

Winkler, O.  
STRUCTURE OF THE ALLOYS OF BERYLLIUM WITH  
SILVER, PALLADIUM AND GOLD. [1962] 24p. (figs.  
tables refs. omitted).  
Order from SLA \$2.60

62-18297

Partial trans. (p. 162-170, 173) of Zeitschrift für  
Metallkunde (Germany) 1938, v. 30, no. 5 [p. 162-173].

DESCRIPTORS: \*Beryllium alloys, \*Silver alloys,  
\*Palladium alloys, \*Gold alloys, Crystal structure.

(Physics--Solid State, TT, v. 9, no. 4)

62-18297

1. Winkler, O.

Office of Technical Services

Manganese Aluminium System, by W. Koster,  
W. Bechthold.

GERMAN, per, 2 fuer Nazi Metallkunde, 1938,  
pp 294-296.

EX

CSIRO/No 6102

Sci-Materials & Metallurgy  
May 63

229,856

X-Ray Determinations of the Temporary Modification  
of the Residual Stress Condition in Alternating  
Bending Stress, by Fritz Gisen, Richard  
Glocker, 6pp  
GERMAN, per, Zeitschrift fur Metallkunde, Vol 30,  
1938, No 9, pp 297-298  
SIA TT-64-18182

Sci - Mech  
May 67

346,689

Plasticity and Mosaic Structure of Crystals, by  
Albert Kochendorfer, 20 pp.

GERMAN, par, Z Metallkunde, Vol XIX, 1938, pp 299-  
305.

AEC Tr 1754

Scientific - Physics Jan 54 CTS/DEX

9189

Contribution to the Problem of Cold and Hot Hardening  
on the Basis of Thermoelectric Investigations, by  
A. Durer, W. Koster.

GERMAN, per, Z fuer Metallkunde, Vol XXX, No 9,  
1938, pp 311-319.

TIL T 5036

Sci - Engr

137,373

Jan 61

A Device for the Direct Evaluation of Damping, by  
Fritz Forster, Helmut Breitfeld, 5 pp.

GERMAN, per, Z fur Metallkunde, Vol XXX, 1938,  
pp 343-345.

Dept of Commerce  
Nat Bur of Standards

56, 818

Sci - Engr

Dec 57

The Cobalt Corner of the Iron-Cobalt-Vanadium  
System, by Werner Koster, Karl Lang, 4 p.

GERMAN, per, Zeit fur Metallkunde, 1938, Vol XXX,  
No 9, pp 350-352.

SLA 59-20232

Sci  
Mar 60  
Vol 2, No 11

109,641

Kroll, W.  
LEAD CALCIUM ALLOYS FOR STORAGE BATTER-  
IES AND CABLE SHEATH. [1961] 2p. 17 refs.  
Order from SLA ml\$1.80, ph\$1.80 61-10089

Trans. of ~~Z~~ ~~Zeitschrift~~ ~~für~~ Metallkunde (Germany)  
1938 [v. 30] p. 373.

(Unannounced)

61-10089

1. Storage batteries--  
Materials
2. Calcium-lead alloys--  
Applications
3. Title: Cable sheath  
1. Kroll, W.

148550

Office of Technical Services

The Diffusion of Mg in Al, by W. Bungardt,  
GERMAN, per. Z. Metallkde., 30, 1938,  
pp 377-383.  
\*NBS TT 70-57347

Sci-Mat  
Aug 70

The Solubility of Hydrogen in Aluminum and a  
Few of Its Alloys, by Walter Baukloh, Friedrich  
Oesterlen, 10 pp.

GERMAN, per, Zeitschrift fur Metallkunde, Vol XXX,  
1938, p 389.

S.L.A. Tr 972

Sci - Metals/Minerals 33,015

Apr 56

Uneven Distribution of Zinc on Sheets During  
Galvanizing, by ~~XXXXXXXX~~ H. Bablick.

GERMAN, Zeitschrift Metallkunde, 1939.

Brutcher Tr 845

Scientific - Min/Metals

\$1.10

12,993

~~12,993~~

Hot-Rolling of Manganese and Its Deformable  
Alloys, by W. Kroll, 27 pp.

GERMAN, per, Z fur Metallkunde, Vol XXXI, No 1,  
1939, pp 20-23.

SLA 60-14620

Sci  
Feb 62  
Vol III, No 11

184,692

Impact Bending Strength of Zinc Alloys at Low  
Temperatures, by K. Bayer, A. Burkhardt, 4 pp.

GERMAN, per, ~~Zeitschrift für Metallkunde~~, Vol  
XXXI, No 5, May 1939, p 131.

SLA Tr 1817 Jan 1957

Sci - Min/Met  
Apr 1957

46,298

New Data on the Welding and Soldering of Zinc  
Aluminium and Magnesium, by Karl Heinemann, 5 p.

GERMAN, per, Zeit fur Metallkunde, 1939, Vol XXI,  
No 5, pp 141-143.

SLA 59-20337

Sci  
Mar 60  
Vol 2, No 12

109,182

The Electric Welding of Copper-Clas Steel Sheet,  
by W. Issel, 8 pp.

GERMAN, por, Z Metallkunde, Vol XXXI, No 5, May  
1939, pp 143, 144.

SIA 2665

Sci - Min/Mat, Engr

Feb 58

58,447

On the Recovery and the Recrystallization of Cold  
Worked Nickel, by H. Miller, 34 pp.

BERMAN, per, Z Metallkunde, Vol XXXI, No 6, Jun  
1939, pp 161-167.

