"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

DRICHKO, A.F.; ZHUKOVSKAYA, L.P.; KARAVAYEV, F.M.; RUSINOVA, S.A.

New working standards for radium. Trudy inst.Kom. stand., mer i izm. prib. no.55:81-89 '61. (MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni Mendeleyeva.

(Radium--Standards)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOVA, S.A.

21(3) SOV/112-59-3-5251

Translation from: Referativnyy zhurnal, Elektrotekhn. 1959, Nr 3, p 135 (USSR)

AUTHOR: Aglintsev, K. K., Balon, Z. P., Dzhelepov, S. S., Karavayev, F. M., Karamyan, A. S., Konstantinov, A. A., Ostromova, G. P., Prokof'yev, F. T., Rusinova, S. A., Sumbayev, I., Khol'nova, Ye. A., Shestopalova, S. A., Yudin, M. F., and Yaritsyn, L. A.

TITLE: Metrology of Penetrating Radiations (Metrologiya pronikayushchikh izlucheniy)

PERIODICAL: V sb.: Atomn. energiya v mirnykh tsel'kh. Gosenergoizdat, 1957, pp 145-181

ABSTRACT: Projects are described of the Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii (All-Union Scientific-Research Institute of Metrology) imeni D. I. Mendeleyev on standardization of measures in the ionizing-radiation field, and on the construction of standard and reference outfits for reproducing the fundamental units in the whole range of energy and intensities of radiations of all types. The following outfits are described: (1) a standard reproducing

Card 1/3

Metrology of Penetrating Radiations

the roentgen in the range of 40-300 Kev; (2) a reference outfit for measuring in roentgens of electromagnetic-radiation doses having the quantum energy of 300-1,500 Kev; (3) an outfit for measuring in roentgens the electromagnetic-radiation doses with quantum energy of 3-20 Kev with an error of 1%; (4) two standard outfits for measuring radium gamma-equivalents; (5) differential lead-ball gamma-calorimeters for measuring the activity of various preparations on the basis of their gamma radiation; (6) an isothermal calorimeter operating on the principle of liquid-nitrogen evaporation for measuring the activity of beta preparations; (7) a differential alpha calorimeter for measuring the activity of radium preparations. Activity-measurement method by counting the number of particles emitted by a preparation is being developed in two directions: counting of particles in a definite solid angle and the same in the total solid angle by means of "4π-meters." The beta-particle counter within a definite angle permits measuring preparations with an activity of $10^{-8}$ - $10^{-5}$ curie with an error of 4-6%. Two private designs of "4π-

Card 2/3

SOV/112-59-3-5251

Metrology of Penetrating Radiations

counters" are described. One of them permits measuring beta preparations with an activity of $10^{-10}$ - $5 \times 10^{-8}$ curie with an error of 2-4%, and the second, $5 \times 10^{-11}$ - $5 \times 10^{-7}$ curie with an error of 1-3%. Two outfits have been built for measuring neutron streams from $10^{8}$ down to a few tens of neutrons per sec. A gamma-spectrometer "Elotron" with an improved focusing has been built for investigation of gamma spectra in the energy range of 600-3,000 Kev. To conduct investigations in the range of 120-1,300 Kev, a 2-meter long crystal-diffraction gamma spectrometer of the Dumond spectrometer type has been built. Also, a magnetic spectrometer analyzing photoelectrons has been built for the range of 200-700 Kev. Measuring the half-life from a few hours to a few years is made by two methods: the method of successive measurements of gamma-equivalent preparations and the differential-chamber method. The results of half-life measurements for a number of isotopes are tabulated.

N.G.Z.

Card 3/3

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24.6720

S/112/59/000/012/052/097
A052/A001

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 12, p. 150, # 24940

AUTHORS: Karavayev, F.M., Rusinova, S.A.

TITLE: Precise Measurements of Radioactive Half-Life 19

PERIODICAL: Tr. Vses. n.-i. in-ta metrol, 1957, No. 30 (90), pp. 132-142

TEXT: Precise measurements of the radioactive half-life by the method of successive measurements and by the method of differential ionization chamber are analyzed. An installation with the differential chamber is described in detail. The convenience of the method of differential chamber for a quick and relatively accurate measurement of half-life of long-lived elements is pointed out. Half-life values of radioactive isotopes $Na^{24}$, $Zn^{65}$, $Cr^{51}$ and $Ag^{110}$ are measured. The results obtained are in a good agreement with the most precise data of other authors, being superior to them by accuracy in some cases. There are 28 references.

N.G.Z.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

AGLINTSEV, K.K.; MOSKVINA, Ye.P.; RUSINOVA, S.A.

Measuring the activity of beta emitters by means of an ionization chamber. Trudy inst. Kom. stand., mer i izm. prib. no.69:42-55 '62. (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. Mendeleyeva.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

DRICHKO, A.F.; ZHUKOVSKAYA, L.P.; KARAVAYEV, F.M.; RUSINOVA, S.A.

A unit of the UPGI-1 type. Nov. nauch.-issl. rab. po metr. VNIIM no.2:13-18 '64. (MIRA 18:4)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

DRICHKO, A.F.; KARAVAYEV, F.M.; RUSINOVA, S.A.

New units for the comparison of reference and standard radium emitters. Nov. nauch.-issl. rab. po metr. VNIIM no.2:18-21 '64. (MIRA 18:4)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

S/081/62/000/005/056/112
B156/B108

AUTHORS: Drichko, A. F, Zhukovskaya, L. P., Karavayev, F. M., Rusinova, S. A.

TITLE: New radium working standards

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 397, abstract 5K4 (Tr. in-tov Kom-ta standartov, mer i izmerit. priborov pri Sov. Min. SSSR, no. 55 (115), 1961, 81 - 89)

TEXT: New radium working standards are described which have radium-element contents of 1 - 200 mg. These are compared with the USSR State Radium Standard. [Abstracter's note: Complete translation.]

Card 1/1

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

KARAVAYEV, F.M.; RUSINOVA, S.A.

Precise half-life measurement. Trudy VNIIM no.30:132-142 '57. (MIRA 12:1)

(Radioisotopes--Decay)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

L 6362-66 EWT(1) GW

ACC NR: AP5026734 SOURCE CODE: UR/0286/65/000/017/0007/0007

27
B

INVENTOR: Rusinova, T. I.
44,55

ORG: none

TITLE: A method for tying well logging observations in with a coordinate system. Class 5, No. 174151 12,44,55

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 7

TOPIC TAGS: geologic exploration, prospecting, geophysic instrument 12,44,55

ABSTRACT: This Author's Certificate introduces a method for tying well logging observations in with a coordinate system. Geophysical observations are tied in continuously with depth and cross sectional coordinates during measurements in the well by automatic measurement and double integration in time of accelerations of the logging instrument in the north-south and east-west directions and along the vertical. Since the geodesic position of the instrument at the beginning of its path is known, its actual position for any moment of time can then be found during the measurement process.

UDC: 550.839 : 622.24

SUB CODE: ES/ SUBM DATE: 22Jan64/ ORIG REF: 000/ OTH REF: 000

Card 1/1

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOVA, V.A.

RUSINOVA, V.A.

Symptoms and treatment of otogenic abscesses of the brain [with summary in English]. Vest.oto-rin. 19 no.3:12-16 My-Je '57. (MIRA 10:10)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - prof. V.G. Yermolayev) Leningradskogo instituta usovershenstvovaniya vrachey i ushnogo otdeleniya Leningradskoy oblastnoy klinicheskoy bol'nitsy (konsul'tant - prof. I.M.Rozenfel'd)

(BRAIN, abscess
otogenic, of cerebrum & cerebellum, diag. & ther.)
(OTITIS MEDIA, compl.
brain abscess, diag. & ther.)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOVA, V. A.

Cand Med Sci - (diss) "Clinical aspect of congenital meningitis." Leningrad, 1961. 13 pp; (Ministry of Public Health RSFSR, Leningrad Sanitary-Hygienic Med Inst); 300 copies; price not given; (KL, 6-61 sup, 240)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKOVA, V.M.

