LAKERNIK, M.M.; RABICHEVA, L.M.

Determining the activity of ferrous oxide in slags of the system FeO - SiO_2 - CaO. Sbor. nauch. trud. GINTSVETMET no.15:5-16 '59. (MIRA 14:4)

(Activity coefficients)
(Iron oxides)

LAKERNIK, M.M.

In the State Research Institute on Nonferrous Metals. TSvet. met. 34 no.10:13-17 O '61. (MIRA 14:10)

1. Zamestitel' direktora po nauchnoy chasti instituta "Gintsvetmet". (Nonferrous metals--Metallurgy)

LAKERNIK, M.M.

Prospects for expanding the industrial use of electric power in nonferrous metallurgy. TSvet. met. 35 no.3:1-6 Mr '62. (MIRA 15:4)

(Nonferrous metal industries) Electrometallurgy)

LAKERNIK, M.M.; GLUSHKOV, G.I.

Trends in research carried out by the Central Design Office of the State Institute of Nonferrous Metals. TSvet. met. 35 no.4: 1-3 Ap '62. (MIRA 15:4)
(Nonferrous metals) (Metallurgical research)

SKOROV, V.A.; STEPANOV, I.S.; SHAKHNAZAROV, A.K., inzhener-metallurg, pensioner; PETROV, V.I., Geroy Sotsialisticheskogo Truda; BARYSHNIKOV, I.F., starshiy inzhener; BUGAREV, L.A.; LAKERNIK, M.M., kand.tekhn. nauk; SHEYN, Ya.P.; MOLCHANOV, A.A.

The greatest objective of our life. TSvet.met. 34 no.10:1-10 O '61. (MIRA 14:10)

1. Glavnyy inzhener Skopinskogo zavoda "TSvetmet" (for Skorov). 2. Zamestitel' predsedatelya Mezhduvedomstvennoy komissii po redkim metallam pri Gosudarstvennom komitete Soveta Ministrov SSSR po koordinatsii nauchno-issledovatel'skikh rabot (for Stepanov). 3. Rukovoditel' brigady kommunisticheskogo truda elektroliznogo tsekha Ural'skogo alyuminiyevogo zavoda (for Petrov). 4. Otdel tsvetnoy metallurgii Gosplana SSSR (for Baryshnikov.). 5. Nachal'nik podotdela otdela ekonomiki i razvitiya tsvetnoy metallurgii Gosekonomsoveta SSSR (for Bugarev). 6. Zamestitel' direktora po nauchnoy chasti Gosudarstvennogo nauchno-issledovatel'skogo instituta tsvetnykh metallov (for Lakernik). 7. Starshiy ekspert upravleniya Gosudarstvennogo komiteta Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (for Sheyn). 8. Glavnyy spetsialist otdela tsvetnoy metallurgii Gosplana SSSR (for Molchanov). (Communism)

LAKERNIK, M.M.; LAVROV, L.G.; SHABALINA, R.I.

Condensing zinc into a liquid metal in a lead-sprayed condensator during the electrothermal treatment of intermediate products from complex metal ores. Sbor. nauch. trud. Gintsvetmeta no.19:387-396 '62. (MIRA 16:7)

(Nonferrous metals—Electrometallurgy)
(Condensation products(Chemistry))

LAKERNIK, M.M.; RABICHEVA, L.M.

Investigating the kinetics of the reduction of metals from slags and from sinter. Sbor. nauch. trud. Gintsvetmeta no.19: 647-660 '62. (MIRA 16:7)

(Nonferrous metals—Metallurgy)
(Iron—Metallurgy) (Slag)

LAKERNIK, M.M.

Forty-five years of Soviet nonferrous metallurgy. TSvet. met. 35 no.11:1-6 N '62. (MIRA 15:11)
(Nonferrous metals--Metallurgy)

LAKERNIK, M.M.; LIDOV, V.P.; ZDANOVICH, P.A.; SYCHEV, A.P.

Processing slags by the electrothermal method. Tsvet. met. 36 no.7:19-24 Jl '63. (MIRA 16:8)
(Nonferrous metals--Electrometallurgy) (Slag)

ABDEYEV, Masgut Abdrakhmanovich, kand. tekhn. nauk; GE"SKIN, Lev Solomonovich, doktor tekhnicheskikh nauk; ZAPLAVNYY, Aleksey Yakovlevich, kand. ekon. nauk; KRUTIKOV, Petr Maksimovich, inzh.; LAKERNIK, Mark Moiseyevich, doktor tekhn. nauk; SMIRNOV, Vasiliy Ivanovich, akademik;

[Modern methods of treating lead and zinc ores and concentrates] Sovremennye sposoby pererabotki svintsovo-tsinkovykh rud i kontsentratov. [By] M.A.Abdeev i dr. Moskva, Metallurgiia, 1964. 285 p. (MIRA 17:10)

1. Akademiya nauk Kaz.SSR (for Smirnov).

LAKERNIK, Mark Moiseyevich

[Metallurgy of lead] Metallurgiia svintsa. Izd.2., dop. i perer. Moskva, Metallurgiia, 1965. 223 p. (MIRA 18:6)

LOSKUTOV, Fedor Mikhaylovich[deceased]; Prinimali uchastiye: ANDREYEV, V.M., kand. tekhn. nauk; ORLOVTSEV, Yu.V., kand. tekhn. nauk; SMIRNOV, M.P., kand. tekhn. nauk; NELEN', I.M., kand. tekhn. nauk; LAKERNIK, M.M., doktor tekhn. nauk; GORDON, G.M., kand. tekhn. nauk

[Metallurgy of lead] Metallurgiia svintsa. Moskva, Metallurgiia, 1965. 528 p. (MIRA 19:1)

LAVROV, L.G.; LAKERNIK, M.H., doktor tekhn. nauk

Investigating the thermodynamic properties of iron protoxide in silicate-calcium slags. Sbor. nauch. trud. Gintsvetmeta no.23:5-20 '65. (MIRA 18:12)

4

BATAYEVA, R.N., inzh.; LAKERNIK, R.M., kand.tekhn.nauk

Automation of the drying operations of long-distance communication cables with styroflex insulation. Izv. vys. ucheb. zav.; energ. 5 no.3:81-87 Mr '62. (MIRA 15:4)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni kabel'nyy zavod "Moskabel'".

(Electric cables--Drying)

LAKERNIK, R. M.

USSR/Electricity - Literature Cables

Jun 53

"Review of N. Kh Golimbiyevskiy's and L. I. Macheret's Book 'Osvintsevaniye Kabeley' (Lead Sheathing of Cables) " (Engrs D. L. Sharle, R. M. Lakernik, reviewers)

Elektrichestvo, No 6, p 96

Reviewer calls Golimbiyevskiy's and Macheret's book (136 pp, Gosenergoizdat, 1952) a much-needed book for technology of cable production, but notes defects, including insuffiedent coverage of lead sheathing of communications and rubber-insulated cables and lack of attention to economy of elec power in pressing

LAKERNIK, R.M.

SIDOROV, Konstantin Vasil'yevich; KOZYREVA, Maria Nikolayevna; MACHERET, Lev Il'ich; LAKERNIK, Refail Moiseyevich; PASHCHENKO, Valentin Yevgen'yevich; SAAKYAN, Gabriyel' Rafailovich; KUZNETSOV, P.V., redaktor; LARIONOV, G.Ye., tekhnicheskiy redaktor.

[Economy of materials and power in the "Moskabel" plant; collection of articles] Ekonomiia materialov i elektroenergii na zavode "Moskabel"; sbornik statei; Moskva, Gos. energ. izd-vo, 1954. 86 p. (MIRA 8:4)
(Electric cables)

AID P - 3265

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 20/25

Authors : Sharle, D. L., and R. M. Lakernik, Engs.

Title : Polyethylene as material for cable sheathing (Review of foreign periodicals)

Periodical : Elektrichestvo, 9, 81-83, S 1955

Abstract : The author summarizes three articles from American periodicals describing the three polyethylene moistureproof materials: "alpeth", "stalpeth", and "lepeth" (Aluminum, - Steel-Aluminum- and Lead-Polyethylene). One drawing, 3 American references, 1951-1954.

Institution : None

Submitted : No date

LAKERNIK, R. M.