SLA 57-721

Sci - Min/Met

58,431

Feb 58

On the Effect of Annealing on Electrolytic Nickel,  
by W. Koster, 13 pp.

~~GERMAN~~  
RUSSIAN, per, Z Metallkunde, Vol XXXI, No 6, 1939,  
pp 168-170.

ATS-31 L 308  
SLA 57-722

Sci - Minerals/Metals  
Oct 57

54,257

Superposition of Cold Hardening and Precipitation Hardening of Iron-Nickel-Copper Permanent Magnet Alloys, by O. Dahl, 36 pp.

GERMAN, per, Z Metallkunde, Vol XXXI, Jun 1939, pp 192-203.

SLA 2131

Sci - Minerals/Metals  
Oct 57

54,044

Production of Aluminium Cable Sheath, by  
Walter Daisinger, 8 p.

GERMAN, per, Zeit fur Metall, 1939, Vol XXXI,  
No 9, pp 305-310.

SLA 59-20359

Sci  
Mar 60  
Vol 2, No 12

109,099

Recrystallization Textures of Face-Centered Iron-Nickel-Copper Alloys, by Horst Guido Muller, 12 pp.

GERMAN, per, Zeitschrift fuer Metallkunde, Vol XXXI, No 10, 1939, pp 322-325.

SLA 59-15205

Sci  
Dec 59  
Vol 2, No 4

103,095

Chromium Plating with Special Reference to Black  
Chromium Plating, by K. Arndt, H. Endrass, 11 pp.

GERMAN, per, Z. Metallkunde, Vol XXX, Jan 1938,  
pp 21-24.

SLA Tr 57-635

Sci - Min/Met  
Sep 57

53,329

Properties of Cemented X Carbide Compositions and  
Their Relation to the Wear Resistance, by W. Dawidl.

GERMAN, per, Zeitschrift Metallkunde, Vol XXXII, 1940.

Brutcher Tr 1246

Scientific - Min/Metals

\$6.75

13.031

~~13.031~~

(FDD 23331)

On Alloys of Germanium With Bismuth, Antimony,  
Iron, and Nickel, by K. Ruttweit, G. Masing,  
38 pp.

GERMAN, per, Zeitschrift fuer Metallkunde,  
Vol XXXII, No 3, Mar 1940, pp 52-61.

CIA/FDD/U-6820

S.L.A. 575 ~~3~~

Germany

Scientific - Minerals/Metals, metallurgy, alloys

21,771

CTS 64/Jan 55

The Zinc Corner of the Zinc-Aluminum-Copper  
Ternary System, by E. Gebhardt, 10 pp.

GERMAN  
Gehlen, per, Z. Metallkunde, Vol. XXXI, April 1940,  
pp 78-85.

S.L.A. Tr 58/1956

Scientific - Minerals/Metals

33, 111

Anodic Corrosion in Lead Accumulators, by H.  
Buckle, H. Hanemann, 5 pp.

GERMAN, Ger, Z für Metallkunde, Vol XXXII, 1940,  
pp 120-122. 9081694

ACSIL Tr 1138

Sci - Chem

Dec 61

175, 165

Investigation of the Time Sequence of Umklapp-processes  
in Metals, by F. Foerster, E. Scheil, 21 pp.  
UNCLASSIFIED

↓  
Foerster  
GERMAN, per, Z. Metallk., Vol XXXII, No 6, 1940,  
pp 165-173. 9097035

SLA TT-63-20831

385

K.E.R.E., HARWELL 11/3/5/505

OT/TSF

764

AEC UCR LTR-760 (4)

April 54 CTS/DEX

Scientific - Min/Metals

11,568

Schneider, Armin and Esch, Udo.  
ON THE REACTIONS BETWEEN MAGNESIUM AND  
SULFUR DIOXIDE (Über die Reaktionen Zwischen  
Magnesium und Schwefeldioxyd). [1963] [21]p. (foreign  
text included) 13 refs.  
Order from SLA \$2.60

63-18134

Trans. of Zeitschrift für Metallkunde (Germany) 1940,  
v. 32, no. 6, p. 173-177.

DESCRIPTORS: \*Magnesium, \*Sulfur compounds,  
\*Dioxides, Casting, Chemical reactions.

(Metallurgy--Nonferrous Metals, TT, v. 10, no. 11)

63-18134

I. Schneider, A.  
II. Esch, U.

Office of Technical Services

A Measuring Device for the Rapid Determination  
of Magnetic Magnitudes, by F. Forster, 18 pp.

<sup>1</sup>  
GERMAN, per, Z. Metallkunde, Vol XXXII, No 6,  
Jun 1940, pp 184-190.

SLA 57-2440

Sci

SLA 62-18161

Aug 58

69,848

A Method of Measuring the Temperature Relationship  
of the Electrical Resistance and the Specific Heat  
of Metals in the Solid and the Fluid State, by  
F. Forster, G. Tschentke.

GERMAN, per, Z Metallik, Vol XXXII(6), Jun 1940,  
pp 191-195.

TPA3/TIB Tr No T 3993

Scientific - Electronics, temperature, resistance  
heat, metals, solid, fluid

Index Aeronauticus

Magnetic Anisotropism in Rolled Iron-Nickel Alloys,  
by H. Conradt, O. Dahl, K. Sixtus, 23 pp.

GERMAN, per, Z Metallkunde, Vol XXXII, No 7, Jul  
1940, pp 231-238.

