DERBAREMDIKER, A.D., kand. tekhn. nauk

Graphoanalytic calculation of hydraulic and mechanical characteristics of valves. Vest. mashinostr. 45 no. 12:28-32 D '65. (MIRA 19:1)

L 17620-66 EWT(m)/EWP(j)/T DJ/RM

ACC NR: AP6007673 (A) SOURCE CODE: UR/0413/66/000/003/0044/0044

INVENTOR: Berents, L. I.; Gavrilyuk, A. D.; Derbaremdiker, A. D.; Vinner, G. G.; Abramovich, S. Sh.; Novosartov, G. T.; Novichkov, A. M.

ORG: none

TITLE: Preparative method for hydraulic fluids. Class 23, No. 178439

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1966, 44

TOPIC TAGS: hydraulic fluid, petroleum base hydraulic fluid, antiwear additive, antioxidant additive

ABSTRACT: An Author Certificate has been issued for a preparative method for petroleum base hydraulic fluid containing antiwear and antioxidant additives. The residual fraction of transformer oil, with a viscosity of 10.3—10.5 cs at 50C, is used as the petroleum base. Ethylpolysiloxane liquid (mol. wt., 1500—1700) or a composition of Sovol, diphenylamine and Ionol are used as the additives. [BO]

SUB CODE: 11/ SUBM DATE: 21Nov64/ ATD PRESS: 4014

Card 1/1 UDC: 621.892.86:621.225

L 33679-66 EWP(k)/EWT(d)/EWT(l)/EWT(m)/EWP(h)/T/EWP(v)/EWP(l) WW/DJ/BC
ACC NR: AP6014334 (A, N) SOURCE CODE: UR/0122/65/000/012/0028/0032

AUTHOR: Derbaremdiker, A. D. (Candidate of technical sciences)

ORG: None

TITLE: A graphic analytic method for calculating the hydraulic and mechanical characteristics of valves

SOURCE: Vestnik mashinostroyeniya, no. 12, 1965, 28-32

TOPIC TAGS: graphic technique, hydraulic engineering, mechanical engineering, valve, hydraulic equipment, flow characteristic

ABSTRACT: The author proposes a practical graphic method for calculating the flow parameters through the apertures and channels of hydraulic valve devices in various types of machines. The calculations are based on the rate of flow through the valve Q and valve motion h as functions of the total pressure drop Δp and time t:

$$Q=f(\Delta p),\ Q=\psi(t),\ h=\phi(\Delta p) \text{ and } h=\Phi(t).$$

The relationships between these four variables may be graphically represented as shown in the figure. Each of the four quadrants in this coordinate system is occupied by only a single one of the fundamental relationships: I--hydraulic characteristics;

UDC: 621.22.01

Card 1/2

L 33679-66
ACC NR: AP6014334

II-mechanical characteristics; III--kinematic characteristics and IV--rate of flow of the liquid as a function of time. Points A_1, A_2, A_3 and A_4 indicate the moment for beginning of valve operation corresponding to pressure drop $\Delta p'$; points B_1, B_2, B_3 and B_4 indicate the moment of maximum valve displacement h_{max}. In quadrant II is the family of curves Q_i=const showing the characteristics of various constant rates of flow Q_1, Q_2, Q_3...

$$\Delta p = k\frac{Q^2_i}{h^2}$$

where k is the proportionality factor. An example is given showing application of the method to a specific valve. The proposed system for plotting the characteristics of valve devices may be used in industry for static control as well as for programming in automated production. Orig. art. has: 5 figures, 12 formulas.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 000

Card 2/2

1. FRENKIN, V., ENG.; DERBAREMDIKER, D.

2. USSR (600)

4. Cotton-Picking Machinery

7. Mechanizing the cotton harvest.
MTS 12 no. 10, 1952

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

DERBAREMDIKER, M.I.

11(2) PHASE I BOOK EXPLOITATION SOV/3340

Kunin, Aleksandr Maksimovich, and Mark Ikhelevich Derbaremdiker

Tekhno-khimicheskiy kontrol' gazovogo proizvodstva (Technical and Chemical Control of Gas Production) Moscow, Gostoptekhizdat, 1958. 331 p. 3,000 copies printed.

Executive Ed.: Ye.S. Lozbyakova, Engineer; Tech. Ed.: A.S. Polosina.

