

NIKOLAEV, V.I.; FEDOROV, S.A.

Introducing a machine for impregnating paper with synthetic resins. Biul. tekhn.-ekon. inform. Gos. Nauch.-issl. inst. nauch. i tekhn. inform. 18 no. 12-47-48 D '65 (MIRA 19:1)

S/056/63/044/002/064/065
B185/3102

AUTHORS: Nikolayev, V. I., Sancherbina, Yu. I., Karchevskiy, A. I.

TITLE: The Mössbauer effect in the compound FeSn₂

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,
no. 2, 1963, 775-777

TEXT: The antiferromagnetic compound FeSn₂ is one of the most interesting objects to be investigated by the Mössbauer method, since both the isotopes Fe⁵⁷ and Sn¹¹⁹ are well suited for studying nuclear γ -ray absorption. The authors measured the absorption of 14.4-kev γ -quanta (source Co⁵⁷, 270 days halflife) and 23.8-kev γ -quanta (source Sn^{119m}, 250 days halflife) by a 28 mg/cm² thick layer of FeSn₂ deposited on a Be disc. The intensity of the radiation passed through the absorber was measured with a NaI(Tl) crystal connected with a single-channel pulse-height analyzer. The Fe⁵⁷ absorption spectrum of the 14.4-kev quanta contained six well resolved peaks, the distance of the outermost ones

Card 1/2

04402-67 EMT(1)/EMT(m)/EMT(t)/ETI IJP(q) JD
ACC NR: AF6034423 SOURCE CODE: UR/0386/66/004/008/0325/0320
50
44
B

AUTHOR: Afanasov, A. B. (Decceased); Nikolayev, V. I.

ORG: none

TITLE: Mossbauer effect on Fe⁵⁷ impurity nuclei in MnAu₂

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu.
Prilozheniya, v. 4, no. 8, 1966, 315-320

TOPIC TAGS: Mossbauer effect, manganese compound, antiferromagnetism, ferromagnetism, Neel temperature

ABSTRACT: Since MnAu₂ affords the rare opportunity of investigating the properties of a substance both in the antiferromagnetic and in the ferromagnetic state at the same temperature, the authors investigated the Mossbauer effect on Fe⁵⁷ impurity nuclei in the crystal lattice of MnAu₂. The purpose was, in particular, to ascertain how the transition of a substance to the ferromagnetic state affects the magnitude of the magnetic field acting on the nucleus of the impurity atom. Particular attention was paid to the behavior of the Mossbauer-effect probability in magnetic transformations. The Mossbauer-effect experiments were made on a sample previously used to investigate the temperature dependence of the magnetic properties (ZhETF v. 45, 480, 1963). The MnAu₂ sample was the radiation source. The atoms of the isotope Co⁵⁷ were introduced into the MnAu₂ lattice by diffusion. The absorber in the Mossbauer-effect experiments was a stainless-steel foil (70% Fe). The measurements were made with apparatus of the

Card 1/3

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ACC NR: AP6034425

5

interest to investigate the probability of the Mossbauer effect as a function of the field and of the temperature in substances in which the striction is large. The authors thank Academician I. K. Kikoin for continuous interest in the work, Yu. N. Egorov and A. N. Afanas'yev for useful discussions, and N. N. Dubovtsev and V. I. Bogachev for help in adjusting the electronic apparatus. Orig. art. has: 3 figures.

ORIG REF: 006/ OTH REF: 003
SUB CODE: 20/ SUBN DATE: 05 JUL 66/

Card 3/3 vob

L APPROVED FOR RELEASE 08/23/2000 (c) CIA-RDP86-00513R001137120001-5
ACC NR: AP6039108 SOURCE CODE: UR/0048/66/030/004/0049/0063 ✓

AUTHOR: Nikolayev, V. I.; Dubovtsev, I. A.; Ugodnikov, G. G.; Takimov, S. S.39
B

ORG: none

TITLE: Investigation of the Mossbauer effect on Fe^{57} nuclei in nickel ferrite-chromite with a compensation point / Report, All-Union Conference on the Physics of Ferro- and Antiferromagnetism held 2-7 July 1965 in Sverdlovsk/

SOURCE: AN SSSR, Izvestiya. Seriya fizicheskaya, v. 30, no. 6, 1966, 949-956

TOPIC TAGS: ferrite, Mossbauer effect, Mossbauer spectrum, spontaneous magnetization, magnetic effect, iron

ABSTRACT: In view of the paucity of studies of the Mossbauer effect in ferrites, the present investigation was undertaken with a view to determining the temperature dependence of the Mossbauer spectra characterizing the absorption of 14.4 keV gamma rays by Fe^{57} nuclei in a ferrite with a compensation point. The investigated material was nickel ferrite-chromite: $\text{NiFe}_{2-x}\text{Cr}_x\text{O}_4$ with x equal to 1.0 and 0.9; both substances have the inverse spinel structure. Both the Curie point and the compensation point of the two compositions lie above room temperature. The two specimens were synthesized by the so-called "dry" procedure of the corresponding oxides (high purity grade). All the measurements were carried out with a stationary absorber. A series of curves

Card 1/2

SIKOLATOV, V.I.

Therapeutic effect of *Carlina vulgaris* in functional disorders of
the cerebral cortex in dogs. *Peru. i tehn. 19 supplement:6-7 '56.*
(NIIA 10:7)

I. Kafedra farmakologii (avv. - doktor A.A.Tyurina) Eurekogo
meditsinskogo instituta.
(CEREBRAL CORTEX, diseases,
exper., eff. of *Carlina vulgaris* extracts (Rus))
(PLANTS,
Carlina vulgaris, eff. on exper. cerebral cortex dis.
(Rus))

GATSIURA, V.V.; NIKOLAEV, V.I.

Combined effect of caffeine and strophanthia. Biul.eksp.biol. i med.
42 no.11:38-42 E '56. (MIRA 10:1)

1. Is kafedry farmakologii Voronoshskogo meditsinskogo instituta
(sev. kafedry dekant V.I.Zavrashnev) Predstavleno doystvitel'nym
chlenom AMN SSSR V.I.Skvortsovym.

(STROPHANTHIN, effects,
on ECG, with caffeine (Eng))

(CAFFEBIEN, effects,
on ECG, with strophanthia (Eng))

SOF/973

NAME & DATE INFORMATION

Information on Cryptanalysis, Oct. 1972
Soviet Cryptanalytic activities (including the
use of computers) during the Six Conference. Moscow, 1960-61.
Analysts: Shmelev, Slobodan, Kuznetsov, Gerasimov, etc.
1,000 copies printed.
8 pp., 127 p.

Submitting Agency: Academy of Sciences USSR, Institute of Mathematics.
Responsible Unit: Institute of Mathematics, USSR, Moscow.

S. Slobodan.

This collection of materials is intended for scholars and persons interested in mathematics, cryptology, and the scientific progress in mathematics and related fields. It is also intended for those interested in applications of this and related problems in the field of cryptology.

The collection consists of papers and at the Black Sea Conference on Cryptology, which took place 19-20 October, 1963 (Leningrad). Some of these are delivered by faculty members of the Institute of Mathematics of the Academy of Sciences of the USSR, others by foreign scholars. The collection includes materials obtained and used in the applications of basic mathematical methods and statistical methods. They discuss basic methods of cryptology, security analysis, the determination of methods, security measures, and other elements, as well as techniques of cipher systems, codes, and algorithms. The collection also contains some papers on the applications of differential cryptology, the applications of probability theory, and the applications of statistical methods. The collection also includes some papers on the applications of the new and more advanced methods of cryptology, such as the methods of V. A. Klimov and V. V. Pshenichny (USSR), which have been developed recently. The collection also contains some papers on the applications of code sequences, the applications of codes, and the applications of codes.

Editorial Board: Institute of Cryptology of the Academy of Sciences of the USSR, Department of Cryptology of the Ministry of Defense of the USSR.

Editorial Staff: Directorate of Cryptology of the Academy of Sciences of the USSR, Department of Cryptology of the Ministry of Defense of the USSR.

Editorial Office: The A. [Name] State University, Moscow, USSR.

Editorial Board: Institute of Cryptology of the Academy of Sciences of the USSR.

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ZAV'YALOV, A.V.; NIKOLAYEV, V.I.

Effect of cytiton and Thermopsis tincture on the emetic effect of apomorphine under clinical and experimental conditions. Zhur.nevr.i psich. 61 no.3:439-445 '61.
(MIRA 14:7)

1. Kafedra farmakologii (zav. - kand.med.nauk V.I.Nikolayev)
Chitinskogo mediteinskogo instituta.
(ANALEPTICS) (APOMORPHINE) (BUSH PEA)
(VOMITING)

VASILEV, S.I.; NIKOLAEV, V.I.; KHANIN, N.S.

Quantitative determination of cardiac glycosides in solutions by
the method of objective luminescence analysis. Apt. delo 11 no.1:
34-39 Ja-F '62. (MIRA 15:4)

1. Chitinskij meditsinskij institut.
(CARDIAC GLYCOSIDES) (LUMINESCENCE)

L 11889-66 EMT(1)/EMT(2)/EMT(t)/EMP(b) LIP(c) III
ACC NW: AF502001 SOURCE CODE: IR/0356/65/002/008/0373/0377

AUTHORS: Nikolayev, V. I.; Tokarev, G. S.; Dobrotov, I. A.; Gavrilova, Z. G.

ORG: Russia

TITLE: Magnetic structure of the compound FeGe

SOURCE: Zhurnal eksperimental'noi teoreticheskoy fiziki. Pis'ma v redaktsiyu
(Prilozheniya), v. 2, no. 6, 1965, 373-377

TOPIC THIS: iron alloy, germanium alloy, antiferromagnetic material, ordered alloy,
Neel temperature

ABSTRACT: To check on the existence of magnetic order in the compound FeGe the authors investigated the Mossbauer spectra of Fe^{57} nuclei in this compound at temperature 77--500K. The sample was prepared by a procedure described by Ohoyama et al. (J. Phys. Soc. Japan v. 18, 589, 1963). The initial components were Armco iron and germanium. X-ray structure analysis has established that the sample produced contains a phase with hexagonal structure, having parameters $a = 5.005 \text{ \AA}$ and $c = 4.054 \text{ \AA}$. Investigations of the magnetization of the sample in the interval 300--500K have shown that there are no ferromagnetic impurities with Curie points above room temperature. In the experiments on the Mossbauer effect, the FeGe sample was used as an absorber. The source of radiation was Co^{57} introduced in stainless steel. The Mossbauer spectrum of the Fe^{57} contained all six resolved components of the hyperfine structure, thus evidencing the magnetic splitting of the ground and excited levels of Fe^{57} and demonstrating directly that FeGe has an ordered magnetic structure at room

Cord 1/2

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ACC NR: AP5028017

temperature. The magnitude of the local magnetic field acting on the iron nuclei is in this case 123 ± 3 koe. Analogous spectra were obtained also for other temperatures. It is also concluded that FeGe is antiferromagnetic. Extrapolation of the temperature dependence of the nuclear magnetic field to zero yields a value $T_N = 411 \pm 2$ K for the Neel point of FeGe. Authors thank I. K. Kikoin for interest in the work, Yu. M. Kagan for discussions, N. N. Kuznetsov and V. I. Bogachev for help in adjusting the experimental setup, and P. N. Petrov and V. A. Somenkov for the x-ray structure analysis of the sample. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 25Aug65/ ORIG REF: 002/ OTH REF: 002

80
Card 2/2

ca

6

Structure of Sodium Chlorate. N. L. Shandruk, J. Russ. Phys.-Chem. Soc., 18, 650 (1886).—LACNO3 is best prepared by double decomposition of equal quantities of NaClO3 and LiNO3. The salt tends to decompose to the unhydrated state, in which case, in order to get the crystals of LACNO3.H2O, it is necessary either to decompose a crystal of this hydrate or to treat the salt with solid CO2. The solid salts decompose at 17° at 2% LiClO3; this corresponds to the crystals LACNO3.6 H2O. Anhydrous LACNO3 is very hygroscopic; that is, it easily becomes damp. The hydrate is a hygroscopic salt that is easiest to crystallize and has a p. can easily be dried, to normal values. The vapor pressure of the salt varies with varying quantities of water over dried, by the Van't Hoff's method, the equation required about a year, as the equations are slow in becoming established. The hydrate crystals are long prismatic needles exhibiting a color play in polarized light, whereas LACNO3.H2O shows double symmetry and does not exhibit a double refraction of rays in polarized light. The hydrate is 24°, $\alpha_D^{20} = 1.378$. The anhydrous is at 8°. LACNO3.6H2O does not exist as a definite compound. The solubility is at .04°. The structure of crystals and diagrams are appended.

Russian Naive

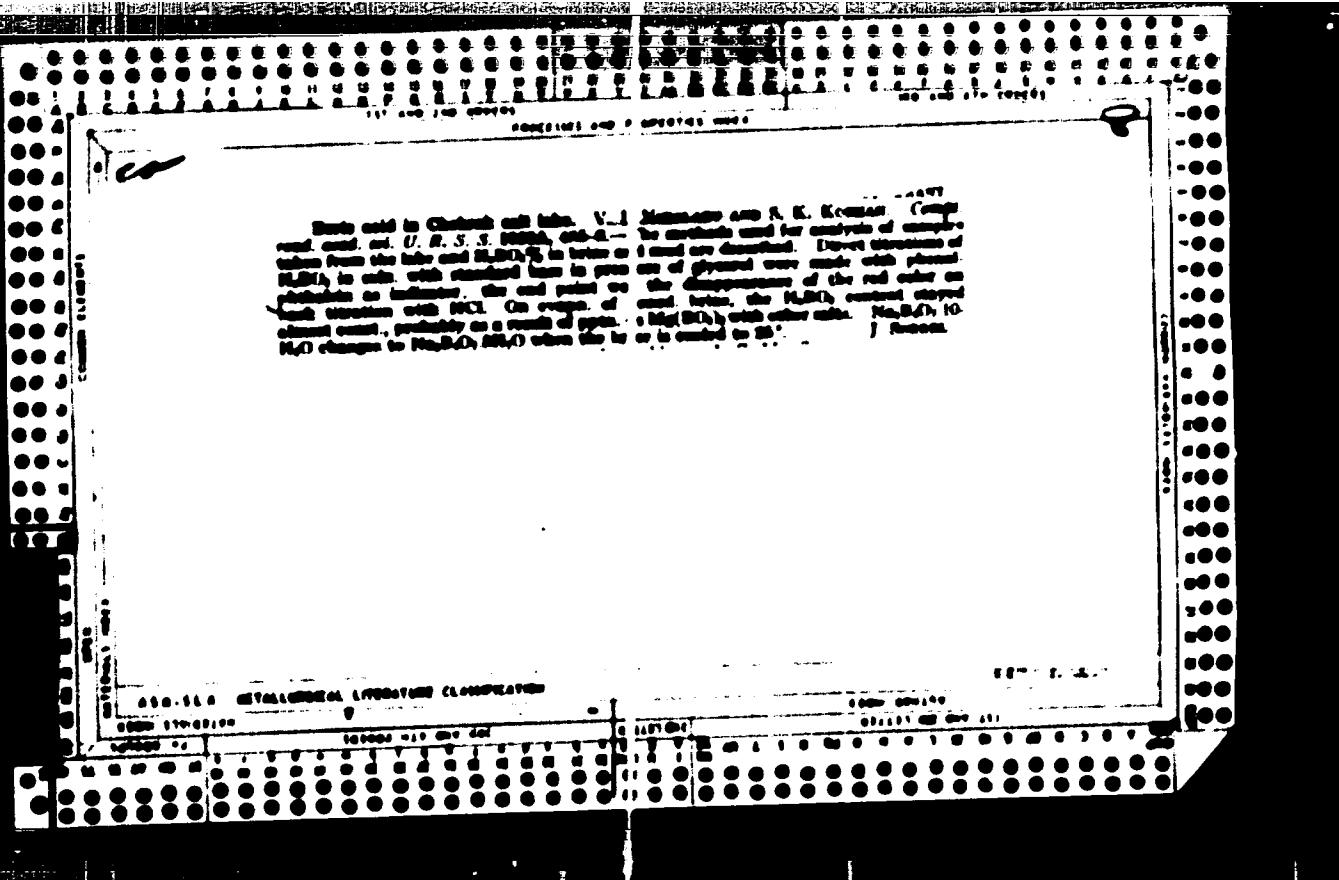
*ca**2*

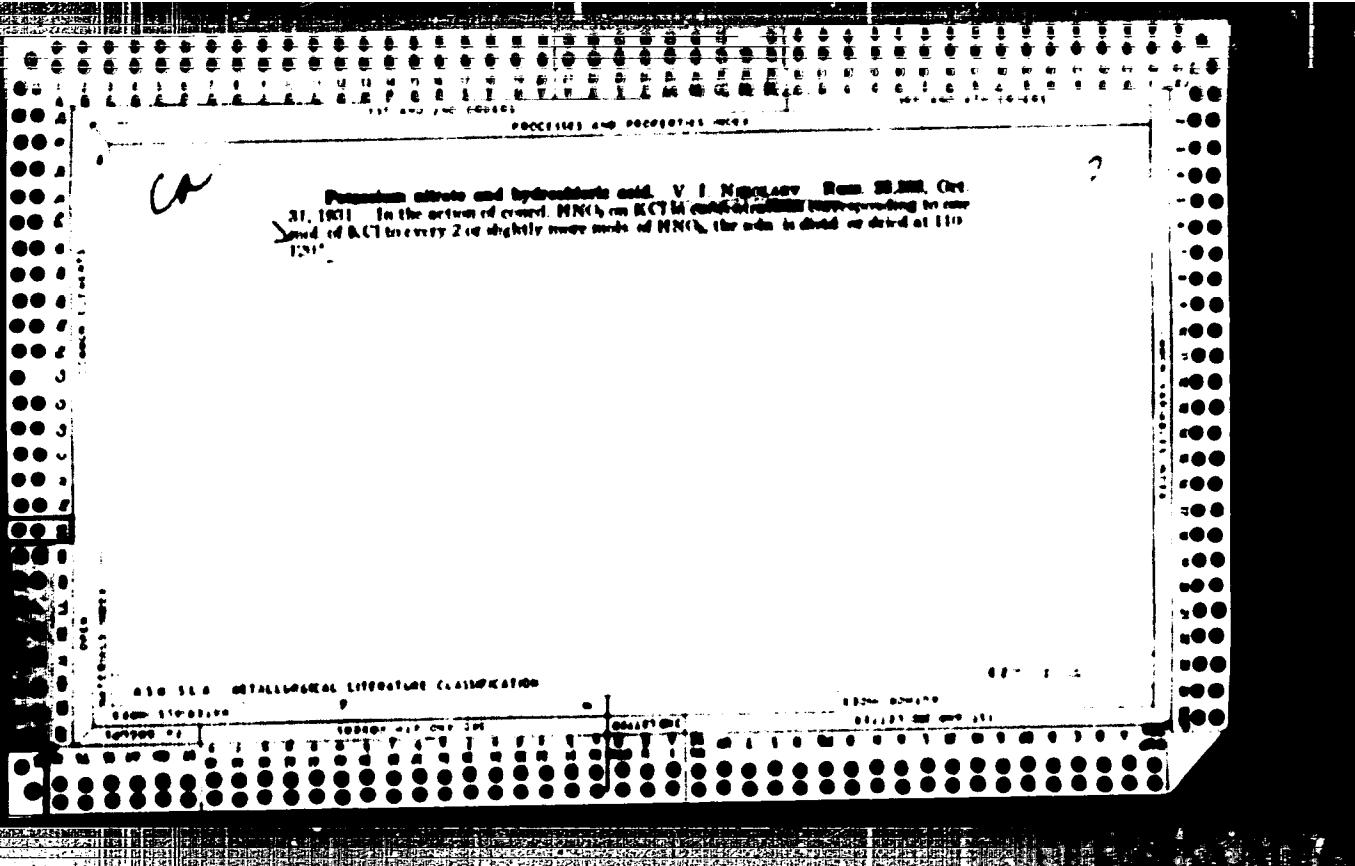
Quaternary system: $\text{NaOH}-\text{KOH}-\text{HCl}-\text{H}_2\text{O}$. V. I. Kostylev and N. S. Dzhaparidze, *J. Russ. Phys. Chem. Soc.* 66, 1251 (1930). cf. C. J. Bratt, *Anal.* KOH was calculated for NaOH in the system. NaOH-NaCl-H₂O previously studied. The equilibrium curve of KCl and KNH₄, under both isothermal and polythermal conditions, in neutral, basic and acid media, was investigated. The influence of added NaOH on the curve of the other (at 25°) was also observed. Under polythermal conditions in the system KCl-KNH₄-H₂O, there is more KCl than KNH₄ in solution at temperatures up to 30°, after an equilibrium in distribution of KOH between both acids is attained, KNH₄ begins gradually to predominate. Under isothermal conditions with an increasing amt. of KOH in solution (or excess of HCl and KNH₄), KNH₄ tends to predominate slightly, but not less than 37.72% by wt. of free KOH is required for actual equilibrium in distribution of the base between the acids, otherwise KNH₄ predominates definitely. In the acid media the content of KNH₄ (free and combined) must be greater than 30.88% before the predominance of KNH₄ can be guaranteed. Thus the content between NaOH and HCl for the base is impacted by substitution of KOH for NaOH, requiring higher temps and excess of free acidic or the base, or under isothermal conditions, the equality in distribution, and then a predominance on the side of KNH₄.

DO NOT RETALIATE OR PENALIZE CLASSIFICATION

CH 18

Manufacture of potassium nitrate and hydrochloric acid. V. I. Nikulin. Zhar
Prilozheniye A, No. 65 (1930).—Chemically pure KNO_3 is dissolved by mixing 74.3 g.
 KCl with 135 g. KNO_3 in 200–300 cc. water. The mass is dried, and the residue
(101 g. KNO_3) dried at 110–120°. The fumes evolved can be used for conversion of
further quantities of KCl into KNO_3 until the KCl/KNO_3 ratio is below 2.8 by wt.
A small modification is described, which permits complete utilization of KNO_3 and full
recovery of KCl .
V. KALINOVICH





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CIA-RDP86-00513R001137120001-5

Relation between the composition of sand and of the salt lake brine. V. I. Nekrasov. J. Applied Chem. (U. S. S. R.) 5, 687-89 (1951).—Report shows that the sand in the salt lakes generally contains Ca carbonates and barium salts, and salts of K and Sr, and Na salts.

