

# 16

(RC-3824)

Prospects of Using Radioactive Isotopes and Nuclear  
Radiation in Metallurgy and Other Technical  
Sciences, by A. M. Samarin, M. S. Fomichev, 10 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,  
Metal i Toplivo, No 6, 1959, pp 121-126.

JPRS 3607

Sci - Phys - Chem

Aug 60

121,574

The Structure and Phase Composition of Diffusion  
Coating of Niobium by Silicon, by P.M. Arzhahyy,  
et al.

RUSSIAN, per Iz Ak Nauk, Otdel Tekh Nauk, Metal  
i Toplivo, No 6, 1959, pp 127-129. CIA 9660420

ATIC MCL 676

Sci - Min/Met

May 61

152,575

On the Nature of Slip Lines on Steel, by N. S. Alferova, et al.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk, Metal i Toplivo, No 6, 1959, pp 131, 132.

HB 5103

Sci - Min/Met

Apr 61

147,465

(116,264)

Semiconductor Thermocouples for High Temperature  
EE Ues, by P. S. Kislyy, G. V. Samsonov, 12 pp.

RUSSIAN, per, 12 Ak Nauk SSSR, Otdel tekhn Nauk,  
Metal i Toplivo, No 6, Nov-Dec 1959, pp 133-137.

JPRS 2526

~~Summary~~  
Sci - Min/Met  
May 60

116,264

Rovinsky, B. M. and Sinayaky, V. M.  
ON THE NATURE OF THE RAUSCHINGER EFFECT.  
22 Sep 60 [9]p. (Illus. omitted) 11 refs. NBS:  
S-30210-61; JPRS: R-1143-D.  
Order from LC or SLA mi\$1.80, ni\$1.80      61-13844

Trans. of Akademiya Nauk SSSR, Otdeleniye  
Tekhnicheskikh Nauk. Izvestiya: Metallurgiya i  
Toplivo, 1959, no. 6, p. 137-141.

It is shown that the Bauschinger effect depends on the emergence during monoaxial plastic deformation of residual oriented microstrains. The reduction of the conventional yield point during reloading of the reverse print is correlated satisfactorily with the magnitude of residual oriented microstrains arising after preliminary deformation, most favorably in the region of 0.5 to 1.5%, and the magnitude of residual oriented microstrains can be summed up with macroscopic strains created by the external load. From the size of (Metallurgy--Structural, TT, v. 5, no. 4) (over)

61-13844

- 1. Single crystals (Metallurgy)--Deformation
- 2. Title: Bauschinger effect
- I. Rovinsky, B. M.
- II. Sinayaky, V. M.
- III. NBS-S-30210-61
- IV. JPRS-R-1143-D
- V. Joint Publications Research Service, Washington, D. C.

143,160

Office of Technical Services

IZVESTIYA AN SSSR, OTN, METALLURGIYA  
I TOPLIVO - bimonthly  
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From 1963 see: "IZVESTIYA AN SSSR,  
                  METALLURGIYA I GORNOE DELO"

1960

Vigdorovich, V. N., Ivleva, V. S., and Krol', L. Ya.  
ON THE PURIFICATION OF ANTIMONY BY THE  
METHOD OF ZONE REFINING. [1960] 8p. 13 refs.  
Order from MDF \$4.50                      MDF V-150

Trans. of Akademiya Nauk SSSR. Otdeleniye  
Tekhnicheskikh Izvestiya Metallurgiya.  
Toplivo 1960, no. 1, p. 44-49.

143,091

(Engineering--Chemical, TT, v. 5, no. 1)

61-12072

- 1. Antimony--Purification
- 2. Title: Zone refining
- I. Vigdorovich, V. N.
- II. Ivleva, V. S.
- III. Krol', L. Ya.
- IV. MDF V-150
- V. Friedman, Morris D.,  
Inc., West Newton, Mass.

Office of Technical Services

Use of Spiral-Flow Conditions to Increase Convective  
Heat Transfer, by V. K. Eimolin,

RUSSIAN, per, Iz Ak Nauk SSSR, ~~OTN~~, No 1, 1960,  
pp 55-61.