AID P - 3460

Subject	:	USSR/Electricity
Card 1/1		Pub. 27 - 27/32
Authors	:	Lakernik, R. M., Eng. and D. L. Sharle, Eng.
Title	:	Power cables with polyethylene insulation (Review of foreign periodicals)
Periodical	:	Elektrichestvo, 10, 77-78, O 1955
Abstract	:	The author summarizes a series of articles from American, British and German Periodicals concerning power cables with polyethylene insulation. Three tables, 6 references (1949-1954).
Institution	:	None
Submitted	:	No date

GRODNEV, Igor' Izmaylovich; LAKERNIK, Rafail Moiseyevich; SHARLE, David Leonidovich; YEFIMOV, I.Ye., redaktor; LINKOV, A.V., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor

[Fundamentals of the theory and the production of communication cables] Osnovy teorii i proizvodstvo kabelei sviazi. Moskva, Gos. energ. izd-vo, 1956. 480 p. (MLRA 9:11)
(Electric cables)

SHARLE, D.L., inzhener; LAKERNIK, R.M., kandidat tekhnicheskikh nauk.

Communication cables with polyethylene insulation. Vest.elektroprom. 27 no.1:65-69 Ja '56. (MLRA 9:6)

1.Nauchno-issledovatel'skiy institut kabel'noy promyshlennosti Ministerstva elektropromyshlennosti (for Sharle).2.Zavod "Moskabel'" Ministerstva elektropromyshlennosti (for Lakernik).
(Electric cables)(Electric insulators and insulation)

LAKERNIK, R.M.

SHARLE, D.L., inzhener; LAKERNIK, R.M., kandidat tekhnicheskikh nauk.

Transatlantic telephone cable. Vest.elektroprom. 27 no.3: 72-75 Mr '56. (MLRA 9:12)

1. Zavod "Moskabel'" Ministerstva elektropromyshlennosti.
(Cables, Submarine)

LAKERNIK, R.M., kand. tekhn. nauk; SHARLE, D.L., inzh.

Coaxial cables. Vest. elektroprom. 27 no.8:71-75 Ag '56.(MLRA 10:9)

1. Zavod "Moskabel'" Nauchno-issledovatel'skogo instituta kabel'noy promyshlennosti.

(Coaxial cables)

LAKERNIK, R.M.

YEFIMOV, I.Ye.; LAKERNIK, R.M.

Ferromagnetic coating of conductors in high-frequency communication cables. Sbor. nauch. rab. po prov. sviazi no.6:77-105 '57. (MIRA 11:5)
(Electric cables)

AUTHOR: Lakernik, R.M., Candidate of Technical Sciences, and Sharle, D.N., Engineer. 388

TITLE: Methods of perfecting the production of urban telephone cables. (Puti usovershenstvovaniya proizvodstva gorodskikh telefonnykh kabeley.)

PERIODICAL: "Vestnik Elektropromyshlennosti" (Journal of the Electrical Industry) 1957, Vol. 28, No. 4, pp. 26 - 30 (U.S.S.R.)

ABSTRACT: The principal measures that will lead to more economic design and increased output of urban telephone cables are: partial replacement of copper conductors by aluminium; more extensive use of paper pulp insulation; the use of double twin and bundle systems of twisting wires together; the development of cable designs with plastic or combined metal and plastic sheathing; modernisation of manufacturing plant and design of new types of machine.

The advantages and disadvantages of aluminium conductors are discussed. Cables with aluminium conductors are larger in diameter than those of copper conductors and at the same time as they are introduced the sheathing should be changed from lead to aluminium, plastic or combined metal-plastic sheathing. Otherwise, the economy of copper will be accompanied by extra consumption of lead. Although an aluminium conductor is only half the mechanical strength of a copper conductor with equal conductivity, the strength of the alu-

Methods of perfecting the production of urban telephone cables. (Cont.)

cored
minium/cable as a whole is equal to that of copper cored and is only half the weight if a lead sheath is used in connection with the copper.

Two main methods are used to insulate the conductors of urban telephone cables; either spirally wound paper tape or paper pulp insulation. Paper pulp has a number of advantages; labour costs and raw material costs are lower so that total insulation costs of a cable are only a third of what they are when paper tape is used. The electric strength of the paper pulp insulation is better than that of paper tape insulation. Paper pulp insulation can only be made on a large scale because it is desirable that the machines should work continuously day and night. It is necessary to establish the best relationship between the two components of paper pulp which are kraft-cellulose and waste cable and telephone paper.

The use of polyethylene for insulating the wires of urban telephone cables is of interest.

The present Soviet practice is to twist insulated wires only in pairs, but there are many advantages in twisting them together in fours. Before this can be done the technical requirements of the Ministry of Communications in respect of communications factor must be relaxed. Soviet practice is to make up cables in successive concentric layers. It would be advantageous to twist up bundles of 50 or 100 pairs which are

Methods of perfecting the production of urban telephone cables. (Cont.)

then twisted into a cable. With this construction wiring up of the cables is greatly simplified and the cables can be made more cheaply.

The process of drying the insulation can be improved. At present the insulation is dried in horizontal vacuum pots which hold several drums of cables. The drying time is usually 6 - 8 hours, the cable being heated by direct current. This method is unsuitable for the organisation of continuous flow production for which drying must take place during the process of displacement of the cable along the production line. This may be achieved by induction heating of the cores. Development of this process will also economise manufacturing space. It is necessary to modernise existing insulating and cable winding equipment and to develop modern specialised manufacturing equipment.

7 figures, 6 literature references (3 Russian.)

5(3) PHASE I BOOK EXPLOITATION SOV/2110

Lakernik, Rafail Moiseyevich, and D.L. Sharle

Polietilen i yego primeneniye v kabel'noy tekhnike (Polyethylene and Its Application in Cable Technology) Moscow, Gosenergoizdat, 1958. 142 p. 3,150 copies printed.

Ed.: A.S. Fridman; Tech. Ed.: G.I. Matveyev.

PURPOSE: The book is intended for engineers and technicians engaged in the design, production and operation of electrical cables.

COVERAGE: The author reviews non-Soviet practices in using polyethylene in the production of different types of cables. Basic data on polyethylene properties and examples of the construction and electrical characteristics of polyethylene insulated cables are given. There are 114 references: 12 Soviet, 85 English, 15 German, 4 French, and 2 Italian.

Card 1/3

Polyethylene and Its Application (Cont.)

TABLE OF CONTENTS: SOV/2110

Card 2/3

Polyethylene and Its Application (Cont.)

AVAILABLE: Library of Congress

TM/ad
8-25-59

Card 3/3

PHASE I BOOK EXPLOITATION SOV/3858

Yefimov, I.Ye., M.A. Klimov, R.M. Lakernik, and D.L. Sharle

Konstruktivnyye i elektricheskiye kharakteristiki kabeley svyazi (Design and Electrical Characteristics of Communication Cables) Moscow, Svyaz'izdat, 1959. 541 p. 7,500 copies printed.

Resp. Ed.: P.A. Frolov; Ed.: G.V. Bogacheva; Tech. Ed.: S.F. Karabilova.

PURPOSE: This monograph is for students specializing in the field of communication cables and for personnel of communication centers and the cable industry who wish to improve their qualifications.

COVERAGE: The monograph contains the fundamentals of design and electrical characteristics of Soviet and non-Soviet communication and radio-frequency cables, the properties of their materials, and methods of calculating their design. I.E. Yefimov wrote Ch. II (except Section 8), VI, XIV (together with R.M. Lakernik), and XV; M.A. Klimov wrote Ch. VII, IX (together with D.L. Sharle), X, XIII, and Section 8 of Ch. II.; R.M. Lakernik wrote Ch. IV, V,

Card 1/7

XI, XII, and XIV (together with I.E. Yefimov); D.L. Sharle wrote Ch. I, III, VIII, and IX (together with M.A. Klimov). The authors thank P.A. Frolov. There are 157 references: 140 Soviet, 9 English, 7 German, and 1 Swedish.

TABLE OF CONTENTS:

ISTOMINA, Nina Petrovna; LAKERNIK, Refail Moiseyevich; SHARLE, David Leonidovich; MALKIN, Kh.R., retsenzent; LINKOV, A.V., red.; ZHITNIKOVA, O.S., tekhn.red.

