules, govern-

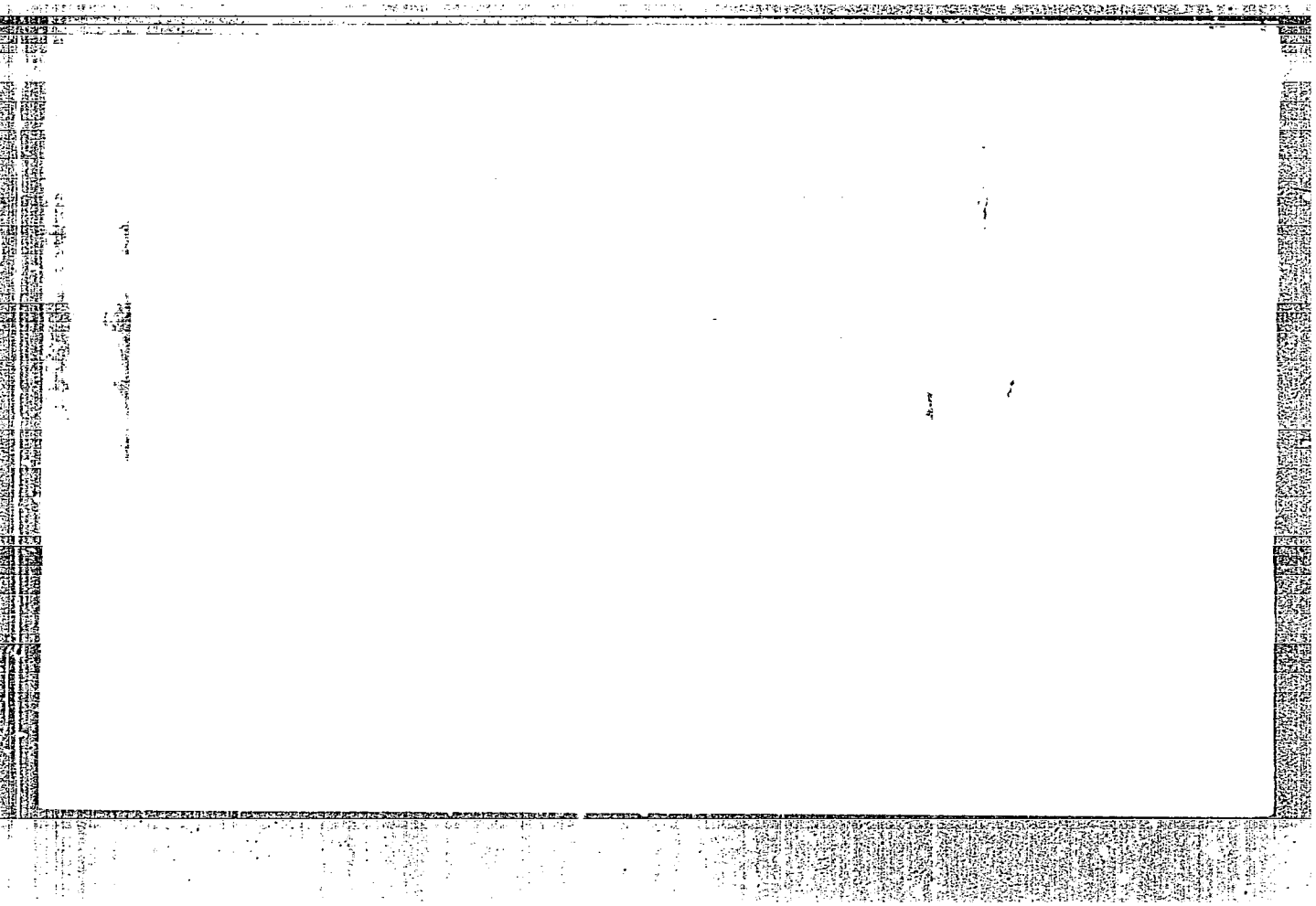
Dokl. AN SSSR, 96, Ed. 4, 777 - 779, June 1954 (Additional Card)

Card 2/2

Abstract : ing the solubility of carbonate species, will basically remain unchanged. Two references. Tables, graphs.

Institution : Acad. of Sc. USSR, The N. S. Kurnakov Institute of Gen. & Inorg. Chem.

Presented by: Academician G. G. Urazov, March 9, 1954



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030004-6"

SHUL'GINA, M.P.; KHARCHUK, O.S.; YANAT'YEVA, O.K.

New solid phases in the system: KCl—K_2SO_4—H_2O. Izv.Sekt.fiz.-khim. anal. 26:198-210 '55. (MIRA 8:9)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR i Stalinskiy meditsinskiy institut im. A.M. Gor'kogo.
(Potassium salts) (Systems (Chemistry))

YANAT'YEVA, O.K.

Solubility isotherms 0° and 55° for the system: Ca, Mg CO_3, SO_4—H_2O. Izv.Sekt.fiz.-khim.anal. 26:266-269 '55. (MIRA 8:9)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR. (Calcium salts) (Magnesium salts) (Solubility)

USSR/Chemistry - Geochemistry

Card 1/2 Pub. 22 - 34/51

Authors : Ianatyeva, O. K.