SLA 2176

Sci - Minerals/Metals  
Oct 57

54,042

An Apparatus for Rapid Determination of Magnetic  
Values, by F. Forster, 10 pp.  
GERMAN, per, Zeitschrift, für Metallkunde, Vol 32,  
No 8, 1940, pp 184-190. 9227279  
ACSL/64/475

Sci - M/M  
May 65

ZIN 280,362

The Behavior of Zinc Toward Sodium Chloride Solution  
and Sea Water Under Atmospheric Conditions, by G.  
Schikorr, 12 pp.

GERMAN, per, Z. Metallkunde, Vol XXXII, No 9, Sep 1940,  
pp 314-317.

SLA Tr 1923

Sci - Minerals/Metals  
Sep 57

54, 011

Diffusion of Mg in Al with Varying Degrees of  
Purity, by W. Bungardt,  
GERMAN, per, Z. Metallkde., 32, 1940, pp 360-362.  
\*NBS TT 70-57329

Sci-Mat  
Aug 70

Properties of Cemented Carbide Compositions and  
Their Relation to the Wear Resistance (Written  
Discussion), by C. Ballhausen.

GERMAN, per, Zeitschrift Fur Metallkunde, Vol XXXII,  
No 9, 1940, pp 369.

Brutcher Tr 1684

Scientific - Min/Metals

\$1.65

12,955

~~12,893~~

General and Specific Properties of Different  
Types of Electrodeposited Zinc-Coatings, by Hell-  
mut, Heldegard Barzmann, 10 pp.

~~GERMAN~~ Fischer  
German, per, Z. Metallkunde, Vol XXXII, November  
1940, pp 376-383.

S.L.A. Tr 52/1956

Scientific - Minerals/Metals 33,989

1  
Intercrystalline Corrosion of Zinc Alloys, by Greta  
Petrich, Wolf Wolf, 4 pp.

4  
GERMAN, per, Z. Metallkunde, Vol XXXII, Dec 1940,  
pp 412-414.

S.L.A. Tr No 483/1955

Sci - Minerals/Metals  
Jan 1957 CRS/dex

45,855

The Recrystallisation-Temperatures of Commercial  
Zinc Alloys, by George Masing, H. J. Wallbaum,  
2 pp.

GERMAN  
~~German~~, per, <sup>T</sup>Z<sup>IT</sup> Metallkunde, Vol XXXII, December  
1940, p 418.

34,011

S.L.A. Tr 101/1956

Scientific - ~~Chemistry~~ Minerals/Metals

Influence of Iron Content on the Working Properties  
of Zinc Alloys, by Hermann Kastner, ~~and~~ Ernst Fischer,  
9 8 pp.

GERMAN  
German, per, Z. Metallkunde, Vol XXX, August-September  
1941.

S.L.A. Tr 85/1956

34, DEC

Scientific - Minerals/Metals, ~~Physics~~

The Shape of the Cooling Curves, by  
G. Masing.

GERMAN, per, Zeitschrift fur Metallkunde,  
Vol 33, No 1, 1941, pp 36-37. 9232373  
AEC NP-Tr-1352

Sci/M&M  
May 66

299,800

Magnetic Investigations of Internal Stresses. 1. Internal Stresses in the Stretching of Nickel Wire, by Fritz Forster, Kury Stamske, 17 pp. UNCLASSIFIED

GERMAN, per, Z. Metallkunde, Vol XXXIII, 1941, pp 98-104.

AEC Tr 1938

EEur - Germany  
Scientific - Min/Metals

17,493

Magnetic Investigations of Internal Stresses,  
1. Internal Stresses in Die-Drawn Nickel Wire,  
by Fritz Forster, Kurt Stambke, 22 pp. UNCLASSIFIED

GERMAN, per, Z. Metallkunde, Vol XXXIII,  
1941, pp 104-114.

AEC Tr 1939

EEur - Germany  
Scientific - Min/Metals

17,396

Destruction of Materials by Cavitation, by Theo.  
Rutenbeck.

GERMAN, Zeitschrift Fur Metallkunde, Vol 33, No 4,  
April 1941, pp 145-152.

USA Corps of Engr, Waterways Exper Sta Tr 43-16

Sci - Engineering, hydraulics, naval  
Econ - Transportation, river, water

Available on loan at Research Center Library

The Simplest Principle in the Crystal Chemistry of  
Alloys, by U. Dehlinger, G.E.R. Schulze.

GERMAN, per, Z Metallk, Vol XXXIII, 1941, pp 157-  
160.

Associated Electrical Industries,  
Ltd  
Tr No T/442 OT/178

Scientific - Chemistry, crystal, alloys

Index Aeronauticus

62-14785

I. Schweizerhof, S.

Schweizerhof, Sigfrid.  
HOMOGENEOUS COOLING STRESSES IN PLATED  
MATERIALS. [1962] 35p. 4 refs.  
Order from SLA \$3.60 •

62-14785

Trans. of Zeitschrift für Metallkunde (West Germany)  
1941, v. 33, no. 4, p. 168-175.

DESCRIPTORS: \*Magnetic materials, Metals, Sheets,  
\*Plating, Annealing, Temperature, Elasticity,  
Stresses, \*Thermal stresses, Iron alloys, Nickel  
alloys.

(Metallurgy, TT, v. 8, no. 4)

Office of Technical Services

Schweizerhof, Sigfrid.

A NEW MULTILAYER MATERIAL WITH RECTILINEAR MAGNETIZATION CURVE. [1962] 47p.  
24 refs.

Order from SLA \$4.60

62-14786

Trans. of Zeitschrift für Metallkunde (West Germany)  
1941, v. 33, no. 4, p. 175-185.