PURPOSE: The book is intended for laboratory personnel in gas works and gas-generating plants.

COVERAGE: The book is an attempt at a systematized presentation of the problem of quality control in the production of gas. The following steps of the production process are treated: control of the quality of coal used for gasification; quality control in the processes of production, dehydration and purification of gas from tars and hydrogen sulfide; and control in the dephenolization and repurification of waste waters. D.A. Muravlev collaborated with the authors in writing Chapter 5. Chapter 4 was written

Card 1/13

jointly by S.M. Golyand, T.K. Krapivina and M.M. Kuzmak.
There are 46 references: 45 Soviet and 1 German.

TABLE OF CONTENTS:

DERBAREMDIKER, M.I.

Industrial experience in the gasification under pressure of brown coals from Eastern Siberia. Gaz.prom. 5 no.2:14-17 F '60. (Shchekino--Coal gasification) (MIRA 13:6)

DEMBAREMDIKER, M.I.; SEREBRENNIKOVA, K.L.; TKACHEV, G.I.

Gasification of mazut under pressure. Gaz. prom. 7 no.6:14-16 '62. (MIRA 17:6)

DERBAREMDIKER, M.I.; SEREBRENNIKOVA, K.L.; TERNOVSKIY, V.A.; [illegible] uchastiye; SHAROV, P.M.; NOVIKOV, L.Z.; LUR'YE, B.I.; PIS'MEN, M.K.; KARABIN, A.I. [deceased]; KOSTIN, L.I.; FROLOV, V.P.; MEDVEDEV, F.V.; GELIMKHANOV, S.G.; BONDAR', V.G.; TIMOFEYEV, P.I.; MININA, L.V.; ARBEKOV, F.F.; NIKOLAYEV, N.I.; YAROSLAV, T.Ye.; NUDEL'MAN, V.G.

Gasification of mazut under pressure in a steam-oxygen blast. Gaz. prom. 9 no.11:49-50 '64. (MIRA 17:12)

DERBARENDIKER, M. L.

"Investigation of Factors Specific to the Reaction of Iron Compounds With Albumins in the Process of Iron Tanning." Thesis for degree of Cand Technical Sci. Sub 14 Feb 50 Moscow Technological Inst of Light Industry imeni L. M. Kaganovich

[redacted] Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

UMANSKIY, A.A., inzhener; DERBAREMDIKER, M.L., kandidat tekhnicheskikh nauk.

Stretching of skins on frames and its effective control.
Leg. prom. 16 no.7:43 Jl '56. (MLRA 9:10)

(Hides and skins)

DERBARENDIKER, M.L.

LITVINOV, M.R.; DERBARENDIKER, M.L.; UMANSKIY, A.A.

Better use of raw calfskins in manufacturing chrome leather.
Leg.prom.16 no.12:44-45 D '56. (MLRA 10:2)
(Leather industry)

DERBAREMDIKER, M.L.

UMANSKIY, A.A.; RYBCHINSKIY, O.I.; DERBAREMDIKER, M.L.

Production of white kidskin. Leg.prom. 17 no.4:50 Ap '57.
(MLRA 10:4)

(Hides and skins)

DEBBAREMDIKER, M.L.

LI'VINOV, M.R.; UMANSKIY, A.A.; RYBCHINSKIY, O.I.; DEBBAREMDIKER, M.L.

Using Nekal for chemical cleaning of unhaired hide faces for chrome tanning. Leg. prom. 18 no.1:48-49 Ja '58. (MIRA 11:2)
(Tanning)

DERBAREMDIKER, M.L.; UMANSKIY, A.A.

Rapid method for checking varnished cooking. Leg.prom. 18 no.7:52-53 Jl '58. (MIRA 11:9)

(Varnish and varnishing)

DERBAREMDIKER, M.L., kand.tekhn.nauk; LITVINOV, M.R., inzh.; UMANSKIY, A.A., inzh.

New criterion for the completion of chrome tanning. Leg. prom. 18 no.9:55-56 S '58. (MIRA 11:10)
(Tanning)

DERBAREMDIKER, M.L., kand.tekhn.nauk; MERZON, A.G., inzh.ekonom.

