

KHOT'KO, Zh.P.; BONDARENKO, B.V.

Principal tectonic structural elements of the White Russian S.S.R.  
according to geophysical data. Dokl.AN SSSR 106 no.4:712-715 F  
156. (MLRA 9:6)

1.Institut geologicheskikh nauk BSSR.Predstavleno akademikom  
N.S.Shatskim.  
(White Russia--Geology, Structural)

BONDARENKO, B.V.

BONDARENKO, B.V. (Minsk); LEBEDEV, T.S. (Kiyev)

P.T. Pasal'skii and his contribution to geophysics. Vop.ist.est.  
i tekhn. no.5:182-187 '57. (MIRA 11:2)  
(Pasal'skii, Pavel Timofeevich, 1871-1900)

BONDARENKO, B.V.

Relation between tectonic processes and manifestations of Paleozoic volcanism in the southern part of White Russia, based on magnetic mapping data. Trudy Inst.geol.nav. AN BSSR no.1: 102-107 ' 58. (MIRA 12:1)  
(White Russia--Geology)

BONDARENKO, B.V.

Second vertical derivatives of magnetic and gravity anomalies  
and their application to geophysical prospecting. Trudy Inst.  
geol. nav. An BSSR no. 2:15-24 '60. (MIRA 13:12)  
(Prospecting--Geophysical methods)

BONDARENKO, B.V. [Bandarenka, B.V.]; KHATS'KO, Zh.P.

Conclusions from using geophysical surveys in making geological maps of the crystalline foundation of the White Russian-Lithuanian massif. Vestsi AN BSSR. Ser.fiz.-tekh.nav. no.2:90-100 '60.

(MIRA 13:10)

(White Russia--Geology--Maps)

(Geophysics)

BONDARENKO, B.V.; KRAVCHENKO, D.M.

Tectonic districts of the Pripyet Depression based on a numerical  
analysis of gravitational anomalies. DOKL. AN SSSR 4 no.12:529-531  
1960. (MIRA 1/12)

1. Institut geologicheskikh nauk AN SSSR. Predstavleno akademikom  
AN SSSR K.I. Lukatskiy.  
(Pripyet Valley--Kiev, Staniitsya)

S/169/63/000/001/047/062  
D218/D307

AUTHOR: Bondarenko, B.V.

TITLE: Application of electronic digital computers to the solution of problems in geophysical prospecting

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1963, 17, abstract 1D87 (Tr. In-ta geol. nauk. AN BSSR, 1961, no. 3, 108-125)

TEXT: A method for the interpretation of gravimetric surveys over large areas is discussed. The surveys are interpreted with the aid of the quantity  $g_{zz}$  which is found from the equation

$$\frac{\partial^2 g}{\partial z^2} = \frac{\partial^2 g}{\partial x^2} + \frac{\partial^2 g}{\partial y^2} .$$

This equation is replaced by a difference equation which is then solved by the grid method. The review is made of the applicability of grids of different form, the grid spacing, the stability of the

Card 1/2

Application of electronic ...

S/169/63/000/001/047/062  
D218/D307

solution, the effect of errors in the original data, and the programming of digital computers for the solution of the difference equation. The method is used to interpret a survey of the Prepyatskaya basin which contained 2000 initial data. The geological results of the interpretation are given. The method may be used for the interpretation of magnetic  $Z_{zz}$  surveys. An example of such an interpretation is given.

[Abstracter's note: Complete translation]

Card 2/2



BONDARENKO, B.V.

Methods for studying emission properties of refractory metals,  
metal-like compounds and alloys. Radiotekh. i elektron. 8  
no.9:1646-1648 S '63. (MIRA 16:9)  
(Heat resistant alloys) (Alloys--Electric properties)

BONDARENKO, B.V. [Bandarenka, E.V.]; GOMELIK, E.A. [Garelin, E.A.]

Tectonics and the basic characteristics of the history of the formation of structural elements in the Strelchevskaya area of the Pripet fault. Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.4:78-84 '62. (MIRA 18:4)

L 63047-65 EWT(1)/EWT(m)/EWP(w)/EPP(n)-2/ENG(m)/ENA(d)/EPA(w)-2/T/EWP(t)/EWP(b) P2-6  
ACCESSION NR: AP5013358 IJP(c) JB/ UR/0109/65/010/005/0971/0972  
JG/AT 621.385.7:546.78'832

34  
B

AUTHOR: Bonifarenko, B. V.; Tsukrov, F. G.

TITLE: Thermionic characteristics of a tungsten-hafnium system

SOURCE: Radiotekhnika i elektronika, v. 10, no. 5, 1965, 971-972

TOPIC TAGS: thermionic emission, hafnium on tungsten emission

ABSTRACT: The results of an experimental investigation of the emission characteristics of (a) hafnium powder baked onto a tungsten base and (b) hafnium precipitated from a gaseous phase are briefly reported. In the case "a", the initial heating was accompanied by an increasing work function, from 3.20 ev at 1100K to 3.93 ev at 2000K, which apparently was due to a sintering of the powder accompanied by a reduction of the effective emitting surface. After a run at 2000K, the work function dropped to 3.70 ev and remained practically constant within the 1500--2000K range. In the case "b", the hafnium was precipitated by an iodide (HfI<sub>4</sub>) method; the measured work function was 3.98--4.01 ev. Orig. art. has: 2 figures and 1 formula.

Card 1/2

L 63047-65

ACCESSION NR: AP5013358

ASSOCIATION: none

SUBMITTED: 25Jul64

ENCL: 00

SUB CODE: EC,EM

NO REF SOV: 001

OTHER: 003

*jk*  
Card 2/2

KOSTIN, V.Ye.; BONDARENKO, D.A.

Screen controlling instruments. Izv.tekh.no.5:73-74 S-0 '56.  
(Optical instruments) (MLRA 10:12)

KHITROV, M.V.; BONDARENKO, D.A.

Measuring heads used for checking blind holes. Stan. 1 instr. 28  
no.5:25-26 My '57. (MLRA 10:6)

(Electric instruments)

KOVALEV, M.K.; KOSTIN, V.Ye.; BONDARENKO, D.A.; GRECHUKHIN, A.I.

Measuring minor dimensions. Stan. 1 instr. 28 no.12:27-28  
D '57.

(Microscope)

(MIRA 10:12)

<BONDARENKO, D.G., mayor meditsinskoy sluzhby

Mechanized calculation of the food value of products. Voenn.-  
med. zhur. no. 6:82 Je '60. (MIRA 13:7)

(FOOD--ANALYSIS)



BONDARENKO, D.I.; YASHCHENKO, S.A.

Using the gear meshing designed by Novikov at a cement plant.  
TSement 26 no. 6:25 H-D '60. (MIRA 13: '9)  
(Gearing)

BONDARENKO, D.K.; VASIL'YEV, D.G.; NIKOL'SKIY, N.K.; TERESHCHENKO, N.I.,  
red.; PEVZNER, V.I., tekhn. red.

