

ALTAI MOUNTAINS, M.M.

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3

The Kolesovka deposit of the Mama-Vitina mica-bearing region. M. N. Althausen. *Trans. All-Union Sci. Research Inst. Iron Mining*. (U. S. S. R.) No. 66, 5-64 (in English 65 7) (1955).—The area investigated includes 1.3 sq. km. in eastern Siberia at latitude 58°12' N, longitude 113°10' E. A massif of pegmatite up to 2 km. wide cuts gneisses and quartzites. The areas of com. value are confined to lenses and irregular bodies of giant-crystal pegmatite up to 150 m. long and several m. thick. With depth com. rock contg. more than 20 kg. per ton can be traced down 18 m. Muscovite and biotite occur chiefly as irregular plate- and wedge-shaped aggregates up to 1 m. square and 10-20 cm. thick. Structural and petrographic evidence and chem. analyses show that the oxides of Bi, Ti, Al, Fe, Mg, Na and K, in addn. to water, were introduced into the gneisses from the pegmatite magma.

R. H. Beckwith

COMMON ELEMENTS

INTERNAL INDEX

ASB-516 METALLURGICAL LITERATURE CLASSIFICATION

Al. ¹² Geochemistry

Br Abs

ALTAHAUSEN, M. N.

Occurrence of tin in Central Kazakhstan. M. N. Althausen (Comp. rend. Acad. Sci. U.R.S.S., 1960, 97, 166-167).—The occurrence of Sn has been established in: pegmatite bodies and veins containing cassiterite; greisens and quartz veins and veins; contact Fe deposits; Cu, polymetallic, and ammonite deposits, and in alluvial, eolian, and glacial deposits. The ages of the explored fields are highly diverse. The industrial value of these deposits is discussed. U. S. P.

AL'TGAUZEN, M.N.; AMIRASLANOV, A.A.; VOL'FSON, F.I.; KREYTER, V.M.;
LEVYTSKIY, O.D.; MALINOVSKIY, P.M.

Academician Iosif Fedorovich Grigor'ev; on the 70th anniversary
of his birth. Sov. geol. 3 no. 9:162-155 S '60.

(MIRA 13:11)

(Grigor'ev, Iosif Fedorovich, 1890-)

AL'TGAUZBN, M.N.

Metallogenetic research. Sov. geol. 3 no. 11:125-133 N '60.
(MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo
syr'ya.

(Ore deposits)

AL'TGAUZEN, M.N.; GINZBURG, I.I.; DUBOVSKAYA, M.V.; YERSHOV, A.D.;
MELKOV, V.G.; OS'KIN, N.I.; ROZHKOVA, Ye.V.; STRAKHOV, N.M.;
KHRUSHCHOV, N.A.; SHMANECHKOV, I.V.; SHCHERBAKOV, D.I.;
YANSHIN, A.L.; AMERASLANOV, A.A.; GOTMAN, Ya.D.; ZUREEV, I.N.;
KOROVYAKOV, I.A.; ORLOVA, P.V.; PASOVA, F.G.; SAAKYAN, P.S.;
TERENT'YEVA, K.F.; SHANOBSKIY, L.M.; CHERNOSVITOV, Yu.L.;
SHCHERBINA, V.V.

IUri Konstantinovich Goretskii; obituary. Sov.geol. 4 no.12:
153-155 D '61. (MIRA 15:2)
(Goretskii, Iuri Konstantinovich, 1912-1961)

AL'TGAUZEN, M.N.

"Prospecting for uranium deposits" by A.A. Iakzhin. Reviewed
by M.N. Al'tgauzen. Sov.geol. 5 no.11:135-138 H '62.
(MIRA 15:12)

(Uranium ores)

(Iakzhin, A.A.)

AL'TGAUZEN, M.N.

V.I.Vernadskii's role in the organization of systematic search for
radioactive ores in our country. Sov.geol. 6 no.3:57-60 Mr '63.
(MIRA 16'3)

(Radioactive prospecting)

(Ore deposits)

FUSTOVALOV, L.V., otv. red.; AL'TGAUZEN, M.N., doktor geol.-min. nauk, red.; DOLGOPOLOV, N.N., red.; IVENSEN, Yu.P., doktor geol.-min. nauk, red.; VLASOV, K.A., doktor geol.-min. nauk, red.; POZHARITSKIY, K.L., doktor geol.-min. nauk, red.; SERDYUCHENKO, D.P., doktor geol.-min. nauk, red.

[Metals in sedimentary formations; ferrous metals, non-ferrous light metals] Metally v osadochnykh tolshchakh; chernye metally, tsvetnye legkie metally. Moskva, Izd-vo "Nauka," 1964. 443 p. (MIRA 17:8)

1. Akademiva nauk SSSR. Laboratoriya osadochnykh poleznykh iskopayemykh. 2. Chlen-korrespondent AN SSSR (for Pustovalov, Vlasov).

PUSTOVALOV, L.V., otv. red.; AL'TGAUZEN, M.N., doktor geol.-
min. nauk, red.; VLAS' V. K.A., red. [deceased]; DOLGOPOLOV,
N.N., red.; IVENSEN, Yu.P., doktor geol.-min.nauk, red.;
POZHARITSKIY, K.L., doktor geol.-min. nauk, red.;
SERDYUCHENKO, D.P., doktor geol.-min. nauk, red.; KRASNOVA,
N.E., red.

[Metals in sedimentary formations; heavy nonferrous, minor
and rare metals] Metally v osadochnykh tolshchakh; tiazhelye
tsvetnye metally malye i redkie metally. Moskva, Nauka,
1965. 389 p. (MIRA 19:1)

1. Moscow. Laboratoriya osadochnykh poleznykh iskopayemykh.

SHCHERBAKOV, D.I., akademik, glav. red.; YEROFEYEV, B.N., otv. red.;
NALIVKIN, D.V., akaderik, red.; AL'TGAUZEN, M.P., red.;
DANCHEV, V.I., red.; MOZESON, D.L.; LEVCHENKO, S.V., red.;
CHAYKOVSKIY, V.K., red.; SHEYNMAN, V.S., red. izd-va;
DOROKHINA, I.N., tekhn.red.; LAUT, V.G., tekhn.red.

[Geochemistry, petrography, and mineralogy of sedimentary
formations] Geokhimiia, petrografiia i mineralogiia osadoch-
nykh obrazovani. Moskva, 1963. 457 p. (MIRA 16:12)
(Rocks, Sedimentary)

AL'TGAUZEN, N. F.

"Exudative Diatheses in Children," Med. Sestra, No.3, 1949

CA

ALTGAUSEN, H.F.

11F

Physiological mechanism of effectiveness of oxygen

therapy in so-called secondary asphyxia in newborn children
I. A. Arshavskii, N. P. Altgausen, and A. A. Benedikt
(Ministry Health, Moscow). *Pediatrya* 1952, No. 2, 20-
31.—In attacks of secondary asphyxia in premature babies,
respiration stops during expiration. The administration of
O₂ is effective owing to stimulation of the respiratory center.
Vapors of NiI₂ produce a similar result. G. M. K.

AL'TGAUZEN, N. N.

"X-Ray Diagnosis of Tumors of the Lateral Cavities of the Brain,"
Vop. Nevrokhirurg., 12, No.1, 1948

Inst. Neurosurgery im. Burdenko, AMS USSR

AL' TGAUZEM, N.N.

[Neuroroentgenology applied to children] Neurorentgenologiya
detskogo vozrasta. Moskva, Medgiz, 1956. 206 p. (MLBA 10:4)
(RADIOLOGY, MEDICAL) (PEDIATRICS)

ALTGAUZEN N. N.

EXCERPTA MEDICA Sec 7 Vol 13/1 Pediatrics Jan 59

295. NEURO-ROENTGENOLOGY IN CHILDHOOD (Russian text) - Altgauzen
N. N. - MOSCOW 1956 (208 pages)

The book is a practical manual intended primarily for pediatricians interested in neuropathology, roentgenology and neurosurgery. In chapter I, the appearances on roentgenological investigation of the skull in children are described; special methods such as pneumoventriculography, pneumoencephalography, angiography and fistulography are included; this chapter contains also details concerning the anatomical peculiarities of the skull in children of different ages. Chapter II deals with anatomical variants and anomalies of skull and brain development. Chapter III adduces data concerning some forms of intrauterine and early postnatal lesions of the skull, meninges and brain. In chapter IV the signs of hydrocephalus are described; contrast methods of investigations are included in this chapter. Chapter V deals with injuries to skull and brain; besides acute craniocerebral trauma, some sections of the chapter discourse on the sequelae and complications of craniocerebral trauma. In chapters VI, VII, VIII, IX and X the diagnosis of tumours of the soft tissues of the head, cranial bones and brain is detailed; in addition, chapter IX contains data concerning calcified formations of neoplastic and non-neoplastic character in meninges and brain; chapter X discusses pneumography in cerebral tumours. Finally, in chapter XI the roentgenological features of some forms of epilepsy are described. A bibliographic index of the Russian and foreign literature is added. The text is illustrated by numerous roentgenograms and diagrams and brief descriptions of clinical observations.

(S)

117 AND 118 (MILS) PROCESSES AND PROPERTIES INDEX 119 AND 120 (MILS)

2

M
ALTGAUZEN, O.N.

*Dispersion-Hardening of Iron-Molybdenum Alloy. O. N. Altgauzen and B. G. Ildschitz (*Zhurnal Tekhnicheskoy Fiziki (J. Tech. Physics)*, 1934, 1242-1245).—[In Russian.] The changes in electrical resistance, magnetic induction, and coercive force of an alloy of iron with 18.8% molybdenum and 0.06% carbon have been investigated during ageing at 300°-750° C. after quenching at 1350° C.—N. A.