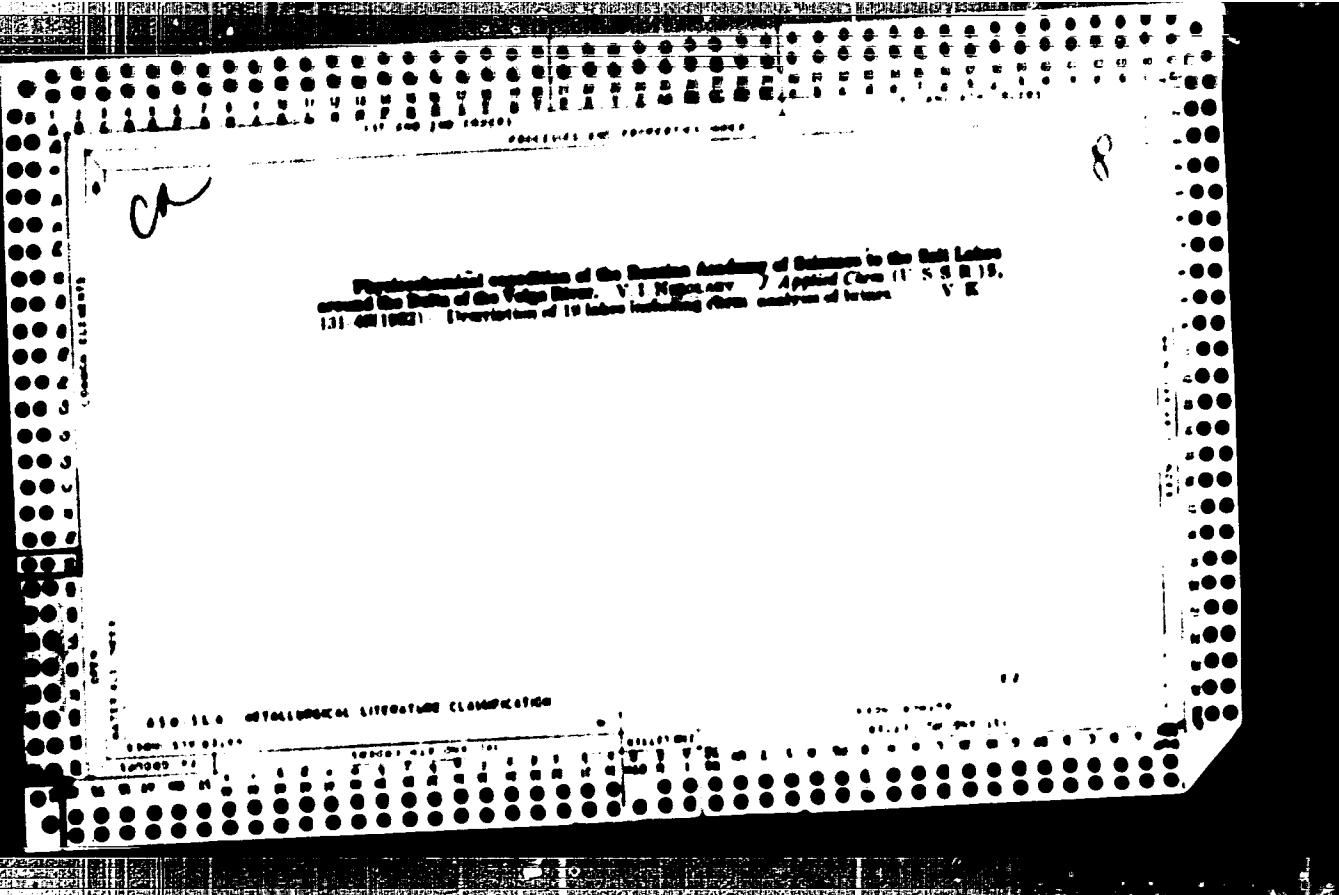
D. Kuznetsov

ASIA-LIA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001137120001-5"

2
Original copy by the Bureau of Mines, Dept. of U.S. V. I. Report No. 400
M. F. Morrison, J. M. Clark, (U. S. G. S.) 1,745-44(1951) ... Behavior of transition metals
in presence of various organic ligands toward hydrogen sulfide, such as NaHS 20%
and NaHS 50%. The action of NaHS on 50% of NiCl₂ by the Bureau was tested
in very similar conditions to those used in the present work. It was found that the
action of NaHS on 50% of NiCl₂ at 100°C. leads to the formation of a 12% NiS at 11.6%
of NiS₂. An 8.6% desulfurization takes place in the presence of 1.2% NaHS at 11.6%
of NiS₂. At lower temperatures desulfurization takes place to the presence of higher amounts of the
salt. At 50°C. the reaction product is 16.0% NiS and the yield required is 61.3%
NiS₂ or 60%. At 30°C. the reaction product is 16.0% NiS and the yield required is 61.3%
NiS₂ or 60%. The transition points for NiS₂ are plotted in Figure 2. In the present work, the transition points for
NiS₂ are plotted in Figure 2. In the presence of 0.12% NaHS. Table 1 gives
the composition and percentages of products of the reactions are given.



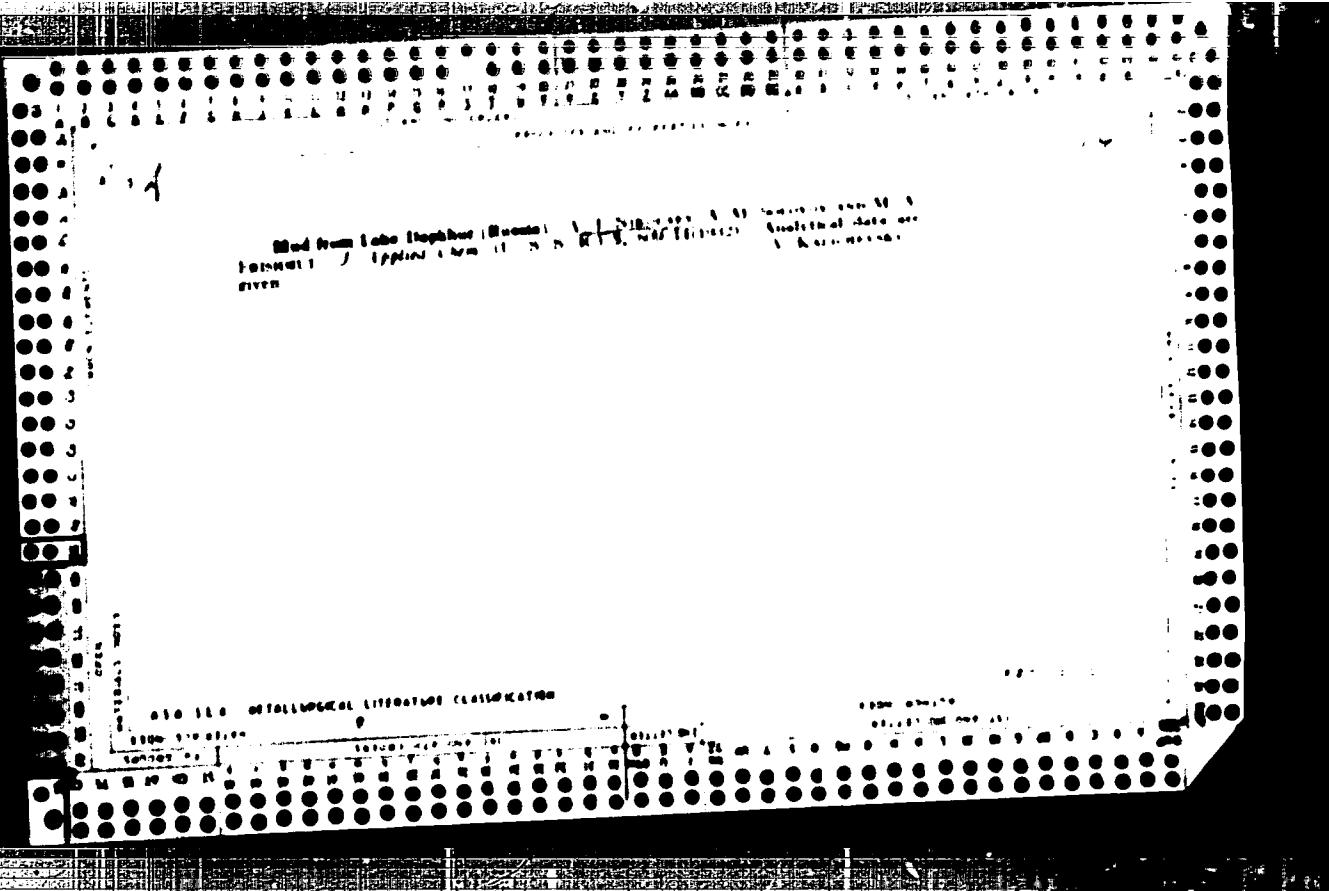
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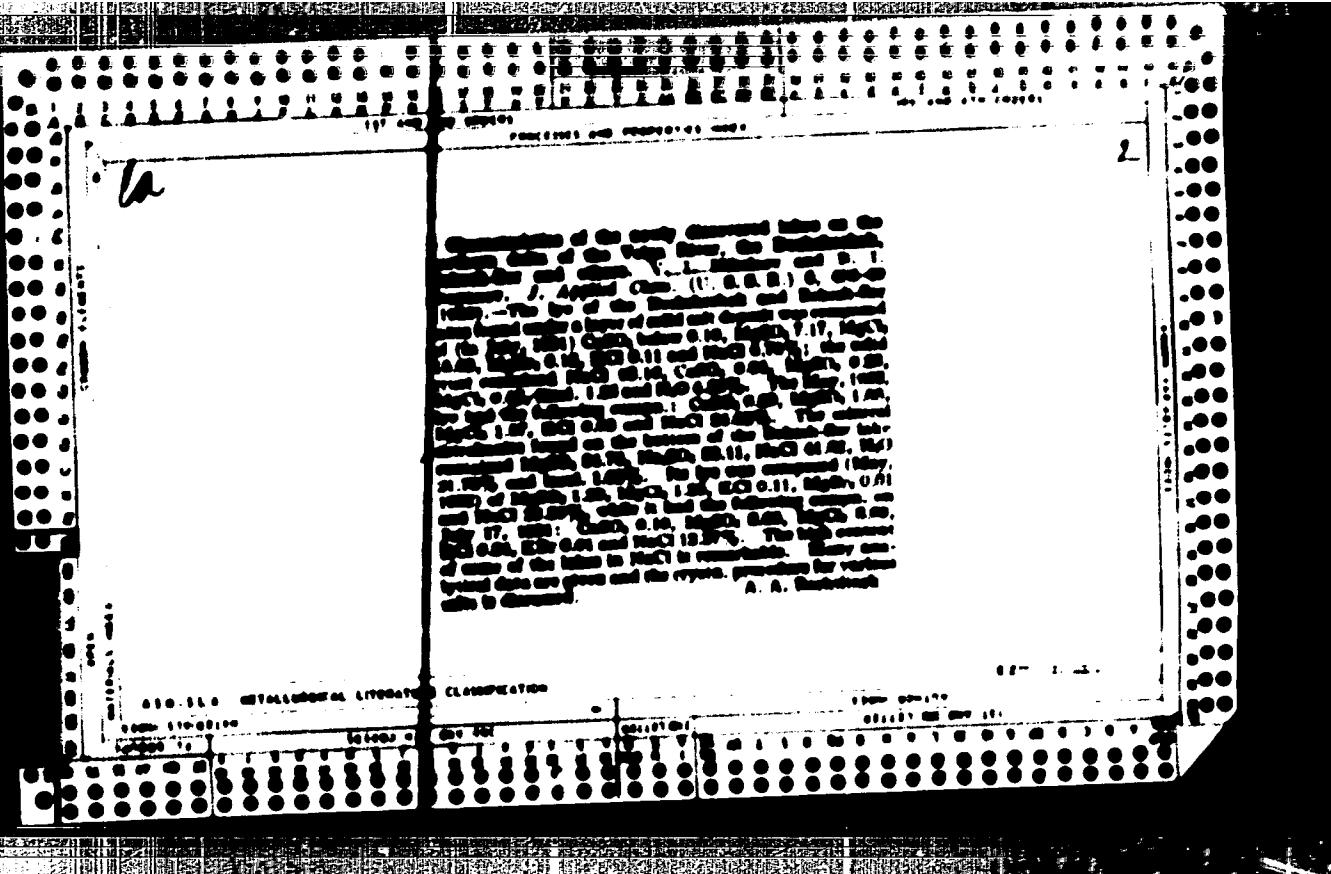
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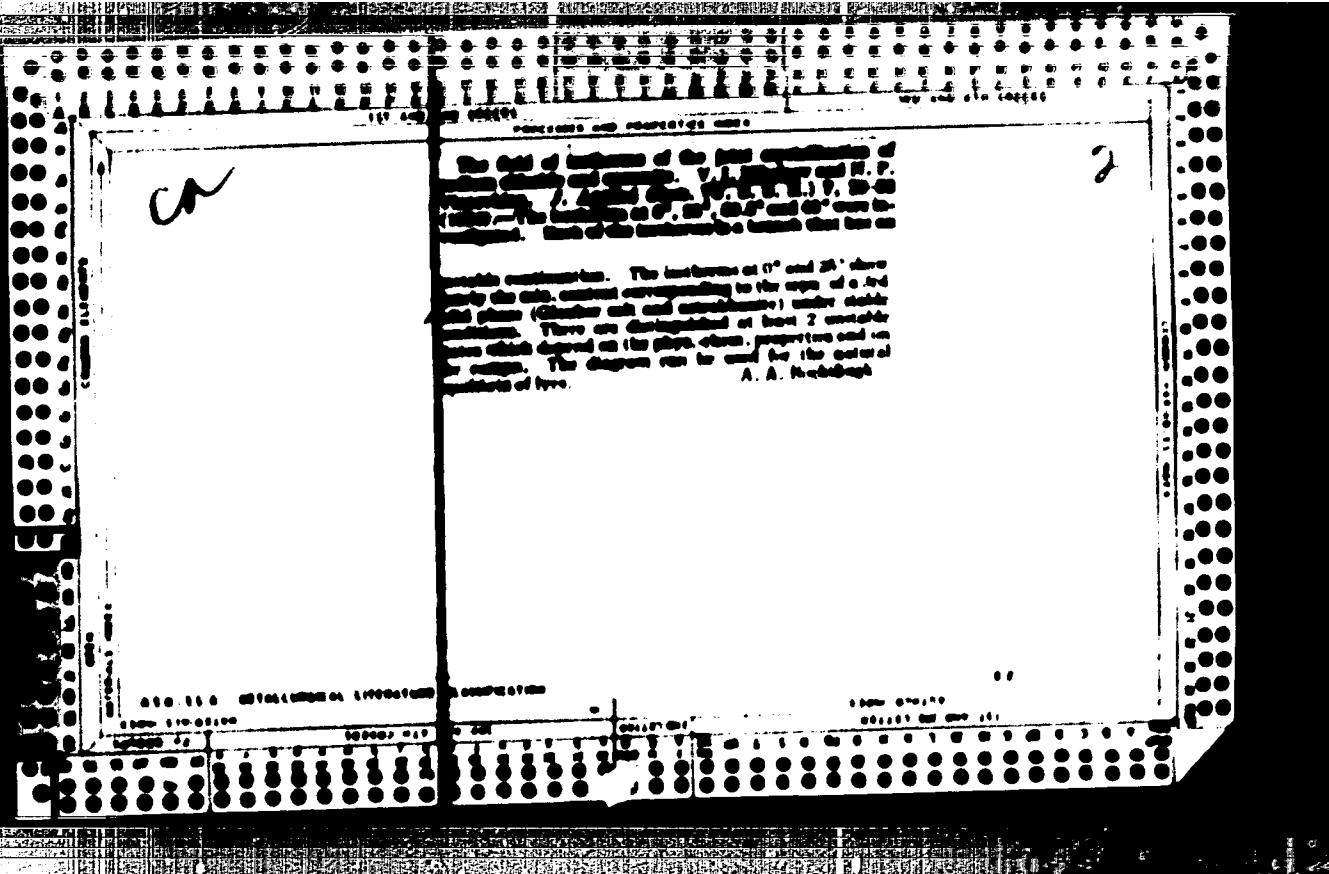
Change and composition of substances. Latent crystallization state of water
alcohol and aqueous. V. S. Shishkov, E. V. Gerasimova, E. O. Bykovskaya and
P. I. Rostovtsev. J. Applied Chem. (U. S. S. R.) 5, 744-50 (1982) -- The diagram for the
MgCl₂-MgCl-NaCl-NaCl system at 25° is worked out. V. K. Kuznetsov.

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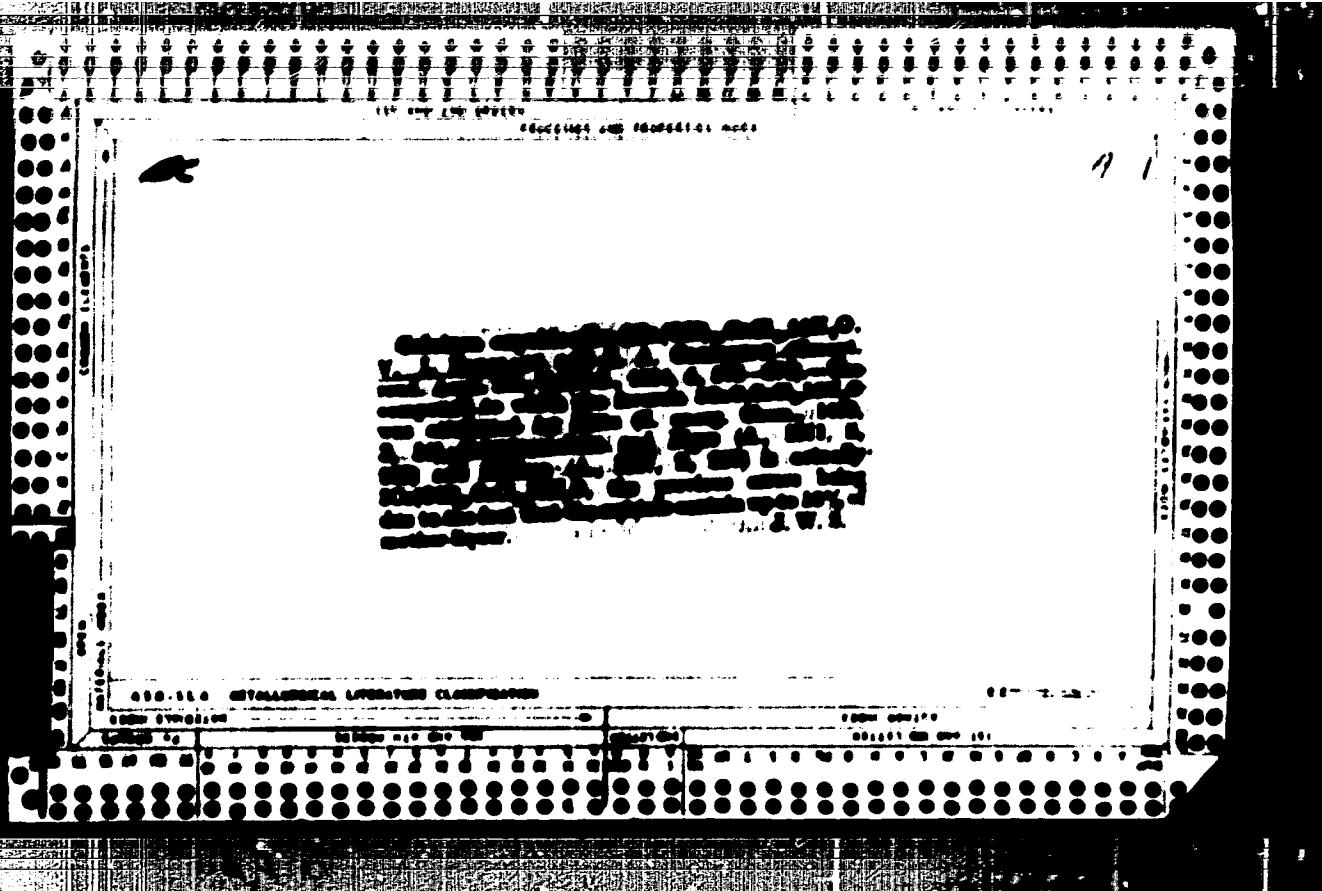
Cathayopisoides, $\text{Na}_2(\text{OH})_2 \cdot \text{CaCO}_3 \cdot 11\text{H}_2\text{O}$ V. I.
 Karpov and B. A. Gerasimov. Compil. read. at meeting of U. S. S. R. Acad. Sci., L. S. S. R. in August 1924. Cf. *Voprosy Khimii i Geologii Zemly i Planety*, 1924, No. 1, p. 103. The formula $\text{Na}_2(\text{OH})_2 \cdot \text{CaCO}_3 \cdot 11\text{H}_2\text{O}$ can be assumed to allow for the extraction of 10% of sodium hydroxide and for 2 parts of Na_2O of composition.

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22 MAY 7, 1970

SALT MINE OVER VOLGA RIVER AND FISHING INDUSTRY OF SIBERIA AND VOLGA RIVER
(SALT LINES OF THE VOLGA RIVER BASIN) INSTITUTE OF SALTS OF THE USSR, LENINGRAD,
L. I. Shchelapov (res) D. I. Kostylev (res), V. V. Kostylev (res) USSR 700000.

LENINGRAD, RUSSIA, MAPS, 1970.

At name of title: Akademicheskii Nauchno-Prakticheskii Institut Obnaruzheniya
I Institut Obnaruzheniya Neorganicheskoy Khimii).

Ternary systems potassium alumate-alum and water
V. I. Kabanov, R. A. Chirkov and A. G. Krugov. *Kinetika i Vysokotemperaturnaya Khimiya*, No. 7, 207. — The field of stability of
K₂Al₃O₅ was studied and the melting curve of the binary
K₂Al₃O₅-H₂O system is given. The fields of stability of
K₂Al₃O₅-K₂Al₃O₅ (monoclinic tetrahedrite) (I), K₂Al₃O₅
and hydrate of K₂Al₃O₅ were defined. The ternary diagram
is given. It is very slight, in the presence of excess H₂O,
in the diagram, action of H₂O; it can be transported in
long distances to needed consumers of a large amount of
it can be used to obtain pure K₂Al₃O₅ and highly concentrated
H₂O (by heating to 100-120°). A. Povall
1/2

B.C.

