VETCHINKIN, S.I.; SOKOLOV, N.D.

Calculation of the system HeH^+ by means of the valence structure method. Zhur. fiz. khim. 35 no.7:1645-1647 Jl '61.
(MIRA 14:7)

1. AN SSSR, Institut khimicheskoy fiziki.
(Helium hydride)

VETCHINKIN, S.I.; SOKOLOV, N.D.

Calculation of molecular integrals in quantum chemistry. Zhur.fiz. khim. 36 no.8:1754-1756 Ag '62. (MIRA 15:8)

1. Institut khimicheskoy fiziki AN SSSR i Moskovskiy gosudarstvennyy universitet fizicheskiy fakul'tet.
(Quantum chemistry)

ALEKSANDROV, I.V.; VETCHINKIN, S.I.; KARYAGIN, S.V.

Theory of superfine splitting anisotropy in electron paramagnetic resonance spectra of free radicals. Dokl. AN SSSR 143 no.4:890-893 Ap '62. (MIRA 15:3)

1. Institut khimicheskoy fiziki AN SSSR. Predstavleno akademikom V.N.Kondrat'yevym.

(Radicals (Chemistry)--Spectra)

S/020/62/147/006/013/034
B104/B180

AUTHOR: Vetchinkin, S. I.

TITLE: Method of determining optimum wave functions for approximating matrix elements

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 6, 1962, 1328-1331

TEXT: The matrix elements $D_{AB} = \int \Psi_A^* D \Psi_B d\tau$ of any operator other than the Hamiltonian have no extreme properties with respect to variation of the wave functions. Slight perturbations of the wave functions may therefore cause considerable changes in the D_{AB}. Any extension of the class of wave functions only improves the average of the energy values while the transition probabilities calculated on this basis may either become closer to, or further from, the exact value. The choice of variation wave function in calculating D_{AB} is thus not only determined by the requirement of an extreme energy value. Here the conditions are studied which should satisfy the approximated wave functions so that D_{AB} is not

Card 1/3

Method of determining optimum ...

dependent on extension of the class of variation wave functions for states A and B. The constants, or unknown functions of the coordinates, a_k and b_k, in the approximated wave functions

$$\psi_A = \frac{1}{N_A}\left\{\varphi_A + \sum_{k=1}^{K} a_k (H - E_A)^k \varphi_A\right\}, \quad (1)$$

$$\psi_A = \frac{1}{N_B}\left\{\varphi_B + \sum_{k=1}^{K} b_k (H - E_B)^k \varphi_B\right\}, \quad (2)$$

are assumed to vary slowly in certain regions of space. The problem is to find whether, with these restrictions on the properties of a_k (b_k), an exact solution of the Schrödinger equation can be represented in form (1) (or (2)), by appropriate choice of ψ_A (or ψ_B). If the function can be expanded in a definite, finite but arbitrarily large number of eigenfunctions ψ_n of the Schrödinger equation, any of these eigenfunctions can be represented in the form of series (1) with constant coefficients a_k.

Card 2/3

Method of determining optimum ... S/020/62/147/006/013/034
B104/B180

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

PRESENTED: June 4, 1962, by V. N. Kondrat'yev, Academician

SUBMITTED: May 24, 1962

Card 3/3

S/051/63/014/003/001/019
E039/E120

AUTHOR: Vetchinkin, S.I.

TITLE: Approximate calculation of the probabilities of dipole transitions. The lithium atom

PERIODICAL: Optika i spektroskopiya, v.14, no.3, 1963, 317-321

TEXT: The conditions are examined for the selection of the optimum approximate wave function for the calculation of the non-diagonal matrix element operator of a dipole moment. It is shown that taking into account the necessary symmetry of the electron wave functions the simplest and most essential of these requirements is not fulfilled, either for the Hartree function or for the Hartree-Fock function. Nevertheless in many cases for the Hartree-Fock function these conditions are able to be taken fully into account (to a sufficient degree of accuracy). It is suggested that for similar problems any approximate wave functions (and not only Hartree-Fock) which decay exponentially to infinity and possess the necessary number of terms, lead to a satisfactory value of the dipole strength. The results are compared with values calculated

Approximate calculation of the ... S/051/63/014/003/001/019
E039/E120

by the self-consistent field method with and without exchange. The values found for the dipole strength show better agreement with experimental values than the results obtained from the more laborious numerical solutions of the Hartree-Fock equations, hence confirming the earlier suggestion. Calculations are made of the dipole strength of the 2s - np (n - 2, 3, 4) transitions of the Li atom valency electrons.
There is 1 table.

SUBMITTED: June 12, 1962

Card 2/2

ACCESSION NR: AT4041501 S/2910/63/003/01-/0107/0118

AUTHOR: Vetchinkin, S. I.

TITLE: Approximate calculations of dipole transition probability and conditions for the optimum choice of approximate wave functions

SOURCE: AN LitSSR. Litovskiy fizicheskiy sbornik, v. 3, no. 1-2, 1963, 107-118

TOPIC TAGS: quantum mechanics, wave function, approximate wave function, wave function selection, dipole transition, dipole transition probability, Hartree Fock function, electron shell, lithium atom

ABSTRACT: When φ_A and φ_B are two approximate wave functions corresponding to states A and B (discrete spectrum) then, in order to obtain a more accurate value of the element of the transition matrix, it is necessary to find corrections for φ_A and φ_B based on energy extremums. For the matrix element D_{AB} of the dipole moment operator D it is possible to limit the choice of φ_A and φ_B so as to make D_{AB} independent of any corrections. The author shows that if the function φ can be expanded into an arbitrary (finite) number of (discrete spectrum) Schroedinger eigenfunctions, Ψ_n, corresponding to energy states E_n, then any Ψ_n can be expressed in terms of φ:

Card 1/3

ACCESSION NR: AT4041501

$$\Psi = \sum_{k=0}^{K} \alpha_k (H-E)^k \varphi \qquad (1)$$

where H is the Hamiltonian of the system and α_k are constants which can be chosen so as to make the exact solution of Schroedinger's equation expressible in terms of φ. Applying this reasoning to φ_A and φ_B and using the notation $\langle A|D|B\rangle = \varphi_A^* L \varphi_B \, d\tau$, it is shown that if

$$\langle A|H^k D|B\rangle = E_A^K \langle A|D|B\rangle \qquad (2)$$
$$\langle A|D H^k|B\rangle = E_B^k \langle A|D|B\rangle$$

the element $D_{AB} = \int \psi_A^* D \psi_B d^r$ is independent of the unknown inaccuracies in φ_A and φ_B within the first order approximation. The theory is then generalized to the requirement that concurrence must exist between the time derivatives of the matrix element D_{AB} and the matrix elements of time derivatives of operator D. It is shown that a satisfactory value of the matrix element of transition between two lowest states of different symmetry is obtained when k + e = 1 conditions, analogous to (2), are satisfied. When the symmetry of the electron wave functions is considered, none of these conditions are strictly satisfied for Hartree or Hartree - Fock functions. For Hartree-Fock functions discrepancies are small (in some cases) and can be neglected. For these cases,

ACCESSION NR: AT4041501

arbitrary approximate wave functions which decay exponentially to zero at infinity and possess the required number of nodal points give satisfactory answers for dipole strengths, provided that they satisfy at least two of the derived conditions. This statement is supported by computation of dipole strengths of the 2S → 2p, 2s → 3p and 2s → 4p transitions of the valence electron of the Li atom. "In conclusion, the author expresses gratitude to Prof. N. D. Sokolov for a number of valuable comments and to A. A. Ivanov for performing the numerical computations." Orig. art. has: 1 table and 27 equations.

ASSOCIATION: Institut khimicheskoy fiziki, AN SSSR, Moscow (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 00 ENCL: 00