[A reference book for state-farm accountants and other state  
agricultural enterprises] Spravochnik dlia bukhgalterov sov-  
khozov i drugikh gosudarstvennykh sel'skokhoziaistvennykh pred-  
priatii. Moskva, Izd-vo sel'khoz. lit-ry, zhurnalov i plakatov,  
1961. 359 p. (MIRA 14:10)

(Agriculture--Accounting)



SHCHUROV, S.A., kand.tekhn.nauk; BONDARENKO, F.A.

Recent Russian and foreign air filters used in tractors.

[Trudy] NATI no.17:54-106 '58.

(Air filters)

(MIRA 11:8)

L 11103-07

ACC NR: AR6030390

SOURCE CODE: UR/0273/66/000/006/0016/0016

AUTHOR: Bondarenko, F. A. //

TITLE: Use of paper filter elements for tractor air cleaners

SOURCE: Ref. zh. Dvigateli vnutrennego sgoraniya, Abs. 6.39.97

REF SOURCE: Tr. Gos. soyuzn. n.-i. trakt. in-t, vyp. 180, 1965, 54-77

TOPIC TAGS: filter paper, air intake system, internal combustion engine

ABSTRACT: A technological system is developed for producing experimental batches of highly porous reinforced and nonreinforced hydrophobic paper for the first time in the Soviet Union under industrial conditions. The material has a low resistance to air flow and a high (99.98%) coefficient of atmospheric dust extraction. The results of tests on this paper show that it is suitable for application in air cleaners. Air cleaners with paper filter cores which have their first stage made in the form of mono- or multicyclones are the best of all existing air cleaner designs with respect to all indices. [Translation of abstract]

SUB CODE: 21

Card 1/1

UDC: 621.432.533.697.2

BONDARENKO, F.F. (Kiyev); YELOVSKIY, V.V., elektrosvarshchik (Stryy  
L'vovskoy obl.)

Driers for electrodes. Stroi. truboprov. 8 no.6:28 Je '63.  
(MIRA 16:7)

1. Starshiy proizvoditel' rabot stroitel'no-montazhnogo upravleniya tresta Ukgazneftestroy (for Bondarenko).
2. Stroitel'noye upravleniye No. 14 tresta Ukgazneftestroy (for Yelovskiy).  
(Electric welding—Equipment and supplies)

BONDARENKO, F.I.

Device for lubricating rail bars. Pat' i put.khoz. 4 no.11:23 N  
'60. (MIRA 13:12)

1. Borozhnyy master, st. Prokhladnaya, Severo-Kavkazskoy dorogi:  
(Railroads--Equipment and supplies)

BONDARENKO, F.M., general-major artillerii

At a new stage of combat skill. Vest. protivovozd. obor. no.11:  
11-14 N '61. (MIRA 16:10)

(Moscow--Antiaircraft artillery)



BONDARENKO, G.; BELOPAVLIC S.

Urolithiasis in the Autonomous Province of Kosmet and Metohija.  
Acta chir. Jugosl. 8 no.1:70-73 '61.

1. Uroloski otsek Opste bolnice u Pristini (Sef dr G.Bondarenko).  
(URINARY CALCULI statist)

BONDARENKO, G.

2 cases of diverticulum of the urethra in male children. Acta  
chir. Iugosl. 8 no.3:262-265 '61.

1. Uroloski otsek Opste bolnice u Pristini (Sef dr G.Bondarenko).  
(URETHRA dis)

BONDARENKO, G.

Our experience with infections in urology. Acta chir. Iugosl. 9  
no.2:159-165 '62.

1. Uroloski osek Opste bolnice u Pristini (Sef dr G. Bondarenko).  
(URINARY TRACT INFECTIONS ther)

BONDARENKO, G.

Cholesteatoma of the epididymis. Acta chir. iugosl. 9 no.3/4:270-272 '62.

1. Uroloski otsek Opste bolnice u Pristini (Sef dr G. Bondarenko).  
(EPIDYMIS) (CHOLESTEATOMA)

S

YUGOSLAVIA

G. BEJANČIĆ, Chief (806) Department of Urology, General Hospital  
(Vrloški otok: Opšte Lelince) Brigade.

Unilateral Cholesteatoma.

Belgrade, Acta Chirurgica Yugoslavica, Vol 8(10), No 3-4, 1962: pp  
270-272.

Abstract *[English summary modified]*: Description of case in 40-year aged  
MC and diagnosed in operative specimen following orchidectomy for  
presumed testicular tumor. Origin is speculatively ascribed to  
unnoticed trauma and subsequent calcification with deposition of  
cholesterol crystals into lumen of congenital cyst. Photograph of  
operative specimen, 8 Russian references.

1/1

BONDARENKO, G.

Device for reducing the salinity of secondary steam. Mor. flot  
22 no.5:19-20 My '62. (MIRA 15:5)  
(Sea water, Distillation of) (Steam navigation)

BONDARENKO, G. A.

PROCESSES AND PROPERTIES INDEX

11F

The influence of folliculin on the blood-forming function of suckling pigs. G. A. Bondarenko. *Problems Animal Husbandry* (U. S. S. R.) 1935, No. 6, 103-5. --Intravenous injection of folliculin in suckling pigs (250 M. U. over a period of 20 days) gave the following results for percentage of hemoglobin, erythrocyte count, leucocyte count and color index, resp., after 25 days: 84%, 5,300,000, 17,000, 0.79. The control values were 65%, 4,500,000, 18,000 and 0.72, resp. At the beginning of the expt. the values were 62%, 4,100,000, 18,000 and 0.75, resp. S. A. K.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

COMMON VARIABLES INDEX

GROUPS

LETTERS

LETTERS

LETTERS





BONDARENKO, G. A.

"Blood Components in Cows in Relation to Milk Productivity." (pp. 440-61)  
by Bondarenko, G. A.

SO: Journal of General Biology (Zhurnal Obshchei Biologii) Vol. 12, No. 6, (Nov-Dec) 1951.

BONDARENKO, G.A.

Changes in blood composition of cows during lactation as related to  
varying nutritional levels. Zhur. Obshchey Biol. 13, 464-78 '52.  
(CA 47 no.14:7052 '53) (MLRA 5:12)

BONDARENKO, G.A.

Changes of blood components in the blood of cows during lactation and its relation to various levels of feeding. Zh. obsh. biol., Moskva 13 no.6:464-478 Nov-Dec 1952. (CIBL 23:4)

1. All-Union Institute of Animal Husbandry.

BONDARENKO, G.A. (Moskva); CHERNIK, T.P. (Moskva)

Digestion in the rumen of ruminants. Usp.sovr.biol. 42 no.2:229-248  
S-0 '56. (MLRA 9:11)

(RUMINATION)

USSR / Farm Animals: Cattle. Q

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7389

Author : Bondarenko, G. A.; Kosova, O. N.  
Inst : All-Union Scientific Research Institute of  
Animal Husbandry

Title : The Effect of Feeds Rich on Easily Assimila-  
ted Carbohydrates upon the Milk Production  
of Cows

Orig Pub : Byul. nauchno-tekhn. inform. Vses. n.-i. in-t  
zhivotnovodstva, 1957, No 1 (3), 42-47

Abstract : The cows of the 1st group (control) were gi-  
ven clover aftercrop, syrup was added to the  
ration of the cows of the 2nd group, the cows  
of the 3rd group were fed clover aftercrop  
(50 percent) with green corn (50 percent).