Consistency of vegetative tanning extracts. Kozh.-obuv.prom. no.2:21-22 F '59. (MIRA 12:6)
(Tanning)

DERBAREMDIKER, M.L.

Oxidation-reduction in the interaction between iron compounds and proteins, and causes of the instability of iron-tanned leather. Zhur.prikl.khim. 33 no.10:2350-2356 O '60. (MIRA 14:5)
(Iron compounds) (Proteins) (Tanning)

DERBAREMDIKER, M.L.; ZURABYAN, K.M.; LAYEVSKAYA, G.I.; LITVINOV, M.R.; METELKIN, A.I.; SLUTSKIY, S.B.; SUCHKOV, V.G.

Production of Russian leather and of footwear manufactured with the hot vulcanization method. Kozh.-obuv.prom.3 no.3:17-20 Mr '61. (MIRA 14:6)

(Shoe manufacture)
(Leather)

LITVINOV, M.R.; OVRUTSKIY, M.Sh.; DERBAREMDIKER, M.L.; SHOR, R.M.

Rapid soaking and liming in the processing of Russian leather.
Kozh.-obuv.prom. 3 no.7:22-25 Jl '61. (MIRA 14:9)
(Leather)

LITVINOV, M.R.; DERBAREMDIKER, M.L.

Use of synthetic surface-active agents for the intensification of leather manufacturing processes. Kozh.-obuv.prom. 4 no.4: 24-25 Ap '62. (MIRA 15:5)
(Surface-active agents) (Leather)

LITVINOV, M.R.; SHOR, R.M.; DERBAREMDIKER, M.L.

Increase of the degree of utilization of the industrial floor space based on the improvement of equipment and technology. Kozh.-obuv. prom. 4 no.8:7-11 Ag '62. (MIRA 15:8)

1. Glavnyy inzhener Kiyevskogo kozhevennogo kombinata No.6 (for Litvinov). 2. Nachal'nik konstruktorskogo otdela Kiyevskogo kozhevennogo kombinata No.6 (for Shor). 3. Nachal'nik laboratorii Kiyevskogo kozhevennogo kombinata No.6 (for Derbaremdiker).
(Leather industry) (Industrial management)

KUPRIYANOV, M.P., kand.tekhn.nauk; DERBAREMDIKER, M.L., kand.tekhn.nauk

Plastic-elastic properties of leather materials for shoe uppers.
Report No.2. Nauch.-issl.trudy Ukr NIIKP no.13:175-180 '62.
(MIRA 18:2)

DUSHIN, B.M. Dushyn, B.M.]; [illegible], M.L., kand. tekhn. nauk

Methods for determining the properties of the grain side surface of leather. Leh.prom. no.1:18-20 Ja-Mr '65. (MIRA 18:4)

DERBAREMDIKER, M.L.

Technical specifications for the accounting for glue and wool.
Kozh.-obuv.prom. 5 no.1:38-39 Ja '63. (MIRA 16:2)
(Wool) (Adhesives)

DUSHIN, B.M.; LITVINOV, M.R.; GERSHENGORN, M.S.; DERBAREMDIKER, M.L.

Refining of leather. Kozh.-obuv.prom. 5 no.5:33-34 My '63.
(MIRA 16:5)

(Leather)

DUSHIN, B.M. [Dushyn, B.M.]; LITVINOV, M.R., [Lytvynov, M.R.]; DERBAREMDIKER, M.L., kand. tekhn. nauk; GERSHENGORN, M.S. [Hershenhorn, M.S.]

Continuous processing of semifinished products in the Kiev Leather Combine. Leh. prom. no.2:35-37 Ap-Je '63. (MIRA 16:7)

(Kiev—Leather industry)
(Assembly-line methods)

DUSHIN, B.M.; DERBAREMDIKER, M.L.

Some characteristics of the tanning process of chromium leather for shoe uppers by means of synthetic and vegetable tanning agents. Leh. prom. no.2:60-61 Ap-Je '65. (MIRA 18:10)

DUSHIN, B.M. [Dushyn, B.M.]; GERSHENGORN, M.S. [Hershenhorn, M.S.]; DERMAREMDIKER, M.L.; UMANSKIY, A.A. [Umans'kyi, A.A.]; SHOR, M.R.

