

Alabyshov. A.F.

AGEYEV, P.Ya.; ALABYSHEV, A.F.; BAYMAKOV, Yu.V.; BELYAYEV, A.I.; BATASHEV, K.P.;  
BUGAREV, L.A.; VASIL'YEV, Z.V.; GUPALO, I.P.; GUS'KOV, V.M.; ZHURIN, A.I.;  
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Georgii Alekseevich Abramov. TSvet.met. 27 no.2:72-73 Mr-Ap '54. (MLRA 10:10)  
(Abramov, Georgii Alekseevich, 1906-1953)

ALABBEV, A. I.

USSR.

Solutions in fused salts. III. Activity of zinc chloride in solutions of alkali chlorides. M. P. Lantsov and A. P. Byshev (V. I. Ulyanov-Lenin Electrochem. Inst., Lenin. Univ., *Prilozh. Priklad. Khim.*, 27, 722-34, 1974, 44 graphs) *Zh. Priklad. Khim.*, 27, 722-34, 1974, 44 graphs. The e.m.f.s. of cells  $Zn|ZnCl_2||M^+|MCl_2$  (43, 5612) in the e.m.f.s. of cells  $Zn|ZnCl_2||M^+|MCl_2$  (43, 5612) in the range (a)  $M = K, Na, and Ba$  in the range 400-600° change not only with the temp. and concn. but also with  $M$  and the character of the complexes formed by the ions. The neg. deviation of  $a_1$  decreases as the radius of  $M$  decreases and its charge increases. For the chlorides of  $M = Cd, Zn, and Mg$  in solns. of  $MCl_2$  ( $M =$  alkali metals and alk. earth metals) the neg. deviation of  $a_1$  increases with the tendency toward complex formation and the stability of the complex ions. For  $ZnCl_2$  and  $NaCl$  the activity coefficients  $\gamma_{Zn}$  are less than 1 over the entire concn. range and curves  $M^+|a_1$  at 600° extrapolated to  $N = 0$  give for  $a_1$  and  $\gamma_{Zn}$  values of 0.162 and 0.120, resp.; these deviations increase for temp. isotherms. B. Benschowitz.

Illustrations of Antenna of monitor matrix Accuracy  
Atsbechev

PL 86-36/50 USC 1601-1606

CONFIDENTIAL - SECURITY INFORMATION

Investigation of ...

"APPROVED FOR RELEASE: 06/05/2000

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ALABYSHEV, A.F.

AUTHOR: None given.

136-4-20/23

TITLE: New technical literature (Novaya tekhnicheskaya literatura).

PERIODICAL: "Tsvetnye Metally" (Non-ferrous Metals) 1957, No.4,  
pp. 84 - 87 (U.S.S.R.)

ABSTRACT: This is an annotated list, compiled from material supplied by the Central Scientific-technical Library of the Ministry of Non-ferrous Metallurgy of the U.S.S.R. The following Russian articles and books are included:

Beneficiation:

K.N. Verigo, "Crushing and grinding equipment in capitalist countries" (Drobilno-razmolnoe oborudovanie v kapitalisticheskikh stranakh), Nauchno-tekhn. O-vo Tsvetnoy Metallurgii, Moscow, 1956, 159 pages. (Book)

N.N. Shumilovskiy and L.V. Mel'tser "Engineering methods for the calculation of consumption meters working on the "marked molecules" method", Priborostroenie, 1956, pp.4-8. No.11 (Article)

Metallurgy:

A.F. Alabyshev and A.G. Morachevskiy "Thermo-dynamic properties of the system sodium-cadmium", Dokl.Ak.Nauk SSSR, 1956, pp. 369-71, Vol. III, No.2. (Article)

"Geology, mining, metallurgy, Collected Works, No.13" (Geologiya, gornoe delo, metallurgiya. Sbornik Nauchnykh Trudov No.13) Metallurgizdat, Moscow, 1956, 416 pages. (Book)

Card 1/4



New technical literature (Cont.)

136-4-20/23

B.V. Deryagin and S.S. Dukhin "Settling of aerosol particles on a phase-change surface. Diffusional method of dust catching. Importance in medicine." Dokl. Ak. Nauk SSSR, 1956, pp.613-616.

Vol. 111, No.3. (Article)

"Reports of the Academy of Sciences of the Kazakhstan SSSR, mining, metallurgy, building and building materials series." (Izvestiya Akademii Nauk Kazakhskoy SSR, seriya gornogo dela, metallurgii, stroitelstva i stroymaterialov (po razdelu metallurgii) No.9, Alma Ata, 1956, 111 pages. (Book)

M.A. Lur'e "Refractories in non-ferrous metallurgy" (Ogneupory v tsvetnoy metallurgii), Metallurgizdat, Moscow, 1956, 151 pages. (Book)

A.F. Ogarkov, "Thermal conductivity of Ural refractory materials", V.Kh. Trudy Uralskogo Politekhn., Sverdlovsk, 1956, pp. 5 - 22. (Article)

N.F. Razina, M.T. Kozlovskiy and V.V. Stender, "Disruption of lead anodes during electrolysis of sulphuric acid solutions", Dokl. Ak. Nauk SSSR, 1956, pp. 404-406, Vol.111, No.2 (Article)

I.G. Ryss, "Chemistry of fluorine and its inorganic compounds" (Khimiya ftora i ego neorganicheskikh soedineniy), Goskhimizdat, Moscow, 1956, 718 pages. (Book)

Card 2/4

New technical literature. (Cont.)

136-4-20/23

I.S. Stepanov, "Rare Metals" (Redkie Metally), MTsM SSSR TsIIN, Moscow, 1956, 58 pages. (Book)

Machining of Metals. Metallurgy:

M.E. Blanter, L.I. Kuznetsov, M.G. Lozinskiy and E.A. Sino-dova, "Influence of alloying elements on the hardness of nickel alloys at high temperatures", *Izvestiya Akad. Nauk SSSR, Otd. Tekh. Nauk*, 1956, pp. 88 - 95. No.12, (Article)

S.Ya. Veyler, V.I. Likhtman and P.A. Rebinder, "Mechanism of the action of lubricants in the working of metals by pressure", *Dokl. Ak. Nauk SSSR*, 1956, pp. 985 - 988. Vol.110 No.6 (Article)

R.B. Golubtsova and L.A. Mashkovich, "Investigation of metallic compounds in nickel alloys containing aluminium." *Dokl. Ak.Nauk SSSR*, 1956, pp. 824-826. Vol.111, No.4. (Article)

M.I. Kochnev, "Correspondence of the temperatures of anomalous change in the properties of copper, its compounds and alloys" *Izvestiya AN SSSR, Otd. Tekh. Nauk*, 1956, No.12, pp.96-105, No.12 (Article)

D.I. Layner and Potemkin, A.Ya. "Rational method for annealing aluminized nickel". *TsIIN MTsM SSSR*, 1956, pp. 19-21. (Article)

Tarnovskiy, I.Ya., Pozdeev, A.A., and Lyashkov, V.B. "Deformation of metals during rolling" (*Deformatsiya metalla pri prok-atke*), *Metallurgizdat, Sverdlovsk*, 1956, 287 pages. (Book)

Card 3/4

New technical literature. (Cont.)

136-4-20/23

Usach, M.Ya. "Hydraulic presses П 646, П 648 and П 664 for pressing non-ferrous metal sections." Tekhniko-ekonomicheskoy Informatsii, 1956, pp. 8 - 10. Vol.11, No.11. (Article)

Economics:

A.I. But, "Planning and economics of non-ferrous metallurgical enterprises." (Planirovanie i ekonomika predpriyatiy tsvetnoy metallurgii), Metallurgizdat, Moscow, 1956, 270 pages. (Book)

AVAILABLE:

Card 4/4

ALABYSHEV, A.F.; LANTRATOV, M.F.