[Minicipal telephone cables] Gorodskie telefonnye kabeli. Moskva, Gos.energ.izd-vo, 1960. 247 p. (MIRA 14:1)

(Telephone lines)

LAKERNIK, R., laureat Stalinskoy premii; YAROV, R., inzh.

Continuous line for manufacturing cables. Izobr. i rats no.9: 6-8, [illegible] '61. (MIRA 14:8)

1. Nachal'nik byuro kabeley svyazi zavoda "Moskabel'" (for Lakernik).

(Cables)

LAKERNIK, R.M.; SHARLE, D.L.; SHVARTSMAN, V.O.

Survey of the general trends in the development of long-distance and municipal wire communications technology. Elektrosviaz' 15 no.6:62-67 Je '61. (MIRA 14:6)
(Telegraph lines)
(Telephone lines)

LAKERNIK, Rafail Moiseyevich; MACHERET, Lev Il'ich; PRIVEZENTSEV, Vladimir Alekseyevich; SHARLE, David Leonidovich; Prinimal uchastiye BABITSKIY, O.Sh.; SAPAROVA, A.L., red.; BORUNOV, N.I., tekhn. red.

[Cables and wires] Kabeli i provoda. [By] R.M.Lakernik i dr. Moskva, Gos. energ. izd-vo. Vol.2. [Manufacture of cables with paper insulation] Proizvodstvo kabelei s bumazhnoi izoliatsiei. 1962. 526 p. (MIRA 15:4)

(Electric cables)

GLEYKH, Yu.Ye., inzh.; LAKERNIK, R.M., inzh.; KAZAKOV, A.R., inzh.; LUNIN, I.V., inzh.

Characteristics of radio-frequency welding of the aluminum covering of cables. Svar. proizv. no.8:20-22 Ag '63. (MIRA 17:1)

1. Zavod "Moskabel'" (for Lakernik). 2. Nauchno-issledovatel'skiy institut tokov vysokoy chastoty (for Lunin).

VOLIN, Pavel Genrikhovich; LAKERNIK, Rafail Moiseyevich; MEL'NIKOVA, Zh.M., red.

[Paths for electricity] Dorogi elektrichestva. Moskva, Izd-vo "Znanie," 1964. 47 p. (Novoe v zhizni, nauke, tekhnike. IV Seriia: Tekhnika, no.10) (MIRA 17:6)

KAZHDAN, A.Ya., kand.tekhn.nauk; LAKERNIK, R.M., kand.tekhn.nauk

Drying of communication wire with water resistant insulation. (MIRA 15:7)
Vest.elektroprom. 33 no.6:20-24 Je '62.
(Electric wire, Insulated—Drying)

LAKESNIK, S.V.

USSR/ Geography - Scientific organization

Card 1/1 Pub. 124 - 5/39

Authors : Lakesnik, S. V., Mem. Corresp., Acad. Sc., USSR

Title : Towards new progress of Soviet geographical science

Periodical : Vest. AN SSSR 25/5, 36 - 39, May 1955

Abstract : An outline is presented of the organization of the Geographic Society of the USSR, which has about 6,000 active members and has branches at 90 points throughout the Union. An account is given of a convention held 3 - 10 February 1955, by this society at which 209 delegates and more than 2,000 guests attended, among them 22 from foreign countries. A great many of the reports read dealt with geography from the agriculturist's point of view. Illustration.

Institution : .....

Submitted : .....

(13)

Sarajevo, Zivot i Zdravlje, Vol 11, No 1, Jan 61

1. "What Affects the Growth and Development of Embryos in the Womb of the Mother"; Prof Dr Milivoje [illegible]; pp 1-3

2. "Does Tonsillectomy have Adverse Effects on the Body?" Docent Dr Josip GERC; pp 3-7.

3. "Regarding the Spontaneous Loss of Hair"; Primarius Dr Veljko [illegible]; pp 7-9.

4. "Keratoplasty"; Dr Radmila DZONLIC-[illegible], Assistant at the Ophthalmology Clinic[1], Sarajevo; pp 10-12.

5. "Gastric Ptosis" ; Dr Petar [illegible]OVIC, pp 12-14.

6. "~~Further Possibilities~~ of Defense against Tuberculosis" Dr Slavoljub LAKETIC; pp 14-16.

7. "Sources of Vitamins and Minerals Required for Good Nutrition, among Natural Products in BiH (Bosnia and Hercegovina); Dr Veljko MARANCIC; pp 17-20.

8. "Complexes" Dr Ivan MILAKOVIC, Neuropsychiatrist; pp20-23.

9. "Health Education in Commercial Organizations"; Milan R. POPOVIC; pp [illegible]-25.

10. "Pertussis" Dr Zivojin [illegible]; pp 26-28.

11. "Prostatic Diseases" Dr [illegible] [illegible]OVIC, Assistant at the Surgical Clinic[2] (Sarajevo?); pp [illegible].

1-Ocna Klinika. 2-Hirurska Klinika.

LAKETIC SLAVOLJUB

— 1/1 —

LAKE TIC SLAVOLJUB

Sarajevo, Zivot i Zdravlje, Vol 15, No 7-8, Jul-Aug 63

1. "Human Tuberculosis Prof Dr Milan P. [illegible]VIC; pp 1-5.
2. "Traffic Accidents and Alcoholism" Prof Dr Miljenko S[illegible]C; pp 5-7.
3. "Importance of School Meals and Vacations" Dr Radovan S[illegible]PAVIC; pp 8-11.
4. "Rheumatic Infections" Dr Drago M[illegible]OVIC; pp 11-15.
5. "Pneumonias" Dr Bogoljub J[illegible]SIC; pp 15-16.
6. "Viral Diseases" Dr Emil ZEVAVIC; pp 16-18.
7. "[illegible] Health Service Law and Antituberculosis Service" Dr Slavoljub [illegible]VIC; pp 18-21.
8. "Proper Feeding of Children from Two to Six Years of Age" Prof Dr Miroslav [illegible]OVIC; pp 21-24.
9. "Storage of Food and Prevention of Food Poisoning" Dr Monika [illegible]VIC; pp 25-28.
10. "Cholecystitis" Primarius Dr Antun LIMT; pp 28-30.
11. "Scabies" Dr Divojin [illegible]OVIC; pp 31-32.

— 1/1 —

CHUDNOVSKIY, Izrail' Yakovlevich, inzh.; LAKETKO, Vladimir Iosifovich, inzh.; VORONYAK, Ivan Gavrilovich, tekhnik; ORLOV, Boris Petrovich, inzh.; SHNAYDERMAN, David Khaymovich, inzh.; KOYCHU, Dora Mikhaylovna, inzh.; BALL, A.M., kand. tekhn.nauk, retsenzent; VEKSLER, G.S. kand.tekhn. nauk, retsenzent; LYSENKO, N.A., kand. tekhn. nauk, retsenzent; YUR'YEV, A.M., inzh., retsenzent; TYNSKIY, P.I., inzh., retsenzent

[Handbook on motion-picture equipment] Spravochnik po kinotekhnike. [By] I.IA.Chudnovskii i dr. Kiev, Tekhnika, 1964. 635 p. (MIRA 18:1)

BORISOV, G.P.; LAKEYEV, A.A.

Unit with a fluidized bed for sprinkling molding slabs. Mashinostroenie no.1:108-110 Ja-F '63. (MIRA 16:7)

(Foundries—Equipment and supplies)

FIKSEN, N.V., inzh.; LAKEYEV, A.S., inzh.

Precision investment molding abroad. Mashinostroenie no.4: 120-124 Jl-Ag '62. (MIRA 15:9)

1. Institut liteynogo proizvodstva AN UkrSSR.
(Precision casting)

LAKEYEV, A.S., inzh.

Innovations in the technological process of precision investment molding. Mashinostroenie no.6:37-40 N-D '63. (MIRA 16:12)

LAKEYEV, A.S., inzh.; BARABASH, V.A., inzh.

Unit for removing pattern compound from casting molds. Mashinostroenie no.5:31 S-O '64 (MIRA 18:2)

LAKEYEV, A.S., inzh.

New mold mixes without stearin for investment casting. Mashinostroenie no.6:57 N-D '64 (MIRA 18:2)

LAKEYEV, G.D.