Card 1/2

USSR / Farm Animals. Cattle. Q

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7389

As a result, as compared to the 1st group changes of the milk's fat content were observed which equaled in the 2nd group to +0.26 percent and in the 3rd group to +0.14 percent. According to groups the average coefficients of digestibility of the substances amounted to: 64.87, 67.23, 67.50 of dry substances; to 66.98, 69.39, 70.01 of organic substances; to 52.30, 54.40, 55.06 of cellulose; to 72.94, 75.95, 75.56 of nitrogen-free extractive substances; the utilization of nitrogen amounted for the 1st group to 30.04 percent of assimilated nitrogen and to 43.56 percent of digested nitrogen; correspondingly, it amounted to 32.58 and 47.18 percent for the 2nd group.

Card 2/2

63

USSR / Farm Animals. Cattle. Q

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7362

Author : Bondarenko, G. A.  
Inst : All-Union Scientific Research Institute of  
Animal Husbandry  
Title : The Influence of Nutrition upon the Processes  
of Milk Fat Formation in Cows

Orig Pub : Tr. Vses. n.-i. in-ta zhivotnovodstva, 1957,  
21, 71-85

Abstract : As rations containing sugar beet (7 series of  
experiments) were fed, the milk's fat increa-  
sed by 0.35, 0.26 and 0.12 percent in 3 se-  
ries, by 0.01 and 0.04 percent in 2 series,  
and decreased by 0.04, 0.13 and 0.12 percent  
in 3 series. An increase of the milk's fat  
content was only observed in cases in which

Card 1/3

USSR / Farm Animals. Cattle. Q

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7362

the organism became impoverished in metabolism activating carbohydrates. As cows were changed to rations of summer stall keeping, which consisted of concentrates and a green clover mass with Timothy grass, the milk's fat content increased by 0.1 percent, and as they were changed to rations consisting of concentrates and green clover, it increased by 0.14 percent. As the cows were fed aftercrop of clover, the content of fat in their milk decreased by 0.21 percent but as syrup was added, not only was a decrease prevented but even a 0.5 percent increase of the milk's fat content was effected. As aftercrop of

Card 2/3

USSR / Farm Animals. Cattle. Q

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206220005-4"

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7362

clover and green corn were fed simultaneously, the milk's fat content decreased by 0.14 percent. -- A. D. Musin

Card 3/3



BONDARENKO, G., kand.veterinar.nauk

Tissue preparations in stockbreeding. Nauka i zhyttia 12  
no.9:49-50 S '62. (MIRA 16:1)  
(Stock and stockbreeding) (Tissue extracts)

BONDARENKO, G.A., zotekhnik; PILIPENKO, A.N., zasluzhennyy agronom  
Ukrainskoy SSR.

Put the planning of feed supply on a scientific basis. Zhivotnovodstvo  
24 no.5:79-81 My '62. (MIRA 16:10)

ZHIL'TSOV, A.G.; SHCHELKOV, Ye.Ye.; BONDARENKO, G.F.

Some accessory elements in the Kenkol intrusive complex.  
Zap. Kir. otd. Vses. min. ob-va no.3:49-58 '62.

(MIRA 17:11)

BONDARENKO, G. F.

"Malignant Foot-and-Mouth Disease." Cand Vet Sci, Khar'kov Veterinary Inst,  
Min Higher Education USSR, Kiev, 1954. (KL, No 5, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher  
Educational Institutions (12)  
SO: Sum. No. 556, 24 Jun 55

BONDARENKO, G.P., veterinarnyy vrach.

Malignant foot-and-mouth disease. Veterinariia 33 no.4:46-48 Ap 1956.  
(MLRA 9:7)

1. Upravleniye veterinarii Ministerstva sel'skogo khozyaystva USSR.  
(Foot-and-mouth disease)

OCHERET'KO, Fedor Ivanovich, kand. sel'khoz. nauk; BONDARENKO, Grigoriy Fedorovich [Bondarenko, H.F.], kand. veter. nauk; PSHENICHNIY, P.D., akademik, red.; ZHELIKHOVSKIY, V.I. [Zhelikhovs'kiy, V.I.], red.; VIDONYAK, A.P., tekhn. red.

[Antibiotics in stockbreeding] Antybiotyky u tvarynnytstvi. Kyiv, Vyd-vo Ukrains'koi Akad. sil's'kohospodars'kykh nauk, 1961. 181 p. (MIRA 15:2)

1. Ukrainskaya Akademiya sel'skokhozyaystvennykh nauk (for Pshenichnyy).

(Stock and stockbreeding) (Antibiotics)

BONDARENKO, G.F., otv. red.; DIDOVETS, S.R., red.; MUCHNIK, S.R., prof., red.;  
PUCHKOVSKAYA, N.A., prof., red.; SHULYUMOVA, Ye.S., prof., red.;  
DOBRZHANSKIY, V.N., red.; LAPCHENKO, Ye.P., tekhn. red.

[Tissue preparations in animal husbandry] Tkanevye preparaty v zhitovnovodstve; materialy. Kiev, Gossel'khizdat USSR, 1962. 235 p. (MIRA 16:2)

1. Nauchno-proizvodstvennaya konferentsiya po primeneniyu tkanevykh preparatov po V.P.Filatovu v zhitovnovodstve i veterinarii, Odessa, 1960. 2. Chlen-korrespondent Akademii meditsinskikh nauk SSSR, Ukrainkiy nauchno-issledovatel'skiy eksperimental'nyy institut glaznykh bolezney i tkanevoy terapii im. akad. V.P.Filatova (for Puchkovskaya). 3. Ukrainkiy nauchno-issledovatel'skiy eksperimental'nyy institut glaznykh bolezney i tkanevoy terapii im. akad. V.P.Filatova (for Muchnik).
4. Odesskiy sel'skokhozyaystvennyy institut (for Shulyumova).
5. Nachal'nik Upravleniya veterinarii Ministerstva sel'skogo khozyaystva Ukr.SSR (for Didovets).

(Tissue extracts) (Stock and stockbreeding)

ACCESSION NR: AP4045386

s/0286/64/000/016/0052/0052

AUTHORS: Baisov, M. Ya.; Bondarenko, G. F.; Zakhar'yev, Yu. G.

TITLE: Joint sealing of two tubes in a high-temperature gas flow conduit. Class F, No. 164750

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1964, 52

TOPIC TAGS: joint, hot gas container

ABSTRACT: This Author Certificate describes joint sealing of two tubes in a high-temperature gas flow conduit, using a spring-loaded gasket of elastic material. To insure the repeated performance of the conduit without tightening or replacement of the gasket, a spring-loaded gasket in the form of a ring with rectangular cross section is packed in a groove closed about the perimeter at the end of one of the tubes (see Fig. 1 on the Enclosure). The gasket is held by the end of the second tube. It compensates for thermal expansion and a possible misalignment of the tubes at the joint. To decrease the temperature in the region of the gasket and spring, closed annular cavities for circulating cooling liquid are placed on the inner surface at the end of the tubes. At the end of one of the tubes there is a

Card 1/3



ACCESSION NR: AP4045366

deflector shield for protecting the gasket from the action of the incandescent gas flow. Orig. art. has: 1 diagram.