\*AEC

Sci - Engr  
Oct 60

List 43

62-12691

Baron, V. V., Efimov, Yu. V., and Savitskii, E. M.  
STRUCTURE AND PROPERTIES OF ALLOYS IN  
THE VANADIUM-TUNGSTEN SYSTEM. Jan 62 [3]p.  
2 refs.  
Available in ARS Journal, v. 32, no. 1, \$3.00

Trans. of Akademiya Nauk SSSR. Otdel[enie] Tekh-  
[nicheskikh] Nauk. Izvestiya: Metallurgiya i Toplivo,  
1960, no. 1, p. 70-74.

DESCRIPTORS: \*Vanadium alloys, \*Tungsten alloys.  
Alloys, Plasticity, Microstructure, Hardness,  
Mechanical properties, Oxidation, Temperature.

(Metallurgy, TT, v. 7, no. 10)

- I. Baron, V. V.
- II. Efimov, Yu. V.
- III. Savitskii, E. M.
- IV. Primary Sources,  
New York
- V. American Rocket Society,  
New York

Office of Technical Services

61-12174

De Dyk Man and Nesmeyanov, An. N.  
INVESTIGATION ON THE THERMODYNAMICS OF  
SOLID SOLUTIONS OF COBALT WITH NICKEL.  
[1960] 12p. 21 refs.  
Order from MDF \$6.50                      MDF D-143

Trans. of A[kademiya] N[auk] SSSR. O[tdelentse]  
T[ekhnicheskikh] N[auk]. [zv[estiya]: Me[allurgiya] I  
Top[ivo] 1960, no. 1, p. 75-84.

142,968

- I. Cobalt-nickel alloys--  
    Thermodynamic properties
- I. De Dyk Man
- II. Nesmeyanov, An. N.
- III. MDF D-143
- IV. Friedman, Morris D.,  
    Inc., West Newton, Mass.

Office of Technical Services

(Metallurgy--Nonferrous Metals, TT, v. 5, no. 3)

Melting Diagram for the Titanium-Vanadium-  
Molybdenum Ternary System, by  
I. I. Kornikov, R. S. Poliekova, 4 pp.

RUSSIAN, per, Izvestia Akademii Nauk  
SSSR, Otdel. Tekh. Nauk, Metallurgiya  
i Toplivo, 1960, No 1, pp 85-89.

ARS Journal  
Vol XXXI, No 5  
May 1961

*Sci - Engr*

*192,321*

62-14554

Ivanova, V. S.  
STRUCTURAL-ENERGETIC INTERPRETATION OF  
FATIGUE PHENOMENA IN METALS (Strukturno-  
Energeticheskaya Interpretatsiya Yavleniya Ustalosti  
Metallov). [1962] [28]p. (foreign text included)  
17 refs.

Order from OTS or SLA \$2.60 62-14554

Trans. of Akademiya Nauk SSSR...Q[idelenie]  
T[ekhnicheskikh] N[auk]. Izvestiya Metallurgiya i  
Toplivo, 1960, no. 1, p. 43-100.

DESCRIPTORS: Energy, Microstructure, \*Metals,  
\*Fatigue (Mechanics), Lattices, Fracture (Mechanics),  
Crystal structure, Elasticity.

The energy of elastic deformation of the crystal lat-  
tice up to the critical point, per unit volume at the  
maximum point of deformation of the crystal lattice,  
as well as the energy per unit volume required for  
(Metallurgy--Structural, TT, v. 8, no. 11) (over)

I. Ivanova, V. S.

Office of Technical Services

Failure of Metals Due to Thermal Fatigue,  
by Yu. V. Kostochkin, I. A. Odintsov, 3 pp.

RUSSIAN, per, Izvestia Akademii Nauk  
SSSR, Otd. Tekh. Nauk, Metallurgiya i  
Toplivo, No 1, 1960, pp 101-104.

ARS Journal  
Vol XXX, No 11  
Nov 1960

sci - 700-101  
62

192, 310

Study of the Mechanism of the Hydrogen Brittleness  
of Titanium and Its Alloys, by L. S. Moroz,  
Yu. D. Khesin, 22 pp.

RUSSIAN, per, Iz Ak Nauk, Otdel Tekh Nauk,  
Metal i Toplivo, No 1, 1960, pp 111-122.