Equipment for briquetting fibre-filled molding. Biul.tekh.-ekon. inform.Gos.nauch.-issl.inst.nauch. i tekh.inform. 16 no.10:51-52 '63. (MIRA 16:11)

KHODANOVICH, I.Ye.; LAKEYEV, V.P.; KOSHELEV, V.A.

Preparation of gas for long-distance transportation. Gaz. delo no.9:9-12 '64. (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza.

LAZOVSKIY, L.I.; LAKEYEV, Yu.G.

Spark-safe automated system for petroleum products pumping stations. Mash. i neft. obor. no.1:29-32 '65. (MIRA 18:4)

1. Groznenskiy filial Vsesoyuznogo nauchno-issledovatel'skogo i proyektno-konstrukterskogo instituta kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti.

LAKEYEVA, M.A.; YELENSKIY, V.K.

Simplifying and improving the planning of railroad operations.
Zhel.dor.transp. 39 no.9:36-40 S '57. (MIRA 10:10)

1. Nachal'nik planovo-ekonomicheskogo otdela Moskovsko-Kiyevskoy dorogi (for Lakeyeva). 2. Nachal'nik planovo-ekonomicheskogo otdela Vostochno-Sibirskoy dorogi (for Yelenskiy).
(Railroads--Management)

TITOVICH, N.Ye. (Gor'kiy); LAKEYEVA, M.A. (Gor'kiy)

Daily shift planning of the work of a railroad division.
Zhel. dor. transp. 46 no.4:69-74 Ap '64. (MIRA 17:6)

1. Nachal'nik Gor'kovskogo otdeleniya Gor'kovskoy dorogi (for Titovich). 2. Nachal'nik planovo-tekhniko-ekonomicheskogo otdela Gor'kovskogo otdeleniya Gor'kovskoy dorogi (for Lakeyeva).

LAKEYEVA, M.A.

Economic operations in a section. Zhel. dor. transp. 46 no.9:39-42 S '64.

1. Nachal'nik planovo-tekhnichesko-ekonomicheskogo otdela Gor'kovskogo otdeleniya Gor'kovskoy dorogi.

LAKEYEVA, M.A.

Economic operations in a section. Zhel.dor.transp. 46 no.9:39-42 S '64. (MIRA 17:10)

1. Nachal'nik planovo-tekhnicheskogo-ekonomicheskogo otdela Gor'kovskogo otdeleniya Gor'kovskoy dorogi.

L 24144-66 EWT(m)/EWP(t) JD

ACC NR: AP6014666 SOURCE CODE: UR/0304/64/000/006/0057/0057

AUTHOR: Lakeyev, A. S. (Engineer) 26 B

ORG: none

TITLE: New non-stearic pattern compositions for investment casting 18

SOURCE: Mashinostroyeniye, no. 6, 1964, 57

TOPIC TAGS: petroleum product, paraffin wax, wax, bending strength, tensile strength

ABSTRACT: The Institute of Casting Problems of the Ukrainian Academy of Sciences, in collaboration with the Kiev Motorcycle Plant, has developed new compositions of the ILP type for use in investment casting which consist of paraffin, lignite wax and commercial vaseline. The Table below shows the parts by weight of the components used, and the effect on strength of the material under static bending and linear contraction. The specific gravity of the compositions is 0.92 g/cm^3, tensile strength is 17-18.5 kg/cm^2.

The drop point of the ILP compositions is 81-83°C: that is, that are more heat resistant than the widely-used PS 1:1 (drop point 47.5°C). The viscous-state temperature of the compositions is 46-50° and is little different from that of PS 1:1 (42-43°C).

Card 1/3

L 24144-66

ACC NR: AP6014666

Content and Properties of Pattern Compositions

Ratio of parafin-lignite wax, (parts by weight)	Bending strength, kg/cm^2 Amount of commercial vaseline (parts by weight)			Linear Contraction, % Amount of commercial vaseline (parts by weight)		
	5	10	15	5	10	15
60:20	53,5	45,5	44,0	0,75	0,70	0,58
60:30	58,5	47,6	46,4	0,80	0,78	0,60
60:45	58,6	49,3	47,0	1,0	0,92	0,83
45:60	65,5	59,0	48,5	1,25	1,5	1,22

It was established that the compositions are ash-bearing (0.075 - 0.2%) to an extent similar to PS 1:1 (0.05%). These figures, however, characterize the initital compositions. Ash content of PS 1:1 increases by a factor of 10, even after the first remelting, as a result of the interaction of the stearin with the hydrolized solution of ethyl silicate. In the compositions studied, all these components failed to interact with the binder and, therefore, there was no increase in ash content. The quality of the surfaces of castings obtained from patterns prepared from the compositions was considerably superior to corresponding ones for PS 1:1. The properties of the salvaged material were

Card 2/3

in no way inferior to those of the original. The material can therefore be used repeatedly by adding 20-25% fresh materials.

The preparation of pattern compositions of the ILP type is the same as for PS 1:1. Pressing in molds does not result in chemical interaction with the mold; there is no adherence to the mold surface, and the hardening time in the mold is less than for PS 1:1. Bonding of the patterns is good.

Patterns obtained from ILP- type compositions are stronger and harder than those of PS 1:1, and they have a glossy surface and sharply defined contours. The softening temperature of patterns prepared from the new material is higher than for PS 1:1.

The patterns are readily wetted by a refractory suspension in binder of hydrolized ethyl silicate but are absolutely unwettable in a liquid glass binder.

Melting of the patterns from the hollows of the molds should be done with hot water. The cost of 1 kg of ILP pattern composition is 0.277-0.241 rubles, or almost three times less than in the case of PS 1:1. Orig. art. has: 1 table. [JPRS]

SUB CODE: 11, 14 / SUBM DATE: none

DAKKYEV, N.M., inzh.

Defectoscopes test welded joints. Put' i put. khoz. no. 7:12-13 Jl '58. (MIRA 11:7)

1. TSekh defektoskopii Moskovskogo metropolitena.
(Railroads--Rails--Testing)

20500

S/025/61/000/003/012/012
A166/A127

24.5500 1043, 2209, 1142
26.2190

AUTHORS: Lakh V. I., Kogan, A. V., Engineers (L'vov)

TITLE: Vanishing-filament pyrometers

PERIODICAL: Nauka i zhizn', no. 3, 1961, 43

TEXT: The article describes operating principles and functions of pyrometers and micropyrometers intended for the measurment of temperatures above 2,000°C. The Soviet vanishing-filament brightness pyrometer "OППИР-017" ("OPPIR-017") is capable of measuring temperatures up to 6,000°C. The filament of a special incandescent pyrometer lamp vanishes when its brightness reaches the same value that is emitted by the heated body. The value is measured by an am-meter whose current has been predetermined and gauged for the filament of the lamp. By measuring the amperage of the lamp the temperature of the heated body can be determined. To keep up with modern precision requirements special absorption glass and diaphragms have been used. For the measurement of temperatures of thin wires, incandescent filaments of electric lamps etc.

Card 1/2

20500
S/025/61/000/003/012/012
A166/A127

Vanishing-filament pyrometers

micropyrometers with an intricate optical system as the "OMП-019" ("OMP-019"), shown in the photograph have been developed which are capable of measuring temperatures of bodies only 50 microns in diameter. There are 2 photos showing the "OPPIR-017" and "OMP-019" pyrometers.

Card 2/2

KISLYY, P.S.; LAKH, V.I.; SAMSONOV, G.V.; STADNYK, B.I.; KHARENKO, R.F.; CHEKHOVICH, A.B.

Thermoelectric characteristics of high-temperature thermocouples with refractory electrodes. Izm.tekh. no.5:21-23 My '61. (MIRA 14:5)

(Thermocouples)

LAKH, V.I.; PROKHORENKO, V.Ya.; TEREBUKH, L.S.; KISLYY, P.S.; PANASYUK, A.D.; SAMSONOV, G.V.

Temperature measurement of the atmosphere of an aluminum electrolysis cell. TSvet. met. 34 no.8:38-40 Ag '61. (MIRA 14:9)
(Aluminum--Electrometallurgy)

S/226/62/000/006/016/016
E193/E383

AUTHORS: Kuz'ma, Yu.B., Kidun, S.M., Lakh, V.I., Stadnik, B.I. and Cherkashin, Ye.Ye.