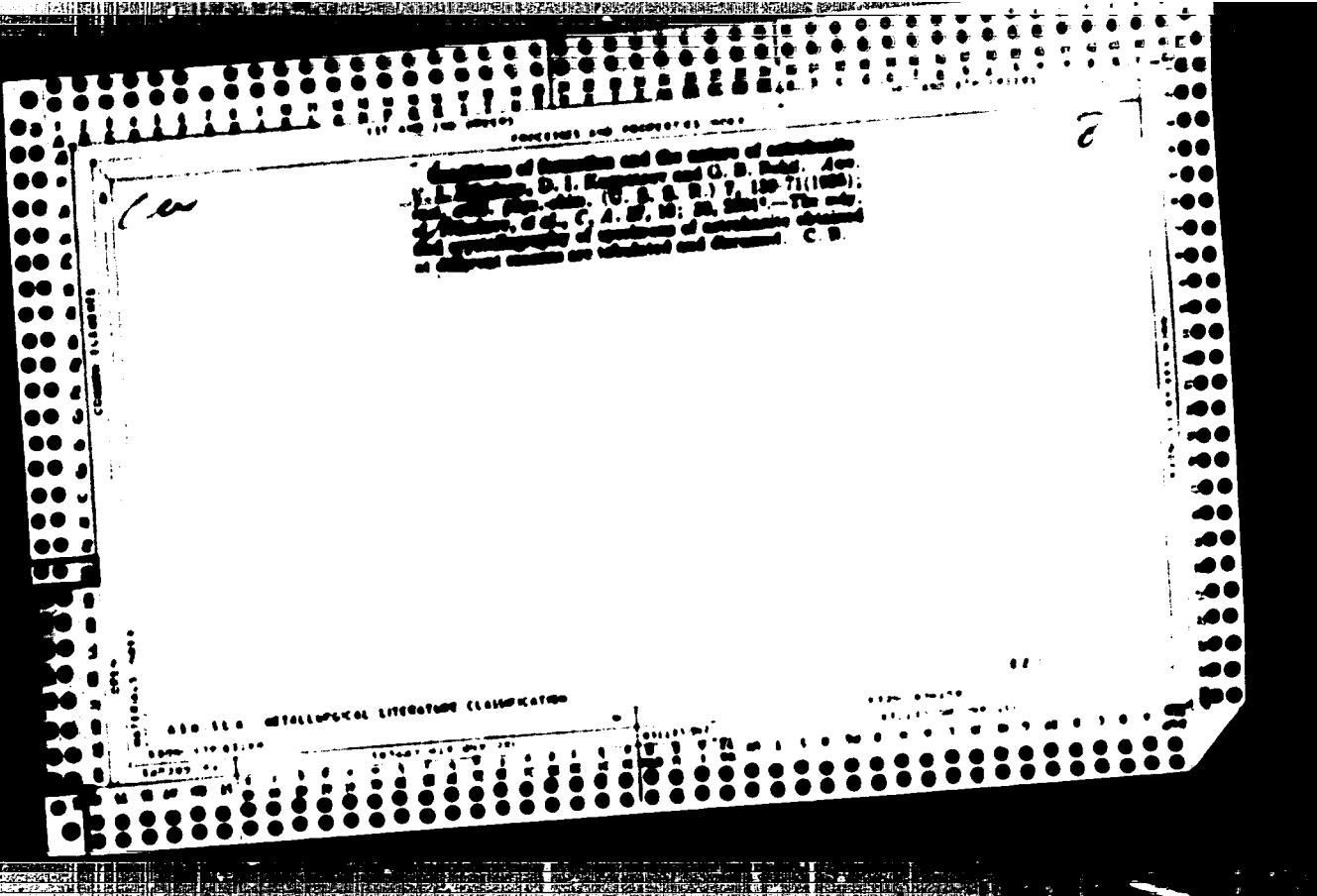
0-1-8

Operating stresses from the synthesis conditions
temperature, 1000°C; pressure, 100 atm; time, 10–100 hr.
A table is given showing the distribution of the
between the liquid and solid phases in the system
LiCl-KCl-NaCl for Na contents of 0.0–0.5%, and at
0–100°. At 100° the liquid contains 2–4 times more
Na than the solid. The max. Na content of gallium
hydride layer was $\pm 10\%$. On App. (4)

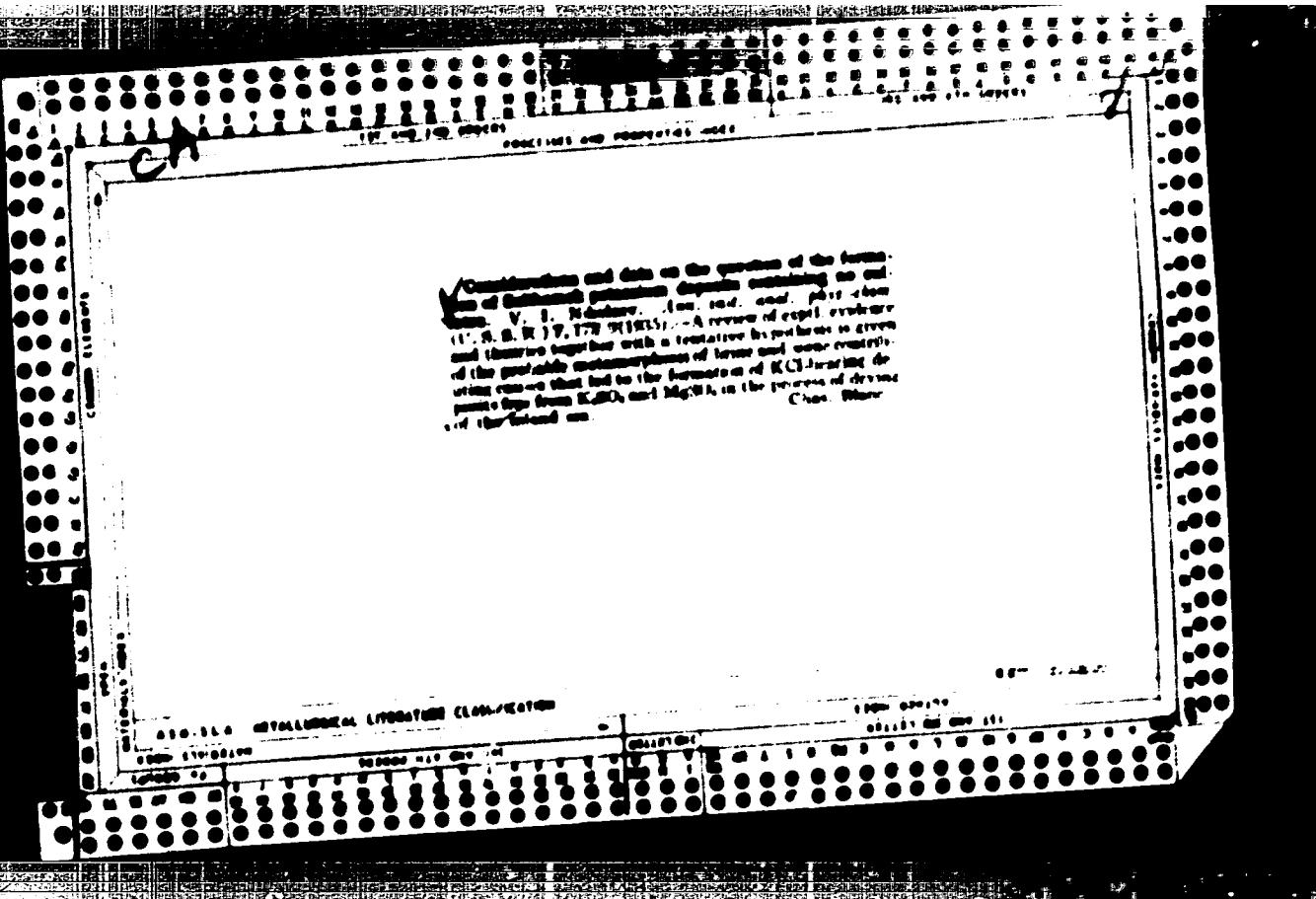
amounts of oxygen atoms entering boronite and spinel (magnetite) in connection with the production of the secondary minerals from the ferruginous rocks and magnetite. V. S. B. R., *Trans. Russ. Acad. Sci.*, 1886, p. 120. (U. S. S. R.) P. 145 (1918). Cf. also, C. A. 8, 20.—The solubility of the ternary and quaternary systems of K_2O - SiO_2 - MgO , K_2O - MgO - Al_2O_3 , MgO - Al_2O_3 - SiO_2 and K_2O - MgO - Al_2O_3 - SiO_2 . The sol. and crystal. and equilibrium curves + the solid phases are presented by proportion of their solid phases are presented by G. L. Blasius.

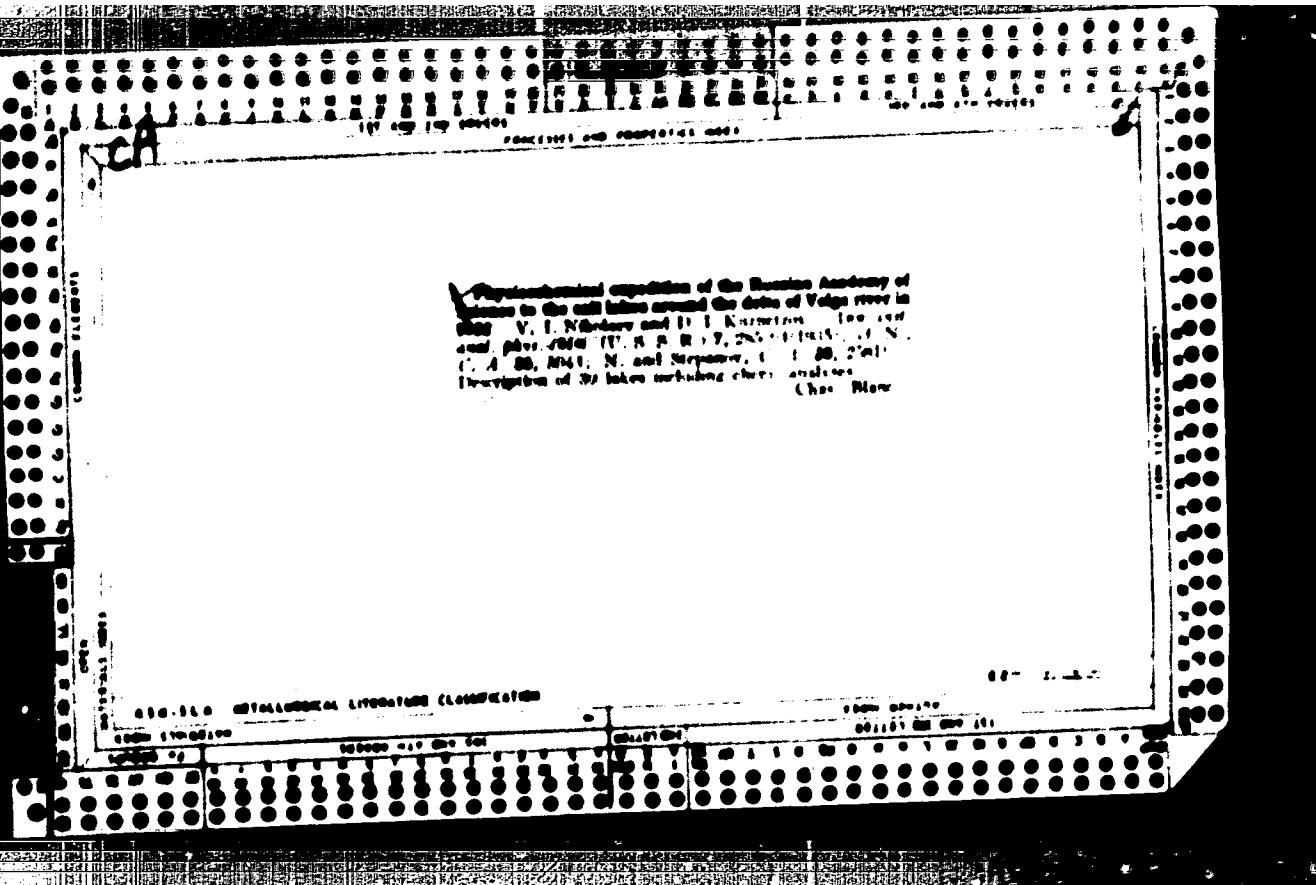
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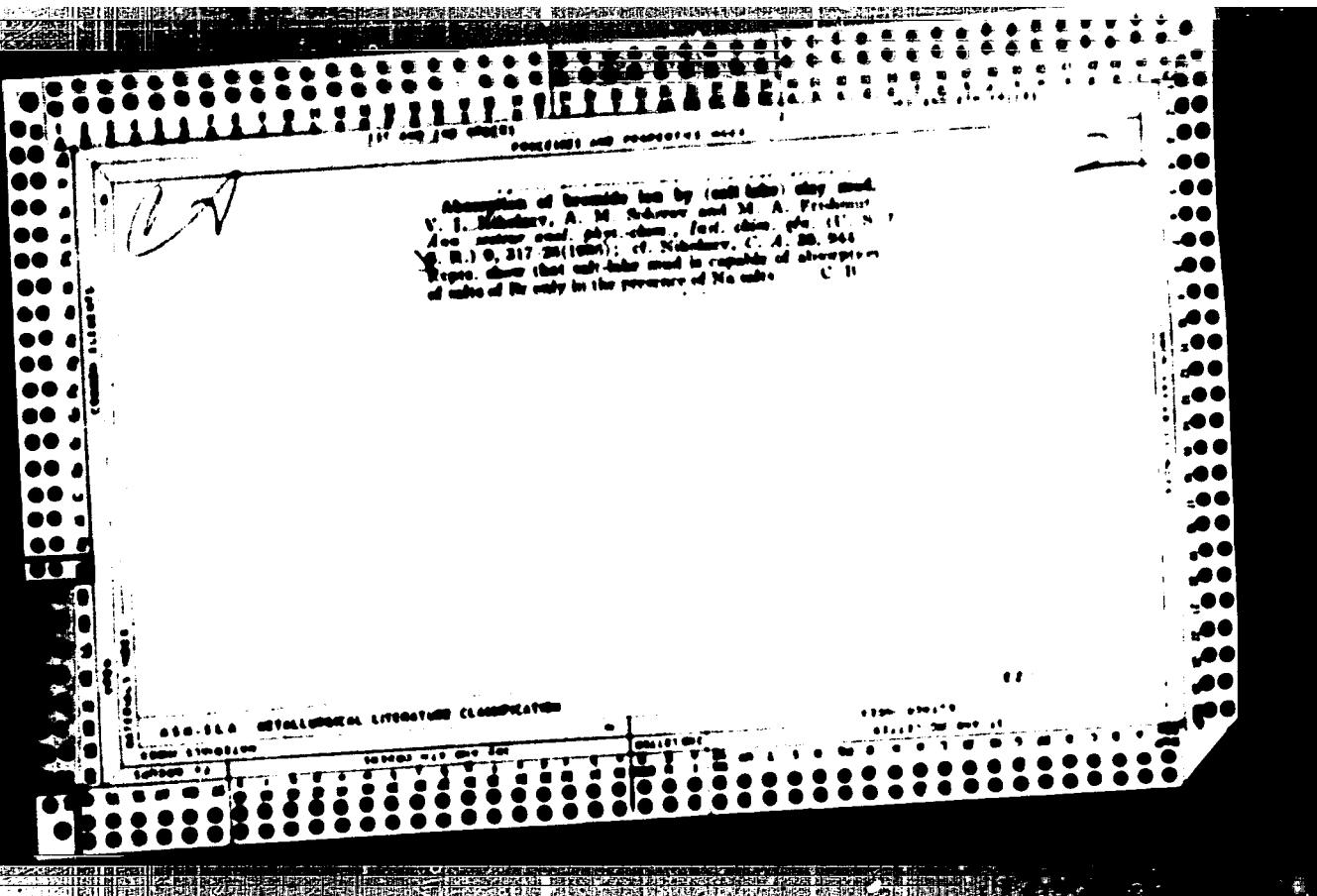
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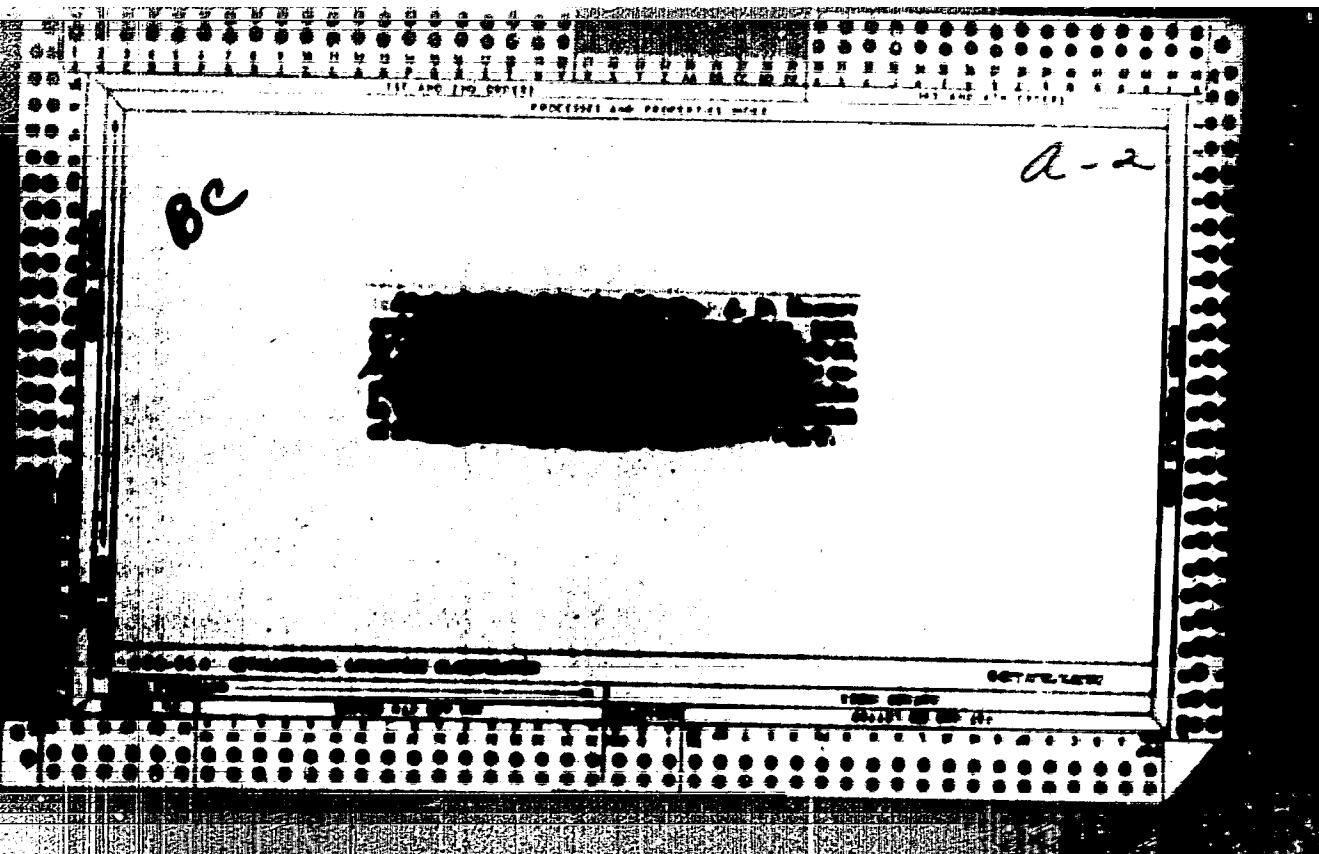
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U
Characterization of lithium tetracyanoferrate. V. I.
M. S. Kharlamov and B. N. Dovgopol. *Acta chem. scandinav.*, 1968, 22, 1031-1035. —
Lithium tetracyanoferrate, $\text{Li}_4[\text{Fe}(\text{CN})_6]$, is formed in either blue or green crystals.
The blue form is formed by a preliminary heating of the salts to 70°.
The yellow is formed at the natural order of the
synthesis, while the blue and green are converted to the
yellow. The conversion of the salts into tetracyanoferrate
is formed as the result of partial decomposit. of $\text{LiFe}(\text{CN})_6$
with LiCO_3 . The carbohydrate
heated at 100° gives the tetracyanoferrate (Morgan, C. A. 19,
1959, polymer crystals. Contrary to Vasil'ev (A. A.
et al., *J. Russ. phys. chem. Soc.*, 18, 220-222 (1886)) $\text{LiFe}(\text{CN})_6$ does
not decompose. The conversion of the tetracyanoferrate is broad
in our case. (See also

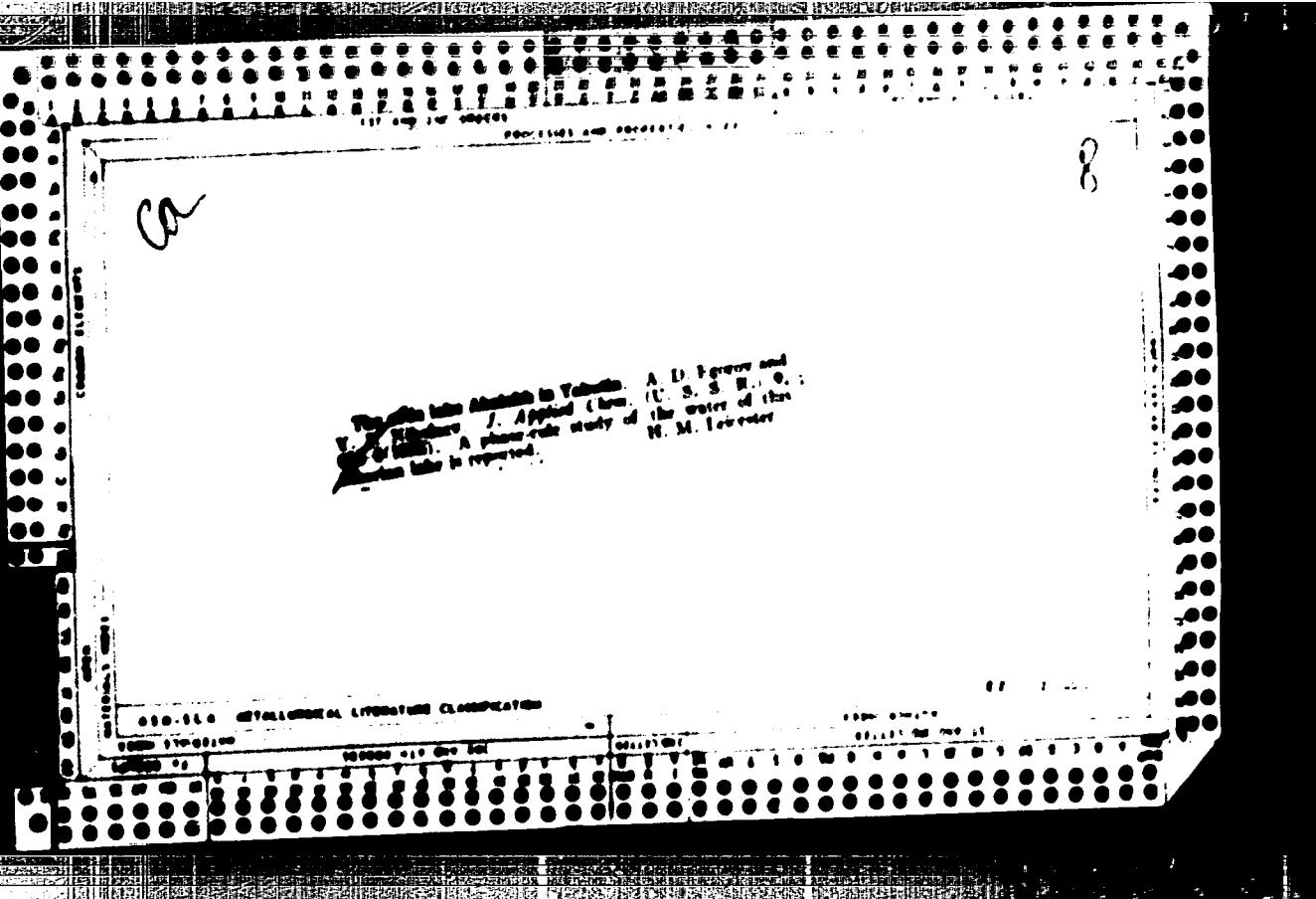
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(A)

(B)

Adsorption properties of colloidal iron oxide. E. I. Nakhmanson and V. I. Nakhmanson. No. 7 and No. 1 R. S. C. (Zelenograd, March and May 1960, 1960-10 in German 1962). As a continuation in the study of the adsorption properties of iron and later metals with respect to the ions of natural humic acids the behavior of colloidal Fe(OH)₃ has been studied. With the exception of Ca and Mg ions all other ions present in natural waters are adsorbed by Fe(OH)₃. The relation between the adsorbed cations and anions could be determined. After adsorption, it was established against the action of H₂S except for the leaching of Fe(II) at the surface of the colloidal granules. The formation of Fe(II) is not due to reduction of Fe(III) and desorption of the liberated Fe(II) in favor of the poorly adsorbed ions.

C. B. Addendum

ABSTRACTS METALLURGICAL LABORATORY CLASSIFIED

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001137120001-5"

Preparation of Glauber salt and magnesium chloride
from芒硝. *J. Appl. Chem.*, 1961, 11, 616. L. A. Lyubimov,
J. Applied Chem., (USSR) 1961, 31(6) P. 1251.
Glauber salt is completely washed out from the
salt by adding NaCl in such way that the NaCl/MgCl₂ molar
ratio is 3, and cooling the wash salts to -10°. The
mother liquor is cooled to the eutectic point of 30-40°, to
yield NaCl and a small amount of MgCl₂. The reference
A. A. Pugachev

Mineral borate deposits of India, central Asia. N. K. Kaban and V. I. Shcheglov. Mineral. Syst. 12, No. 1, 17-20 (1987). The treated borates were borax, anhydrite, hydroborate, carbonato and borate. The chemical composition, crystallography and phys. properties of the samples do, crystallinity and phase properties of the natural and synthetically prepared borates agreed closely with the data in the literature. Chas. Blan.