Wild vetch species of Moscow Province and their introduction for cultivation. Biul.Glav. bot. sada no.39:68-78 '60. (MIRA 14:5)

1. Glavnyy botanicheskiy sad AN SSSR.
(Moscow Province—Vetch)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOVICH, I. A.

Rusinovich, I. A. "Results of Geological Surveying in the Stoilensk District of the Kursk Magnetic Anomaly." Razvedka Nedr, Moscow, no. 9/10, 1937, pp.23-27.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

PA 69T55

RUSINOVICH, I. A.

USSR/Geological Prospecting 1948
Iron Ore
Sedimentation

"Geological Structure of the Northeastern Belt and the Genesis of Iron Ore of the Kursk Magnetic Anomaly," I. A. Rusinovich, 23 pp

"Sovet Geolog" No 28

Presents geological structure of region around Kursk magnetic anomaly (KMA), descriptions of sedimentary and crystalline layers, character of genesis of iron ores, and suggests further surveying of KMA.

[redacted] 69T55

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

AUTHOR: Rusinovich, I.A., 132-58-2-1/17

TITLE: An Assessment of the Prospects of Gostishchevo Iron Ore Deposit (Otsenka perspektiv Gostishchevskogo zheleznorudnogo mestorozhdeniya)

PERIODICAL: Razvedka i Okhrana Nedr, 1958, Nr 2, pp 1-7 (USSR)

ABSTRACT: The Gostishchevo iron ore deposit was discovered in 1956 in the south-westerly part of the iron ore basin of the Kursk magnetic anomaly. The author assesses it as one of the richest in the world. The ores represent a powerful crust of ancient continental erosion of the ferrous quartzite strata. They form an 11 km long horizontal layer. Its width has not yet been determined, but exceeds 2 km in the area of Gostishchevo. The average vertical magnitude varies from 30 to 143 m. Most of these (85 to 90%) are residual ores, and the sedimentary ores, formed as a result of the erosion and shifting of the residual ores, represent 10-15% of the mass. The average content of the iron varies from 58 to 68%. The content of noxious additions (sulphur and phosphorus) is negligible. The prospective ore reserves in the central part of the deposit are estimated to be 3.8 billion tons. The entire iron ore

Card 1/2

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132-58-2-1/17

An Assessment of the Prospect of Gostishchevo Iron Ore Deposit

reserve of the deposit could be estimated at 5.0 to 5.5 billion tons. There are 3 graphs.

ASSOCIATION: Gostishchevskaya geologorazvedochnaya partiya (The Gostishchevo Geological Prospecting Group)

Card 2/2 1. Industry-USSR 2. Iron ore-Availability

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOVICH, I.A.

Geological structure of the pre-Cambrian in the iron ore basin of the Kursk Magnetic Anomaly[with summary in English]. Sov. geol. no. 5:19-29 My '58. (MIRA 11:10)

1. Kurskaya geofizicheskaya ekspeditsiya Ministerstva geologii i okhrany nedr SSSR.
(Kursk Magnetic Anomaly--Geology)
(Iron ores)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOVICH, I.A.

Gostishchevo high-grade ore deposit. Mat. po geol. i pol. iskop. tsentr. raion. evrop. chasti SSSR no.2:66-88 '59. (MIRA 13:9)

1. Belgorodskaya zhelezorudnaya ekspeditsiya.
(Kursk Magnetic Anomaly--Iron ores)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOVICH, I.A.

Zone of hypergene changes in Pre-Cambrian rocks and the genesis of iron ores in the Kursk Magnetic Anomaly. Mat. po geol. i pol. iskop. tsentr. raion. evrop. chasti SSSR no.2:94-112 '59. (MIRA 13:9)

1. Belgorodskaya zhelezorudnaya ekspeditsiya.
(Kursk Magnetic Anomaly--Iron ores)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

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43269
S/848/62/000/040/004/005
E193/E483

11300

AUTHORS: Shevakin, Yu.F., Doctor of Technical Sciences, Rusinovich, Yu.I., Engineer

TITLE: Design of roll passes for cold rolling of titanium alloy tubes

SOURCE: Moscow, Institut stali i splavov. Sbornik. no.40. 1962. Protsessy prokatki. 381-387

TEXT: Tests were carried out with the rolling of a 42 mm diameter, 0.8 mm wall thickness tube from 53 x 3.5 mm blanks. Three different kinds of roll passes obtained from three different empirical formulae proposed by different investigators were made. The roll pass geometry is defined in an illustration and accompanying table and the three formulae are recited. The rolling was carried out on mandrels with a 0.01 taper using ВТ1-1 (VT1-1), ОТ4 (OT4) and ВТ5-1 (VT5-1) titanium alloys. The pressure on the rolls, the total displacement, the rate of feed and the actual change in the wall thickness along the length of the roll pass were measured. The test results and their discussion have shown that a formula proposed by Yu.F.Shevakin et al. (Stal', no.5, 1957) ensures a variation of the relative reduction along the

Card 1/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

Design of roll passes ... S/848/62/000/040/004/005
E193/E483

length of the reducing portion of the roll pass which yields the highest productivity of the mill without scrap through tube failures. There are 3 figures and 1 table.

X

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOVICH, Yu.I.; SHEVAKIN, Yu.F.

Cold rolling of pipe from titanium and its alloys. TSvet. met. 35 no.1:75-78 Ja '62. (MIRA 16:7)
(Pipe mills) (Titanium)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

S/848/62/000/040/005/005
E193/E481

AUTHORS: Shevakin, Yu.V., Doctor of Technical Sciences, Rusinovich, Yu.I., Engineer

TITLE: On the plastic deformation mechanism of titanium alloy tubes during reduction

SOURCE: Moscow. Institut stali i splavov. Sbornik. no.40. 1962. Protsessy prokatki. 405-412

TEXT: The importance of a large reduction in the beginning of the swaging portion of a die groove in tube rolling to achieve high productivity and good quality final tubes is discussed. The maximum possible reduction is desirable which can be determined from the knowledge of the mechanism of plastic deformation. Three kinds of tests were carried out: (1) compression tests to destruction between flat strikers of the press on sockets made of OT4 alloy having a diameter of 46 mm, a wall thickness of 4 mm and a length of 50 mm; (2) compression of sockets between strikers with a round groove having a diameter of 40 mm; (3) different reductions of diameter in the beginning of the die groove during cold rolling of tubes. Starting with blanks measuring 46 x 4 and 50 x 4 mm of BT1-1 (VT1-1), OT4 and BT5-1 (VT5-1) alloys to

Card 1/2

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E193/E481

On the plastic deformation ...

be rolled into 30 x 2 mm tubes, the diameter reductions ranged between 1.4 and 8.1 mm. Conclusions: The roll passes for cold rolling of tubes of metals and alloys with a hexagonal crystal lattice (magnesium, titanium, zirconium and tantalum) as well as of heat resistant alloys and alloys with low ductility which constitute solid solutions, must be so arranged that the initial reduction is about 3 to 6%. It is believed that as a result of self-diffusion in the direction of the stress gradient, which may lead to the formation of a new phase near the slip planes, the deformation may otherwise become difficult. For a given total deformation, a certain ratio between the relative diameter and wall thickness changes must be preserved, e.g. for a wall thickness reduction of 50% the diameter reduction ratio must not exceed 1.35. There are 5 figures and 1 table.

Card 2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

32547

1 1300 1454

S/136/62/000/001/003/005
E082/E435

AUTHORS: Rusinovich, Yu.I., Shevakin, Yu.F.

TITLE: Cold rolling tubes in titanium and titanium alloys

PERIODICAL: Tsvetnyye metally, no.1, 1962, 75-78

TEXT: The changes in the mechanical properties with degree of deformation when cold rolling Ti and Ti alloys were studied and a graph of results plotted. Alloys BT1-1 (VT1-1), BT5-1 (VT5-1) and OT-4 all gave analogous results at lower values of deformation. At higher values VT5-1 showed brittle fracture - the others were little changed. Experiments were made to determine the permissible reduction of diameter of tubes at the beginning of the pass. Ductility of VT1-1 remained good after quite large reductions. The low ductility of OT-4 and VT5-1 precludes large reductions of diameter, which should not exceed 3 or 4%. Large reductions are inexpedient when using press-formed blooms due to the likelihood of cracks forming as a result of inherent flaws. Tests showed that the inclination of Ti alloys to fracture during cold rolling depends largely on the reduction of internal diameter, and wall thickness. Reduction of internal diameter must not exceed

Card 1/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

32547
S/136/62/000/001/003/005
E082/E435

Cold rolling tubes in titanium ...