TITLE: Investigation of the physicochemical properties of tungsten-rhenium thermoelectrodes

PERIODICAL: Poroshkovaya metallurgiya, 2, no. 6, 1962, 100 - 103

TEXT: The object of the present investigation was to determine the causes of instability of the thermoelectric and mechanical properties of W-Re alloy in relation to the conditions and duration of heat-treatment. Wire specimens, 0.5 and 0.34 mm in diameter, containing 5, 10, 15 and 20 wt.% Re (alloys BP(VR)-5, VR-10, VR-15 and VR-20) were used in the experiments. The heat-treatment (20 - 700 h at 1400 - 2 000 °C) was conducted in vacuum, in argon or in hydrogen. All the investigated compositions were in the single β-phase range. The Re content of the alloys was checked by chemical analysis before and after heat treatment. The experimental work comprised measurements of thermo-e.m.f., X-ray diffraction analysis and examination of the microstructures of longitudinal and transverse cross-sections of the specimens. "The thermo-e.m.f. increased

Card 1/4

with increasing temperature and time of the heat treatment; in addition, the thermo-e.m.f. decreased after treatment in argon or hydrogen and increased after vacuum treatment" [Abstracter's note: this statement does not tally with the contents of a table in which the results of measurements of thermo-e.m.f. are reproduced, there being no clear correlation between the values of the thermo-e.m.f. and the conditions of heat treatment.] The thermocouple VR-15/20 (with a high Re content) proved more stable in hydrogen at 1 800 - 2 000 °C than the thermocouple VR-5/20 with a lower Re content. The Re concentration increased with increasing annealing time, the relative increase being higher for electrodes with lower Re contents. The relative change in the Re content was lower in vacuum than in argon or hydrogen. The degree of recrystallization of thermo-electrodes increased with increasing temperature and time of the treatment and dependend on the Re content. A slight longitudinal splitting of the electrodes was caused by texture, which persisted even after prolonged annealing. Phase analysis showed that all the thermoelectrodes studied constituted solid solutions whose lattice constants depended on the composition of the alloy. In some

Investigation of ....

specimens, the σ- and χ-phases were also observed. The formation of the σ-phase was attributed to a decrease in the tungsten content in the β-phase, caused by a reaction between tungsten and impurities (oxygen, nitrogen, carbon) in the ambient atmosphere. The thermoelectrode VR-20. treated in vacuum for 700 h, contained the β-phase in equilibrium with the χ-phase with a lattice constant a = 9.63 kX, which indicated that the σ-phase of the system W-Re existed at temperatures above 1 400 °C. Prolonged holding at 400 °C brought about decomposition of the σ-phase and attainment of the β + χ equilibrium. Tungsten carbide (W_2C), formed during annealing in vacuum above 1 300 °C due to the presence of oil vapours, was present in addition to the β-phase in thermoelectrodes operating in vacuum. When the specimens were vacuum-annealed for 20 h at 2 000 °C in a furnace with graphite heating elements, W_2C or the σ-phase (in specimens with a Re content of 23%) of the W-Re system were precipitated from the β-phase. Alumina sheaths did not offer sufficient protection against the effect of carbon at 1 800 - 2 000 °C. The formation of W_2C and the σ-phase at 1 800 °C could be prevented by using beryllia sheaths which, however, were not effective at 2 000 °C. The presence of the

S/226/62/000/006/016/016
E193/E383

Investigation of ....

σ-phase and W_2C in the thermoelectrodes studied caused a decrease in their ductility.
There is 1 table.

ASSOCIATION: L'vovskiy gosuniversitet im. I. Ya. Franko
(L'vov State University im. I. Ya. Franko)

SUBMITTED: April 14, 1960

Card 4/4

L 19908-63 EWP(q)/EWT(m)/EWP(B)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3005811 S/0226/63/000/004/0040/0048

AUTHORS: Kuz'ma, Yu. B. ; Lakh, V. I, ; Markiv, V. Ya; Stadnyk, B. I, ; Gladyshevskiy, Ye. I.

63
62

TITLE: X-ray diffraction analysis of the W-Re-C system

SOURCE: Poroshkovaya metallurgiya, no. 4, 1963, 40-48

TOPIC TAGS: W-Re-C, x-ray diffraction

ABSTRACT: Thirty-four alloys of the W-Re-C system containing 1-40 atomic % of C were investigated by x-ray diffraction. The effect of C content on the composition and properties of W-Re thermocouples was studied. Alloy samples weighing 30 g were prepared from the following powdered materials: tungsten carbide (6.09 at. % of C), tungsten - 99.98%, rhenium - 99.8%, and carbon (lampblack) 99.9%. The phase equilibriums of cast alloys and of the alloys annealed at 2000, 1500, 1000 and 800C were determined. It was established that Re and alpha-W_2C form a continuous series of solid solutions. Two new compounds were found: a ternary compound W_3Re_2C with a cubic lattice akin to that of beta-Mn (space group $P4_13-O^7$, a = 6.859 ± 0.002 A); and a ternary carbide (WRe)C formed at temperatures above 2500C with a cubic face-centered lattice of the type NaCl (space group $Fm3m - O_h^5$, a = 4.063 ± 0.001 A).

Card 1/2

L 19908-63

ACCESSION NR: AP3005811

Preliminary data concerning the existence of a rhombic low-temperature version of W_2C were obtained. Orig. art. has: 4 tables and 5 figures.

ASSOCIATION: L'vovskiy ordena Lenina gosuniversitet im. I. Ya. Franko (L'vov State University)

SUBMITTED: 14May62 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: ML NO REF SOV: 006 OTHER: 009

Card 2/2

L 19712-63 EPR/EWT(l)/EPF(c)/EPF(n)-2/EWP(q)/EWT(m)/BDS/T-2/ES(v)/ES(s)-2/ES(w)-2 AFFTC/ASD/SSD Ps-4/Pr-4/Pu-4/Pe-4/Pab-4/Pt-4 WW/WH

ACCESSION NR: AP3003205 S/0115/63/000/006/0021/0022

AUTHOR: Margulis, O. M.; Usatikov, I. F.; Kamenetskiy, A. B.; Lakh, V. I.; Stadny*k, B. I.

TITLE: Refractory insulation of thermo-electrodes used in measuring high temperatures

SOURCE: Izmeritel'naya tekhnika, no. 6, 1963, 21-22

TOPIC TAGS: insulation, refractory insulation, high-temperature measurements, VR-5 alloy, VR-15 alloy, VR-20 alloy

ABSTRACT: As porcelain caps and beads slipped over thermocouples withstand only temperatures of up to 1,000-1,500C, other materials — MgO, Al_2O_3, and ZrO_2 — were used for developing refractory insulation for high-temperature thermocouples. Wires from tungsten-rhenium alloys containing 5% (VR-5), 15% (VR-15), and 20% (VR-20) rhenium were annealed at 1,400-1,650C in

Card 1/2

L 19712-63

ACCESSION NR: AP3003205

4

0.001-torr vacuum and in hydrogen. VR-5/20 and VR-15/20 thermocouples were made from these 0.34-mm wires. The MgO caps and beads were tested separately for five hours in argon at 2,400C; they also worked in induction furnaces at temperatures up to 2,000C without appreciable vaporization or volatilization; however, in 10^{-4}-torr vacuum at temperatures over 1,600C, a "considerable wear was observed." Orig. art. has: no figure, formula, or table.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov (Ukrainian Scientific-Research Institute of Refractories)

SUBMITTED: 00 DATE ACQ: 22Jul63 ENCL: 00

SUB CODE: IE NO REF SOV: 001 OTHER: 002

Card 2/2

ACCESSION NR: AP4004151 S/0294/63/001/002/0299/0305

AUTHORS: Lakh, V. I.; Stadny*k, B. I.; Kuz'ma, Yu. B.