Thermodynamic properties of  $PbCl_2$ ,  $CdCl_2$ , and  $ZnCl_2$  in solutions  
with potassium, sodium, lithium and barium chlorides. Trudy LPI  
no. 93-105 '57. (MIRA 11:9)  
(Chlorides) (Thermodynamics)

137-58-6-11486

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 33 (USSR)

AUTHORS: Alabyshev, A.F., Lantratov, M.F.

TITLE: Thermodynamic Properties of  $PbCl_2$ ,  $CdCl_2$ , and  $ZnCl_2$  in Solutions Thereof with the Chlorides of Potassium, Sodium, Lithium, and Barium (Termodinamicheskiyevoystva  $PbCl_2$ ,  $CdCl_2$ , i  $ZnCl_2$  v rastvorakh ikh s khloridami kaliya, natriya, litiya i bariya)

PERIODICAL: Tr. Leningr. politekhn. in-ta, 1957, Nr 188, pp 93-105

ABSTRACT: Calculations are made of the isobaric-isothermal potentials of formation,  $\Delta Z$ , the entropy,  $\Delta S$ , and the enthalpy of formation,  $\Delta H$ , of the salts  $PbCl_2$ ,  $CdCl_2$ , and  $ZnCl_2$  by the emf's of reversible chemical chain reactions of the type of  $M_1[M_1Cl_2(N_1)+M_{11}Cl_n(N_2)]Cl_2$  where  $M_1Cl_2$  represents  $PbCl_2$ ,  $CdCl_2$ , or  $ZnCl_2$ , and  $M_{11}Cl_n$  represents  $LiCl$ ,  $KCl$ ,  $NaCl$ , or  $BaCl_2$  at 500-700°C. It is found that the  $\Delta Z$  of  $PbCl_2$  in the presence of  $KCl$ ,  $NaCl$ ,  $LiCl$ , or  $BaCl_2$  is smaller than for  $CdCl_2$  and  $ZnCl_2$ , and that this is due to the formation in the solution of complex ions, in which the cations  $Pb^{2+}$ ,  $Cd^{2+}$ , and  $Zn^{2+}$  are complex-formers. As the radius of the complex-

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137-58-6-11486

Thermodynamic Properties of (cont.)

forming ion and the temperature diminish, the deviation from the ideal in the behavior of the solutions rises; this is attributed to the increase in size of the complex ions.

B.L.

1. Halogen chlorides--Thermodynamic properties
2. Mathematics--Applications

Card 2/2

ALABYSHEV, A. F.

78-3-27/35

AUTHORS: Alabyshev, A. F. and Morachevskiy, A. G.

TITLE: Electrochemical Investigation of the Ternary System Cd - Na - Pb in the Liquid State. (Elektrokhimicheskoye issledovaniye troynoy sistemy Cd - Na - Pb v zhidkom sostoyanii.)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1957, Vol.II, Nr.3, pp. 669-675. (USSR)

ABSTRACT: Using glass as the electrolyte e.m.f. values for the system Cd - Na - Pb at 425°C ( $\pm 0.5$ ) were determined. E.m.f. values and the sodium activity values calculated from this are tabulated for the following Cd : Pb ratios: -  $\infty$  : 1; 4 : 1; 2 : 1; 1 : 1; 1 : 2; 1 : 4; 1 :  $\infty$  together with those for Na : Pb ratios of 5 : 2 and 1 : 1. Darken's method<sup>1</sup> was used to calculate integral excess free energy values for the ternary system and the activity coefficients of cadmium and lead. The addition of lead to sodium - cadmium alloys was found to reduce greatly the activity coefficient of sodium, that of cadmium increasing. No significant effect on

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78-3-27/35

Electrochemical Investigation of the Ternary System  
Cd - Na - Pb in the Liquid State.

activity coefficients for sodium - lead alloys on  
adding cadmium was observed. There are 11 figures,  
2 tables and 13 references, of which 3 are Slavic.

ASSOCIATION: Leningrad Polytechnic Institute imeni M. I. Kalinin ..  
(Leningradskiy Politekhnikheskiy Institut im. M. I.  
Kalinina.)

SUBMITTED: October 5, 1956.

AVAILABLE: Library of Congress.

Card 2/2



*File by sketch, A.T.*

AUTHORS: Alabyshev, A. F., Lantratov, M. F., SOV/74-27-8-1/7  
Morachevskiy, A. G. (Leningrad)

TITLE: The Thermodynamic Properties of Liquid Alloys Containing Alkali Metals (Termodinamicheskiye svoystva zhidkikh splavov, sodershashchikh shchelochnyye metally)

PERIODICAL: Uspekhi khimii, 1958, Vol. 27, Nr 8, pp. 921 - 937 (USSR)

ABSTRACT: First the authors mention that during the last years the interest in the investigation of the thermodynamic properties of liquid metal solutions has considerably increased. The investigation of these thermodynamic properties plays an important role in the elaboration of present-day theory of concentrated solutions. The investigation of the thermodynamic properties of potassium and sodium alloys (Refs 22-24) is of special interest. There are, generally speaking, two methods for the experimental investigation of the thermodynamic properties of liquid alloys containing any alkali metal: the method of the measuring of the partial vapor pressure, and the method of measuring the EMF of concentrated chains (Refs 1,2,8,25). After referring to some papers dealing with this field (Refs 31-38) the authors in

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The Thermodynamic Properties of Liquid Alloys  
Containing Alkali Metals

SOV/74-27-8-1/7

a special chapter mention the potassium and sodium alloys of lead. In the next chapter the authors deal with the sodium, potassium and cesium alloys of mercury. The third chapter deals with the sodium and potassium alloys with thallium. In the fourth chapter the sodium and potassium alloys with bismuth are described. In the fifth chapter the authors deal with the sodium alloys with tin, and in the sixth chapter with the sodium alloys with cadmium. The seventh chapter deals with the entropy and the degrees of the heat in the mixture of the alloys. Then it is mentioned that the formation of alloys in which also alkali metals are contained takes place exothermally. The partial molar mixture entropy (in formation of compounds) differs greatly from the theoretical values obtained. The considerable negative values  $\Delta S$  may be explained by the nature of the chemical bonds in metal compounds. There are 19 figures, 1 table, and 79 references, 31 of which are Soviet.

Card 2/3

The Thermodynamic Properties of Liquid Alloys  
Containing Alkali Metals

SOV/74-27-8-1/7

1. Alloys (Liquid)--Thermodynamic properties
2. Alkali metals--Thermodynamic properties
3. Intermetallic compounds--Bonding

Card 3/3

ALABYSHEV, A.F.; LANTRATOV, M.F.; SOKOLOVA, L.I.

Electric conductivity of the  $\text{NaOH-Na}_2\text{CO}_3\text{-NaCl}$  system. Zhur.prikl.  
Khim. 31 no.11:1749-1752 N '58. (MIRA 12:2)

Leningradskiy elektrotekhnicheskiy institut imeni V.I. Ul'yanova  
(Lenina).

(Systems (Chemistry)) (Electric conductivity)

ALABYSHEV, A.F.; GRACHEV, K.Ya.; ZARETSKIY, S.A.; LANTRATOV, M.F.;  
FEDOT'YEV, N.P., prof., retsenzent; KHAIN, P.G., inzh., retsen-  
zent; MORACHEVSKIY, A.G., red.; ERЛИKH, Ye.Ya., tekhn.red.