1.25 to 1 or 1.35 to 1. Recommended maximum values of taper for mandrels are given. Measurements of roll pressures showed that pressure is not a limiting factor when cold rolling Ti and Ti alloys. Maximum values of deformation are recommended for the various alloys. Experiments to determine the influence of feed rate on roll pressure showed that Ti can be cold rolled with feed rates of 10 to 12 mm. There are 5 figures and 4 Soviet-bloc references.

Card 2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOVICH, Yu.I.; SHEVAKIN, Yu.V., doktor tekh.nauk, rukovoditel' raboty

Correlation of deformation during the cold rolling of titanium alloy pipes. TSvet. met. 35 no.9:75-79 S '62. (MIRA 16:1)
(Rolling (Metalwork)) (Deformations (Mechanics))

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

SHEVAKIN, Yu. V., doktor tekhn. nauk; RUSINOVICH, Yu. I., inzh.

Mechanism of the plastic deformation of titanium alloy tubes in the reduction process. Sbor. Inst. stali i splav. no.40: 405-412 '62. (MIRA 16:1)

(Pipe mills) (Deformations(Mechanics))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

SHEVAKIN, Yu. F., doktor tekhn. nauk; RUSINOVICH, Yu. I., inzh.; POTAPENKO, Yu. I., inzh.

Extrusion of a pipe billet of titanium and its alloys. Sbor. Inst. stali i splav. no.40:443-450 '62. (MIRA 16:1)

(Extrusion(Metals)) (Pipe, Titanium)

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Rusinovskaya, N. N.

2

319. LOW TEMPERATURE DISTILLATION OF FINE GRANULAR SHALE IN A FLUIDIZED BED. Chernyshev, A.B. and Rusinovskaya, N.N. (Tallin: Estonian Govt, 1956, "Oil shales: Chemistry and Technology," Iss. 2, 27-32; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1957, (10), 33317). [illegible] to 2 mm particles of shale were used in a laboratory retort consisting of a steel tube 32 mm in diameter and [illegible] mm long. The yield of oil from Estonian shale was 71-73% and from Voshchilovo shale 78-86% of the yield in an aluminum retort. Calculations show that a retort 3 m in diameter with a bed 1 m thick could deal with 600 tons/h of shale.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

(A) L 13522-66 EWT(m)/EWP(j)/EWA(c) RPL JW/RM

ACC NR: AP6001856 SOURCE CODE: UR/0190/65/007/012/2028/2032

AUTHORS: Fedotova, O. Ya.; Grozdov, A. G.; Rusinovskaya, I. A.

ORG: Moscow Institute of Chemical Engineering im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut)

53

B

TITLE: Study of the reaction of aromatic amines with diisocyanates. Reaction catalysts. 5

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2028-2032

TOPIC TAGS: catalysis, chemical reaction, chemical reaction kinetics, amine, lead compound, zinc compound, ammonia, sodium carbonate, potassium compound, iron compound, copper compound

ABSTRACT: Results obtained in the study of the effect of various catalysts upon the rate of reaction of 1,6-hexamethyldiisocyanate with 4,4'-diaminodiphenylmethane (I), of its N,N'-diethyl derivative (II), of 4,4'-diamino-3,3'-dimethyldiphenylmethane (III), of its N,N'-diethyl derivative (IV), of 4,4'-diaminodiphenylsulfoxide (V), and of 4,4'-diaminodiphenylsulfone (VI) are reported. Catalysts used were aliphatic and aromatic tertiary amines, chlorides of lead, zinc, iron, and ammonia, carbonates of sodium, potassium, and iron, acetates of copper and zinc, and organic lead compounds: dibutyl dichloro lead, tetrabutyl lead, and dilauryl dibutyl lead. Synthesis of polyureas was conducted in anhydrous ethyl methylketone at 25C with

UDC: 541.64+678.675

Card 1/3

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equimolar amounts of reagents. Quantitative effects of catalysts were determined by comparing kinetic data illustrated in Fig. 1 and obtained by the calorimetric

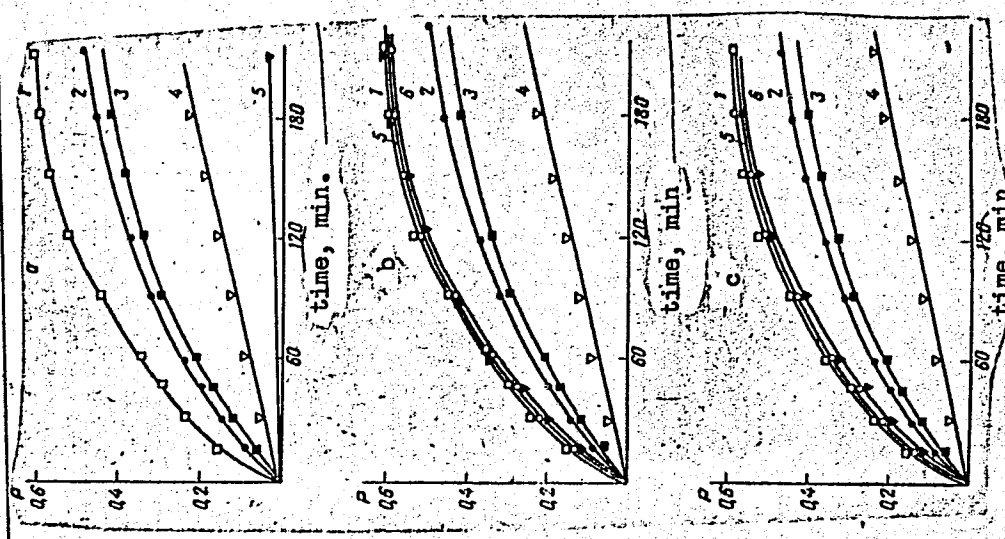


Fig. 1. Kinetic curves obtained for reactions of hexamethyl-diisocyanate with certain aromatic diamines in ethyl-methyl ketone at 25C: a - without catalyst; b - with 2.5% dibutyldichlorolead; c - with 5% triethylamine. Number of the curve corresponds to the Roman number of the compound listed in text. P - degree of completion.

Card 2/3

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L 13522-66

ACC NR: AP6001856

method described by the authors earlier (O. Ya. Fedotova and A. G. Grozdov. Vysokomolek. soyed. 6, 2127, 1964). It was established that aliphatic tertiary amines, lead chloride, and certain lead organic compounds increase the reaction rates proportionally to the concentration of the catalyst. Reactions of I and III were not affected by catalysts. Orig. art. has: 2 tables and 2 figures.

SUB CODE: 07/ SUBM DATE: 17Nov64/ ORIG REF: 001/ OTH REF: 002

Card 3/3

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOVSKAYA, N.N.; FEDOSEYEV, S.D.

Effect of the components of producer-gas on the process of interaction between water vapor and fuel carbon. Trudy MKHTI no.28:109-114 '59. (MIRA 13:11)

(Gas) (Water vapor) (Carbon)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

KASSUR, Bertold; ADAMCZYK, Jozef; RUSINOWA, Aldona; WOLODKO, Teresa;

The course of diphtheria in vaccinated and unvaccinated subjects. (According to 950 cases of diphtheria observed during the period 1956-1961). Przegl. epidem. 17 no.3:157-168 '63.

1. Z II Kliniki Chorob Zakaznych AM i Osrodka Badan Klinicznych PZH w Warszawie Kierownik: prof. dr med. B. Kassur.
(DIPHTHERIA) (DIPHTHERIA TOXOID) (STATISTICS)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

POLAND

KASSUR, Bertold, ADAMCZYK, Jozef, RUSINOWA, Aldona, and WOLODKO, Teresa; Second Clinic of Infectious Diseases (II Klinika Chorob Zakaznych), AM [Akademia Medyczna, Medical Academy] in Warsaw and Center for Clinical Investigations (Osroked Badan Klinicznych), PZH [Panstwowy Zaklad Higieny, State Institute of Hygiene] in Warsaw (Director: Prof. Dr. med. B. KASSUR)

"Course of Diphtheria in Vaccinated and Non-vaccinated Patients."

