

L 39399-65 EPR/EWT(m)/EWP(b)/T/EWA(d)/EWP(w)/EWP(t) Ps-4 IJP(c) JD GS

ACCESSION NR: AT4046214

S/0000/63/000/000/0032/0039

37
36
B+1

AUTHOR: Panin, V. Ya.; Zenkova, E. K.; Solov'yev, L. A.; Fadin, V. P.

TITLE: High-temperature anomalies of the properties of Cu-Al alloys in the solid solution region

27 17

SOURCE: Yubileynaya konferentsiya po fiziko-khimicheskomu analizu. Novosibirsk, 1960. Fiziko-khimicheskii analiz (Physicochemical analysis); trudy konferentsii. Novosibirsk, Izd-vo Sib. otd. AN SSSR, 1963, 32-39

TOPIC TAGS: solid solution, solid solution transition, activation energy, vacancy mobility, copper alloy, aluminum alloy, high temperature anomaly, alloy physical property, alloy crystal structure

ABSTRACT: Earlier studies showed (see, e.g., C. R. Houska, B. L. Auerbach, J. Appl. Phys., v. 30, no. 10, 1959, p. 1525; V. S. Kagan, V. A. Somenkov, Ya. S. Umanskiy, Kristallografiya, v. 5, no. 4, 1960) that solid Cu-Al solutions may undergo high temperature transitions accompanied by thermal effects and anomalous variations in heat capacity, electrical resistivity, and mechanical properties of the alloy. The present study investigated these anomalies in detail for solid

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Cu-Al solutions of varying concentration. Special attention was paid to solutions near the solubility limit because of the possible abrupt changes in the concentration limits. Tests using very pure (from 99.95% pure Cu and 99.99% pure Al) and technically pure alloys heated up to 800C showed that: 1) the anomalous changes at increased temperatures in the properties of solid Cu-Al solutions are caused neither by impurities nor by changes in the limits of solubility of Al in Cu; they are rather connected with the ordering processes within the alloy; 2) in alloys close to the solubility limit the ordering process may be supplemented by another process connected with the changes in the solubility limit for $T < 400C$; 3) the kinetics of the ordering processes within the Cu-Al alloys depend, however, very much on the purity of the alloy; an increase in purity shifts the ordering process into the lower temperature region. The associated decrease in activation energy is probably related to the increased mobility of the excess hardening vacancies which, otherwise, become bound by the impurity atoms. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 10Sep63

ENCL: 00

SUB CODE: MM

NO REF SOV: 007

OTHER: 010

Card 2/2 ✓

S/185/63/008/002/003/012
D234/D308

AUTHORS: Panin, V. Ye., Fadin, V. P. and Dudarev, Ye. F.
TITLE: Effect of hardening temperature on the ordering processes in solid solutions of Cu-Al
PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 8, no. 2, 1963, 195-200

TEXT: The authors investigated the alloy Cu + 14.3 at.% Al hardened at $T_h = 320^\circ$, 600° and 900°C . The electric resistance ρ was chosen as the characteristic of state, and its temperature variation is considered. The ordering processes during tempering are very slow for $T_h = 320^\circ$ but very intense for $T_h = 600^\circ\text{C}$. Values for the activation energy of the ordering process are given for the above values of T_h and for $T_h = 400^\circ\text{C}$, and it is found that the activation energy is independent of T_h for $T_h = 400 - 900^\circ$, but increases sharply for $T_h = 320^\circ\text{C}$. There are 3 figures and 1 table.

Card 1/2

Effect of hardening ...

S/185/63/008/002/003/012
D234/D308

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut (Siberian
Physicotechnical Institute), Tomsk

Card 2/2

S/185/63/008/002/004/012
D234/D308

AUTHORS: Panin, V. Ye. and Fadin, V. P.

TITLE: Effect of purity of the alloy on the character of ordering in solid solutions of Cu-Al

PERIODICAL: Ukrayins'kyi fizychnyy zhurnal, v. 8, no. 2, 1963, 201-206

TEXT: The alloys investigated were: 1) Cu + 14.3 at.% Al of high purity, 2) Cu + 14.9 at.% Al with 0.025 and 0.07 weight% P. The dependence of the electrical conductivity ρ on the hardening temperature T_h , the temperature variation of ρ and of C_p are considered.

The activation energies E of the ordering process are given. Conclusions: the temperature interval of the ordering is displaced towards higher temperatures with increasing concentration of P; E increases at the same time. E is independent of T_h when the latter is between 400° or 500°C and 900°C . Atomic mobility in Cu-Al alloys can be sharply decreased by adding small quantities of P. There

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Effect of purity ...

S/185/63/008/002/004/012
D234/D308

are 3 figures and 1 table.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut (Siberian
Physicotechnical Institute), Tomsk

Card 2/2

S/185/63/008/002/005/012
D234/D308

AUTHORS: Panin, V. Ye., Fadin, V. P., Bushnev, L. S. and
Minayeva, G. G.

TITLE: Imperfect long-range order in solid solutions Cu-Al

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 8, no. 2, 1963,
206-210

TEXT: The authors calculate the theoretical isotherms of the variation of short-range parameter σ during tempering of the hardened alloy Cu + 14.3 at.% Al. Experimental curves, obtained from the tempering isotherms of electrical conductivity, are compared with theoretical curves. Temperatures of hardening were 320° and 600°C, that of tempering 130°C. There is considerable disagreement between theory and experimental results for 600°C, which is attributed to the existence of imperfect long-range order. Thin foils (1000 - 2000 Å thick) of the alloy were investigated with an electron microscope, and paired dislocations, with distances of 150 - 300 Å in a pair, was observed. These are typical for alloys with long-

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Imperfect long-range ...

S/185/63/008/002/005/012
D234/D308

range order. There are 2 figures.

ASSOCIATION: Sibirskiy fiziko-tehnicheskii institut (Siberian
Physicotechnical Institute), Tomsk

Card 2/2

FADIN, V.P.; PANIN, V.Ye.; DUBAREV, Ye.F.

Nature of ordering in Cu-Al solid solutions. Ukr. fiz. zhur. 8 no.2:
210-216 F '63. (MIRA 16:2)

1. Sibirskiy fiziko-tehnicheskiy institut, g. Tomsk.
(Copper-aluminum alloys)

S/126/63/015/002/017/033
E193/E383

AUTHORS: Panin, V.Ye., Fadin, V.P., Red'kin, V.P. and Ignatyuk, V.A.