Title : Effect of aqueous gypsum solutions on dolomite in the presence of CO

Periodical : Dok. AN SSSR 101/5, 911-912, Apr 11, 1955

Abstract : The interesting results obtained in studying the effect of pure water and aqueous gypsum solutions on dolomite ($CaCO_3 \cdot MgCO_3$) at various partial CO_2 pressures are outlined. A study of dolomite solubility in gypsum solutions of various concentrations showed that at a partial CO_2 pressure of about 1 atm and temperature of 25° the gypsum practically has no effect on the solubility of the double carbonate

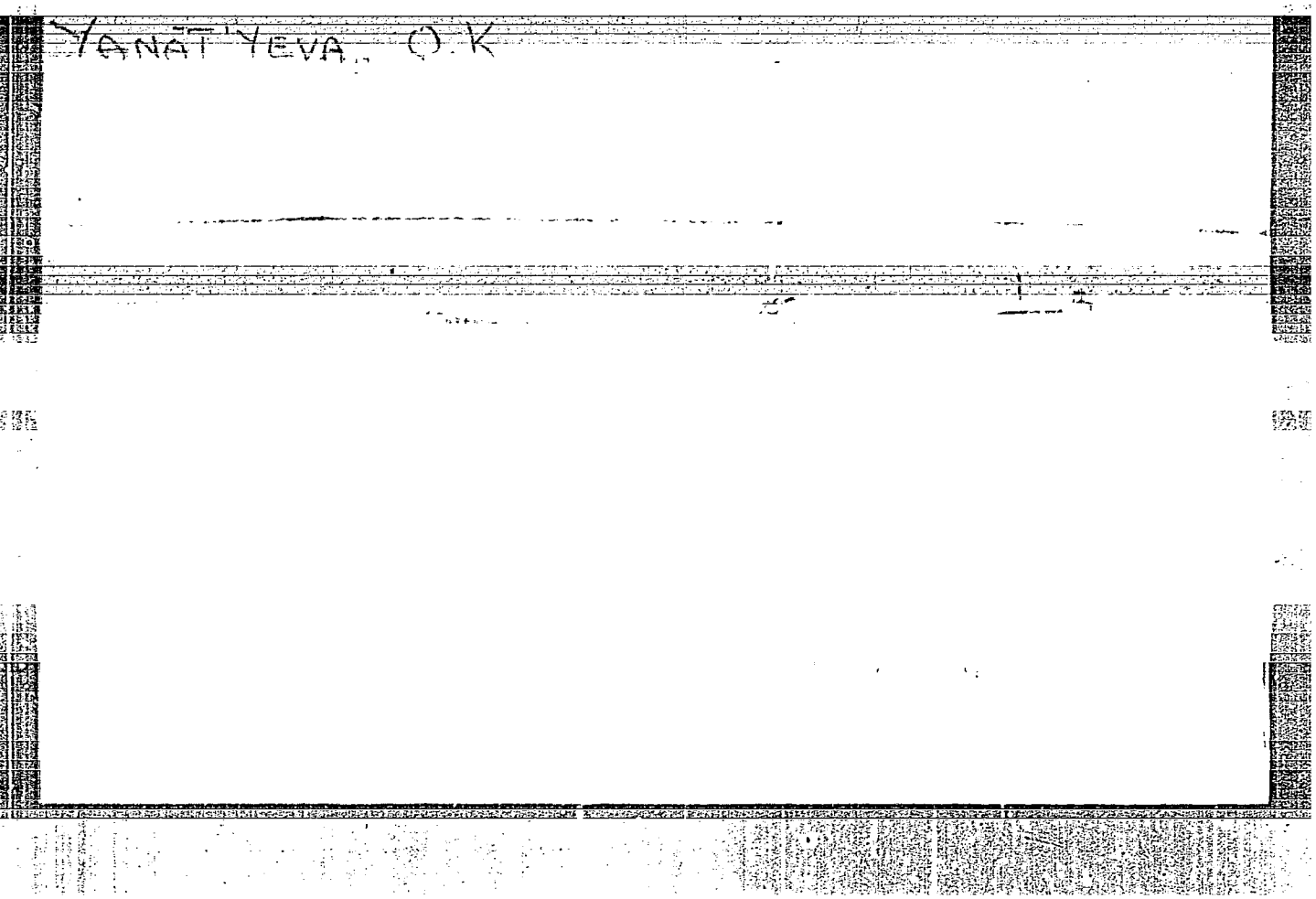
Institution : Acad. of Sc., USSR, The N. S. Kurnakov Inst. of Gen. and Inorg. Chem.

Presented by : Academician G. G. Urazov, December 6, 1954

Card 2/2 Pub. 22 - 34/51

Periodical : Dok. AN SSSR 101/5, 911-912, Apr 11, 1955

Abstract : and behaves in the system as an indifferent component. Entirely different results were obtained for analogous mixtures at an identical temperature but at a CO_2 pressure of 0.0012 atm. Four references: 3 USSR and 1 USA (1925-1950). Graph.



YANAT'YEVA, O. K.

USSR/Physical Chemistry. Thermodynamics, Thermochemistry, B-8
Equilibria, Physical-Chemical Analysis, Phase Transitions.

Abs Jour: O. K. Yanat'yeva, V. T. Orlova
Inst : -
Title : Study of Equilibria in System K_2SO_4-Na_2SO_4-$MgSO_4$-H_2O at 55°

Orig Pub: Zh. neorgan. khimii, 1956, 1, No 5, 988-994

Abstract: The solubility at 55° was studied in the systems Na_2SO_4 (I) - K_2SO_4 (KK) - $MgSO_4$ (III) - H_2O and I - II - H_2O. Crystals of the relation of II : I > 3 (3.35 and 3.60) were obtained in the latter system. Their x-ray pictures differ from that of glaserite ($3K_2SO_4.Na_2SO_4$) (IV), which allows the authors to consider these crystals as a new phase forming at higher temperatures. Six crystallization fields were disclosed in the quaternary system, viz.: I, II, $NgSO_4.6H_2O$ (V), $Na_2SO_4.MgSO_4.4H_2O$ (VI), $K_2SO_4.MgSO_4.4H_2O$ (VII), IV and four nonvariant treble points: 1) 12.96 of II, 4.05 of I, 15.64 of III; solid phases of IV, II, VII; 2) 7.12 of II, 12.61 of I, 20.25 of III; solid