ASME-ISA METALLURGICAL LITERATURE CLASSIFICATION

117 AND 118 (MILS) 119 AND 120 (MILS)

ALTSZWEIN, O. I.

iron-manganese-aluminum alloys with high permeability and low coercivity. H. G. Lipsitz and O. N. Altshuler. *Russkaya Metallovedeniya* No. 4, No. 2, 25-31 (1957); *Abstracts (in Metals & Alloys)* 8, 104. Steels with the compn.: 0.09% C, 4.02 Mn, 3.53 Al; 0.19 C, 3.69 Mn, 2.75 Al; 0.04 C, 2.70 Mn, 1.75 Al; 0.10 C, 5.46 Mn, 3.57 Al were melted in an induction furnace in air atm. They were forged easily at 800-950°. Annealed in H₂ at 1100° and measured ballistically the bars of steel showed that during the first interval of annealing, 5-10 hrs., the coercive force drops quite noticeably; during continued annealing it decreases but much more slowly. The lowest H_c values obtained with these steels were 0.24, 0.24, 0.30, 0.10 in the order corresponding to the above analyses when they were annealed in H₂. Annealed in air at 1100-1250° for 7 hrs. the same steels gave minima of 0.38, 0.26, 0.70, 0.30-ersteds. Permeability increases with the reduction of coercive force, but while longer annealing reduced the latter, permeability decreases after reaching a max. The steel has 1.5 times greater resistance than 4% Si transformer steel. M. W. B.

ASB-514 METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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1ST AND 2ND SERIES

PERIODICALS AND PROPERTIES INDEX

1951-1952

2

CP

Constant of anisotropy and the magnetic saturation of iron-nickel and iron-nickel-silicon alloys. O. N. Al'khovskii, *J. Exptl. Theoret. Phys.* (U. S. S. R.) 8, 1014-28(1958); cf. *C. A.* 33, 3788. Data are given in 3 tables and 3 figures on the const. of anisotropy, intensity of magnetization at satn. and the coercive forces of the α -forms of various Fe-Ni-Si alloys contg. 0-30% Ni and 0-17% Si at room temp. and at the temp. of the $\alpha \leftrightarrow \gamma$ transformation of the given alloy (after treatment at 1000-1500°). Ni and Si additively lower the const. of anisotropy of the 3-component alloys. Up to 18% Ni does not change the magnetic moment of Fe-Ni alloys, more Ni decreases it slightly. Si linearly lowers the magnetic satn. from 30-25,000 gauss at 0% Si to 10-12,000 gauss at 18% Si for 0-80% Ni alloys. This is more than can be accounted for by simple replacement of part of the ferromagnetic atoms; the Si apparently interacts with Fe and Ni atoms to decrease their magnetic effects. Alloys with more than 3.0% Si yield only one modification.

... F. H. Rathmann

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

FROM SYMBOL

FROM SYMBOL

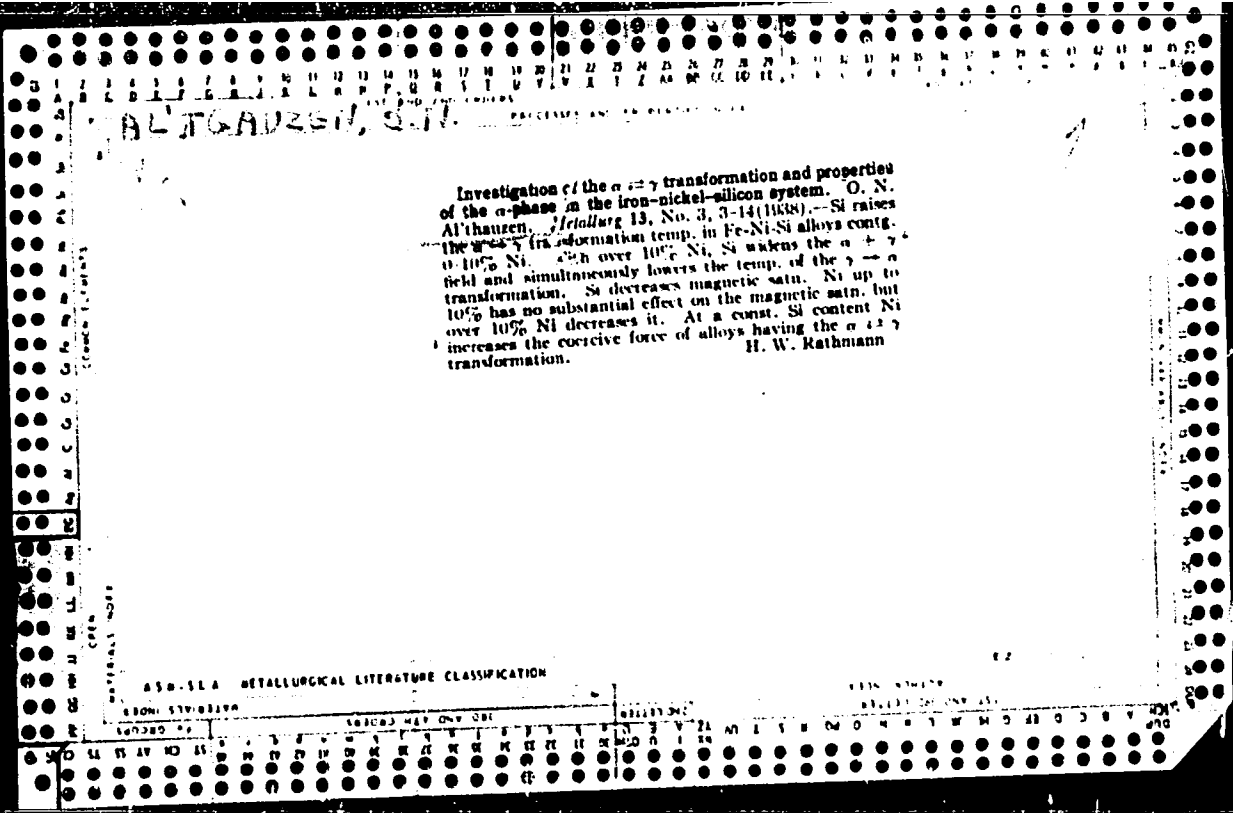
SELECT ONE OR MORE

ALPHABETIC INDEX

NUMERICAL INDEX

COMMON ELEMENTS

COMMON VARIANTS INDEX



Dr. A. J. M.

AL' PSHVZETI, O. I.

Effect of oxidation on magnetic properties of magnetite. O. N. Alkhanov (Comp. rend. Acad. Sci. U.R.S.S., 1961, 81, 258-260). The effect of heating in air on the magnetic properties of artificial and natural magnetite has been investigated. There is no simple connection between Fe_3O_4 content and χ_{ms} . A. J. M.

AL'TGAUZEN, O. N.

"Determination of the Magnetic Field of the Earth Acting in Different Geological Epochs," *Is. Ak. Nauk SSSR, Ser. Geograf. i Geofiz.*, No.1-6, 1944
Sci.Res. Inst., Peoples Commissariat of the Electric Industry

ZAYMOVSKIY, A. S., ALTGAUZEN, G. N., RASKIN, L. I., SIMILEVA, I. N.

"Magneto-dielectric Cores for Radio-Frequencies on the Base of Al'sifer (Aluminum-Silicium-Iron) Alloy." Iz. Ak. Nauk SSSR, Otdel. Tekh. Nauk, No. 10-11, 1945. Submitted 10 Jul 1945.

Report U-1582, 6 Dec 1951.

ALTGAUZEN, O.

B 64

8A

2340

621.318.4.042.15 - 82
 Pressed powder cores for radio frequencies, based on the aluminum-silicon-iron alloy "Alsifer RF." Zainovsky, A., and Altgauzen, O. Bull. Acad. Sci. USSR (Nos. 10-11) 1131-8 (1945) In Russian. - Manufacturing process is described for the preparation of pressed powder cores from the powdered alloy comprising 7.5% Al, 10% Si and 82.5% Fe. Electrical characteristics of the core material are tabulated. Characteristics are also presented for coils mounted on a variety of core forms. The cores are recommended in place of the present iron carbonyl and magnetite cores. E. R. A.

AL'TGAUZMAN, O. N.

26241 Ob obshchikh zakonemernostyakh obrazovaniya termostatichnoy
namagnichennosti v magnetitakh. izvestiya akad. nauk. SSSR, seriya geogr. i
geofiz., 1949, No. 4, s. 359-62

SO: LETOPIS' NO. 35, 1949

Translation: "The General Principles Governing the Formation of Thermal
Residual Magnetisation in Magnetites," Iz. Ak. Nauk SSSR, Ser. Geograf. i Geofiz.,
13, No.4, 1949