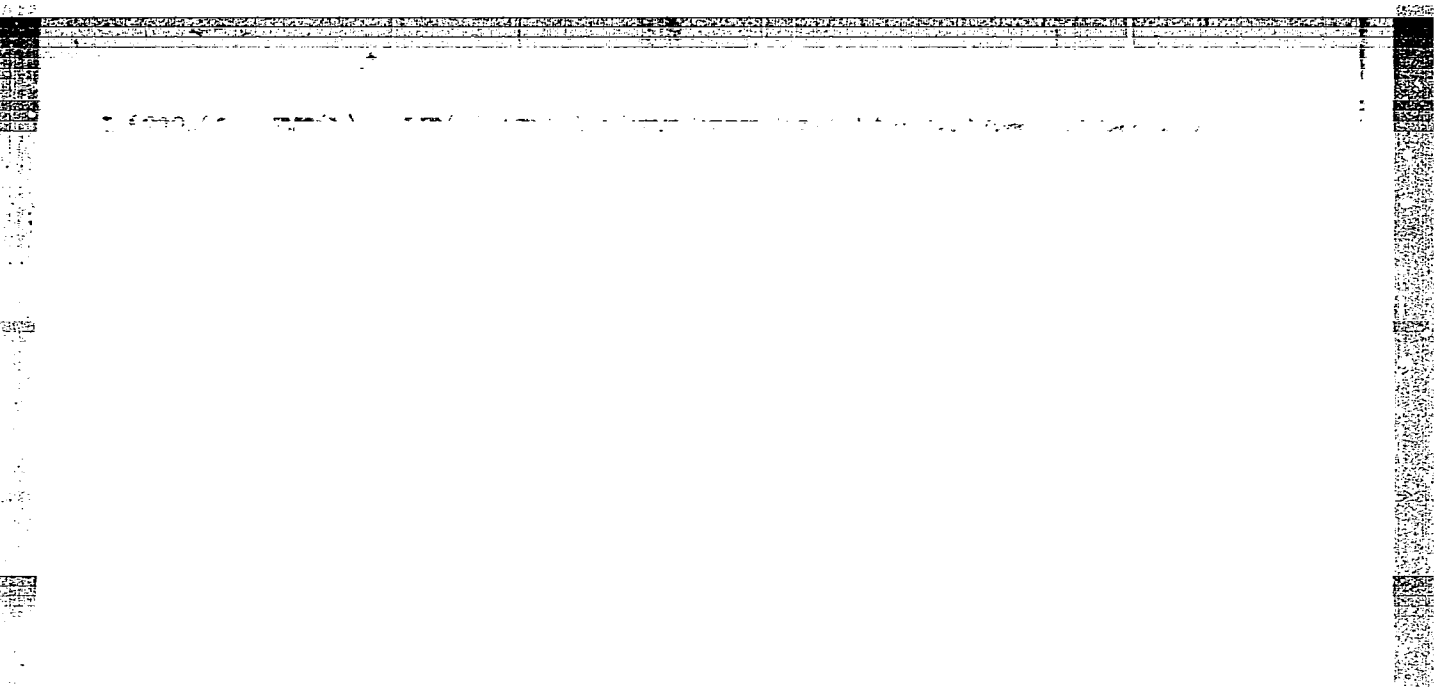
SUB CODE: GP NO REF SOV: 004 OTHER: 003

Card 3/3

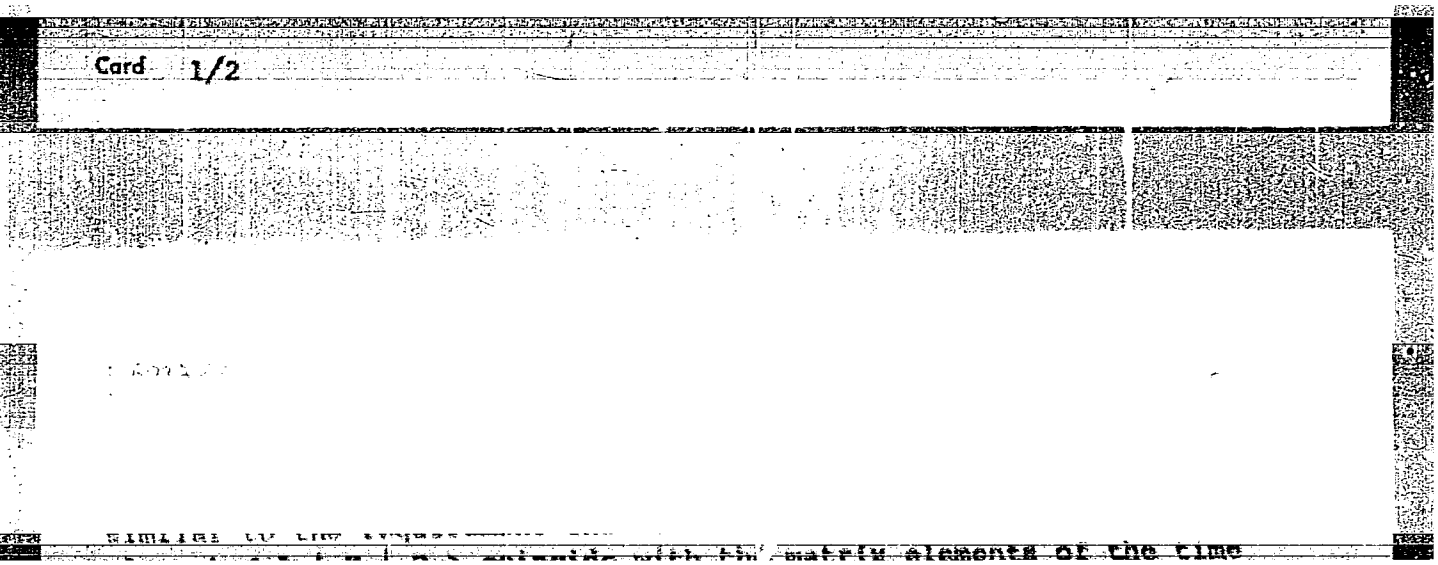
VETCHINKIN, S.I.

Approximate method for calculating the hyperfine interaction constant. Opt. i spektr. 18 no.1:10-15 Ja '65.

(MIRA 18:4)



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859620015-4"

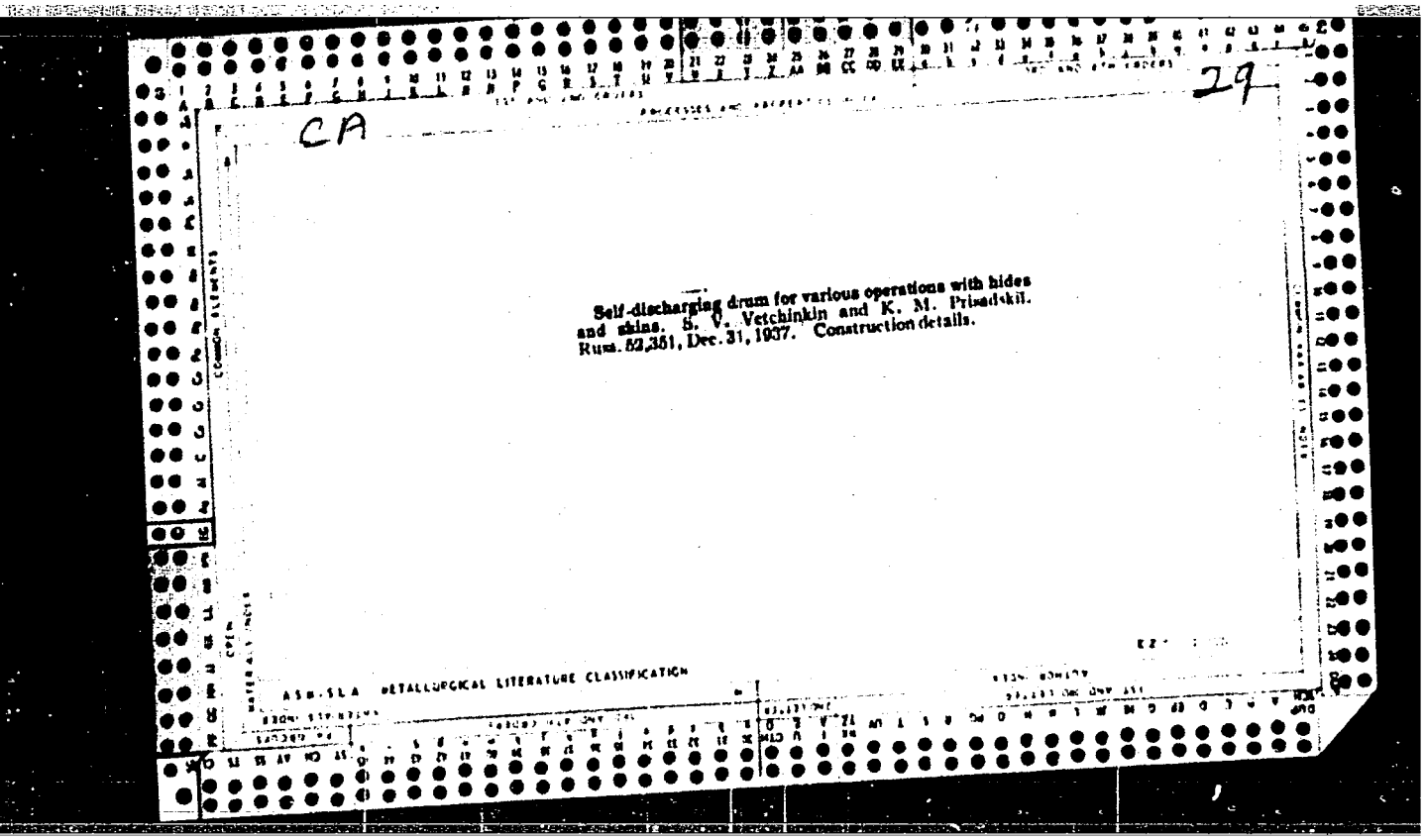


SUB CODE: GP, NP ENCL: 00

Card 2/2

VETCHINKIN, S.I.