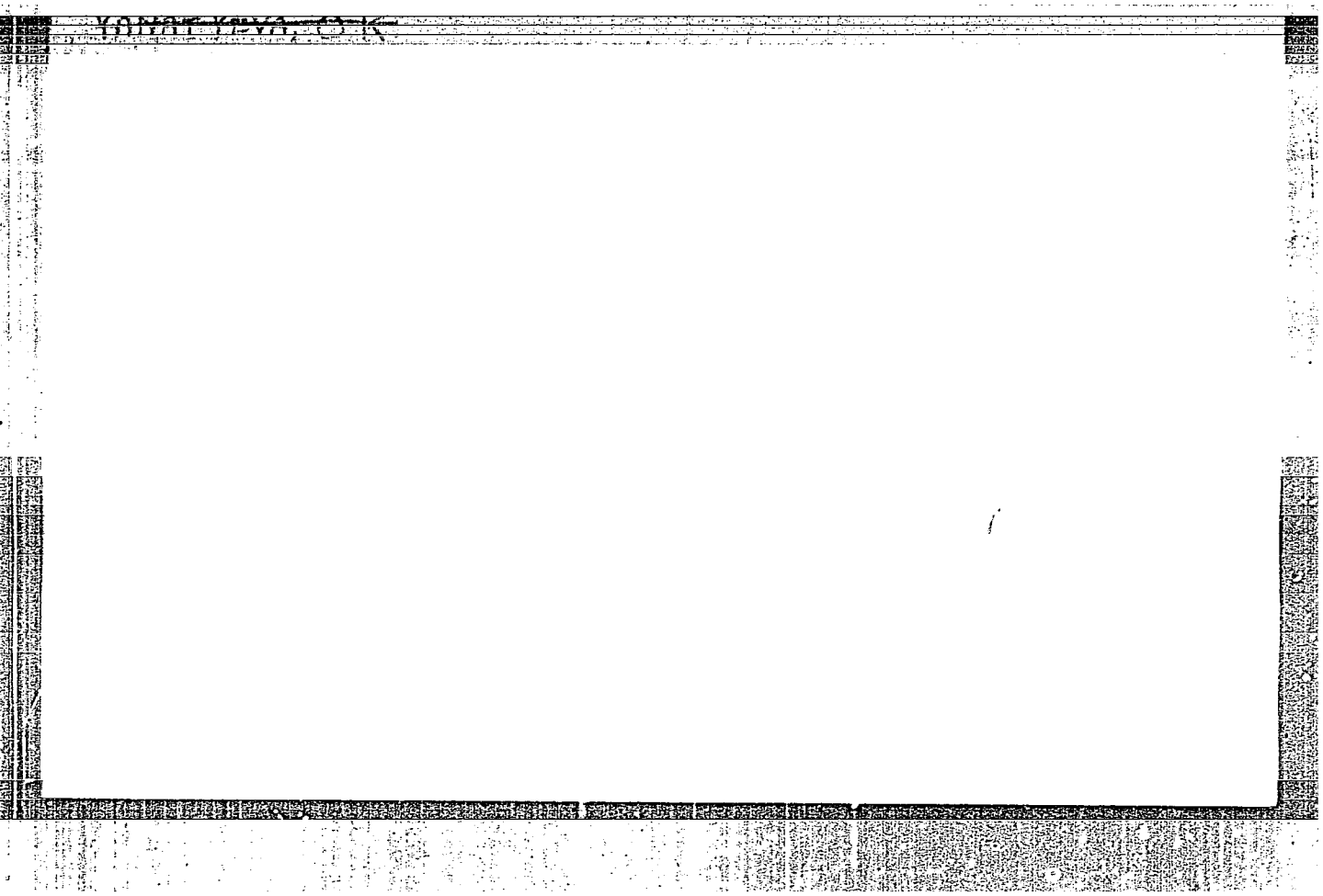
Card 1/2

USSR/Physical Chemistry. Thermodynamics, Thermochemistry, Equilibria, Physical-Chemical Analysis, Phase Transitions B-8

Abs Jour: Ref Zhur-Khimiya, No 5, 1957, 14707

Abstract: phases of IV, VII, Vi; 3) 6.11 of II, 21.45 of I, 12.40 of III; solid phases of IV, I, Vi; 4) 3.68 of II, 4.80 of I, 31.65 of III; solid phases of IV, VII, V.

Card 2/2



Mountain of the ... These were examd. in the following ways: (1) soly. in water at 25° under 1 atm. of CO_2 (*C.A.* 45, 12036*h*), (2) gravimetric chem. analysis, (3) thermal analysis, (4) x-ray powder patterns, (5) alky. of water in contact with powd. samples (25°, 1 atm. CO_2). Carbonate rock dissolves as ...

... brating and titrating the soln. with 0.1*N* HCl to the methyl orange end point. Ca was then detd. as the oxalate and Mg as the phosphate. These data showed that 3 samples were dolomitized limestone; one was dolomite, and one did not fit either pattern. Thermal analysis agreed with these results and showed that the irregular sample had some magnesite. The magnesite was not distinguished by chem. analysis of x-ray powder patterns. In the alky. method the $(HCO_3)^-$ content was detd. from 3 to 80 days after stirring ...

YANAT'YEVA, O.K.