TITLE: The temperature-dependence of short-range order in solid Cu-Al solutions

PERIODICAL: Fizika metallov i metallovedeniye, v. 15, no. 2, 1965, 264 - 268

TEXT: The object of the present investigation was to evaluate the contribution of the variation in short-range order to the variation in properties of Cu-Al alloys during heat-treatment. Using the theoretical concepts of Kidin and Shtremel' (FIZM, 1961, 11, no. 5), Le Claire and Lomer (Acta met., 1954, 2, 11) and the experimental data due to Houska and Averbach (J. Appl. Phys., 1959, 30, no. 10) on the equilibrium probability P_{AB} of a given bond of an atom A being satisfied by an atom B, the present authors calculated the values of P_{AB} and the parameter of the short-range order σ for the 14.5 at.% Al-Cu alloy at 0 - 1 000 °C. The results indicated that a considerable degree of short-range order

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The temperature-dependence

S/126/63/015/002/017/033
E193/E383

was retained in the alloy studied even at temperatures approaching its melting point. The values of σ obtained were used to estimate the variation in electrical resistivity due to the gradual destruction of short-range order on heating; it was shown that the resistivity of the alloy should gradually increase with increasing temperature. The temperature-dependence of ρ_{AB} was used to determine the temperature-dependence of the energy required to destroy the short-range order. Finally, the heat effect associated with disordering was experimentally determined by studying the temperature-dependence of the specific heat of the 17.5 at.% Al-Cu alloy. The results obtained for this alloy are reproduced in Fig. 3, showing the temperature-dependence of the short-range order parameter (σ , righthand scale, curve 1), the energy required to destroy the short-range order (ΔE , cal/mole, lefthand scale, curve 2) and the heat effect due to disordering (ΔQ , cal/mole, lefthand scale, curve 3). The fact that curves 2 and 3 in Fig. 3 did not coincide at high temperatures was taken to indicate that transformations in the solid Cu-Al solution were

Card 2/3

The temperature-dependence

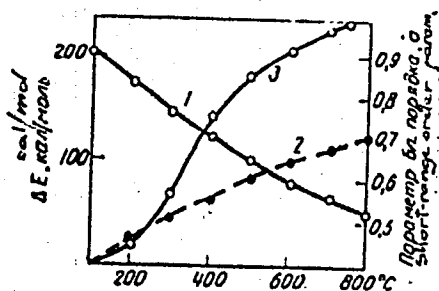
S/126/63/015/002/017/055
E193/E383

associated not only with changes in the degree of short-range order but with other phenomena. There are 3 figures and 1 table.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskii institut
(Siberian Physicotechnical Institute)

SUBMITTED: July 10, 1962

Fig. 3:



Card 3/3

FADIN, V.P.; PANIN, V.Ye.

Kinetics of near order changes in copper-aluminum solid solutions. Fiz.
met. i metalloved. 17 no.2:192-196 F '64. (MIRA 17:2)

1. Sibirskiy fiziko-tehnicheskij institut.

PANIN, V.Ye.; FADIN, V.P.

Short-range order contribution to the change in the properties of
Cu - Al solid solutions due to thermal treatment. Izv. vys. ucheb.
zav.; fiz. 8 no.2;119-124 '65. (MIRA 18:7)

1. Sibirskiy fiziko-tekhnicheskij institut imeni Kvanetsova.

FADIN, V.P.; PANIN, V.Ye.

Concentration dependence of the ordering energy in Cu - Zn solid solutions. Izv. vys. ucheb. zav.; fiz, 8 no.2:177-179 '65. (MIRA 18:7)

1. Sibirskiy fiziko-tekhnicheskiy institut imeni Kuznetsova.

L 46327-65 EWT(m)/T/EWA(m)-2

ACCESSION NR: AP5009215

S/0020/65/161/001/0074/0077

AUTHOR: Bayer, V. N.; Fadin, V. S.

TITLE: Polarization effects in the ¹⁹production of particles in colliding beam experiments _B

SOURCE: AN SSSR. Doklady, v. 161, no. 1, 1965, 74-77

TOPIC TAGS: colliding beam experiment, electron polarization, electron positron annihilation, pair production

ABSTRACT: To estimate the influence of electron polarization on the fundamental two-particle processes occurring during annihilation of an electron-positron pair, the authors calculated the cross sections for the production of pairs of pions, muons, nucleons, and vectons by polarized electrons and positrons. The polarization is produced when the electrons move in a magnetic field and radiate. The calculations show that polarization of the initial electrons and positrons causes the cross sections of two-particle annihilation to be appreciably deformed compared with the cross sections of the process for nonpolarized particles. Such deformation must be taken into account in experiments with colliding beams. On the

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ACCESSION NR: AF5009215

other hand, experiments with initially polarized particles yield no new information on the form factors, compared with experiments with unpolarized particles. To obtain new information on the form factors it is essential to measure the polarization of the final particles. This report was presented by G. I. Budker. Orig. art. has: 12 formulas.

ASSOCIATION: Novosibirskiy gosudarstvennyy universitet (Novosibirsk State University)

SUBMITTED: 05Oct64

ENCL: 00

SUB CODE: NP

NR REF SOV: 003

OTHER: 000

Card 2/2 pm

L 22136-66 EWT(1) GG
ACC NR: AF6004934

SOURCE CODE: UR/0056/66/050/001/0156/0168

AUTHOR: Bayer, V. N.; Fadin, V. S.; Khoze, V. A.

57
13

ORG: Novosibirsk State University (Novosibirskiy gosudarstvenny universitet)

TITLE: Electromagnetic particle pair production

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 1, 1966, 156-168

TOPIC TAGS: pair production, particle collision, photon emission, fermion, collision cross section, electromagnetic interaction, nuclear spin, charged particle, differential cross section, integral cross section, quantum electrodynamics, bremsstrahlung

ABSTRACT: This is a continuation of a series of earlier papers (ZhETF v. 48, 1708, 1965 and elsewhere) dealing with bremsstrahlung occurring upon collision of two charged particles, and the emission of a photon following two-particle annihilation of a pair of particles. The method used in these investigations consisted of integrating individual parts of the diagrams and using the properties of relativistic, gauge, and charge invariance. In the present article this method is used to calculate the cross sections for electromagnetic pair production under the simplifying assumption that all the charged particles are distinguishable.

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L 22136-66

ACC NR: AF6004934

The cross sections for the creation of pairs of fermions with spin $1/2$ or of scalar particles upon collision of a photon with a charged particle are calculated. Exact expressions are obtained for the differential cross sections in terms of the invariant mass of the pair of charged particles. The obtained cross sections are discussed from the point of view of the study of the form factors of the particles and the check on the validity of quantum electrodynamics at small distances. This is followed by an analysis of the annihilation of a pair of particles into two pairs of charged particles. The exact value of the differential cross section is obtained in terms of the invariant masses of the produced pairs, and the properties of these cross sections are discussed. Approximate expressions are also obtained for the integral cross section. The calculation takes into account the recoil and the contribution of the dispersion, and the Compton tensor of the fourth rank is integrated over the final states of the fermion pair. Orig. art. has: 4 figures and 3 formulas.