[Sodium and potassium; their preparation, properties, and uses]  
Natrii i kalii; poluchenie, svoistva, primeneniye. Pod red. A.F.  
Alabysheva. Leningrad, Gos.nauchno-tekhn.izd-vo khim.lit-ry,  
1959. 390 p. (MIRA 13:3)  
(Sodium) (Potassium)

AUTHOR: Lantratov, M.F. and Alabyshev, A.F. SOV/80-59-1-11/44

TITLE: Diagram of the State of the NaOH - Na<sub>2</sub>CO<sub>3</sub> - NaCl System (Diagramma sostoyaniya sistemy NaOH - Na<sub>2</sub>CO<sub>3</sub> - NaCl)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Nr 1, pp 65-70 (USSR)

ABSTRACT: The diagram of the state of the NaOH - Na<sub>2</sub>CO<sub>3</sub> - NaCl system has not been investigated thus far. The authors studied the temperatures of the beginning of crystallization for a number of compounds of this system, rich in NaOH and containing up to 60% (by weight) of NaCl or soda. The investigation was conducted by the visual-polythermal method. The temperature of the crystallization beginning was determined by means of a chromel-alumel thermocouple with an accuracy of  $\pm 1^{\circ}$ . The following compounds were investigated: NaOH - NaCl; NaCl - Na<sub>2</sub>CO<sub>3</sub>; NaOH - Na<sub>2</sub>CO<sub>3</sub>, and NaOH - Na<sub>2</sub>CO<sub>3</sub> - NaCl, and the results of determinations are presented both in the tabular and graphical form. In particular, a part of the triangular of concentrations of the NaOH - Na<sub>2</sub>CO<sub>3</sub> - NaCl system pictured in Figure 6 shows that it is possible to store up to 10 to 20% of NaCl with the same concentration of soda in the smelt under practical conditions at a temperature of electrolysis of 300°C.

There are 6 graphs, 1 table, and 12 references, 6 of which are Soviet, 2 Italian, and 4 German.

Card 1/2

Diagram of the State of the NaOH - Na<sub>2</sub>CO<sub>3</sub> - NaCl System SOV/EC-59-1-11/44

ASSOCIATION: Leningradskiy elektrotekhnicheskij institut imeni V.I. Ul'yanova (Lenina) (Leningrad Electrotechnical Institute imeni V.I. Ul'yanov (Lenin))

SUBMITTED: March 21, 1958

Card 2/2



5(2), 18(6)

AUTHORS:

Shoykhet, D. N., Morachevskiy, A. G., Alabyshev, A. F.

SOV/78-4-7-25/44

TITLE:

The Melting Diagram of the System Potassium - Lead (Diagramma plavkosti sistemy kaliy - svinets)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 7, pp 1616-1619 (USSR)

ABSTRACT:

One of the methods of obtaining metallic potassium consists in the distillation of a potassium-lead alloy (Ref 1), which is obtained by the electrolysis of melted potassium salts on a liquid lead cathode. The potassium-lead alloys have, however, not been fully investigated, and published data contain contradictions (Refs 2-5). This gave rise to carrying out the present investigation. The alloys were produced in cups of armco-iron in an argon atmosphere. The initially unsatisfactory mixing of the melts resulted in inhomogeneous alloys, which are probably also the cause of the contradictory data found in publications. Only after better mixing reproducible values were obtained, which are given by a table. The melting diagram is shown by a figure. It shows a maximum at  $578^{\circ}$ , which corresponds to the compound  $KPb$ , and three peritectic horizontals at

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SOV/78-4-7-25/44

The Melting Diagram of the System Potassium - Lead

372°, 336°, and 292°, which correspond to the compounds  $K_2Pb_3$ ,  $KPb_2$ , and  $KPb_4$ . In the part of the system which contains more potassium, an eutectic point is found for  $K + KPb$  near 52°, and in the part which is rich in lead an eutectic  $Pb + KPb_4$  is found at 274°. The disintegration stated to take place by D. P. Smith (Ref 2) in the interval of 36-74 at% K could not be found to occur, the compound  $K_2Pb$  assumed by Smith was not observed but it was found that the peritectic transformation corresponds to the compound  $K_2Pb_3$  at 372°. There are 1 figure, 1 table, and 5 references, 3 of which are Soviet.

ASSOCIATION: Leningradskiy politekhnicheskii institut im. M. I. Kalinina  
(Leningrad Polytechnic Institute imeni M. I. Kalinin)

SUBMITTED: April 4, 1958

Card 2/2

LANTRATOV, M.F.; ALABYSHEV, A.F.

Structural diagram of the system  $\text{NaOH} - \text{Fe}_2\text{CO}_3 - \text{NaCl}$ . Zhur.  
prikl.khim. 32 no.1:65-70 Ja '59. (MIRA 12:4)

1. Leningradskiy elektrotekhnicheskiy institut imeni V.I.  
Ul'yanova (Lenina).  
(Systems (Chemistry))

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5.1310

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SOV/76-33-11-9/47

~~5(4)~~  
AUTHORS:

Lantratov, M. F., Alabyshev, A. F.

TITLE:

Investigation of the Thermodynamic Properties<sup>21</sup> of Liquid Metallic Solutions of Potassium With Thallium, Lead, and Bismuth

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 11, pp 2429-2434 (USSR)

ABSTRACT:

The investigation of the alkaline-metal alloys are of special interest for the development of a new production method of these metals by electrochemical deposition on a liquid lead cathode and subsequent vacuum distillation of the alloy. In the present case the method of the electromotive force was applied, and the thermodynamic properties of the cell potassium | electrolyte with potassium ions | potassium alloy were calculated. K<sub>2</sub>O-containing glass was used as electrolyte, as was also done in the studies of Hauffe (Ref 1), Kubaschewski and Hugler (Ref 2), Vierk (Ref 3), as well as A. F. Alabyshev and A. G. Morachevskiy (Refs 5-8). The design of the cell (Fig 1) and the operational method were described in detail in references 1 and 7. The isothermal lines and activity coefficients of potas-

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SOV/76-33-11-9/47

Investigation of the Thermodynamic Properties of Liquid Metallic Solutions of Potassium With Thallium, Lead, and Bismuth

sium and thallium at 525°C show that a deviation from the Raoult law occurs. This may be explained by structural groups which are present in the liquid alloy. The system potassium - lead was investigated in the temperature range 525-600°C. No separation of layers was observed, in contradistinction to the data of reference 12 and in accordance with the explanation of D. N. Shoykhet, A. G. Morachevskiy, and A. F. Alabyshev. For potassium and lead, the activity isothermal lines negatively deviated from the Raoult law. The alloy potassium - bismuth was tested at 575°C. Heat emission was observed during the formation of the alloy, and it was found that only the stable compound of  $K_3Bi$  is present. The considerable negative deviation of the excess mixing entropy is explained by the partially ionic character of the bonds in the compounds. There are 7 figures and 12 references, 6 of which are Soviet. ✓

ASSOCIATION:  
Card 2/3

Elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina),  
Leningrad (Institute of Electrical Engineering imeni V. I. Ul'-

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SOV/76-33-11-9/47

Investigation of the Thermodynamic Properties of Liquid Metallic Solutions  
of Potassium With Thallium, Lead, and Bismuth

yanov (Lenin), Leningrad

✓

Card 3/3

ALABYSHEV, A. F.

PHASE I BOOK EXPLANATION 257/5098

Bogoroditskiy, M. P., and V. V. Pasynkov, eds. *Spravochnik po elektrotehnicheskim materialam*. V gradebni i osnove 21. Mestitsyze, provodnikovyje, poluprovodnikovyje, dielekticheskiye materialy (Handbook on Electrical Engineering Materials, Dielectric and Other Materials). Vol. 2; Magnetic, Conducting, Semiconducting, and Other Materials. Moscow, Gosenergoizdat, 1960. 211 p. Serially issued. 30,000 copies printed.

Eds. of Handbook: M. P. Bogoroditskiy, M. P. Pasynkov, and S. M. Tarayev; Eds. (This vol.): M. P. Bogoroditskiy and V. V. Pasynkov; Tech. Ed.: Ye. M. Soboleva.