AL'TGAUZEN, O.N., kandidat fiziko-matematicheskikh nauk; BERNSHTEYN, M.L., kandidat tekhnicheskikh nauk; BLANTER, M.Ye., doktor tekhnicheskikh nauk; BOKSHTEYN, S.Z., doktor tekhnicheskikh nauk; BOLKHOVITINOVA, Ye.N., kandidat tekhnicheskikh nauk; BORZDYKA, A.M., doktor tekhnicheskikh nauk; BUNIN, K.P., doktor tekhnicheskikh nauk; VINOGRAD, M.I., kandidat tekhnicheskikh nauk; VOLOVIK, B.Ye., doktor tekhnicheskikh nauk [deceased]; GAMOV, M.I., inzhener; GELLER, Yu.A., doktor tekhnicheskikh nauk; GORELIK, S.S., kandidat tekhnicheskikh nauk; GOL'DENBERG, A.A., kandidat tekhnicheskikh nauk; GOTLIB, L.I., kandidat tekhnicheskikh nauk; GRIGOROVICH, V.K., kandidat tekhnicheskikh nauk; GULYAYEV, B.B., doktor tekhnicheskikh nauk; DOVGAL'EVSKIY, Ya.M., kandidat tekhnicheskikh nauk; DUDOVTSEV, P.A., kandidat tekhnicheskikh nauk; KIDIN, I.N., doktor tekhnicheskikh nauk; KIPNIS, S.Kh., inzhener; KORITSKIY, V.G., kandidat tekhnicheskikh nauk; LANDA, A.F., doktor tekhnicheskikh nauk; LEYKIN, I.M., kandidat tekhnicheskikh nauk; LIVSHITS, L.S., kandidat tekhnicheskikh nauk; L'VOV, M.A., kandidat tekhnicheskikh nauk; MALYSHEV, K.A., kandidat tekhnicheskikh nauk; MEYERSON, G.A., doktor tekhnicheskikh nauk; MINKEVICH, A.N., kandidat tekhnicheskikh nauk; MOROZ, L.S., doktor tekhnicheskikh nauk; NATANSON, A.K., kandidat tekhnicheskikh nauk; NAKHIMOV, A.M., inzhener; NAKHIMOV, D.M., kandidat tekhnicheskikh nauk; POGODIN-AL'EKSEYEV, G.I., doktor tekhnicheskikh nauk; POPOVA, N.M., kandidat tekhnicheskikh nauk; POPOV, A.A., kandidat tekhnicheskikh nauk; RAKHSHTADT, A.G., kandidat tekhnicheskikh nauk; ROGEL'BERG, I.L., kandidat tekhnicheskikh nauk;

(Continued on next card)

AL'TGAUZEN, O.N.---- (continued) Card 2.

SADOVSKIY, V.D., doktor tekhnicheskikh nauk; SALTUKOV, S.A., inzhener; SOBOLEV, N.D., kandidat tekhnicheskikh nauk; SOLODIKHIN, A.G., kandidat tekhnicheskikh nauk; UMANSKIY, Ya.S., kandidat tekhnicheskikh nauk; UTEVSKIY, L.M., kandidat tekhnicheskikh nauk; FRIDMAN, Ya.B., doktor tekhnicheskikh nauk; KHIMYSHIN, F.F., kandidat tekhnicheskikh nauk; KHRUSHCHEV, M.M., doktor tekhnicheskikh nauk; CHERNASHKIN, V.G., kandidat tekhnicheskikh nauk; SHAPIRO, M.M., inzhener; SHKOL'NIK, L.M., kandidat tekhnicheskikh nauk; SHRAYBER, D.S., kandidat tekhnicheskikh nauk; SHCHAPOV, N.P., doktor tekhnicheskikh nauk; GUDTSOV, N.T., akademik, redaktor; GORODIN, A.M., redaktor izdatel'stva; VAYNSHTYUN, Ye.B., tekhnicheskii redaktor

[Physical metallurgy and the heat treatment of steel and iron; a reference book] Metallovedenie i termicheskaya obrabotka stali i chuguna; spravochnik. Pod red. N.T.Dudtsova, M.L.Bernshteina, A.G. Makhshadta. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 1204 p. (MLRA 9:9)

1. Chlen -korrespondent Akademii nauk USSR (for Bunin)
(Steel--Heat treatment) (Iron--Heat treatment)
(Physical metallurgy)

AUTHOR: ~~Al'tgauzen, O. N.~~ Candidate of Physical-
-Mathematical Sciences 105-58-6-21/33

TITLE: Investigations on the Influence of Temperature Upon the Mag-
netic Properties of Dynamo Steel (Issledovaniye vliyaniya
temperatury na magnitnyye svoystva elektrotekhnicheskoy stali)

PERIODICAL: Elektrichestvo, 1958, Nr 6, pp. 80-82 (USSR)

ABSTRACT: Investigations were performed on the influence exerted by
heating to 300°C and cooling to -78°C upon the induction of
dynamo steel in fields with 125 Oe. The investigation was per-
formed with hot-rolled steel 0,35 mm in thickness of the types
E 42 and E 43 (produced by the Verkh-Iset factory) and with
cold-rolled steel of the type E 320 of the factory "Elektrostal".
The samples weighed 25 to 30 g. From the curves of magnetic
permeability for E 42 and E 43 it is to be seen that within the do-
main of comparatively weak fields at +300°C the curve takes a
higher course than at +18°C. The maximum value is attained by
the permeability in weaker fields. At -78°C an increase in the
maximum permeability and a displacement of the maximum to the
domain of stronger fields is observed. In the domain of fields
with 2 to 100 A/cm the magnetization curves at -78°C and +18°C

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Investigations on the Influence of Temperature Upon the
Magnetic Properties of Dynamo Steel

105-58-6-21/33

lie higher than at $+300^{\circ}\text{C}$. The course of the curves is equal in both types of steel. The mean temperature factor of the induction within the range of from 20 to 300°C can be computed from the induction-temperature-diagram thanks to the linear course of the curves. In the case of B_{100} it is equal to $-7,5 \cdot 10^{-5}$ 1/degree, in the case of B_2 - $-35 \cdot 10^{-5}$ 1/degree. The greatest change of induction was observed in the domain of weak fields. In steel E 320 it was found during the measurement that it irreversibly changes its properties. On heating to 300°C and subsequent cooling the permeability decreases. On heating in the domain of weak fields the permeability increases more strongly than in the hot-rolled steels E42 and E43. The value of maximum permeability also considerably increases. After aging at 300°C the change of permeability with temperature is less. In contrast to hot-rolled steel no dependence of the temperature factor on the induction was observed in E 320 in the range of from 1 to 100 a/cm. The temperature factor amounts to from 20 to $30 \cdot 10^{-5}$ 1/degree. It is shown that in cold-rolled steel the change of induction in weak fields is considerably higher than in the two hot-rolled ones.

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Investigations on the Influence of Temperature Upon the
Magnetic Properties of Dynamo Steel

105-58-6-21/33

There are 7 figures and 1 reference, 1 of which is Soviet.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy me-
tallurgii (Central Scientific Research Institute for Ferrous
Metallurgy)

SUBMITTED: August 23, 1957

1. Steel--Magnetic properties
2. Steel--Temperature factors
3. Generators--Materials

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SOV/129-58-11-11/13

AUTHORS: Al'tgauzen, O.N., Zusman, Sh. I., and Stepanova, A.N.

TITLE: Thermomagnetic treatment in vacuum furnaces of magnetically soft alloys with a rectangular hysteresis loop (Termomagnitnaya obrabotka magnitnomyagkikh splavov s pryamougol'noy petley gisterezisa v vakuumnykh pechakh)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 11, pp 60-62 (USSR)

ABSTRACT: In the Institute for Precision Alloys TsNIIChm, a vacuum shaft furnace with spiral heating elements of nichrome and the alloy EI695 was used which made continuous temperature control of the furnace possible, particularly below 700°C. A sketch, Fig.1, shows the arrangement of the magnetising device and of the specimens during thermo-magnetic treatment (design proposed by N. A. Kalmychek, NII MRTP). The high temperature annealing and the thermo-magnetic treatment were effected in accordance with regimes enumerated in a Table, p 62. The magnetic properties of alloys after the thermo-magnetic treatment with fields of various magnitudes are graphed in Fig.2. The high temperature treatment consisted of annealing

Card 1/4 in vacuum at 1100°C for two hours, cooling with a speed

SOV/129-58-11-11/13

Thermomagnetic treatment in vacuum furnaces of magnetically soft alloys with a rectangular hysteresis loop

of 100°C/hr to 600 and 200°C respectively, followed by cooling with the container in air. The thermomagnetic treatment consisted of the following: Alloy 50NP: heating at 600°C for one hour, cooling inside a magnetic field at 50°C/hr to 400°C, cooling by 100°C/hr to 200°C followed by cooling with the container in air; alloy 65NP: heating at 700°C for 4 hours, cooling inside a magnetic field to 200°C with a speed of 100°C/hr, followed by cooling in air with the container; heating to 800°C for one hour, cooling inside a magnetic field with a speed of 100°C/hr down to 200°C, followed by cooling in air with the container (alloy 34NKMP). Analysis of the obtained results enables the following conclusions: for all the alloys separate high temperature and thermomagnetic treatment in vacuum can result in obtaining magnetic properties which satisfy the specified technical requirements. The magnitude of the magnetic properties depends to a large extent on the intensity of the field applied during the heat treatment; to obtain a maximum improvement of the magnetic properties it is sufficient for all

Card 2/4

SOV/129-58-11-11/13

Thermomagnetic Treatment in Vacuum Furnaces of Magnetically
Soft Alloys with a Rectangular Hysteresis Loop

the tested alloys to use a magnetic field potential of 10 to 15 Oe. An increase in the magnetic field strength does not result in an improvement of the properties of the alloys. Within the investigated thicknesses the effect of the thermomagnetic treatment is practically independent of the character of the applied field (d.c., pulsating or 50 c.p.s. fields), provided their amplitude values are the same. This conclusion confirms the results obtained by Kelsall (Physics, 1934, Nr 5). For larger thicknesses it is necessary to verify the influence of the surface effect in the case of treatment with an a.c. field. The carried out work has shown that the thermomagnetic treatment of the investigated alloys can be effected in furnaces used for high temperature treatment of these alloys, provided the magnetising circuits are fed with d.c. or a.c. currents.

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SOV/129-58-11-11/13
Thermomagnetic Treatment in Vacuum Furnaces of Magnetically
Soft Alloys with a Rectangular Hysteresis Loop

There are 2 figures, 1 table and 3 references, 2 of
which are Soviet, 1 English.