Investigating the solubility of the system Ca, Mg ‖ CO_3, SO_4 - H_2O at 25° and $P_{CO_2} \simeq 0.0012$ atm. Zhur.neorg.khim. 2 no.9: 2183-2187 S '57. (MIRA 10:12)

1.Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR.

(Solubility) (Systems (Chemistry)

YANAT'YEVA, A. K.

Solubility polythe... ...system $CaCO_3$ - Mg...

AUTHORS: Yanat'yeva, O. K., Orlova, V. T. SOV/78-3-10-28/35

TITLE: I. The Crystallization Volume of Schenite in Sea Water K, Na, Mg // Cl, SO_4-H_2O at 0° (I.Ob"yem kristallizatsii shenita v morskoy sisteme K, Na, Mg // Cl, SO_4-H_2O pri 0°)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 10, pp 2408-2413 (USSR)

ABSTRACT: The conditions of crystallization of schenite- $K_2SO_4 \cdot MgSO_4 \cdot 6H_2O$. were investigated in the five-component system K, Na, Mg // Cl, SO_4-H_2O at 0°. The solubility, viscosity and density were determined in the systems K, Na, Mg // SO_4-H_2O, K, Mg // Cl, SO_4-H_2O and K, Mg, Na // Cl, SO_4-H_2O at 0°. In the system K, Na, Mg // SO_4-H_2O no solid solution of the glaserite type appears in the solid phase. The equilibrium diagram of the system is characterized by four ranges of crystallization: schenite- $K_2SO_4 \cdot MgSO_4 \cdot 6H_2O$ and the hydrates of the sulfates of K, Na and Mg. Six crystallization ranges of the following salts appear in the system K, Mg // Cl, SO_4-H_2O: schenite, carnallite - $KCl \cdot MgCl_2 \cdot 6H_2O$-, KCl, $MgSO_4 \cdot 7H_2O$, $MgCl_2 \cdot 6H_2O$ and $K_2SO_4 \cdot H_2O$. The conditions of the existence of schenite in

Card 1/2

I.The Crystallization Volume of Schenite in Sea Water K, SOV/78-3-10-28/35
Na, Mg||Cl, SO_4-H_2O at 0°

the fivecomponent system K, Na, Mg || Cl, SO_4-H_2O were determined. The crystallization range of schenite is limited by six salts: glaserite ($3K_2SO_4 \cdot Na_2SO_4$) , KCl, NaCl, $K_2SO_4 \cdot H_2O$, $MgSO_4 \cdot 7H_2O$ and $Na_2SO_4 \cdot 10\ H_2O$. There are 3 figures, 3 tables, and 4 references, 3 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im.N.S.Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N.S.Kurnakov of the Academy of Sciences, USSR

SUBMITTED: May 5, 1958

Card 2/2

5(2) SOV/78-4-8-32/43

AUTHORS: Yanat'yeva, O. K., Orlova, V. T.

TITLE: On the Conditions of the Existence of Glaserite in the System K, Na, Mg || Cl, SO_4 - H_2O at 0° (Ob usloviyakh sushchestvovaniya glazerita v sisteme K, Na, Mg || Cl, SO_4 - H_2O pri 0°)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol. 4, Nr 8, pp. 1903-1909 (USSR)

ABSTRACT: The authors wrote this paper on the occasion of the 40th anniversary of the existence of the Komsomol. The double salt glaserite ($3K_2SO_4 \cdot Na_2SO_4$) forms solid solutions with its components Na_2SO_4 and K_2SO_4. The publication data on the temperature limits for the existence of these solid solutions deviate. It was only proved that the addition of chlorides permits the existence of glaserite at low temperatures. The investigations of the authors showed that in the systems K_2SO_4 - Na_2SO_4 - H_2O and K_2SO_4 - Na_2SO_4 - Mg_2SO_4 - H_2O no glaserite is formed. In order to determine the solid phases of the system mentioned first, which represents an important member of the marine

Card 1/3

On the Conditions of the Existence of Glaserite in the System K, Na, Mg || Cl, SO_4 - H_2O at 0°

five-component system K, Na, Mg || Cl, SO_4 - H_2O, the solubility isothermal line was investigated at 0°. In contrast to data from publications (Ref 2) $K_2SO_4 \cdot H_2O$ and $Na_2SO_4 \cdot 10H_2O$ were found to be solid phases. Glaserite is formed only at 0° and only in the presence of certain amounts of chlorides (KCl, NaCl and MgCl). It does not crystallize from the sulphate solutions of K, Na and Mg. The range of existence of glaserite is found in the systems K, Na || Cl, SO_4 - H_2O and K, Na, Mg || Cl, SO_4 - H_2O at a chloride concentration of 8-10% and it increases with their increasing concentration. The crystallization ranges of glaserite, potassium sulphate monohydrate and Glauber's salts were determined in the five-component complex at 0°. The small range of glaserite penetrates conically into the range of the two sulphates which occupy the maximum part of the diagram. The results are important for the production of pure salts in the processing of crude salts of marine origin. There are 5 figures, 3 tables, and 7 references, 5 of which are Soviet.

Card 2/3

SOV/78-4-8-32/43

On the Conditions of the Existence of Glaserite in the System K, Na, Mg || Cl, SO_4 - H_2O at 0°

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

SUBMITTED: May 5, 1958

Card 3/3

JANAT'YEVA, O.K.