SUB CODE: 20/ SUBM DATE: 09Jul65/ ORIG REF: 008/ OTH REF: 004

Card 2/2 BK

L 30030-66 EWT(1) (a) (u) (c) (1) (c) GG

ACC NR: AP6020115 SOURCE CODE: UR/0367/66/003/002/027/0331

AUTHOR: Bayer, V. N.; Fadin, V. S.; Khoze, V. A. 62

ORG: Novosibirsk State University (Novosibirskiy gosudarstvennyy universitet) B

TITLE: Elastic and inelastic formfactors in the cross-sections of electromagnetic processes

SOURCE: Yadernaya fizika, v. 3, no. 2, 1966, 327-331

TOPIC TAGS: photon, elastic scattering, inelastic scattering, particle annihilation, particle cross section, electromagnetic interaction

ABSTRACT: General formulae for the cross-sections of elastic scattering and the two- and three-particle annihilation of a pair of arbitrary particles are derived in a one-photon approximation. The creation of a pair of particles in interactions of photons with charged particles and in the inelastic electromagnetic annihilation of a pair is considered. Orig. art. has: 3 figures and 26 formulas. [Based on authors Eng. abst.] [JPRS] 19

SUB CODE: 20 / SUBM DATE: 23Jun65 / ORIG REF: 004 / OTH REF: 005

Card 1/1 *so*

L 41742-66 EWT(1)/T LJP(c) AT

ACC NR: AP6020217

SOURCE CODE: UR/0056/66/050/006/1611/1616

76
73
B

AUTHOR: Bayer, V. N.; Fadin, V. S.; Khoze, V. A.

ORG: Novosibirsk State University (Novosibirskiy gosudarstvenny universitet)

TITLE: Emission of two photons in a specified angle during electron collisions

SOURCE: Zh eksper i teor fiz, v. 50, no. 6, 1966, 1611-1616

TOPIC TAGS: photon emission, electron collision, radiation detector, scattering cross section

ABSTRACT: This is a continuation of earlier work by one of the authors (Bayer, with V. M. Galitskiy, ZhETF Pis'ma v. 2, 259, 1965 and earlier) dealing with the emission of two photons of arbitrary energy as a result of electron collisions. In view of the great interest that attaches to this process in connection with colliding-beam experiments, and in view of the fact that earlier calculations were based on the assumption that the angular dimensions of the photon detectors greatly exceed the characteristic emission angle, the authors calculate in this article the cross section for the emission of two photons into a specified angle, which is shown to be only a fraction of the cross section of the radiation integrated over all the angles. The final expression, obtained by a combination of analytic and computer techniques, is in the form of a polynomial in the powers of the frequencies of the two photons. The numerical values of the coefficients of the powers of the frequencies are obtained in the case when the detector dimensions are of the order of magnitude of the characteristic

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L 41742-66

ACC NR: AF6020217

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emission angle. An analytic expression for the cross section is obtained when the detector dimensions are much larger than the characteristic angle. The results of this analytic expression agree well with the numerical calculations. The authors thank A. P. Onuchin for a discussion of questions connected with the experiment, and G. I. Rusova and E. Z. Borovskaya for help with the numerical calculations. Orig. art. has: 1 figure, 14 formulas, and 2 tables.

SUB CODE: 20/^{18/} SUBM DATE: 10Jan66/ ORIG REF: 003/ OTH REF: 001

Card 2/2 10

ACC NR: AP6036055

SOURCE CODE: UR/0056/66/051/004/1135/1142

AUTHOR: Bayer, V. N. ; Fadin, V. S. ; Khoze, V. A.

ORG: Novosibirsk State University (Novosibirskiy gosudarstvennyy universitet)

TITLE: Bremsstrahlung in high energy electron collisions

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 4, 1966, 1135-1142

TOPIC TAGS: bremsstrahlung, electron collision, photon emission, center of mass, ~~center of mass system, laboratory system~~
recoil

ABSTRACT: Single bremsstrahlung in high energy electron collisions is considered. The angular distribution and spectrum of the emitted photons in the center of mass system and the laboratory system are calculated. Radiation due to the incident particle and recoil particle is considered in the 1. s. case. The classical current and Weizsacker—Williams methods are analyzed and it is shown that the latter method is not valid for calculating the spectrum of photons emitted by recoil

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ACC NR: AP6036055

particles if $\mu > m/2$. The authors are very grateful to V. M. Galitskiy and Ye. M. Lifshits for discussions. Orig. art. has: 3 figures and 28 formulas.
[Authors' abstract]

SUB CODE: 20/SUBM DATE: 09Apr66/ORIG REF: 005/OTH REF: 005/

Card 2/2

FADIN, V., inzhener; FADIN, Ye., inzhener.

Automatic control. Tekh.mol.24 no.6:16-18 Ja '56. (MLRA 9:9)
(Automatic control)

FADIN, Ye.A., (Leningrad)

Riddle of the "red displacement." Nauka i zhizn' 22 no.10:43-45
(Spectrum analysis) (MLRA 9:1)

SOV/86-58-8-2/37

AUTHOR: Rayevskiy, P.D., Lt Col, and Fadin, Ye.S., Capt

TITLE: Party Organization Fights for High Standards in Training (Partiynaya organizatsiya v bor'be za vysokoye kachestvo ucheby)

PERIODICAL: Vestnik vozdushnogo flota, 1958, Nr 8, pp 9-14 (USSR)

ABSTRACT: The authors describe the role played by party organizations in the training of personnel in general, and of flying personnel in particular. They are members of an outstanding bomber unit, which has had no aircraft accidents during the last 10 years.

Card 1/1

FADINA, G.

Exhibition hall for Soviet goods in Accra. Vnesh. tovg. 30 no.12:
25 '60. (MIRA 13:12)

(Accra--Exhibitions)

FADINA, G.

Republic of Ghana. Vnesh.torg. 41 no.5:27-31 '61.

(MIRA 14:4)

(Ghana--Economic conditions)

(Ghana--Commerce)

FADINA, G.

Commerce with Ghana is on the upsurge. Vnesh. torg. 42 no.10:8-11 '62.
(MIRA 15:10)

(Russia—Commerce—Ghana)

(Ghana—Commerce—Russia)

KOVALEV, N.G.; ZMEYEV, A.A.; LUKIN, Ye.I.; FADINA, G.I.; KATIN,
V.K.; SYSHCHIKOV, Yu.T.; VLASOV, A.V.; KARPOV, I.N.;
ASTAKHOV, A.S.; DARONYAN, M., red.; MOSKVINA, R., tekhn.
red.

[Africa in figures; a statistical manual] Afrika v tsif-
rakh; statisticheski spravochnik. Moskva, Sotsekgiz,
1963. 566 p. (MIRA 16:11)
(Africa--Statistics)

KIDIN, I.N.; LEYKOVSKIY, K.K.; FIGUZOV, Yu.V.; FABINA, L.V.

Investigating the isothermal decomposition of austenite by the
internal friction method. Fiz. met. i metalloved. 18 no.2:316-
317 Ag '64. (MIRA 18:8)

L. Moskovskiy institut stali i splavov.

VAYNSHTEYN, Ya.I., inzh.; FADINA, N.M., inzh.