Minimization of the mean square error of the approximate wave function and the calculation of matrix elements. Opt. i spektr. 15 no.3:291-297 S '63. (MIRA 16:10)



VETCHINKIN, VLADIMIR PETROVICH, S.I. KAMENEV, and N.G. CHENTSOV.

Dinamika poletov. Moskva, 1927. 298 p., tables, diagrs. (TSAGI. Trudy, no. 26)

Summary in English.
Title tr.: Dynamics of flight.

QA911. M65 no. 26

SO. Aeronautical Science and Aviation in the Soviet Union. Library of Congress, 1955.

VETCHINKIN, V. P.

Metody priblizhennogo i chislennogo integrirovaniya obyknovennykh differentsial'nykh uravneniy. Novyye formuly mekhanicheskikh kvadratur. M., Voyenno-vold. Akad. Im. Zhukovskogo, vyp. 1 (1932), 1-104.

Chislovyye metody resheniya nelineynykh integral'nykh uravneniy. Trudy tsagi, vyp. 192.

Rukovodstvo po priblizhennym vychisleniyam. Trudy Tsagi, vyp. 210.

Novyye formuly i tablitsy ellipticheskikh integralov i funktsiy s prilozheniyem sokrashch - ennykh semiznachnykh logarifmov uisel i trigonometricheskikh velichin. M. Voyennovozd. Akad. 20 (1935), 1-47.

Uislennyye metody resheniya nelineynykh integral'nykh uravneniy. L., Trudy vtorogo Vsesoyuzn. Matem. S"ezda, T. 2 (1936), 410-414.

Elementarnyye sposoby chislennogo integrirovaniyo obyknovennykh differentsial'nykh uravneniy vysshikh poryadkov i ikh sistem. Trudy TsAGI, 273, 11-13 (1936), 13-56.

Sbornik stately po chislennomu integrirovaniyu differentsial'nykh uravneniy. Trudy TsAGI, 309 (1937), 1-51.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.,
Markushevich, A.I.,
Rashevskiy, P.K.
Moscow-Leningrad, 1948

VETCHINKIN, VLADIMIR PETROVICH.

Dinamika samoleta. Vvedenie. Chast'I i Chast'II. 2 perer. i dop. izd. Moskva, Oosmashmetizdat, 1953. 400 p.

Title tr.: Dynamics of airplanes.

NCF

SO. Aeronautical Science and Aviation in the Soviet Union. Library of Congress, 1955.

VETCHINKIN, VLADIMIR PETROVICH.

Method of simultaneous equal azimuths for determining latitude and time correction. Moskva, Glav. red. tekhn.-teoret. lit-ry, 1937. 87 p. (49-55361)

QB201.V4

VETCHINKIN, VLADIMIR PETROVICH.

Aerodinamika. (Akademiia Nauk SSSR. Otdelenie matematicheskikh i estestvennykh nauk. Matematika i estestvoznanie v SSSR. Moskva, 1938. p. 121-138)

Title tr.: Aerodynamics.

Q127.R9A59

SO. Aeronautical Science and Aviation in the Soviet Union. Library of Congress, 1955.

VETCHINKIN, Vladimir Petrovich; PYSHNOV, V.S., otvetstvennyy redaktor; KIMENIKOV, V.M., redaktor izdatel'stva; SIMKINA, Ye.N., tekhnicheskiy redaktor

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akademii nauk SSSR. Vol.1. [Dynamics of aircraft] Dinamika samoleta. 1956. 422 p. (MLRA 9:11)

(Aeronautics)
(Vetchinkin, Vladimir Petrovich, 1888-1950)

VETCHINKIN, V.P.; KOGAN, F.M.; KALAKUTSKIY, V.A., red.; SUKHOVTSEVA, M.D., tekhn.red.

[New formulas of numerical quadratures] Novye formuly chislennykh kvadratur. Moskva, Gos.izd-vo tekhniko-teoret.lit-ry, 1949. 71 p. (MIRA 13:8)

(Numerical calculations)
(Curves--Rectification and quadrature)

VETCHINKIN, V. P. DECEASED 1950

Aviation Eng.

see ILC

ZEMEL'MAN, V.B.; KOGAN, A.M.; VETCHINKIN, V.Ye.

Method for determining relations between the parameters of a revolving furnace. Khim. prom. no.10:776-779 O '63.
(MIRA 17:6)

VETCHINKIN, Yu.M.

PETROV, B.A., professor, predsedatel'; DOROTEEV, V.I., sekretar'; MLYNCHIK, V.E.; KAZANSKIY, V.I., professor; BAKULEV, A.N., professor; LEVIT, V.S., professor; PETROVSKIY, B.V., professor; PECHATNIKOVA, E.A.; SOLOV'YEV, A.Ye., professor; MAKHOV, N.I., dotsnet; YELANSKIY, N.N. professor; PLOTKIN, F.M., professor; VISHNEVSKIY, A.A., professor; VETCHINKIN, Yu.M.; GUREVICH, N.I., professor; OSIPOV, B.K., professor; TIKHONOVA, N.A.; KYZHIKH, A.N., professor; RUDYAVSKIY, B.A.; TERNOVSKIY, S.D., professor.

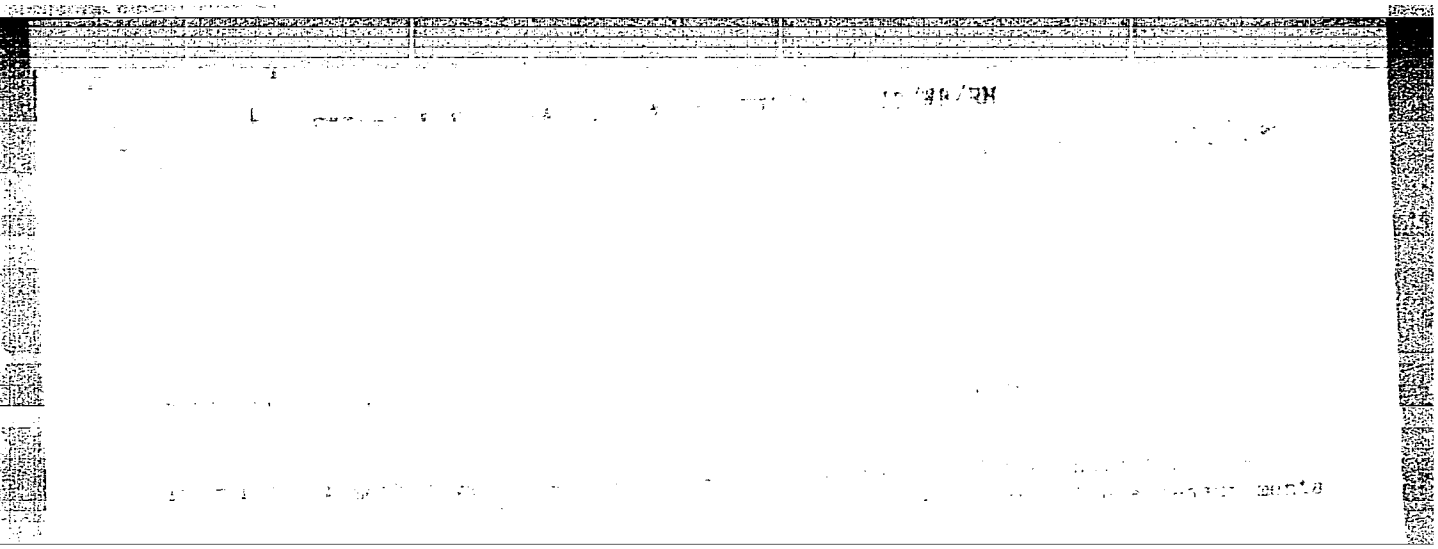
Minutes of the session of the Surgical Society of Moscow and Moscow Province of October 10, 1952. Khirurgiia no.4:92-95 Ap '53. (MLRA 6:6)

1. Khirurgicheskoye obshchestvo Moskvy i Moskovskoy Oblasti.
(Esophagus--Surgery) (Esophagus--Cancer) (Rectum--Diseases)

OSIPOV, B.K.; VETCHINKIN, Yu. M.

Surgical therapy of broncho-diverticulo-esophageal fistula. Khirurgiia, Moskva no.5:31-34 May 1953. (CLML 25:1)

1. Professor for Osipov.



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859620015-4"

Card 1/2

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 18Jun64 ENCL: 00 SUB CODE: OC, GC

VETCHINKINA, V.N.; OBUKHOVA, L.K.

Quantitative determination 2,6-di-tert-butyl-4-methylphenol (ionol). Zhur. anal. khim. 20 no.8:860-863 '65. (MIRA 18:10)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.

L 10111-66 EWT(m)/EWP(j) RM
ACC NR: AP6013904 (A) SOURCE CODE: UR/0076/66/040/004/0762/0765

33
B

AUTHOR: Vetchinkina, V. N.; Mayzus, Z. K.; Emmanuel', N. M.