DESCRIPTORS: \*Magnetic materials, Materials, Magnetic properties, Physical properties, Magnetostriction, Permeability, Heat treatment, Stresses, Elasticity, Sheets, Nickel alloys, Iron alloys, Plating, Magnetic cores, Alloys.

(Physics--Magnetism, TT, v. 8, no. 4)

62-14786

1. Schweizerhof, S.

Office of Technical Services

62-18169

Conradt, H. W., Dahl, O., and Sixtus, K.  
MAGNETIC ANISOTROPISM IN ROLLED IRON-NICKEL  
ALLOYS (Magnetische Anisotropie in Gewalzten Eisen-  
Nickel-Legierungen). [1962] [23]p. 9 refs.  
Order from SLA \$2.60 62-18169

I. Title: Anisotropy  
I. Conradt, H. W.  
II. Dahl, O.  
III. Sixtus, K.

Trans. of Zeitschrift für Metallkunde (Germany) 1940,  
v. 32 [no. 7] p. 231-238.

DESCRIPTORS: \*Nickel alloys, \*Iron alloys, Rolling  
mills, Deformation, Crystal structure, Magnetic fields,  
Heat treatment, Elasticity, Stresses, Single crystals,  
Rotation, Conductivity, Magnetostriction, Magnetic  
properties, Intensity.

In nickel iron alloys, cold rolling leads to a strongly  
preferred magnetic direction in the direction of rolling.  
Heating, even below the initiation of recrystallization,  
eliminates the rolling anisotropy; in this way there was  
made possible a complete division of the total anisotropy  
(Metallurgy, TT, v. 9, no. 4) (over)

Office of Technical Services

Concerning the Synthesis and the Volume Changes  
of Zinc-Copper-Aluminum Alloys III. Survey  
of the Course of Equilibrium in the Copper-  
Aluminum-Zinc System, by Werner Koester, 26 p.

GERMAN, per, Zeit. fur Metallkunde, 1941, Vol  
Vol XXXIII, No 8/9, pp 289-296.

SLA 59-17830

Sci  
Feb 60  
Vol 2, No 10

108912

On the Structure and Changes of Volume of  
Zinc-Copper-Aluminum Alloys, IV. The Causes of  
the Volume Changes and a Method for Achieving  
Constancy of Dimension, by Erich Gebhardt, 24 p.

GERMAN, per, Zeitschrift für Metallkunde, 1941,  
Vol XXXIII, No 8/9, pp 297-305.

SLA 59-17829

Sci  
Feb 60  
Vol 2, No 10

108,910

The Adhesion of Hot-dipped Zinc Coatings, by Heinz  
Bablik, and Rudolf Scheu, 5 pp.

~~GERMAN~~  
~~corrosion~~, per, Z. Metallkunde, Vol XXXIII, No 10,  
Oct 1941.

S.L.A. Tr 7/1956

Scientific - Minerals/Metals-Chemistry

33,935-

The Zinc-Cerium and Zinc-Lanthanum Systems, by  
Jakob Schramm (Stuttgart), 5 pp.

GERMAN, per, Zeit fuer Metallkunde, Vol XXXIII,  
1941, pp 358-360. 9209187

AEC-Tr-5678

Sci - Mat & Met

Jul 63

236,168

The Three-Component System Nickel-Cobalt-Aluminum,  
by Jakob Schramm, 28 pp.  
GERMAN, per, Zeit fur Metallkunde, No 12, 1941,  
pp 403-412.  
Patent Office

Sci - Chem  
Oct 64

268,089

The Processes in Metal Structure Subjected to Tensile  
and Alternating Loading, by A. Thum, C. Petersen,  
17 pp.

Full translation.

GERMAN, per, Zeits. für Metallkunde, Vol XXIV, No 2,  
Feb 1942, pp 39-46.

S.L.A.

Scientific - Minerals/metals

27, 223

Aug 55

The Diffusion of Carbon in Alloy Steels, by W.  
Seith, F. Bartchat, 11 pp.

GERMAN, per, Z Metallkunde, Vol XXXIV, 1942,  
pp 125-130.

2  
AEC Tr IGRL-T/C-89

Sci - Chem

Sep 58

73, 720

The Temperature Dependence of the Solu-  
bility of Lead in Solid Silver Above the  
Eutectic Temperature, by E. Raub and A.  
Polaszek-Wittke, 11 pp.

GERMAN, per, Z. Metallkunde, Vol XXXIV, 1942,  
pp 93-96.

SLA Tr 57-2080

Sci

Jul 58

68,015

The Determination of the Probable-Damage Line of  
an Al-Cu-Mg Wrought Alloy, by F. Bolleaurath,  
H. Cornelius

Full translation.

GERMAN, per, Z. Metallk, Vol XXXIV, No 7, Jul 1942,  
pp 150-156.

TPA3/TIB Tr No T-4081

*S.L.H.*

Scientific - Minerals/Metals

Index Aeronautics

Jun 53

CTS/DEX

*2315*

Diffusion of Fe and Al and the Formation of  
Intermetallic Phases, by W. Seith,  
GERMAN, per, Z Metallkunde, No 35, 1943, pp 242-  
245.

\*NBS TT 70-57479

Sci-Mat  
Aug 70

Laminar Corrosion in Aluminium Alloys, by F.  
Bollenrath, W. Bungardt

GERMAN, per, Z. Metallk., Vol 34, No 7, pp 160-165,  
Jul 1952.