...and the people of the land were afraid. A. Q. Smith and V. L. Price

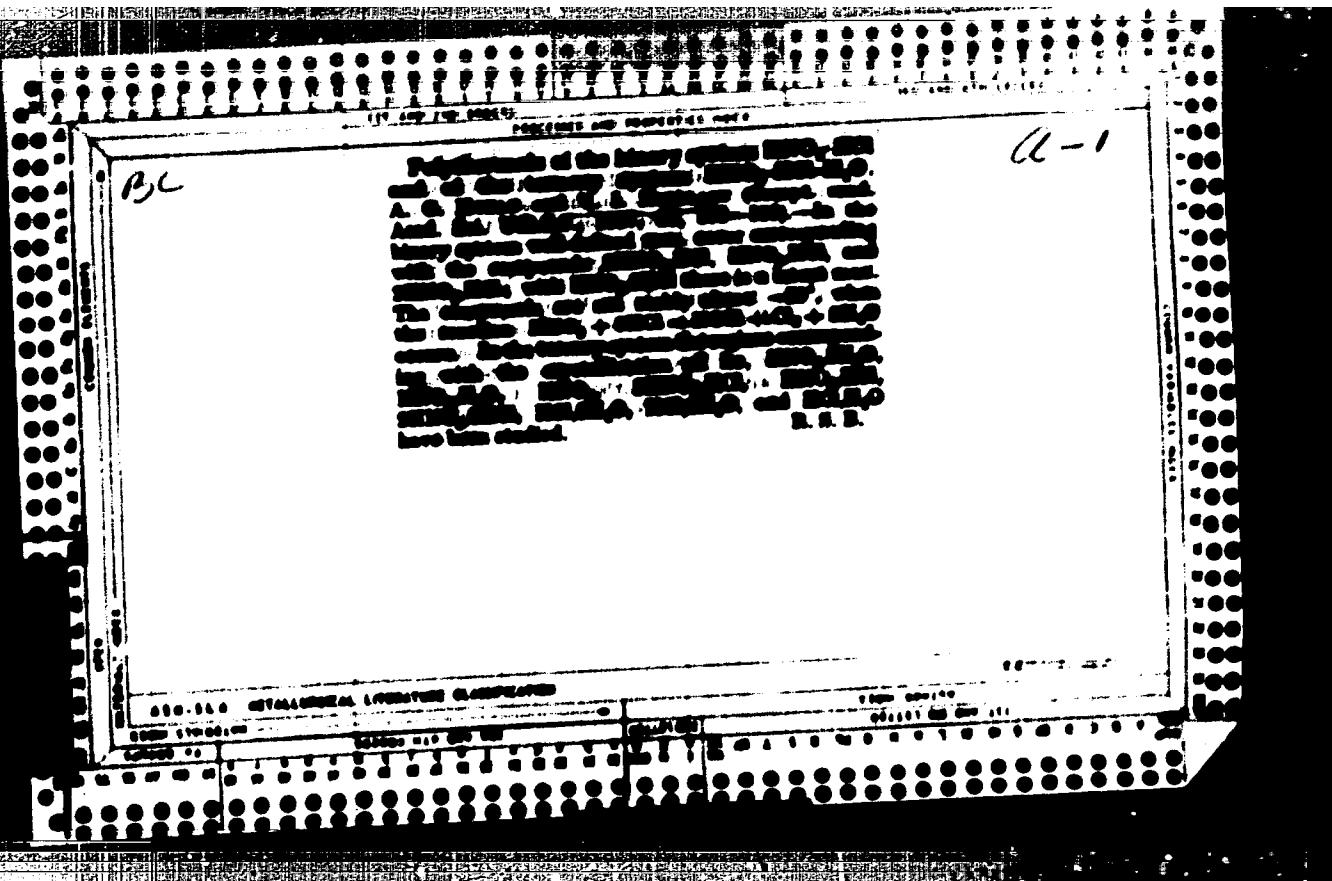
lure. Comp. anal. cond. wt. U. S. S. 10, 200 g. (1937) (in Peacock).—The systems MgO - HCl and MgO - HCl - H_2O were studied and the points at which crystals appeared for various mol. ratios observed and discussed. J. C. La Cour

1.3.1.4. Institutional Support Classification

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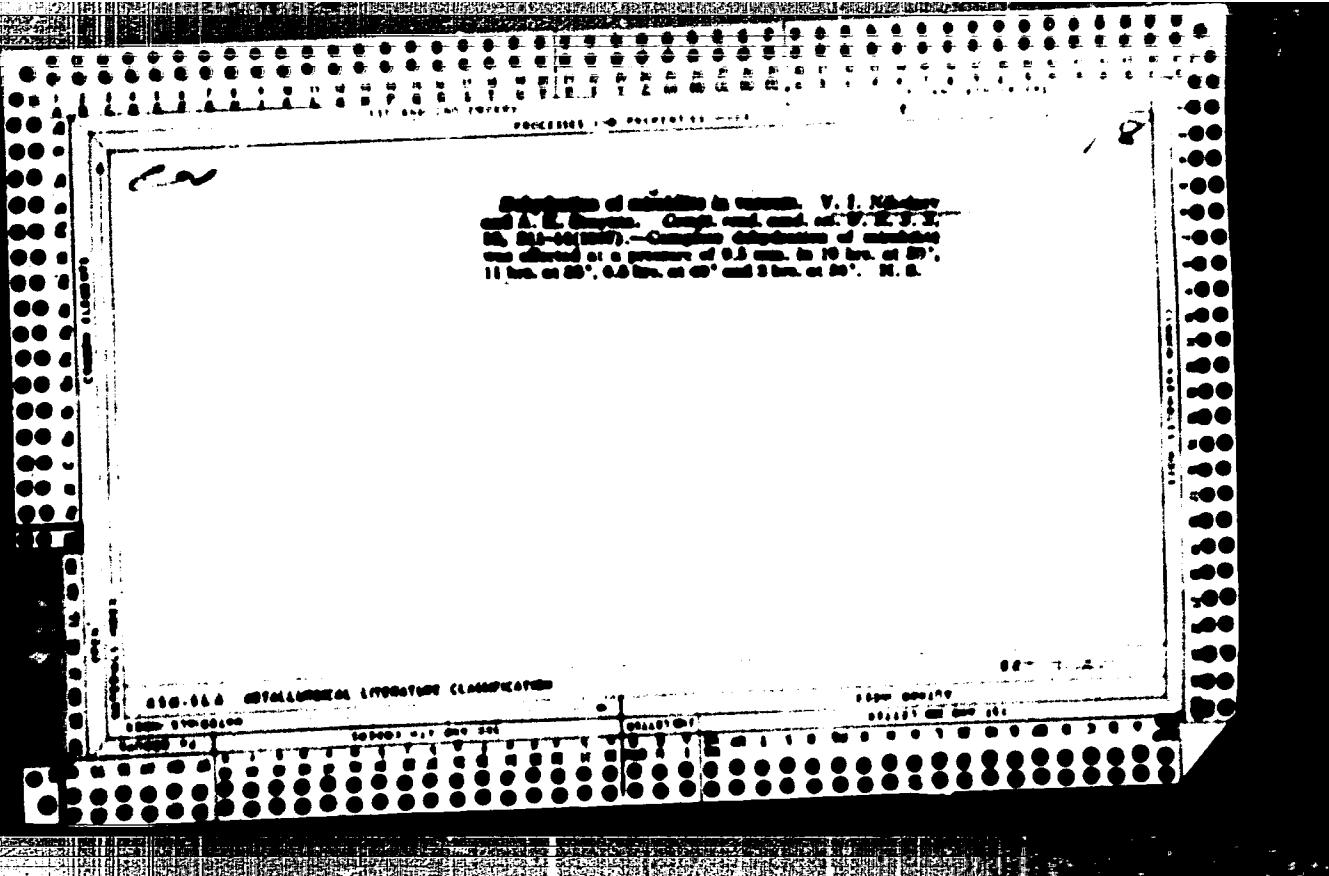
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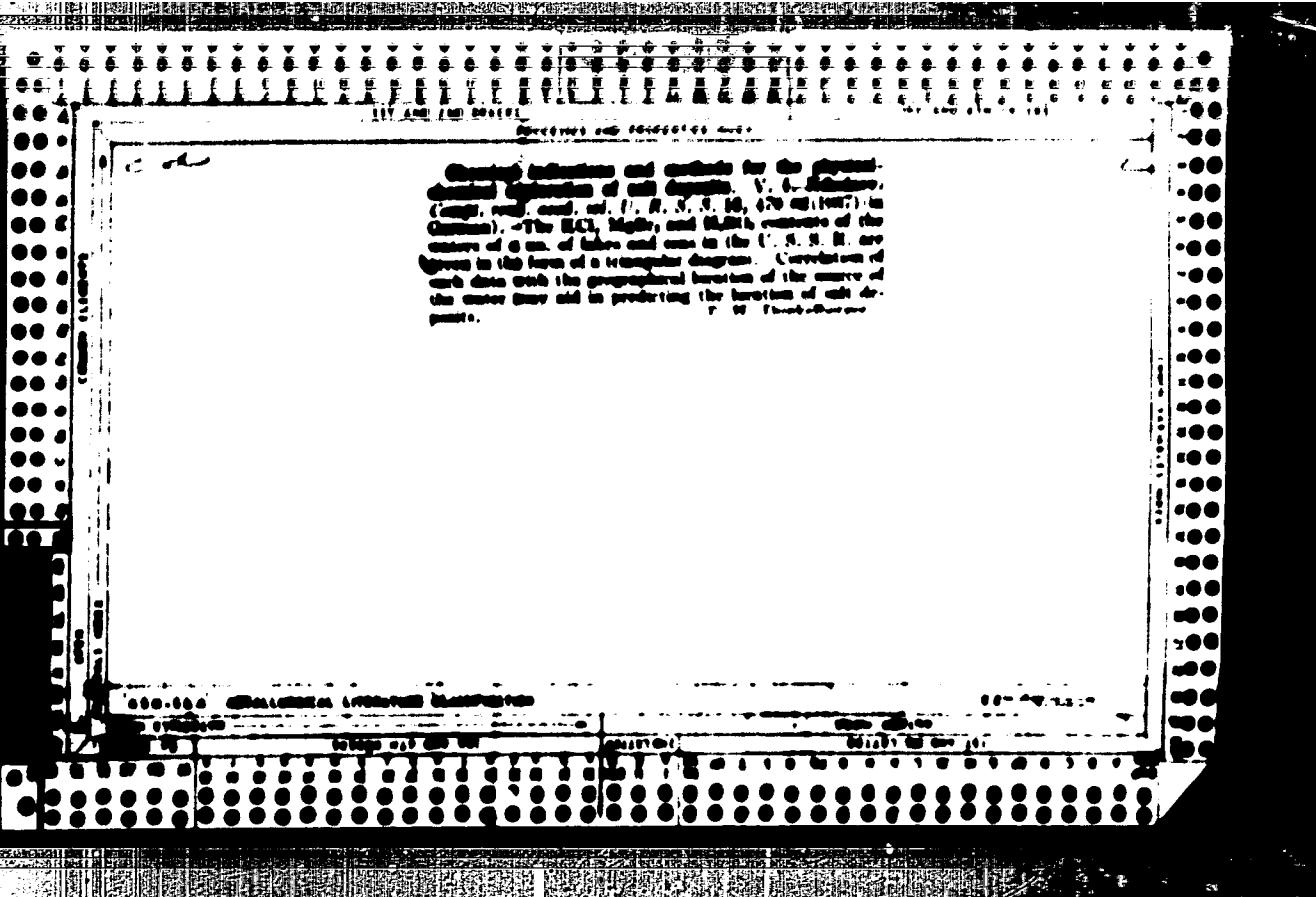


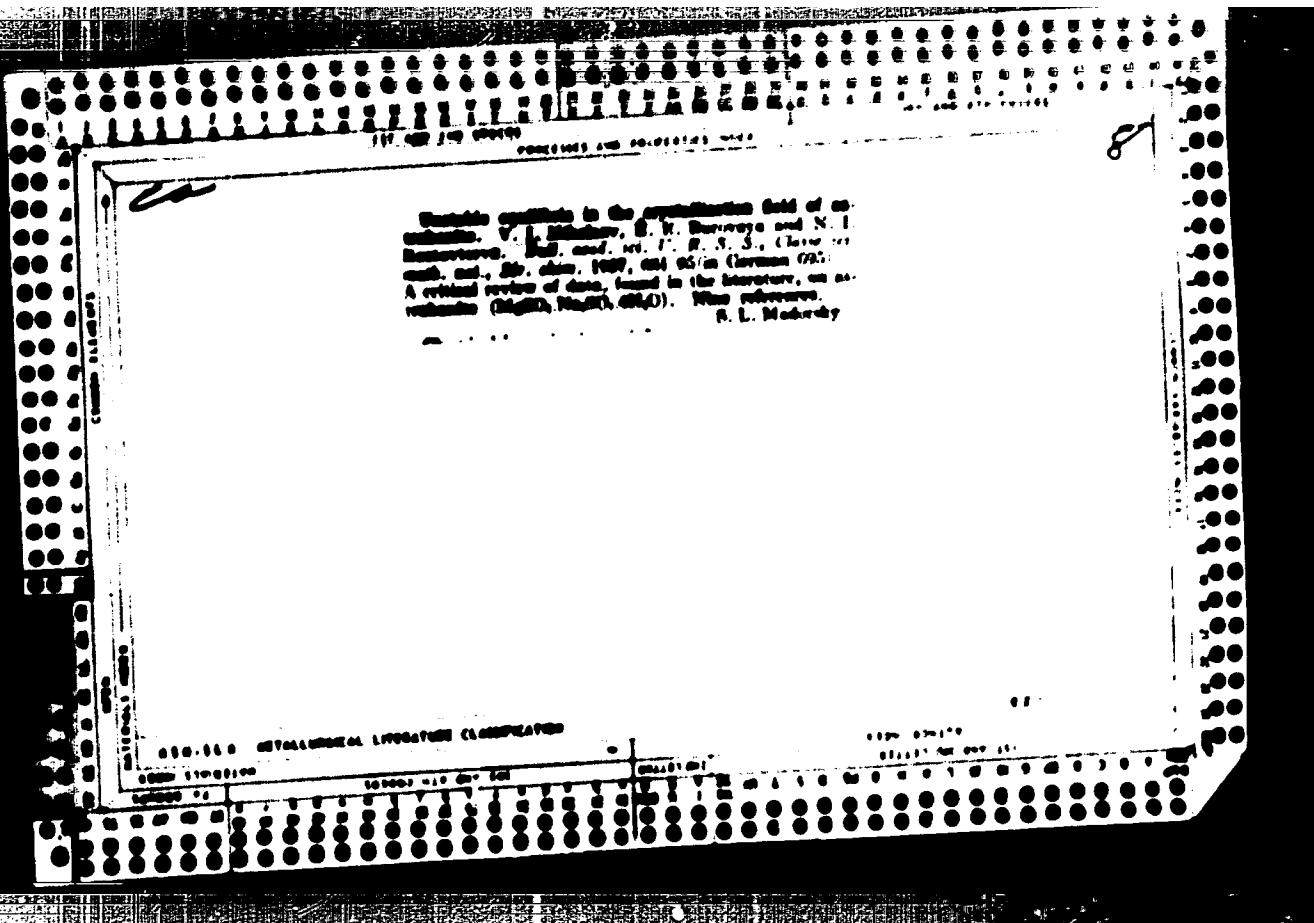
cc
Pechen deposits on the right bank of the Volga and in
Kolomna V. I. Neklyudov, O. K. Venet'ev and A. D.
Neklyudov could read and in 1948-1950
in 1950. The report of an expedition investigating
Pechen deposits

AIG-11A METALLURGICAL LITERATURE CLASSIFICATION

Problems of genesis of Permian salt deposits. V. I. Nalygina, N. I. Baryshov and I. N. Lepeshkin. Zapoved. no. U.R.S.S., Class sci. math. and. 56, dated 1969, zap. 411 (in English 411-12). - An analysis of the relative amounts of KCl, KCl.MgCl₂ and KCl.Fe in the salts residues formed on the evap. of Lake Tadzhik, shows that these residues are similar to the natural salt deposits of the ancient Permian sea, namely, the Sibirensk and Kamchatsk deposits. An investigation was made of the conditions of deposition of salts from the Tadzhik Lake during evap., in order to throw light on the genesis of the Tverian deposits.

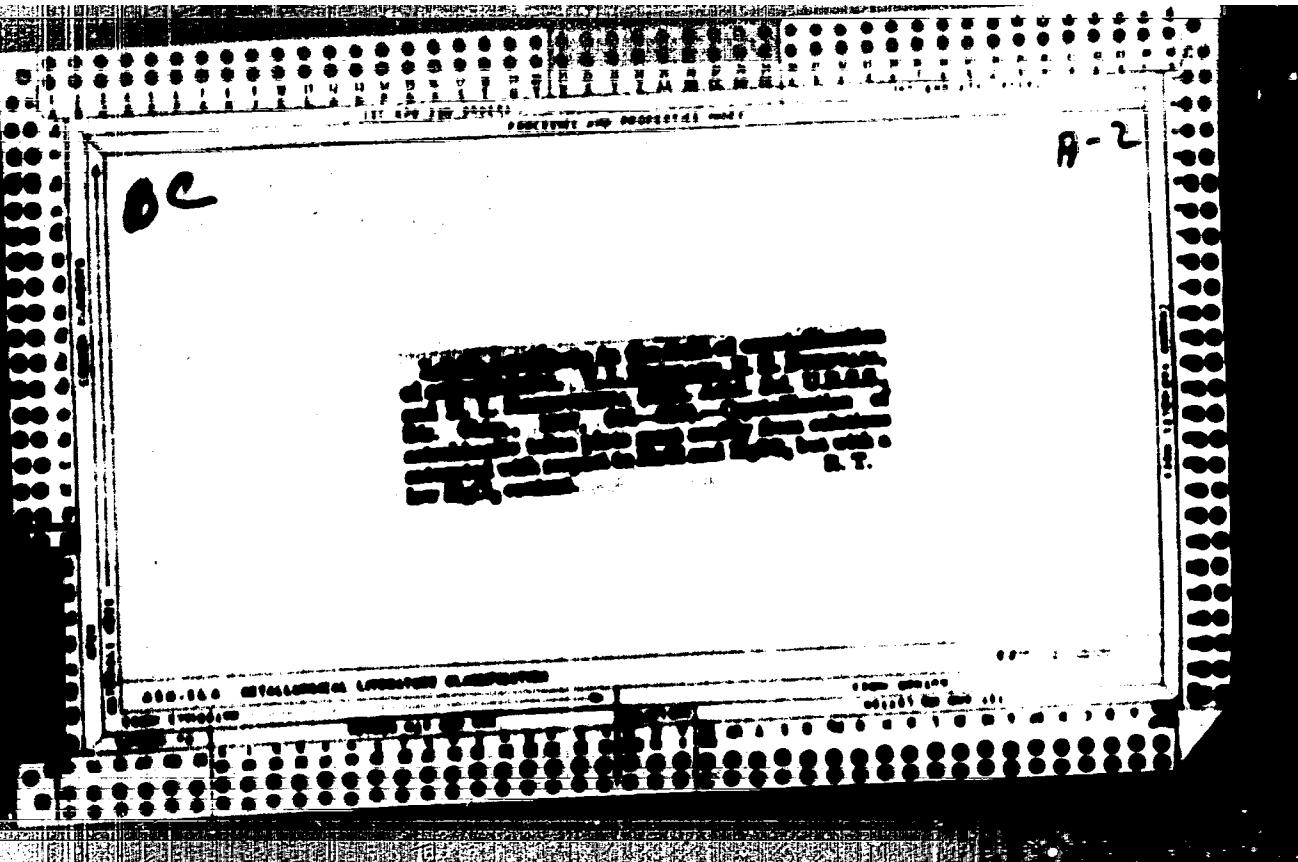
S. E. Moshkov





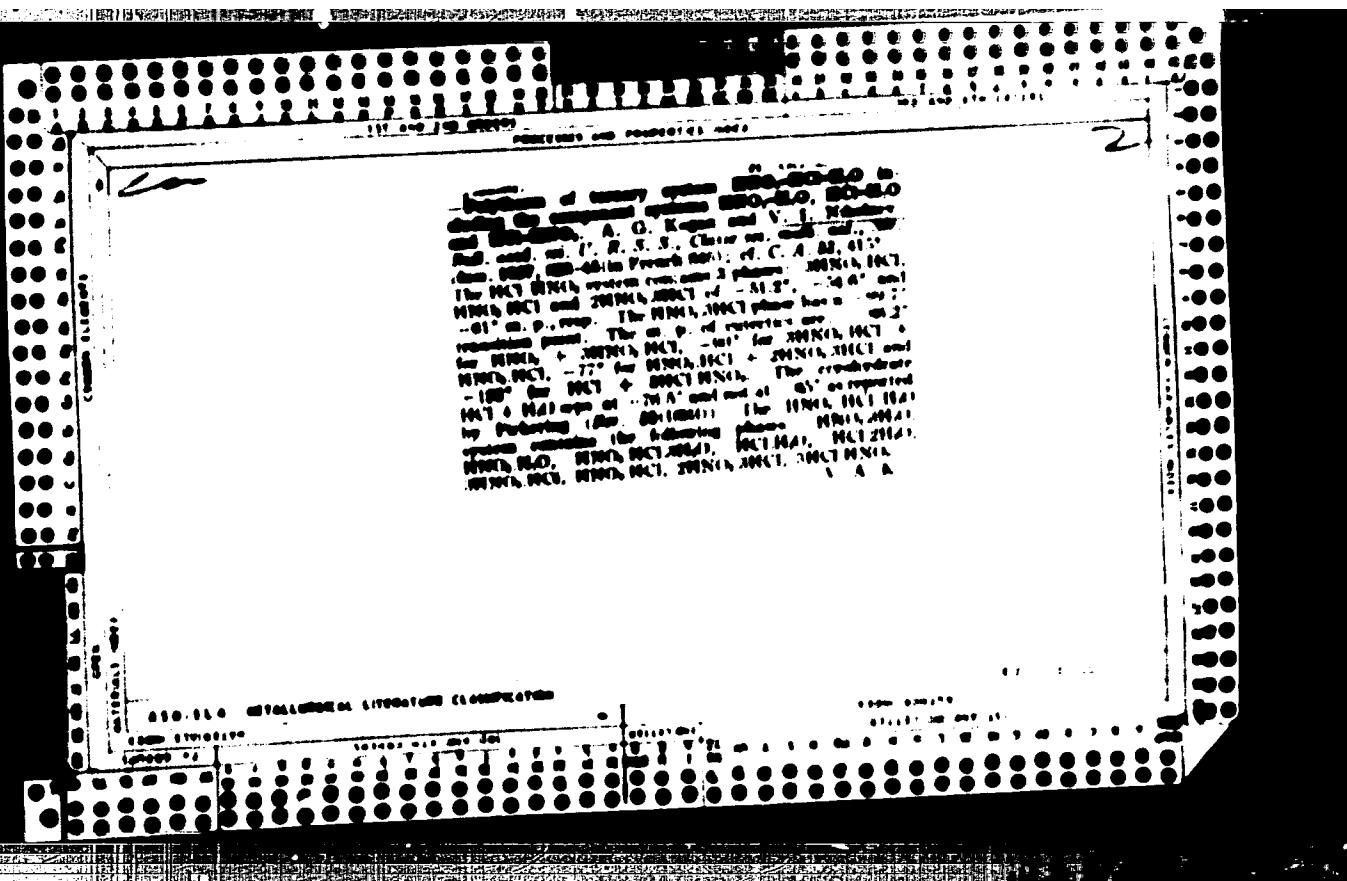
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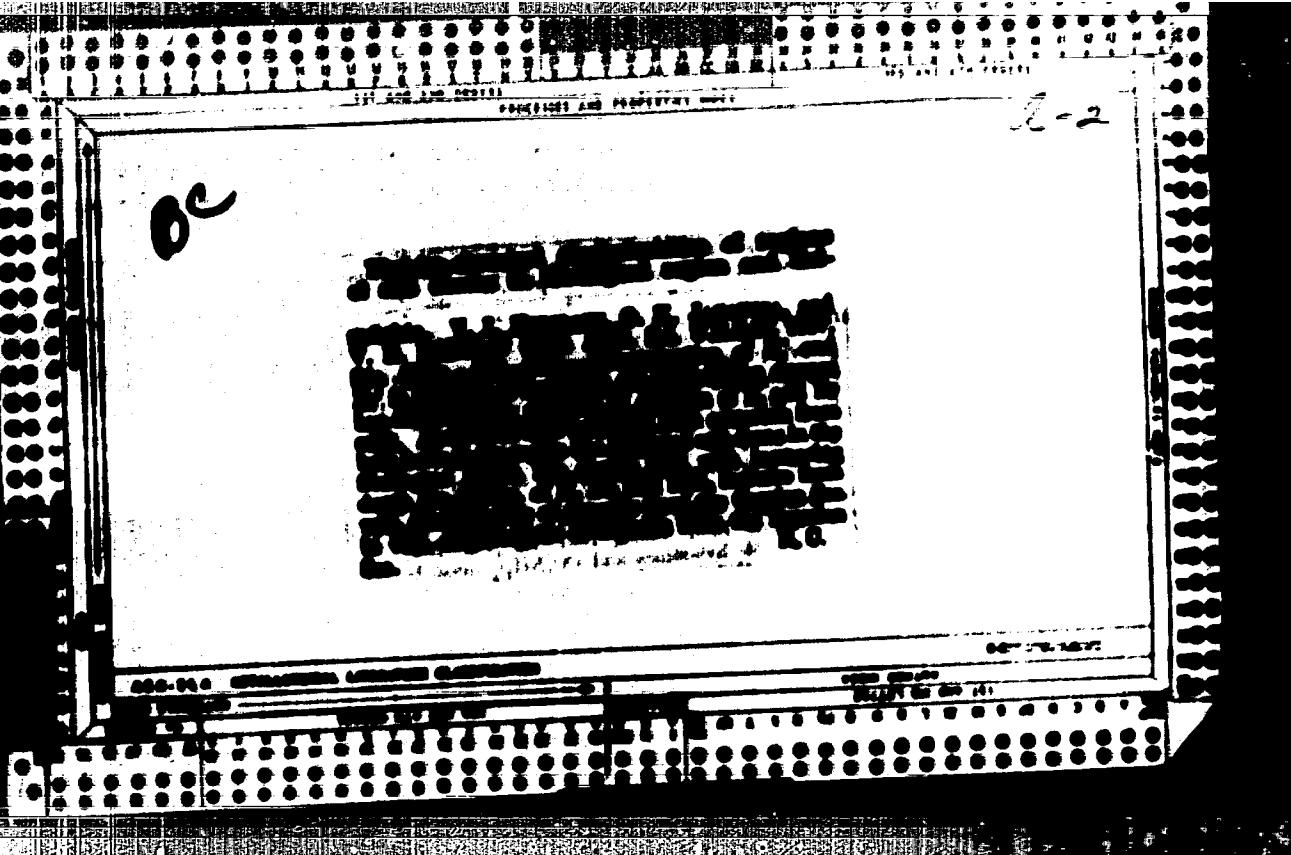