Warsaw, Przeglad Epidemiologiczny, Vol 17, No 3, 63, pp 157-168.

Abstract: [Authors' English summary modified] A comparative study on 950 cases of diphtheria in the clinic during 1956-1960 showed the evident advantages of vaccinated against unvaccinated cases in all phases of incidence, extent of affected areas, severity of course, and outcome of the disease. Coupled with statistical data on the epidemiological decrease of deiptheria cases since compulsory public vaccination, the study points to unequivocal need to extend vaccination, particularly for children 8-14 years. 15 refs: 2 Soviet, 7 Polish, 6 Western.

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APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

KASSUR, Bertold; MIGDALSKA-KASSUROWA, Bronislawa; RUSINOWA, A.; FRANCZAK, T.

Erythema exudativum multiforme and its variation Stevens-Johnson's syndrome. Polski tygod. lek. 11 no.17:729-734 23 Apr 56.

1. Z II Kliniki Chorob Zakaznych A.M.; kier. prof. dr. med. B. Kassur i z Oddz. Obserw. Szpit. Zak. I; ordyn. dr. med. Br. Migdalska-Kassurowa. Warszawa, ul. Saska 91 m 3.
(ERYTHEMA MULTIFORME,
Stevens-Johnson synd. (Pol))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

KEDROWA, Stanislawa; RUSINOWA, Aldona

Dysbacteriosis in a form of staphylococcal enteritis during the course of chloromycetin therapy. Polski tygod. lek. 15 no. 16: 595-598 18 Ap '60.

1. Z II Kliniki Chorob Zakaznych A.M. w Warszawie; kierownik: prof. dr. med. B. Kassur.
(CHLORAMPHENICOL toxicol.)
(STAPHYLOCOCCAL INFECTIONS etiol.)
(ENTERITIS etiol.)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOWA, Elzbieta; BUBLEWICZ, Alina

Clinical value of agglutination and antistreptolysin reactions of the blood serum in some eye diseases. Klin. oczna 33 no.1: 19-24 '63.

1. Z Oddziału Ocznego Szpit. Wojew. Nr 1 w Bydgoszczy Kierownik: dr med. E. Rusinowa.
(HEMAGGLUTINATION) (ANTISTREPTOLYSIN)
(BLOOD CHEMICAL ANALYSIS) (OPHTHALMOLOGY)
(RHEUMATISM)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSINOWA, Elzbieta; GUSTOWSKI, Aleksander

Vicarious and supplementary retinal hemorrhage in endocrine ovarian functional disorders. Klin. oczna 35 no.3:467-472 '65.

1. Z Oddzialu Chorob Oczu Szpitala Ogolnego Nr 1 w Bydgoszczy (Ordynator: doc. dr. med. E. Rusinowa).

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

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RUSINSKIY, Yu. M.

Organization of work and establishment of work norms in mechanized coal mine stopes. Moskva, Ugletekhizdat, 1954. 230 p.

1. Coal mines and mining - Russia.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

KRUMPHANZL, Vladimir; DYR, Josef; RUSINSKY, Norbert

Inflow method of lactic fermentation. Prum potravin 14 no.10: 555-558 O '63.

1. Vysoka skola chemickotechnologicka, katedra kvasne chemie a technologie, Praha.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

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KASIMOV, Ye.; FTL'KIN, I.; KUCHMASOV, P.; RUSINYAK, A.; POLETAYEV, R.; BRUZH, R.; BABKOV, D., inzh.

Exchange of experience. Avt. transp. 43 no.2:50-54 F '65. (MIRA 18:6)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

C 1

**Effect produced by lesions of the hypothalamic region on the carbohydrate metabolism.** G. G. Rusishvili and Ts. L. Yankovskaya (Pavlov Physiol. Inst., U.S.S.R.). *J. Physiol.* (U.S.S.R.) 32, 223-8(1946)(in Russian). — Lesions were produced in the hypothalamic region of 3 dogs and observations on the carbohydrate metabolism were made. None of the dogs under observation showed hyperglycemia. Marked hypoglycemia in the post-operative period coincided with severe general disturbances and epileptic fits. A therapy of massive sugar administrations proved beneficial in these cases.

S. Gottlieb

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

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GOGITIDZE, O.A.; MANDZHAVIDZE, Z.Sh.; RUSISHVILI, N.S.; TSERELOV, A.A.; SHTAYERMAN, A.Yu.

A 340-liter expansion-condensing chamber for studying high-energy particle interaction. Fiz. chast. vys. energ. no.1:91-96 '65. (MIRA 18:12)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSTAVELI, O. S., Cand Tech Sci - (diss) "Construction of Orthogonal projections in frontal and military axonometric projections." Tbilisi, 1960, 28 pp (Georgian Polytechnical Institute imeni V. I. Lenin) (KL, 38-60, 109)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSISHVILI, O. S.

RUSISHVILI, O. S. -- "The Transformation of Orthogonal Projections into Frontal Axonometric Projections." Min Higher Education USSR. Order of Labor Red Banner Georgian Polytechnic Inst imeni S. M. Kirov. Tbilisi, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Knizhnaya Letopis', No 1, 1956

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSIYA, Zaur; KHURTSILAVA, Gigla; SMAKHARADZE, Kukuri; MIKAYA, Zurab; SIRADZE, Bondo; AVAZASHVILI, Guguli; PIRTSKHALASHVILI, Pavle; TATUASHVILI, Anzor

Search goes on. Sov. profsoiuzy 18 no.5:16-18 Mr '62. (MIRA 15:3)

1. Zavod "Elektroavtomat", g. Tbilisi.
(Tiflis--Labor and laboring classes)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSIYESHVILI, G. I. Cand Phys-Math Sci -- (diss) "~~Some~~ Certain Extremal Problems of the Internal Geometry of ~~XXXXX~~ Polyhedrons in Lobachevskiy's Space." ~~XXX~~ Len, 1957. 8 pp 20 cm. (Len Order of Lenin State Univ im A. A. Zhdanov), 100 copies (KL, 17-57, 94)

-7-

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSIYESHVILI, G.I.

Some extremal problems of the intrinsic geometry of polyhedrons in Lobachevskii space [with summary in English, p.209]. Vest.Len.un. 12 no.1:76-79 '57. (MLRA 10:5)

(Polyhedra) (Spaces, Generalized)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

KAYRYUKSHTIS, I.A. [Kairiukstis, I.]; RUSIYESHVILI, N.I.; MAN'KO, G.D.; OL'SHANETSKIY, G.M.; ORISHCHENKO, A.; ZAKHAROV, A.V.; KORUNCHIKOV, P.G.; LAPSHIN, I.I.

In the Soviet Union. Veterinariia 38 no.6:91-96 Je. '61. (MIRA 16:6)

(Veterinary medicine)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSIYESHVILI, N.I.

Struggle of veterinary workers of the Georgian S.S.R. for a further expansion of communal stockbreeding. Veterinariia 32 no.9:8-10 S '55. (MLRA 8:12)

1.Veterinarnyy vrach Veterinatnogo upravleniya Ministerstva sel'skogo khozyaystva Gruzinskoy SSR.
(GEORGIA--VETERINARY MEDICINE)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSJAN, Bruno, ing.(Ljubljana)

Control of room temperature by thermostats. Elektr vest 28 no.8/10: 184-188 '60.

1. Tovarna "TELA", Ljubljana.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSJAN, B.

Transducers. p. 8. ELEKTROTEHNISKI VESTNIK. (Institut za elektrisko gospodarstvo, Fakulteta za elektrotehniko in Institut za elektrozveze) Ljubljana. Vol. 24, no. 1/3, Jan./Mar. 1956

So. East European Accessions Vol. 5, No. 9 September, 1956

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSJAN, B.

Signaling fire or excessive rise of temperature. p. 197.

(ELEKTROTEHNISKI VESTNIK. Vol. 25, No. 5/6, May/June 1957, Ljubljana, Yugoslavia)

SO: Monthly List of East European Accessions (EEAL) Lc. Vol. 6, No. 10, October1957. Uncl.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

BUSLAN, B.