ASSOCIATION: none

SUBMITTED: 31May62

: ENCL: 01

SUB CODE: IE

NO REF SOV: 000

OTHER: 000

Card 2/3

ACCESSION NR: AP4045386

ENCLOSURE: 01

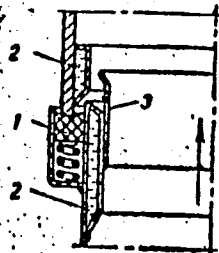


Fig. 1. Joint sealing of two tubes in a high-temperature gas flow conduit

1- spring-loaded gasket; 2- closed annular cavity; 3- deflector shield

Card 3/3

BONDARENKO, G.I.

Unit for continuous control of metal pressure on the rolls.  
Biul.tekh. ekon.inform.Gos.nauch.-isll.inst.nauch.i tekhn.inform.  
17 no. 5:9-10 My '64. (MIRA 17:6)

BONDARENKO, G. K.

PA 54/49T10

USSR/Biology - Wheat  
Biology - Hybridity

Jul 49

"The Inheritance of Winter-Resistant Qualities in Hybrid Winter Wheat," G. K. Bondarenko, Ukrainian Sci Inst for Grain Econ, 3 pp

"Dok Ak Nauk SSSR" Vol LXVII, No 1

Based on the compilation of data on various combinations of hybrids and their inherited properties, a greater degree of resistance to winter may be expected. Pollination of the best regional variety of these hybrids with good winter resistance and productivity under the given conditions are selected. Submitted by Acad N. A. Maksimov 9 May 49.

54/49T10

BONDARENKO, G. K.

USSR .

V. Effects of nitrates and nitrites on the gas-forming activity of *Escherichia coli* and yields of other fermentation products. M. V. Fedorov and G. K. Bondarenko (K. A. Timiryazev Agr. Acad., Moscow). *Mikrobiologiya* 24, 25-30 (1955).—In presence of 0.03%  $\text{NaNO}_2$  or 0.024%  $\text{NaNO}_3$ , *E. coli* forms  $\text{MeCHOHCOOH}$ ,  $\text{AcOH}$ , and  $\text{HCOOH}$  but no gas. Carboxylase is deaminated and deactivated, decarboxylation of  $\text{MeCOCO}_2\text{H}$  ceases, and so the formation of  $\text{EtOH}$  stops for lack of  $\text{AcH}$ . When the salts are present,  $\text{MeCOCO}_2\text{H}$  forms  $\text{AcOH}$  and  $\text{HCOOH}$  after the manner of oxidative decarboxylation, but without forming  $\text{CO}_2$  and  $\text{H}_2$ . Evidently the  $\text{NH}_2$  group in carboxylase participates directly in the decompn. of  $\text{MeCOCO}_2\text{H}$ . The gas-inhibiting power of nitrates and nitrites can be utilized to prevent blowing due to *E. coli* in the early ripening stages of certain cheeses; toxicity of the salts is not a factor since they are quickly reduced and disappear. J. F. S.

USSR/General Biology - Genetics. Plants Genetics.

B.

Abs Jour : Ref Zhur - Biol., No 21, 1958, 94670

Author : Bondarenko, G.K.

Inst : -

Title : Formation of Immunity Attained in Wheat-Rye Hybrids.

Orig Pub : Priroda, 1957, No 8, 88-89

Abstract : Among hybrids obtained from cross breeding winter wheat varieties with rye, there were developed plants resistant to brown rust while at the same time related forms were subjected to this disease. In single combinations of cross breeding, resistant plants appeared in F<sub>1</sub> and in others only in F<sub>3</sub>. -- T.K. Lepin

Card 1/1

- 28 -

AUTHOR: Bondarenko, G.K. (Dnepropetrovsk) SOV-26-58-10-22/51

TITLE: Winter Amphidiploids (Ozimyye amfidiploidy)

PERIODICAL: Priroda, 1958, Nr 10, pp 96-98 (USSR)

ABSTRACT: The author describes 3 types of amphidiploids produced as a result of crossing wheat with rye at the Tsentral'naya selektsionno-opytnaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta kukuruzy (The Central Experimental Selection Station of the All-Union Research Institute for Maize) 1948 - 1956. The crossing process and after-treatment of the seeds obtained is discussed and the qualities of the resulting plants listed. The three types are compared from the standpoint of their practical and agricultural value.

1. Agriculture--USSR 2. Cereals--Genetic factors

Card 1/1

BONDARENKO, G.K.

Effect of the cultivation and hybridization conditions on the  
polyploidy of wheat-rye hybrids. Trudy MOIP. Otd. biol. 5:148-  
153 '62. (MIRA 16:5)

1. Dnepropetrovskaya vysshaya partiynaya shkola.  
(POLYFLOIDY) (WHEAT BREEDING) (RYE BREEDING)



L 23508-66 EWT(m)/EWP(w) IJP(c) EN

ACC NR: AP6002461

SOURCE CODE: UR/0144/65/000/012/1372/1376

AUTHOR: Bondarenko, G. I. (Aspirant)

ORG: Institute of Automation, Gosplan, UkrSSR (Institut avtomatiki Gosplana UkrSSR)

23  
B

TITLE: Output characteristics and equivalent circuit of magnetoelastic transformer-type transducers

SOURCE: IVUZ. Elektromekhanika, no. 12, 1965, 1372-1376

TOPIC TAGS: strain gauge, pressure transducer

ABSTRACT: Intended for measuring mechanical force, the transducer consists of a square-shaped laminated <sup>am</sup> magnetic core with four symmetrical punched holes and two symmetrical cross windings pulled through the holes. One, magnetizing, winding is supplied with ac; the other, measuring, winding is connected to an instrument. Under no-load conditions, the measuring winding produces zero or a little residual-unbalance voltage. When a mechanical force is applied to the core, the magnetic flux is distorted and an emf depending on the force appears across the measuring winding.

2658

Card 1/2

UDC: 621.314.6+ 621.313.045

L 23508-66

ACC NR: AP6002461

Thus, the transducer acts as a magnetic bridge, and its equivalent circuit is developed from the analogy with unbalanced a-c bridges. Testing an experimental transducer revealed the following: (1) Maximum difference between estimated and measured emf's (for 0--1650 kg/cm<sup>2</sup>) is 13.5%; (2) The transducer is very sensitive to supply-voltage and frequency variations; (3) The maximum sensitivity of the transducer corresponds to its maximum permeability; (4) Temperature variation within +18 +100C almost does not affect the transducer. Orig. art. has: 5 figures and 11 formulas.

SUB CODE: 09, 13 / SUBM DATE: 27Feb65 / ORIG REF: 004

Card 2/2

GRISHCHENKO, A.Z.; BONDARENKO, G.L.; TARASENKO-ZELENAYA, L.N.; KORCHAK, A.N.

Automatic control of the concentration of alkali hydroxide  
solutions. Khim.volok. no.2:49-52 '62. (MIRA 15:4)

1. Kiyevskiy institut avtomatiki Gosplana USSR.  
(Alkalies) (Automatic control)

GRISHCHENKO, A.Z.; BONDARENKO, G.L.