PURPOSE: This handbook is intended for technical personnel of electrical and radio engineering establishments, power stations and substations, electric repair shops, laboratories, and scientific research institutes. This volume of the handbook contains basic information on magnetic materials, metallic conductors, electrical carbon, and important electrically used in modern engineering. It describes characteristics of semiconductor, ferroelectric, and piezoelectric materials. It does not include insulating materials, which are covered in Volume 1. The authors are scientists associated with the Department of Dielectric and Semiconductors of the Leningradskiy Elektrotexnikeskij Institut (Inst. V. I. Ul'yanova (Lenina)) (Leningradskiy Elektrotexnikeskij Institut imeni V. I. Ul'yanova (Lenin)) of the Leningradskiy Elektrotexnikeskij Institut imeni V. I. Ul'yanova (Lenin), Candidate of Technical Sciences, R. O. Kanakov and O. P. Voylochnikov, assistant, and O. I. Panteleyev and O. M. Kornev for their assistance. References accompany each part.

Handbook on Electrical Engineering (Cont.)

SOV/5058

PART V. MATERIALS WITH ELECTROLYTIC CONDUCTIVITY AND  
MATERIALS FOR GALVANIC CELLS AND STORAGE BATTERIES

Ch. XXX. General Information on Electrolytes (A. F. Alabyshev  
and M. F. Lantratov)

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Ch. XXXI. Information on the Most Frequently Used Aqueous  
Solutions of Alkalies, Acids, and Salts  
(M. F. Lantratov)

- |   |     |
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85456

S/149/60/000/005/008/015  
A006/A001

11.4150

AUTHORS: Morachevskiy, A.G., Alabyshev, A.F.

TITLE: On the Activity of Sodium in Liquid Alloys With Thallium

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetraya metallurgiya, 1960, No. 5, pp. 105-107

TEXT: The activity of sodium in alloys with thallium was calculated from measurements of emf in the circuit: Na (electrolyte with Na<sup>+</sup> ions) Na + Tl alloy. The Gibbs-Duhem equation in its form recommended by Wagner (Ref. 7) was used to calculate the activity of Tl and the integral molar excess isobar potential. Thermodynamical properties of the Na-Tl system were studied by a method described in Reference 3 at 400°C. The composition of the alloys varied from  $N_{Na} = 0.92$  to  $N_{Na} = 0.08$ ;  $N_{Na}$  is the atomic portion of sodium in the alloy; "No. 23" glass containing 9.42% Na<sub>2</sub>O was used as an electrolyte. The measurements were made in argon atmosphere and high-purity sodium and thallium were used. The experiments showed considerable negative deviations of the Na-Tl system from the Raoult's law, due to the presence of atom groupings in the liquid system corresponding to a metallic compound. The fusibility curve of the system is compared to the curve

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85450

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A006/AC01

On the Activity of Sodium in Liquid Alloys With Thallium

of integral molar excess isobar potential (Figure 2). The extremum of the integral curve  $\Delta z^x$  corresponds to the composition of the congruently melting NaTl compound. In general the extremum of the  $\Delta z^x$  curve corresponds to the composition of the strongest compound in the system. If a series of congruently melting compounds with relatively close melting points are formed, then the extremum occupies an intermediate position between the compositions of these compounds.

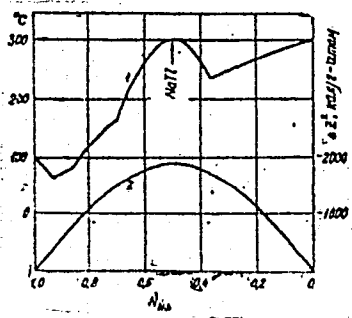


Figure 2

Fusibility curve of the Na-Tl system (1) and the integral molar excess isobar potential of the system (2).

X

30  
35  
50  
55

Card 2/3

85456

S/149/60/000/005/008/015  
A006/A001

On the Activity of Sodium in Liquid Alloys With Thallium

There are 1 table, 2 figures and 11 references: 1 English, 3 German and 7 Soviet.

ASSOCIATIONS: Leningradskiy politekhnicheskij institut (Leningrad Polytechnic Institute) Kafedra obshchey khimii (Department of General Chemistry)

SUBMITTED: November 20, 1959

X

Card 3/3

11950

S/194/62/000/002/054/096  
D273/D301

AUTHORS: Alabyshev, A. F. and Barsukova, N. N.

TITLE: Stability of metals and solvents (carbon tetrachloride) in an ultrasonic field

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 2, 1962, abstract 2-5-16ch (Nauchno-tekhn. inform. byul. Leningr. politekhn. in-t, 1960, no. 11, 85-89)

TEXT: The stability of cleaning solvents has been experimentally investigated and in particular carbon tetrachloride and the corrosion of metals under the action of ultrasonic beams in cleaning processes. The following results were obtained: 1) Ultrasonic oscillations of 15 to 20 kc/s promote the corrosion of metals: steel 15Xφ (15KhF), 45P2 (45G2), ct. 3 (st. 3), non-rusting steel, aluminum, bronze, iron cleaned in carbon tetrachloride; 2) ultrasonic oscillations of 50 to 2880 kc/s do not appear to influence the corrosion of metals (steel 15KhF) in the same media; 3) urotropin shows a stabilizing effect on carbon tetrachloride in an ultrasonic field

Card 1/2

Stability of metals ...

S/194/62/000/002/054/096  
D273/D301

in the presence of a metal held in solution in the range 0.005 to  
0.01% by weight. 3 tables. 3 figures. 3 references. [Abstracter's  
note: Complete translation.]

J

Card 2/2

MORACHEVSKIY, A.G.; CHEREPANOVA, Ye.A.; ALABYSHEV, A.F.

Sodium diffusion in liquid lead. Izv. vys. ucheb. zav.;  
tsvet. met. 3 no.3:70-73 '60. (MIRA 14:3)

L. Leningradskiy politekhnicheskii institut, Kafedra obshchey  
khimii.

(Sodium) (Diffusion) (Lead alloys)

S/153/60/003/004/017/040/XX  
B020/B054

AUTHORS: Alabyshev, A. F., Lantratov, M. F., Morachevskiy, A. G.

TITLE: Electromotive Force of the Chemical Chain  $Pb | PbCl_2 | Cl_2$

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 4, pp. 649 - 652

TEXT: The authors attempted to interpret the principal causes of the divergence of experimental results, and their deviation from results obtained on the basis of thermodynamic calculations. These problems are studied by the example of emf of the chain mentioned in the title. A table lists experimental data obtained by various authors who studied this chain, as well as theoretical values of emf of this chain calculated from thermodynamic data (Ref.15). A figure illustrates the deviation of experimental results found by various authors from thermodynamically calculated values. Measurement results of emf of the chain mentioned in the title show that the change of emf with temperature is almost linear. Emf values nearest to the thermodynamically calculated values

Card 1/2

Electromotive Force of the Chemical Chain  $\text{Pb} | \text{PbCl}_2 | \text{Cl}_2$  S/153/60/003/004/017/040/XX  
B020/B054

were obtained in investigations in which the chlorine electrode was obtained by saturation of a graphite electrode with chlorine gas, as well as in those in which the electrode spaces were separated from each other. The space around the chlorine electrode must be saturated with chlorine, and the space around the lead electrode with lead. A penetration of lead into the zone of the chlorine electrode should be avoided to exclude reactions leading to depolarization. The preliminary treatment of the graphite rods used to manufacture the chlorine electrode is very important; this treatment consists in a prolonged chlorination at high temperatures. The purity of the graphite used is also important. B. P. Artamonov (Ref.9) is mentioned. There are 1 figure, 1 table, and 18 references: 9 Soviet, 2 US, 6 German, and 1 British.

ASSOCIATION: Leningradskiy politekhnicheskii institut im. M.I. Kalinina, kafedra obshchey khimii (Leningrad Polytechnic Institute, Department of General Chemistry)

SUBMITTED: December 8, 1958

Card 2/2



S/076/61/035/012/008/008  
B101/B138

AUTHORS: Semerikova, I. A., and Alabyshev, A. F.