B-8

COUNTRY : GDR
CATEGORY :

ABS. JOUR. : RZKhim., No. 5 1960, No. 16959

AUTHOR : Janat'yeva, O. K. and Orlova, V. T.
INST. : Not given
TITLE : Equilibria in the Salt Water System K, Na, Mg ‖ Cl, SO_4-H_2O at 55°

ORIG. PUB. : Freiberger Forschungsh, A, No 123, 119-126 (1959)

ABSTRACT : Solubility, viscosity, and density characteristics in the systems K, Mg Cl, SO_4-H_2O and K, Na, Mg ‖ Cl, SO_4-H_2O have been investigated at 55°. The complete solubility diagram for 5-component salt water, including 15 crystallization volumes of the salts [sic], has been obtained.

From authors' summary

CARD: 1/1

35

YANAT'YEVA, O.K.

70° Solubility isotherm for the system Ca, Mg // CO_3, SO_4 - H_2O. (MIRA 13:11)
Zhur. neorg. khim. 5 no.11:2582-2586 N '60.

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova Akademii nauk SSSR.
(Systems (Chemistry))

YANAT'YEVA, O.K.; RASSONSKAYA, I.S.

Metastable equilibria and solid phases in the system $CaCO_3$ - $MgCO_3$ - H_2O. Zhur.neorg.khim. 6 no.6:1424-1430 Je '61. (MIRA 14:11)
(Calcium carbonate) (Magnesium carbonate)
(Phase rule and equilibrium)

YANAT'YEVA, O.K.; RAPOPORT, G.S.; RASSONSKAYA, I.S.; USTINOVA, M.B.

Physicochemical investigations of calcium and magnesium carbonates appropriate to the conditions of sovelit production. Zhur.prikl. khim. 34 no.10:2347-2350 O '61. (MIRA 14:11)

1. Insitut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova AN SSSR.
(Sovelit) (Calcium carbonate) (Magnesium carbonate)

YANAT'YEVA, O.K.

Metastable equilibria in the system $CaCO_3$ - $MgCO_3$ - H_2O. Izv. AN SSSR. Otd. khim. nauk no. 1:180-182 Ja '61. (MIRA 14:2)

1. Institut obshchey i neorganicheskoy khimii im.N.S. Kurnakova AN SSSR.

(Calcium carbonate) (Magnesium carbonate)

YANAT'YEVA, O.K.; ORLOVA, V.T.

Reciprocal system consisting of K, Na, and Mg chlorides and sulfates at 100°. Zhur.neorg.khim. 6 no.12:2816-2817 D '61. (MIRA 14:12)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN SSSR.

(Systems (Chemistry))

YANAT'YEVA, O.K.; ORLOVA, V.T.

Solubility polytherm of the system K, Na, Mg||Cl, SO_4 - H_2O.
Dokl. AN SSSR 142 no.1:102-104 Ja '62. (MIRA 14:12)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR. Predstavleno akademikom I.I. Chernyayevym.
(Systems (Chemistry)) (Crystallization)

ORLOVA, V.T.; YANAT'YEVA, O.K.

Interaction of salts in the system Na, Mg // Cl, SO_4 - H_2O at 100°. Zhur. neorg. khim. 8 no.7:1789-1791 Jl '63.
(MIRA 16:7)

(Salts) (Systems(Chemistry))

S/236/63/000/001/002/015
D251/D308

AUTHORS: Kalade, Yu. A., Shugurov, V. K. and Yanavichyus, A. I.

TITLE: Elimination of the motion of the center of mass in a system of identical particles

SOURCE: Akademiya nauk Litovskoy SSR. Trudy. Seriya B, no. 1, 1963, 13-20

TEXT: The authors consider a means of eliminating the non-single valuedness and the consequent false states which arise in the determination of the energy of the states of a system of identical particles. A method is given for constructing the wave function of the relative motion in a system of N such particles, the mass of each of which is taken to be unity. By means of a non-singular transformation it is possible to eliminate the effect at the center of mass. Then, in operator form

$$\underline{M} = \underline{l}_c + \underline{M}_R, \quad \underline{M}_R = \underline{s}_N + \underline{M}\,(N-1) \qquad (3)$$

Card 1/3

Elimination of the ...

$$\underline{M}\,(N-1) = \sum_{i=1}^{N-1} (\underline{l}_i + \underline{s}_i), \quad \underline{l}_i = \left[\underline{r}_i \underline{p}_i\right] \tag{4}$$

where $\underline{M}$ is the total moment of momentum, $\underline{l}_c$ is the moment corresponding to the motion of the center of the mass, $\underline{M}_R$ is the relative moment, and $\underline{s}_i$ is the spin moment. The operator $M(N-1)$ does not act on the N-th particle, and hence it is possible to take any particle as the 'last' and to use a coordinate system

$$\underline{r}_i = \underline{r}'_i - \underline{r}'_N, \quad i = 1, \ldots, N-1 \tag{10}$$

which gives the position of n - 1 particles in terms of the Nth, and is best suited to the problem. The wave function

Card 2/3

$$\Psi = \underline{A} \left\{ \Psi(x_1, x_2, \ldots, x_{N-1}) \Gamma(\sigma_N \tau_N) + \right.$$

$$\left. + (-1)^{N-1} \Psi(x_N, x_1, \ldots, x_{N-2}) \Gamma(\sigma_{N-1} \tau_{N-1}) + \ldots \right\} \qquad (6)$$

is constructed using Clebsh-Gordon coefficients and genealogy coefficients. The calculation of the matrix elements is discussed, and a worked example is given. There is 1 table.

ASSOCIATION: Institut fiziki i matematiki Akademii nauk Litovskoy SSR (Institute of Physics and Mathematics of the AS Lithuanian SSR); Vil'nyusskiy gosudarstvennyi universitet im. V. Kapsukasa (Vil'nyus State University im. V. Kapsukas)

SUBMITTED: July 7, 1962

Card 3/3

5 5110

24443
S/081/61/000/006/004/015
B101/B201

AUTHORS: Korenman, I. M., Tumanov, A. A., Yanayeva, V. Ya.