Adjustment of slit-type gas burners. Teploenergetika 8 no.3:
11-12 Nr. '61. (MIRA 14:9)

1. Energonaladka. (Gas burners)

VAYNSHTEYN, Ya.I., inzh.; FADINA, N.M., inzh.

Increase in the evaporative capacity of boilers. Energetik 10
no.4:13-16 Ap '62. (MIRA 15:4)

(Boilers)

FADINA, E. A., PROKHOROVA, A. A. and BELIKOV, N. P.

"Honey inspection and determination of its quality."

Veterinariya, Vol. 37, No. 5, 1960, p. 82

Leningrad City Vet - Bacteriol. Lab

ZAKHAROV, V.I.; NOVIKOVA, N.R.; PERFILOV, N. A.; FADINA, Ye.V.

Properties of fine-fraun nuclear emulsions dependent on the pAg
and the temperature of emulsification and first ripening.

Zhur. nauch. i prikl. fot. i kin. 9 no.1:21-27 Ja-F'64.

(MIRA 17:2)

ZAKHAROV, V.I.; NOVIKOVA, N.R.; PERFILOV, N.A.; FADINA, Ye.V.

Pyrogallolamidol developer for nuclear emulsions. Zhur.nauch.
i prikl.fot. i kin. 9 no.6:422-425 N-D '64.

(MIRA 18:1)

ACC NR: A17000923

SOURCE CODE: UR/3180/66/012/000/0005/0015

AUTHOR: Novikova, N. R.; Zakharov, V. I.; Fadina, Ye. V.

ORG: none

TITLE: Use of synthetic polymers in the manufacture of fine grain nuclear emulsions. Part I. Properties of fine grain emulsion when the gelatine is partially replaced by polyvinyl acetals

SOURCE: AN SSSR. Komissiya po khimii fotograficheskikh protsessov. Uspekhi nauchnoy fotografii, v. 12, 1966. Yadernaya fotografiya (Nuclear photography), 5-15

TOPIC TAGS: nuclear emulsion, emulsion polymerization, film grain, polyvinyl acetate

ABSTRACT: The authors report experiments aimed at improving the properties of nuclear emulsions by replacing the gelatin with polyvinyl acetals, using PR-2 nuclear emulsions as examples, and investigated the physical, mechanical, and recording properties of emulsions prepared on this basis. The emulsions were prepared essentially by diluting the initial PR-2 emulsion with a solution of polyvinyl acetal. The preparation of the polyvinyl acetal and of the emulsion are briefly described. Several types of polyvinyl acetal were investigated. The tests consisted of determining the swelling of the gelatin and polymer-gelatin emulsion layers, the changes in the linear dimensions, the mechanical strength, and the photographic grain density and the fog-

Card 1/2

FADRKHONS, J.

M

CZECHOSLOVAKIA/Cultivated Plants. Grains.

Abs Jour: Ref Zhur-Biol., No 5, 1958, 20260.

Author : ~~J. Fadrkhons~~

Inst : Not given.

Title : The Selection of Short-Stalked Rye. (Selektsiya rzhis korotkoy solomoy).

Orig Pub: Sbor. Ceskosl. akad. zemed. ved. Rostl. vyroba, 1956, 29, No 7, 645-652.

Abstract: The problem is solved for the possibility of selecting rye with short stalks in order to provide them with greater resistance to stem wilting. A new select variety of Dobrovitskiy winter rye with a short culm in comparison with the standard variety of Czech rye is distinguished by its resistance to stem wilting,

Card : 1/2

MALY, J.; FADRUS, H.

The possibility of use of indigocarmin for the determination
of nitrates. Cesk. hyg. 9 no.6:367-373 J1'64

1. Vodohospodarska sprava, Brno.

NEDOROST, Cestimir, inz.; FADRUS, Hubert, promovany chemik; MALY, Josef, promovany chemik; ~~NENTVICH~~, Jindrich, inz.

Experiences in waste water purification in Brno. Vodni hosp 14 no.8:293-298 '64.

1. Water Resources Management Agency of the city of Brno (for all except Nentvich). 2. Hydroprojekt, Brno (for Nentvich).

NEDOROST, Cestmir, inz.; MALY, Josef, promovany chemik; FADRUS, Hubert, promovany chemik; PAZDERA, J., inz.

Experiences in waste water purification in Brno. Vodni hosp 14 no.9:
332-347 '64

1. Brno City Water Resources Management, Brno (for all except Pazdera).
2. Hydroprojekt, Brno (for Pazdera).

FADRUS, H.; MALY, J.

A contribution to the quick determination of iron content in water. Cesk. hyg. 10 no.2:97-99 Mr '65

1. Vodohospidarska sprava mesta Brna.

SECRET

WALY, J; MADRUS, H.

Water Administration (Vodohospodarska sprava), Brno (for both)

Prague, Ceskoslovenska Hygiena, No 6, 1964, pp. 367-373

"The Possibility of the Use of Imidoguanine for the Determination of Nitrate."

CZECHOSLOVAKIA

MADRUS, H; WALY, J.

Water Economy Management of the City of Brno (Vodohospodarska sprava mesta Brno), Brno (for both)

Prague, Ceskoslovenska Hygiena, No 2, 1965, pp. 97-99

"On the Quick Detection of Iron in Water."

VAS'KOVSKIY, A. P., PASECHNIK, P. P., FADRYGA, S. V. and CHALENKO, S. R.

"Agriculture of the Magadan Oblast" (book) 1957

Tells of the Experience of agricultural workers of the Magadan Oblast', which is the more interesting because of the utilization of new areas in the north. In spite of the many of authors the book is a complete and finished work.

FADYUSHIN

598

AUTHORS: Kotel'nikov, V.K. and Fadyushin, I.L.

TITLE: Built-up Reamers and Boring Disc Cutters provided with Carbide Inserts for the machining of Cast Iron Housing Components. (Razvertki Sbornyye I Rastochnyye Plastiny, Osnashchennyye Tverdym Splavom, Dlya Korpusnykh Detaley Iz Chuguna).

PERIODICAL: "Stanki i Instrument" (Machine Tools and Cutting Tools, No.3, 1957, pp.31-33 (U.S.S.R.)).

ABSTRACT: In the All Union Scientific Research Institute of the Tool Industry (VNII) designs of built-up adjustable reamers and floating disc shaped boring cutters with carbide cutting tips have been developed which permit repetition work to class 1 and class 2 precision and are claimed to reduce machining time by a factor of two or three. Designs for reamers between 40 and 300 mm diameter are illustrated in cross-section. The design of boring disc cutters between 70 and 400 mm diameter is also illustrated. In both tools regrinding is preceded by the shimming of the carbide tips to restore the original size. Detailed instructions for re-sharpening are given.

There are 4 illustrations.