ASSOCIATION: TsNIICM

1. Alloys--Heat treatment
2. Alloys--Magnetic factors
3. Alloys--Properties
4. Vacuum furnaces--Performance

Card 4/4

PLATE I BOOK REFERENCE 807/8080

Research, Technological Machine-Tool Electrical-ly Instrument Chemistry as well as
Instrument Precision with splaver

Prezidentskiye splavy (Precision Alloys) Moscow, Metallurgizdat, 1979, 209 p.
(Series: Ita: Sbornik trady, 779. 22) 2,150 copies printed.

Additional Sponsoring Agency: USSR. Gosstatrazvery planovyy komsitet

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P. O. Izdat'yeva.

PURPOSE: This collection of articles is intended for technical personnel
and electrical engineers in the metallurgical instruments in the
and electrical engineering fields. It may be useful to students of
higher technical education.

CONTENTS: This collection of articles presents the results of scientific
precision alloys made in recent years by the Technological Machine-
Tool Electrical-ly Instrument Chemistry Institute (Central Scientific
Research Institute of Ferrous Metallurgy). Properties of alloys
which can be soldered (soft or hard) with silver and cerium alloys
and alloys used for making springs are discussed. Problems of
electrical resistance and thermal expansion of alloys are discussed.
Irradiation on properties of alloys is discussed. Problems
of self-ordering and aging of alloys are discussed. Problems
of rolling of bimetallic strips are reviewed. Analysis of all used
in manufacturing high-temperature transducers of strain gauges
is presented. No personalities are mentioned. References follow several
of the articles.

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66238

SOV/126-8-3-23/33

18.1141

AUTHORS: Al'tgauzen, O.N. and Kupalova, I.K.

TITLE: Temperature Dependence of the Magnetic Properties of the Alloy Yul6 (Alfenol)

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, Nr 3, pp 459-461 (USSR)

ABSTRACT: In the present work the result of a study of magnetization curves of the alloy Yul6 at temperatures between -78 and 300°C are given. The iron-aluminium alloy Yul6 with an aluminium content of 16 wt % is a magnetically soft material. The experimental alloy was made in a high frequency furnace, subjected to hot, followed by warm, rolling down to a thickness of 0.35 mm. From the strip obtained rings were stamped out which were then put together in packets and heat treated. The magnetic measurements were taken by a ballistic method. In Fig 1 to 3 and in the table on p 459, the magnetic properties of this alloy at various temperatures are indicated. The magnetic properties of the alloy depend essentially on temperature. On cooling to -78°C and heating to 200°C , the maximum permeability in both cases decreases practically reversibly and on heating to

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SOV/126-8-3-23/33

Temperature Dependence of the Magnetic Properties of the Alloy Yu16
(Alfenol)

255 to 300°C and subsequent cooling, the change is irreversible - the maximum permeability does not attain the original value. The coercive force remains practically unchanged in the temperature range of -78 to 200°C and at higher temperatures it increases irreversibly. The irreversible change in magnetic properties appears to be associated with the commencement of a hardening process (Ref 3) and limits the possibility of its application at temperatures above 200°C. Some stabilization of properties can be obtained by changing the heat treatment (specimen Nr 2) in such a manner that partial hardening should occur during this process, which somewhat lowers the level of properties of the alloy but raises its temperature stability on heating to 100 to 200°C. There are 3 figures, 1 table and 3 references, 2 of which are Soviet and 1 Polish.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute for
Card 2/3

AL'TGAUZEN, O.N.; LYUBETSKAYA, O.V.; SOL'NS, V.A.

Determining the magnetic susceptibility of fine wire made of
weakly magnetic materials. Sbor.trud.TSNIICM no.22:160-167
'59. (MIRA 13:6)

(Wire--Magnetic properties)

24(3)

AUTHORS:

Alitgauren, O. N., Semenzhina, N. A.

SOV/32-25-4-19/71

TITLE:

Methods of Measuring Magnetic Properties of Electrotechnical Steel in Weak and Mean Fields (O metodike izmereniya magnitnykh svoystv elektrotekhnicheskoy stali v slabykh i srednikh pol'yakh)

PERIODICAL:

Zavodskaya Laboratoriya, 1959, Vol 25, Nr 4, pp 426-428 (USSR)

ABSTRACT:

The influence of the demagnetization of samples after thermal treatment, the conditions for the origin of a magnetic texture of the sample, and the reduction of the permeability with time on the results obtained in measuring the properties of electrotechnical steel in weak and mean fields (0.002-25/cm) are investigated. The measurements were made at packs of hot-rolled steel types E 42 and E 43 made up of stamped rings (0.35 and 0.5 mm thick), as well as at packs of cold-rolled steel with 3% Si made by a winding of bands (0.05-0.5 mm thick). The magnetic properties were determined by the ballistic method. The demagnetization was made with the device RU, the magnetization curves being obtained by the commutation method. The amount of magnetic permeability calculated by the curve obtained without demagnetization is μ in the interval of 0.0025-0.015 oer-

Card 1/2

SOV/32-25-4-19/71

Methods of Measuring Magnetic Properties of Electrotechnical Steel in Weak and Near Fields

ated - 35 to 95% of the permeability calculated by the curve obtained after demagnetization. In the fields where the permeability attains its maximum value, the difference in the permeability (Fig 1) between the non-demagnetized and the demagnetized samples decreases. It is found that it would be most convenient to establish the values of the initial permeability in technical documentations. Except for fields with voltages above 0.5 oersted, a decrease in the permeability with time could be observed in all experiments. The measuring results of the commutation tests at constant current intensity show (Figs 2,3) that the deflection of the galvanometer changes with an increase in the number of commutations, and does not reach a constant value, even at commutations over 25 times. The asymmetry of deflection of the galvanometer observed at samples which were exposed to a constant field before commutation is attributed to a magnetic texture. The latter may lead to errors in measurements by the ballistic method. There are 3 figures and 4 references, 3 of which are Soviet.

ASSOCIATION:
Card 2/2

Tsentralnyy nauchno-issledovatel'skiy institut Chernoy metal-
lurgii (Central Scientific Research Institute of Iron Metallurgy)

86877

S/105/61/000/001/004/007
B012/B059

24,2200 (1134,1158,1160)

AUTHORS: Al'tgauzen, O. N., Semenova, N. A., and Stepanova, A. N.

TITLE: Effect of Demagnetization and of Time-dependent Drop of
Magnetic Permeability Upon the Latter of Materials for
Magnetic Conductors

PERIODICAL: Elektrichestvo, 1961, No. 1, pp. 51-55

TEXT: In the present paper the authors discuss the effect of demagnetization on magnetic permeability and the effect of a change with time of the magnetic permeability in some magnetically soft materials is discussed. Investigation was carried out with Ni-Fe alloys containing 50 and 65% nickel, alloys with 79% nickel and molybdenum, and alloys with 80% nickel, chromium and silicon (Refs. 1,2,3), furthermore electrotechnical steel containing 4% silicon, cold-rolled steel with 3% silicon, and an iron-aluminum alloy with 15% aluminum. In order to clarify the effect of demagnetization upon the magnetic properties, the latter were determined immediately after heat treatment of samples which never before have been

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Effect of Demagnetization and of Time-
dependent Drop of Magnetic Permeability
Upon the Latter of Materials for Magnetic
Conductors

S/105/61/000/001/004/007
B012/B059

in a magnetic field, and then of the same samples after demagnetization through alternating field. Measurements were made with direct current by means of the ballistic method (Ref. 5). The change with time of the magnetic properties was checked at the same samples at various times after demagnetization. Also these measurements were made by the ballistic method. The investigations showed that the increase in permeability on demagnetization is apparently caused by the formation of the magnetic texture, and the drop with time of the permeability by the destruction of the magnetic texture. The physical nature of this phenomenon is still unexplained and the necessity of a proper investigation is pointed out (Refs. 6-12). Because of the observed dependence of the magnetic permeability on pre-demagnetization of the alloys after heat treatment and on the time between end of demagnetization and begin of investigation, the authors call for normalization of the method of determining the magnetic properties of soft magnetic alloys. There are 7 figures, 1 table, and 12 references: 10 Soviet and 1 German.

Card 2/3

86877

Effect of Demagnetization and of Time-
dependent Drop of Magnetic Permeability
Upon the Lattice of Materials for Magnetic
Conductors

S/105/61/000/001/004/007
B012/B059

ASSOCIATION: TsNIChM

SUBMITTED: October 2, 1959

J

Card 3/3

AL'TGAUZEN, O.N.

Measurement techniques connected with control of the
properties of magnetic materials. Trudy inst. Komstand.mer
i izm. prib no.64:18-26 '62. (MIRA 16:5)
(Magnetic materials--Testing) (Magnetic measurements)

AL'TGAUZEN, O.N.

Methods of determining the initial permeability of modern
magnetically soft alloys. Trudy inst. Kom.stand.mer i izm.
prib no.64:55-59 '62. (MIRA 16:5)
(Alloys--Magnetic properties)

AL'TGAUZEN, O.N.; SEMENOVA, N.A.; STEPANOVA, A.N.

Temporary drop in the magnetic permeability of magnetically
soft alloys. Sbor. trud. TSNIICHM no.25:98-103 '62. (MIRA 15:6)
(Alloys—Magnetic properties)

S/776/62/000/025/006/025

AUTHORS: Al'tgauzen, O.N., Semenova, N.A., Stepanova, A.N.

TITLE: On the time-delayed drop in magnetic permeability in soft magnetic alloys.

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik.trudov. no.25. Moscow, 1962. Pretsizionnyye splavy. pp.96-103.