TITLE: Density of some melts of the system KF·HF

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 12, 1961, 2791 - 2793

TEXT: Densities of the system KF·HF are investigated over a wide range in continuation of already published researches. Density was pycnometrically determined, the melt level being determined by the closing of an electric contact as soon as the melt poured into the pycnometer reached a platinum wire. In all melts investigated, density decreases linearly with rising temperature and increases with rising KF concentration. All isotherms were S-shaped and a nearly horizontal section, appropriate for the formation of the compound KF·2HF on the liquidus curve, is formed between 31.1 and 32.8 mole% KF (43.2 - 40.8% by weight of HF). This is also confirmed by the variation of the temperature coefficient. There are 2 figures, 1 table, and 3 references: 1 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: W. C. Schumb, R. C. Ioung, K. I. Radimer, Ind. Eng. Chem., 1947; Cady, J. Amer. Chem. Soc., 56, 1931, 1934.

Card 1/2

Density of some melts... S/076/61/035/012/008/008  
B101/B138

ASSOCIATION: Gosudarstvennyy institut prikladnoy khimii (State Institute of Applied Chemistry)

SUBMITTED: May 11, 1961 Table

Table.  
Density of melts in the system KF·HF.

Legend:  
(A) HF content; (a) mole%; (b) % by weight;  
(B) temperature coefficient, g/cm<sup>3</sup>·deg.  
Card 2/2

Содержание HF		t, °C											Температурный коэффициент, g/cm <sup>3</sup> ·град (B)		
(a) моль %	(b) %	80	90	100	110	120	130	140	150	160	170	180		190	
23,4	45,3	1,861	1,850	1,837	1,828	1,819	1,810								0,00100
30,1	44,5	1,866	1,855	1,847	1,836	1,826	1,818								
31,0	43,5	1,866	1,876	1,865	1,854	1,842	1,837								
31,1	43,2	1,889	1,880	1,870	1,856	1,846	1,835								
31,6	42,8	1,895	1,886	1,873	1,862	1,851	1,840								
31,8	42,5	1,893	1,880	1,870	1,857	1,846	1,835								
32,2	42,1	1,892	1,884	1,875	1,860	1,851	1,843								
32,6	41,2	1,892	1,880	1,870	1,860	1,850	1,839								
33,5	40,9	1,894	1,888	1,870	1,869	1,860	1,848								
34,4	39,7	1,910	1,900	1,890	1,881	1,868	1,859								
34,8	39,2	1,946	1,928	1,915	1,903	1,893	—							0,00107	
35,6	38,4			1,940	1,929	1,917	1,908	1,896	1,886					0,00110	
36,2	37,8			1,968	1,956	1,947	1,930	1,919	1,906					0,00124	
37,5	36,5	—	—	—	—	—	1,954	1,942	1,930	1,913	1,904			0,00139	
39,8	34,3	—	—	—	—	—	—	—	1,946	1,929	1,914	1,898	1,883	0,00158	

FEDOT'YEV, N.P., doktor khim. nauk, prof.; BIBIKOV, N.N.; VYACHESLAVOV,  
P.M.; GRILIKHES, S.Ya.; ALABYSHEV, A.F., doktor tekhn.nauk,  
prof., retsenzent; ROTINYAN, A.L., doktor tekhn.nauk, prof.,  
red.; LAYKINA, T.L., red.izd-va; CHFAS, M.A., red.izd-va;  
PETERSON, M.M., tekhn. red.

[Electrolytic alloys]Elektroliticheskie splavy. Pod red. N.P.  
Fedot'eva. Moskva, Mashgiz, 1962. 311 p. (MIRA 16:3)  
(Alloys--Electrometallurgy)

LOPATIN, Boris Alekseyevich; ALABYSHEV, A.F.; retsenzent;  
SOBOLEVSKIY, K.M., retsenzent; KRASILENKO, V.A.,  
retsenzent; KRYUKOV, P.A., otv. red.; TARASOVA, N.V.,  
red.

[Conductometry; measurement of the electrical conductivity  
of electrolytes] Konduktometriia; izmerenie elektroprovod-  
nosti elektrolitov. Novosibirsk, Redaktsionno-izdatel'skii  
otdel Sibirskogo otd-niia AN SSSR, 1964. 278 p.

(MIRA 18:3)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya  
AN SSSR (for Kryukov). 2. Leningradskiy politekhnicheskii  
institut im. M.I.Kalinina (for Alabyshev). 3. Institut  
avtomatiki i elektrometrii Sibirskogo otdeleniya AN SSSR  
(for Sobolevskiy, Krasilenko).

FEDOT'YEV, N.P., prof., doktor khim. nauk; BIBIKOV, N.N.;  
VYACHESLAVOV, P.M.; GRILIKHES, S.Ya.; ALAY SHEV, A.F.,  
doktor tekhn.nauk, prof., retsenzent; ROTINYAN, A.L.,  
doktor tekhn.nauk, prof., red.; LEYKINA, T.L., red.izd-  
va; CHFAS, M.A., red.izd-va; PETERSON, M.M., tekhn. red.

[Electrolytic alloys]Elektroliticheskie splavy. Pod red.  
N.P.Fedot'eva. Moskva, Mashgiz, 1962. 311 p.

(MIRA 15:11)

(Electroplating) (Alloys)

FEDOT'YEV, N.P., prof.; ALAHSHEV, A.F.; ROTINYAN, A.L.; VYACHESLAVOV,  
P.M.; ZHIVOTINSKIY, P.B.; GAL'INBEK, A.A.; MORGACHEVSKIY, A.G.,  
red.; ERLIKH, Ye.Ya., tekhn. red. .

[Applied electrochemistry] Prikladnaia elektrokimiia. Lenin-  
grad, Goskhimizdat, 1962. 638 p. (MIRA 15:12)  
(Electrochemistry)

SEMERIKOVA, I.A.; ALABYSHEV, A.F.

Viscosity of some melts of the KF - HF system. Zhur.fiz.khim.  
36 no.5:1070-1072 My '62. (MIRA 15:8)

1. Gosudarstvennyy institut prikladnoy khimii.  
(Potassium fluoride) (Hydrofluoric acid) (Viscosity)

YUSOVA, Yu. I.; ALABYSHEV, A. F.

Vapor pressure of hydrogen chloride over the system  $KF.HF$   
with additions of fluoride salts. Zhur. fiz. Khim. 36 no.12:  
2772-2774 D '62. (MIRA 16:1)

1. Institut prikladnoy khimii.

(Hydrofluoric acid) (Vapor pressure)  
(Fluorides)



ALABYSHEV, A.F.

Review of N.A. Doronin's book "Calcium." Izv. vys. ucheb. zav.;  
tsvet. met. 6 no.4:145-146 '63. (MIRA 16:8)

(Calcium)

S/076/63/037/002/017/018  
B144/B180

AUTHORS: Yusova, Yu. I., Alabyshev, A. F.

TITLE: Effect of sodium fluoride on the vapor pressure of hydrogen fluoride over a KF - HF melt. II

PERIODICAL: Zhurnal fizicheskoy khimii, v. 37, no. 2, 1963, 449-450

TEXT: The effect of additions of 2-30% by weight NaF on the HF vapor pressure was investigated over KF - HF melts of different acidities. The methods of measurements had been described by the authors in a previous paper (in press). The HF vapor pressure was reduced by NaF additions of 2-5% by weight, but considerably increased above 5%. This may be due to weakening of the KF - HF system and formation of the NaF - HF system which decomposes before melting. There is 1 table. ✓

ASSOCIATION: Institut prikladnoy khimii (Institute of Applied Chemistry)

SUBMITTED: March 28, 1962

Card 1/1

YUSOVA, Yu.I.; ALABYSHEV, A.F.