Card 1/1

PHASE I BOOK EXPLOITATION

PHASE I BOOK EXPLOITATION SOV/5581

17

Moscow. Dom nauchno-tekhnicheskoy propagandy.

Vysokoproizvoditel'nyy rezhushchiy instrument [sbornik] (Highly Productive Cutting Tools; Collection of Articles) Moscow, Mashin. 1961. 354 p. Errata slip inserted. 10,000 copies printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR. Moskovskiy dom nauchno-tekhnicheskoy propagandy imeni F. E. Dzerzhinskogo.

Ed. (Title page): N. S. Degtyarenko, Candidate of Technical Sciences; Ed. of Publishing House: I. I. Lesnichenko; Tech. Ed.: Z. I. Chernova; Managing Ed. for Literature on Cold Treatment of Metals and Machine-Tool Making: V. V. Rzhavinskiy, Engineer.

PURPOSE : This collection of articles is intended for technical personnel of machine, instrument, and tool plants.

Card=1/6.

Highly Productive Cutting Tools (Cont.)

SOV/5581

17

COVERAGE: The collection contains information on the following: new brands of high-speed steels and hard alloys; designs of built-up tools and tools for the machining of holes; tools for machining heat-resisting and light-metal alloys and plastics; tools for unit-head machines and automatic production lines; and methods for the sharpening and maintenance of carbide-tipped tools. No personalities are mentioned. There are 56 references, mostly Soviet. References accompany some of the articles.

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FADYUSHIN, I.I.

Heads for annular boring of through holes in cast iron. Stan.1
instr. 33 no.3:26-27 Mr '62. (MIRA 15:2)
(Drilling and boring machinery)

FADYUSHIN, I.L.

Controlled two-edge floating reamers. ✓ Stan. 1 instr. 36
no. 12:31-33 D '65 (MIRA 19:1)

FADYUSHINA, M. N.

5000

~~Effect of the time period during which steels U-10, U-11, U-12 and U-13 are in the hardened state on crack formation. E. I. Malinkina and M. N. Fadyushina. Svoitsa i Termichesk. Obrabotka Instrumental. Stal (Moscow: Mashgiz) 1954, 41-2; Referat. Zhur., Khim. 1955, No. 4427. — Crack formation in these steels was prevented by immediate annealing of the steel after hardening, particularly when the hardening temps. were 760-80°.~~

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of *yo* *FH*

GELLER, Yu.A.; FADYUSHINA, M.N.

Microscopic method of determining decarbonization in tool steels.
Zav.lab. 26 no.3:307-310 '60. (MIRA 13'6)

1. Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut.
(Steel alloys--metallography)
(Carbon)

S/137/62/000/002/088/144
A060/A101

AUTHORS: Geller, Yu. A., Fadyushina, M. N.

TITLE Determination of residual austenite by the magneto-metallographic method

REFERENCE: Referativnyy zhurnal. Metallurgiya, no. 2, 1962, 70, abstract 2147 (V sb. "Metodika i praktika metallogr. issled. instrum. stali", Moscow, Mashgiz, 1961, 44-50)

TEXT The magneto-metallographic method proposed by the authors makes it possible to establish the presence of residual austenite by examination of specimens under a microscope and to determine the distribution of residual austenite in the structure. The magneto-metallographic method was checked by testing the steels XBF, 9XC, P9, and P18 (KhVG, 9KhS, R9, and R18). It is shown that the results of the magneto-metallographic method coincide with the data obtained by the magnetic X-ray structure analyses. The magneto-metallographic method possesses a high sensitivity and is very expedient for determining the residual austenite in a multiphase alloy, and is also convenient for controlling the tempering of high-speed steel.

[Abstracter's note: Complete translation]

I. Nikitina

Card 1/1

S/137/62/000/002/091/14
A060/A101

AUTHORS: Geller, Yu. A., Fadyushina, M. N.

TITLE: Determining decarbonization in alloy steel from intermediate transformation

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 71, abstract 21474
(V sb. "Metodika i praktika metallogr. issled. instrum. stali".
Moscow, Mashgiz, 1961, 60-65)

TEXT: A description is given of the comparative determination of the thickness of the decarbonized layer using three methods - the method of chemical analysis, the method of V. D. Sadovskiy, and the method of A. A. Popov and M. S. Mikhalev, carried out in order to estimate the precision of the last mentioned method and the feasibility of its application to tool steels. The steel grades Y12, Y11XB, X. 9XC, XBГ, 95XГCB, and 8CBM(U12, U11KhV, Kh, 9KhS, KhVG, 95KhGSV, and 8SVM) were investigated. The specimens had a cross-section 8 x 8mm. All the steels to be decarbonized were soaked in a hydrogen stream at 900°C; in order to obtain the initial structure the specimens were annealed at 780°C for 4 hours. Then the specimens were heated up in a reducing vat and cooled to

Card 1/2

S/137/62/000/002/091/144
A060/A101

Determining decarbonization in alloy ...

450 - 300°C (the region of intermediate transformation) and were soaked for 180 sec. The dark-staining zone, representing the transformation products in the intermediate region was taken as the thickness of the decarbonized layer. It was established that the method proposed by A. A. Popov and M. S. Mikhalev is applicable only to alloy tool steels, but not to carbon steels. For hyper-eutectoid steels the method yields somewhat low values of the thickness of the decarbonized layer. This method may be used to check the decarbonization in a finished tool, where the specimens or parts of the instrument should have a diameter or thickness ≤ 10 mm. Treatment schedules for the specimens are cited. ✓

V. Ferenets

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/002/093/14
A060/A101

AUTHORS: Smol'nikov, Ye. A., Fadyushina, M. N.

TITLE: Determining decarbonization in steel containing 12% Cr, by the use of pearlitic transformation

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 71, abstract 21476 (V sb. "Metodika i praktika metallogr. issled. instrum. stali". Moscow, Mashgiz, 1961, 66-68)

TEXT: An investigation was carried out upon two methods of fixing the decarbonized layer and determining its depth in steel grade X12 (Kh12). The first method is based on the fact that the bainite transformation in the zone with lowered C content occurs earlier than in regions with higher C content. The second method is based on the nonsimultaneous transformation of supercooled austenite in the pearlitic region in zones with differing C contents. The recommended hardening schedule for the first method is: heating up for hardening to 1,000 - 1,025°C, cooling in saltpeter at 375 - 390°C for 10 - 20 min and thereupon in water. According to the second method the heating temperature for hardening is 1,000 - 1,025°C, cooling in a salt vat (78% BaCl₂ + 22% NaCl) at

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Determining decarbonization in steel ...

S/137/62/000/002/093/144
A060/A101

725°C for 10 min and then in oil. It is noted that both methods yield results which coincide. The values of the depth of the decarbonized layer obtained by the two methods are cited.

V. Ferenets

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/005/094/150
A006/A101

AUTHORS: Gulyayev, A. P., Fadyushina, M. N.