TEXT: This experimental investigation deals with the both theoretically and practically important magnetic aftereffect in ferromagnetic materials that consists in a gradual decrease in magnetic permeability (MP) following a demagnetization by an AC, an effect which evokes additional noise in electric circuits. More specifically, this paper reports the results of an investigation of the MP of soft magnetic alloys immediately after heat treatment and after demagnetization following various time intervals between the completion of the demagnetization and the beginning of the measurements. Specimens were prepared from 7 alloys cast and rolled at the Experimental Factory of the TsNIChM (Central Scientific Research Institute of Ferrous Metallurgy). Strips 1.0, 0.5, 0.35, 0.2, and 0.1 mm thick were used to make specimens in the form of packets assembled from stamped rings; tapes of

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On the time-delayed drop in magnetic

8/776/62/000/025/006/025

smaller thickness were used to make coiled-core specimens, with Mg-oxide insulation between coils and lamellae. The magnetic measurements were performed by the ballistic method after 10-fold commutation at every value of the field. The magnetization curves and other magnetic characteristics were determined at room T, both immediately following heat treatment and after demagnetization of the specimens by a 50-cps AC with decreasing amplitude. In the first instance it was assumed that following heat treatment, which was ordinarily performed at T above the Curie T, the specimens were totally demagnetized. The assessment of the delayed decrease in magnetic permeability or its increase with time was obtained from the change in the curve of the dependence of the permeability on the field measured after various time intervals between the completion of the demagnetization and the beginning of the measurement. Even though this method is not a rigorous one for the determination of the change in value of the permeability in a given field, it does, nevertheless, afford a valid assessment of the trend in the change of the permeability for the entire curve versus time. The time intervals following the measurement directly after demagnetization were 10 and 30 min and then a varying, but prescribed, scale of intervals from 1 to 336 hours. The effect of the conditions of demagnetization and the time-delayed decrease of the magnetic permeability are discussed for each of the 7 alloys tested, together with a graphic representation and a full-page tabular summary. An attempt is made to explain

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On the time-delayed drop in magnetic

S/776/62/000/025/006/025

the experimental data obtained in the present investigation by hypothesizing that the increase in permeability in the alloys following their demagnetization by a variable field can be explained by the appearance in the material of a magnetic texture along the direction of the field as a result of the demagnetization. The magnetic texture is observed to disintegrate even at room temperature. The decrease in magnetic permeability following demagnetization in the alloy 50НП (50NP), which has a crystallographic texture, can be explained by the assumption that the appearance, during the high-temperature anneal, of a crystallographic texture is accompanied by the formation of a magnetic texture along the direction of rolling. Upon demagnetization by the variable field, the character of this texture changes to such an extent that the magnetic permeability is reduced irreversibly. There are 5 figures, 1 table, and 11 references (4 Russian-language Soviet, 7 English-language, of which 1 in Russian translation).

Card 3/3

AL'TGAUZE O.N., kand. fiziko-maten. nauk

"Magnetic properties of electrical steel" by V.V. Druzhinin.
Reviewed by O.N. Al'tgauzen. Elektrotehnika 34 no.10:79
0 '63. (MIRA 16:11)

L 55332-65 EPA(s)-2/EWT(m)/EWP(i)/EWA(d)/EWP(t)/EWP(z)/EWP(b) NJW/JD/GS

ACCESSION NR: AT5014631

UR/0000/65/000/000/0180/0185
681.142.324

36
32
B+

AUTHOR: Sizov, Ye. A.; Al'tgansen, O. N.; Artsishevskiy, N. A.

TITLE: Magnetic properties of extremely thin films from magnetically soft alloys

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki i vychislitel'noy tekhniki, 9th, Yerevan, 1963. Magnitnyye analogovyye elementy (Magnetic analog elements); doklady soveshchaniya. Moscow, Izd-vo Nauka, 1965, 180-185

TOPIC TAGS: thin magnetic film, magnetic film production, alloy magnetic property, neutron irradiation, magnetically soft alloy, alloy cold rolling

ABSTRACT: In view of the widespread incorporation of magnetic films into electronic devices, the personnel of the Institut pretsizionnykh splavov TsNIICM (Instituta for Precision Alloys of TsNIICM) developed the technology of the mass production of magnetically soft alloy films using the 20-roller stand TsKBPM-90 with a 3-35 mm roller diameter. Cold rolling produces films 0.02-0.003 mm thick and 30-40 mm wide without heat treatment. The paper describes in considerable detail the production of films, the general magnetic properties

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L 55332-65
ACCESSION NR: AT5014631

of the samples, the magnetic properties of 79NMA, 80NMA, 77NMD, and 79NM alloys within the -60 to +150C temperature range, and the effect of neutron irradiation on the magnetic properties of the films. The results seem to agree with the assumption that nuclear particle irradiation has an adverse effect on magnetic materials by causing radiation defects and radiation ordering (see, e.g., M. A. Artsishevskiy, Ya. P. Seisskiy, *RMM*, 1961, 11, no. 1). Orig. art. has: 2 figures and 5 tables.

ASSOCIATION: TsNIICHM

SUBMITTED: 28Dec64

ENCL: 00

SUB CODE: MM, EC

NO REF SOV: 003

OTHER: 002

JD
Card 2/2

ACC NR: AP6029525

SOURCE CODE: UR/0046/66/012/003/0283/0288

AUTHOR: Al'tgauzen, O. N.; Bezuglaya, L. S.; Bulycheva, Z. N.; Lyubetskaya, O. V.

ORG: Central Scientific Research Institute of Ferrous Metallurgy im. I. P. Bardin, Moscow (Tsentral'nyy n.-1. institut chernoy metallurgii)

TITLE: Magnetic properties of alloys for magnetostriction converters

SOURCE: Akusticheskiy zhurnal, v. 12, no. 3, 1966, 283-288

TOPIC TAGS: magnetostriction, magnetic property, magnetic induction, nickel, aluminum alloy, iron alloy/ 8Yu alloy, 10Yu alloy, 14Yu alloy

ABSTRACT: The authors have investigated the static and dynamic properties of textured alloys 8Yu, 10Yu, and alfer (14Yu), and compared them with those of N1 nickel (GOST849-56) and 50KF permendur (ChMTU4319-53). The purpose of the investigation was to obtain a less expensive material, containing no nickel and cobalt which are in short supply, for the manufacture of magnetostriction converters. The material was prepared in the form of sheets 0.2 m thick (Fe-Al) or 0.1 mm thick (50KF and nickel). The dependence of the magnetostriction on the induction was determined by simultaneously measuring the magnetostriction and the induction in a specified field in tension-gauge and ballistic equipment respectively. The magnetostriction and its dependence on the induction were measured directly on the sheets, while all the other magnetic parameters were determined using toroidal samples made up of rings stamped from the sheets. The static magnetic properties were determined by a ballistic method. Tables

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UDC: 534.232: 669.715

ACC NR: AP6029525

and graphs showing the results of the measurements are presented. The results show that the magnetostriction of iron-aluminum alloys is close to that the magnetostriction of iron-aluminum alloys is close to that of nickel and permendur, that the coercive force is smaller, and the losses are also lower. The most promising is the textured alloy 8Yu, which in addition to having better magnetic and electric properties also has better technological properties. Orig. art. has: 5 figures and 3 tables.

SUB CODE: 1120/ SUBM DATE: 13May64/ ORIG REF: 004/ OTH REF: 004

Card 2/2

PROCESSES AND PROPERTIES INDEX

11e

Vitamin A and its significance in skin tuberculosis.
 V. L. Al'tgauzen and M. V. Lejokaya. *Problemy Tuberkul'z*: 1968, No. 1, 87-90. — A study of the vitamin A (I) level in the blood and the effect of I therapy of skin tuberculosis was made, using 48 adult patients with a variety of forms of the disease, most of them having the disease for a long period of time. In all cases before the therapy blood level of I was low, av. 12.6 γ %, with min. 4 γ % and max. 25 γ %. Carotene level was higher than normal, av. 75 γ %, with min. 30 γ % and max. 144 γ %. Treatment with 80,000 units daily of I concentrate for 3-6 months caused the significant rise in blood level, with many cases reaching super-normal levels and the values found ranged from 90 to 260 γ %, after one month of therapy. In majority of cases the 3rd month led to further increase of blood level of I while succeeding months gave rise either to essentially stationary state (with variations) or to a slight drop; in all cases the general level remained above normal. The carotene level over the same period showed a corresponding decrease, with 80% of cases showing a drop to normal level within the exptl. period (only 4 cases still had a super-normal level at the end of treatment period). The urinary excretion was studied in some of the patients during the therapy. The NaCl showed a rise during the treatment period, starting with sub-normal level, av. 0.94 g. daily, and reaching normal level by the end of the treatment. I therapy appeared to be more effective than ascorbic acid therapy for the epithelization was rapid and the skin deformations showed signs of more rapid disappearance than was the case with ascorbic acid treatment. Combination of I (80,000 I.U. daily) and ascorbic acid (0.5 g. per os daily) was a satisfactory therapy for majority of cases of lupus vulgaris.
 G. M. Kosolapoff

METALLURGICAL LITERATURE CLASSIFICATION

B-777

AL'TGAUZEN, V. I.

PA 18/49T78

USSR/Medicine - Vitamin D2
Medicine - Skin, Tuberculosis and Tuberculids
May/Jun 48

"Therapy for Lupus Tuberculosis With Vitamin D2,"
Prof. A. B. Vaynshteyn, V. I. Al'tgauzen, Cand Med
Sci, A. R. Tat'yandin, Chem Engr, 3 pp

"Vest Venerol i Dermatol" No 3

Summarizes history of treatment and describes own
experience. Concludes that alcohol solution of
vitamin D2 administered in doses of 150,000-200,000
IU daily for 4 months is a good treatment for lupus.
Out of 50 patients so treated, 33 recovered, 6
improved considerably and 11 improved some.