TITLE: Composition and solubility of some complex compounds of indium

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1961, 106, abstract 6B41 (6V43). ("Tr. po khimii i khim. tekhnol. (Gor'kiy)", 1960, vyp. 1, 86 - 90)

TEXT: Complex compounds of In and SCN with antipyrine, pyramidon, and diantipyryl methane have been synthesized. Their composition can be expressed by formulas: $[In(C_{11}H_{12}ON_2)_3](SCN)_3$; $[In_2(C_{13}H_{17}ON_3)_3](SCN)_6$; $[In_2(C_{23}H_{24}O_2N_4)_3](SCN)_6$. The solubility of the complex compounds concerned has been determined in water, sulfuric acid, and acetic acid of different concentrations, and also in some organic solvents. The formation of $[In_2(C_{23}H_{24}O_2N_4)_3](SCN)_6$ has served to determine small amounts of In. [Abstracter's note: Complete translation.]

Card 1/1

L 21521-66 EWT(1)/EWA(h) GS

ACC NR: AP6007498 SOURCE CODE: UR/0109/66/011/002/0211/0218

AUTHOR: Voronin, E. S.; Yanayt, Yu. A.

ORG: none

TITLE: Phase switching in a three-state parametric trigger

SOURCE: Radiotekhnika i elektronika, v. 11, no. 2, 1966, 211-218

TOPIC TAGS: flip flop circuit, parametric oscillator

ABSTRACT: A two-tank parametric oscillator is investigated. It can be excited on one of three stable types of oscillations having the same frequency but phase-shifted by $2\pi/3$ from one another. Such an oscillator can be used in computers as a 3-position trigger. Formulas describing the operation and phase-switching of the oscillator by a harmonic external signal are derived. It is found that the external signals of suitable amplitude and phase can effect switching the trigger from one of its stable states into another. Limits of the stable operation are determined. An experimental verification included a hookup with balanced diodes, two tank circuits tuned to 1 Mc and 2 Mc; pumping frequency, 3 Mc; pumping signal amplitude, 1.5 v. Reverse-biased Si D-205 diodes were used as modulating capacitors. External 300-1500-microsec pulses with adjustable carrier frequency were employed. Stable switching of the trigger on a low-power signal was achieved. Orig. art. has: 3 figures and 36 formulas. [03]

SUB CODE: 09/ SUBM DATE: 090ct64/ ORIG REF: 004/ ATD PRESS: 4222

Card 1/1 UDC: 621.373.93.018.1

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1969, 104-10[illegible]

TOPIC TAGS: parametric generator, parametric generator phase

Card 1/2

SUBMITTED: 14Mar64 ENCL: SUB CODE:

NO REF SOV: 003 OTHER: 000

Card 2/2

YANBAYEV, T.A.; TALIKOV, N.A.

Clinicoanatomical comparisons of renal changes in suppurative processes in the body. Khirurgiia 39 no.8:98-100 Ag '63. (MIRA 17:6)

1. Iz khirurgicheskogo otdeleniya Tashkentskoy klinicheskoy bol'nitsy neotlozhnoy pomoshchi (nauchnyy rukovoditel'- prof. S.A. Masumov; glavnyy vrach - zasluzhennyy vrach Uzbekskoy SSR T.Sh. Alimov).

YANBAYEV, T.A.; TALIKOV, N.A.

Clinicoanatomical comparisons of renal changes in suppurative processes in the body. Khirurgiia 39 no.8:98-100 Ag '63. (MIRA 17:6)

1. Iz khirurgicheskogo otdeleniya Tashkentskoy klinicheskoy bol'nitsy neotlozhnoy pomoshchi (nauchnyy rukovoditel'- prof. S.A. Masumov; glavnyy vrach - zasluzhennyy vrach Uzbekskoy SSR T.Sh. Alimov).

YANBAYEVA, Kh. I.

YANBAYEVA, Kh. I. "Some Data on the Functional State of the Cardiovascular System and the Reactivity of the Organism of Patients with Rheumatism and Septic Endocarditis. (Clinical-Laboratory Investigations)." Published by the Acad Sci Uzbek SSR. Tashkent State Medical Inst imeni V. M. Molotov. Tashkent, 1956. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya Letopis', No. 19, 1956.

YANBAYEVA, Kh.I.

Changes in the electrocardiogram in rheumatic fever. Sbor.nauch. trud.TashGMI 22:51-59 '62. (MIRA 18:10)

1. Kafedra gospital'noy terapii sanitarno-gigiyenicheskogo i pediatricheskogo fakul'tetov (zav. kafedroy - prof. O.N.Pavlova) Tashkentskogo gosudarstvennogo meditsinskogo instituta.

YANBAYEVA, Khurshid Ibniaminovna; LEVINA, L.M., red.

[Rheumatic fever and heart defects] Revmatizm i poroki serdtsa. Tashkent, Meditsina, 1965. 151 p. (MIRA 18:9)

YANBAYEVA, Kh.I., kand.med.nauk; GULYAMOVA, S.G., aspirant

Use of phonocardiography in the diagnosis of mitral and aortal heart failure. Med. zhur. Uzb. no.8:92-97 Ag '61. (MIRA 15:1)

1. Iz Instituta krayevoy i eksperimental'noy meditsiny AN UzSSR (direktor - G.M.Makhkamov).
(HEART--VALVES--DISEASES) (HEART--SOUNDS)

YANBAYEVA, Kh.I.; LEVINA, L.M., red.; AGZAMOV, K., tekhn. red.