TITLE: Red-heat resistance of high-speed steel

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 62 - 63, abstract
5I373 (V sb. "Metodika i praktika metallogr. issled. instrum. stali",
Moscow, Mashgiz, 1961, 70 - 75)

TEXT: To develop a method of testing red-heat resistance of high-speed steel, the authors studied the effect of the method and duration of heating and repeated heating upon the reduction in hardness, measured at room temperature. The investigations were made on grade P 9 (R9) steel quenched from 1,230°C and tempered 3 times at 560°C. Red-heat resistance tests are conducted as follows: specimens of a given heat are treated under conditions recommended for the given steel grade; they are then heated to 575°C with 4 hours holding time, air-cooled, and their hardness is measured. These specimens are then heated to 600°C, held for 4 hours, and the same operation is repeated and extended to 700°C. The results obtained are used for the plotting of a "hardness versus 4-hour heating-

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Red-heat resistance of high-speed steel

S/137/62/000/005/094/150
A006/A101

temperature" curve. The temperature causing a decrease in the steel hardness down to a given value, as e.g. to 58 RC, is taken as a red-heat resistance standard. Standards of red-heat resistance are given for 9 high-speed steel grades.

N. Kalinkina

[Abstracter's note: Complete translation]

Card 2/2

88283

S/032/61/027/001/015/037
B017/B054

1.9600

AUTHORS: Smol'nikov, Ye. A., Fadyushina, M. N.

TITLE: New Method of Determining the Decarbonized Layer in
X-12 (Kh-12) Steel

PERIODICAL: Zavodskaya laboratoriya, 1961, Vol. 27, No. 1, p. 62

TEXT: Gradual hardening was recommended to develop the decarbonized layer in the perlite region of Kh-12 steel. The steel specimen was heated to 1000-1050°C, then cooled down to 750°C, kept at this temperature for 10 min, and subsequently hardened in oil. After development by etching, the decarbonized layer in steel becomes visible as a dark stripe. Gradual hardening was also recommended to develop the decarbonized layer in the bainite region. The steel specimen was heated to 1000-1025°C, cooled down to 375-390°C, kept at this temperature for 10-20 min, and then hardened in water. The decarbonized layer in steel shows a needle structure after development by etching. W

Card 1/2

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88283

New Method of Determining the Decarbonized
Layer in X-12 (Kh-12) Steel

S/032/61/027/001/015/037
B017/B054

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy
institut (All-Union Scientific Research Institute of
Instruments)

✓

Card 2/2

18.9100

24159
S/032/61/027/005/005/017
B119/B215

AUTHORS: Geller, Yu. A. and Fadyushina, M. N.
TITLE: Application of the magnetic-metallographic method for the
determination of residual austenite in the steel structure
PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 5, 1961, 562-565

TEXT: The magnetic-metallographic method is based upon the principle that in spontaneous magnetization colloidal magnetic particles evenly distributed on the polished steel surface are attracted by the ferromagnetic phases of the alloy. Non-magnetic phases (austenite, alloyed cementite, and carbides of alloying metals) no longer contain such particles and, thus, appear as light spots under the microscope (in contrast to the magnetic phases which are darkened by the particles covering them). The authors studied the possibility of applying this method for the determination of residual austenite in martensite-base steels and alloys (alloy instrument steels: X3F (KhVG), 9XC (9KhS); high speed steels: P9 (R9), P18 (R18)) after different heat treatment of specimens and finished instruments. The results

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Application of the ...

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S/032/61/027/005/005/017
B119/B215

obtained are in good agreement with those of magnetic and X-ray structural analysis. This method was also suited for determining very small amounts of austenite which could not be determined by the other two methods. It was also possible to eliminate differences in the results obtained by dilatometric and magnetic analyses. The method is especially suited for the determination of residual austenite in multiphase alloys and the continuous control of annealing high-speed steel immediately in instruments. There are 4 figures and 1 Soviet-bloc reference.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut (All-Union Scientific Research Institute of Instruments)

Card 2/2

MAJINKINA, Ye.I.; LOMAKIN, V.N.; PADOUSHINA, M.N.; BADAJOVA, A.S.

Effect of a carbide lattice on the properties of hypereutectoid
steel. Standartizatsiya 27 no.12:29-31 D '63. (MIRA 17:4)

L 40824-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6019204

SOURCE CODE: UR/0121/66/000/006/0030/0031

AUTHOR: Fadyushina, M. N.; Malinkina, Ye. I.

ORG: None

TITLE: Industrial use of R12 steel

SOURCE: Stanki i instrument, no. 6, 1966, 30-31

TOPIC TAGS: tool steel, hardness, plasticity, metal welding, crack propagation, ~~metal heat treatment~~ ductility/ R12 steel, R18 steel

ABSTRACT: The results of tests carried out at various plants indicate that R12 steel can replace R18 steel satisfactorily. Many cutting tools have been made from this steel in recent years. The chemical composition for R12 steel is 0.8-0.9% C, 12-13% W, 3.1-3.6% Cr and 1.5-1.9% V. Impurity elements are within the limits specified for high-speed cutting steel. R12 steel does not present any problems as far as production is concerned. Various specimens were made from both R12 and R18 steel and subjected to various tests. Analysis shows that R12 steel is ductile in the 900-1200°C range and has a higher ductility than that of R18 steel by a factor of 1.5-2. R12 steel was tested by welding to 45 and 40Kh steels under conditions for welding R18 steel. No difficulties were encountered during welding. Crack formation during welding was checked by periodic inspection of the specimens. Cracks were noticed in R12

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B

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UDC: 669.14.018.252.3.7

L 40824-66

ACC NR: AP6019204

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steel with a decarbonized surface. Crack formation was not observed in the majority of cases when similar experiments were performed using samples whose surfaces were not decarbonized. Cutting tools were made from R12 steel using the same production techniques as required for R18. The results show that R18 steel products require less polishing than R12, while the two grades are otherwise similar. The effects of heat treatment are considered. The results show that red hardness is normal (RC 58) for R12 steel only in specimens with a diameter of less than 5 mm. Samples with larger diameters show reduced red hardness. These results show that R12 is only slightly different from R18. The operational properties of R12 and R18 steels are compared. Cutting tools made from R12 steel are as good as those made from R18. Only one case was reported where R12 steel products were considered inferior to R18 products. This is explained by the fact that the materials machined by the cutters made from R12 steel were harder. Cutting tools made from R12 steel may be used for working structural steel with a hardness of up to HB 250. Among the various advantages of R12 steel are the fact that it is less expensive than R18 steel and may be polished more easily than R9. Orig. art. has: 4 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 000

Card 2/2 MLP

FADYUSHINA, M.P., inzh.; RYSAKOV, N.F., kand. tekhn. nauk, dotsent

Study of the mixing unit of a reactor. Izv. vys. ucheb. zav.; energ. 7
no.8:121-125 Ag '64. (MIRA 17:12)