ORG: Institute of Chemical Physics, Academy of Sciences, SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR)

TITLE: The radical mechanism of phenol conversion in a hydrocarbon medium

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 4, 1966, 762-765

TOPIC TAGS: phenol, hydrocarbon, reaction mechanism, oxidation inhibitor

ABSTRACT: Phenol dissolved in n-decane was heated at 140C in a stream of nitrogen preliminarily purified of oxygen traces, in an attempt to clarify if consumption of the inhibitor without participation of RO_2 radicals is related to oxidation of the inhibitor or represents a parallel reaction requiring no oxygen. Results indicate that the consumption of phenol heated in an oxygen-free hydrocarbon environment is accompanied by the formation of free radicals. The radical formation rate constant for phenol in n-decane is given as $k=9.6\cdot10^{-5}$ 1/mol·sec at 140C. The low efficiency of phenol as an inhibitor of the oxidation of the hydrocarbon discussed is ascribed to an interaction between the two. Orig. art. has: 2 formulas and 4 figures.

SUB CODE: 07/ SUBM DATE: 05Jul65/ ORIG REF: 004/ OTH REF: 003
UDC: 541.124/.128

Card 1/1 pla

TERESHCHENKO, I.P.; MOSKVIN, O.I.; DARAGAN, M.V.[Darahan, M.V.]; ANISIMOV, V.P.; YARMOLINSKIY, M.R.[IArmolyns'kyi, M.R.]; BULGAKOV, P.S.[Bulhakov, P.S.]; KUTS, V.K.; KASHPUR, A.V.; VASILENKO, G.K.[Vasylenko, H.K.]; KUKOLEV, V.D.[Kukoliev, V.D.]; SIGOV, S.G.[Sihov, S.H.,deceased]; NAGIRNYAK, P.A. [Nahirniak, P.A.]; VETCHINOV, I.A.[Vietchynov, I.A.]; ZADOROZHNYY, V.K.; DROSOVSKAYA, L.I.[Drosovs'ka, L.I.]; SHKITINA, M.I.; PROSHCHAKOV, O.M.; MOKIYENKO, B.F. [Mokiienko, B.F.]; GOLOVACH, A.V.[Holovach, A.V.]; IVANITSKIY, I.V.[Ivanyts'kyi, I.V.]; KOZAK, V.Ye.; BORYAKIN, V.M., red.izd-va; NESTERENKO, O.O., glav. red.; DAKHNO, Yu.B., tekhn. red.

[National income of the Ukrainian S.S.R. during the period of the large-scale building of communism] Natsional'nyi dokhod Ukrains'koi RSR v period rozhornutoho budivnytstva kommunizmu. Red.kol.: O.O.Nesterenko ta inshi. Kyiv, Vydvo AN URSR, 1963. 333 p. (MIRA 16:12)

1. Akademiya nauk URSR, Kiev. Instytut ekonomiky.
(Ukraine--Income)

VETCHINOV, E. (g.Mytishchi, Moskovskaya oblasti')

Efficiency promoters of the competition of the Office of Municipal Sanitation in Mytishchi. Zhil.-kom. khoz. 9 no.4: 18-19 '59. (MIRA 12:7)

1.Nachal'nik kontory sanitarnoy ochistki.
(Mytishchi--Street cleaning)

VETCHINOV, M.

"Secrets" of achievements. Za bezop.dvizh. 5 no.10:2-3 O '62. (MIRA 15:12)

1. Instruktor Moskvoretskogo rayonnogo komiteta Kommunisticheskoy partii Sovetskogo Soyuza.
(Moscow--Traffic safety)

NOVAK, I.I., ZHURKOV, S.N., VETEGREN, V.I.

Study of orientation and crystallization of caprone fibers by infrared microscopy.

Report presented at the 13th Conference on High-molecular compounds Moscow, 8-11 Oct 62

VITEBSKIY, A. I.

Medicine

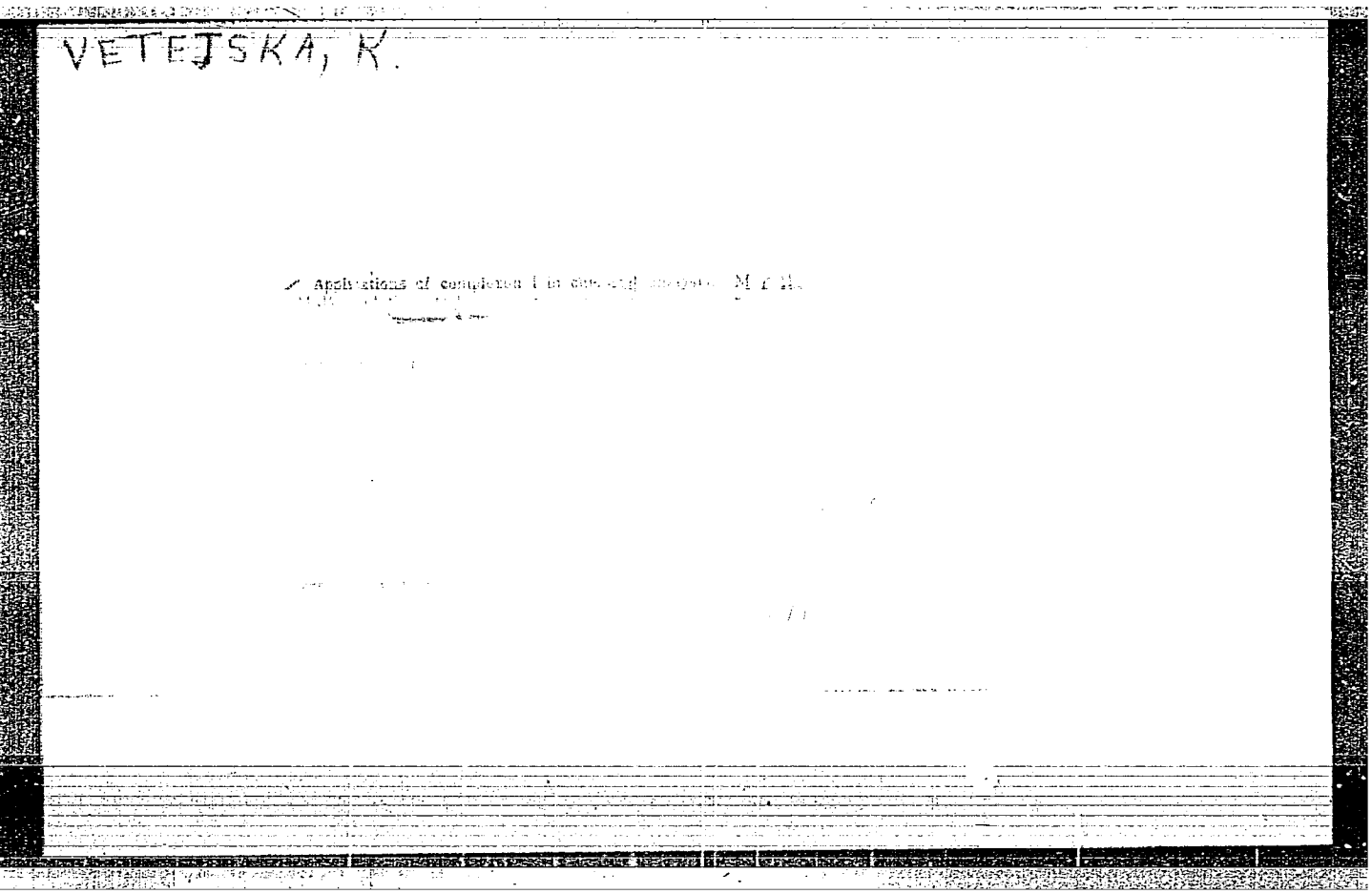
Orthopedic stomatology. Pod obshch. red. B. N. Bynina Izd. 2. ispr i dop. Moskva, Medgiz, 1951.

Monthly List of Russian Accessions, Library of Congress August 1952. Unclassified.