TITLE: Thermoelectric stability of some tungsten-rhenium alloy thermocouples at high temperatures

SOURCE: Teplofizika vy*sokikh temperatur, v. 1, no. 2, 1963, 299-305

TOPIC TAGS: pyrometer, pyrometry, tungsten rhenium alloy thermocouple, tungsten rhenium alloy, thermocouple thermoelectric stability, thermocouple degeneration, thermocouple protection, thermocouple shielding, alumina shield, beryllium oxide shield, thermocouple reliability, alumina, beryllium oxide thermocouple

ABSTRACT: Thermal electrodes containing 5, 10, 15 and 20% rhenium, as well as thermocouples made up of combinations of these electrodes, were investigated to ascertain the factors that influence the sta-

Card 1/3

bility of the thermoelectric characteristics of tungsten-rhenium alloys. The effect of a weakly-reducing medium on the thermoelectric characteristic of such thermocouples was also investigated in a high-temperature furnace. The test procedures are described in detail. The assembled experimental material leads to the conclusion that thermocouples made of tungsten-rhenium alloys can be used to measure high temperatures in vacuum and in neutral or hydrogen atmospheres. Certain combinations of thermal electrodes must be protected at high temperatures with ceramic beads. Thermocouples VR5-20 (one wire 5% rhenium and the other 20% rhenium) must be protected by alumina ceramics above 1400C and by beryllia ceramics above 2,000C. Large rhenium contents (10 and 20%, 15 and 20%) must be used in hydrogen atmospheres. Maximum wire diameter is recommended above 1800C. "The authors are grateful to Corresponding Member AN UkrSSR G. V. Samsonov and Doctor of Chemical Sciences Ye. Ye. Cherkashin for a discussion of the problems touched upon in the present work. Orig. art. has: 9 figures.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928430003-2"

ACCESSION NR: AP4004151

ASSOCIATION: L'vovskiy gosudarstvenny*y universitet im. Iv. Franko (L'vov State University)

SUBMITTED: 17Jun63 DATE ACQ: 26Dec63 ENCL: 00

SUB CODE: ML, MA NO REF SOV: 005 OTHER: 001

Card 3/3

ACCESSION NR: AP4041342 S/0115/64/000/005/0019/0021

AUTHOR: Bardila, P. I.; Kits, A. I.; Lakh, V. I.; Pinchevskiy, A. D.; Shparov, P. I.

TITLE: New platinum resistance thermometers

SOURCE: Izmeritel'naya tekhnika, no. 5, 1964, 19-21

TOPIC TAGS: thermometer, resistance thermometer, platinum resistance thermometer

ABSTRACT: Soviet-make resistance thermometers for a −200+500C range with platinum wire wound on a mica form have shown these shortcomings: (a) poor seal, (b) mechanical weakness, (c) unwieldy design, and (d) high thermal inertia. A new design, free from the above drawbacks, consists of four helices, made from 0.05—0.07-mm Pt wire, placed in channels in a ceramic cartridge; the channels are subsequently filled with alumina powder. Temperature measurements up to 700C are possible. These types are developed and offered for production:

Card 1/2

ACCESSION NR: AP4041342

Type:	Resistance at 0C, ohms	Sensitive elem. dia., mm	Length, mm	Channel dia., mm
Single	10	2.8	20	0.6
	46	4.8	25	1.3
	46	4.2	35	1.2
	100	4.8	50	1.3
Double	46	4.8	50	1.3

Orig. art. has: 2 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: TD, IE NO REF SOV: 004 ENCL: 00

OTHER: 000

Card 2/2

ACCESSION NR: AP4044906 S/0226/64/000/004/0015/0020

AUTHOR: Glady*shevskiy, Ye. I., Lakh, V.I., Skolozdra, R.V., Stadny*k, B.I.

TITLE: A study of the mutual solubility of disilicides of the transition metals belonging to groups IV, V, and VI

SOURCE: Poroshkovaya metallurgiya, no. 4, 1964, 15-20

TOPIC TAGS: silicide, disilicide, transition element, silicide solubility, solid solution, powder metallurgy

ABSTRACT: At the present time, the practical significance of the disilicides of the transition metals is constantly increasing, and great attention is being given to their investigation. The mutual solubility of the disilicides of transition metals belonging to groups IV, V, and VI has been investigated particularly thoroughly. Thus, of 36 possible binary systems, 20 were investigated earlier. The present authors have reduced the gap still further by investigating the systems $TiSi_2$ - $CbSi_2$, VSi_2 - $CrSi_2$, VSi_2 - WSi_2, $ZrSi_2$ - $CbSi_2$, $ZrSi_2$ - WSi_2, $CbSi_2$ - $MoSi_2$, $CbSi_2$ - $TaSi_2$, and $CbSi_2$-WSi_2, omitting only the scarce disilicides of hafnium. Radiographic and micrographic methods, as well as microhardness measurements, were used. The specimens were prepared by fusion of

Card 1/4

ACCESSION NR: AP4044906

high purity metals (content of basic metal not less than 99.5%) with silicon (99.99%) in an electric arc furnace with a watercooled copper base, using non-consumable tungsten electrodes and a helium atmosphere, and were annealed at 800C for 1500 hours. Powder-graphs taken in cylindrical chambers (d=57.3 mm) under Cr-K radiation were used for radiographic phase analysis, and lattice constants were determined by the method of Preston in a chamber 86.4 mm in diameter. Samples were etched in mixtures of concentrated hydrofluoric and nitric acids. Microhardness was determined with a PMT-3 hardness meter having an accuracy of + 25 dan/mm^2 (1 dan/mm^2 = 1.02 kg/mm^2). All the investigated sections $Me^{I}Si_2$ - $Me^{II}Si_2$ of the ternary systems Me^{I} - Me II-Si proved to be pseudo-binary with limited or continuous solubility between the silicides. A summary of the results with regard to the mutual solubility of the disilicides is given in Fig. 1 of the Enclosure. Continuous series of solid solutions formed in two of the eight systems (VSi_2 - $CrSi_2$ and $CbSi_2$ - $TaSi_2$). Like the other series known, these were formed between isostructural disilicides of metals which are very close neighbors in the periodic system (elements of one group, Cb-Ta, or of one period, V-Cr). In the six remaining disilicide systems, limited solid solutions were formed, consisting of non-isostructural compounds. The greatest mutual solubility was exhibited by disilicides

Card 2/4

ACCESSION NR: AP4044906

for which the values $F = \frac{\gamma Me^{I} - \gamma Me^{II}}{\gamma Me^{I}} \cdot 100,$ (1)

were the smallest, where $\gamma Me^{I} < \gamma Me^{II}$ these were $TiSi_2$—$NbSi_2$ ($F = 0.7\%$); $CbSi_2$ - $MoSi_2$ (F=4.3%), $CbSi_2$-WSi_2 (F=3.6%), and VSi_2-WSi_2 (F=4.5%).

With an increase in the F-value, the reciprocal solubility decreased sharply: $ZrSi_2$ - $CbSi_2$ (F = 10.3) and $ZrSi_2$ - WSi_2 (F = 14.3%).

"M.I. By*chkova and S.A. Bakuta, as well as the students T.G. Fedoruk, A.A. Kulikova, L.A. Ly*senko, O.Ye. Slezko and G.I. Bova, participated in the investigations." Orig. art. has: 1 table and 7 figures..

ASSOCIATION: L'vovskiy gosuniversitet im. Iv. Franko (L'vov State University)

SUBMITTED: 02Jan63 ENCL: 01 SUB CODE: MM, IC

NO REF SOV: 001 OTHER: 010

ENCLOSURE: 01

ACCESSION NR: AP4044906

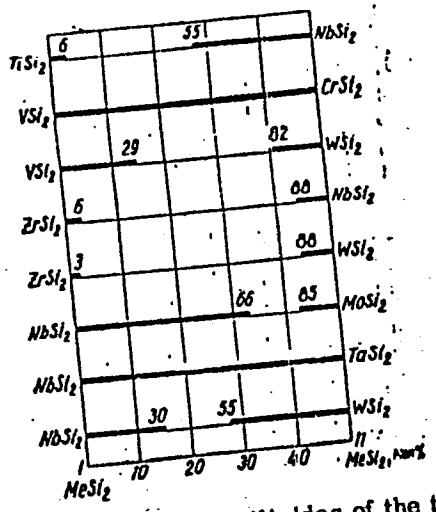

Fig. 1. Mutual solubility of the investigated disilicides of the transition elements.

Card 4/4

BARDILA, P.I.; KITS, A.I.; LAKH, V.I.; PINCHEVSKIY, A.D.; SHPAROV, P.I.