9079372

~~HAZ~~

AEC UCRL-Trans-661(L)

Sci  
Aug 61

163,773

Priselkov, Yu. A., Sapozhnikov, Yu. A., and  
Tseplyaeva, A. V.  
MEASURING THE PRESSURE OF SATURATED BO-  
RON VAPOR. [1961] [5]p. 9 refs.  
Order from OTS or SLA \$1.10      61-28232

Trans. of Akademiya Nauk SSSR. O[tdelente]  
T[ekhnicheskikh] N[auk]. Izvestiya: Metallurgiya i  
Toplivo, 1960, no. 1, p. 134-137.

DESCRIPTORS: \*Vapor pressure, Measurement,  
\*Boron, Heat of sublimation, Thermochemistry,  
Thermodynamics.

The study deals with the determination of vapor pres-  
sure within the temperature range of 1651-1764°K by  
Knudsen's effusion method. The boron vapor pressure  
depends largely on the S/K ratio. Saturation is  
reached in the chamber only when the S/K<sub>0</sub> ratio is  
larger than 15,000-20,000.

61-28232

I. Priselkov, Yu. A.  
II. Sapozhnikov, Yu. A.  
III. Tseplyaeva, A. V.  
IV. Translations, New York

(Physics - Thermodynamics,  
TT, V, 7, no. 7)

Office of Technical Services

Secondary Breaking of Iron Ores by High-Frequency Current, by M. I. Agoshkin, A. S. Voronyuk.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk, Metal i Toplivo, No 1, 1960, pp 138-144.

HB 4857

Sci - Electron

Jun 61

155,173

Elastic Interaction of Rock Body and Casting,  
by Yu. A. Pezlyak, 9 pp.

RUSSIAN, per, Is Ak Nauk SSSR, Otdel  
Tekh Nauk, Metall i Toplivo, No 1,  
1960, pp 145-151.

ATS-47M43R

ATS-RJ-3495

Sci  
Vol IV, No 11  
Jan 62

199, 259

Automated Determination of Mechanical Properties  
of Coke, by G. N. Dmitryev, G. I. Enik.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,  
Metall i Toplivo, No 1, 1960, pp 17<sup>h</sup>, 17<sup>s</sup>.

HB 4813

Sci - Fuels

123,081

Aug 60



Influence of Oxygen on the Surface Tension of Nickel  
and the Boundary Angle of Wetting of Aluminum Oxide  
by Nickel, by V. N. Yermenko, Yu. V. Naydich, 5 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Metal i Toplivo, No 2,  
1960, pp 53-55.

MDF E-111  
9092703

Sci

Oct 61

61-12259

Movchan, B. A.  
CONCENTRATION LAYERS ON INTERPHASIAL  
SURFACES DURING CRYSTALLIZATION OF  
ALLOYS. [1960] 9p. 8 refs.  
Order from MDF \$5.50

MDF M-140

Trans. of A[kademiya] N[auk] SSSR. O[tdeleniye]  
T[ekhnicheskikh] N[auk]. Izvestiya: Met[allurgiya] I  
Top[ivo] 1960, no. 2, p. 72-78.

1. Alloys--Crystallization
2. Alloys--Phase studies
3. Alloys--Surfaces

- I. Movchan, B. A.
- II. MDF M-140
- III. Friedman, Morris D.,  
Inc., West Newton, Mass.

143,301

Office of Technical Services

(Metallurgy--Structural, TT, v. 5, no. 4)

63-13718

Gel'd, P. V., and Kusenko, F. G.  
THE HEAT CONTENT AND HEAT CAPACITY OF  
NIOBIUM OXIDES AND CARBIDES AT HIGH TEMPER-  
ATURES, [1962] [12]p. 24 refs.  
Order from OTS or SLA \$1.60

63-13718

Trans. of Akad[emiya] Nauk SSSR, Ordelenic  
Tekhn[icheskikh] Nauk, Izvestiya Metallurgiya i  
Toplivo, 1960, no. 2, p. 79-86.

DESCRIPTORS: \*Thermochemistry, \*Niobium  
compounds, \*Oxides, \*Carbides, Temperature, Heat,  
\*Entropy.

(Physics--Thermodynamics, TT, v. 9, no. 12)

I. Gel'd, P. V.  
II. Kusenko, F. G.  
III. Translations, New York

Office of Technical Services

Effect of Low Temperatures Upon Fracture and  
Toughness of [Medium Alloy] Steel, by M. P.  
Braun.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,  
Metal i Toplivo, No 2, 1960, pp 104-109.

