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AEC Tr 2638

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AEC SC-1-T-204

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Sci - Min/met
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*JPRS for Army Rocket and
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Sci - Min/metals
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Sci - EM Minerals/Metals

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Order from ATS \$13.25 ATS-30N54G

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1950, v. 47, no. 2, p. 97-101.

DESCRIPTORS: *Gallium alloys, *Silicon alloys, Al-
loys, Grains (Metallurgy), Processing.

I. Kessler, H.
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Original copy poor quality; available on loan also

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DESCRIPTORS: *Titanium, *Zirconium, Melting,
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Sci-M&M

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Order from SLA \$1.10

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1956, v. 47, p. 418-420.

DESCRIPTORS: *Copper, *Tellurium, *Phase studies,
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(Metallurgy--Structural, TT, v. 10, no. 12)

I. Patzak, I.

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*NTIS/USDC/NBS TT 71-55061

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ASLIB-GE65

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ON THE MAGNETIC ROLLING ANISOTROPY OF
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[Thesis Halle U. (East Germany) 1955. [1963] 15p 15
15refs
Order from SLA \$1.60

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Trans. of Zeitschrift für Metallkunde (West Germany)
1957, v. 48, p. 26-32.

DESCRIPTORS: Theses, *Nickel alloys, *Iron alloys,
*Anisotropy, Rolling mills, Cold working, Heat treat-
ment, Magnetic properties, Crystal structure.

The magnetic anisotropy of reversible Fe-Ni alloys was
measured after cold-rolling as a function of the degree
and direction of rolling and of heat treatment. The re-
sults are interpreted in terms of disorder affecting the
unit cell of the FeNi_3 superstructure. The direction
and relative magnitude of the anisotropy are calculated
and compared with experiment. (Author)

1. Title: Cubic metals

I. Bunge, H. -J.

II. Müller, H. G.

III. Halle U. (East Germany)

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

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DESCRIPTORS: *Tantalum, *Oxygen, *Oxidation,
*Solubility, Chemical reactions.

(Chemistry--Physical, TT, v. 6, no. 1)

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OTS 61-18876
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Sci - Min/Met
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(Metallurgy--Nonferrous Metals, TT, v. 11, no. 11)

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Isomerism of the Type AX_3Y Compounds, by
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Sintered Tungsten by the Measurement of Residual
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7 pp.

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AEC-tr-5315

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Agency: Picatinny Arsenal B-10695-B
P. O. Req. 18-70b 14 Aug. 69

Title: Physical Properties of Superstructures with
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Author: Koster, W. and W. Lang.

Source: Z. Metallk. Vol. 49. (1958).

Language: German.

Special instruction: Please translate & type 1 copy only.

63-18818

Lohberg, Karl and Westpahl, Herbert.

RETROGRESSION AND RECONSTRUCTION OF THE
OMEGA-STRUCTURE IN TITANIUM-VANADIUM AND
TITANIUM-MOLYBDENUM ALLOYS. [1963] 15p (figs
[refs] omitted)

Order from SLA \$1.60

63-18818

I. Lohberg, K.
II. Westpahl, H.Trans. of *Zeitschrift für Metallkunde* (West
Germany) 1958, v. 49, no. 9, p. 449-455.DESCRIPTORS: *Molybdenum alloys, *Titanium alloys,
*Vanadium alloys, Hardness, Annealing, Heat treat-
ment, Phase studies,The formation and retrogression of the ω -structure of
titanium-molybdenum alloys were investigated at
various temperatures by means of hardness, length-
change, and susceptibility measurements, and by means
of X-ray-graphic and metallographic observations. For
(Metallurgy--Structural, TT, v. 10, no. 10) (over)

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Various Effects of Vacuum Melting on the Gas
Content of Metals, by I. Pfeiffer. UNCL.

GERMAN, per, Z fuer Metallkunde, Sep 1958,
pp 455-460.

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OXYGEN DETERMINATION IN ZINC AND MAGNE-
SIUM. [1961] (refs., 2 tables omitted).
Order from SLA \$1.10 61-20692

Trans. of Z[eitschrift für Metallkunde] (Germany)
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DESCRIPTORS: *Zinc, *Magnesium, Chemical anal-
ysis, *Oxygen, Determination.

The procedure is based on $ZnO + H_2S = ZnS + H_2O$.
Hydrogen sulfide was conducted over the zinc melt at
550° with hydrogen as carrier. The water which is
formed is caught in a U-shaped absorption tube with
phosphor pentoxide and weighed. In this manner oxy-
gen content between 0.0004 and 0.0006% was deter-
mined for various types of zinc in compact form. Re-
sults show that the determination of O_2 in metallic mag-
nesium is made in the same way as in zinc. (Author)

I. Hartmann, H.
II. Hofmann, W.
III. Gerhard, S.

(Chemistry--Physical, TT, v. 7,
no. 2)
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Vaporization in Floating Zone, by G. Ziegler, 5 pp.
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Experience With Japanese Light Optical Method
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Deformation Anisotropy of Super-Saturated
Solid Solution Crystals - Precipitation Isoperas,
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GERMAN, per, Z fuer Metallkunde, Vol XLIX, No 10,
1958, pp 517-523.