New platinum resistance thermometers. Izm. tekh., no.5:19-21 My'64 (MIRA 17:7)

L 23875-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b)/EWA(h) Peb IJP(c)
JD/JG/MLK S/0000/64/000/000/0168/0169

ACCESSION NR: AT5002772

AUTHOR: Kuz'ma, Yu. B.; Lakh, V.I.; Stadnyk, B.I.; Gladyshevskiy, Ye. I. B+1

TITLE: Xray structural analysis of alloys of the system W - Re - C

SOURCE: Vsesoyuznoye soveshchaniye po probleme reniya. 2d, Moscow, 1962. Reniy (Rhenium); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 168-169

TOPIC TAGS: rhenium, rhenium alloy, rhenium alloy structure, xray structural analysis, tungsten alloy, alloy carbon content, tungsten rhenium thermocouple, cast rhenium alloy, tungsten carbide

ABSTRACT: The system W - Re - C was studied in order to elucidate the influence of carbon on the composition and properties of tungsten-rhenium thermocouples, which have recently come into widespread use. Cast alloys containing up to 40 at. % carbon, quenched after annealing at 2500, 2000, 1500, 1000, 800C, were subjected to x-ray analysis. The phase equilibria were established, and the corresponding isothermal sections were constructed. The negative influence of a carbon-containing atmosphere on the stability of tungsten-rhenium thermocouples (increase in brittleness) is attributed to the formation of a carbide corresponding to a continuous series of solid solutions

Card 1/2

L 23875-65

ACCESSION NR: AT5002772

formed between Re and α-W_2C, which were stable at all the investigated temperatures. An increase in lattice constants was observed in passing from Re to α-W_2C. The compound W_3Re_2O was identified; in cast alloys and alloys annealed at 2500 and 2000C, it was found to be in equilibrium with the continuous solid solution between Re and α-W_2C, with the solid solution based on W, and with the σ phase of the system W - Re. At 1500, 1000, and 800C W_3Re_2C is also in equilibrium with the χ phase of the system W - Re. The ternary carbide (W, Re) C (ω phase) was identified at temperatures above 2500C.

ASSOCIATION: none

SUBMITTED: 05Aug64 ENCL: 00 SUB CODE: MM

NO REF SOV: 000 OTHER: 001

Card 2/2

GLADYSHEVSKIY, Ye.I.; LAKH, V.I.; SKOLOZDRA, R.V.; STADNYK, B.I.

Investigating the mutual solubility of group IV, V, and VI transition metal silicides. Poroshk.met. 4 no.4:15-20 Jl-Ag '64. (MIRA 18:8)

1. L'vovskiy gosudarstvennyy universitet imeni Franko.

L 48819-65

ACCESSION NR: AP5008336 S/0115/65/000/001/0035/0036

AUTHOR: Kochan, V. A.; Lakh, V. I.; Palyanytsya, I. F.; Protsevyat, M. M.

TITLE: Automatic low-temperature recorder

SOURCE: Izmeritel'naya tekhnika, no. 1, 1965, 35-36

TOPIC TAGS: recorder, low temperature recorder

ABSTRACT: Shortcomings are discussed of the conventional bridge circuits for measuring low resistance (fraction of ohm) when such circuits are applied for measuring the resistance of a platinum thermometer (in the 90—10K range). The a-c compensator circuit is proposed for measuring such temperatures because the instrument reading is independent of the supply-voltage variation and leads resistance. Successful testing of the new low-temperature measuring instrument, consisting of an automatic recording a-c compensator and a platinum resistor, is reported. Orig. art. has: 3 figures and 3 formulas.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: GP, IE

NO REF SOV: 005 OTHER: 000

Card 1/1

CHAN, V.A.; LAKH, V.I.; PALYANYTSYA, I.F.; PROTSEVYAT, M.M.

Automatic recording device for measuring low temperatures.
Izm tekh. no.1:35-36 Ja '65. (MIRA 18:4)

L 2786-66 EWP(e)/EWT(m)/EWP(i)/EPF(n)-2/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c)
IJP(c) JD/WW/HW/JG

ACCESSION NR: AP5022261 UR/0363/65/001/007/1112/1114
546.831+546.73+546.27

AUTHOR: Kuz'ma, Yu. B.; Lakh, V. I.; Voroshilov, Yu. V.; Stadnyk, B. I.

TITLE: The zirconium-cobalt-boron system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 7, 1965, 1112-1114

TOPIC TAGS: zirconium alloy, cobalt alloy, boron alloy, zirconium compound, cobalt compound, boron compound, thermometry

ABSTRACT: The object of the study was to establish the phase equilibria in the Zr-Co-B system and to determine whether alloys of this system can be used as new materials in thermometry. Samples of Zr-Co and Zr-Co-B were prepared by sintering powder mixtures. The phase compositions were determined by the x-ray powder technique. In the Zr-Co system, phase analysis showed the presence of the compounds Zr_6Co_{23}, $ZrCo_2$, ZrCo, Zr_2Co, and Zr_4Co, the crystal structures of which were determined. An isothermal section at 800C was plotted for the Zr-Co-B system. Two ternary compounds exist in this system: a γ phase $Zr_2Co_{21}B_6$ with the face-centered cubic structure of $W_2Cr_{21}C_6$ ($a = 10.597$ A), and a ρ phase of the

Card 1/2

L 2786-66

ACCESSION NR: AP5022261

approximate composition $ZrCo_3B$. These ternary phases have much lower melting points than ZrB_2, form a low-melting eutectic (m. p. below 1200C) with the Co-base solid solution, and for this reason cannot be used as new materials in thermometry. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. I. Franko (Lvov State University)

SUBMITTED: 23Feb65 ENCL: 00 SUB CODE: MM, IC

NO REF SOV: 003 OTHER: 003

Card 2/2 md

LAKH, V.I.; PORTAK, R.A.; TEREBUKH, L.S.

Prolonged measurement of the temperature of melts in aluminum electrolyzers. Porosh. met. 5 no.1:96-97 Ja '65. (MIRA 18:10)

1. Konstruktorskoye byuro "Termopribor".

KUZ'MA, Yu.B. (L'vov); LAKH, V.I. (L'vov); VOROSHILOV, Yu.V. (L'vov); STADNYK, B.I. (L'vov); MARKIV, V.Ya. (L'vov)

Constitutional diagram of the system Zr -- Fe - B. Izv. AN SSSR. Met. no.6:127-129 N-D '65. (MIRA 19:1)

1. Submitted September 18, 1964.

L 43773-66 EWT(l)/EWP(e)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG/LHB

ACC NR: AP6020964 SOURCE CODE: UR/0226/66/000/006/0073/0076

AUTHOR: Kuz' ma, Yu. B.; Lakh, V. I.; Stadnyk, B. I.; Voroshilov, Yu. V.

ORG: L' vov "Order of Lenin" State University im. Iv. Franko, Design Bureau "Termopribor" (L' vovskiy ordena Lenina gosudarstvennyy universitet, KB "Termopribor")

TITLE: X-ray diffraction study of the system niobium-tungsten-boron

SOURCE: Poroshkovaya metallurgiya, no. 6, 1966, 73-76

TOPIC TAGS: niobium, tungsten, boron, x ray diffraction analysis, phase equilibrium, lattice constant, ~~niobium containing system, tungsten containing system, boron containing system~~ ALLOY SYSTEM, CRYSTAL LATTICE STRUCTURE

ABSTRACT: The paper deals with x-ray analyses of the system niobium-tungsten boron. The phase equilibriums were established for the first time at 1500°C and are shown in an isothermal cross-section view of the system in the original article.