1  
TFA3/TIB Tr No T 4044

Scientific - Minerals/Metals  
Ministry of Supply, TFA3/TIB/P & TD, Laysdown Road,  
Nottingham, London, S.E.9

1334

Results of Investigations on Eutectic Zinc Alloys,  
by Weiss, E. Blumenthal, and H. Rönnebeck, 2 pp.

GERMAN  
German, per, Z. Metallkunde, Vol XXXIV, September  
1942, p 221.

S.L.A. Tr 15/1956

Scientific - Minerals / ~~and~~ Metals

33,939

Contribution to the Fatigue Bending Strength of Rolled  
Zinc and of Zinc Alloys, by F. Erdmann-Jesnitser, H.  
Hanemann, J. Kohlmeier, 8 pp.

*No 2*  
GERMAN, per, Z. für Metallurg, Vol XXIV, ~~1941~~, 1942  
pp 222-224.

S.L.A.

Scientific - Minerals/Metals

*74,802*

The Crystal Structures of  $\text{Ni}_5\text{Ca}$ ,  $\text{Ni}_5\text{La}$ ,  $\text{Ni}_5\text{Ce}$ ,  
 $\text{Cu}_5\text{La}$ ,  $\text{Cu}_5\text{Ca}$ ,  $\text{Zn}_5\text{La}$ ,  $\text{Zn}_5\text{Ca}$ ,  $\text{Ni}_2\text{Ce}$ ,  $\text{MgCe}$ ,  $\text{MgLa}$   
and  $\text{MgSr}$ , by Hans Nowotny, 21 pp.

GERMAN, per, Z Metallkunde, Vol XXXIV, 1942, pp 247-253.

S.L.A. Tr 1022/1956

39,240

Sci - Chemistry

The Stress Corrosion Behavior of Several  
~~XXX~~ Aluminum-Zinc-Magnesium Alloys After  
Artificial Aging, by Walter Bangardt, Gunther  
Schaitberger, 31 pp.

~~XXXXXXXX~~ GERMAN, per, Z fur Metallkunde,  
Vol XXXV, No 2, 1949, pp 47-55.

SLA 60-14360

Sol  
Feb 62  
X Vol III, No 11

184.691

The Problem of the Strengthening Effect of Latent Elastic Stresses, by G. Masing, 6 pp.

GERMAN, per, Z. Metallkunde, Vol XXXV, Jan 1943, p 56.

SLA 58-697

Sci

Aug 59

95, 671

Structure of Al-Mn and Al-Mg-Si Alloys, by H. Rohrig, E. Kaponick,  
6 pp.

GERMAN, per, Zeits. Metallkunde, Vol XXV, 1943,  
pp 117-120.

S.L.A. No 385/1956

Scientific - Minerals/metals

34, 277

The Resistance of Zinc to Atmospheric Corrosion,  
by Gerhard Schikorr, Ina Schikorr, 17 pp.

GERMAN, per, Zeitschrift fuer Metallkunde, Vol  
XXXV, Sep 1943, pp 175-181.

S.L.A. Tr 600/1955

Sci - Min/Met  
Apr 1957 CTS/dex

50,234

On the Theory of Degassing of Liquid Metal by Scavenging  
by W. Geller, 18 pp. UNCL

GERMAN, per, Z Metallkunde, Vol XXXV, No 11, 1943,  
pp 213-217.

Apply for loan:

Atomic Energy Research Establishment  
Apply through Science Library,  
South Kensington, London.

May 59

Permeability Measurements on Strip Having a  
Thickness of 0.1 to 0.01 mm, by G. Reasmann,  
10 pp.

GERMAN, per; Z. Metallkunde, Jan 1944, pp 131-  
135.

SIA 57-3080

SIA 59-15196

Sci

Aug 58

71,425

Investigations With Porous Sintered Alloys on a  
Copper Base, by Hermann Unckel,

GERMAN, per, Z Metall, Vol XXXVI, 1944, pp 164-169.

AEC Tr-4019

Sci - Phys

May 60

117,374

Relationship between Dimensional Changes of Metal  
and Powders and their Properties, by H. Davohl and  
W. Ritz, 14 pp.

GERMAN, per, Z. Metallkunde, Vol XXVI, No 8,  
1944, pp 197-200. (Loan Copy Only).

SLA 57-3001

Sci

AUG 58

71,416

Diffusion Behaviour of Rare Metal Platings,  
Part I, by H. Buckle, 13 pp.

GERMAN, per, Z. fuer Metallkunde, Vol XXXVII,  
No 1, 1946, pp 47-52.

CSIRO

Sci - Min/Met  
May 62

196, 422

OTS 62-18418  
SLA 63-20972

Bückle, Helmut.

STRUCTURE AND MICRO-HARDNESS OF BINARY  
AND TERNARY SYSTEMS OF COLUMBIUM,  
TANTALUM, MOLYBDENUM AND TUNGSTEN.

[29 Sep 47] [7p] 1 ref

Order from SLA \$1.10

TT-63-20971

Trans. of [Zeitschrift für Metallkunde] (West Germany)  
1946 [v. 37, no. 1/2] p. 53-56. (Abstract available)

DESCRIPTORS: \*Powder metallurgy, Sintering,  
\*Tungsten alloys, \*Molybdenum alloys, \*Tantalum al-  
loys, \*Niobium alloys, Hardness, Microstructure,  
Phase studies,

A high vacuum sintering installation for maximum  
temperatures is described for the manufacture of  
sintered bodies from high-melting metals. Tungsten,  
molybdenum, columbium and tantalum, as well as  
their binary and ternary alloys were prepared in the  
(Metallurgy--Nonferrous Metals, TT, v. 11, no. 5)  
(over)

TT-63-20971

I. Bückle, H.

Office of Technical Services

On the Effect of Air on Liquid Zinc, by Erich  
Gebhardt, 13 pp.