[Heart defects] Poroki serdtsa. Tashkent, Medgiz, UzSSR, 1962. 43 p. (MIRA 15:7)
(HEART--DISEASES)

YANBAYEVA, Kh.I., kand. med. nauk

Importance of the diphenylamine reaction in the diagnosis of the activity of the rheumatic process. Vop. revm. 3 no.3:71-74 Jl-S'63 (MIRA 17:3)

1. Iz Instituta krayevoy i eksperimental'noy meditsiny (dir. - prof. G.M. Makhkamov) AN Uzbekskoy SSR i kafedry gospital'noy terapii lechebnogo fakul'teta (zav. - chlen-korrespondent AMN SSR prof. Z.I. Umidova) Tashkentskogo meditsinskogo instituta.

YANBAYEVA, Kh.V.

Capillary permeability in rheumatic fever. Trudy Inst. kraev. eksper. med. no.3:57-64 '61. (MIRA 15:5)
(CAPILLARIES--PERMEABILITY) (RHEUMATIC FEVER)

YANBAYEVA, T.A.

Functional conditions of the kidneys in suppurative surgical diseases. Khirurgiia 36 no.11:138-139 N '60. (MIRA 13:12)

1. Iz kafedry gospital'noy khirurgii (zav. - prof. S.A. Masumov) Tashkentskogo meditsinskogo instituta.
(KIDNEYS)

YANBORISOV, R., kapitan-leytenant

Petty officers are champions of regulation procedure on ship. Komm. Vooruzh. Sil 3 no.18:62-66 S '63. (MIRA 16:10)

(Naval discipline)

25(5) SOV/117-59-2-13/27

AUTHOR: Yanbukhtin, A.Kh., Section Chief in a Machine Shop

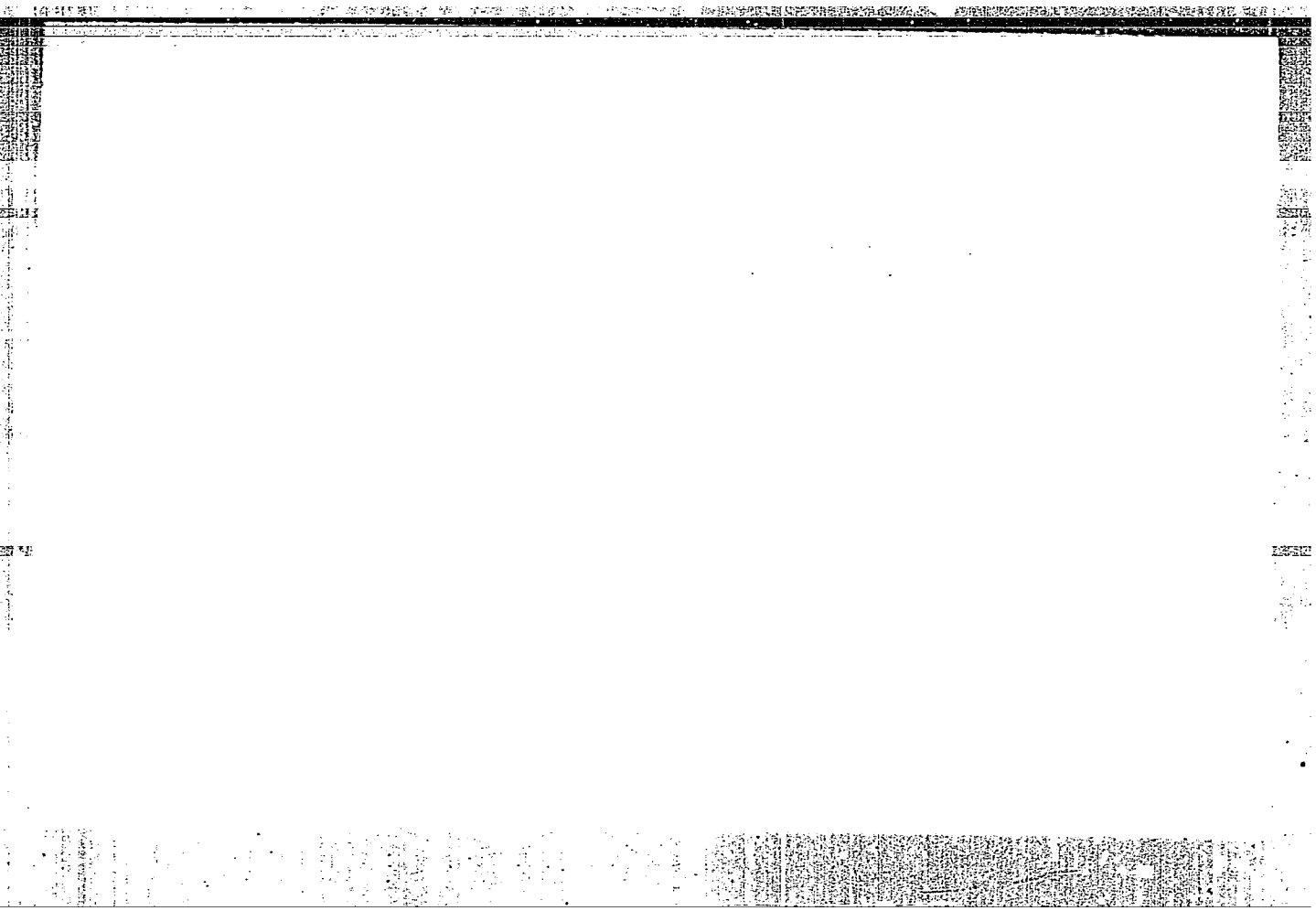
TITLE: From the Experience of a Section's Work Experience in the Field of Group Production (Iz opyta raboty uchastka po gruppovoy tekhnologii)

PERIODICAL: Mashinostroitel', 1959, Nr 2, pp 22-23 (USSR)

ABSTRACT: The author tells of the experience acquired by the Machine Shop of an unidentified plant in the introduction of the group production method, which reduced the number of brigade leaders by 45%, improved the quality and rate of production and improved the planning work. The article is very general. There is 1 photo.