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18

Producing pure common salt via NaCl-MgO. V. I.
Nedospasov and M. I. Krappev. Compt. rend. Acad. Sci. U.R.S.S. No. 80, 263-6 (1952) (in English). In part, were conducted to obtain very pure NaCl from impure common salt from Russia with 10% comp. Ca₂(CO₃)₂ 0.26, Ca²⁺ 0.08, Mg²⁺ 0.16, NaCl 99.62, undissolved residue 1.04%. (I) 401.8 g. H₂O was added to 50 g. of impure salt, the mass stirred and cooled to -7° to -8°; the mother liquor poured off and about 250 g. of cryst. NaCl (contg. Ca₂(CO₃)₂ 0.06, Ca²⁺ 0.24, Mg²⁺ 0.10, MgCl₂ 0.1, NaCl 97.7, MgO 1.01%, resp., obtained. (II) The mother liquor was poured off with the filtrate and the expt. repeated with 501 g. of the brine (26.04% NaCl), to which was added 400.8 g. of impure salt. After freezing to -7° to -8° and pouring the mother liquor from the NaCl dihydrate crystals, the latter yielded 65% of the initial quantity of common salt and contained Ca²⁺ 0.41, Mg²⁺ 0.10, NaCl 99.92, H₂O 0.21, undissolved residue 0.31%, resp.

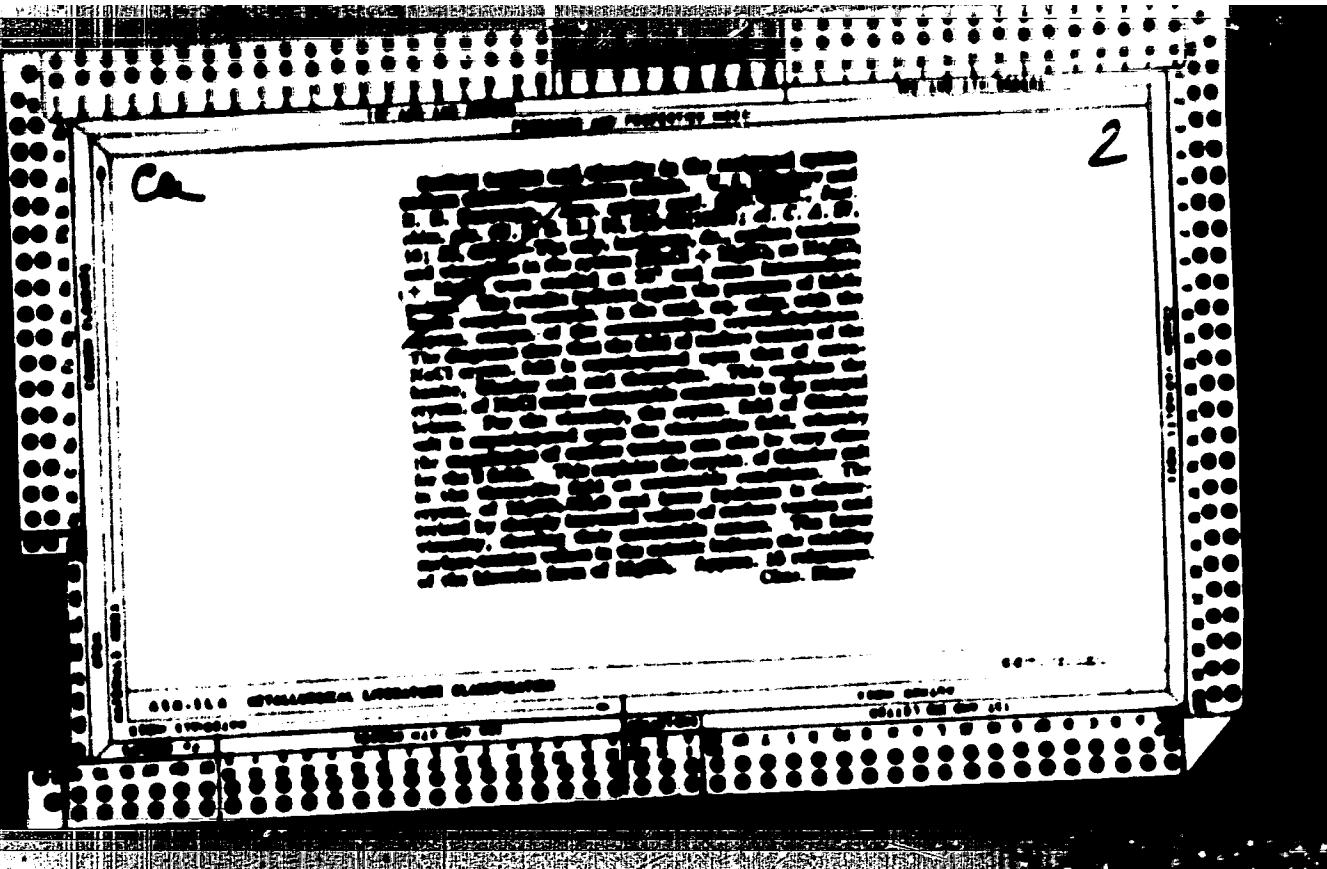
A. H. Krupper

R

Robinson, V. L., and Buddekin, E. L. An analysis of adsorption of clay (kaolinite). (Original work by U.R.S.S., 21, 237-39 (1968) (in English). The adsorptive properties of a kaolin sample containing 99.5% pure clay were studied after first removing a slight admixture of smectite soils by washing with hot NaCl. Two gms of clay, dried at about 100° and finely ground, was shaken for 2 hr with 100 gms of a synthetic solution of definite composition, then the composition of the solution after shaking was compared with the composition before shaking. Clay adsorbed halide ions but not Ca^{++} , Mg^{++} and SiO_4^{4-} ions. To compare the adsorption values of separate ions by clay and by the entire soil complex, sand was washed with NaCl until it gave no Cl ion reaction, sterilized and weighed and the dry substance analyzed. The adsorption values of the separate halide ions by the sand complex are considerably greater than those of the same ions by pure clay. The clay in the sand adsorbs 94.3% of the Cl ion, 68.6% of the Br ion, 7.5% of the K ion and 43.7% of the Na ion.

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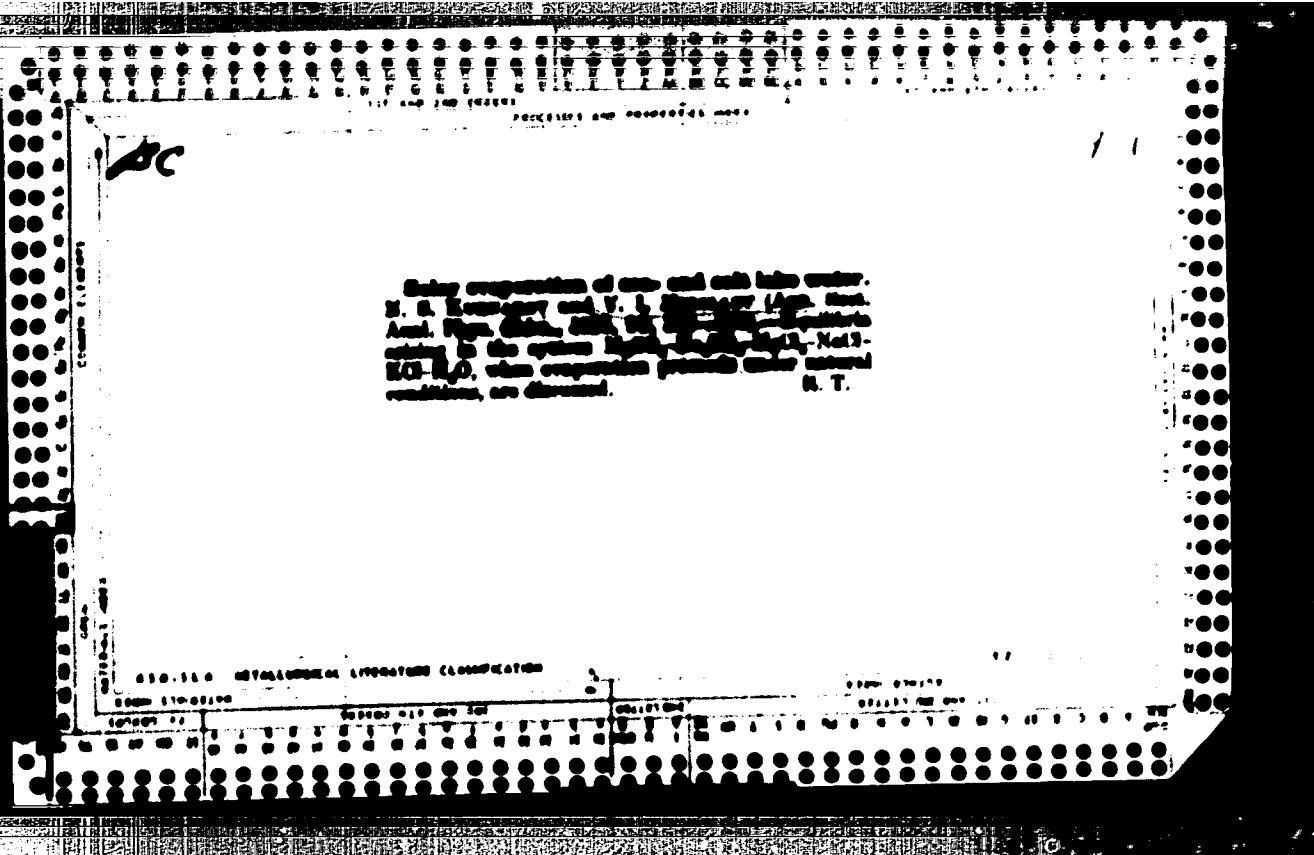


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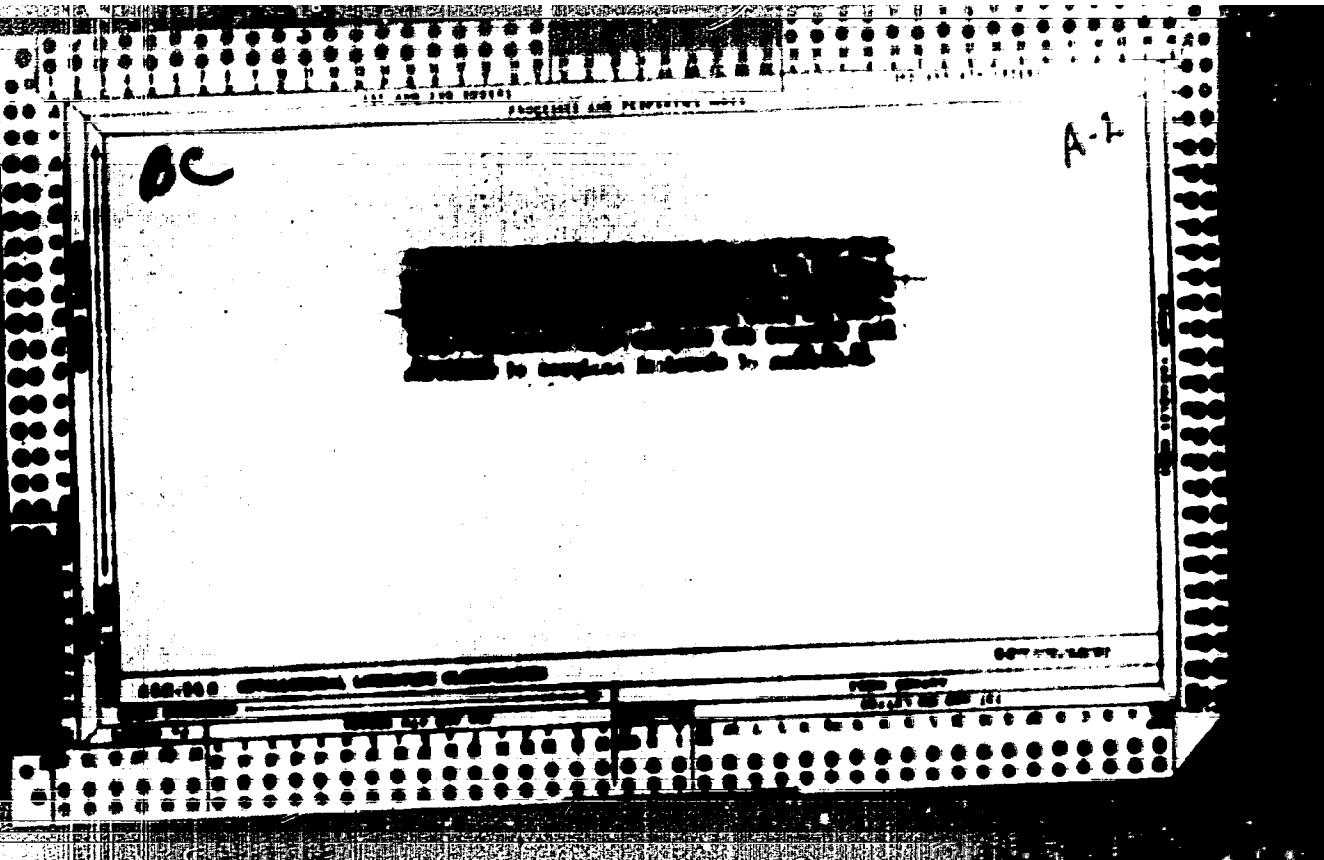


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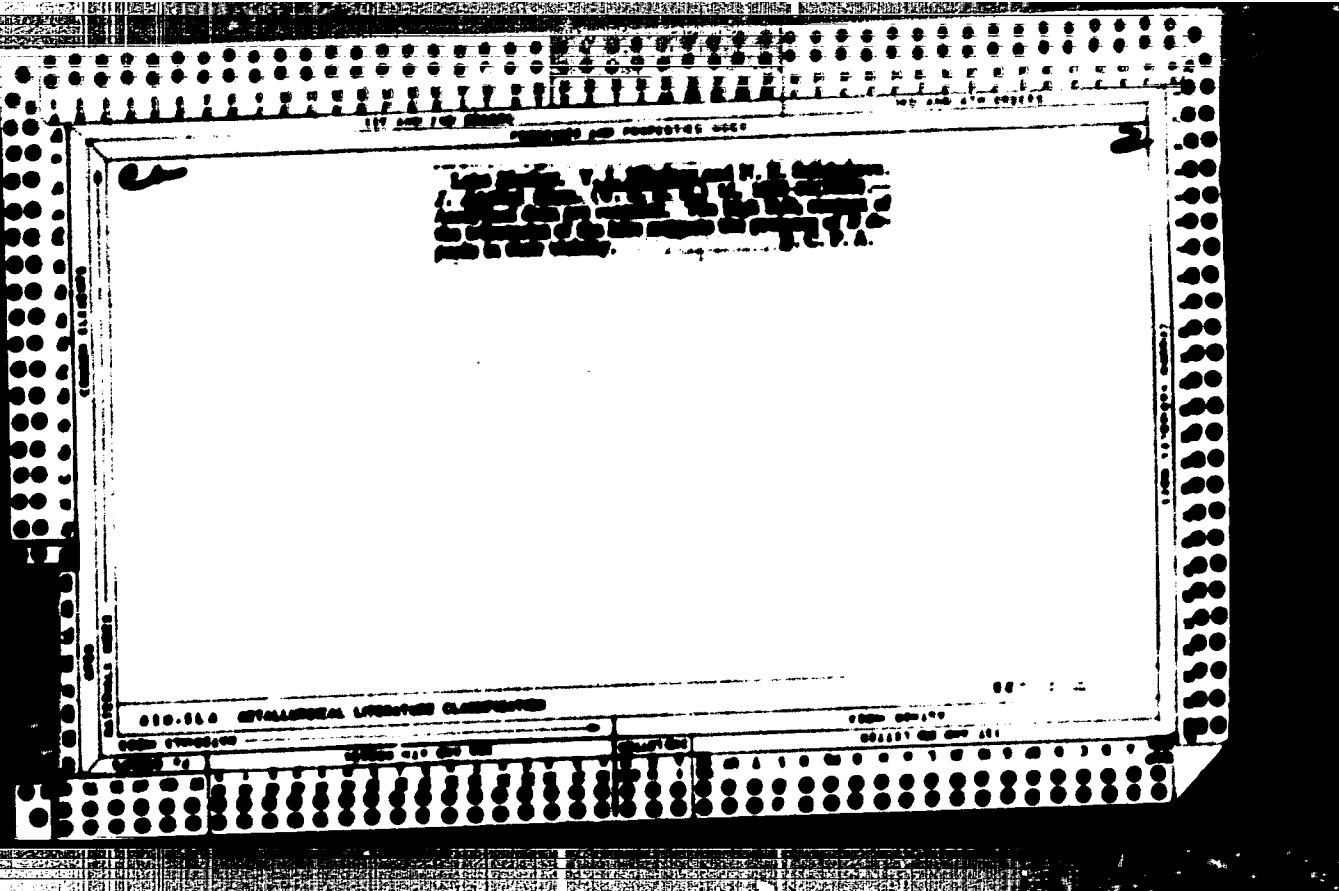
Strontium as a chemical indicator V. I. Shul'nev and
S. E. Katsin. *Geop. rev. ered. nauch. R.S.S. 20,*
66-6(1966)(in English). - The percentage of Sr in the
solid residues from natural waters or salt deposits can be
used to determine their origin. Crusts of Sr larger than over
0.005% are characteristic of salt deposits of Permian origin,
and crusts, not over 0.01 to 0.02% are characteristic of
Caspian deposits and natural waters L. N. Steiner

450 350 0 METALLURGICAL LITERATURE CLASSIFICATION

Preparation of potassium chloride by double decomposition of potassium chlorate with sulfuric acid at low temperature and concentration of sulfuric acid. X. J. Nakhmanson and A. G. Kogan. Bull. Acad. U. S. S. R., Chem. and math. phys., No. 1, p. 102, 1958 (Ref. in English, 1961, Transl. Russ. Sci. Chem., 1961, 100-04). In English, 1961, Transl. Russ. Sci. Chem., U. S. S. R., No. 2, p. 24 (1960).
In hospital. A study of 4 variants of the method showed the diagram of the system K_2CrO_7 -HCl-H₂O was as follows:
and 10% HCl to every variant, but for varying amounts of KMnO₄ and H₂O₂, led to a variation of prop. of KMnO₄ among variants, of H₂O₂, from 37.7% up and temp. of 1-14°. By x-ray, 70% of the theoretical KMnO₄ is obtained. Further KMnO₄ + HCl is recryst. and from this molten mass KMnO₄ is obtained by cooling to 0°. It is said, molten mass KMnO₄ is obtained by cooling to 0°. 10-15% KMnO₄ is obtained from the mother prop. of 10%. 10-15% KMnO₄ is obtained from the mother prop. of 10%. A flow sheet is given. V. G. Tolosa

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Annual cycles of salt lakes which have deposits of
salt, B. T. Rappaport and V. I. Nekrasov, Bull. Acad.
Sci. U. S. S. R., Clas. Sci. Mat. Nauk, No. 1, p. 1000,
1956 (in English, 1964). The regularities of changes in
the surface of Baskunchak lakes were studied. The annual
cycles of these lakes are closed ones and they have a wave
nature. Three waves could be distinguished: (1) winter
waves, when NaCl is accumulated in the brines, (2)
spring waves, enriched with MgCl₂, and (3) summer fall
waves, when the brines are rich in MgCl₂. During the
winter both NaCl and Na₂SO₄ hardly crystallize together
down to about -3°, while at lower temp. Na₂SO₄ (10%)
and NaCl 20% crystallize. A method for the separation
of NaCl from Gubayev's salt is being developed. B. Z. K.