18/49T78

USSR/Medicine - Vitamin D2 (Contd) May/Jun 48

Therapeutic effect was noticed in lupus of skin
and mucous membranes, irrespective of type of
lupus. Progress is more rapid with ulcerous
lupus. Treatment is simple and generally avail-
able. Complications due to vitamin D2 rapidly
disappear with temporary cessation of treatment
or when dose is decreased.

18/49T78

AL'TRAUZEN V. I.

Sep/Oct. 48

USSR/Medicine - Skin, Tuberculosis
and Tuberculosis
Medicine - Vitamin D₂

"Treating Tubercular Lupus Vulgaris With Vitamin D₂ (Calciferol)," Prof. A. B. Vaynshteyn,
V. I. Al'Trauzen, Cand Med Sci, A. K. Tat'yanin, Inst Cutis Tuberculosis, 2 pp

"Problemy Tuberkuleza" No 5

Presents data on 50 Patients, with four photographs. Concludes that alcoholic solution of
Vitamin d₂ manufactured in USSR containing 200,000 IU's per cc is very effective in treat-
ing tubercular lupus vulgaris orally. Daily dose is 100,000 - 150,000 - 200,000 IU's.
Duration of treatment 4-6 months or longer.

PA 21 49T79

ALTGAUSEN, B.L.

YANOVSKAYA, L.M.; ^GALTGAUSEN, B.L.

Effect of vitamin D₂ in pulmonary tuberculosis. Probl. tuberk.,
Moskva no.4:59-62 July-Aug. 1950. (CIML 20:1)

1. Of the Institute of Skin Tuberculosis (Director -- Prof. F. V.
Shebanov; Scientific Director -- Prof. N. L. Rossiyanakiy).

ALTGAUSEN, V.L.;LEPSKAYA, M.V.

Ascorbic acid in treatment of skin tuberculosis. Communication
I. Vest. vener. no.5:43-44 Sept-Oct 1950. (CIML 20:1)

1. Of the Scientific-Research Institute for Tuberculosis of the
Skin (Scientific Director -- Prof. N. L. Rossiyskiy).

ALTOAUSEN, V.L.;LEPSKAYA, M.V.

Water-slat metabolism in skin tuberculosis during massive
doses of ascorbic acid. Communication II. Vest vener. no.5:44-46
Sept-Oct 1950. (CIML 20:1)

1. Of the Scientific-Research Institute for Tuberculosis of the
Skin (Scientific Director -- Prof. N. L. Rossiyanskiy).

AL'TGAUZEN, V. F.

AL'TGAUZEN, V. P. - "A Study of the Characteristics of Pathogenic
Bacteria of the Intestinal Group in the Organism of the House Fly."
Sub 22 Dec 52, First Moscow Order of Lenin Medical Inst.
(Dissertation for the Degree of Candidate in Medical Sciences).

SO: Vechernaya Moskva January-December 1952

LEVIN, Ye.R.; AL'TGAUZEN, V.P.

Clinical and immunological aspects of Escherichia coli
infections in young children. Vop.okh.mat. i det. 4
no.2:21-26 Mr-Apr '59. (MIRA 12:5)

1. Iz Gorodskoy klinicheskoy bol'nitsy No.9 i Moskovskogo
nauchno-issledovatel'skogo instituta vaktsin i syvorotok im.
I.I.Mechnikova.

(INTESTINES--BACTERIOLOGY) (CHILDREN--DISEASES)

AL'TGAUZEN, V.P.

Presence of serum agglutinins in intestinal diseases induced by
pathogenic *Escherichia coli*. Zhur.mikrobiol.epid.i immun. 30
no.7:54-57 J1 '59. (MIRA 12:11)

1. Iz Moskovskogo instituta vaktsin i syvorotok imeni Mechnikova.
(ANTIBODIES)
(ESCHERICHIA COLI INFECTIONS - immunology)

SHIRVINDT, B.G.; RYABINSKAYA, T.F.; DOBKINA, M.S.; GOLUBEVA, I.V.;
AL'TGAUZEN, V.P.; NORDSHTEYN, R.A.

Clinical picture and diagnosis of coli enteritis in children. Pedia-
tria 37 no.8:77-82 Ag '59. (MIRA 13:1)

1. Iz Instituta pediatrii Ministerstva zdravookhraneniya RSFSR (dir. -
A.P. Chernikova, samestitel' direktora po nauchnoy chasti - prof.
N.R. Shastin), Instituta imeni Mechnikova (dir. - A.P. Muzychenko) i
4-y gorodskoy klinicheskoy bol'nitsy (zaveduyushchiy infektsionnym
otdeleniyem T.F. Yermolovich).

(ENTERITIS, etiology)

(ESCHERICHIA COLI INFECTIONS, in infancy & childhood)

KRAVCHENKO, N.A.; SADYKOVA, V.B.; AL'TGAUZEN, V.P.; BEREZKINA, G.N.;
KOSTYUKOVA, N.N.; SUSLOVA, V.S.; BOCHKOVA, V.A.; NEYMARK, Y.M.

"Indicator" method for the detection and identification of
diphtheria pathogen cultures, suggested by G.V. Andreeva and
Z.N. Poliakova. Zhur. mikrobiol., epid. i immun. 40 no.38
131-132 Mr '63. (MIRA 17s2)

AL'TGAUZEN-RAGINSKAYA, V.P., kand.med.nauk

Comments on "Organization of laboratory work at a sanitary
epidemiological station" by D.B. Rozenfel'd. Reviewed by
V.P.Al'tgausen-Raginskaia. Zdrav. Ros.Feder. 7 no.5:9-10 My'63.
(MIRA 16:6)

(PUBLIC HEALTH LABORATORIES) (ROZENFEL'D, D.B.)

AL'TGOVZEN, M., polkovnik, kand. voyennykh nauk, dotsent

Chronicle of outstanding victories. Voenn. vest. 42 no.11:120-
122 N '62. (MIRA 16:10)

(World War, 1939-1945)

SOV/84-58-9-42/51

AUTHOR: ~~Al'tgevzen, Z.~~, Engineer, Synoptic Meteorologist

TITLE: Our Proposals (Nashi predlozheniya)

PERIODICAL: Grazhdanskaya aviatsiya, 1958, Nr 9, p 35 (USSR)

ABSTRACT: The author discusses the inadequacies of the present system of meteorological service, especially with reference to the introduction of new jet equipment. According to the current system, forecasts embrace altitudes only up to 4,000 m, whereas jet airliners fly at a 10 to 11,000 m altitude. Also the admissible errors (15 km/h in wind velocity and 30° in direction) lose their significance if the relatively very high wind velocities in the upper altitudes are considered. Furthermore, there is no uniformity in the tolerable forecast errors. The author advocates revision of the existing regulations concerning meteorological services.

Card 1/2

Our Proposals

SOV/84-58-9-42/51

The system, developed and used for airdrome traffic is recommended for adoption as the standard system. Introduction of standards for rating the work of aerometeorological stations are advocated for certain zones. The Main Administration of Hydrometeorological Service and airports are criticized for laxity in procuring equipment for stations. Television equipment is urgently needed for the transmission of weather forecasts on appropriate channels.

Card 2/2

ALTHOF, C.

ALTHOF, C. Intergranular and intragranular corrosion. n. 97.

Vol. 13, no. 1/4, 1954, Budapest, Hungary KOZLEMLÉNYEI

SO: Monthly List of East European Accessions, (FEAL), IC, Vol. 5, No. 3,
March, 1956

USSR / Plant Physiology. Respiration and Metabolism.

I

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34238

Author : Altikhova, A. L.
Inst : Leningrad Agricultural Institute
Title : On the Directed Change of Metabolism.

Orig Pub : Zap. Leningr. s.-kh. in-ta, 1956, vyp. 11, 74-78'

Abstract : Modifications of metabolism with regard to interrelation of carbohydrates and protein were studied under changing photoperiodic conditions in various phases of growth of spring wheat of Diamant variety. Groups of long day plants served as control. Protein and starch in leaves were identified with the help of normal qualities of color reactions; their relative content was valued according to the five-figure system. Plants placed under short day conditions, produced in the fourth phase of growth a decrease of starch content. A much more significant decrease in protein content was

Card 1/2

AL'TKORN, Ye. (Krakov)

Wage system in Poland's retail trade. Sov. torg. 36
no.10:40-42 0 '62. (MIRA 16:2)
(Poland--Wages--Retail trade)

AL'TMA, A. V.

PA 11T25

USSR/Magnetization
Metallography

Feb 1947

"Study of the Work of a Magnetizing Devices of an AC
Remanence-defectoscope," A. V. Al'tma, R. I. Yanus,
8 pp

"Zhur Tekh Fiz" Vol XVII, No 2

Connection diagram of apparatus for detecting defects
in steel. Characteristic curves describing its
operation.

11T25

PA 11T26

AL'TMA, A. V.

USSR/Magnetism
Currents, Electric - Alternating

Feb 1947

"The Induction of Residual Magnetism by an Alternating Current," A. V. Al'tma, R. I. Yanus, 10 pp

"Zhur Tekh Fiz" Vol XVII, No 2

Connection diagrams of apparatus for inducing residual magnetism by alternating current. Hysteresis diagrams and equations representing subject action.

11T26

AL'TMA, A. V.

"Laws Governing the Magnetic Properties of Macroheterogeneous Retentive Systems," Zhur. tekhn. fiz., 19, No.5, 1949

AL'TMAN, A. A., comp.

Methods of testing petroleum products. Moskva. Gos. nauchno-tekhn. izd-vo nef'tianoi i gorno-toplivnoi lit-ry, 1946. 414 p. (49-12806)

TR691.A43

AL'TMAN, A.A..