Dynamics of the regulation of the processes in the preparation  
of solutions in viscose production. Khim. volok. no.2:39-42 '65.  
(MIRA 18:6)

1. Institut avtomatiki Gosudarstvennogo komiteta po priborostroyeniyu,  
sredstvam avtomatizatsii i sistemam upravleniya pri Gosplane SSSR,  
Kiyev.

24(7)  
AUTHORS: Bondarenko, G.N., Voznesenskiy, B.N., and Umarov, G.Ya. <sup>06555</sup> SOV/166-59-4-6/10

TITLE: Investigation of the Form of the  $\beta$ -Spectrum of RaD

PERIODICAL: Izvestiya Akademii nauk Uzbekskoy SSR, Seriya fiziko-matematicheskikh nauk, 1959, Nr 4, pp 42-46 (USSR)

ABSTRACT: For the investigation of the  $\beta$ -spectrum of RaD in the region of small energies the author developed a special electrostatic spectrometer with a focusing and an accelerating field. For a variation of the accelerating field and a constant focusing field the  $\beta$ -spectrum can be investigated in a certain interval for the same energy. Here the absorption of the  $\beta$ -particles by the plate of the recorder is the same in the whole investigated region, and consequently it does not influence the form of the spectrum. The results of the measurements in essential agree with the results of Kobayashi [Ref 4]. There are 6 figures, 1 table, and 4 references, 1 of which is Soviet, 2 American, and 1 Japanese.

ASSOCIATION: Sredneaziatskiy politekhnicheskiy institut ([Soviet] Central Asian Polytechnical Institute)

SUBMITTED: January 22, 1959

Card 1/1

ACC NR: AR6013634

AUTHOR: Bondarenko, G. N.; Umarov, G. Ya.

SOURCE CODE: UR/0058/65/000/010/V012/V012

TITLE: The conversion electron spectrum of long-lived isotopes of lutetium

SOURCE: Ref. zh. Fizika, Abs. 10V116

REF SOURCE: Tr. Tashkentsk. politekhn. in-ta, vyp. 24, 1963, 104-111

TOPIC TAGS: lutetium, conversion electron spectrum, beta decay

TRANSLATION: A  $\beta$ -spectrometer of the ketron type with a variable transverse magnetic field was used to measure the conversion electron spectrum of  $\text{Lu}^{173}$  and  $\text{Lu}^{174}$  isotopes present in the lutecium fraction of the products of the spallation of Ta by fast protons. The instrument allowance was 0.6% for  $w/4\pi = 0.9\%$ . Because of the thickness of the source, the half-width of lines in the 140 keV region was amplified by 1.2%. The results support the data of other authors on the decay of these isotopes.

SUB CODE: 18,20

Card 1/1

BONDARENKO, G.P.

Distribution of microelements (Cu, Zn, Co, Ni, Mn, Sr) and some macroelements (Si, Fe, Al, Ca, Mg) between roots and the aerial part of plants as related to the phase of development. Vest. Mosk. un. Ser. 6: Biol., pochv. 18 no.1:57-69 Ja-F '63. (MIRA 16:12)

1. Kafedra pochvovedeniya Moskovskogo universiteta.

BONDARENKO, G.P.

Seasonal dynamics of the mobile forms of microelements and iron in floodplain soils of the widening of the Moskva River in the Ramenskoye region. Nauch.dokl.vys.shkoly; biol.nauki no.4:202-207 '62. (MIRA 15:10)

1. Rekomendovana kafedroy pochvovedeniya Moskovskogo gosudarstvennogo universiteta im. Lomonosova.  
(MOSKVA VALLEY—MINERALS IN SOIL)  
(TRACE ELEMENTS)



BONDARENKO, G.P., kand.tekhn.nauk

Carburetion and combustion in the vortex chamber of an engine with  
compression ignition. Avt. prom. no. 1:7-9 Ja '61. (MIRA 14:4)

1. Khar'kovskiy politekhnicheskii institut imeni V.I. Lenina.  
(Diesel engines—Combustion)

FORM 100-62	EWI(m)/EWP(w)/EWA(a)/T/EWP(t)/ERP(k)/EWP(z)/EWP(b)/EWA(c)	Pr. 4
TJP(2)	M/R/JD/HW	
ACCESSION NR: AR5012852		UR/0137/65/009/003/1043/1043
SOURCE: Ref. zh. Metallurgiya, Abb. 31289		35 33 B
AUTHOR: <u>Bondarenko, G. S.</u>		
TITLE: Effect of impact thermomechanical treatment on the density of dislocations in U-12 steel / 4		
CITED SOURCE: Uch. zap. Kabardino-Balkarsk. un-t. Ser. fiz. - matem. n., vyp. 19, 1963, 389-392		
TOPIC TAGS: impact treatment, thermomechanical treatment, dislocation density, steel microstructure, impact loading, quenching, steel hardness, metal mechanical property, annealing, x ray crystallography, carbide diffusion, U-12 steel		
TRANSLATION: The samples to be subjected to impact thermomechanical treatment were quenched in water from 950C. The impact thermomechanical treatment consisted in combined quenching of the steel and simultaneous impact loading of the sample during the process of cooling in the quenching bath. The hardness of		
Card 1/2		

I 6002-6

ACCESSION NR: AR5012852

2

the steel after quenching with the use of impact thermomechanical treatment reached 64-65 R<sub>c</sub>, while after ordinary quenching it was 61-62 R<sub>c</sub>. Annealing of the steel was carried out at 300, 350, 400, 450, and 500C for 1 hour. The density of the dislocations, rho, was determined from the width of the X-ray lines, with the introduction of a correction for the geometry of the exposure and the non-homogeneity of the X-ray irradiation. At an annealing temperature of 300C, rho in steel quenched by the impact thermomechanical method is higher than in steel quenched by the ordinary method ( $14 \cdot 10^{11}$  and  $9 \cdot 2 \cdot 10^{11} \text{ cm}^{-2}$ ). At increased annealing temperature, rho decreases; in this case, in steel subjected to impact thermomechanical treatment, this change takes place more rapidly. At an annealing temperature of 450C, the value of rho is identical for both types of quenching, and does not change further. Such a character of the change in rho as a function of the annealing temperature is explained by the fact that in the process of quenching by the impact thermomechanical treatment method, the diffusion process is accelerated, the carbides separate out, and an increase in rho takes place.

1. Kopyev

SUB CODE: NM, SS

ENCL: 00

Card 2/200P

L 17941-65 ASD(a)-5/ESD(gs)  
ACCESSION NR: AP4048363

S/0032/64/030/011/1337/1338

AUTHORS: Bondarenko, G. V.; Blokhin, M. A.