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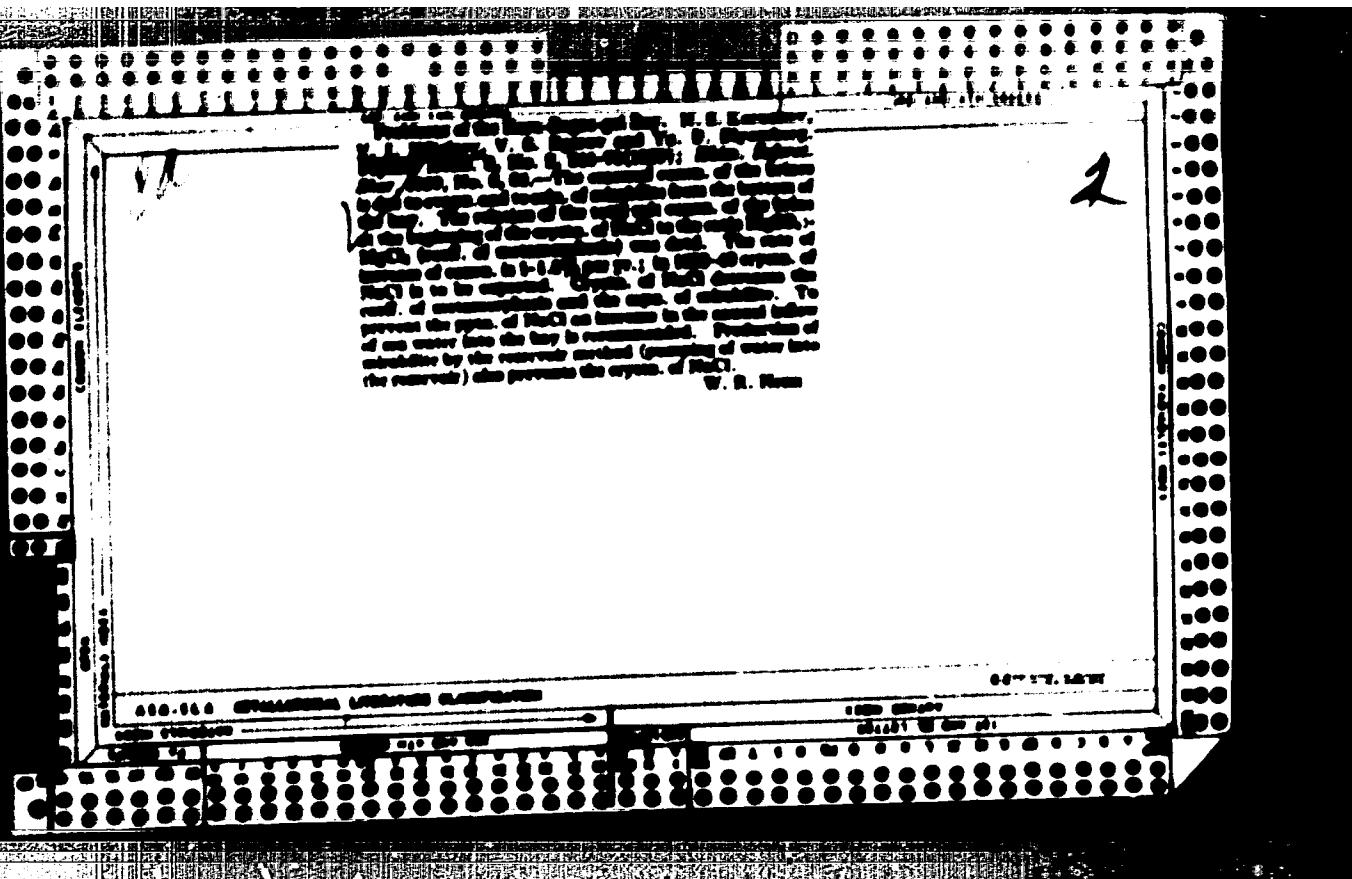
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CA

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The synthesis of binary and
ternary systems of aluminum and the
aluminum hydrides and borides. V. I. Kostylev and
I. S. Kargin. J. Gen. Chem. (U. S. S. R.) 1957, 27,
241. - The up. cit. publications on hydrides of the elements
of groups II, III, and IV to the next (transition) were devoted
mainly to the binary and ternary systems among. We are

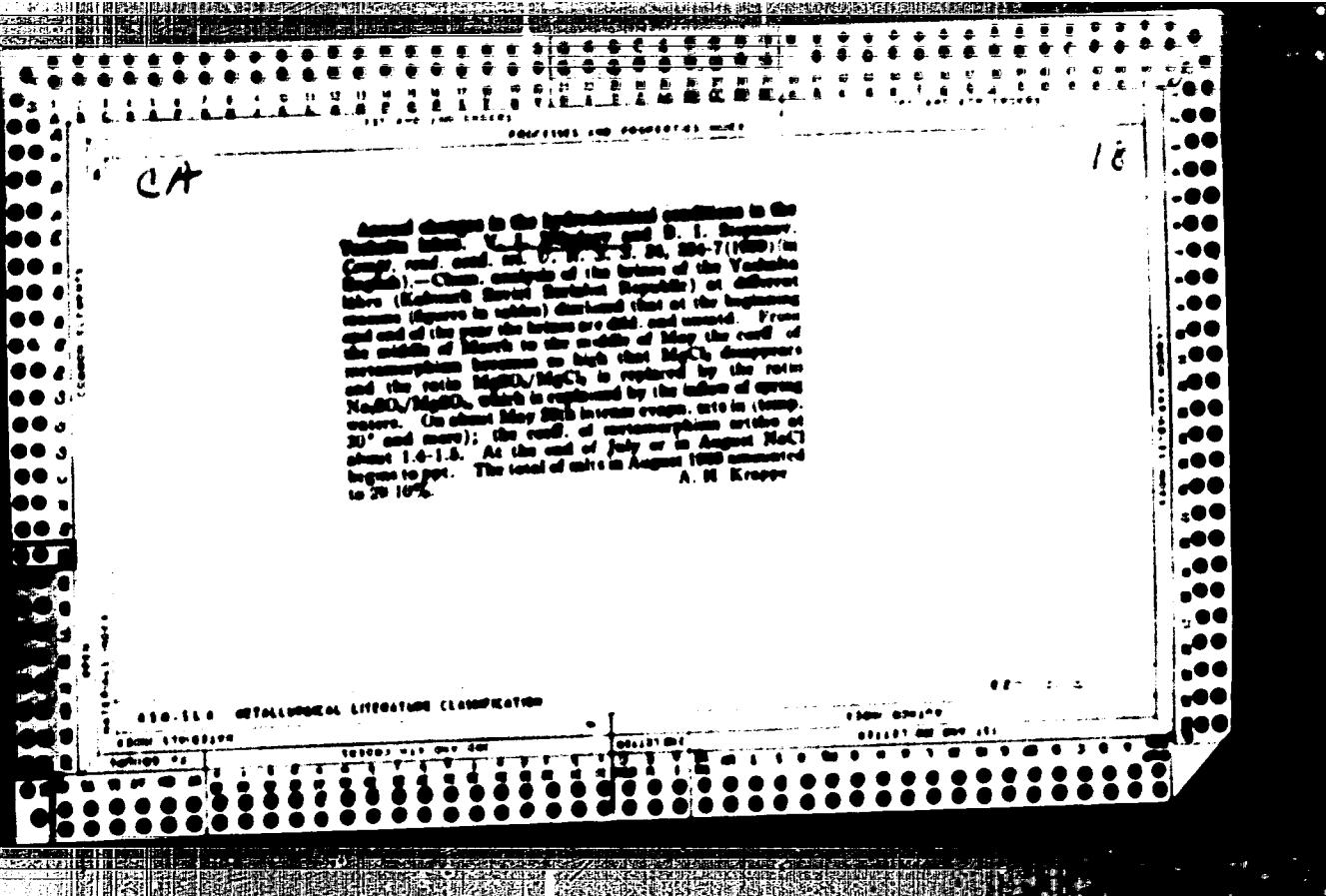
very interested and interested. The results of the investigation
were compared with the data of the heat capacities of
the binary systems at 20° as given in the literature. The
heat capacities of the up. cit. publications in
the binary systems correspond to their capacity, to the
transition points or to the min. of the heat capacities. In
the ternary systems $\text{MgCl}_2 + \text{MgH}_2 + \text{NaH}$ (20°) and
 $\text{MgH}_2 + \text{MgCl}_2 + \text{NaH}$ (20°) "special points" were ob-
served which divided the temperature-compositions of
the up. cit. publications (and heat capacities) into two
distinct branches. Transition points were observed in
the publications of the up. cit. publications of the lower
temperatures of MgH_2 . Transition publications and
up. cit. data showed an analogy between the structure and
the properties of the solid and the liquid (aq.) state.
The "liquid hydrides" correspond to the solid ones.
The observed "special points" correspond to
the transformation of one type of the water-cell complex
into complexes of another kind. They are points of re-
sidence of different types of complexes. The diagrams
@ table and 3 references are given. W. B. Nonn

The treatment of camphorine to get Chamber's salt and
camphorine dihydrate. V. I. Nefedov and L. S. Dvorkin
J. Russ. Fed. U. S. S. R., No. 4, p. 41 (1924).
A 20% soln. of camphorine is treated with enough NaCl
to give 2 layers on which NaCl on NaCl is the top, and
refined to -4° to -5°. NaCl, 1/1000 parts, and is filtered
and washed with cold NaCl, 10%, soln. The yield is 70.3%
and the purity is 99.22%. The mother liquor is cooled
until almost all the NaCl has crystallized, and is then
treated with CuCl₂ to ppt. the remaining NaCl. Evaporation
at 70° or above gives about 95% of the MgCl₂ A.R.D.
14 M Lebrecht

NIKOLAYEV, V. I.

"A New Method of Production of Potassium Saltpeter by Exchange Decomposition of
Potassium Chloride with Nitric Acid at Low HNO₃ Concentrations and Temperatures," Dokl.
AN SSSR, 22, No.2, 1939,

Kalmyk Salt Station, Astrakhan Med. Inst.



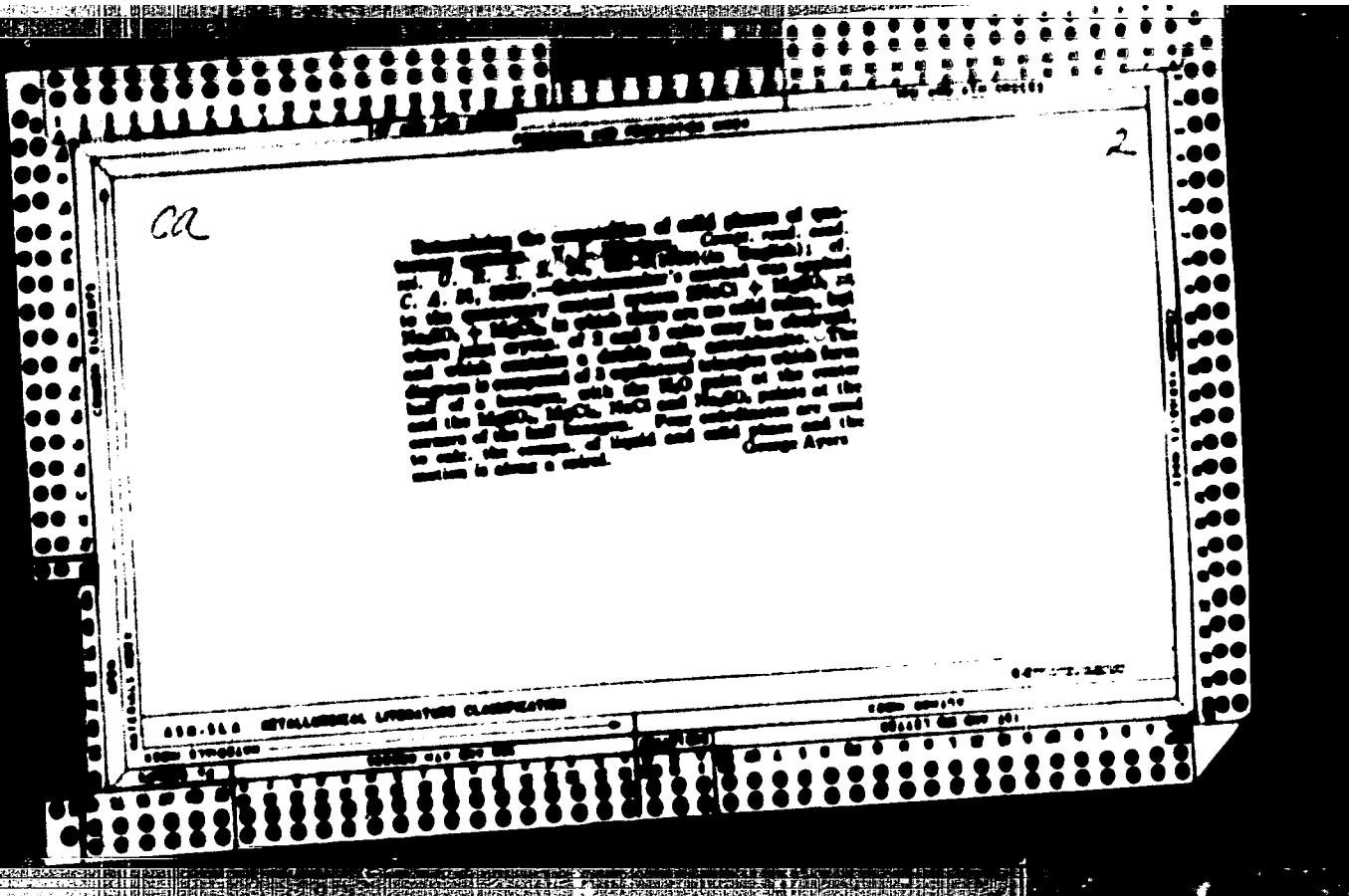
CA

16

Collection of later brines for the production of magnesium and magnesium compounds. V. I. Slobodko, L. V. Gavrilova and L. S. Tyshina. (Transl. from Russ. by A. F. R. J. S. S. No. 200-9 1959) (in English).—The paper of MgCl₂, Mg(OH)₂ and MgCl₄ from the Kirovograd brines (Kirovograd Soviet Socialist Republic) is placed in graphite on the basis of lab. copper. Cooling (in winter) to -8° of brines collected in July and August gives Na₂SO₄. The method of drying by the sun should be replaced by the use of Na metanilate. After deposition of Na₂SO₄, the brines can be evap. further to produce MgCl₂.
A. H. Krapp

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ca

Mineralogical composition of glassy pyroclastic material was determined by X-ray diffraction and electron microprobe analysis. Compt. result. anal. No. 100-11-1, 100-71000 (in English). -Sugita, S. & T. Nakamura. Mineralogical composition determined on the basis of X-ray diffraction patterns which show (1) very 0.04 mm. in diam. and (2) 0.01 mm. in diam. indicate that (a) it is mainly the glassy portion of the glassy lava, although K₂O, Cl⁻ and Na⁺, (b) Na⁺ and SiO₄⁴⁻ ions are extracted not only by clay, but also by Fe²⁺O₃ and (c) Na⁺ ions are replaced by Ca²⁺ and Mg²⁺ in minerals, indicating the origin of the glassy lava. -G. Agave.

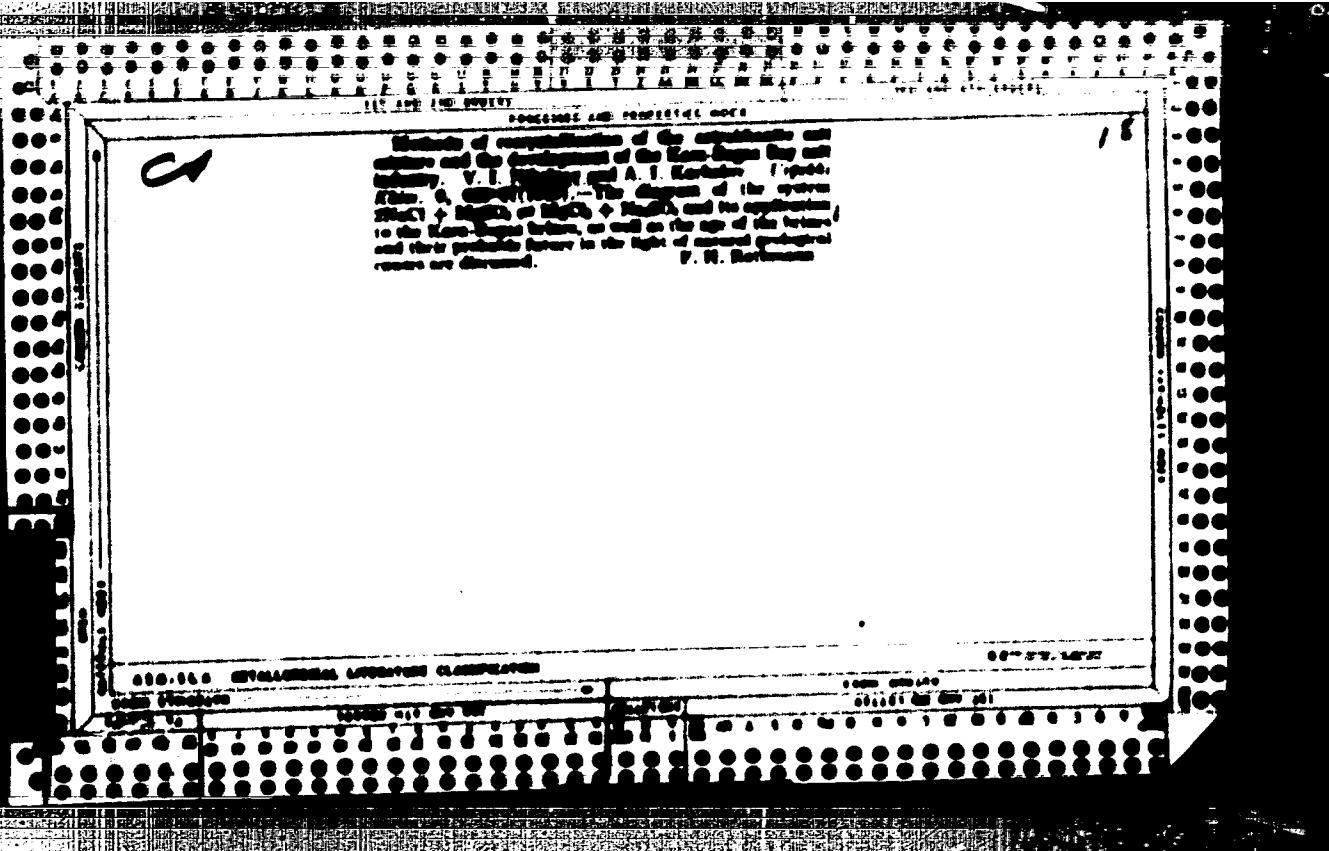
24
Report on dredging operations at [redacted] (approx. 0.1 km) from the surface of [redacted] (approx. 0.1 km) and V. L. Meemore, Geog. anal. anal. in T. R. S. 19, 1977 (Montreal, Quebec). Surface water in Lake Superior. Average lake contained Ca_{CO₃} 0.04%, CaCl₂ 0.10, MgCl₂ 0.32, MgCl₄ 0.08, KCl 0.10 and NaCl 1.64%. The lake water 30 cm below the surface contained Ca(HCO₃)₂ 0.11, CaCl₂ 0.16, MgCl₂ 0.27, MgCl₄ 0.04, KCl 0.13 and NaCl 1.07%. The lake water ranged from about 25° to more than 30° in winter. It was found that 500 tonnes of pure epoxidite per hectare rapid, not during the period of cutting from summer to winter. Rapid removal of epoxidite from these lake bottoms under natural conditions are being undertaken. H. K. Meemore

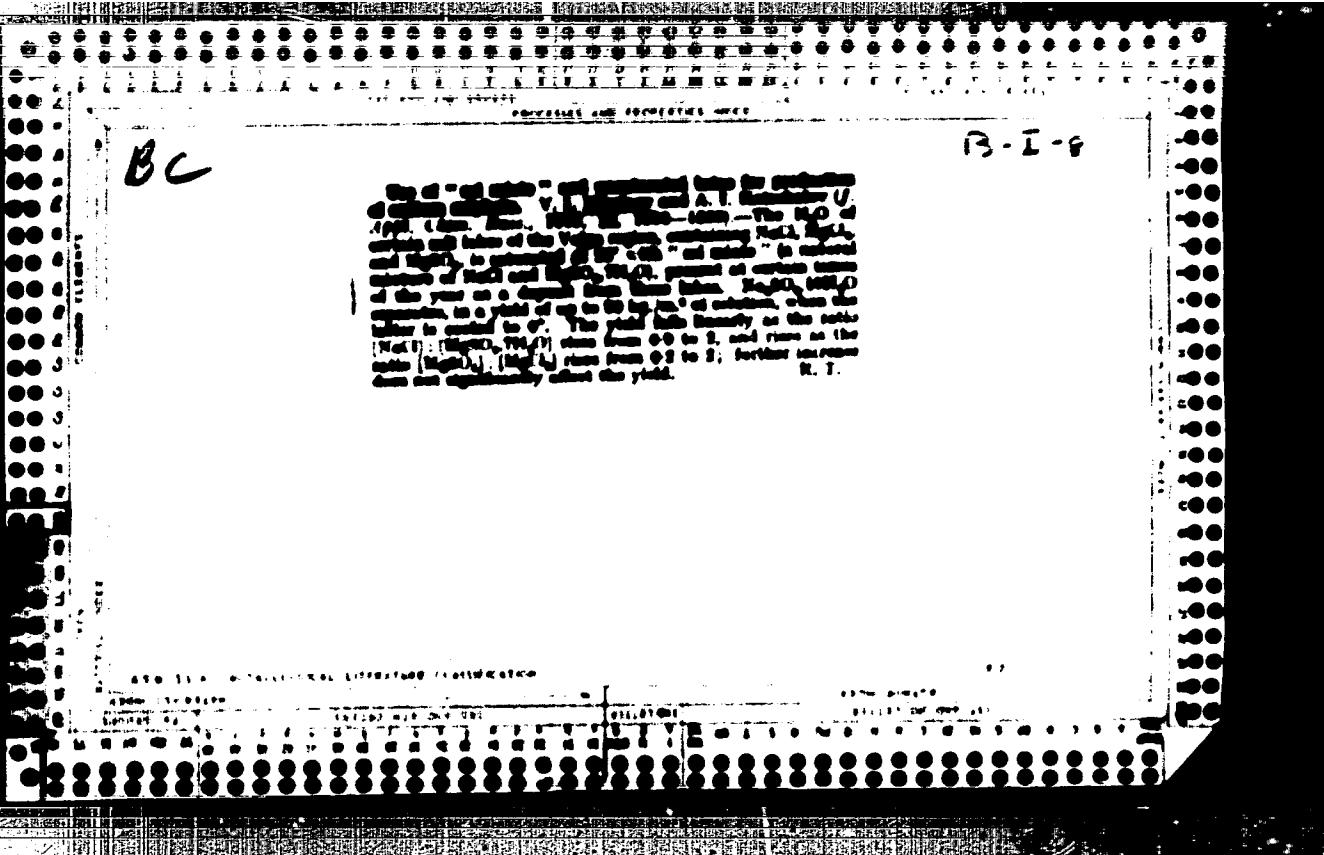
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15. H.