K. VETEJSKA

Distr: 4E2c

Separation of iron from rare earths. J. H. Krepelka, K. Vetejška, and J. Mazáček (Ústav pro výzkum rud, Prague). *Collection Czechoslov. Chem. Communs.* 24, 198–202 (1959)(in German).—Preparative and analytical sepn. of Fe from Ce, La, Pr, Nd, Sm, and Y was carried out by passing a soln. of the chlorides of the above elements in 8 *N* HCl through a column contg. 20–5 ml. of OAL quaternary anion exchanger, grain diam. of 0.52–0.25 mm. The rare earths pass through the column; $FeCl_4$ is adsorbed and can be washed out with water. To det. Fe in monazite concentrates, fuse the mineral with an excess of Na_2O_2, digest the pptd. hydroxides with water to neutral reaction, dissolve the ppt. in HNO_3, treat an aliquot with NH_4OH, wash the pptd. hydroxides with hot water, filter, dissolve the ppt. in hot conc'd. HCl, cool, pass the soln. through the column washed with 8 *N* HCl, and wash out the retained Fe(III) (together with Zr) with H_2O. M. Hudlický



E-2

COUNTRY : Czechoslovakia
CATEGORY : Analytical Chemistry - Analysis of Inorganic Substances
ABS. JOUR. : RZKhim., No. 24 1959, No. 86043

AUTHOR : Krepelka, J.H.; Vetejska, K.; Mazacek, J.
INST. :
TITLE : Separation of Iron from Rare-Earth Elements

ORIG. PUB. : Collect. Czechsl. Chem. Communs, 1959, 24, No 1, 198-202

ABSTRACT : The possibility has been ascertained of a separation of Fe from rare-earth elements (REE) by means of strongly basic anionite OAL (anionite particle size 0.52-0.25 mm; column 1 cm in diameter, holding capacity 20-25 ml). In model-study experiments on investigation of sorption of $FeCl_3$ and chlorides of REE, depending on the concentration of HCl, the anionite-containing column was washed with a solution of HCl (100 ml) of the same concentration as that of the solutions being analyzed; the latter were prepared by dissolving 30 mg of oxides of REE (obtained by fractionation of monazite concentrate) and 40 mg Fe_2O_3 in 50 ml HCl of different concentration. The analyzed

CARD: 1/3

80

E-2

COUNTRY : Czechoslovakia
CATEGORY :

ABS. JOUR. : RZKhim., No. 1959, No. 86043

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : solutions were passed through the anionite column at a rate of 0.5 ml/minute, and filtrate fractions of 5 ml were taken for analysis. Presence of REE was determined by precipitation with 2% solution NH_4OH and staining of precipitates with Alizarin S; for quantitative estimation the precipites were calcined and weighed. Fe was determined photometrically with KSCN. It was found that in the interval of HCl concentration 0.1-9 N, no sorption of Ce, La, Pr, Nd, Sm, and Y is taking place. Ratio of the eluation constants shows that separation of Fe from REE, by means of anionite OAL, can be effected in a medium of approximately 8 N HCl. Under these conditions Fe is

CARD: 2/3

COUNTRY : Czechoslovakia
CATEGORY : E-2

ABS. JOUR. : RZKhim., No. 1959, No. 86043

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : quantitatively retained by the anionite, while REE pass in the filtrate. The anion-exchange method is applicable for determination of Fe im monazite concentrate. In such a case Zr as well as Fe undergoes sorption on anionite, but it does not interfere with determination of Fe; Th passes in the filtrate together with REE. On analysis of a number of synthetic samples and of natural minerals good results were obtained.

Vladimir Kostka.

CARD: 3/3

VETEJSKA, Karel

Toxic properties of rare and less current metals. Chem listy 57 no.7:711-722 Jl '63.

1. Ustav pro vyzkum rud, Praha.

VETEJSKA, K.

Chemical processing of uranium ores. p. 239.

RUDY. (Ministerstvo hutniho prumyslu a rudnych dolu) Praha, Czechoslovakia, Vol. 7, No. 7, July 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 11, November 1959.

Uncl.

VETEJSKA, Karel

"Hafnium," Prague, Chemicke Listy, No. 11, Nov 60, p. 1123.

Affiliation: Institute for Ore Research, Prague.

VETEJSKA, K.

"Rare earth elements."

p. 474 (Chemie, Vol. 10, no. 6, June 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 9, September 1958

VETEJSKA, K.

Separation of thorium from rare earths by means of FN cation exchanger.
Coll Cz Chem 25 no.7:1895-1900 Jl '60. (EEAI 10:9)

1. Institut fur Erzforschung, Prag.

(Thorium) (Earths, Rare) (Cations) (Ion exchange)

VETEJSKA, K.; MAZACEK, J.; KREPELKA, J.

"Separation of iron from rare earths" In German. p. 198.

COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, Praha, Czech.,
Vol. 24, No. 1, Jan. 1959.

Monthly List of East European Asseccions (EEAI), LC, Vol. 8, No. 6, Sept. 59
Unclassified

VETEJSKA, K.; HAMPLS, V.

Determination of lithium in lithium micas using a flame photometer. p. 487. (Hutnicke Listy, Vol. 11, no. 8, August 1956. Brno, Czechoslovakia)

SO: Monthly List of East European Accessions. (EEAL) LC. Vol. 6, No. 6, June 1957. Uncl.

VETEJSKA, Karel, ScC.

"Rare metals" by [Dr. Ing.] W. Schreiter. Reviewed by Karel Vetejska. Rudy 11 no.6:206 Je '63.

1. Ustav pro vyzkum rud.

S/081/62/000/018/016/059
B144/B186

AUTHORS: Pelikán, Jiří, Mazáček, Jan, Vetejška, Karel

TITLE: Method of separating gallium from aluminum and zinc by using an anion exchanger

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 18, 1962, 124, abstract 18D155 (Czechoslovak patent 97806, December 15, 1960)

TEXT: A simple method is suggested for the concentration of Ga and its simultaneous purification from Al and Zn in the processing of bauxites and Zn ores. The method is based on the different sorption of Ga, Al and Zn chlorides dissolved in HCl on high-alkaline anionites OAL and L which contain quaternary N. In 7 N HCl, Ga is strongly adsorbed on the anionite and Al passes into the filtrate. Ga is elutriated from the anionite by HCl solution (< 2 N). In the presence of Zn instead of Al, the separation is effected in 2 N HCl. With such an acidity, Zn is adsorbed by the anionite and Ga passes into the filtrate. In order to separate Ga from Al the alkaline bauxite extract is neutralized with HCl solution. The separated Ga and Al hydroxides are filtered off, washed

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with water, dissolved in 7 N HCl, whereupon the solution obtained is passed through a column containing anionite L, which has previously been washed with 7 N HCl solution. Then the column is washed with 7 N HCl solution and Ga is elutriated from the anionite by < 2 N HCl solution. If the initial solution contains Ga, Al, and Zn the separation is done in two stages. In the first stage, Ga together with Zn is separated from Al as described above. Separation of Ga from Zn is obtained by flushing the column with 2 N HCl, Ga being washed out and Zn being strongly adsorbed on the anionite. The method suggested enables Ga to be separated from considerable amounts of Al and Zn. [Abstracter's note: Complete translation.]

VETEJSKA, Karel, promovany chemik, CSc.

New trends in hydrometallury. Rudy 12 no.7/8:328-330 Jl-Ag '64
(MIRA 17:8)

1. Institute of Ore Research, Prague.

VETEJSKA, Karel, CSc.

Colloquy on the metallurgy of rare and trace metals in the German Democratic Republic. Rudy 12 no.4:134-135 Ap '64.

VETEJSKA, Karel, promovany chemik, C.Sc.

Research on dressing of the skarn magnetite ore from Bulec area. Rudy 10 no.2:Suppl. 7-11 F '62.

1. Ustav pro vyzkum rud, Praha.

VETEJSKA, Karel, C.Sc.

Contribution to the problem of barite refining; the effect of the remnants of flotation reagents on the leaching of iron. Rudy 10 no.7:Suppl.:Prace vyzk ust no.6:41-44 Jl '62.

1. Ustav pro vyzkum rud, Praha.

Z/008/60/054/011/001/005
E112/E453

AUTHOR: Vetejška, Karel

TITLE: Hafnium

PERIODICAL: Chemické listy, 1960, Vol.54, No.11, pp.1123-1132

TEXT: This paper is a review and deals with occurence, physical and chemical properties, separation and potential uses of hafnium. Main sources of hafnium are zirconium ores and the ratios of Hf:Zr in different types of rocks are tabulated. In terms of geochemistry hafnium is more common than, for instance, mercury, bismuth or cadmium. Physical properties are listed and atomic weights and percentage contents of eleven isotopes are given. The chemical properties are very similar to those of zirconium, resulting from very similar atomic radii. Great similarity exists also in the arrangement of the valency electrons. The main difficulty in producing pure hafnium is its separation from zirconium. No differential chemical reactions for both these elements are known. Methods used for the separation of zirconium from zirconium ores will also separate simultaneously hafnium. Fractionating processes are then required for the isolation of hafnium and these are described at some length in the present paper. They are based on

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Z/008/60/054/011/001/005
E112/E453

Hafnium

the following principles: a) Fractional crystallization of the double fluorides of hafnium and zirconium. Solubilities in water and N-hydrofluoric acid are tabulated. The solubilities of the oxychlorides of hafnium and zirconium in N-hydrochloric acid are listed. Separation can be also achieved by fractional crystallization of the double oxalates of these elements with potassium or ammonium. b) Fractional precipitation of the phosphates. This is achieved by rapid addition of phosphoric acid to a solution of the sulphates of zirconium and hafnium. After seven repeated operations the hafnium contents can be increased from 13 to 93%. c) Fractional decomposition of some complex compounds of both elements. These methods are based on the fact that some complex coordination compounds in which hafnium is the central atom are less stable than those with zirconium. The effectiveness of the method is also increased by the fact that the separated hafnium compounds have lower solubilities than those of zirconium. d) Fractional distillation of the complex volatile compounds of the tetrahalides with phosphorous oxychloride: Differences in boiling points of the two elements are 5°C. e) Extraction methods with

Z/008/60/054/011/001/005
E112/E453

Hafnium

organic solvents. A list of potential solvents is given. A Czechoslovak method, described at a Symposium for Inorganic Chemistry, Bratislava, 1959, by L.Divi$, is based on extraction with methylcyclohexanone containing thiocyanic acid and 10% butyl acetate. An eight step extraction gave a product containing 92% hafnium and 5% zirconium. f) Separation based on the use of ion-exchange resins. g) Separation based on fractional absorptions. Methanolic solutions of the chlorides of both elements are absorbed on silica gel columns and eluted with sulphuric acid. The first eluents are richer in zirconium. Potential uses for hafnium are outlined. There are 3 figures (including extraction scheme), 5 tables and 50 references: 32 English, 10 German, 3 Soviet, 2 Czech, 2 French and 1 Italian.