BUSLAN, B. Transducer in a self-saturated binding. p. 258.

Vol. 24, No. 9/10, 1956.
ELEKTROTEHNISKI VESTNIK
TECHNOLOGY
Ljubljana, Yugoslavia

So: East European Accession, Vol. 6, No. 2, February 1957

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

M

Country : USSR
Category: Cultivated Plants. Potatoes. Vegetables. Cucurbits.

Abs Jour: RZhBiol., No 22, 1958, No 100286

Author : Bamberg, K.; Ruska, A.
Inst : AS Latvian SSR
Title : Chemical Sorting of Seed Potatoes.

Orig Pub: Latv. PSR Zinatnu Akad. vestis, Izb. AN LatbSSR, 1957, No 12, 83-88.

Abstract: In the three-year experiments, the application of potassium and magnesium sulphates in the chemical sorting of potatoes produced better results than the application of Kcl solution. After sorting by chemical means, it is recommended not to cut wet tubers and not store them

Card : 1/3

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

M

Country : USSR
Category: Cultivated Plants. Potatoes. Vegetables. Cucurbits.

Abs Jour: RZhBiol., No 22, 1958, No 100286

in heaps since this can cause a complete loss of the germinating ability in the tubers. After chemical sorting in KCl solution, tubers should be planted immediately. If storage for 2 or 3 days is necessary, the sorted-out tubers are sprinkled layer by layer with dry peat. Sortin increases the yield of the potatoes. In the study of the diffusion of ions of Cl, $SO_4$ and $PO_4$ from salt solutions, it was found that they pass into the tubers considerably slower through the skin than through the eyes. The amount of ions diffusing into the tubers de-

Card : 2/3

M

Country : USSR
Category: Cultivated Plants. Potatoes. Vegetables. Cucurbits.

Abs Jour: RZhBiol., No 22, 1958, No 100286

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pends on the duration of the effect of the solution on the tubers. Diffusion of Cl ions proceeds approximately twice as fast as the diffusion of $SO_4$ and $PO_4$ ions. Mg ions pass into the tubers slower the K ions. -- Ye. M. Tsvetayeva

Card : 3/3

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

2

**The chief chemical work of the physician, Razi.** Julius Ruska. *Umschau* 41, 852–53 (1937).—A short account of Razi's "Book of Secrets," probably written by this Arabian alchemist about the year 920. H. B. Gordon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

L 39703-66 GD-2

ACC NR: AP6008278 SOURCE CODE: UR/0109/66/011/003/0409/0432

4
B

AUTHOR: Ruska, E.

ORG: Institute of Electron Microscopy, Berlin-Dahlem (Institut der Elektronenmikroskopie)

TITLE: State of the art and prospects for the electron microscope [A review]

SOURCE: Radiotekhnika i elektronika, v. 11, no. 3, 1966, 409-432

TOPIC TAGS: electron microscope, electron microscopy

ABSTRACT: Based on 1943-66 German (one American) publications, this review covers mainly the conditions necessary for obtaining maximum theoretical resolution of the transmission-type electron microscope. The maximum resolution — roughly 1000-fold higher than that of an optical microscope — is obtainable under the following conditions: stationary object, circular symmetry of focusing fields,

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L 39703-66

ACC NR: AP6008278

and no influence of the electron beam upon the object. Hence, the conditions conducive to the above goals are considered: reduction of drift and object heating, reduction of noise due to electric and magnetic fields, reducing the deviation of focusing-image fields from the circular symmetry, and steps against the beam influence (contamination, lattice destruction) on the object. A special protective chamber for the object is described; backing for and cooling (-20-70C) of the object are considered. A further enhancing of resolution by shortening the electron-beam wavelength and reducing the objective spherical aberration is discussed. An attempt has been made to construct a new W. Glaser lens (Z. Phys., 1941, v. 117, 285-315) which acts jointly as condenser and objective. This lens permits a resolution, with a conventional accelerating voltage, equal to that of a conventional objective at 400 kv. A resolution about 1Å might be obtained only for such particles which ensure sufficient contrast. The possibilities of a zonal diaphragm are mentioned. Orig. art. has: 16 figures and 1 table.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 011 / OTH REF: 007

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKA, Laszlo

Electrical examination of the quality indexes of chip board. Pt.2. Faipar. 12 no.4:121-124 Ap'62

1. Faipari Kutato Intezet.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKA, Laszlo

Electrical examination of the quality indexes of chip board.
Faipar 12 no.3:75-81 Mr '62.

1. Faipari Kutato Intezet.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKA, Laszlo

Electrical examination of the quality indexes of chip board. Pt. 3. Faipar 12 no.6:168-171 Je '62.

1. Faipari Kutato Intezet.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

BUTKA, I.

"Simple switching systems for contact manometers." p. 73.

MAGYAR FIZIKAI FOLYOIRAT. (Magyar Tudomanyos Akademia). Budapest, Hungary, Vol. 7, No. 1, 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

SHAPAYEVA, Ye.S.; RUSKA, T.N.; DEVYATKOVA, A.V.; DOLGASHOV, V.I., starshiy nauchnyy sotrudnik; ANTIPINA, V.I.; ROGOVSKAYA, Ye.G., red.; SERGEYEV, A.N., tekhn.red.

[Agroclimatic reference book on Pskov Province] Agroklimaticheskii spravochnik po Pskovskoi oblasti. Leningrad, Gidrometeor. izd-vo, 1959. 138 p. (MIRA 13:2)

1. Leningrad. Gidrometeorologicheskaya observatoriya. 2. Nachal'nik sektora agrometprognozov Severo-Zapadnogo upravleniya gidrometsluzhby (for Devyatkova). 3. Institut geografii AN SSSR (for Dolgashov).

(Pskov Province—Crops and climate)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKEVICH, A.A., inzhener.

[redacted]

Improving the operation of the V-2 engine. Energetik 4 no.8: 21-22 Ag '56. (MLRA 9:10)
(Gas and oil engines--Cooling)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKEVICH, M.L.

28-1-11/42

AUTHOR: Ruskevich, M.L., Engineer

TITLE: Hydraulic Presses for Plastic Products (Pressy gidravlicheskiye dlya pressovaniya izdeliy iz plastmass)

PERIODICAL: Standartizatsiya, # 1, Jan-Feb 1957, p 48-49 (USSR)

ABSTRACT: The article describes general features of hydraulic presses for pressing of plastics, and advantageous designs are recommended: single work piston, downward pressing, use of mineral oil as the work medium, etc. It also contains information on the new standard for such presses, "ГОСТ 8200-56". This standard was approved on 10 Oct 1956 and will become effective on 1 Jan 1958. It prescribes frame design of hydraulic presses, with the frame cast in one single piece or composed of columns and traverses, mostly welded of rolled steel; the nominal work pressure (25, 40, 63, 100, 160, 200, 250, and 315 tons); the stroke of the slide in mm; the maximum clearance between the bed and the slide in mm; the maximum ejector pressure and the maximum ejector stroke; slide speed in idle, work, and return strokes.

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Card 1/1

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKEVICH, M.L.

RUSKEVICH, M.L., inzhener.

Hydraulic presses for molding plastic products. Standartizatsiia no.1:48-49 Ja-F '57. (MLRA 10:5)
(Hydraulic presses--Standards)
(Plastics)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSHKEVICH, Ye.A.

Vocomotor method with verbal instruction and an additional stimulant.
Zhur.vys.nerv.deiat. 6 no.6:913-918 N-D '56. (MLRA 10:2)

1. Otdel psikhiatrii i patologii vysshey nervnoy deyatel'nosti Instituta fiziologii im. A.A.Bogomol'tsa Akademii nauk USSR.
(CENTRAL NERVOUS FUNCTION SYSTEM, physiol.
higher nerv. funct. exam., modified speech-motor method)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

NAVROTSKIY, Georgiy, Aleksandrovich, kandidat tekhnicheskikh nauk; RUSKEVICH, Mikhail Leont'yevich; SHIFRIN, S.M., nauchnyy redaktor; BUKOVA, I.V., redaktor; EGGERT, A.P., tekhnicheskiy redaktor

[Automatic cold upsetting machinery] Kholodnovysadochnye avtomaty. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1956. 68 p. (Metal working machinery) (MLRA 9:7)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKIEWICZ, Maria

POLAND

RUSKIEWICZ, Maria

Department of Mineral Raw Material Deposits (Zaklad Zloz Surowcow Skalnych), Geological Institute

Warsaw, Kwartalnik geologiczny, No 3, 1963, pp 512-13.