TITLE: X-ray spectral analysis of lanthanides in solutions using the K-spectrum of radiation

SOURCE: Zayidskaya laboratoriya, v. 30, no. 11, 1964, 1337-1338

TOPIC TAGS: x ray spectroscopy, lanthanum, rare earth, rare earth element/ RUM 11 therapeutic apparatus, FEU 35 photomultiplier, 3BPM 200 x ray tube

ABSTRACT: Since x-ray spectral analysis of lanthanides with the L-spectrum is only accurate to 1% and can be used only on solid materials, a method for using the K-spectrum in the analysis of solutions was investigated. Because the K-series fluorescence is an order of magnitude higher than the L-series and the wavelength of the analytical lines is 0.2-0.5A (permitting use of a more accurate counter), the K-series analysis of rare earth should provide more (or equally) accurate results than the L-series. To obtain sufficiently intense K-lines for rare earths, x-ray tubes with up to 200 kv have to be used. Since such tubes are not presently available, a medical therapeutic apparatus RUM-11 powering a 3BPM-200 x-ray tube was used in all the experiments providing 150 kv at 10 ma. A counter consisting of an

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L 17941-65  
ACCESSION NR: AP4048363

FEU-35 photomultiplier and a NaI(Tl) crystal was used to record the analytical lines. The maximum sensitivity of this method for all the rare earths was found to be as follows: La - 0.10 gm/ltr, Ce - 0.1, Pr - 0.15, Nd - 0.15, Sm - 0.2, Eu - 0.3, Gd - 0.3, Tb - 0.35, Dy - 0.45, Ho - 0.5, Er - 0.6, Tu - 0.9, Yb - 0.9, Lu - 0.95. Orig. art. has: 1 table.

ASSOCIATION: Institut fiziki Sibirskogo otdeleniya Akademii nauk SSSR (Physics Institute, Siberian Branch, Academy of Sciences, SSSR); Rostovskiy gosudarstvennyy universitet (Rostov State University)

SUBMITTED: 00

ENCL: 00

SUB CODE: IC, OP

NO REF SOV: 000

OTHER: 001

Card 2/2

~~BONDARENKO, G. Ye.~~, inzh; ~~PODOL'SKIY, Yu.K.~~, inzh.

Enamels as durable coatings. Vop.rud. transp. no.4:210-216 '60.

(MIRA 14:3)

1. Luganskiy zavod im. A.Ya. Parkhomenko.  
(Mining machinery) (Enamel and enameling)

BONDARENKO, G. Ye., inzh.; PODOL'SKIY, Yu. K., inzh.

Effect of the thermal heating method on the durability of traction  
block chains. Vop.tud. transp. no.4:61-66 '60. (MIRA 14:3)

1. Luganskiy zavod im.A.Ya.Parkhomenko.  
(Chains)

80V/123-59-15-59152

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, p 38 (USSR)

AUTHORS: Tarapov, I.Ye., Bondarenko, L.I.

TITLE: Some Problems in the Theory of Lubrication of Surfaces of Revolution

PERIODICAL: Uch. zap. Khar'kovsk. gos. ped. in-ta, 1957, Vol 21, pp 25 - 36

ABSTRACT: The article has not been reviewed.

Card 1/1



BOHDARENKO, G.P., Cand Tech Sci --(diss). "Study of the Whirlpool diesel  
chamber." Khar'kov, 1958. 13 pp with ill~~o~~ (Min of Higher Education UKSSR.  
Khar'kov Polytech Inst im V.I.Lenin), 150 copies (11, 46-58, 140)

BONDARENKO, G.P., inzh.

Determining the turbulence speed in the turbulence chamber of the  
D-54 diesel engine. Trakt. i sel'khoz mash. no. 4:1-6 Ap '58.  
(MIRA 11:5)

1. Khar'kovskiy politekhnicheskii institut imeni Lenina.  
(Diesel engine)

BONDARENKO, G.P.

Structure of the swirl in the swirl chamber of the diesel engine.  
Trakt. i sel'khoz mash. no.5:10-11 My '58. (MIRA 11:6)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina.  
(Diesel engines)

BONDARENKO, Grigoriy Patrovich; PUL'MANOV, N.V., kand.tekhn.nauk, retsenzent;  
VIKHERT, M.M., kand.tekhn.nauk, red.; GELLER, I.Yu., red.izd-va;  
SMIRNOVA, G.V., tekhn.red.

[Testing diesel swirlchambers] Issledovanie vikhrevoi kamery  
dizelia. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry,  
1959. 73 p. (MIRA 12:3)  
(Diesel engines--Testing)

BONDARENKO, G.S.

Effect of thermomechanical impact treatment on the fine crystal  
structure of steel. Trudy NPI 152:3-6 '63. (MIRA 17:4)

BONDARENKO, G. YE.

42361: BONDARENKO, G. YE. - Tekhnologicheskaya laboratoriya (zavoda im. frunze)  
na sluzhbe proizvodstva. V sb: Opyt novatorov mashinostroyeniya. kuybyshev,  
1948, s 159-68.

SO: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948.

*DOVRETKENKO, I.*

AID P - 5554

Subject : USSR/Parachutism - Instruments  
Card 1/1 Pub. 58 - 13/20  
Authors : Bondarenko, I., and V. Chekunov  
Title : A computer for calculating a parachute jump  
Periodical : Kryl. rod., 1, 20-22, Ja 1957  
Abstract : The authors describe in detail a device permitting to draw speedily a diagram of a planned parachute jump, with the direction and the velocity of the wind at different altitudes taken into account. 5 drawings, 3 tables.  
Institution : None  
Submitted : No date

BONDARENKO, I.

Construction schools must use new training methods. Sel'. stroi.  
14 no.7:25 J1 '59. (MIRA 12:10)

1. Direktor Altayskoy shkoly stroitel'nykh masterov (desyatnikov).  
(Altai Territory--Building trades--Study and teaching)



SOBOLEV, V., IVANOVA, A., BONDARENKO, I., POLTAVSKIY, Yu.

Rationalizing a production process. Biul.nauch. inform.;  
trud i zar. plata 3 no.1:49-51 '60. (MIRA 13:6)  
(Zaporozh'ye--Metal cutting)

KISLITSA, Georgiy Vasil'yevich, rabochiy-vzryvnik; BONDARENKO, I.,  
brigadir; KALINICHENKO, L., rabochiy ochistnogo zaboya

We are the trade union. Sov.shakht. 10 no.12:20-23 D '61.  
(MIRA 14:12)

1. Predsedatel' uchastkovogo komiteta uchastka No.5 shakhty  
imeni Gor'kogo tresta Nesvetayanratsit v Rostovskoy oblasti (for  
Kislitsa). 2. Chleny uchastkovogo komiteta uchastka No.5  
shakhty imeni Gor'kogo tresta Nesvetayanratsit v Rostovskoy  
oblasti (for Bondarenko, Kalinichenko).  
(Trade unions)  
(Coal miners)

PISARENKO, I.D., inzh.; BCNDARENKO, I.A., inzh.