PA 61T100

USSR/Petroleum Industry
Oil Production

Mar 1948

"Standardization and Normalization in the Petroleum
Industry of the USSR," A. A. Al'tman, 3 1/2 pp

"Neftyanoye Khozyaystvo" No 3

Standardization and normalization are most important
factors for accelerating introduction of advanced
technological processes, newest types of equipment
and newest methods of production. Discusses briefly
problems of introduction of usable standards for
products and equipment in petroleum industry.

61T100

ALTMAN, A.A.

STARIKOVA, Ye.V.; DOBRYAKOVA, N.Ye.; KOROBKO, V.A.; ALTMAN, A.A.;
ROMANOVA, N.V., vedushchiy redaktor; POLOSINA, A.S., ^{tekhnicheskii} redaktor

[Methods of testing petroleum products] Metody ispytania nefte-
produktov. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-
toplivnoi lit-ry, 1953. 389 p. [Microfilm] (MLRA 7:9)
(Petroleum products--Testing)

BORISOVA, M.I., nauchnyy sotrudnik; VLADIMIROV, B.M., nauchnyy sotrudnik;
AL'TMAN, A.B.; VALAKINA, V.M.; MEMELOV, V.L.

Self-lubricating ceramic metal rollers made with graphitic iron.
Tekst.prom.22 no.3:80-82 Mr '62. (MIRA 15:3)

1. Tsentral'nyy nauchno-issledovatel'skiy institut khlopchatobu-
mazhnoy promyshlennosti (TsNIKhBI) (for Borisova, Vladimirov).
2. Vsesoyuznyy nauchno-issledovatel'skiy institut elektromekhaniki
(VNIIFM) (for Al'tman, Valakina, Memelov).
(Spinning machinery)

ALTMAN, A. B. 9

CA

Steel and cast iron alloyed with Pb and S. D. A. Prokoshin and A. B. Altman. Russ. 56,979, April 30, 1940. The machining of steel and cast iron is improved by introducing PbS into the molten metal.

ASB-314 METALLURGICAL LITERATURE CLASSIFICATION

FROM SYMBOLS

GROUP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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1ST AND 2ND CODES

PROCESSES AND PROPERTIES INDEX

13

Impact Testing of Steels and Alloys at High Temperatures. (In Russian.) A. B. Al'tman and G. V. Estulin. *Zavodskaya Laboratoriya (Factory Laboratory)*, v. 13, Oct. 1947, p. 1218-1221.

Describes a specially designed furnace and testing apparatus for the above. Gives results of testing of carbon steels, with and without 0.1 Pb, from 800°-1200°C, and of 18-8 stainless steels containing Ti, and also W, at 20°, 600°, and 700°C.

ASB-ISA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CODES

3RD AND 4TH CODES

5TH AND 6TH CODES

7TH AND 8TH CODES

9TH AND 10TH CODES

11TH AND 12TH CODES

13TH AND 14TH CODES

15TH AND 16TH CODES

17TH AND 18TH CODES

19TH AND 20TH CODES

21ST AND 22ND CODES

23RD AND 24TH CODES

25TH AND 26TH CODES

27TH AND 28TH CODES

29TH AND 30TH CODES

31ST AND 32ND CODES

33RD AND 34TH CODES

35TH AND 36TH CODES

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41ST AND 42ND CODES

43RD AND 44TH CODES

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49TH AND 50TH CODES

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83RD AND 84TH CODES

85TH AND 86TH CODES

87TH AND 88TH CODES

89TH AND 90TH CODES

91ST AND 92ND CODES

93RD AND 94TH CODES

95TH AND 96TH CODES

97TH AND 98TH CODES

99TH AND 100TH CODES

1st and 2nd Order Processes and Properties Index

12

Laws of Magnetic Properties of Macro-Heterogeneous Magnetic-Solid Systems. (In Russian.) A. B. Altman, I. Sh. Kazarnovskii, and V. L. Memelov. *Zhurnal Tekhnicheskoi Fiziki* (Journal of Technical Physics), v. 19, May 1949, p. 560-566.

Establishes laws of residual induction and coercive force for the above systems as a function of phase composition. Such laws permit evaluation of properties of metal-ceramic and metal-plastic compositions. Permanent magnets from the Fe-Ni-Al system with additions of Co, Cu, and K were investigated. Results are charted and tabulated.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

Common Elements

Materials Index

Character Variables Index

1	2	3	4	5	6	7	8	9	0	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
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ALTMAN, A. B.

621.3187 : 621.318.012 1'

3073. Permanent magnets of powder materials.

A. B. ALTMAN, *Electrotechnica*, 1954, No. 6, 65-9

Abstract

See also 621.318.012 1'

See also 621.318.012 1'

as magnets provide

fracture toughness

size up to 100 g.

are even smaller ones (up to 30 g). Other dimensions

are experienced in cases where the shapes required

are complicated by slots, etc. Characteristics

and typical errors of measurement

and energy contents are tabulated. Of some interest

is a table of production allowances for the case of

Fe-Ni-Al metalloceramic magnets. B. F. KRAUS

AL'TMAN, A. B.

Subject : USSR/Electricity AID P - 1285
Card 1/1 Pub. 27 - 9/30
Authors : Al'tman, A. B., Kand. of Tech. Sci. and Melashenko, I. P.
Eng.
Title : Metal-ceramic materials for electric contacts
Periodical : Elektrichestvo, 1, 43-47, Ja 1955
Abstract : The author presents a review of materials produced by powder metallurgy techniques from refractory metal such as tungsten and molybdenum, or from semirefractory material, such as graphite, nickel, cobalt, or cadmium oxide and their compositions with copper and silver. He describes the technique of production and the structure, application and characteristics of the materials. 13 photographs and diagrams, 10 references (4 Russian, 1941-1952).
Institution : Scientific Research Institute of the Ministry of Heavy Industry
Submitted : J1 14, 1954

Category : USSR/Magnetism - Ferromagnetism

F-4

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 1406

Author : Altman, A.B., Eysurovich, A.S.

Title : Concerning the Dependence of the Coercive Force of Pressed Ferromagnetic Powders on the Pressing Pressure and on the Particle Concentration

Orig Pub : Fiz. metallov i metallovedeniye, 1955, 1, No 3, 441-445

Abstract : A study is made of the dependence of the coercive force of fine Fe and Fe-Co (26% Co) powders on the particle concentration and on the pressure used in compressing the powders. The Fe and Fe-Co powders were obtained by reducing organic acid salts (particle dimension approximately 0,03 microns). H_c was measured in a ballistic setup by the deflection method. It is established that changing the packing density of the ferromagnetic particles, by changing the distances between the groups of particles, does not affect H_c of thin powders and pressed parts, in contradiction with Weil's experimental data (Weil, C.r. Acad. sci. 1947, 225, 229-230). It was observed that the coercive force of the pressed parts diminishes with increasing pressure, both for constant and variable concentration of the ferromagnetic particles. The pressure used to compress the ferromagnetic powders varied from

Card : 1/2

Mr. [Name] [Address] [City] [State] [Zip]
[Faded text, likely a return address or recipient information]

AL'TMAN, A.B.

USSR/Magnetism - Ferromagnetism

F-4

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 12004
Author : Al'tman, A.B.
Inst : -
Title : Metal-Ceramic Permanent Magnets
Orig Pub : Poroskhovaya metallurgiya, Yaroslavl', 1956, 295-310
Abstract : Survey of properties, technology of manufacture, and application of permanent magnets, obtained by means of powder metallurgy. (See Abstract 12001).

Al'tmann, A.B.

AUTHOR: Al'tmann, A.B.

112

TITLE: Dependence of the magnetic properties of metallo-ceramic permanent magnets on the porosity. (Zavisimost' magnitnykh svoystv metallokeramicheskikh postoyannykh magnitov ot poristosti.)

PERIODICAL: "Fizika Metallov i Metallovedenie", (Physics of Metals and Metallurgy), 1957, Vol.IV, No.1 (10), pp.84-88, (U.S.S.R.)

ABSTRACT: The results are described of investigations of the influence of porosity of metallo-ceramic permanent magnets made of alni, alnico, "magnico" and "cunico" on their respective magnetic properties, i.e. the coercive force, the residual induction and the maximum magnetic energy. The compositions of these magnetic alloys are given in Table 1, p.55. For pore concentrations up to 25% there is an essentially linear dependence between the magnitudes of the residual induction and the maximum magnetic energy. It was confirmed that the coercive force of metallo-ceramic magnets does not depend on the porosity. Empirical formulae are proposed which enable one to calculate the residual induction and the maximum magnetic energy of porous magnetically hard alloys if their respective characteristics in the poreless (dense) state are known, which are valid for alloys with $H_c = 480 - 850 \text{ Oe}$, $B_r = 3000 - 12\ 000 \text{ Gauss}$, $W_{\max} = 30\ 000 - 150\ 000 \text{ erg/cm}^3$, porosity up to 25%.

Dependence of the magnetic properties of metallo-ceramic
permanent magnets on the porosity. (Cont.) 112

2 tables, 3 figures, 4 references, 3 of which are Russian.

Research Institute, Recd. Feb. 15, 1956;
Ministry of Electrical Industry. after revision recd.
June 27, 1956.

ALTMAN, A. B.

"Mangan-Wismut-Dauermagnete,"

paper presented at the Intl. Powder Metallurgy Meeting in Eisenach, 28-31 May 1957.

Die Technik, No. 10, Oct. 1957.

ALTMAN, A. B.

6(2) **PLATE 1 BOOK EXPLORATION** **SOV/US55**

Sovetskoye po elektrotekhnika boezhnyam. Moscow, 1956.

Elektricheskiye kontakti: izudy sovetskoye (Electrical Contacts: Transactions of the Conference) Moscow, Gosizdatgiz, 1956. 303 p. 4,150 copies printed.

Materialy konferentsii po kontaktam (Materialy Konferentsii po Kontaktam), vol. 2. E. P. Korotkiy, Ed. L'vov, Dzhukovskiy, 1956. 116 p.