Questioning of astrobiologists on salt in salt solutions. V. I.
Murchison and R. A. Fairbairn (J). *Appl. Chem. Assoc.*, 1968, 53, 384.
salt - Astrobiologists will need to know properties of materials (astral
salt, gypsum, and rock salt) which have passed through the sand
bed of meteor salt lakes near the delta of Volga. The deserts -
of this material in some salt solutions without changing their rhythmic
changes. At an undisturbed desertsion to a salt lake the upper
layer of sand contained mainly NaCl, the middle one mainly MgCl₂,
and the lower one NaHCO₃ and Na₂HPO₄. Astrobiologists believe in
salt solutions either with gypsum or with rock salt. J J H





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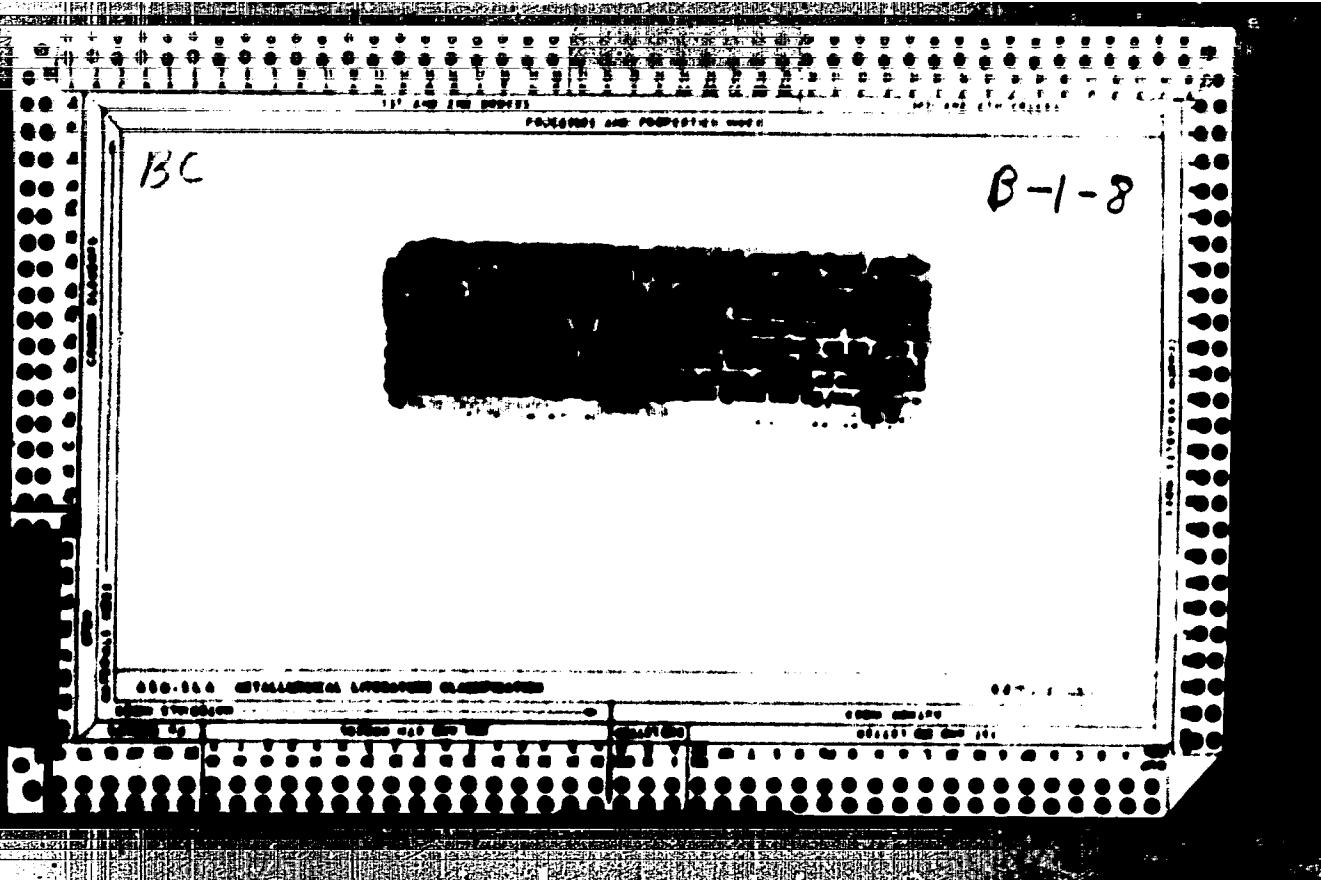
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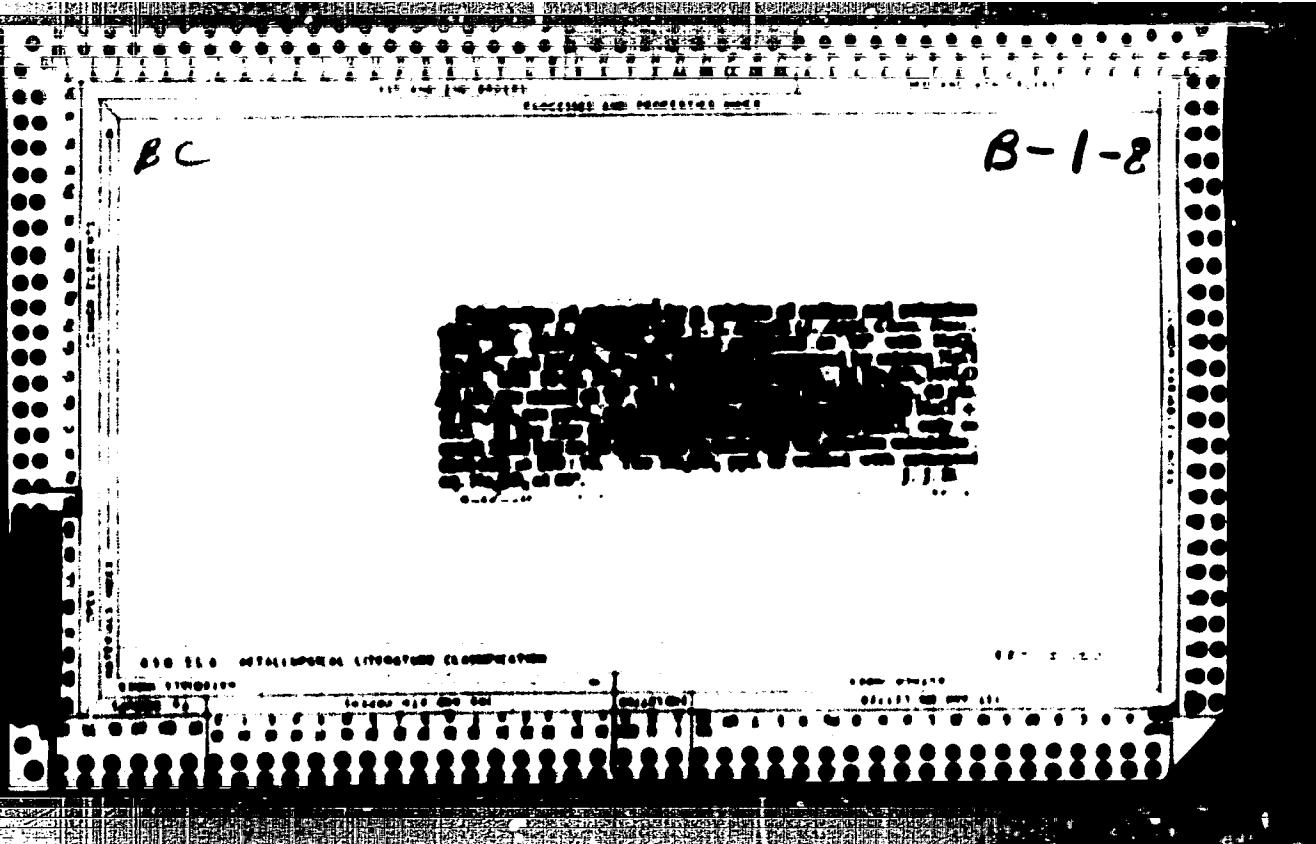


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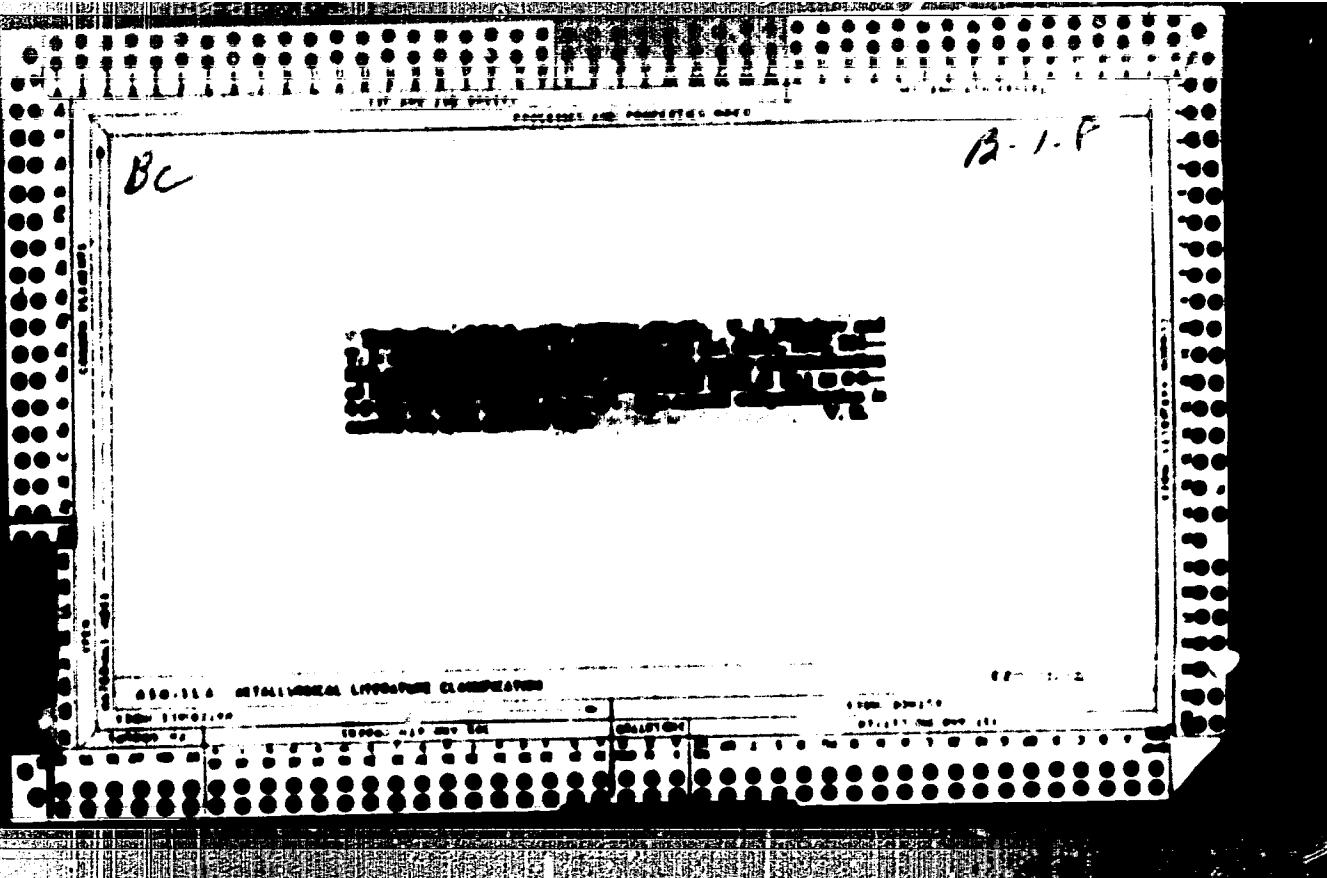


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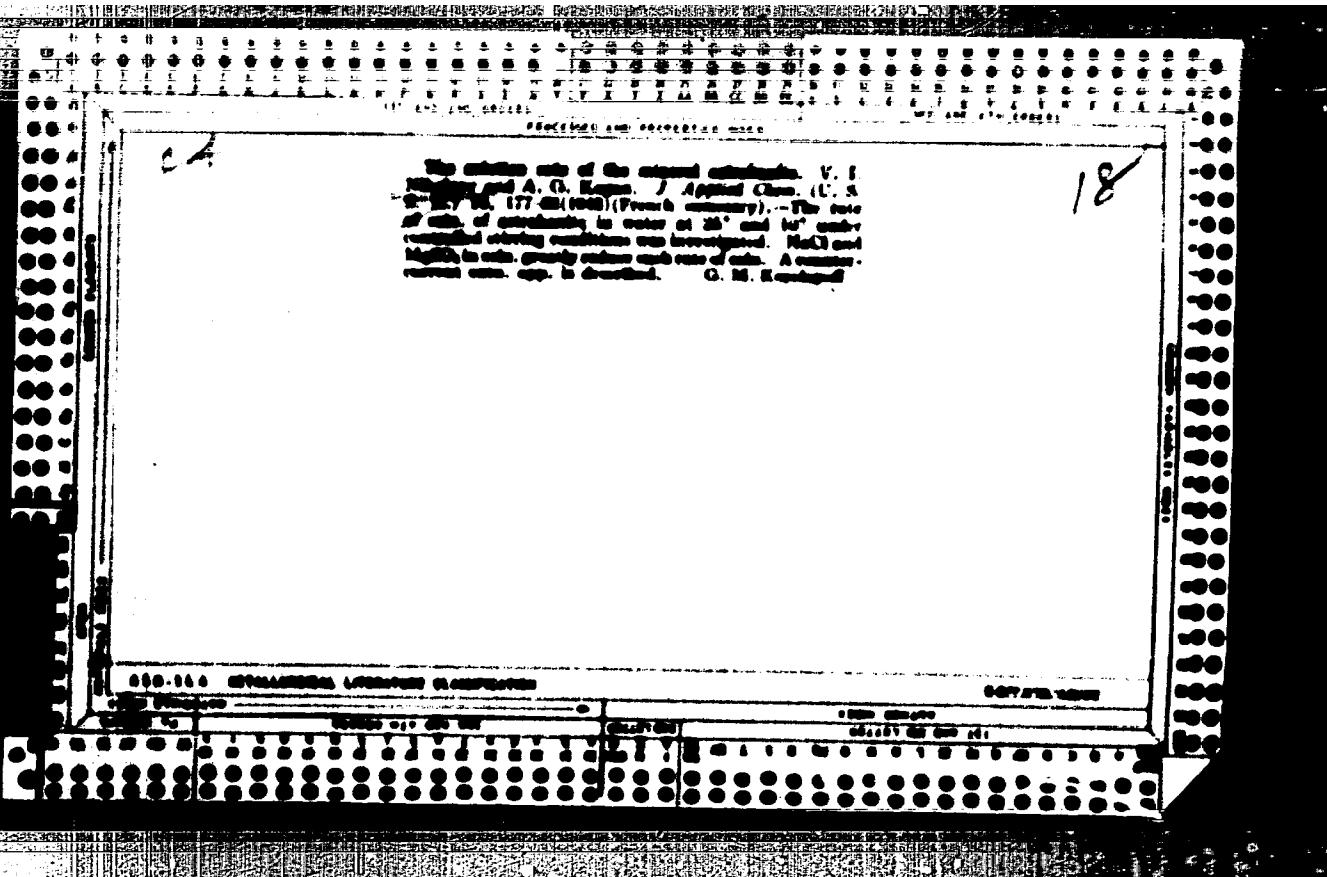
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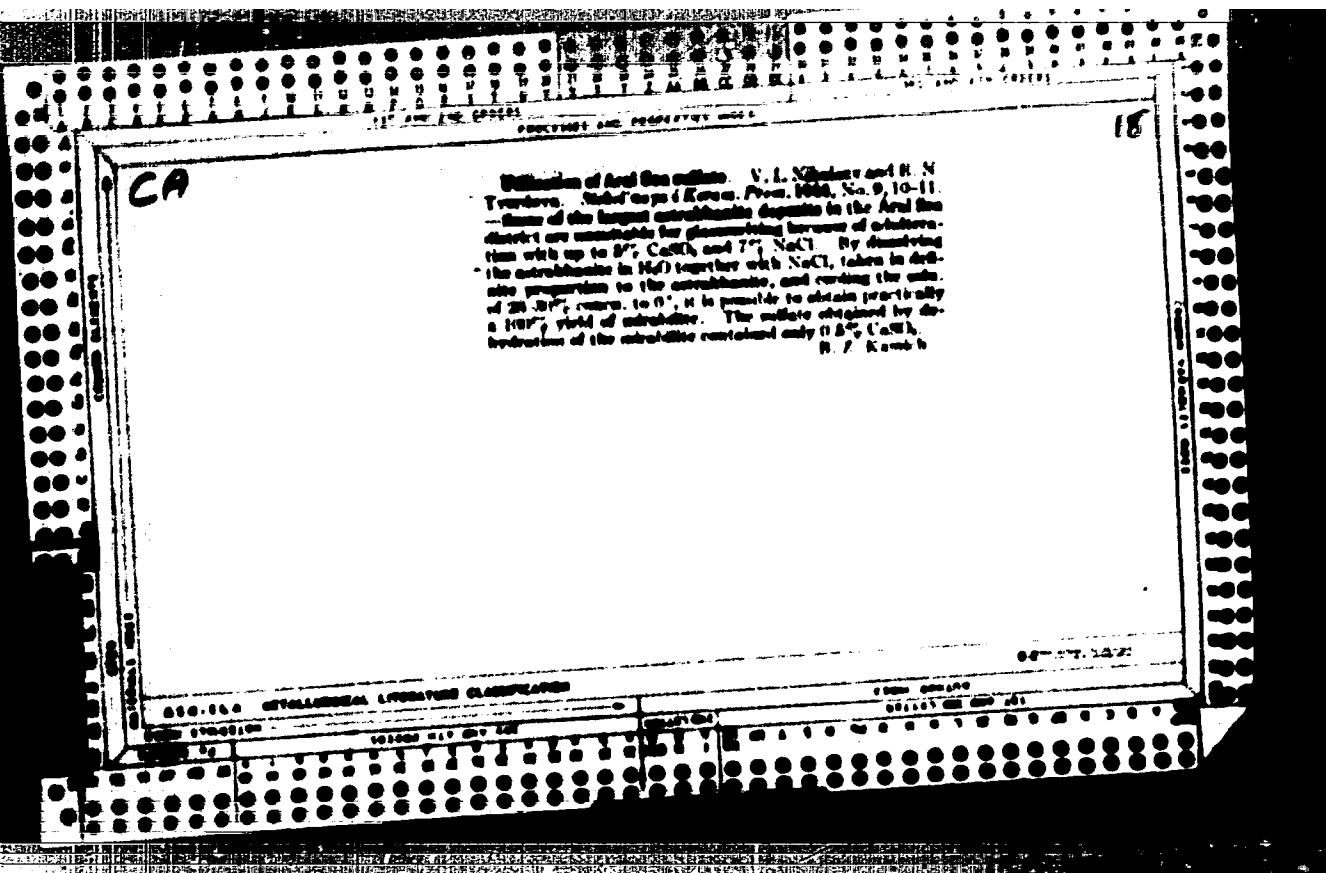
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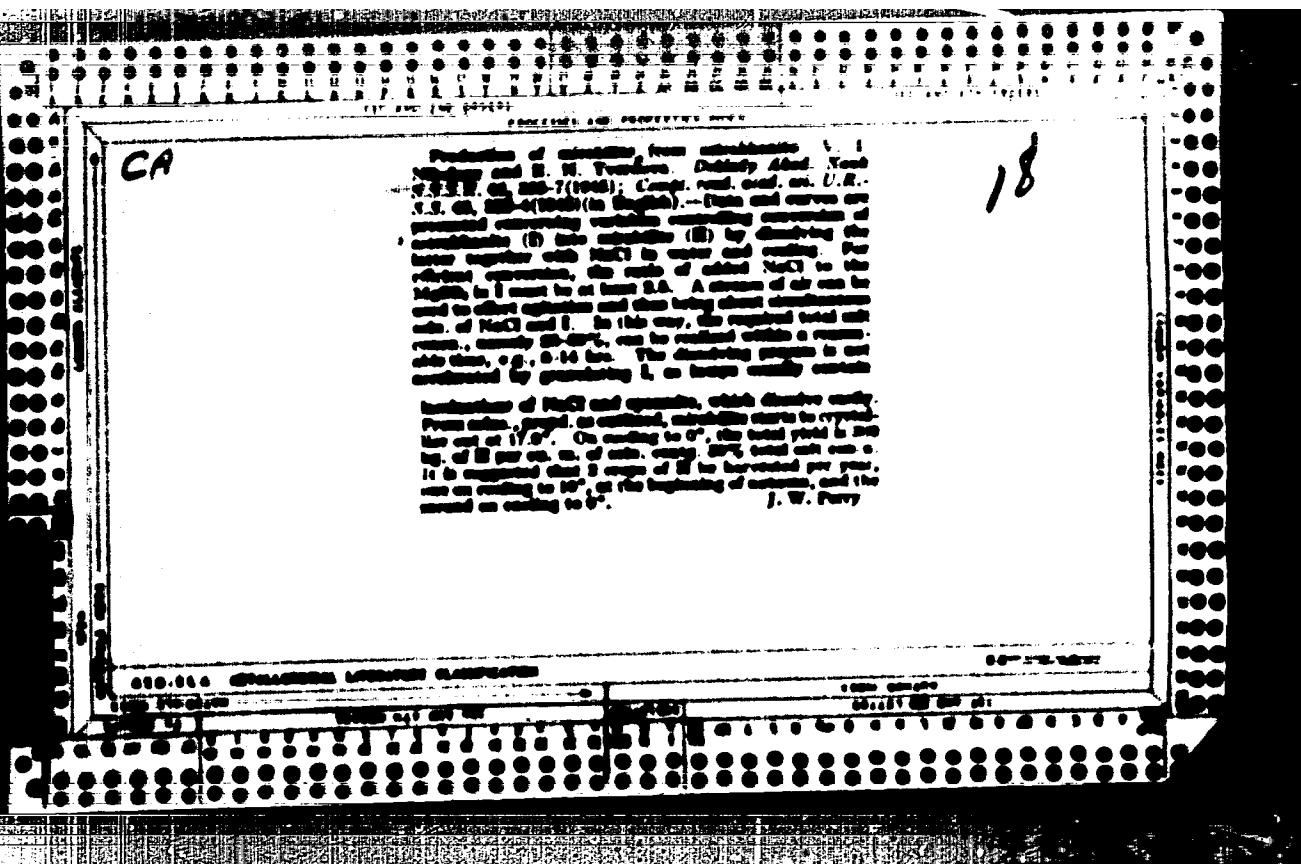


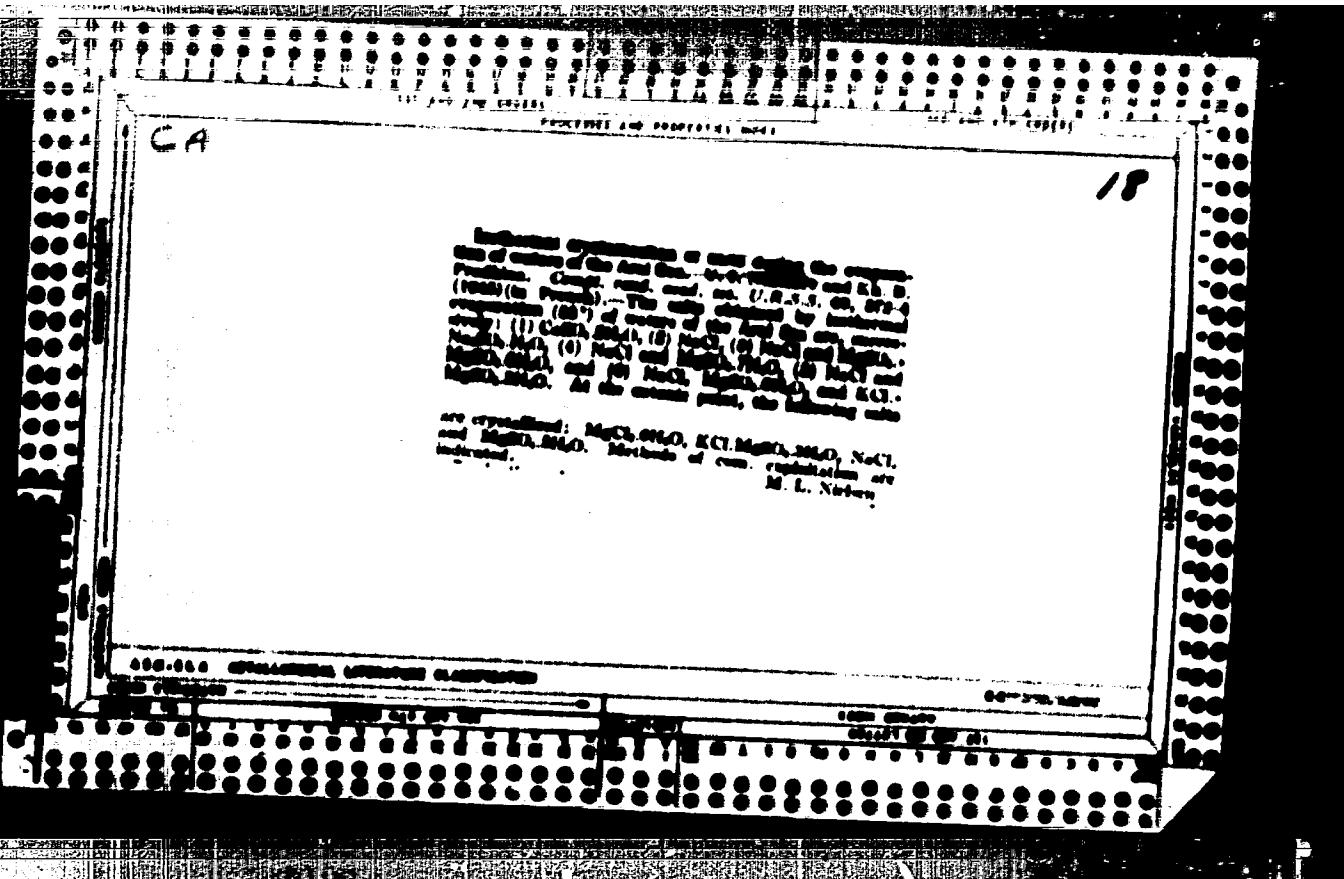
R-1

Preparation of copper-zinc base galvanic anode by means of
method. V. I. Kostyuk and T. I. Aronov. *J. Appl. Chem.*
USSR, 1981, No. 11, p. 2450. — A mixt. of $\text{Pb}(\text{OAc})_2$ (5.0 equiv.) is mixed
with 0% Na_2S solution (1 equiv.) and extracted with H_2S . After
5–10 hr. the mixture is filtered under pressure; the filtrate contains
0.1 equiv. of Na_2SO_4 .