GERMAN, per, Zeits fuer Metallkunde, Vol XXXVII, 1946,  
pp 87-96.

S. L. A. Tr 595/56

Bci - Min/Met

38,344

Aug 56 CTS/dex

Diffusion Studies in Multiphase Alloys, by H. Buckle.  
GERMAN, per, Z. Metallkde, Vol 37, 1946, pp 175-181.  
\*NTIS/USDC/NBS TT 71-55044  
Available NBS Only

May 71

~~The Diffusion Behavior of Rare Metal Platings,~~  
by H. Buckel.

GERMAN, per, Z. Metallkunde, Vol XXXVII, No 1,  
1946, pp 175-181.

ASLIB-034

Sci  
Aug 58

70,866

Nowotny, Hans.  
THE CRYSTALLINE STRUCTURE OF  $\text{Cu}_2\text{Te}$ . [1963]  
5p. (figs. refs. omitted).  
Order from SLA \$1.10

63-18483

Trans. of [*Zeitschrift für Metallkunde*] (West Germany)  
1946, v. [37] [no. 1/2] p. 40-42.

DESCRIPTORS: \*Copper alloys, \*Tellurium alloys,  
Crystal structure, Crystal lattices, Phase studies,  
Microstructure

(Metallurgy--Structural, TT, v. 10, no. 11)

63-18483

I. Nowotny, H.

Office of Technical Services

X-Ray Stress Measurements With Steels Possessing  
Different Carbon Contents and Different Carbon  
Contents and Different Structures, by Franz  
Bollenrath, Viktor Hauk, 14 p.

GERMAN, per, Zeit fur Metallkunde, 1946,  
Vol XXVII, No 6, pp 161-167.

SLA 59-20598

Sci  
Apr 60  
Vol III, No 2

113, 590

Bückle, H.  
DIFFUSION BEHAVIOR OF NOBLE METAL CLADDING  
II. 20 Dec 48, 10p. (figs. formulae omitted).  
Order from SLA \$1.10

62-18497

Trans. of [Zeitschrift für Metallkunde] (West Germany)  
1946 [v. 37, no. 6] p. 175-181.

DESCRIPTORS: \*Rare earth elements, \*Metals, Alumi-  
num, Silver, Zinc, Cadmium, \*Diffusion, Penetration,  
Crystal structure, Heating, Curve fitting.

A new index is suggested for the diffusion behavior of  
claddings. It is shown mathematically that the curve  
 $d = f(t)$  as a rule is a parabola. After prolonged  
periods of heating, it may be approximated by its  
tangent. The penetration depths at various tempera-  
tures on the silver side are determined for the pairs of  
metals Ag/Al, Ag/Zn and Ag/Cd. In the pair of metals  
Ag/Zn, a swelling of the intermediate layers formed  
(Metallurgy--Structural, TT, v. 9, no. 4) (over)

62-18497

I. Bückle, H.

Office of Technical Services

Study of the Diffusion of Some Elements in Metals,  
by J. Hauk.

GERMAN, per. Z. Metallkde. Nos 37-38, 1946-47,  
pp 49-55.

\*NBS TT 70-57521

Sci-Mat

Aug 70

Fröhlich, K. W.  
CONTACT MATERIALS WITH A SILVER BASE.  
5 Jan 49, 6p. (figs. tables omitted).  
Order from SLA \$1.10

62-18377

Trans. of [Zeitschrift für Metallkunde] (West Germany)  
1947 [v. 38] no. 1, p. 29-32.

DESCRIPTORS: \*Silver alloys, Physical properties,  
Hardening, Silicon alloys, Nickel alloys, Tungsten al-  
loys, Iron alloys, Zinc alloys, Powder metallurgy.

The applicability of pure silver as a contact material is limited by its softness, its tendency to stick, its relatively low melting point and its sensitivity to filming by sulfur. These four factors cause, according to the conditions of switching, rather strong plastic deformation, sticking, burning (i.e. actually spitting) of the contact material and contact resistance. To harden silver for (Metallurgy--Nonferrous Metals, TT, v. 9, no. 4)

(over)

62-18377

I. Fröhlich, K. W.

Office of Technical Services

The Structure of Galvanic Alloy Deposits. IV.  
Silver - Cadmium Alloys, by Ernst x Raub,  
Bernhard Wullhorst, 34 pp.

GERMAN, per, Z Metallkunde, Vol XXXVIII, 1947,  
pp 33-41.

AEC Tr-4521

Sci  
Jun 61

157,744

Hunger, Johanna and Seeliger, R.  
THE PRESENTATION OF RELIEF IN THE ULTRA-  
MICROSCOPE BY MEANS OF PRESSURE AND  
DOUBLE LAYER REPLICAS. [1960] [7]p. 6 refs.  
Order from SLA ml\$1.80, ph\$1.80 60-18817

Trans. of [Zeitschrift für Metallkunde] (West Germany)  
1947, v. [38]2, Mar, p. 65-69.

The relief to be represented is pressed in purest  
aluminum, which, after electrolytic oxidation, gives  
a standard aluminum-oxide replica film for examina-  
tion by transmitted radiation in the electron microscope  
(pressure replica). Oxide or pressure replicas are  
also coated with a thin lacquer film.