ASSOCIATION: Ústav pro výzkum rud, Praha (Institute for the Study of Ores, Prague)

Card 3/3

VETYK, J., Dr.; ZEJDA, V., Dr.; KASPAR, Z. MUC.

Experiences with lymphography. Rozhl. chir. 37 no.2:94-97 Feb 58.

1. I. chirurgicka klinika v Brne, prednosta prof. Dr. J. Podlaha. J. V., Brno, Pekarska 53.
(LYMPHATIC SYSTEM, radiography
technic & diag. value (Cz))

VETEK, L.; DECSI, Z.

National Conference of the Alumina Industry, Almasfuzito, July 11-12, 1958.
p.389

KOHASZATI LAPOK. (Magyar Banyaszati es Kohaszati Egyesulet)
Budapest, Hungary
Vol. 13, no.8, Aug. 1958

Monthly List of East European Accessions (EEAI) LC., Vol. 8, no.7, July 1959
Uncl.

VETER, Z. I.
L. A. CHRISTEVA, ZhPKh, 1940, 13, 132-139

VETER, I. I.
L. A. KHRISTEVA, ZhPKh, 13, 132-9, 1940

VETER, V. V.

(Inst. Physics, AS USSR, in Krasnoyarsk)

"The Determination of the Width of the Domain Boundary"

work carried out with L. V. Kirenskiy; the method had been suggested by G. S. Krinchik.

paper presented at the All-Union meeting on Magnetic Structure of Ferromagnetics June 1958, in Krasnoyarsk. Meeting sponsored by Inst. of Physics, Acad. Sci. USSR, and Comm. for Magnetism, Dept Phys-Math Sci, AS USSR,

L 4266-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD

ACC NR: AP5024553 UR/0070/65/010/005/0688/0692

548.4:538.65

AUTHOR: Chebotkevich, L. A.; Urusovskaya, A. A.; Veter, V. V.

TITLE: Motion of dislocations under the influence of a magnetic field

SOURCE: Kristallografiya, v. 10, no. 5, 1965, 688-692

TOPIC TAGS: crystal dislocation, iron, magnetization, magnetostriction

ABSTRACT: The motion of dislocations in a ferromagnetic (filamentary iron crystals grown by reducing $FeCl_2$ in hydrogen) was caused by placing the sample in a magnetic field. The dislocations were revealed by etching in a mixture of picric and nitric acid. Fresh dislocations were obtained by deforming with the tip of a diamond pyramid. The domain structure was observed by the standard powder method. Magnetization causes the motion of dislocations in their slip plane; this motion may be due both to a direct interaction of the domain bondary and dislocation (magnetoelastic interaction) and to the influence of magnetostriction, i.e., elastic stresses arising in the sample as a result of repeated magnetization. The effects of these two factors could not be separated. "We express our deep appreciation to V. L. Indenbom for valuable comments and to I. P. Kushnir for providing the samples of iron whiskers." Orig. art. has: 3 figures.

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L 4266-66

ACC NR: AP5024553

3

ASSOCIATION: Dal'nevostochnyy gosudarsvennyy universitet (Far East State University); Institut kristallografii AN SSSR (Institute of Crystallography, AN SSSR) 44, 55

SUBMITTED: 17May65 ENCL: 00 SUB CODE: SS, EM

NO REF SOV: 004 OTHER: 019

Card 2/2 JP

S/139/60/000/004/023/033
E201/E591

AUTHORS: Kirenskiy, L. V. and Veter, V.V.

TITLE: Investigation of Domain Boundaries in Ferromagnetics

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No.4, pp.183-189

TEXT: The magnetooptical Kerr effect was used to study domain boundaries in monocrystals of silicon iron containing 3% Si. The possibility of using the Kerr effect in domain-boundary studies was pointed out by G. S. Krinchik (Ref.3). The basis of the method is the rotation of the plane of polarization on reflection of polarized light from a sample magnetized at right-angles to the surface. The coefficient of proportionality between the angle of rotation and the magnetization intensity depends on the wavelength of the light and on the temperature. The boundary-layer width is found by measuring the change in the light flux produced by rotation of the plane of polarization. The apparatus used included a microscope MBI-6, a polarizer and an analyser and a photomultiplier FEU-18. The method employed gave the thickness of the domain boundary and its polarity directly, without the use of

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S/139/60/000/004/023/033
E201/E591

Investigation of Domain Boundaries in Ferromagnetics

magnetic powders which distort the boundaries. It was found that the polarity of the domain boundaries in silicon iron with 3% Si was variable and that the boundary layer widths were unstable: for 180° boundaries they ranged from 0.58 to 0.88 μ. There are 2 figures and 4 references: 1 Soviet, 1 German and 2 English.

ASSOCIATION: Institut fiziki Akademii nauk SSSR
(Physics Institute, Academy of Sciences, USSR)

SUBMITTED: April 9, 1959

V

Card 2/2

KIRENSKIY, L.V.; VETER, V.V.

Investigating interdomain boundaries in ferromagnetics. Izv. vys. ucheb. zav.; fiz. no.4:183-189 '60. (MIRA 13:9)

1. Institut fiziki Akademii nauk SSSR.
(Ferromagnetism)

VETER, V.V.

PHASE I BOOK EXPLOITATION SOV/5526

Vsesoyuznoye soveshchaniye po magnitnoy strukture ferromagnetikov, Krasnoyarsk, 1958.

Magnitnaya struktura ferromagnetikov; materialy Vsesoyuznogo soveshchaniya, 10 - 16 iyunya 1958 g., Krasnoyarsk (Magnetic Structure of Ferromagnetic Substances; Materials of the All-Union Conference on the Magnetic Structure of Ferromagnetic Substances, Held in Krasnoyarsk 10 - 16 June, 1958) Novosibirsk, Izd-vo Sibirskogo otd. AN SSSR, 1960. 249 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut fiziki Sibirskogo otdeleniya. Komissiya po magnetizmu pri Institute fiziki metallov OFMN.

Resp. Ed.: L. V. Kirenskiy, Doctor of Physical and Mathematical Sciences; Ed.: R. L. Dudnik; Tech. Ed.: A. F. Mazurova.

PURPOSE: This collection of articles is intended for researchers in ferromagnetism and for metal scientists.

Card 1/11

Magnetic Structure (Cont.) SOV/5526

COVERAGE: The collection contains 38 scientific articles presented at the All-Union Conference on the Magnetic Structure of Ferromagnetic Substances, held in Krasnoyarsk in June 1958. The material contains data on the magnetic structure of ferromagnetic materials and on the dynamics of the structure in relation to magnetic field changes, elastic stresses, and temperature. According to the Foreword the study of ferromagnetic materials had a successful beginning in the Soviet Union in the 1930's, was subsequently discontinued for many years, and was resumed in the 1950's. No personalities are mentioned. References accompany individual articles.

TABLE OF CONTENTS:

24 (3)
AUTHORS: Kirenskiy, L. V., Veter, V. V. SOV/20-127-3-

TITLE: The Measurement of the Width of the Boundary Layer Between the Domains in Ferromagnetics (Izmereniye shiriny granichnogo sloya mezhdu domenami v ferromagnetikakh)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 520-522 (USSR)

ABSTRACT: The present paper deals with the determination of the width of the boundary layer (by means of the magneto-optical Kerr effect) of 180-degree proximities in monocrystals of ferrosilicon of 3 % Si. First, the theory underlying such measurements is discussed in short. The authors then describe the instruments used for these measurements: 1) The microscope MBI-6 with "polaroids" and a special expensible slit which is placed in the plane of the field diaphragm. 2) The photoelectronic multiplier FEU-18 (shielded in a special manner from the external magnetic field), which consists of a condenser of known capacity, of a resistor and of a compensating system. 3) The pulse-spectroscope SI-1 which is the main measuring part of the instrument. The optical scheme of the instrument is shown in a figure. Another

Card 1/3

The Measurement of the Width of the Boundary Layer Between the Domains in Ferromagnetics

SOV/20-125-3-16/63

figure shows the integral-balance scheme of the system. The next paragraph of the paper deals with the carrying out of the experiment, that is, with the measurement of $\Delta\Phi$ and $\Delta\Phi'$. $\Delta\Phi$ denotes the variation of the light flux in the reflection from the boundary layer, and $\Delta\Phi'$ the variation of the light flux coming from the part of the sample which is magnetized perpendicularly to its surface. The results of these measurements permit the following conclusion: The width of the boundary layer for 180-degree proximities in monocrystals of ferrosilicon is not a stable quantity. As to the first sample (in which the boundaries between the domains run through the whole monocrystal), the boundary layer has a breadth of 0.99μ. In the same sample, a polarity of boundaries could be observed. The breadth of the boundary layer of the second sample (in which the domain structure had not a regular shape of the layers) amounted to 0.64μ. There are 3 figures and 7 references, 4 of which are Soviet.