Vapor pressure over the system  $\text{NH}_3/\text{HF}$  of various ammonia content.  
Zhur.fiz.khim. 37 no.8:1870-1871 Ag '63. (MIRA 16:9)

1. Gosudarstvennyy institut prikladnoy khimii.  
(Ammonia) (Hydrofluoric acid) (Vapor pressure)

ALABYSHEV, A.F.

One hundred and thirtieth anniversary of the laws of electrolysis.  
Zhur. prikl. khim. 36 no.12:2746-2748 D'63. (MIRA 17:2)

SEMERIKOVA, I.A.; ALABYSHEV, A.P.

Density and viscosity of some melts of the system  $NE_{40}F_{60} - HF$ .  
Zhur. fiz. khim. 36 no.6:1343-1344 Je'62 (NIRA 17:7)

1. Gosudarstvennyy institut prikladnoy khimii.

ALABYSHEV, A.F.; LANTRATOV, M.F.

Investigating thermodynamic properties of liquid metal solutions  
in the system Sb - Zn - Cd. Trudy LPI no.223:55-66 '63.

(MIRA 17:11)

ALABYSHEV, Aleksandr Filosofovich, doktor tekhn. nauk, prof.;  
LANTRATOV, Mikhail Fedorovich, kand. khim. nauk;  
MORACHEVSKIY, Andrey Georgiyevich, kand. tekhn. nauk;  
ZASLAVSKAYA, M.I., red.

[Reference electrodes for fused salts] Elektrody sravneniia dlia rasplavlennykh solei. Moskva, Metallurgiiia, 1965. 129 p. (MIRA 18:3)

L 42141-66 .EWT(m)/I/EWP(t)/ETI . . . IJP(c) DS/JD/WW/GD/JG

ACC NR: AT6022484 (N) SOURCE CODE: UR/0000/65/000/000/0338/0341

AUTHOR: Zaretskiy, S. A.; Suchkov, V. N.; Busse-Machukas, V. B.; Kisel'gof, Yu. S.; Yakimenko, L. M.; Alabyshev, A. F.

none

TITLE: On the preparation of chlorine, caustic soda, and alkali metals by electrolysis of fused media with a liquid lead cathode

SOURCE: Vsesoyuznoye soveshchaniye po fizicheskoy khimii rasplavlennykh soley. 2d, Kiev, 1963. Fizicheskaya khimiya rasplavlennykh soley (Physical chemistry of fused salts); trudy soveshchaniya. Moscow, Izd-vo Metallurgiya, 1965, 338-341

TOPIC TAGS: electrolysis, alkali metal, lead, liquid metal, chlorine, sodium hydroxide, CATHODE

ABSTRACT: In recent years, a new method of producing alkali metals has been in use in the Soviet Union: the metals are distilled out of a lead-alkali alloy prepared by electrolysis on a liquid lead cathode. However, the process is characterized by a recurring decrease of current efficiencies, particularly at high cathodic current densities. The article reviews studies made for the purpose of improving this method. It is shown that the electrolysis of alkali metal chlorides in molten salts with a circulating liquid lead cathode and distillation of the metal has many advantages over the electrolysis of aqueous solutions, namely: (a) pure sodium metal can be obtained at high current efficiencies, and pure caustic soda is thus produced without the necessity of using expensive mercury; (b) it is no longer necessary to build evaporation units and

Card 1/2



L 42141-66

ACC NR: AT6022484

units for melting caustic soda; (c) the process is carried out at current densities that are 30-35 times higher than in diaphragm electrolysis, and 6-7 times higher than in mercury electrolysis. Orig. art. has: 5 figures.

SUB CODE: 07/ SUBM DATE: 23Aug65/ ORIG REF: 007

Card 2/2 10/21

L 22365-06

ACC NR: AP6005100 (A,N) SOURCE CODE: UR/0325/65/000/004/0163/0166

AUTHOR: Alabushay, V. A.

23  
B

ORG: none

TITLE: Effect of various herbicides<sup>b</sup> on the proteinaceous nitrogen content in grain of crops in chernozem and turflike-podzolic soils

SOURCE: Nauchnyye doklady vysshey shkoly. Biologicheskiye nauki, no. 4, 1965, 163-166

TOPIC TAGS: horticulture, weed killer, soil type, plant metabolism

ABSTRACT: The effect of 2,4-D and other herbicides on the proteinaceous nitrogen content of corn, barley, millet and peas grown in black earth was investigated. 2,4-D and DNOK had no significant effect on the nitrogen content in peas while treatment with Simazine noticeably increased the nitrogen, probably due to better weed control by Simazine as well as its decomposition by microorganisms to provide additional feed for the plants. 2,4-D applied in customary dosages increased the proteinaceous nitrogen in the grains only when the plants were fed at the time of herbicide application, as shown by the correlation between the amount of nitrogen in the grain and plant growth. Orig. art. has: 1 table.

Card 1/340 SUB CODE: 06/ SUBM DATE: 20Jul64/ ORIG REF: 005/ OTH REF: 003

SHEKHURIN, Diodor Yefremovich; KATS, Ya.L., red.; ALABYSHEVA, N.A.,  
red.izd-va; BELOGUROVA, I.A., tekhn. red.

[Basic principles for the development of information in the  
Scientific Research Institute] Osnovnye printsipy razvitiia  
informatsii v NII; stenogramma doklada, pročitannogo v  
LDNTP na zaniatiakh seminarov rabotnikov sluzhb tekhnicheskoi  
informatsii. Leningrad, 1963. 33 p. (MIRA 16:10)  
(Technology--Information services)

KOPYLOVA, Z.A.; KAMLIKOVA, T.L.; Primalni uchastiye: ALABYSHEVA, S.I.;  
VASEVA, R.G.

Level of ascorbic acid in the blood in health subjects and in  
acute infections in Archangel. Vop.pit 21 no.4:66-71 J1-Ag '62.  
MIRA 15:12)

1. Iz kafedry biokhimii (zav. - dotsent M.D.Kiverin) i  
infektsionnoy kliniki Arkhangel'skogo meditsinskogo instituta.  
(ASCORBIC ACID) (ARCHANGEL--COMMUNICABLE DISEASES)

ALACEVIC, M.

Elastic fibers in the respiratory parenchyma of elephants, p. 80. (GLASNIK, Series, II/B, v. 4/6, 1950/52, Zagreb, Yugoslavia)

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, no. 1  
Jan. 1955, Uncl.

ALACEVIC-GRLIC, M.

YUG/2-59-4-2/16

5(3)

AUTOCES: Johandes, V. and Madarić-Grlić, M.

TITLE: Preparing Heterokaryons from Various Strains of Aspergillus Niger. In order to Improve Their Amyolytic Properties (Prirodne Heterokarioma iz različitih sojeva Aspergillus niger u cilju poboljšanja njihove amilolitičkih aktivnosti)

PERIODICAL: Kemija u industriji, 1959, Nr 4, pp 91-94 (YUG)

ABSTRACT: The article describes various interationally known tests which were made with 25 strains of heterokaryons with niger with the purpose of obtaining heterokaryons with the highest amyolytic properties. The used for commercial conversion of sugar in alcohol distilleries. The types of Aspergillus niger used in the tests were taken from the collection of the Zavod za mikrobiologiju Tehnološkog Fakulteta (Microbiologic Institute of the Technological (Food) Dept., in Zagreb. The tests produced 3

Card 1/2

Types of highly active amyolytic heterokaryons, two of which, HMK 337, of USA origin and 439, of Japanese origin, when paired off in a submerged culture, produced the highest number of amyolytic units. The results are in tables and 32 references of which 27 are English and 5 German.

ASSOCIATION: Zavod za mikrobiologiju - Tehnološki fakultet (Microbiological Institute of the Technological [Univ.] Dept.), Zagreb.