HB 4854

Sci - Min/Mat

143, 051

Feb 61

Alloys of Transition-Metal Borides With Other  
Metals, by M. S. Koval'chenko.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,  
Met Toplivo, No 2, 1960, pp 115-119. 9660415

HB 4853

Sci - Min/Met

ATK MEL 671

Oct 60

129,104

14 070

GF-1 \* UK-23

ZAITSEVA S. P., et al.

Use of radioactive isotopes and nuclear radiations in investigating flotation processes

Die Anwendung von radioaktiven Isotopen und von Kernstrahlungen bei der Untersuchung des Flotationsprozesses

\* Izv. Akad. Nauk SSSR, Otdel. Tekhn. Nauk, Metallurg. i Topl., No. 2, 130-132 (1960)

GF-1: German

\* UK-23: English

E u r a t o m

63-10845

Portnoi, K. I., Levinskii, Yu. V., and Fadeeva, V. I.  
INTERACTION OF CERTAIN REFRACTORY CAR-  
BIDES AND THEIR SOLID SOLUTIONS WITH CARBON.  
[1962] 6p. 8 refs.  
Order from OTS or SLA \$1.10 63-10845

I. Portnoi, K. I.  
II. Levinskii, Yu. V.  
III. Fadeeva, V. I.

Trans. of Akademiya Nauk SSSR, Otdelenie Tekhni-  
cheskikh Nauk, [Izvestiya Metallurgiya i Toplivo,  
1961, no. 2, p. 147-[149].  
Another trans. is available from OTS or SLA \$1.10  
as AEC-tr-4871 [1961] 5p.

DESCRIPTORS: \*Carbides, Titanium compounds,  
Zirconium compounds, Tantalum compounds, Hafnium  
compounds, Eutectics, \*Refractory materials,  
Chemical reactions.

For abstract see Technical Translations §: 661, 1962  
(Materials--Refractories, TT, v. 9, no. 12)

Office of Technical Services

61-12308

Kovalev, A. G.  
SOME EMPIRICAL FACTORS OF THE DISPLACEMENT PROCESS FOR IMMISCIBLE LIQUIDS. [1960]

Order from ATS 510.60                      ATS-RM43R

Trans. of Akad[emiya] Nauk SSSR. Otdel[eniye] Tekhnicheskoi Nauk. Izvestiya: Matematika i Toplivo, 1960, no. 2, p. 146-150.

146,996

- I. Petroleum--Separation
- I. Kovalev, A. G.
- II. ATS-80M43R
- III. Associated Technical Services, Inc., East Orange, N. J.

Office of Technical Services

(Engineering, TT, v. 5, no. 5)

# 18

(NY-4426)

Scientific Conference on the Metallurgy, Chemistry,  
and Electrochemistry of Titanium, by S. V. Ogurtsov,  
2 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk -  
Metal i Topliva, No 2, 1960, pp 167, 168.

JPRS 5035

Sci - Metal

Aug 60

Tension Superficielle du Beryllium Liquide, (Surface  
Tension of Liquid Beryllium), by V. N. Eremenko,  
V. I. Nizhenko, Shou-wei T'ai, 4 pp.

RUSSIAN to FRENCH, per, Iz Ak Nauk SSSR, Otdel Tekh  
Nauk, Met i Toplivo, No 3, 1960, p 116.

Reverse Trans  
CEA Tr-R-1158

Sci  
Jun 61

Structure Diagram and Some Properties of  
Alloys of the System Niobium-Molybdenum-  
Vanadium, 17 pp.

RUSSEAN, per, Iz Ak Nauk SSSR, Otdel Tekh  
Nauk, Metal i Toplivo, No 4, 1960, pp 243-249.  
0571093

FED MCL-1170/1

Sci. - Min/Metal

173,802

15 Nov 61

61-12935

Glazov, V. M. and Liu, Chen-yuan.  
INVESTIGATION OF THE SEPARATE AND JOINT  
SOLUBILITY OF ALUMINUM AND ANTIMONY IN  
SILICON. [1961] 8p. 10 refs.  
Order from MDF \$5.00

MDF G-194

Trans. of A[kademiya] N[auk] SSSR. O[tdelechiye]  
T[ekhnicheskikh] N[auk]. Izvestiya: Met[allurgiya] i  
Top[ivo] 1960, no. 4, p. 150-155.