Card 2/3

The Measurement of the Width of the Bounday Layer Between the Domains in Ferromagnetics

SOV/20-125-3-16/63

ASSOCIATION: Institut fiziki Akademii nauk SSSR, Krasnoyarsk (Institute of Physics of the Academy of Sciences USSR, Krasnoyarsk)

PRESENTED: December 29, 1958, by A. V. Shubnikov, Academician

SUBMITTED: July 21, 1958

Card 3/3

KIRENSKIY, L.V.; VETER, V.V.

Measurement of the width of a boundary layer in ferromagnetics by means of the Kerr magnetooptical effect. Zhur. eksp. i teor. fiz. 35 no.3:819 S '58. (MIRA 12:3)

1.Sibirskoye otdeleniye AN SSSR, Institut fiziki.
(Ferromagnetic substances) (Magnetooptics)

SOV/56-35-3-55/61

24(3)

AUTHORS: Kirenskiy, L. V., Veter, V. V.

TITLE: The Variation of the Breadth of the Boundary Layer in Ferromagnetics by Means of the Magneto-Optical Kerr-Effect (Izmeneniye shiriny granichnogo sloya v ferromagnetikakh s pomoshch'yu magnetoopticheskogo effekta Kerra)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 3, pp 819-819 (USSR)

ABSTRACT: In the present paper the method developed by Krinchik (Ref 2) is, in principle, employed, which is based upon the application of the polar magneto-optical Kerr-effect. This permits direct measurement of the breadth of the boundary layer. It is possible to show that for the mean value of the normal component of the magnetization of the boundary layer the expression $2J_s/\pi$ applies, where J_s denotes the saturation-magnetization of the ferromagnetic domain. The variation of the light current on a boundary layer as a result of the rotation of the polarization plane and the variation of the light current in the investigated part of the ferromagnetic domain were measured by means of the photoelectronic multi-

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SOV/56-35-3-55/61

The Variation of the Breadth of the Boundary Layer in Ferromagnetics by Means of the Magneto-Optical Kerr-Effect

plier FEU-18. The direct proportionality between the quantities leads to the relation $\Delta\Phi/\Delta\Phi' = ld/S'$. Here $\Delta\Phi$ denotes the variation of the light flux emanating from the boundary layer, $\Delta\Phi'$ - the variation of the light flux emanating from the investigated part of the sample (which was normally magnetized up to the value of $2J_s/\pi$, l - the length of the boundary layer, d - the breath of the boundary layer, S' - the area of the investigated part of the sample. Thus, d is determined by comparison of the light fluxes and surface areas. The breadth of the boundary layer was determined for monocrystals of iron silicide (3 % Si). Repeated measurements resulted in the value 0,8 μ for this breadth. There are 4 references, 3 of which are Soviet.

ASSOCIATION: Sibirskoye otdeleniye Akademii nauk SSSR (Siberian Department of the Academy of Sciences, USSR) Institut fiziki (Institute of Physics)

SUBMITTED: July 11, 1958

Card 2/3

L 22436-66

ACC NR: AP6013625 SOURCE CODE: UR/0104/65/000/009/0024/0026

AUTHOR: Rozental', A. Ya. (Engineer); Veterov, Yu. A. (Engineer)

ORG: none

TITLE: Experimental runs of TGV-200 turbogenerators

SOURCE: Elektricheskiye stantsii, no. 9, 1965, 24-26

TOPIC TAGS: electric power plant, electric generator, turbine

ABSTRACT: TGV-200 turbogenerators produced by the Khar'kov factory "Elektrotyazhmash" im. V. I. Lenin are nowadays in use at numerous domestic and foreign electric power stations. The paper presents data concerning the operation of these machines at one of the electric stations of Khar'kovenergo from their introduction in 1960 to the present time. Accumulated results shown in the form of tables indicate that: 1) these turbogenerators are reasonably reliable and the actual characteristics agree with those on the rating plates; 2) the machines have a favorable distribution of the journal bearings within the end panels of the generator, a convenient stator suspension on special springs, and a convenient placing of the rotor best rings at a single location; 3) the "Elektrotyazhmash" and its research institute should improve the hydrogen seals, study the effect of

Card 1/2 UDC: 621.313.322-81.004

L 22436-66

ACC NR: AP6013625 O

stray currents on end portions of the machine, and provide it with an ion excitation system thus increasing its reliability; 4) Zaporozhskiy elektroapparatnyy zavod (Zaporog factory for electrical equipment) should drastically improve the quality of its ionic rectifiers; 5) the "Uralelektrotyazhmash" factory should reconsider its design of the fast anode disconnecting switch until they become fully reliable; and 6) the thermal tests of the TGV-200 turbogenerators give grounds for expecta-tions that an increase in excess pressure by 3.5 to 5 atm may increase their power by 10%, i.e., the capacity can be increased to 220 MW. Orig. art. has: 3 tables. [JPRS]

SUB CODE: 10 / SUBM DATE: none

Card 2/2 BLG

L 22112-66

ACC NR: AP6012982 SOURCE CODE: UR/0091/65/000/009/0003/0006

47
B

AUTHOR: Vetrov, Yu. A. (Engineer); Lazarev, G. B. (Engineer)

ORG: none

TITLE: Ionic self-excitation device of the TGV-200 turbogenerator of the Zmiyevskaya hydroelectric power station

SOURCE: Energetik, no. 9, 1965, 3-6

TOPIC TAGS: ion source, hydroelectric power plant, power generating station, circuit design

ABSTRACT: Ionic excitation devices (basic systems for generator excitation) have been constructed for the 200 MW TGV-200 turbogenerators of the Zmiyevskaya hydroelectric power station (GRES). The article presents the circuit diagram of the ionic self-excitation device, its power supply circuit diagram, describes in considerable detail the operation of the device, and reports on the performance of the device during continuous commercial operation. The systems responded satisfactorily to various cases of short-circuiting. They are fast, need low control power, and are able, in most cases, to supply the needed excitation boosting during brief short circuits. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 10, 09 / SUBM DATE: none

Card 1/1 BK

UDC: 621.313.322-81

1. VETESHKIN, S.I.

2. USSR (600)

4. Moscow - Buildings

7. Construction of high buildings in Moscow. Gig. i san. 17, no. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1. VEYESHKIN, S.I.

2. USSR (600)

4. Buildings-Moscow

7. Construction of high buildings in Moscow., Gig.i san., 17, No.9, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

KARDEVAN, Andor, dr.; VETESI, Ferenc, dr.

Waxy degeneration of skeletal muscles in partridges. Magy allatorv lap 19 no.2:63-65 F '64.

1. Chair of Pathological Anatomy, University of Veterinary Medicine (Head of Chair: University professor Dr. Gyula Salyi, corresponding member, Hungarian Academy of Sciences), Budapest

HUNGARY

KARDEVAN, A. and VETESI, F., Chair of Pathological Anatomy at the University for Veterinary Sciences [original-language version not given] in Budapest (Head: SALYI, Gy., Professor).

"On the Generalized Aspergillosis in Horses"

Budapest, Acta Veterinaria Academiae Scientiarum Hungaricae, Vol 16, No 2, 27 Jun 1966, pp 193-205.

Abstract: [German article] A detailed report is presented on an outbreak observed in a combine [location not given] during which the horses showed excessive salivation and high fever. The fungus responsible for this outbreak was identified as Aspergillus fumigatus. The fodder was found to be contaminated by mould; the weakened state of the horses made them susceptible to the effects of Bacterium pyosepticum (viscosum) . The findings were described in detail. 33 references, including 2 Hungarian, 3 Russian, 1 Czechoslovak, 12 German, and 15 Western. (Manuscript received 1 Nov 1965).

1/1

VETESNIK, M.

CZECHOSLOVAKIA/Optics - Photometry. Colorimetry K-12

Abs Jour : Ref Zhur - Fizika, No 1, 1959, No 2267

Author : Tremko J., Vetesnik M.
Inst : -
Title : Spectral Sensitivity of the Photoelectric Photometer of the University Observatory at Brno

Orig Pub : Byul. astron. in-tov chekhoslovakii, 1958, 9, No 3, 105-107

Abstract : Description of results of measurements of the spectral sensitivity of the electron multiplier and of the photometer, both with filters and without, and a determination of the effective wavelengths.

Card : 1/1

VETESNIK, M.