1. Ural'skiy politekhnicheskoy institut imeni S.M.Kirova. Predstavlena
kafedroy teplovykh elektricheskikh stantsiy.

L 8918-65 EWT(1)/EWT(m)/EPP(c)/EPP(j)/T/EWT(k) Pc-h/Pf-h/Ps-h/Ps-h/Pi-h
ACCESSION NR: AP4045636 AS(mp)-2/ASD(m)-3 S/0020/64/158/002/0446/0447
WW/EM

AUTHOR: Faerman, V. T.; Goryachko, G. V.; Slonimskiy, G. L. B

TITLE: Role of supramolecular structure in the destruction of polymers in an ultrasound field

SOURCE: AN SSSR. Doklady*, v. 158, no. 2, 1964, 446-447, and insert facing p. 446

TOPIC TAGS: polymer, amorphous polymer, crystalline polymer, supramolecular structure, spherulite, ultrasound, ultrasound treatment, polymer destruction

ABSTRACT: The effect of ultrasound on the structure and mechanical properties of polymers has been studied for amorphous poly(vinyl chloride) (PVC), and for crystalline polyethylene (PE) and polypropylene (PP) films in distilled water. The destruction stages of the films were observed with a polarizing microscope. Micrographs indicated that ultrasound causes tensile and compressive stresses which can result in various destructive mechanisms; depending on the supramolecular structure of the polymers. Destruction of amorphous PVC

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L 8918-65

ACCESSION NR: AP4045636

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and fine-crystalline PE and PP films proceeds by formation of individual cracks which grow in arbitrary directions to form a network. In PP films with a coarse spherulite structure, cracks are formed at the spherulite boundaries. Ultrasound treatment of PP films with a heterogeneous (fine and coarse) crystalline structure results only in the destruction of coarse spherulite regions along well-defined boundaries, owing to the higher overstresses in these regions. It is concluded that the destruction process of crystalline polymer films in an ultrasonic field depends on the size of elements of supramolecular structure and, probably, on the inner structure of these elements. The dependence of the strength of PP with various supramolecular structures on the duration of treatment with ultrasound is given in Fig. 1 of the Enclosure. Orig. art. has: 4 figures.

ASSOCIATION: Kalininskiy nauchno-issledovatel'skiy institut tekstil'noy promyshlennosti (Kalinin Scientific Research Institute of the Textile Industry); Kalininskiy pedinstitut (Kalinin Pedagogical Institute); Institut elementoorganicheskikh soedineniy Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences SSSR)

Card 2/4

L 8918-65

ACCESSION NR: AP4045636

SUBMITTED: 13Apr64

ATD PRESS: 3110

ENCL: 01

SUB CODE: OC, GP

NO REF SOV: 004

OTHER: 001

Card 3/4

L 8918-65

ACCESSION NR: AP4045636

ENCLOSURE: 01

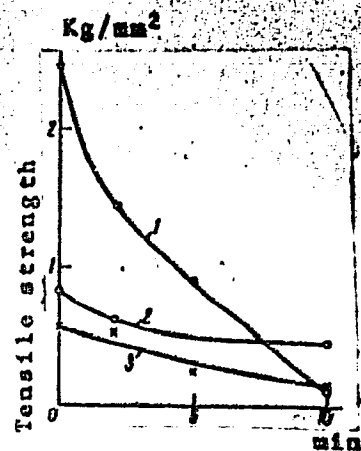


Fig. 1. Change of the strength of polypropylene films with various structures under the effect of ultrasound

1 - Fine-crystalline films; 2 - macro-crystalline films; 3 - heterogeneous crystalline films.

Duration of ultrasonic treatment

Card

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PAPRA, E.

Over 47 thousand zlotys. p. 5.

RODNIK SPECYJALNA. (Centrala Rolniczej Spolkielni "Samopomoc Chlopska")
Warszawa, Poland. Vol. 8, no. 32, Aug. 1955.

Monthly list of East European Accessions (EMAI) LC, Vol. 9, no. 2, Feb. 1960

Encl.

FAFARA, E.

First decennial. p. 3; ROLNIK SPOLDZIELCA. (Centrala Rolnicza Spoldzielni "Samopomoc Chlopska") Warszawa; Vol. 8, no. 18, May 1955.

SOURCE: East European Accessions List (EEAL), Library of Congress, Vol. 4, No. 12, December 1955.

FABRA, E.

Accumulation would have been easier. p. 2.

We are organizing a health cooperative. p. 3.

Article 286 of the Penal Code. p. 4.

RODNIK SYLOWIENSKI, Warszawa, Vol. 8, no. 28, Jul. 1955.

SO: Monthly List of East European Accessions, (week), Vol. 4, no. 10, Oct. 1955,
Uncl.

PAFARA, E. - Rolnik Spoldzielca Vol. 8, No. 29, July 1955 - Warszawa

The peasants themselves fight against deficiencies. p. 8.

SO: Monthly list of East European Accessions List, (EEAL), LC, Vol. 4, No. 11
Nov. 1955, Uncl.

FAFARA, E.

After a Party-economic conference in Lomza, p.3.

ROLNIK SPOKSZIELCA. (Centrala Rolniczej Spolkielni "Samopomoc Chlopska")
Warszawa, Poland. Vol. 8, no. 36, Sept. 1955.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 2, Feb. 1960

Uncl.

FAFARA, E.

107, 2 per cent of the plan in August. p. 4

ROLNIK SPOKDZIELCA. (Centrala Rolniczej Spolkzielni "Samopomoc Chlopska")
Warszawa, Poland. Vol. 8, no. 37, Sept 1955.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 2, Feb 1960

Uncl.

FAFARA, E.

FAFARA, E. How they accomplish their plans. ;. 4. Vol. 8, no. 47, Nov. 1955.
ROINIK SPULLZIELCA. Warszawa, Poland.

SOURCE: East European Accessions List (EEAL) LC Vol. 5, no 6, June 1956

FAPARA M.

At the winter fair in Ostrowia Mazowiecka. p. 4.

Precongress competition. p. 5.

(KS). New incentives for the development of livestock breeding. p. 5.

Vol 8, no. 50, Dec. 1955. Cooperation, a condition of success. p. 1. Our congress
pledges, p. 1. ROLNIK SPOLDSIELCA. Warsaw, Poland.

So: Eastern European Accession. Vol 7, no. 4, April 1956

FAFARA, E.

FAFARA, E. Fertilizers in Grojec District. p. 8.

Vol. 9, no. 6, Feb. 1956
ROLNIK SPOLDZIELCA
AGRICULTURE
Poland

So: East European Accession, Vol. 6, No. 5, May 1957

FAFARA, E.

FAFARA, E. The vadium fines can be avoided. p. 4. Fairs should be prepared better in Jedwabne. p. 4.