REMARKS: This collection of articles is intended for engineers and technicians studying, developing and operating electrical apparatus and is concerned with electrical contact materials. It may also be useful in scientific research in physics and electronics.

COMMENTS: This book comprises reports delivered at the Electric Contacts Conference held in Moscow in November, 1956. These papers cover physical processes occurring during connecting or disconnecting, methods of designing and testing electric contacts, production and characteristics of contact materials. During this conference of the Institute of Electrical Engineering of the USSR (Institute of Automation and Remote Control, Academy of Sciences, USSR) participants approved periodic maintenance of pyrolytic, metallurgical, chemical and apparatus design specialists to discuss problems of electric contacts, which are the components of electric apparatus primarily influencing the reliability of electric systems, especially the control systems. Their physical, chemical, mechanical and chemical processes have still not been well analyzed. References are given at the end of most of the reports.

II. DESIGN: APPLICATION AND TESTING METHODS

Pylyar, G.D. (Grand "Plasma" House - Moscow "Plasma" Plant) **Veer Baste - Contacty in D-0 Contactors and Components** 158
The author describes the method of testing wear resistance of contacts at the "Plasma" Plant in Moscow and proposes that all other plants adopt this method as a standard one to enable the comparison of test results.

Orlov, A.V. **Methods of Testing the Resistance to Wear of Electric Contacts in Aircraft D-0 Contactors** 158
The author reports the results of work he carried out along with engineers E.Y. Izrael, M.A. Pruzer, V.Y. Slavov. It describes the method applied for testing aircraft contactors. This method permits approximating operating conditions with real operating conditions. It suggests applying this method for testing contactors of general industrial use.

Albin, V.K. and M.A. Orlovich. (Zavod "VTZ-1" Moscow "VTZ-1 Plant") **Contactors of Vintovoye Voltage Regulators** 156
The authors summarize the results of investigations they carried out in the Scientific Research Institute of the VTZ-1 Plant along with engineers T.G. Shchegolev, V.I. Shchegolev, L.S. Boger, N.Y. Gornov, O.O. Shchegolev on operating conditions of contacts in vibrator voltage regulators of aircraft generators on the design of contact fittings and on various pairs of contact metals.

III. PROPERTIES AND CHARACTERISTICS OF CONTACT MATERIALS

Al'tman, A.B., I.P. Melnikova, and K.G. Pyrkova. (Inzhenerno-Issledovatel'skiy Institut Elektromekhanicheskoy Promyshlennosti - Scientific-Research Institute for the Electrical Industry) **Modern Silver-Metal Electric Contacts.** 171
Silver contacts are presently the most suitable materials for arcing tips of high-current circuit-breakers. The authors explain the technical requirements, describe the structure of the contact tips, methods of production, characteristics and applications.

Pravoslav, I.M., and O.K. Rodionov. (Institut Metallurgiki i Spetsial'nogo Stroyeniya AF USSR - Institute for Special Metals and Special Alloys, Russian Academy of Sciences) **Production Methods of Silver-Metal Electric Contacts** 166
The authors describe the results of their investigation of the composition of various methods of producing silvered metals.

Usov, V.F. and Khuz'yeva, M.K. (Inzhenerno-Issledovatel'skiy Institut Elektromekhanicheskoy Promyshlennosti - Scientific-Research Institute for the Electrical Industry) **Methodical Problems of Contact Design.** 169
Calculations of alloys at higher temperatures result in errors in the design of contacts that obtained by the silvered metal power method. The authors explain this "methodical" method and its advantages.

Al'tman, A.B., and G.D. Pylyar. (Scientific-Research Institute for the Electrical Industry) **Internal Structure of Wear-Resistant Electric Contacts** 218
The authors discuss their investigation of the influence of internal structure on the wear resistance of electrical contacts. They paid special attention to the alloys Ag-Cu, Ag-Ni, and Ag-W.

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AUTHOR: Al'tman, A. B. SOV/126-6-1-5/33
TITLE: Certain Relations Governing the Magnetic Properties of
Manganese-Bismuth Permanent Magnets (Nekotoryye
zakonomernosti magnitnykh svoystv marganets-vismutovykh
postoyannykh magnitov)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol. 6, No. 1,
pp 46-51 (USSR)

ABSTRACT: Magnetically hard materials based on bismuth-manganese
powders have been investigated by various authors and
in the Soviet Union by Ye. V. Shtol'ts and Ya. S. Shur
(Refs. 9 and 10). The published literature contains a
considerable amount of information on the technology and
the properties of these magnets but this is not quite
exhaustive enough and further studies are of considerable
interest. In this paper the results are described of
work relating to magnets pressed from powder of a
manganese-bismuth alloy as a function of the conditions
of manufacture and testing. For the manufacture,
manganese and bismuth were mixed in a ratio of 23:77, and
fused in a stationary electric resistance shaft furnace
inside a steel crucible. The fusion was effected in

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Certain Relations Governing the Magnetic Properties of Manganese-Bismuth Permanent Magnets

SOV/126-6-1-5/33

air adding ammonium chloride which is capable of forming a protective atmosphere of volatile chlorides with oxides of manganese and bismuth. In the individual experiments the melt was protected from oxidation by means of a flux produced from sodium chloride without using ammonium chloride. The obtained ingots had approximately the same properties in both cases. The total duration of the smelting was about five hours, the manganese-bismuth alloy castings were crushed in a ball-mill in benzol. After drying, the powder was subjected to magnetic separation for separating out non-magnetic particles. The pyrophoricity of the dried powder was low. The chemical compositions of the fractions were 18.4% Mn, 81.6% Bi for the ferromagnetic and 10.9% Mn, 89.1% Bi for the non-ferromagnetic. The magnets were pressed from the ferromagnetic fraction into 8 mm dia., 12 mm long cylinders in a hydraulic press whilst heating in air inside a magnetic field, the direction of which was identical with the direction of the pressing, see sketch, Fig.1. p.47. Thus, the

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Certain Relations Governing the Magnetic Properties of Manganese-Bismuth Permanent Magnets

method was different from that described by Adams et alii (Refs.7 and 8) who produced the alloy by smelting in a furnace with a rotating crucible (duration 45 hours) and crushing the castings and pressing the magnets inside a helium atmosphere. The experiments aimed essentially at studying the influence of the crushing of the alloy, the pressure and the temperature of pressing, the potential of the magnetic field during pressing and the temperature of the ambient medium during the tests on the properties of the pressed specimens. In each series of the tests only one of the conditions was varied, whilst the others were maintained constant. The starting conditions of manufacture were as follows: the specimens were pressed from a powder which was refined by crushing for eight hours, specific pressure 1.3 tons/cm², pressing temperature 280°C, magnetic field potential 11000 Oe; the tests were carried out at 20°C. For comparison the properties of a manganese-bismuth alloy were tested in the as-cast state. The influence of the pressing pressure on the

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SOV/126-6-1-5/33

Certain Relations Governing the Magnetic Properties of Manganese-Bismuth Permanent Magnets

magnetic properties are graphed in Fig.3; the influence of the heating temperature during pressing on the properties of the specimens are graphed in Fig.4; the influence of the ambient medium on the magnetic properties of the specimens are graphed in Fig.5 and, finally, the curves of demagnetisation and of the magnetic energy of the specimens are graphed in Fig.6. The influence of the magnetic field potential on the magnetic properties of the specimens are entered in Table 2, p 50. It was found that the technology of manufacturing manganese-bismuth permanent magnets can be considerably simplified compared to that described in literature. The permanent magnets produced in accordance with the here described technology had a maximum magnetic energy of 150 000 erg/cm³. Due to the irreversible decrease of the magnetic properties during cooling of manganese-bismuth permanent magnets below room temperature, such magnets cannot be used extensively in engineering. Due to the very good magnetic properties of such magnets at 20°C it would be advisable to attempt to reduce the temperature coefficients of the magnetic properties of

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Certain Relations Governing the Magnetic Properties of Manganese-
Bismuth Permanent Magnets

SOV/126-6-1-5/33

such magnets. One of the possibilities of doing so would be to complicate the chemical composition of the alloy on the basis of the manganese-bismuth system. There are 6 figures, 2 tables and 13 references, 8 of which are Soviet, 2 German, 3 English.

SUBMITTED: January 4, 1957 (initially)
April 2, 1957 (after revision)

Card 5/5 1. Magnets--Magnetic properties 2. Powder alloys---Applications
3. Magnets---Production

AL'TMAN, A.B.; GLADYSHEV, P.A.

Effect of zirconium and nitrogen on magnetic properties of permanent
iron-nickel-aluminum magnets. Inzh.-fiz. zhur. no. 6:110-111
Je '58.

(MIRA 11:7)

(Magnets)

AUTHOR: Al'tman, A. B.

SCV/126-6-3-10/32

TITLE: Investigation of Sintering of Cermets on the Basis of the System Fe-Ni-Al (Issledovaniye spevaniya metallo-keramicheskikh splavov na osnove sistemy Fe-Ni-Al)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 3, pp 456-465 (USSR)

ABSTRACT: The conditions of sintering Fe-Ni-Al magnets are well known. However, the physical and chemical processes which take place during the sintering of these magnets have been studied relatively little. The magnetically hard alloys Fe-Ni-Al belong to those multi-component systems which form during heating a uniform solid solution and can decompose during the cooling to form two phases: an iron-base and an intermetallide NiAl (Refs 6 to 8). In some cases such alloys contain admixtures of cobalt, copper and titanium which, according to A. Geisler (Ref 9), do not change the character of the structural transformations in the magnets. Sintering of the alloys is complicated by the presence of aluminium and titanium which have a tendency to form oxides which are difficult to reduce. The work described in this paper was carried out for the purpose of

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