Card 2/2

LIVSHITS, R.M.; ALACHEV, V.P.; PROKOF'YEVA, M.V.; ROGIVIN, Z.A.

Mechanism of the tetravalent cerium salt initiation of the graft copolymerization of cellulose with vinyl monomers. Vysokom. soed. 6 no.4:655-658 Ap '64. (MIRA 17:6)

1. Moskovskiy tekstil'nyy institut. Nauchno-issledovatel'skii institut sinteticheskikh smol.

une classe d'intégrales de...

Intégrales de...



Alaci, V. Une classe de fonctions simplement-discontinues.

The known value of  $h^2(t)$  and  $h^1(t)$  with  $h^1(t) = h^2(t) + \dots$

are established, so that (\*) should not be

Source: Mathematical Reviews.

Vol 13 No. 5

ALACI, V.

1141753)  
... for the ... 16

11/14/73

*ALACI V.*

*J. Alaci. V. Contribution concernant les "fonctions quasi"*

*1. RW*

2

Alaci, V. Au sujet d'une classe d'équations aux dérivées partielles à coefficients constants. Acad. R. P. Roum. Baza Cerc. Sti. Timișoara. Stud. Cerc. Sti. Ser. Sti. Tehn. 3 (1956), no. 1-2, 9-15. (Romanian. Russian and French summaries)

Using ideas of his previous paper [same Stud. Ser. I 2 (1955), 9-12; MR 18, 401], the author indicates a method by which one can obtain solutions (depending on arbitrary constants and functions) of linear equations with partial derivatives, with constant coefficients, in  $n+1$  independent variables. If

$$(*) \sum_{i=1}^n \left( a_i \frac{\partial^2 u}{\partial x_i^2} + b_i \frac{\partial^2 u}{\partial x_i^2} + c_i \frac{\partial u}{\partial x_i} \right) = a \frac{\partial^2 u}{\partial t^2} + b \frac{\partial^2 u}{\partial t^2} + c \frac{\partial u}{\partial t} + d u,$$

GLW  
1/2

Alaci, V.

one postulates a solution of the form  $u = e^{\alpha t} \varphi(v)$  where  $v = \sum_{j=1}^n A_j x_j + \lambda t$  and  $A_j, \alpha, \lambda$ , are  $n+2$  arbitrary constants. Substitution in (\*) leads to an ordinary, third order, linear differential equation for  $\varphi(v)$ . This will be satisfied by an arbitrary function  $\varphi(v)$ , provided that all its coefficients vanish. Thus one obtains a system  $S$  of four equations in the  $n+2$  arbitrary constants. The system  $S$  is in general consistent for  $n \geq 2$  (if  $n=1$ , the coefficients of (\*) have to satisfy two conditions in order to insure the consistency of  $S$ ). Some equations with partial derivatives of higher order can also be handled by this method.

E. Grosswald (Philadelphia, Pa.)

GW  
2/72

Spind

ALACS, B. Tamas

One and a half years of "Epitechnika", a tripartite  
publication. Magyar ipar 12 no.6:278 '63.

ALADAR-TURI, inzh.; BRODSKIY, A.Ya., kand.tekhn.nauk

Local heat treatment of resistance welded joints in 35GS steel reinforcement rods. Svar. proizv. no.6:9-11 Je '62. (MIRA 15:6)

1. Tsentral'nyy nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy.

(Concrete reinforcement--Welding)  
(Steel--Welding)



ALADASHVILI, B.I.

Echinococcus of the ribs. Khirurgia, no.11:78 N '55. (MIRA 9:6)

1. Iz TSiteli-TSkaroyskoy rayonnoy bol'nitsy, Gruzinskaya SSR.  
(RIBS--HYDATIDS)

SOV/136-59-2-17/24

AUTHORS: Makhatadze, M.A., Candidate of Technical Sciences and  
Aladashvili, G.A., Engineer

TITLE: Machining Titanium with the Use of CO<sub>2</sub> and the  
Utilisation of Titanium Chips in Metallurgy (Obrabotka  
titana s primeneniym CO<sub>2</sub> i ispol'zovaniye titanovoy  
struzhki v metallurgii)

PERIODICAL: Tsvetnyye Metally, 1959, Nr 2, pp 75-78 (USSR)

ABSTRACT: In 1957 an investigation on the machining of type VT-ID titanium with cooling to below zero by CO<sub>2</sub> was carried out by one of the authors (Makhatadze) at the Laboratoriya Obrabotki Metallov (Metals Machining Laboratory) of the Institut Metallurgii AN Gruz SSR (Institute of Metallurgy of the AS Gruz SSR). The work now described had the object of studying the influence of machining factors on the oxidation of the metal. A series of tests was first made to find the influence of temperature on the rate of oxidation of chips by measuring the rate of weight increase. Fig 1 shows weight-increase (%) isotherms as functions of time (minutes) for 600 to 1100°C in air. Qualitative deductions were made from the temper colours and their

Card 1/2

SOV/136-59-2-17/24

Machining Titanium with the Use of CO<sub>2</sub> and the Utilisation of Titanium Chips in Metallurgy

degree of reflection: in Fig 2 the latter is related to machining factors with CO<sub>2</sub> cooling (curve "CO<sub>2</sub>") and without cooling and in Fig 3 to the temperature. The work showed that without cooling machining factors influence oxidation through their effect on temperature: cutting speed increases lead to increased oxidation, the pitch and depth of cut having the opposite effect. Oxidation of chips occurred at temperatures of over 400°C, i.e. under all machining conditions without cooling. With cooling by CO<sub>2</sub> under all machining conditions unoxidised chips were obtained which could be melted to give sound titanium. There are 4 figures and 6 Soviet references.

ASSOCIATION: Institut Metallurgii AN Gruz SSR (Institute of Metallurgy, AS Gruz SSR)

Card 2/2

MAKHATADZE, M.A.; ALADASHVILI, G.A.

Titanium cutting in conditions of cooling with use of CO<sub>2</sub>.  
Trudy Inst.met. AN Gruz. SSR 12:173-186 '62. (MIRA 13:12)  
(Metal cutting) (Titanium)

ALADASHVILI, N.A.

Bas-relief from Opiza Monastery with a representation of Ashot  
Kuropalat. Soob. AN Gruz. SSR 15 no.7:473-478 '54.

(MLRA 8:6)

1. Akademiya nauk Gruzinskoy SSR, Institut istorii gruzinskogo  
iskusstva, Tbilisi. Predstavleno deystvitel'nym chlenom Aka-  
demii G.N. Chubinashvili.

(Georgia--Bas-relief)

ALADASHVILI, V.A.

Effect of certain bitters on secretion of the gastric juice. Ter.  
arkh., Moskva 24 no. 5:58-63 Sept-Oct 1952. (GLML 23:3)

1. Of the Faculty Therapeutic Clinic (Head -- Prof. A. S. Aladash-  
vili, Active Member of the Academy of Sciences Georgian SSR,  
deceased), Tbilisi Medical Institute.

ALADASHVILI, V.A.

Certain morphological modifications in blood picture in functional pathology of the central nervous system. Trudy Inst. fiziol. 3: 447-453 '54. (MIRA 8:2)

1. Laboratoriya kortiko-vistseral'noy patologii. Zaveduyushchiy I.T. Kurtsin.

(REFLEX, CONDITIONED,  
disord., eff. on blood picture)

(BLOOD,  
picture, eff. of conditioned reflex disord.)

USSR/Human and Animal Physiology (Normal and Pathological).  
Blood. Blood Diseases.

T-3

Abs Jour : Ref Zhur - Biol., No 16, 1958, 74688

Author : Aladashvili, V.A.

Inst :

Title : On the Role of the Nerve Factor in the Pathogenesis of  
Some Anemias.

Orig Pub : Sabchota, Meditsina, 1957, No 2, 20-22.