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Dickenscheld, W[erner] and Seemann, H[ugo] [coed].
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EFFECT IN COLD AND WARM AGED ALUMINUM-
COPPER MAGNESIUM ALLOYS. 16 Dec 60 [20]p.

18 refs.

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1. Aluminum-copper-
magnesium alloys--Test
methods

2. Title: Press effect

I. Dickenscheld, W.
II. Seemann, H. J.

Office of Technical Services

(Metallurgy, TT, v. 5, no. 9)

Formation of a Ternary Carbide During the Attack
of Iron-Carbon Alloys by Molten Zinc, by
J. Leo Huotter, Hans H. Stadelmaier, 4 p.

GERMAN, per, Zeitschrift fur Metallkunde, 1958,
Vol XLIX, No 11,

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Vol 2, No 8

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Richter, H(erbert) and Wassermann, G(unter).
ON THE EFFECT OF DEFORMATIONS ON THE
MECHANICAL PROPERTIES OF A PRECIPITATION
HARDENING ALUMINIUM ALLOY. (1961).
Order from FRI

FRI Trans-137

Trans. of Zeitschrift für Metallkunde (West
Germany) 1958, v. 49, no. 11, p. 549-556.
Another translation is available from SLA ml\$2.70,
pt\$4.80 as 60-18903 [1960] 26p.

DESCRIPTORS: *Aluminum alloys, *Mechanical prop-
erties, *Hardening.

For abstract see Technical Translations 4: 687, 1960.

(Metallurgy, TT, v. 6, no. 1)

61-22415

I. Title: Precipitation
hardening

1. Richter, H.

II. Wassermann, G.

III. FRI Trans-137

IV. Fulmer Research Inst.,
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On the Effect of Deformations on the Mechanical
Properties of a Precipitation Hardening
Aluminium Alloy, by H. Richter, G. Wassermann.

GERMAN, per, Z. Metallk, Vol. II, No 11,
1958, pp 549-556.

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Studies on the Tantalum - Nitrogen System, by Erich
Gebhardt, Hans-Dieter Beghezzi, Wolfgang Durtschnabel,
12 pp.

No 11,

GERMAN, per, Z. Metallkunde, Vol ~~XXX~~ XLIX/1958,
pp 577-583.

AEC-Tr-3678

Sci - Chem

Jul 59

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61-10566

Bungardt, Karl and Weigand, Hans-Hermann.
INFLUENCE OF HEAT TREATMENT ON SOME
PROPERTIES OF CORROSION RESISTANT NICKEL-
MOLYBDENUM ALLOY: (Einfluss der Wärmebehand-
lung auf Einige Eigenschaften von Korrosions-
beständigen Nickel-Molybdän-Legierungen). [1960]

[19]p. 9 refs.

Order from SLA mi\$2. 40, ph\$3. 30

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Trans. of Z[eitschrift für] Metallkunde (West Germany)
1959, v. 50 [no. 1] p. 11-18.

The effect of a heat treatment on microstructure, hard-
ness, strength and corrodibility was tested with four
corrosion resistant nickel-molybdenum alloys (with and
without an addition of chromium). It was found that a
change in these properties depends on the kind of pre-
cipitate which is formed during the heat treatment. The
results are discussed. (Author)

(Metallurgy--Structural, TT, v. 5, no. 7)

1. Molybdenum-nickel alloys--
Hea. treatment
1. Bungardt, K.
II. Weigand, H.

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STEN ALLOYS. Kleffer, R.; Sedlatschek, K.; Braun, H. Trans-
lated for Sandia Labs., Livermore, Calif., from Z. Metallk.; 50:
18-24 (1959). 19p. Dep. NTIS.

metallurgy; refractories; translations 11F, 11B

MN-25 P NSA

Welding Device for Thin Thermo-Couples, by
H. Specht.
GERMAN, per, Zeitschrift für Metallkunde,
Vol. 50, No. 36, 1959
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Sci -
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Electron Microscopy of Thin Metal Sections Cut With a
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pp 37-41.

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Preparation of Germanium Single Crystals from
the "Floating Crucible", by Jan Goorissen,
Frithjof Karstensen.

GERMAN, per, Z. Metallkde, Vol 50, No 1, 1959,
pp 46-50. P911027367

AEC ORNL-tr-1441

Sci/Physics
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62-14764

Bohm, H.

DISCONTINUOUS PRECIPITATION IN COPPER-INDIUM ALLOYS. [1962] [18]p. 14 refs.

Order from SLA \$1.60

62-14764

Trans. of Zeit[schrift] für Metallkunde (West Germany) 1959, v. 50, no. 2, p. 87-93.

DESCRIPTORS: *Copper alloys, *Indium alloys, Precipitation, Microstructure, Phase transitions.

The precipitation of δ -phase from supersaturated α solid solution in copper alloys with 4, 6, 10, 12.5 and 15% In was investigated in the temperature range 200 to 480° C. From the values of growth rate and lamellar spacing, the activation energy for grain-boundary diffusion is found to be 20 K cal/g-at. at 15% In, rising to 23 K cal/g-at. at 6% In. In the range in which the discontinuous precipitate is not optically resolvable, occurring as grain-boundary bands, the growth (Metallurgy--Structural, TT, v. 8, no. 3) (over)

I. Bohm, H.

GB/33/169

GB/39/

not/m/

Office of Technical Services