Using Arsenazo III indicator in determining zirconium content  
in nonstandard bronzes and alloys based on copper. Mashinostroenie  
no. 2:77-80 Mr-Apr '64. (MIRA 17:5)

BONDARENKO, I.A., inzhener

Moving bridge spans on Diamond railroad cars. Tekh.zhel.dor.6  
no.8:25 Ag'47. (MIRA 8:12)

(Bridges--Repairing )

SOKOLOV, N.S. (Magadanskaya oblast'); POPOV, V.M. (Magadanskaya oblast');  
DYMOV, K.M. (Magadanskaya oblast'); SHUVALOV, L.V. (Magadanskaya  
oblast'); MATSUYEV, L.P.; ~~BONDARENKO, I.G.~~ (Magadanskaya oblast');  
MAYO-ZNAK, Ye.S. (Magadanskaya oblast'); DZASOKHOV, Kh.B.  
(Magadanskaya oblast')

Eliminate inefficiency in the operation of dredges. Kolyma 21  
no.1:4-7 Ja '59. (MIRA 12:6)

1.Nachal'nik gornogo upravleniya (for Sokolov). 2.Nachal'nik dragi  
No.175 (for Popov). 3.Nachal'nik dragi No. 173 (for Dymov). 4.Nachal'nik  
priiska im. Gastello (for Shuvalov). 5.Zamestitel' direktora Vsesoyuzno-  
go nauchno-issledovatel'skogo instituta zolota i redkikh metallov,  
Magadan (for Matsuyev). 6.Nachal'nik otдела truda i zarobotnoy platy  
gornogo upravleniya (for Bondarenko). 7.Zamestitel' nachal'nika  
proizvodstvenno-tekhnicheskogo otдела sovnarkhoza (for Mayo-Znak).  
8.Nachal'nik priiska im. Chkalova (for Dzasokhov).  
(Dredging machinery) (Hydraulic mining)

*Bondarenko, I.I.*

BONDARENKO, I.P., inzh.; PALEY, D.I., inzh.; BONDARENKO, I.I., inzh.

More attention should be paid to the training of specialized  
miners. Bezop. truda v prom. 2 no.1:13 Ja '58. (MIRA 11:1)  
(Miners)

BONDARENKO, Igor' Ilich

DECEASED

1964

ATOMIC ENERGY

c/1964

BONDARENKO, I.I., ZHUKOV, M.N.; ZINCHEVSKIY, N.P.; RED'KO, I.A.  
SEMENKO, P.I.; SVINARENKO, D.M.; KHIVRENKO, A.F.; SHKUTA, B.I.;  
SHOSTAK, A.G.

Review of "Ventilation of mines after large-scale blasting"  
by S.I. Lugovskoi. Reviewed by I.I. Bondarenko and others.  
Bezop.truda v prom. 3 no.8:38 Ag '59. (MIRA 12:11)

1. Glavnyy inzhener upravleniya Krivorozhskogo okruga Gosgortekhnadzora USSR (for Bondarenko).
  2. Glavnyy inzhener instituta Krivbassproyekt (for Zhukov).
  3. Glavnyy inzhener rudoupravleniya im. Karla Libknekhta (for Zinchevskiy).
  4. Nachal'nik otdela kapital'nogo stroitel'stva rudoupravleniya im. Dzerzhinskogo (for Ryng).
  5. Nachal'nik ventilyatsii tresta Dzerzhinskruuda (for Red'ko).
  6. Upravlyayushchiy rudoupravleniyem im. Dzerzhinskogo (for Svinarenko).
  7. Upravlyayushchiy upravleniyem im. Karla Libknekhta (for Semenko).
  8. Glavnyy inzhener tresta Dzerzhinskruuda (for Khivrenko).
  9. Glavnyy inzhener rudoupravleniya im. Dzerzhinskogo (for Shkura).
  10. Nachal'nik tekhnicheskogo otdela tresta Dzerzhinskruuda (for Shostak).
- (Bibliography--Industrial safety) (Lugovskoi, S.I.)



BONDARENKO, I.I.

Textural characteristics of sedimentary rocks in the Karazhal  
deposit. Vest. AN Kazakh. SSR 17 no.10:41-53 0 '61. (MIRA 14:10)  
(Karazhal--Petrology) (Iron ores)  
(Manganese ores)

BATYRBEKOV, G.A.; BONDARENKO, I.I. [deceased]; KOLEGANOV, Yu.F.; NIKOLAYEV,  
M.N.; UZNADZE, O.P.

Some characteristics of a fast reactor with thorium shielding.  
Atom. energ. 17 no.4:294-299 0 '64. (MIRA 17:10)

BONDARENKO, I.I. [deceased]; LIFOROV, V.G.; MOROZOV, V.N.; NIKOLAYEV, M.N.;  
PARFENOV, V.A.; SEMENOV, V.A.

Measurement of neutron spectra in nickel, iron, and stainless steel.  
Atom. energ. 18 no.6:593-601 Je '65. (MIRA 18:7)

L 2898-66 EWT(m)/EPF(c)/ETC/EPF(n)-2/EWG(m)/T WW

ACCESSION NR: AT5022118

UR/3158/65/000/007/0001/0009

AUTHORS: Bondarenko, I. I. (deceased); Kovalev, V. P.; Zolotukhin, V. G.

TITLE: The possibility of utilizing a nuclear reactor in space to measure directly the neutron-neutron scattering cross section

SOURCE: Obninsk. Fiziko-energeticheskiy institut. /Doklady/, no. 7, 1965. O vozmozhnosti ispol'zovaniya yadernogo reaktora v kosmicheskom prostranstve dlya pryamogo izmereniya secheniya (n-n)-rasseyaniya, 1-9

TOPIC TAGS: nuclear reactor, neutron, scattering cross section, elementary particle, space environment

ABSTRACT: A physical experiment is proposed for continuously and directly measuring the n-n interaction cross section in the S-state. Because of the very high vacuum of outer space, the experiment is proposed at an altitude of 400-500 km with a pulse reactor as the neutron source and an He<sup>3</sup>-filled ionization chamber as a detector. Starting with an expression for the number of pulses in the given chamber per single burst

$$J = k(\tau) \cdot Q^2 \cdot \sigma_{nn} \cdot S \cdot E \text{ pulses}$$

and the following definition for the pulse width

Card 1/2

L 2898-66

ACCESSION NR: AT5022118

$$\bar{\epsilon} = 3.5 \frac{\rho}{\delta K_0}$$

a criterion is derived for selecting the most suitable reactor

$$\delta K_0 = \frac{|\alpha|}{2} (T_{max} - T_0),$$

where  $|\alpha|$  is the thermal coefficient of reactance  $K_0$ . The best reactor is shown to be a zirconium-hydride one with a beryllium reflector. The number of neutrons emitted from the reactor is given by  $8.6 \times 10^{17}$  n, and the value for the number of pulses  $I$  is 114. Four possible sources of background noise are investigated, and it is shown that the maximum error in the neutron-neutron scattering cross section can be reduced to  $\pm 10\%$ . "The authors express their gratitude to V. A. Kuznetsov, G. Ya. Rumyantsev, Yu. Ya. Stavisskiy, and V. S. Stavinskiy for their interest in the work and for their valuable advice." Orig. art. has: 5 formulas and 1 figure.

ASSOCIATION: Gosudarstvennyy komitet po ispol'zovaniya atomnoy energii SSSR (State Committee on the Utilization of Atomic Energy SSSR); Fiziko-energeticheskiy institut, Obninsk (Physics and Power Institute, Obninsk)

SUBMITTED: 06Apr65

ENCL: 00

SUB CODE: NP

NO REF SOV: 003

OTHER: 005

Card 2/2 KC

L 2285-66 EWT(m)/EPP(n)-2/T/EWP(t)/EWP(z)/EWP(b)/EMA(h) IJP(c) JD/HW/DM  
ACCESSION NR: AP5016928 55 UR/0089/65/018/006/0593/0601  
45B 621.039.538/539.125.52

AUTHORS: Bondarenko, I. I. (Deceased); Liforov, V. G.; Morozov, V. N.; Nikolayev, M. N.; Parfenov, V. A.; Semenov, V. A.