60-18817

1. Metals--Surfaces
2. Title: Pressure replica
3. Title: Double-layer replica
- I. Hunger, J.
- II. Seeliger, R.

142,792

Office of Technical Services

(Metallurgy--Structural, TT, v. 5, no. 2)

Contribution to the Problem of Ingo Segregation, by E. Schail.

GERMAN, per, Z. fur Metallkunde, Vol XXXVIII,  
pp 69-75.

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Sci - Min/Met

Apr 62

192, 737

Mahl, H.  
ELECTRON-MICROGRAPHS OF STEEL FRACTURES.  
[1960] [3]p. 4 refs.  
Order from SLA ml\$1.80, ph\$1.80 60-18819

Trans. of [Zeitschrift für Metallkunde] (West Germany)  
1947, v. [38]2, June, p. 186-188.

The pressure-replica process has enabled electron-micrographs of fractures to be made. The picture of the fracture discloses details of the structure, in a simple manner which by other methods could only be obtained with considerable trouble. (Author)

(Metallurgy--Ferrous Metals, TT, v. 5, no. 2)

60-18819

1. Steel--Fracture  
I. Mahl, H.

142,819

Office of Technical Services

62-18376

Graf, L.  
STRESS CORROSION OF HETEROGENEOUS ALLOYS.  
9 May 49, 10p. (figs. refs. omitted).  
Order from SLA \$1.10 62-18376

I. Graf, L.

Trans. of [Zeitschrift für Metallkunde] (West Germany)  
1947 [v. 38, no. 7/8] p. 207-212.

DESCRIPTORS: \*Alloys, \*Corrosion, \*Stresses,  
Sensitivity, Electrochemistry, Phase studies, Crystal  
structure.

(Metallurgy--Corrosion, TT, v. 9, no. 4)

Office of Technical Services

Note on the Reactivity of Water Vapor and Hydrogen Peroxide With Light Metals at Higher Temperatures, by Oswald Kubaschewski, Hans Ebert, 7 pp.

GERMAN, per, Z. Metallkunde, Vol. XXXVIII, 1947, pp 232-235.

AEC Tr 2413

Sci - Minerals/Metals, Chemistry

32,488

The Study of the Ferromagnetic Transition Temperature  
as A Function of Composition, by W. Gerlach.

GERMAN, per, Z. Metallkde, Vol 38, 1947, pp 275-280.

\*NTIS/USDC/NBS TT 71-55049

Available NBS Only

May 71

Reactions of Molten Zinc-Aluminum Alloys With Solid  
Iron, by E. Gebhardt, I. Schmidt

GERMAN, per, Zeitschrift für Metallkunde, Vol XXXIX,  
No 11, 1947, pp 321-325.

Brutcher Jr 3128

Scientific - Minerals/Metals  
CTS/DEX Price \$6.90

5922

The Temperature Dependence of the Elastic  
Modulus of Some Pure Metals, by W. Koster.  
GERMAN, per, Z. Metallkde., Vol 39, 1948,  
pp 1-9.

\*NTIS/USDC/NBS TT 71-55058  
Available NBS Only

May 71

62-18402

I. Köster, W.

Köster, W.  
ELASTICITY MODULUS OF PURE METALS AS A  
FUNCTION OF THE TEMPERATURE. 18 Feb 49, 10p.  
(figs. tables, refs. omitted).  
Order from SLA \$1.10

62-18402

Trans. of Z[ei]tschrift f[ür] Metallkunde (West  
Germany) 1948 [v. 39, no. 1] p. 1-9.

DESCRIPTORS: Temperature, \*Metals, \*Elasticity.  
Melting, Measurement, Vibration mechanisms.

The modulus of elasticity and its temperature depend-  
ence were measured for 32 very pure metals from  
-180° up to the melting point or up to about 1000° with  
the aid of the determination of the natural frequency of  
transversely vibrating bars.

(Metallurgy, TT, v. 9, no. 3)

Office of Technical Services

62-18403

I. Köster, W.

Köster, W.  
ON A SPECIAL PHENOMENON IN THE TEMPERA-  
TURE COURSE OF THE MODULUS OF ELASTICITY  
AND DAMPING OF METALS SUCH AS Cu, Ag, Al AND  
Mg. 3 Mar 49, 5p. (figs. tables refs. omitted).  
Order from SLA \$1.10

62-18403

Trans. of Zeitschrift für Metallkunde (West Germany)  
1948, v. 39 [no. 1] p. 9-12

DESCRIPTORS: \*Magnesium, \*Aluminum, \*Silver,  
\*Copper, \*Damping, \*Elasticity, Temperature.

The temperature dependence of the modulus of elasticity  
and the damping of Cu, Ag, Al and Mg were determined.  
These four metals show, over an extensive temperature  
range, an unexpected lowering of the modulus of elasti-  
city and an increase of damping. The height at which the  
bulge of the curve occurs depends on the degree of  
purity of the metals. The phenomenon is therefore due to  
(Metallurgy, TT, v. 9, no. 3)  
(over)

Office of Technical Services

The Hardening of Iron-Zinc and Cobalt-Zinc Alloys,  
by J. Schramm, A. Mohrheim.  
GERMAN, per, Z fuer Metallkunde, Vol XXXIX, No 3,  
1948, pp 71-78.  
BISI 3614

Sci - M/M  
May 64

258,896

62-18404

Köster, W. and Rauscher, W.  
RELATIONSHIPS BETWEEN THE MODULI OF ELAS-  
TICITY OF BINARY ALLOYS AND THEIR STRUC-  
TURE. 17 Mar 49, 12p. (figs refs. omitted)  
Order from SLA \$1.60 62-18404

Trans. of Z[e]i[t]s[chr]i[t] f[ür] Metallkunde (West Ger-  
many) 1948 [v. 39, no. 4] p. 111-120.