- I. Study of the impact of
  2. Silicon-impurities
  3. Aluminum-solubility
  4. Antimony-solubility
- I. Glazov, V. M.
  - II. Liu, Chen-yuan
  - III. MDF G-194
  - IV. Friedman, Morris D., Inc.,  
West Newton, Mass.

108400

Office of Technical Services

(Physics--Solid State, TT, v. 5, no. 10)

On the Broadening of the Possibilities of Using  
Penetrating Radiation to Enrich Coal, by  
V. D. Goroshko, O. M. Todes, A. Z. Yurovskiy,  
5 pp.

RUSSIAN, per, Iz Ak Nauk USSR, Otdel Tekh  
Nauk, Met i Toplov, No 4, 1960, pp 185-186.

MDF G-189  
9092771

Sci  
Oct 61

INVESTIGATION OF THE RECRYSTALLIZATION ON NICKEL-BASE,  
CAST, HEAT RESISTANT ALLOY, BY Z. S. BYCHKOVA,  
YU. V. VINOGRADOV, ET AL, 19 PP.

RUSSIAN, PER, IZ AK NAUK SSR, OTDEL TEKH NAUK,  
METAL I TOPLIVO, NO 5, 1960, PP 70-78. 9678198

FTD-TT-62-518

SCI - MINERALS/METALS  
11 OCT 62

212,358

INVESTIGATION OF PLASTIC DEFORMATION OF HIGH-MELTING  
METALS AT HIGH TEMPERATURE, BY L. I. IVANOV,  
M. P. MATVEYEVA, ET AL, 14 PP.

RUSSIAN, PER, IZ AK NAUK SSR, OTDEL TEKH NAUK,  
METAL I TOPLIVO, NO 5, L960, PP 79-85. 9678198

FTD-TT-62-518

SCI - MINERALS/METALS  
11 OCT 62

212,359

61-19627

Kornilov, I. I., Ozhinkova, O. V., and  
Pryakhina, L. I.  
CORRELATION BETWEEN COMPOSITION, TEMPER-  
ATURE, AND HEAT RESISTANCE OF NICKEL-  
CHROMIUM-TUNGSTEN-TITANIUM-ALUMINUM AL-  
LOYS. 6 Mar 61. 2p. AID rept. 61-25; AD-254 394.  
Order from OTS or SI A SI 10      61-19627

Abstract trans. of Akademiya Nauk SSSR. Otdeleniye  
Tekhnicheskikh Nauk. ~~Zvestiya~~ Metallurgiya i Top-  
tivo, 1960, no. 5, p. 137-141.

DESCRIPTORS: \*Nickel alloys, \*Chromium alloys,  
\*Tungsten alloys, \*Titanium alloys, \*Aluminum alloys.  
Heat resistant alloys

The alloy studied was of constant Cr, W, and Ti con-  
tent (not specified) and varying aluminum and (in-  
versely) nickel content (0 to 16%). The solubility of  
aluminum in nickel-base solid solution was found to de-  
crease with decreasing temperature. At 1200°C solu-  
bility was 5.5%, at 1100°C, 4.2%, at 1000°C, 3%, and  
(Metallurgy. TT, v. 6, no. 4)      (over)

- I. Kornilov, L. I.
- II. Ozhinkova, O. V.
- III. Pryakhina, L. I.
- IV. AID-61-25
- V. Air Information Div.,  
Washington, D. C.
- VI. AD-254 394

177680

Office of Technical Services

Simulation by Scale Models of the Deformation  
Processes in the Heat Treatment of Metals, by  
V.A. Lonakin.

RUSSIAN, per, Iz Ak Nauk, SSSR, OIM, Met i Top,  
No 5, 1960, pp 174-180.

CIA/FDD XX-1018  
USIB ONLY

Sci - Min/Met

Jun 61

NOT RELEASABLE TO FOREIGN NATIONALS

155,487

Viscosity and Electrical Conductivity  
Aluminum-Antimony, and Indium-Antimony  
Alloys in the Liquid State, by V. M. Glazov,  
8 pp.

RUSSIAN, per: Iz Ak Nauk USSR, Seriya Tekhn. Nauk  
Nauk, Met i Toplov, No 5, 1960, pp 190-194.