Vol. 9, no. 20, May 1956
ROLNIK SPOLDZIELCA
AGRICULTURE
Poland

So: East European Accession, Vol. 6, No. 5, May 1957

BARSZCZAK, Tadeusz; FAFARA, F.

Influence of soaking seeds in borax solutions on their vigor,
germinating power, and boron content. Roczn. nauk roln. rosl. 87
no.2:409-415 '63.

FAFARA, R.

Polish-made binders in this year's harvest work. p. 25. We build clay pits for silage. p. 26. (PLON. Vol. 4, No. 7, 1953.)

SO: Monthly List of East European Accessions, L.C., Vol. 3, No. 4, April, 1954

FAFARA, R.

"Nema thresher, a product of the German Democratic Republic" (p. 13) MECHANIZACJA
I ELEKTRYFIKACJA ROLNICTWA (Panstwowe Wydawnictwo Rolnicze i Lesne) Warszawa, Vol 6,
No 2, Apr/June 1953.

SO: East European Accessions List, Vol 3, No 8, Aug 1954

FAFARA, R.

"A straw and husk gatherer constructed by the Institute for Mechanization and Electrification of Agriculture, adjusted to an S-4 combine" (p. 60) MECHANIZACJA I ELEKTRYFIKACJA ROLNICTWA (Panstwowe Wydawnictwo Rolnicze i Lesne) Warszawa, Vol 6, No 2, Apr/June 1953.

SO: East European Accessions List, Vol 3, No 8, Aug 1954

FAFARA, R.

"Studies concerning the Automat 10/700, a thresher." p. 111, (RCCZNIKI NAUK. SERIA C-MECHANIZACJI, Vol. 66, No. 1, 1953, Warsaw, Poland.)

SO: Monthly List of East European Accessions, Library of Congress, Vol 2 no10: Oct 1953, Uncl.

FAFARA, R.

"Studies on clover threshers." p. 112, (ROZNIKI NAUK. SERIA C-MECHANIZACJI, Vol. 66, no 1, 1953, Warsaw, Poland).

SO: Monthly List of East European Accessions, Library of Congress, Vol 2 no 10 Oct 1953, Uncl.

FAFARA, R.

"Testing the Tractor-and Horse-Drawn Agrostroj Binder made in Czechoslovakia,"
P. 63. (ROCZNIKI NAUK ROLNICZYCH, Vol. 66, No. 2, 1953. Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4,
No. 1, Jan. 1955 Uncl.

FAFARA, R.

"Testing Potato Diggers," P. 77. (ROZNIKI NAUK ROLNICZYCH. Vol. 66,
No. 2, 1953. Warszawa, Poland)

SO; Monthly List of East European Accessions, (EEAL), LC, Vol. 4,
No. 1, Jan. 1955 Uncl

FAFARA, P.

Tests with the Automat 10/100 threshing machine manufactured in Czechoslovakia, p. 41.
(POCZNIKI NAUK POLINICZYCH, Warszawa, Vol. 66, no. 3, 1953^{1/2})

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jun. 1955,
Uncl.

FATARA, R.

POL.

3337

1.10.195

Fatara R. Hammer Mills.

„Rozdrabiacze bijakowe”. Mechanizacja i Inżynieria Rolnicza, 1955, t. 1, pp. 37-40, 6 figs.

The author reviews the advantages from the use of hammer mills and deals with the theory of breaking and grinding of material carried out by mills of this type. He also gives a comparison of the design of Soviet MDU-4 and DKM-0.1, Hungarian K-0-12 and Czech (RE-2) type hammer mills. Constructional features of these mills are: feed hopper with side supply to the crushing chamber facilitating feeding the hay, hammers pivoted on a disc, and a peripheral speed of 74 metres per second at 3300 r.p.m. It was found necessary, where a higher moisture content in the material was being used, to increase the speed in order to ensure unvaried performance of the machine, to run at increased speeds. Experiments have also revealed that mill with pivoted hammers are more universal and can be used alike for grinding grains and chaff hay containing up to 20 per cent moisture. Grinding and crushing at higher speeds is more economical and the side feed system close to the axis of rotation more effective—particularly in the case of hay—since better use can be made of the air current generated by the rotor. The hammers should be of rectangular shape and 5 mm thick. The mean grind in grains is obtainable with 3 1/2 to 4 mm mesh sieves, a 2 to 2 1/2 mm sieve is required for crushing chaff and pounding it to powder. A 10 kW electric motor with star-delta switching starter appears to be the most suitable for driving the MDU-4 hammer mill.

FAFARA, R.

AGRICULTURE

PERIODICAL: ROCZNIKI NAUK ROLNICZYCH VOL.67, no. 3, 1958

FAFARA, R. The problem of wrapping in threshing machine beaters. p.323.

Monthly List of East European Accessions (MEAI) LC, Vol 8, no 4.
April 1959, Unclass

FAFARA, Roman; PABIS, Stanislaw

Development trends in the technology of grain drying and storing in Poland. Zesz probl post nauk roln no. 44:257-292 '64.

1. Institute of Mechanization and Electrification in Agriculture, Warsaw.

PAVLOV, V.A.; PONYRKO, S.A.; KHOVANSKIY, Yu.M.; FAFAYEVA, G.I.,
red.; DANILOVA, V.V., red.

[Stabilization of aircraft and automatic pilots] Stabili-
zatsiia letatel'nykh apparatov i avtopiloty. Moskva,
Vysshaya shkola, 1964. 483 p. (MIRA 17:8)

FAPL, B., Dr.

Eye injuries. Cesk.pediat. 10 no.4:261-263 May 55.
(~~MYE~~, wounds and injuries,
in inf. & child. incidence & ther.)
(WOUNDS AND INJURIES,
eye, in inf. and child, incidence & ther.)

FAFL, B., MUDr.; NOVAKOVA, M., MUDr.

Dispensary services for children with ocular diseases and defects.

Zdrav. aktuality no. 147:148-157 '61.

(OPHTHALMOLOGY)

(HOSPITAL OUTPATIENT SERVICE)

(PEDIATRICS hosp & clin)

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1. Detska fakultni nemocnice s poliklinikou v Praze, Otralmopedicky ustav v Praze.

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1. Z Ośrodka Badawczego Sprzetu Chemicznego.

Distr: 4E2c 27
✓ Chromic sulfate. Otakar Quadrat, Vladimir Bahensky,
and Josef Raj (Vysoka škola chem. technol., Prague).
Sbornik vysoké školy chem. technol. v Praze 1957, 17-22.
On boiling $K_2Cr_2O_7$, CrO_3 , and $(NH_4)_2Cr_2O_7$ up to 4 hrs. in
concd. H_2SO_4 , green-grey microcryst. products were formed
having the following formulas: $8Cr_2(SO_4)_3 \cdot SO_3$, $Cr_2(SO_4)_3 \cdot$
 SO_3 , and $8Cr_2(SO_4)_3 \cdot 2H_2SO_4 \cdot 3H_2O$, resp. M. Hudlický

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