DESCRIPTORS: \*Alloys, \*Crystal structure, Eutectics,  
Intermetallic compounds, \*Elasticity, Lattices, Phase  
studies, Chemical bonds.

A comprehensive review is given with respect to the  
concentration dependence of the modulus of elasticity of  
binary alloys. An investigation was made of continuous  
mixed crystal series, limited mixed crystal series,  
eutectic alloy series and alloys with intermetallic  
phases. The most important structural systems were  
(Metallurgy--Structural, TT, v. 9, no. 2) (over)

I. Köster, W.  
II. Rauscher, W.

Office of Technical Services

Etudes magnetiques et electriques de barreaux  
frittes de nickel-carbonyle, by W. Gerlach,  
J. Von Rennenkampf, et al, 27 pp.  
GERMAN to FRENCH, per, Z fuer Metallkunde, Vol XXXIX,  
1948, p 130.

Reverse Translation  
CEA-A-1554

Sci  
Sep 64

62-18351

Jellinghaus, W.  
THE MAGNETIZATION PROCESS IN THE CASE OF  
IRON-NICKEL-ALUMINIUM-COBALT-AND COPPER-  
MAGNET ALLOYS WITH A PREFERRED DIRECTION.  
25 Apr 59, 8p. (figs. tables omitted).  
Order from SLA \$1.10

62-18351

Trans. of Zelts[chrift] f[ür] Metallkunde (West Ger-  
many) 1948, v. 39, no. 2, p. 52-56.

DESCRIPTORS: \*Magnetic alloys, Copper alloys,  
Cobalt alloys, Aluminum alloys, Nickel alloys, Iron  
alloys, Heat treatment, Magnetic fields, \*Magnets,  
\*Magnetism.

Starting with a completely non-magnetic state, internal  
magnetization curves are obtained with small fields  
which with amplitudes of less than  $H_c$  in the preferred  
direction, show less magnetization than in the trans-  
(Metallurgy, TT, v. 9, no. 2) (over)

I. Jellinghaus, W.

Office of Technical Services

62-18350

I. Jesnitzer, F. E.

Jesnitzer, F. E.  
THE EFFECT OF THE WELDING TIME IN SPOT  
WELDING OF ALUMINIUM ALLOYS. 29 Mar 50, 16p.  
(figs. tables omitted) 19 refs.  
Order from SLA \$1.60

62-18350

Trans. of Zeitschrift für Metallkunde (West Germany)  
1948 [v. 39, no. 10] p. 303-312.

DESCRIPTORS: \*Aluminum alloys, \*Spot welding, Spot  
welds, Welded joints, Electrodes, Time.

Weld seams on single-notched spot-welds produced with  
various periods of welding and intensities of welding  
current, using six different aluminum-magnesium al-  
loys, have been investigated with respect to strength and  
structure. Accordingly, with long welding times of 20,  
30 and more cycles duration (corresponding to 1/3,  
1/2 and more seconds), weld seams were obtained  
(Metallurgy, TT, v. 9, no. 2) (over)

Office of Technical Services

Phase Boundaries in Binary Metallic Systems, by  
Ortrud von Goldbeck, 10 pp.

GERMAN, per, Z Metallkunde, Vol XXXIX, 1948, pp 213-  
216.

Sci - Minerals ~~Metals~~

S.L.A. Tr 1064/1956

39,256

Diffusion in Metals, by O. Kubaschewski.  
GERMAN, per, Z. Metallkde., Vol 39, 1948,  
pp 216-228.

\*NTIS/USDC/NBS TT 71-55063

Available NBS Only

May 71

III. The Oxidation Mechanism of Metals  
and Alloys, by Oswald Kubaschewski, 6 pp.

GERMAN, per, Z. Metallk, Vol XXXIX, 1948,  
pp 218-220.

AEC Tr 2410

Sci - Minerals/Metals, Chemistry

Apr 56

33,267

Wellinger, Karl and Hofmann, Artur.  
TESTING METALLIC MATERIALS IN THE COLD.  
[26 Sep 49] [18p] 19 refs  
Order from SLA \$1.60c

TT-63-20830

Trans of Z[eitschrift für] Metallkunde (West Germany)  
1948, v. 39, no. 8, p. 233-239.

DESCRIPTORS: \*Aluminum, \*Aluminum alloys,  
\*Magnesium alloys, \*Manganese alloys, Low  
temperature research, Tests, \*Tensile properties,  
Mechanical properties, Crystallization.

(Metallurgy--Light Metals, TT, v. 11, no. 4)

TT-63-20830

I. Wellinger, K.  
II. Hofmann, A.

Office of Technical Services

The Rolling Texture of Zinc and Zinc Alloys and  
Its Influence on the Working Properties  
Especially the Deep-Drawing Characteristics,  
by W. Hofman, B. Trautmann.

GERMAN, per, Z Metallkunde, Vol XXXIX, No 10,  
1948, pp 293 -- 303.

Alum Lab, Ltd, Tr  
OT/1598

Sci - Min/met  
Aug 57

51,341

V  
Information on the Manganese-Bearing Structural  
Constituent in Industrial Aluminium Alloys,  
by H. J. Seeman, M. Dudek, 2 pp.

GERMAN, per, Zeit fuer Metallk, Vol XXXIX,  
Oct 1948, pp 319-320.

S.L.A. Tr 527/56

Sci - Minerals/Metals

Aug 1956

37,112