TITLE: Measurement of the neutron spectrum in nickel, iron, and stainless steel 16 17 17

SOURCE: Atomnaya energiya, v. 18, no. 6, 1965, 593-601

TOPIC TAGS: neutron spectrum, neutron energy distribution, nickel, iron, stainless steel, nuclear reactor shield, neutron cross section

ABSTRACT: The neutron spectra were measured by the time of flight method using a pulsed fast reactor (IBR) with a resolution of ~0.04  $\mu\text{sec/m}$ , and with high neutron intensity ( $\sim 10^7 \text{ sec}^{-1}$ ). The energy region covered was that below 1 MeV. The experimental setup is shown in Fig. 1 of the Enclosure. The spectra of the neutrons passing through various thicknesses of material disclosed the presence of a

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L 2285-66

ACCESSION NR: AP5016928

10

fine structure due to the resonant character of the cross section of the investigated media. A preliminary analysis of these spectra was made by comparison with multigroup calculation and calculations based on simple models, with account taken of the resonant self-screening of the cross section, shows certain discrepancies between theory and experiment, the reasons of which are briefly discussed. 'The authors thank O. D. Kazachkovskiy, L. N. Usachev, and V. V. Orlov for valuable discussions, F. L. Shapiro and Yu. S. Yazvitskiy for advice and the opportunity of using the neutron detector and the multichannel time analyzer of the Laboratory of Neutron Physics of the Joint Institute of Nuclear Research, and the IBR reactor crew headed by S. K. Nikolayev for help, and V. Z. Nozik, Z. A. Aleksandrova and L. M. Sereda for participating in the experimental data reduction.' Orig. art. has: 6 figures and 4 formulas

ASSOCIATION: None

SUBMITTED: 13Jul64

ENCL: 01

SUB CODE: NP

NR REF SOV: 017

OTHER: 005

Card 2/3

L 2285-66

ACCESSION NR: AP5016928

ENCLOSURE: 01

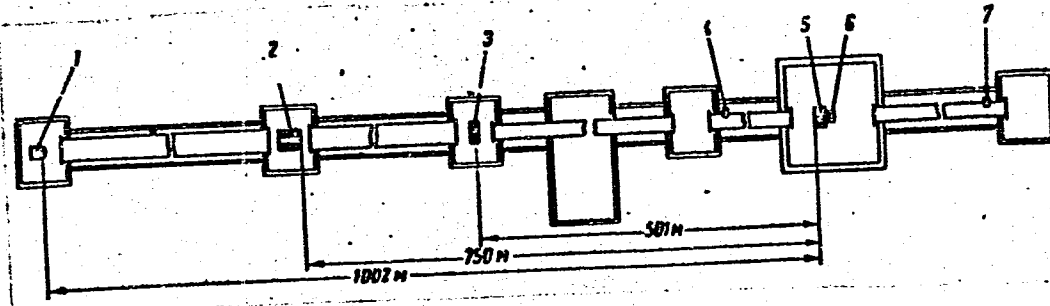


Figure 1. Setup of the experiment:

1 - scintillation detector; 2 - collimator; 3 - detector consisting of Born counters; 4 - monitor on a 50m base; 5 - prism made of the research material; 6 - active zone of the pulsed fast reactor (IFR); 7 - monitor on a 100m base.

Card 3/3 DP



49-43-65 EWT(1)/EPA(s)-2/EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pt-7/Pu-4 IJP(c)

27/11/36

ACCESSION NR: AP5010814

UR/0057/65/035/004/0751/0758

AUTHOR: Bondarenko, I.I.; Gus'kov, Yu.K.; Lebedev, M.A.

TITLE: Investigation of the influence of a transverse magnetic field on a low-voltage cesium vapor arc

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 4, 1965, 751-758

TOPIC TAGS: cesium vapor diode, transverse magnetic field

ABSTRACT: The authors have investigated the effect of a transverse magnetic field (up to 370 Oe) on the operation of low-voltage cesium vapor arc between hot stainless steel electrodes. The electrodes were hollow cylinders 18 mm in diameter, and their closed ends were separated by 6 mm. The electrodes were heated by internal nichrome heaters and the temperatures of the ends were measured with thermocouples. In most of the experiments the cathode temperature was 800°C and the anode temperature was 350°C. The tubes were baked out on the pumps and sealed off at  $1-2 \times 10^{-7}$  mm Hg. A tube was discarded when its ignition and burning potentials began to increase. The cesium vapor pressure was controlled by heating a branch tube containing cesium. The magnetic field was produced by two 14 cm

Card 1/2

L 49243-65

ACCESSION NR: AP5010814

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diameter coils separated by 14 cm. The ignition potential and the current-voltage characteristics were determined as functions of the cesium vapor pressure and magnetic field strength; the results are presented graphically and discussed at some length. For cesium pressures above the critical value good agreement was found with the theory of R.Haefer (Acta Physica Austriaca, 7, No. 1, 52, 1953) when the ionization energy of cesium was assumed to be 1.35 eV, which is close to the excitation energy of an excited cesium atom. This agreement is regarded as further evidence that ionization of cesium in the low-voltage arc proceeds in a stepwise manner. Significant deviations from the theory were observed at low pressures. "In conclusion, the authors express their gratitude to Academician A.I.Laypunskiy of the Ukrainian S.S.R. Academy of Sciences, V.P.Pashchenko, I.P.Stakhanov, and A.S. Stepanov for discussions." Orig. art. has: 9 formulas and 10 figures.

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Card 2/2

ROZENTHALL, S.I. (deceased); KOVALEV, V.P.; SMOLITSKIY, V.G.

Feasibility of using a nuclear reaction in order space for  
direct measurement of the moderating oxide reaction, etc.  
Doc. No. 51859-242 N 105. (1970, 1980)

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AUTHOR: Bondarenko, I. I. (deceased); Kovalev, V. P.; Zolotukhin, V. G.

42  
38  
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AWI

ORG: none

TITLE: Possible use of a nuclear reactor in outer space for direct measurement of the nn scattering cross section

SOURCE: Yadernaya fizika, v. 2, no. 5, 1965, 839-842

TOPIC TAGS: neutron scattering, neutron cross section, neutron reaction, scattering cross section, nuclear reactor

ABSTRACT: In view of the fact that the presently attainable free-neutron densities for experiments on neutron-neutron scattering are of the order of  $\sim 10^{10}$  n/cm<sup>3</sup>, and that no measurement of neutron-neutron scattering parameters has been possible to date, the authors propose a physical experiment which would make it possible to measure directly the cross section of nn interaction in the S state. The experimental scheme consists in producing a neutron burst in an evacuated space of sufficiently large size so that scattering from the "walls" can be neglected. This can be produced by a pulsed nuclear reactor with negative temperature coefficient, raised to an altitude of 400--500 km in outer space. If one uses a detector which

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