MDJ: G-191  
9092757

171, 533

Glazov, V. M.  
VISCOSITE ET CONDUCTIBILITE ELECTRIQUE DES  
ALLIAGES Al-Sb, Ga-Sb ET In-Sb A L'ETAT LIQUIDE  
(Vyazkost i Elektroprovodnost' Splayov Alyumini-  
Sur'ma, Gallii -Sur'ma i Indii-Sur'ma v Zhidkom  
Sostoyanii) tr. by Rafalovkiy. 26 Dec 61 [14p. (Russian  
text included) 18 refs. CEA Trans. no. R 1464 (text in  
French).

62-24580

- I. Glazov, V. M.
- II. CEA-tr-R1464
- III. Commissariat à l'Energie Atomique (France)

Order from CTS or SLA \$1.60

62-24580

Trans. In French of Akad[emiya] Nauk SSSR. [Otdelente  
Tekhnicheskikh Nauk]. Izv[estiya: Metallurgiya i  
Toplivo] 1960, no. 5, p. 190-194.

DESCRIPTORS: \*Viscosity, \*Electrical conductance,  
\*Alkali metal alloys, Aluminum alloys, Antimony alloys,  
Gallium alloys, Indium alloys, Liquid metals.

(Metallurgy, TT, v. 8, no. 3)

Office of Technical Services

Churaev, P. V.

OBTENTION DES MICROPHOTOGRAPHIES ÉLEC-  
TRONIQUES D'UNE PARCELLE DONNÉE DE LA  
SECTION POLIE D'UN ÉCHANTILLON EXAMINÉ  
(Poluchenie Elektronnykh Mikrofotografii s Zadannogo  
Uchastka Shlifa Issleduemogo Obratzsa) [Obtaining  
Electron Photomicrographs of a Given Area on Polished  
Specimens Being Studied] tr. by B. Detrezvinsky.  
9 Nov 61 [12]p. (foreign text included) 7 refs. CEA  
Trans. no. R 1392.

Order from OTS or SLA \$1.60

62-13803

Trans. in French of Akad[emiya] Nauk SSSR,  
Otdel[enie] Tekh[nicheskikh] Nauk, [Izvestiia; Metal-  
lurgiya i Toplivo] 1960, no. 5, p. 221-223.

DESCRIPTORS: \*Electron microscopy,  
Photomicrography.

(Physics--Optics, TT, v. 10, no. 5)

62-13803

I. Churaev, P. V.  
II. CEA-tr-R-1392  
III. Commissariat à l'Énergie  
Atomique (France)

Office of Technical Services

Metallo-Ceramic Method of Obtained Alloyed  
Moldings on the Basis of Molybdenum, by  
A. V. Savin, 7 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, OZh,  
Metallurgiya i Toplivo, No 6, 1950,  
pp 47-50. 9670988

FED MCL-952/1

Sci - Min/Met

169,301

Sep 61

Refining Metallic Lithium, by T. F. Fedorov,  
F. I. Shampay, 10 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, (TN, Metal i  
Toplivo, No 6, 1960, pp 56-60. 9670744

FED MET-953/1

Sci - Min/Metal

1 Sept 61

*Dept Interior*

TN 7 557 No 511

165,896

TT-63-2471

- I. Belashchenko, D. K.
- II. CEA-tr-R1557
- III. Commissariat à l'Énergie Atomique, Paris (France)

Belashchenko, D. K.  
PROPRIETES CINETIQUES DES ALLIAGES DE  
METAUX LIQUIDES (Kineticheskie Svoystva Zhidkikh  
Metallicheskikh Splavov) [Kinetic Properties of  
Liquid Metal Alloys] Mime Boutleroff, tr. 24 Mar 62  
[19p] (Russian text included) 14refs  
CEA Trans. no. R 1557.  
Order from OTS, SLA, or ETC \$1.60      TT-63-2471

Trans. in French of Akad[emiya] Nauk SSSR.  
[Otdelenie Tekhnicheskikh Nauk]. Izvest[iya]:  
Metallurgiya i Toplivo] 1960, no. 6, p. 89-93.

DESCRIPTORS: \*Alloys, \*Liquid metals, Dynamics,  
Viscosity, Electrical conductance, Resistance  
(Electrical), Magnetic properties.

(Metallurgy, TT, v. 11, no. 5)

Office of Technical Services

62-10208

Shmuk, E. I.  
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(Chemistry--Physical, TT, v. 7, no. 9)

I. Shmuk, E. I.

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62-27298

Teumin, I. I.  
METHODIK UND BESONDERE VERHÄLTNISSE BEIM  
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11p.