"Analysis of the Domestic Deposits of Dolomites As a Raw Material in the Production of Shaped Converters".

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

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RUSKIEWICZ, Maria

Results of geological identification activities carried out at the chalcedony deposits at the western wing of the Inowlodzka Anticline. Kwartalnik geol 5 no.4:965-966 '61.

1. Zaklad Zloz Surowcow Skalnyzh, Instytut Geologiczny, Warszawa.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKIEWICZ, Maria

Possibilities of utilizing Polish dolomites in the production of converter stampings. Przegl geol 13 no.2:74-75 F '65.

1. Institute of Geology, Warsaw.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKIEWICZ, Maria

Increase of the refractory raw material basis of silica and crushed stone for building in the Opoczno-Tomaszow Mazowiecki region. Przegl geol 10 no.10:526-529 O '62.

1. Zaklad Zloz Surowcow Skalnych, Instytut Geologiczny, Warszawa.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKII, I.

Determining the optimum length of the bench tracks when the benches are made with a one-dipper dredging shovel. p. 30.
(Minno Delo, Vol. 11, no. 6, Nov./Dec. 1956, Bulgaria)

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

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUS'KIN, L.I., inzh.

Core lifter for taking samples of cohesive hydraulic-fill soils. Gidr. i mel. 16 no.9:53-54 S '64. (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i melioratsii imeni A.N. Kostyakova.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUSKIN, S. Ye.

"Hardening Machines and Induction Heaters," Moscow-Leningrad, 1954 - 48 pp.

evaluation of book B-87699, 6 Sep 55

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

BORISOV, Georgiy Nikolayevich; RUSKIN, Serafim Dmitriyevich; ZUBOV, I.V., inzh., retsenzent; TSARENKO, A.P., inzh., red.; USENKO, L.A., tekhn. red.

[Accelerated handling of the flow of local cars; experience of the Moscow-Kursk Division of the Moscow Railroad] Uskorennyi propusk mestnogo vagonopotoka; opyt Moskovsko-Kurskogo otdeleniia Moskovskoi dorogi. Moskva, Transzheldorizdat, 1963. 29 p. (MIRA 16:5)
(Railroads--Management)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

21(7)

AUTHOR: Rus'kin, V. I. SOV/56-36-1-22/62

TITLE: Consideration of Resonance-$\pi$-$\pi$-Interaction Within the Framework of the Statistical Theory by Fermi for the Multiple Production of Particles ( Uchet rezonansnogo $\pi$-$\pi$-vzaimodeystviya v ramkakh statisticheskoy teorii Fermi mnozhestvennogo obrazovaniya chastits)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 1, pp 164-168 (USSR)

ABSTRACT: Earlier papers dealing with this subject are first discussed in short. By proceeding from the papers by F. Dyson (Ref 1) and G. Takeda ( Ref 2) (in which the second maximum of $\pi^-$-p-scattering within the range of 1 Bev is explained by the resonance interaction of two pions), it is possible to explain a similar interaction in Fermi's statistical theory by the production of a "virtual particle" $\Pi$ with the mass $\mu = 0.47$, the ordinary spin S = 0 and the isotopic spin T = 0 (or T = 1). By comparing calculated with experimental results it is possible to select those results from the two variants which, from the point of view of the statistical theory, are the more correct. $\pi$-$\pi$-resonance interaction is

Card 1/4

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

Consideration of Resonance-$\pi$-$\pi$-Interaction Within the Framework of the Statistical Theory by Fermi for the Multiple Production of Particles SOV/56-36-1-22/62

here considered for the case of $\pi^-$-p-scattering at an energy of 4.5 Bev. The formula for calculating statistical weights is written down. In all cases the statistical weights are calculated in consideration of the laws of conservation for energy, momentum, ordinary spin, isotopic spin (and their projections) and also in consideration of the distinguishability of particles. In the case of consideration of "strange particles", also the law of the conservation of "strangeness" was taken into account in calculations. Calculations for 2 and 3 particles were carried out in accordance with the exact formulas by S. Z. Belen'kiy et al. (Ref 6). In the case of 4 and 5 particles the nucleons N and the "isobars" N' are considered to be nonrelativistic particles, while the pions and $\pi$-particles are considered as ultrarelativistic particles. In consideration of the production of K-mesons and hyperons the ordinary spin of K-mesons was assumed to be equal to zero, and that of hyperons equal to -1/2. At an energy of 4.5 Bev only the following reactions are possible in consideration of the conservation of the "strangeness" from the point of view of energy:

Card 2/4

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

Consideration of Resonance-$\pi$-$\pi$-Interaction Within the Framework of the Statistical Theory by Fermi for the Multiple Production of Particles

SOV/56-36-1-22/62

$\Lambda\Theta$, $\Sigma\Theta$, $\Lambda\Theta 1$, $\Sigma\Theta 1$, $\Lambda\Theta\Pi$, $\Sigma\Theta\Pi$, $\Xi\Theta\Theta$, $N\Theta\widetilde{\Theta}$

The charge distributions of these reactions are given by a table. The statistical weights found for the investigated processes are shown in a table. The third table contains the charge distributions of the products of $\pi^-$-p-collisions in the case in which "$\Pi$-particles" are produced. The following conclusions may, among others, be drawn: 1) The introduction of "isobars" alone into the statistical theory, in consideration of the production of K-mesons and hyperons, caused considerable deviation from the experiment. 2) The joint introduction of "isobars" and $\pi$-$\pi$-resonance interaction ("$\Pi$-particles") improves agreement between the statistical theory and the experiment if the production of K-mesons and hyperons is taken into account. 3) Dyson's variant agrees better with the experiment than that of Takeda. The author thanks Professor Zh. S. Takibayev and his collaborators P. A. Usik and Ya. M. Granovskiy for their valuable advice, and he further thanks A. Akhmedshin for his assistance in carrying out calculations. There are 4 tables and 9 references,

Card 3/4

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

Consideration of Resonance-$\pi$-$\pi$-Interaction Within the Framework of the Statistical Theory by Fermi for the Multiple Production of Particles SOV/56-36-1-22/62

2 of which are Soviet.

ASSOCATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute for Nuclear Physics of the Academy of Sciences, Kazakhskaya SSR)

SUBMITTED: June 14, 1958

Card 4/4

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

SOV/56-36-3-51/71

21(7)

AUTHOR: Rus'kin, V. I.

TITLE: Interpretation of the Maximum in the Total Cross Section of Proton-Proton Scattering in the Range of 1 Bev (Interpretatsiya maksimuma v polnom poperechnom sechenii rasseyaniya protona na protone v oblasti 1 BeV)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 3, p 935 (USSR)

ABSTRACT: Recently, a number of papers (Refs 1-4) has been investigating the existence of ($\pi$N)-interaction resonance in the range of 200 Mev ("isobars"), which results from the occurrence of a maximum of ($\pi$p)-interaction within this energy range (Ref 5). The author of the present paper ("Letter to the Editor") shows that the maximum in (pp)-scattering at $\sim$ 1 Bev might be explained by the excitation of one of the nucleons to an "isobaric" level (Ref 7). If independence of charge is assumed, the following holds for the total (pN)-scattering cross sections:

Card 1/3

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

Interpretation of the Maximum in the Total Cross Section of Proton-Proton Scattering in the Range of 1 Bev SOV/56-36-3-51/71

$$\sigma(pp) = P\left\{\frac{2}{3}\sigma_{1/2} + \frac{1}{3}\sigma_{3/2}\right\}$$

$$\sigma(pn) = P\left\{\frac{5}{6}\sigma_{1/2} + \frac{1}{6}\sigma_{3/2}\right\}$$

where $\sigma_{1/2}$ and $\sigma_{3/2}$ are the cross sections of the meson-nucleon resonance system with the isotopic spins T = 1/2 and T= 3/2, and P - the probability for a one-meson state of pion clouds surrounding the "cores" of the nucleons. Experimentally it was found that in the range of 1 Bev $\sigma(pp) > \sigma(pn)$. This inequation is satisfied if $\sigma_{3/2} > \sigma_{1/2}$. The resonance of the meson-nucleon system therefore occurs in the state with T= 3/2. With

$$P\sigma_{3/2} = 2\pi P \lambda\!\!\!^{-2}(2J+1)\frac{(\Gamma/2)^2}{(\varepsilon-\varepsilon_0)^2 + (\Gamma/2)^2} \quad \text{(Breit-Wigner formula)}$$

($\lambda\!\!\!^{-} = 2.14 \cdot 10^{-13}$, pion wave length in the c.m.s.) the following is obtained: J= 3/2, P= 0.1, $\Gamma$ = 82 Mev, $\varepsilon_0$ = 110 Mev, which

Card 2/3

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

Interpretation of the Maximum in the Total Cross Section of Proton-Proton Scattering in the Range of 1 Bev SOV/56-36-3-51/71

agrees well with the "isobaric" parameters (Ref 5). There are 1 figure and 7 references, 2 of which are Soviet.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute for Nuclear Physics of the Academy of Sciences, Kazakhskaya SSR)

SUBMITTED: November 1, 1958

Card 3/3

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

21(7) SOV/56-37-1-16/64

AUTHOR: Rus'kin, V. I.

TITLE: $\pi^-$-p-Interaction in the 1.4 Bev Energy Region ($\pi^-$-p-vzaimodeystviye v oblasti energii 1.4 BeV)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 1(7), pp 105-108 (USSR)

ABSTRACT: It is shown in the present paper that $\pi^-$-p-interaction in the energy region 1.0-1.4 Bev can be interpreted by Fermi's statistic theory which considers the interaction of one pion with one nucleon and the resonance interaction of two pions. The statistic weights, calculated by a method by Belen'kiy et al (Ref 6), of the reactions possible in a collision $\pi^-$-p have the following values:

| N1 | N2 | N'2 | NΠ | N3 | N'2 | NΠ1 | N'Π | N4 | Strange Particles |
|---|---|---|---|---|---|---|---|---|---|
| 12 | 18 | 18 | 7 | 5 | 8 | 8 | 2 | 0 | 22 |

N2 denotes the process occurring during the formation of one nucleon and two pions, N'1 the process occurring during the formation of one isobar and one pion (which is called free

Card 1/4

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in contrast to the pion that is formed by the decay of an isobar), $N\pi$ the process occurring during the formation of one nucleon and one $\pi$-particle, etc. Thus, the two-particle processes $N\pi$ and N'1 determining the reactions (n+-) and (p-0) are the principle processes. The most important peculiarity of two-particle processes is the independence of their kinematic characteristics on the matrix element $H_{if}$. Therefore, the principal condition of Fermi's statistic theory (i.e. the independence of $H_{if}$) may be regarded as fulfilled for these processes. The author found the following distribution of the charged products on the number of rays: two-ray collision 88(94), four-ray collision 12(6). Consideration of the resonance interactions evidently cannot reduce the statistic weight of the "strange particles" down to the experimental value, which requires introduction of additional presupposition on the formation of strange particles into the statistic theory. In the calculation of momentum distributions, it was assumed that the isobar and the $\pi$-particle in their rest systems decay isotropically. In the decay of the isobar (of the $\pi$-particle), the spectrum of the meson momenta is then described by the expression

$$N(p)dp = pdp/2p_c\gamma V \sqrt{p^2 + \mu^2} .$$



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$p_c$ denotes the meson momentum in the decay of the resting isobar (of the $\pi$-particle) in the center-of-mass system formed by meson and nucleon. The momentum distribution of mesons and nucleons in the reactions (n+-) and p-0) in the center-of-mass system is illustrated by 2 diagrams. The distribution of nucleons momenta at the energy of 1.4 Bev of the incident pion is well clarified both by the calculations discussed here and by calculations according to the "isobaric system". According to the values determined in the present paper, the $\pi$-particle mass must be raised to 0.69 to bring the theoretically found maximum into agreement with the experimental value. These results indicate the existence of a resonance-$\pi$-$\pi$-interaction. Another diagram shows the distribution of pion momenta in the reactions (n+-) and (p-0) in the center-of-mass system. The maximum in the range of large momenta is caused by free pions in the process N'1, and the maximum in the range of small momenta by pions originating in the decay of the isobar in the same process. The statistic theory which considers not only the isobar but also the resonance interaction of two pions, is therefore not contradictory to the experimental data on the $\pi^-$-p-interaction at the energy of 1.4 Bev of the



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incident pion. The author thanks Professor Zh. S. Takibayev for his instruction. There are 2 figures, 1 table, and 9 references, 4 of which are Soviet.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics of the Academy of Sciences of the Kazakhskaya SSR)

SUBMITTED: January 9, 1959 (initially) and March 31, 1959 (after revision)



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S/707/60/003/000/010/013
B108/B102

AUTHOR: Rus'kin, V. I.

TITLE: Resonance interaction from the viewpoint of the statistical theory of multiple particle production

SOURCE: Akademiya nauk Kazakhskoy SSR. Institut yadernoy fiziki. Trudy. v. 3, 1960. Vzaimodeystviye vysokoenergichnykh chastits s atomnymi yadrami, 131 - 141

TEXT: On the basis of experimental evidence (F. Dyson. Phys. Rev., 99, 1036, 1955; G. Takeda. Phys. Rev., 100, 440, 1955) the $\pi$ - p interaction model is somewhat altered. The nucleon is assumed to be the core surrounded by a virtual pion cloud with which the incident real meson may resonance-interact. At low energies the real meson excites the nucleon as a whole into an "isobaric" state. At energies around 1.0 Bev (lab. syst.) the resonance of the cloud may be forced. The behavior in p-p scattering is similar: the observed maximum around 1.0 Bev may be explained by "isobaric" excitation of one of the nucleons (lifetime of this state: $1 \cdot 10^{-23}$ sec). Multiple production of mesons in 1.0 Bev $\pi^-$-p scattering is calculated taking into account resonance interaction of two

Card 1/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7



pions. Almost all characteristic features of $\pi^- - p$ collision in the range near 1 Bev can be explained with the Fermi statistical theory together with nucleon "isobar" (3/2, 3/2) and resonance (pion-pion) interaction. Professor Zh. S. Takibayev and G. Ya. Grigor'yev are thanked for remarks and assistance. There are 15 figures and 25 references: 12 Soviet and 13 non-Soviet. The four most recent references to English-language publications read as follows: H. Burrowes et al. Phys. Rev. Lett., 2, 119, 1959; R. Crittenden et al., Phys. Rev. Lett., 2, 121, 1959; S. Lindenbaum, R. Sternheimer. Phys. Rev., 109, 1723, 1958; W. Walker et al., Phys. Rev., 104, 526, 1956.



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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUS'KIN, V.I.; USIK, P.A.

Calculating strange particles in the Fermi statistical theory.
Zhur.eksp.i teor.fiz. 38 no.3:929-933 Mr '60.
(MIRA 13:7)

1. Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR.
(Particles(Nuclear physics))

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88448

S/056/60/039/006/040/063
B006/B063

24.6900

AUTHORS: Usik, P. A., Rus'kin, V. I.