Frequency of stars in the vicinity of the sun according to the integral of energy. In English. p. 81.

BULLETIN OF THE ASTRONOMICAL INSTITUTES OF CZECHOSLOVAKIA. (Ceskoslovenska akademie ved. Astronomicky ustav) Praha, Czechoslovakia, Vol. 10, no. 3, May 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 11, Nov. 1959
Uncl.

VETESNIK, P.

TECHNOLOGY

PERIODICAL: CHEMI KY PRUMYSL, VOL. 11, no. 3, 1958

Vetesnik, P. Polarographic determination of hydroxylamine and nitroethane. p. 526.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 5, May 1959, Unclass.

KLICNAR, Jiri; KOSEK, Frantisek; PANUSOVA, Sona; VETESNIK, Pavel

Preparation and electric conductivity of 6-nitroquinoxaline methyl derivatives. Sbor VSCHT Pardubice no.1:103-110 '64.

1. Chair of Organic Chemistry and Chair of Physics of the Higher School of Chemical Technology, Pardubice. Submitted October 19, 1963.

VETESNIK, V.

Economical design of heaters for air-conditioning equipment operating in places with very heavy heating load even during the winter season. Zdravot tech 7 no. 3:134-135 '64.

1. Strojtex National Enterprise, Dolni Bousov.

PARFENOV, A.P., inzh.; NIFANT'YEV, A.D., inzh.; VETETENNIKOV, V.A., inzh.

Efficient method of pipeline assembly in horizontal and inclined workings. Shakht. stroi. 8 no.8:28 Ag '64. (MIRA 17:9)

1. Korkinskoye stroitel'no-montazhnoye upravleniye tresta Soyuzshakhtospetsmontazh (for Parfenov). 2. Shakhta No.47 tresta Kopeyskugol' (for Nifant'yev, Veretennikov).

VETEŠKA, K.

Distr: 4E2c

Production of pure salts of beryllium from Czechoslovakian raw materials. K. Veteška and J. Mazáček. *Rudy* (Prague) 8, 1-8(1950).—V. and M. studied the possibilities of producing pure Be salts from domestic raw materials. For the decompn. they used the modified method of Copaux-Kawecki with Na_2FeO_3 and melting BeO with addn. of $Ca(OH)_2$. The decompn. by the 1st method takes about 1 hr. at 700°, and a great excess of Na_2FeO_3 (about 500%) is necessary. The decompn. by the 2nd method takes 2 hrs. at 1000°, and the same excess of $Ca(OH)_2$ is necessary. For the extn. of $Ba(OH)_2$ a great excess of H_2SO_4 is to be used. Therefore, the 1st method seems to be economically more suitable.

I. Hyne

3
1-MIC/ID
1

S/123/63/000/003/001/005
A054/A126

AUTHORS: Vetishka, A., Orlov, G.M.

TITLE: High-velocity pressing of molds by explosion

PERIODICAL: Liteynoye proizvodstvo, no. 3, 1963, 5 - 8

TEXT: For the analysis of the high-velocity pressing methods for molds of high strength, accurate shape and smooth surface, tests were made by utilising blasting power. The test apparatus, constructed by A. Vetishka, Docent, Candidate of Technical Sciences, and Shneyder, Engineer, represented in a figure, features a ram head that is activated by the blast of a 12-mm smokeless shotgun cartridge. The motion of the ram head was recorded by Zeiss "Pentamet" slow-motion cameras, producing 3,000 frames per second. The kinetic energy of the impact was determined for charges of 3, 2.5 and 1.5 g for four kinds of mixtures. Mixture no. 4 has a very high degree of liquidity (90.5%) as compared to mixture no. 3 (2.2% liquidity). The tests covered various relations between density, strength, gas-permeability and hardness of the samples, and the specific kinetic energy of pressing and the properties of the mixture. Investigation of the be-

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High-velocity pressing of molds by explosion

havior of the mold when containing the pattern showed that the distribution of forces in blast compression is similar to that of the conventional process. Although the apparatus for blast compression is very simple and has a high output, it is not yet definitely established to which extent it can be used, neither is its technology determined. However, so much can be said that the mold mix used must have a moisture content below 2 - 3%, a compression strength of 0.3 - 0.4 kg/cm^2 and the specific power of the ram head must be about 8 - 10 kgm/cm^2. The impact power applied ultimately depends on the dimensions of the mold and pattern and their relationship. Similar effects as obtained with blasting can also be produced by high-speed pneumatic presses, such as the DUPARAK type. The tests were carried out in cooperation with the Department of Foundry Industry, Brno, CSSR, and the Moskovskiy avtomaticheskiy institut, SSSR (Moscow Institute of Automatics, USSR). There are 8 figures and 5 tables.

Card 2/2

L 9517-66 EWT(d)/EWP(m)/EWP(f)/EWP(c)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWP(l)/
ACC NR: AP6002639 ETC(m) JD/WW/EM SOURCE CODE: CZ/0032/65/015/002/0138/0143

AUTHOR: Vetiska, A. (Docent; Engineer; Doctor); Setnicka, R. (Engineer); Hoffmann, A. (Engineer)

ORG: [Vetiska] VUT, Brno; [Setnicka, Hoffmann] CKD, Blansko

TITLE: Checking the mechanical properties of large cast blades of Kaplan turbines

SOURCE: Strojirenstvi, v. 15, no. 2, 1965, 138-143

TOPIC TAGS: turbine blade, metal casting, metal property, solid mechanical property, mechanical engineering

ABSTRACT: The mechanical properties of large cast blades for Kaplan turbines can be checked by measuring the attenuation of ultrasonic signals in the casting. The method described reveals the actual mechanical properties of the casting and not just those of a sample cut out of a riser; samples from risers do not provide reliable information because there is a different crystallization process in them. This work was presented by Dr. J. Ruzicka. Orig. art. has: 10 figures, 6 tables. [JPRS]

SUB CODE: 13, 21 / SUBM DATE: none / ORIG REF: 003 / OTH REF: 002

Card 1/1

VETISKA, A.

24(6) PHASE I BOOK EXPLOITATION CZECH/2360

Pišek, František, Academician; Aleš Vetiška, Doctor, Engineer; Jiří Škarek, Engineer (Part 1); Karel Čiha, Engineer; Martin Černohorsky, Doctor; and Dalibor Ružička, Engineer (Part 2)

Nauka o materiálu. II. 1. svazek; 2 svazek (The Science of Materials. Vol II. Part 1 and Part 2) Praha, Nakladatelstvi Československe Akademie Věd, 1959. Part 1, 658 p., Part 2, 669 p. Errata slip inserted. 4250 copies printed.

Sponsoring Agency: Československá Akademie Věd. Sekce technická.

Scientific Ed.: Ladislav Jeníček, Professor, Engineer, Doctor; Reviewers: Jaroslav Němec, Professor, Engineer, Doctor, Josef Shon, Engineer, Vladimir Hajdovský, Doctor, Milič Roubal, Engineer, Josef Vodseďálek, Engineer; Zdenik Ministr, Engineer, and Antonin Fingerland; Resp. Ed. Ladislav Hrdina; Tech. Ed.: Jaroslav Hrubý.

PURPOSE: This book is for engineers and technicians in the field of mechanical engineering, specializing in the strength of materials.

COVERAGE: This is the second volume of an exhaustive work entitled "Science of

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Z/056/63/020/003/003/005
E073/E135

AUTHORS: Orlov, G.M., and Vetiška, A.

TITLE: Explosive forming of foundry moulds

PERIODICAL: Hutnictví a strojírenství. Přehled technické a hospodářské literatury, v.20, no.3, 1963, 142, abstract HS 63-1732. (Slévárenství, v.10, no.10, 1962, 365-370)

TEXT: The article describes an explosive forming machine for foundry molds, and also the molds used in explosive forming. The forming mixture must have a low humidity (2 to 3% water). A high upsetting velocity can be obtained either by using explosive powders or pneumatically by using the well-known "Dynapark" equipment constructed so as to have a high impact energy.
16 figures. 1 reference.

[Abstracter's note: Complete translation.]

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VETISKA, Ales

Possibilities of improving gray cast iron quality by bath vibration. Slevarenstvi 13 no.4:128-133 Ap '65.

1. Chair of Foundry of the Higher School of Technology, Brno.

VETISKA, A., doc. inz. dr.; SETNICKA, R., inz.; HOFFMANN, A., inz.

Testing the mechanical properties of Kaplan turbine blades. Strojirenstvi 15 no.2:138-143 F '65.

1. Higher School of Technology, Brno (For Vetiska). 2. Ceskomoravska-Kolben-Danek National Enterprise, Blansko (for Setnicka and Hoffmann).

VETISKA, A.

Problem of the education of foundry engineers. Slevarenstvi 11 no.2: 88-89 F '63.

VETISKA, Ales; MACASEK, Igor

The problem of art castings. Slevarenstvi 11 no.3:104-108 Mr '63.

1. Vysoke uceni technicke, katedra slevarenstvi, Brno.