Card 1/1

ABSTRACT: This Author Certificate presents a turbine flowmeter containing a retarded impeller, a rotation angle detector, and a device creating the retarding moment. To increase the reliability, to guarantee complete hermeticity of the detector case, and to isolate the electric portion of the flowmeter from the controlled medium, the rotation angle detector and the device creating the retarding moment are electromagnetic systems achieving induction coupling with the impeller contained in a baffle (see Fig. 1 on the Enclosure). To increase reliability and to insure the possibility of operation under conditions of vibration, shock, and elevated temperatures, the impeller suspension is a torsion tube. To insure the possibility of measuring the flow of liquids moving in both forward and reverse directions, the supply source of the device creating the retarding moment is connected in the diagonal of a bridge whose two adjacent arms are a slide wire.



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962030004-6"

L 00694-67 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l)
ACC NR: AP6005354 (N) SOURCE CODE: UR/0413/66/000/001/0094/0095

AUTHORS: Suvorov, V. P.; Kozlov, V. I.; Yanbukhtin, I. R.; Makarevich, O. P.

ORG: none

TITLE: A device for the automatic control of mass flow. Class 42, No. 177648 [announced by Scientific Research Institute of Thermal Power Engineering Instrument Manufacture (Nauchno-issledovatel'skiy institut teploenergetinheskogo priborostroyeniya)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 94-95

TOPIC TAGS: flow regulator, flow measurement, flow control, fluid flow, automatic control design

ABSTRACT: This Author Certificate presents a device for automatic control of mass flow. The device contains a sensitive element made in the form of a single impeller rotating with a speed proportional to the volume flow, capable of being displaced along the axis by an amount proportional to the velocity head of the flow. The device also has a measuring instrument (see Fig. 1). The design increases the precision of the measurement accuracy in operation and provides the capability of measuring reversible flows. The axes of the impeller are kinematically connected with a power converter. This power converter creates a force which compensates the axial movement of the impeller. The ratio of the signals (proportional to the compensating force

Card 1/2 UDC: 681.121.531.751.3

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ACC NR: AP6005354

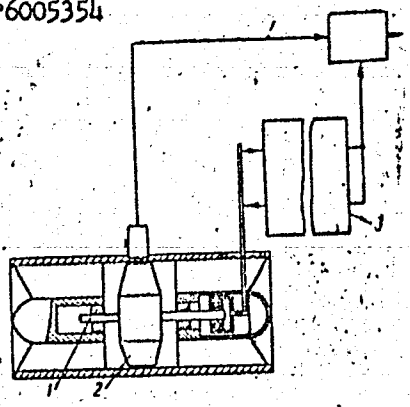

Fig. 1. 1 - impeller axes; 2 - force converter; 3 - impeller

and to the impeller rotation speed) is used as the measure of the mass flow. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 22Jul64/

Card 2/2 mjs

YANBUKHTIN, K. Kh.

ZVEREV, A.G.; POPOV, V.F.; FADEYEV, I.I.; BABUSHKIN, V.I.; BERLOVICH, I.L.; BOCHKO, A.M.; BURLACHENKO, S.Ye.; GARBUZOV, V.F.; DMITRICHEV, P.Ya.; DUNDUKOV, G.F.; ZLOBIN, I.D.; KOROVUSHKIN, A.K.; KORSHUNOV, A.I.; KUZIN, M.G.; KUTUZOV, G.A.; LYSKOVICH, A.A.; MASHTAKOV, A.M.; MIKHEYEV, V.Ye.; NIKEL'BERG, P.M.; POSKONOV, A.A.; ROMANOV, G.V.; SOSIN, I.F.; SOSNOVSKIY, V.V.; POVOLOTSKIY, M.M.; URYUPIN, F.A.; KHARIONOVSKIY, A.I.; CHULKOV, N.S.; SHESHERO, N.A.; SHITOV, A.P.; SHUVALOV, A.M.; YANBUKHTIN, K.Kh.

Arsenii Mikhailovich Safronov; obituary. Fin.SSSR 18 no.11:95 N '57. (MIRA 10:12)

(Safronov, Arsenii Mikhailovich, 1903-1957)

BERENFEL'D, V.M.; YAKHONTOV, L.N.; YANBUKHTIN, N.A.; KRASNOKUTSKAYA, D.M.; YATSENKO, S.V.; RUBTSOV, M.V.

Synthesis of substituted 4-(ε-diethylamino-α-methylbutylamino) 2-styrylquinolines. Zhur.ob.khim. 32 no.7:2169-2177 Jl '62. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(Quinoline)

YANBUKHTIN, Sh.T.

Distribution of plants of the alcohol, liqueur and vodka industries. Spirt. prom. 23 no.3:22-23 '57. (MIRA 10:6)

1. Rosglavspirt.
(Liquor industry)

YANBUKHTIN, Sh.T.

YANBUKHTIN, Sh.T.

Urgent tasks of economic councils of the R.S.F.S.R. with regard to the alcohol industry. Spirt.prom. 23 no.8:32-33 '57. (MIRA 11:1)

(Alcohol)