TITLE: A Particular Case of Peripheral Interactions Between High-energy Nucleons

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 6(12), pp. 1718 - 1720

TEXT: A perturbation-theoretical method devised by I. Ye. Tamm, D. S. Chernavskiy et al. for taking peripheral interactions of two nucleons into account has been used to study the peripheral interaction shown in the attached Feynman graph:

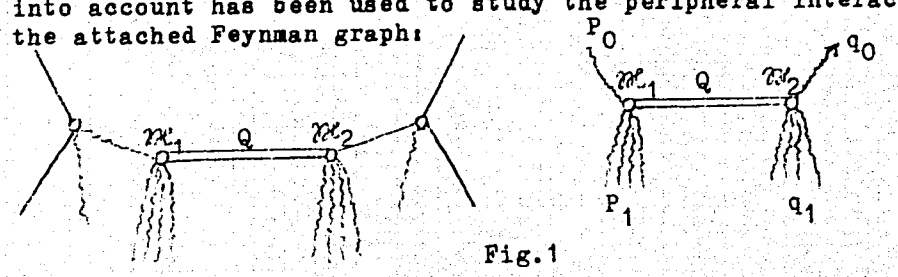


Fig.1

Card 1/4

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

88448

A Particular Case of Peripheral Interactions Between High-energy Nucleons

S/056/60/039/006/040/063
B006/B063

This type of interaction may result in the formation of two emission centers of shower particles (a "two-peak" angular distribution as considered first by Zatsepin, Chernavskiy, and E. G. Bubelev). In the case of large pion scattering cross sections ($\sigma_{\pi\pi}$), this process possibly increases the contribution of peripheral collisions substantially. It is very difficult to estimate the total cross section of this process because $\sigma_{Q\pi}$ is neither experimentally nor theoretically known, and also the type of the Q-distribution function is unknown. First, the distribution function in the central part of the graph (Fig.2) is studied on the assumption that the pion-pion interaction takes place via exchange of a boson with the four-momentum Q and the mass M. $\mathfrak{M}_1$ and $\mathfrak{M}_2$ are the masses of the excited states which rapidly decay into secondary particles; $M \geqslant \mu, \mu$ - pion mass. The three cases $M = 2\mu$, $M = 2m$, and $M = 4m$ are studied (m - nucleon mass). Following the ideas of Yu. A. Romanov and Chernavskiy (Ref.2), the probability for the process graphically represented in Fig.2 is given as $dw \sim w^2_{Q\pi} \frac{p_1}{2E_0} \frac{d(\cos\theta)\mathfrak{M}_1 d\mathfrak{M}_1 \mathfrak{M}_2 d\mathfrak{M}_2}{(Q^2+M^2)^2}$, where $E_0$ is

Card 2/4

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A Particular Case of Peripheral Interactions Between High-energy Nucleons

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B006/B063

the energy of the virtual pion, which is taken to be equal to $\mu\gamma_0$ ($\gamma_0$ is the Lorentz factor of the colliding nucleons). At high nucleon energies, $w_{Q\pi}$ can be assumed to be constant. After integrating from 0 to $(1 - \cos\theta) = M^2/2E_0^2$ one obtains $dw \sim w_{Q\pi}^2 \frac{P_1 \varkappa_1 \varkappa_2 d\varkappa_1 d\varkappa_2}{E_0^3 (M^2+\varkappa^2)(2M^2+\varkappa^2)}$. In the case of symmetric excitation ($\varkappa_1 \sim \varkappa_2$, $\varkappa^2 \sim M^2$, $Q^2 + M^2 \sim 2M^2$) one obtains $\varkappa_1 \sim \varkappa_2 \sim \sqrt{2E_0 M - M^2}$. With $\bar{E}_\pi \approx 0.4$ it is possible to calculate the mean multiplicities of the shower particles and to compare them with experimental values. A table gives numerical results for 13 showers; the data of 12 showers have been taken from an article of Cocconi, and in one case (No.5), from previous studies of the authors. The results indicate that the exchange boson has a mass that is equal to that of a nucleon - antinucleon pair. The authors thank D. S. Chernavskiy for suggesting the subject and his interest in the work, and also Professor Zh. S. Takibayev for discussions. There are 1 figure, 1 table, and 8 references: 4 Soviet, 1 US, and 3 Italian.

Card 3/4

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88448

A Particular Case of Peripheral Interactions Between High-energy Nucleons

S/056/60/039/006/040/063
B006/B063

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics, Academy of Sciences Kazakhskaya SSR)

SUBMITTED: June 21, 1960

| № | Тип случая | $\tau_c$ | $n_s$ | | |
|---|---|---|---|---|---|
| | | | $M=2\mu$ | $M=2$ | $M=4$ |
| 1 | 0+ 4p | 150(245) | 11,4(14,5) | 30,9(39,9) | 42,7(55,6) |
| 2 | 0+14p | 450(218) | 19,7(13,7) | 54,4(37,5) | 76,3(53,2) |
| 3 | 1+15p | 260(201) | 15,0(13,2) | 41,1(36,0) | 57,3(50,0) |
| 4 | 0+32p | 71(81) | 7,5(8,3) | 20,7(22,3) | 27,7(30,0) |
| 5 | 0+20p | 79(77) | 8,2(8,1) | 21,9(21,6) | 29,6(29,4) |
| 6 | 0+20p | 34(68) | 5,4(7,4) | 13,5(20,4) | 16,6(27,2) |
| 7 | 0+22p | 26(65) | 4,7(7,4) | 11,3(19,7) | 12,8(29,2) |
| 8 | 1+11p | 55(53) | 6,8(6,8) | 17,9(17,7) | 23,6(23,0) |
| 9 | 0+21p | 38(48) | 5,7(6,4) | 14,4(16,6) | 18,1(21,5) |
| 10 | 0+16p | 50(45) | 6,5(6,2) | 17,0(16,0) | 22,1(20,6) |
| 11 | 0+13p | 44(43) | 6,1(6,1) | 15,8(15,6) | 20,3(19,9) |
| 12 | 0+16p | 20(43) | 4,1(6,1) | 9,4(15,6) | 9,4(19,9) |
| 13 | 0+16p | 30(40) | 5,0(6,0) | 12,5(14,9) | 14,9(18,9) |

Card 4/4

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

RUS'KIN, V.I.

Angular correlations between $\pi$-mesons in the statistical theory of multiple particle production. Vest.AN Kazakh.SSR 17 no.4:80-87 Ap '61. (MIRA 14:5)

(Mesons)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446120015-7

39310
S/707/62/005/000/013/014
D290/D308

24.6600

AUTHORS: Golyak, I.G. and Rus'kin, V.I.

TITLE: The effect of a nucleonic isobar with isospin $T = \frac{1}{2}$ on the results of the statistical theory of multiple production of particles

SOURCE: Akademiya nauk Kazakhskoy SSR. Institut yadernoy fiziki. Trudy, v. 5. Alma-Ata, 1962. Fizika chastits vysokikh energiy. Struktura yadra, 155-163

TEXT: The authors summarize the evidence for the existence of a nucleonic isobar with isospin $T = \frac{1}{2}$ and ordinary spin $S = \frac{3}{2}$ (isobar $(\frac{1}{2}, \frac{3}{2})$); the maxima that are found at about 700 Mev in the total cross-section for $\pi^-$-p scattering and in the total cross-section for photoformation of mesons in protons indicate that a resonant interaction exists between a meson and a nucleonic isobar $(\frac{1}{2}, \frac{3}{2})$. The authors also applied Fermi's statistical theory to $\pi$-p colli-

Card 1/3

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sions at 1.0, 1.4 and 4.5 Bev allowing for nucleonic isobars $(\frac{3}{2}, \frac{3}{2})$ and $(\frac{1}{2}, \frac{3}{2})$, and a $\pi$-mesonic isobar (1,1) or (0,0); the results did not differ appreciably from those obtained without allowing for the $(\frac{1}{2}, \frac{3}{2})$, (1,1) or (0,0) isobars. This is explained by the fact that the effect of the $(\frac{3}{2}, \frac{3}{2})$ isobar predominates between 1-5 Bev; the effect of the $(\frac{1}{2}, \frac{3}{2})$ will predominate at higher energies because of its larger mass. The characteristics of the resonant interaction of two $\pi$-mesons are also unchanged; thus the theory still explains the maxima in the distribution of nucleon momenta and in the angular distribution of $\pi$-mesons for the reactions $\pi^- + p \rightarrow p + \pi^- + \pi^0$ and $\pi^- + p \rightarrow n + \pi^+ + \pi^-$ at 1 Bev. The divergences from experiment for these processes may be caused by neglecting the correlation that exists between the two $\pi$-mesons. However, the large overestimates of the statistical weights of processes involving the $\pi$-mesonic isobar (1,1) are caused by the degeneracy of the ordinary spin and the neglect of the law of conservation of angular momentum. The wide limits of error of experiments on $\pi^-$-p collisions at 1.4 and



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