Card 1/2

L 43773-66

ACC NR: AP6020964

In graphs included in the original article the authors show changes in the lattice constants of Nb_3B_2 and of NbB as a function of tungsten dissolution. Orig. art. has: 1 table and 3 figures. [Based on authors' abstract] [AM]

SUB CODE: 11/ SUBM DATE: 12Mar66/ ORIG REF: 001/ OTH REF: 007/

Card 2/2

L 43103-66 EWP(e)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/WW/JG

ACC NR: AP6014117 (N) SOURCE CODE: UR/0370/65/000/006/0127/0129

AUTHORS: Kuz'ma, Ye. B. (L'vov); Lakh, V. I. (L'vov); Voroshilov, Yu. V. (L'vov); Stadnyk, B. I. (L'vov); Markiv, V. Ya. (L'vov)

39
B

ORG: none

TITLE: Phase diagram of the system Zr--Fe--B

SOURCE: AN SSSR. Izvestiya. Metally, no. 6, 1965, 127-129

TOPIC TAGS: alloy phase diagram, zirconium containing alloy, iron containing alloy, boron containing alloy

ABSTRACT: The phase diagram for the system Zr--Fe--B at 850C was investigated by x-ray analysis. This investigation supplements the results of V. N. Svechnikov, V. M. Pan, and A. Ts. Spektor (Promezhutochnyye fazy v sisteme zhelezo-tsirkoniy. Zh. neorgan. khimii, 1963, 8, 2118). The specimens were prepared from Fe and $ZrBr_2$ at 1600C. A total of 72 different specimens was studied, and the experimental results are presented graphically (see Fig. 1). In addition, the crystal structure of the compound Zr_2Fe was determined. It was found that the structure of Zr_2Fe is of the Ti_2Ni type with a = 12.14 Å. A detailed description of the structure is to be

UDC: 669.017.13

Card 1/2

L 43103-66

ACC NR: AP6014117

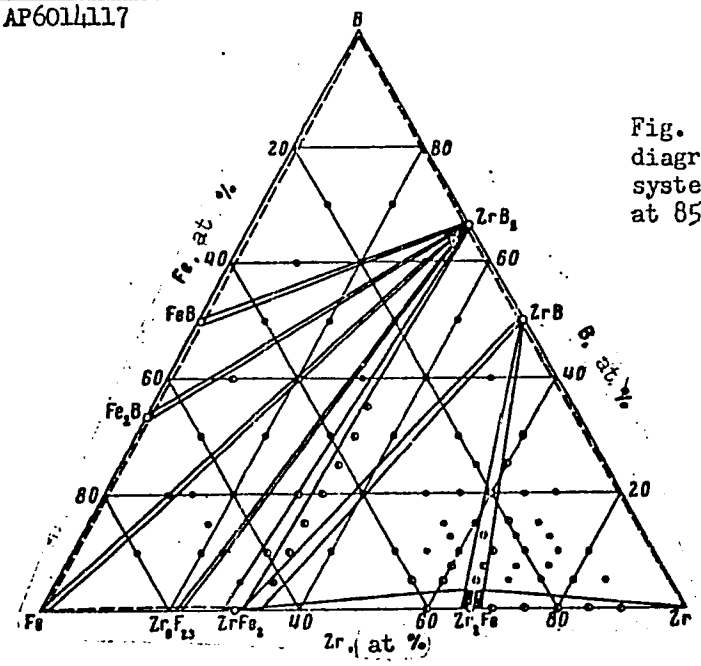

Fig. 1. Phase diagram of the system Zr-Fe-B at 850C.

presented elsewhere. Orig. art. has: 1 graph.

SUB CODE: ML/ SUBM DATE: 18Sep64/ ORIG REF: 005/ OTH REF: 001

Card 2/2

L 00892-67 EWP(e)/EWT(m)/T/EWP(t)/ETI LJP(c) JD/WW/HM/JG

ACC NR: AP6021616 SOURCE CODE: UR/0021/66/000/006/0772/0774

AUTHOR: Kuz'ma, Yu. B.; Lakh, V. I.; Voroshylov, Yu. V. -- Voroshilov, Yu. V.; Stadnyk, B. I.

55
B

ORG: L'vov State University (L'vivs'kyy derzhavnyy universytet)

TITLE: Crystal structure of the compounds $Zr_2Ni_{21}B_6$ and $Zr_2Co_{21}B_6$

SOURCE: AN UkrRSR. Dopovidi, no. 6, 1966, 772-774

TOPIC TAGS: phase equilibrium, zirconium alloy, nickel alloy, cobalt alloy, boron alloy, x ray diffraction analysis, intermetallic compound, inorganic crystal

ABSTRACT: The authors study phase equilibrium in the Zr-Ni-B and Zr-Co-B systems. Fifteen alloys were studied in each of these systems with compositions of 5-20 at.% Zr, 80-55 at.% Ni(Co) and 15-25 at.% B. The alloys were prepared from powdered zirconium (99.5% Zr), nickel (99.9% Ni), cobalt (99.9% Co) and boron (99.5% B). These were thoroughly mixed and pressed into briquettes. The briquettes were then sintered in a vacuum furnace at 1200°C for two hours. After this, the specimens were melted in a vacuum arc furnace and subjected to homogenizing annealing in evacuated quartz ampules at 800°C for 120 hours. X-ray diffraction analysis based on Cr radiation was used throughout the study. The analysis shows the existence of the compounds $Zr_2Ni_{21}B_6$ and $Zr_2Co_{21}B_6$ (τ-phases). These compounds have cubic structures of the $W_2Co_{21}C_6$ type

Card 1/2

L 00892-67

ACC NR: AP6021616

(space group $Fm3m-O_h^5$); for $Zr_2Ni_{21}B_6$ a=10.628±0.005 A, and for $Zr_2Co_{21}B_6$ a=10.597± ±0.005 A. The compound $Zr_2Ni_{21}B_6$ has a region of homogeneity located on the 20 at.% B isoconcentrate at a zirconium concentration of 5-15 at.%. Increasing the Zr concentration from 5 to 15 at.% and reducing the Ni concentration from 75 to 65 at.% increases the lattice constant of the τ-phase from 10.609±0.005 A to 10.702±0.005 A. The existence of a second ternary compound was discovered in the Zr-Co-B system with a composition similar to $ZrCo_3B$. This article was presented for publication by Academician V. M. Svyechnikov. Orig. art. has: 1 table.

SUB CODE: 20/11/ SUBM DATE: 30Nov64/ OTH REF: 001

Card 2/2 afs

AUTHOR: Arodzero, A.M.; Lakh, Ye.I. SOV-115-58-4-17/45

TITLE: A Portable Oscillograph Assembly (Peredvizhnaya ostsillograficheskaya ustanovka)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 4, pp 32-34 (USSR)

ABSTRACT: The Tsentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti (The Central Research Institute for Mechanization and Energetics in the Forestry Industry) has prepared a portable oscillograph installation for recording forces during the trials of transport vehicles under operational conditions. The assembly is installed inside a specially equipped T-82 "Giprolesmash" passenger bus mounted on a ZIL-150 truck chassis. The unit is connected with the vehicle under test by flexible cable. The assembly consists of an OT-24-51 oscillograph made at the "Geofizika" Plant, a block for

Card 1/2

checking and balancing the measuring bridges, a distribution panel for the oscillograph and pick-ups power supply connections, storage batteries,etc. There is also a workbench with instruments and a dark-room equipped for the processing of oscillograms. The equipment is mounted on rubber cushions to lessen vibration. Details of the various component parts and their operation and interconnection are given. There is 1 circuit diagram.

1. Oscillographs--Design

LAKH, Ye.I.

Testing suspensions of two-axle automobile-train trailers. Avt. prom. no.1:20-23 Ja '59. (MIRA 12:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti.
(Automobiles--Trailers--Springs)

LAKH, Ye. I.

Cand Tech Sci - (diss) "Several problems of vertical dynamics of the sawmill motor vehicle train." Moscow, 1961. 28 pp with diagrams; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Forestry Engineering Inst); 150 copies; free; (KL, 5-61 sup, 191)

LEKSAU, Igor' Nikolayevich; ARODZERO, Aleksandr Mikhaylovich; GAL'PERIN, Zinoviy Samoylovich; GORBACHEVSKIY, Viktor Andreyevich; DARAGAN, Leonid Dmitriyevich; KLYCHKOV, Pavel Dmitriyevich; LAKH, Yevgeniy Ivanovich; PRASOLOV, Boris Aleksandrovich; RYZHKOV, Aleksey Nikolayevich; SUKHARNIKOV, Iosif Osipovich; TURASS, Aleksey Leont'yevich; DOLGOPOLOV, N.P., red.; KONARDOVA, T.F., red. izd-va; VDOVINA, V.M., tekhn. red.

[Manual for the lubmer truck driver] Spravochnik shofera lesovoznogo avtomobilia. Moskva, Goslesbumizdat, 1962. 169 p. (MIRA 15:7)

(Lumber—Transportation)