Abstract : 120 patients with anemias were investigated. In acute post-hemorrhagic and chronic hemolytic anemias, stimulation by cold caused sharp and deep vasoconstrictive reactions (VR) in a majority of cases. In patients with chronic hypochromic anemias due to depression of hemopoiesis, as well as with chronic post-hemorrhagic anemia and Biermer's anemia, reaction to cold usually were insignificant - the inert type - or did not appear at all. Conditioned vascular reflexes did not develop or developed with difficulty.

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ALADASHVILI, V.A.

Neural factor in the stimulating effect of blood transfusion. Probl.  
gemat.i perel.krovi 4 no.12:37-39 D '59. (MIRA 13:4)

1. Iz kafedry fakul'tetskoy terapii (zaveduyushchiy - dotsent V.S.  
Garsamiya) lechebnogo fakul'teta Tbilisskogo gosudarstvennogo  
ditsinskogo instituta.

(CENTRAL NERVOUS SYSTEM physiol.)  
(BLOOD TRANSFUSION)  
(ANEMIA ther.)

ALADASHVILI, V.A., dotsent

Nervous factor in the pathogenesis of chronic gastritis. Kaz.med.  
zhur. 40 no.6:43-46 N-D '59. (MIRA 13:5)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. M.D. Kandelaki)  
lechebnogo fakul'teta Tbilisskogo meditsinskogo instituta i labo-  
ratorii kortiko-vistseral'noy patologii (zav. - prof. I.T. Kurtsin)  
Instituta fiziologii im. I.P. Pavlova AN SSSR.  
(REFLEXES) (STOMACH--INFLAMMATION)

ALADASHVILI, V.A.

Character of the interrelations between hypertension and some diseases of the digestive organs. Trudy Inst. klin. i klin. i eksper. kard. AN Gruz. SSR 8:227-229 '63. (MIRA 17s7)

1. Kafedra fakul'tetskoy terapii lechebnogo fakul'teta Tbilisskogo gosudarstvennogo meditsinskogo instituta.

ALADASHVILI, V.A.; ABULADZE, O.G.; VASIL'YEVA, L.T.

Changes in the cholesterol and lecithin amount of blood serum  
in patients with cholecystitis and liver cirrhosis. Soob.  
AN Gruz. SSR 31 no. 3:745-748 S '63. (MIRA 17:7)

ALADASHVILI, V.A.; VASIL'YEVA, L.T.

Protein formula of the blood serum in chronic gastritis. Soob.  
AN Gruz. SSR 35 no.3:729-732 S '64.

(MIRA 17:11)

1. Tbilisskiy gosudarstvennyy meditsinskiy institut. Predstavleno  
chlenom-korrespondentom AN GruzSSR A.N. Bakuradze.

DZHEBASHVILI, I.Ya., kand. tekhn. nauk; ALADASHVILI, Z.M.; GVINIANIDZE, I.I.

Device for measuring fuel consumption and recording the number of revolutions of an engine crankshaft. Avt. prom. 31 no.1:20  
Ja '65. (MIRA 18:3)

1. Nauchno-issledovatel'skiy institut mashinovedeniya Soveta narodnogo khozyaystva Gruzinskoy SSR.

ALADASHVILI, Z.M., inzh.; LEZHAVA, G.G., inzh.; MATIKASHVILI, I.V., kand. tekhn. nauk; TSIBALASHVILI, G.G., inzh.

The TR-4 device for measuring fuel consumption in motor vehicles. Priboro-  
stroenie no.7:26 JI '65. (MIRA 18:7)

~~ALADATOV, G.M.~~

Principle stages in the geologic history of northern Fergana. Trudy  
KF VNII no.6:386-396 '61. (MIRA 15:2)  
(Fergana--Geology)



ALADATOV, G.M.; BEDCHER, A.Z.; NIKIFOROV, B.M.; STOLOVITSKIY, G.M.;  
SHARDANOV, A.N.

Boundary of the Paleozoic and Mesozoic in the Yeisk-Berezan' region  
of the Scythian Platform. Trudy KF VNII no.6:113-121 '61.  
(MIRA 15:2)  
(Krasnodar Territory--Geology, Structural)

SHARDANOV, A.N.; KIYKO, K.I.; ALADATOV, G.M.; NIKIFOROV, B.M.

Formation of the folded structure in the Yeisk-Berezan' region  
of the Scythian platform. Trudy VNIGNI no.34:164-178 '61.

(MIRA 15:7)

(Krasnodar Territory--Folds (Geology))  
(Krasnodar Territory--Condensate oil wells)

ALADINSKIY, V.I., kand.tekhn.nauk

Chasms in city streets. Avt. dor. 24 no.3:32 Mr '61. (MIRA 14:5)  
(Streets—Maintenance and repair)  
(Water, Underground)

ALADATOV, G.M.: KAN, Ye.K.

New data on the geological structure, and oil and gas potentials  
of the northern part of the Fergana Valley. Geol.nefti i gaza 3  
no.5:19-22 Ny '59. (MIRA 12:7)

1. Krasnodarskiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel'-  
skogo instituta i Neftepromyslovoye upravleniye Kirgizneft'.  
(Fergana--Petroleum geology)  
(Fergana--Gas, Natural--Geology)

ALADATOV, G.M.

Types of oil and gas pools in northern Fergana. Trudy KF VNII no.3:  
209-212 '60. (MIRA 13:11)

(Fergana--Petroleum geology)  
(Fergana--Gas, Natural--Geology)

ALADATOV, G.M.; GROSSGEBM, V.A.

Band correlation of terrigenous flysch. Trudy KF VNII no.3:227-232  
'60. (MIRA 13:11)  
(Kuban--Geology, Stratigraphic) (Flysch)

ALADATOV, G.M.

Geology, and oil and gas potentials of northern Fergana,  
Trudy KF VNII no.2:79-89 '59. (MIRA 13:11)  
(Fergana--Petroleum geology) (Fergana--Gas, Natural--Geology)

SHIMANSKIY, A.A.; ALADATOV, G.M.; NIKIFOROV, B.M.

Formation and characteristics of the distribution of  
gas-condensate pools in the Yeysk-Berezan' District  
(Krasnodar Territory). Trudy KF VNII no.10:3-18 '62.  
(MIRA 15:11)  
(Krasnodar Territory—Condensate oil wells)



ALADATOV, G.M.; NIKIFOROV, B.M.; SHIMANSKIY, A.A.

Distribution of Pre-Cambrian, Paleozoic, Triassic, and Jurassic  
sediments in western Ciscaucasia (Yeysk-Berezan' gas-bearing  
region). Trudy KF VNII no.10:136-148 '62. (MIRA 15:11)  
(Krasnodar Territory--Geology)

ALADATOV, G.M.; BEDCHER, A.Z.; GROSSGEYM, V.A.; POPOV, V.K.

Practice of complex studying thinly alternating flysch-type reservoir  
rocks in the western Kuban. Trudy KF VNII no.1:202-221 '59.

(MIRA 16:9)

(Kuban--Oil sands--Permeability)

ROSTOVTSEV, K.O.; ALADATOV, G.M.

Triassic sediments of western Ciscaucasia. Dokl. AN SSSR 156  
no. 4:830-833 Je '64. (MIRA 17:6)

1. Krasnodarskiy filial. Vsesoyuznogo neftegazovogo nauchno-  
issledovatel'skogo instituta. Predstavleno akademikom A.L.  
Yanshinym.

ALADICS, A.; FARKAS, J.

Condensate drain tap based on heat expansion. p.765

ENERGIA ES ATOMTECHNIKA. (Energiagazdalkodasi Tudomanyos Egyesulet)  
Budapest, Hungary  
Vol. 11, no.11/12, Nov./Dec. 1958

Monthly List of East European Accessions (EEAI) LC., Vol. 8, no.7, July 1959  
Uncl.