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1961, no. 1, p. 24-30.

DESCRIPTORS: \*Vibration mechanisms, Elasticity,  
\*Metals, \*Alloys

(Metallurgy, TT, v. 9, no. 11)

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COALESCENCE, SPHEROIDIZATION, AND HEALING OF MICROPORES  
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11 PP.

RUSSIAN, PER, IZ AK NAUK SSSR, OTDEL TEKH NAUK,  
METAL I TOPLIVO, NO 1, 1961, PP 58-63. 9678199

FTD-TT-62-519

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Bu. of Mines CP-443-67

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Properties and phase composition of alloys of boron  
with carbon

By: Zhuravlev, N. N.

From: Izvestiia, Otdeleniye tekhnicheskikh nauk,  
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Some Peculiarities of the Reduction of Hardened  
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the Ash Content of Coal, by V. D. Goroshko,  
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in a Fluidized Bed, by K. P. Lavrovskiy, A. L.  
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Metal i Toplivo, No 2, 1961, pp 13-19.

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Reduction of Lead Losses in Slags by Electro-  
Chemical Methods, by A. N. Kvyatkovskiy, et al.

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Metall i Toplivo, Vol II, 1961, pp 43-48.

NLL RTS 2148

Sci - M/M, Electron  
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Kinetics of Reduction by Carbon Monoxide of Free  
Lead Oxide and Lead Oxide Combined in Silicates,  
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NLL RTS 2149

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Heat Content of Slags in the System Iron-Oxide  
Zinc-Oxide Silica, by Z. F. Gulyanitskaya.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk  
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MLL RNS 2150

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Initial Stages in the Plastic Deformation of Iron ,  
by V. E. Kochnov, I. I. Zlochevskaya.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk  
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Investigation of the Hot Rolling of Aluminium in  
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The Effect of Small Degrees of Plastic ~~Strain~~ Strain  
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Interaction of Impurities During the Zone Re-crystallization of Antimony, by V. E. Vigdorovich.

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Welding Process, by A. A. Erokhin.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk  
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Properties of Liquid Alloys in Systems With  
Unlimited Solidus Solubility, by A. A. Vertman,  
A. M. Samarin.

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On the Kinetic Characteristics of Liquefaction  
Micro-Inhomogeneities in the Crystallization  
of Solid Solutions, by V. M. Glazov,  
Liu Chen-yuan, 13 pp.

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Viscosity and Electrical Conductivity of  
Aluminum-Antimony, and Indium-Antimony  
Alloys in the Liquid State, by V. M. Glazov,  
8 pp.

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Nauk, Met i Toplov, No 5, 1960, pp 190-194.

MDF G-191  
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<p>Glazov, V. M. VISCOSITE ET CONDUCTIBILITE ELECTRIQUE DES ALLIAGES Al-Sb, Ga-Sb ET In-Sb A L'ETAT LIQUIDE (Vyazkost i Elektroprovodnost' Splayov Alyumini- Sur'ma, Pallii -Sur'ma i Indii-Sur'ma v Zhidkom Sostoyanii) tr. by Baftalovkiy. 26 Dec 61 [14]p. (Russian text included) 18 refs. CEA Trans. no. R 1464 (text in French). Order from OTS or SLA \$1.60                      62-24580</p> <p>Trans. in French of Akademiya Nauk SSSR. [Otdelente Tekhnicheskikh Nauk]. Izvestiya: Metallurgiya i Toplivo 1960, no. 5, p. 190-194.</p> <p>DESCRIPTORS: *Viscosity, *Electrical conductance, *Alkali metal alloys, Aluminum alloys, Antimony alloys, Gallium alloys, Indium alloys, Liquid metals.</p> <p>(Metallurgy, TT, v. 8, no. 3)</p>	<p>62-24580</p> <p>I. Glazov, V. M. II. CEA-tr-R1464 III. Commissariat à l'Énergie Atomique (France)</p> <p>Office of Technical Services</p>
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SECTION POLIE D'UN ÉCHANTILLON EXAMINÉ  
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9 Nov 61 [12]p. (foreign text included) 7 refs. CEA  
Trans. no. R 1392.  
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Otdel[enie] Tekh[nicheskikh] Nauk. [Izvestiia: Metal-  
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DESCRIPTORS: \*Electron microscopy.  
Photomicrography.