500-104 METALLURGICAL LITERATURE CLASSIFICATION







NIKOLAYEV, V. I.

"The Age of the Most Ancient Salt Lakes in the Delta of the River Volga," Doklady Akademii Nauk SSSR, Vol 50, 1945 (357-358).
(Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO: U-3218, 3 Apr 1953

C4

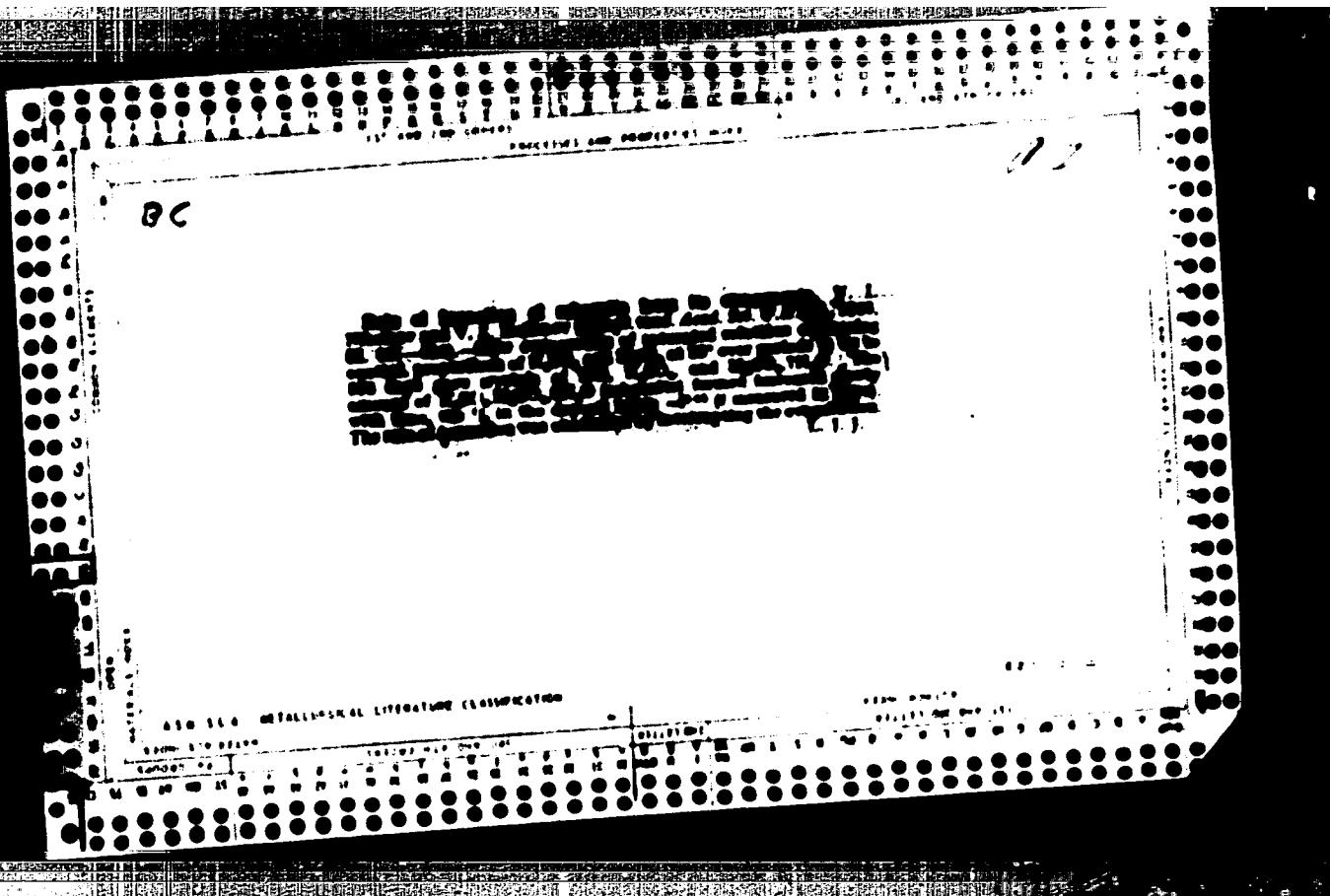
Preparation of the brines of the Drakay-Elyak lake
 V. I. Nekrasov and K.E. N. Prud'kov. J. Applied Chem. S
 (U.S.S.R.) 19, 773-4(1946)(in Russian).—The brines
 have the typical salt content (depending external varia-
 tions) $Mg(OH)_2$ 7.4%, $MgCl_2$ 0.68, KCl 1.18, $NaCl$ 10.87%.
 To purify $Mg(OH)_2$, after concentration with up
 to 50-55% $Ca(OH)_2$, the solution is heated to give a 24%
 $Mg(OH)_2$ soln., 4 vol. of water are mixed with 3 vol.
 of the brine and cooled below 0°; this precip. pure $Mg(OH)_2$.
 100g of 100% yield, provided the temp. is not allowed
 to fall below -5°. The mother liquor represents a dilute
 soln. of essentially the same relative salt content, as the
 original brine and can be used over again. Cooling to
 0° or lower a soln. of equal wt. of the brine and a 20%
 soln. of $Mg(OH)_2$ (from the same lake) results. $Mg(OH)_2$
 11.67, $Mg(OH)_2$ 12.44, $NaCl$ 8.20% gives 130-170 kg
 $Mg(OH)_2$, 100g/vol. m. brine. To obtain pure $Mg(OH)_2$,
 $Mg(OH)_2$, 75g, the brine was evapd. at 20° as long as only
 $NaCl$ precip., and evapd., was stopped on reaching the
 $Mg(OH)_2$ 10.28, $MgCl_2$ 12.48, KCl 1.48, $NaCl$ 1.89%;
 cooling of this soln. to 0° or lower yielded $Mg(OH)_2$,
 $75g$ (with not over 1% $NaCl$) 97.3 kg /vol. m. brine.
 The remaining mother liquor, $Mg(OH)_2$ 0.47, $MgCl_2$ 14.28,
 KCl 1.77, $NaCl$ 0.34% is removed, to the eutectic compon.
 $Mg(OH)_2$ 2.00, $MgCl_2$ 20.00, $NaCl$ 0.70% (yield with re-
 gard to the original brine, 12.2%) to obtain $Mg(OH)_2$.
 N. Three

600-000 RETENTION LEVEL/TYPE CLASSIFICATION

600-000 RETENTION

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NIKOLAYEV, V. I.

PL 547

~~www~~/hydrology
geochemistry

1987

"Seasonal Changes in the Concentrations of Potassium, Bromine, and Sulfuric Acid in the Salt Lakes of the Delta of the Volga," V. I. Nekolayev, N. M. Segol', Kalyazetskiy Sel Res Salt Sta, Astrakhan Ned Inst, 5 70

"Gidrokhim Materialy" Vol XIII

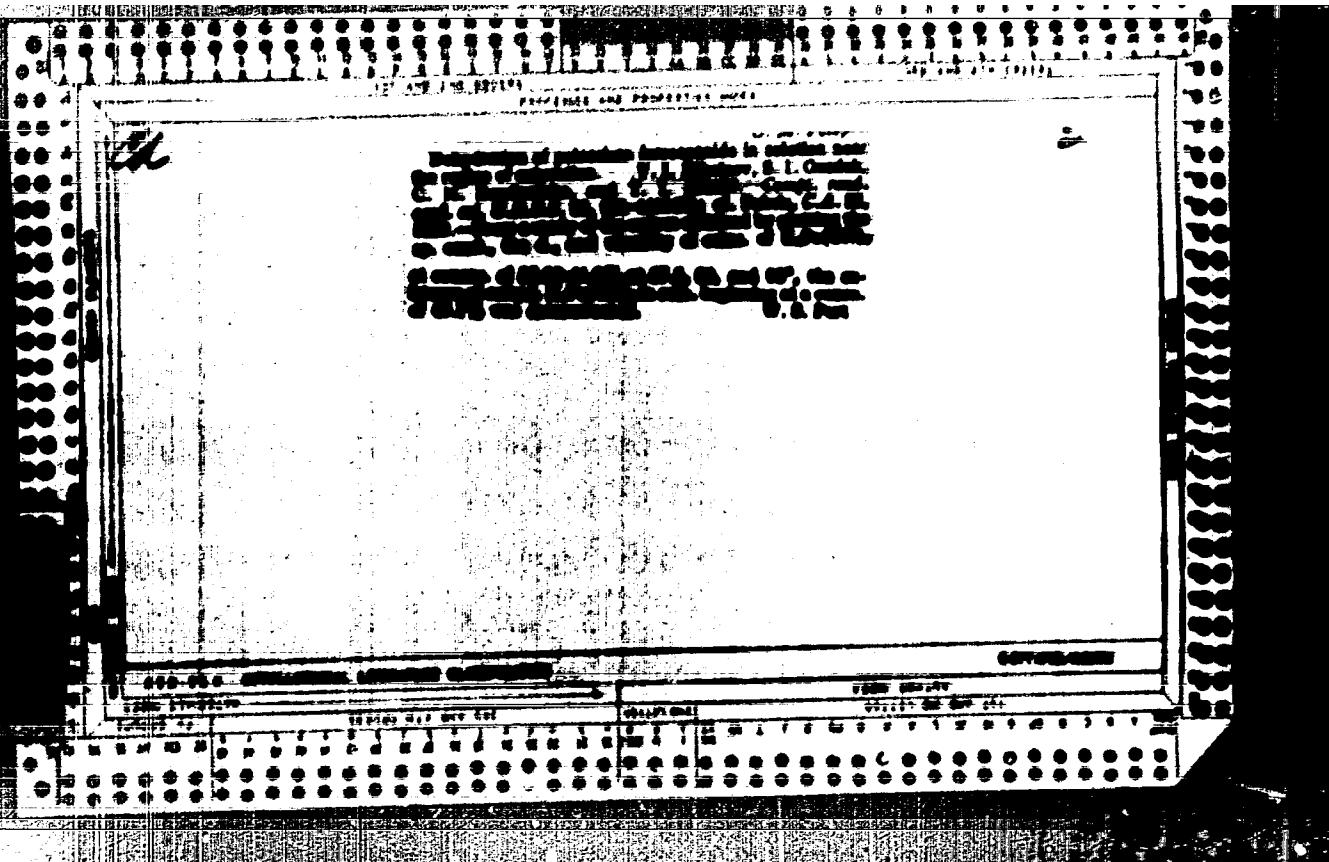
Concentration of these ions increases with depth of brines at close of summer; by early autumn comes up to maximum values of equilibrium between silts and brines. Phenomena of adsorption of these ions mainly involves argillaceous part of mud complex.

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CIA-RDP86-00513R001137120001-5"

NIKOLAEV, V. I.

27142: K Voprosu polucheniya smeshannoy soli, kristallizuyushchiyeysya iz zerkovnykh resolov.--atti: I. G. DRUZHININ, V. I. NIKOLAEV, I. S. CHETYALINA, A. I. AZARAEVA. Zhurnal prikl. khimii, 1949, No. 8, s. 787-792.--Bibliogr: 1' nezv.

SO: Letopis' Zhurnal'nykh Statey, vol. 36, 1949

NIKOLAYEV, V. I.

Aug 49

USSR/Chemistry - Salts
Brines

"Preparing Complex Salts Crystallized From the Brines of Kara-Bogaz-Gol," I. G. Drushinin, V. I. Nikolayev, I. S. Chelyadina, A. I. Lazareva, Inst of Gen and Inorg Chem, Acad Sci USSR, 6 pp

"Zhur Prik Khim" Vol XXXI, No 8

Kara-Bogaz-Gol brines give variable yields of salts, depending on the temperature. At 0° C, there is a relatively high yield of magnesium sulfate; above 25° C, astrakhanite is obtained; and below 0° C, mirabilite is the chief product. Saturated sodium sulfate solutions yield as much as 268 kg of mirabilite per 1 cubic meter of solution. Submitted 5 Jan 49.

67/49T72

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NIKOLAYEV, V. I.

(2) 3

E kinetics of transformation of carnallite and magnesium sulfate hydrates into halite. V. I. Nikolayev and N. G. Drushina, Izv. Akad. Nauk SSSR, 20, 289-74 (1960).—The formation of halite from metastable carnallite and $MgSO_4 \cdot 7H_2O$ is assumed to proceed according to $KCl \cdot MgCl_2 \cdot 6H_2O + MgSO_4 \cdot 7H_2O = KCl \cdot MgSO_4 \cdot 7H_2O + MgCl_2 + 9H_2O$. The isothermal (25°) formation of halite was studied by placing the 2 solid phases in equiv. aqts. under a brine the concn. of which corresponded to that part of the crystal field of halite where carnallite crystallizes under metastable conditions: $MgCl_2$ 5.67-6.0%, $MgCl_2 \cdot 6H_2O$ 23.29-22.29, KCl 3.19-3.47, $NaCl$ 1.09-2.48, and KI 0.08-0.75%. The purpose of the KI was to enable the calcn. of the amt. of mother liquor adhering to the solid phase. For the rate of halite formation under these conditions there was obtained a curve $y = e^{kt}$, where y is time in hrs. and x is % of halite formation. The rate of halite formation decreased with time. By varying the $MgSO_4 \cdot 7H_2O/KCl \cdot MgCl_2 \cdot 6H_2O$ ratio there was obtained a curve showing that the lowest rate of transformation coincided with a ratio of 1. At a ratio 2:1 the rate of transformation was approx. 2.5 times and at a ratio 1:2, 1.6 times as fast. The rate of transformation was also studied as affected by temp., 25-50°. The rate, temp., needed as obtained by extrapolation was 25°. The polythetas can be expressed by $y = e^{\alpha t}$, where y is the rate of halite formation, α the temp. in degrees from start of transformation (25°) and α is a const. For the interval 25-35° (α is 2-12) it was found to be 1.289-1.432 or on av. 1.410.

M. Hough

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1664, 3108, 15X, 1482 . 0044

31625
S/197/61/000/012/003/003
B117/B108AUTHORS: Dobryakov, D., Krumin', Yu., Klyavin, Ya., Nikolayev, V.

TITLE: Investigation of the possibility of conveying spherical conductive bodies by means of a magnetic traveling field

PERIODICAL: Akademiya nauk Latviyskoy SSR. Izvestiya, no. 12 (173), 1961,
55 - 60

TEXT: Ponderomotive forces were determined, which are necessary for conveying solid and hollow spheres placed in the magnetic traveling field of a cylindrical inductor. Experiments were conducted to convey solid spheres of various materials in a magnetic traveling field inductor under dynamic conditions. For the motion of a sphere in a tube, an approximate equation was derived under the following assumptions: (1) the friction is proportional to the velocity of the sphere, $F_{friction} = kv$; (2) the acceleration of the sphere is constant, $dv/dz = a = \text{const}$; (3) the electromagnetic force F_{em} does not change with velocity (holds for a small range of velocities); (4) the energy consumed by the rotation of the sphere

X

Card 1/3

SHCHOLAYEV, Viktor Georgiyevich; CHIGOVIN, Iosif Zakharovich; MEDRAK, T.V..
red.; SHCHOLAYEV, A.S., tekhn.red.

[Distribution and cultivation of fruit & berry species and varieties in North Ossetia] Razmeshchenie porod i sortov plodovo-izgodnykh kul'tur i uchesh se nimi v usloviiskh Severnoi Ossetii. Ordzhonikidze, Severo-Osetinskoe knishchoe izd-vo, 1960. 57 p. (MIRA 14:3)

(Ossetia--Fruit culture)

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21356

5/126/61/011/004/003/023
2032/8314

168180

1418, 1413, also 1160, 1155
1195

AUTHORS: Karchevskiy, A.I. and Nikolayev, V.I.

TITLE: Hall Effect in the Metamagnetic Alloy MnAu₂PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol. 11,
No. 4, pp. 519 - 524TEXT: Since the experimental data reported by various authors (Meyer, Taglang et al - Refs. 2-5) on the magnetic properties of MnAu₂, are not in complete agreement, the present authors have investigated the Hall effect, the paramagnetic susceptibility, magnetisation and the magnetocaloric effect in MnAu₂. The MnAu₂ alloy was prepared from 99.99% pure Au and electrolytically pure Mn, taken in the stoichiometric ratio. The alloy was prepared using the method described by Meyer and Taglang (Ref. 2). The Hall effect was measured on rectangular specimens placed in an argon atmosphere in magnetic fields up to 36 000 Oe. The paramagnetic susceptibility was measured by the Gouy method and the magnetisation was determined by the ballistic method. No correction was made for the demagnetisation

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S/126/61/011/004/003/023
E032/E314**Hall Effect**

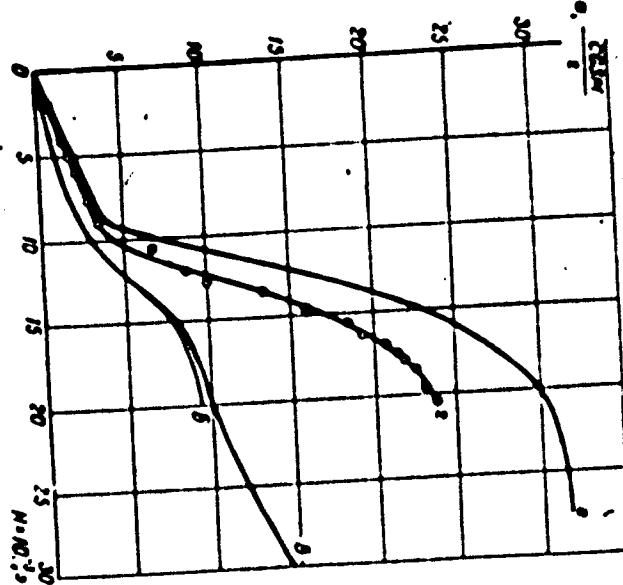
(Curve a is taken from Ref. 2; Curve b represents the results of Kussmann and Raub - Ref. 4; Curve C represents the results of Klitzing and Gielessen - Ref. 4 and Curve d represents the present results). The magnetocaloric effect was measured in the range 9,000 to 36,000 Oe, at temperatures between +20 and -140 °C. The ferromagnetic Curie point, as determined from the magnetocaloric effect maximum in large fields, was found to be 100 ± 1 °C. The temperature dependence of the magnetocaloric effect was found to be entirely analogous to that found by Meyer and Taglang (Ref. 2), and indicates that the alloy is antiferromagnetic in weak fields. Thus, the dependence of the Hall effect on the external magnetic field in the metamagnetic alloy MnAu₂ below the Neel point suggests that the Hall effect in metamagnetics shows the same regularities as in ordinary ferromagnetics. Acknowledgments to Academician I.K. Kikoin for attention and discussions, to V.I. Kutaytsev for assistance with the preparation of the alloy specimens and to A.S. Nikishin for assistance in the experiments.

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E032/E314

Hall Effect

Fig. 4:



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24.7900 1144, 1147 1462

30451
S/126/61/012/003/006/021
E032/E314

AUTHORS: Karchevskiy, A.I. and Nikolayev, V.I.

TITLE: On the Hall effect in the metamagnetic alloy MnAu₂

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol. 12,
No. 3, pp. 372 - 375

TEXT: Recent interest in the properties of MnAu₂ is due
to its metamagnetic behaviour: in a sufficiently strong
magnetic field the alloy experiences a transition from the
antiferromagnetic to the ferromagnetic state. Previous work
by the present authors (Ref. 1 - FMM, 1961, 11, 519) shows that
in a wide range of temperatures and magnetic fields the Hall
e.m.f. in metamagnetics may be represented by

$$\epsilon_H = R_o H + R_I I \quad (1)$$

where R_o is the classical Hall constant,

R_I is the ferromagnetic Hall constant,

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E032/E31⁴

On the Hall effect

I is the magnetisation, and
H the true magnetic field in the specimen.
The Hall e.m.f. e_H is referred to unit current density and
unit distance between the Hall electrodes. However,
I.G. Fakidov and V.N. Novogradskiy (Ref. 4 - FMM, 1960, 10, 158)
have reported that when the alloy $MnAu_2$ goes over into the
ferromagnetic state the slope of the $e_H(I)$ curve changes by a
factor of 3. On this basis the authors of Ref. 4 conclude
that the Hall effect in antiferromagnetic and ferromagnetic
states is of different origin. The present authors, on the
other hand, now point out that this conclusion is erroneous
since the bend in the $e_H(I)$ curve is due to the fact that the
Hall e.m.f. of $MnAu_2$ consists of two components, only one of
which is proportional to the magnetisation (c.f. Eq. 1).
Fig. 1 shows the magnetisation σ (cgs/g) of Hall specimens
as a function of the magnetic field H_t (kOe). These curves are
corrected for the demagnetising factor. The two $MnAu_2$ specimens

Card 2/3,

On the Hall effect

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E032/E314

to $H = 0$. However, it must be emphasised that the corresponding curves must be plotted as a function of the true field in the specimen. The values of R_I for specimens 1 and 2 were found to be -19×10^{-10} and $-15.5 \times 10^{-10} \text{ Vg/A gauss cm}^2$. Using these values of R_I , one can exclude the second component of Eq. (1) and determine the classical component of the Hall effect. A plot of $\Delta e_H = e_{II} - R_I I$ as a function of the field H was found to give a straight line passing through the origin. This fact leads the present author to the conclusion that the mechanism responsible for the Hall effect in both the ferromagnetic and antiferromagnetic states of MnAu_2 is the same. X

Acknowledgments are expressed to Academician I.K. Kikoin and Yu.M. Kagan for discussions. [Abstracter's note - this is an abridged translation.] There are 3 figures and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The English-language reference quoted is: Ref. 2 - E.M. Pugh - Phys. Rev., 1930, 36 1503.

SUBMITTED: January 10, 1961
Card 4/5,

L 5030-66 ENT(d)/EFF(1) IJF(c) EC
ACC NR: AP5021898 UR/0281/65/000/004/0130/0145
621.431.74-5

AUTHOR: Nikolayev, V. I. (Leningrad)

TITLE: The determination of the time spent by an operator solving the problem of ship power plant control

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 4, 1965, 130-145

TOPIC TAGS: automatic control system, ship component, man, power plant

ABSTRACT: Automation of ship operation reduces drastically the number of operating personnel needed but, at the same time, increases the importance of their actions. The present author establishes a model of the action of operators (viewed as components of the control system) of ship power plants and after a thorough theoretical analysis derives expressions for carrying out the individual operations constituting the control process. The processing of numerous experimental data shows that there exists a general connection between the amount of information and the time necessary for its reception and conversion. However, under complex conditions this connection may be distorted by side factors which may be revealed only after an extremely careful analysis of all circumstances. The present inquiry will have to be supplemented in the future by the study of the probability of incorrect actions on the part of operators.
Orig. art. has: 64 formulas and 4 figures.

ASSOCIATION: None

Card 1/2

POLAROID