(Physics--Optics, TT, v. 10, no. 8)

62-13803

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Atomique (France)

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Metallo-Ceramic Method of Obtained Alloyed  
Holdings on the Basis of Molybdenum, by  
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[Otdelenie Tekhnicheskikh Nauk]. Izvest[iya]:  
Metallurgiya i Toplivo] 1960, no. 6, p. 89-93.

DESCRIPTORS: \*Alloys, \*Liquid metals, Dynamics,  
Viscosity, Electrical conductance, Resistance  
(Electrical), Magnetic properties.

(Metallurgy, TT, v. 11, no. 5)

TT-63-24271

- I. Belashchenko, D. K.
- II. CEA-tr-R1557
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\*Metals, \*Alloys

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R-7940-D

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From: Izvestia, Otdeleniye tekhnicheskikh nauk,  
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HB 5181  
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The Use of Radioactive Radiation for Controlling  
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B. P. Kikenorova.

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Metal i Topliv, No 1, 1961, pp 152-157

NLI M 8850

Sci - Phys  
Mar 63

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(S7-1028)

Nikolay Mikhaylovich Karavayev, 5 pp.

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JPRS 4723

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RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,  
Metal i Toplivo, No 2, 1961, pp 13-19.

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RUSSIAN, per, Iz Ak Nauk SSSR Otdel Tekh Nauk  
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Kinetics of Reduction by Carbon Monoxide of Free  
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by L. G. Berezkins, et al.

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Heat Content of Slags in the System Iron-Oxide  
Zinc-Oxide Silica, by Z. F. Gulyaitskaya.

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Initial Stages in the Plastic Deformation of Iron ,  
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RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk  
Metal i Toplivo, Vol II, 1961, pp 60-63.

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Investigation of the Hot Rolling of Aluminium in  
Vacuum and in Air, by I. M. Pavlov, et al.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk  
Metal i Toplivo, Vol II, 1961, pp 64-67.

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The Effect of Small Degrees of Plastic ~~Str~~ Strain  
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Interaction of Impurities During the Zone Re-crystallization of Antimony, by V. N. Vigdorovich.

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Basic Stages and Metallurgical Features of the Arc  
Welding Process, by A. A. Erokhin.

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Properties of Liquid Alloys in Systems With  
Unlimited Solidus Solubility, by A. A. Vertman,  
A. M. Samarin.

RUSSIAN, per, Iz Ak Nauk SSSR Otdel Nauk  
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Liu Chen-yuan, 13 pp.

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The Character of the Reaction of Certain Nitroxy  
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P. S. Le Fortnoy, Yu. V. Levinakly, V. I. Fedayev,  
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ALC Tr-4871

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THE EFFECT OF SMALL ADDITIONS OF NICKEL AND COBALT  
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NLL M. 3770

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FTD-TT-61-160

Sci - Engr

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18 Dec 61

TT-63-23982

Volozhin, V. A., Vysotakaya, A. L., Genenko, V. E.,  
and Urazovskii, S. S.

THE THERMODYNAMICS OF COKING [Zur Thermodynamik des Verkokungsprozesses]. [1963] [11p] Sredn. C. E. Trans. 2997.

Order from OTS, SLA, or ETC \$1.60      TT-63-23982

Trans. of Akad[emiya] Nauk SSSR. [Otdelenie Tekhnicheskikh Nauk]. [Izvestiya] Mest[alurgiya] i Toplivo. 1961, no. 3, p. 183-190.  
Another trans. is available in German from TTB \$2.35.

DESCRIPTORS: \*Thermodynamics, \*Coke, Coal, Heat of formation, Entropy, Calorimeters, Pyrolysis.

This study determined the heats of formation of the solid products in the thermal decomposition of G<sub>2</sub> gas coal and its vitrain. Entropy determinations were made from measurements of the heat capacity at low temperatures. (Author)

- I. Volozhin, V. A.
- II. Vysotakaya, A. L.
- III. Genenko, V. E.
- IV. Urazovskii, S. S.
- V. CE Trans-2997
- VI. Central Electricity  
Generating Board  
(Gt. Brit.)

*COAL*  
*1961*

(Materials--Fuels, TT,  
v. 11, no. 8)  
Office of Technical Services