Drying and processing of leather for shoe uppers. Leb.prom. no.1:45-48 Ja-Mr '64. (MIRA 19:1)

DUSHIN, B.M. [Dushyn, B.M.]; GERSHENGORN, M.S.; UMANSKIY, O.A. [Umans'kyi, O.A.]; DERBAREMDIKER, M.R., kand.tekhn.nauk

Refining of Russian leather and large hides with deep grain defects. Leh.prom. no.3:15-16 Jl-S '63. (MIRA 16:11)

1. Kiyevskiy kozhevennyy kombinat No.6.

DUSHIN, B.M. [Dushyn, B.M.]; DERBAREMDIKER, M.Ya. [Derbaremdiker, M.L.]

Filling of chrome leather for shoe uppers. Leh. prom. no.3: 57-58 Jl-S '65. (MIRA 18:9)

VYDRA, A.Ya.; ZALICHENKO, Z.Ya.; DERBAREMDIKER, P.Z.

Effect of the concentration of the sizing solutions and additives on the viscosity of the product. Leh.prom. no.1: 66-70 Ja-Mr '62. (MIRA 15:9)

1. Darnitskiy shelkovyy kombinat.
(Sizing)

DERBAREMDIKER, P.Z.; VODYANYUK, S.O.; PAVLOVSKAYA, L.V. [Pavlovs'ka, L.V.]

Use of oleinless emulsions for the oiling of wool blends in the manufacture of blankets. Leh. prom. no.4:39-41 O-D '65.
(MIRA 19:1)

DERBARENDINER, S.V.

VASNETSOV, N.S., kandidat meditsinskikh nauk; DERBARENDINER, S.V.

Chorioepithelioma associated with pregnancy. Akush. i gin. no.3: 82-83 My-Je '54. (MLRA 7:8)

1. Iz patologicheskogo otdeleniya (konsul'tant prof. D.M.Khayutin) Odesskoy oblastnoy klinicheskoy bol'nitsy (glavnyy vrach I.P. Polyarskiy)

(PREGNANCY, complications,
*brain tumor)
(BRAIN, neoplasms,
*in pregn.)

SHTEKELIS, R.I., dotsent; BOTSMAN, N.Ye., kand.med.nauk; DERBARENDINER, S.V.

Pulmonary and extrapulmonary complications in primary lung cancer.
Vrach.delo no.7:713-717 Jl '59. (MIRA 12:12)

1. Gospital'naya terapevticheskaya klinika (zav. - prof. A.A. Oks) pediatricheskogo i sanitarno-gigiyenicheskogo fakul'tetov Odesskogo meditsinskogo instituta na baze oblastnoy klinicheskoy bol'nitsy.
(LUNGS--CANCER)

AUTHOR: Derbasov, N.M., Engineer SOV/122-58-8-6/29

TITLE: Increasing the Service Life of Coal-mining Machines and Mechanisms (Povysheniye sroka sluzhby ugol'nykh mashin i mekhanizmov)

PERIODICAL: Vestnik mashinostroyeniya, 1958, Nr 8, pp 22 - 23 (USSR)

ABSTRACT: The operation of many types of coal-mining machinery and haulage equipment under service conditions was examined by the special-design office of the imeni "Parkhmenko" Works in Lugunsk. Frequent failures of the side plates in coal-sorting screens could be explained, in spite of the low stress found in strain gauge tests (300/350 kg/cm^2), by the fatigue of the welded joints between the tubular stays and the side plates under the conditions of corrosive humidity. A new design with ribs between the tube and the plate greatly increased the service life. The coil springs in the screen installation which failed in the fatigue machine after 3 hours worked satisfactorily for five million reversals after shot peening. The wear

Cardl/2

Increasing the Service Life of Coal-mining Machines and Mechanisms

endurance of links, pins and sleeves in conveyor chains restricted their service life to 8 months. The results of laboratory tests are reported showing the effect of mine water, different steel compositions and lubrication. There are 3 photographs.

Card 2/2 1. Coal industry 2. Industrial equipment--Design 3. Industrial equipment--Performance 4. Industrial equipment--Maintenance

AUTHOR: Derbasov, N.M., Engineer SOV/117-58-11-24/36

TITLE: The Hardening of Torsion Springs (Uprochneniye vitykh pruzhin)

PERIODICAL: Mashinostroitel', 1958, Nr 11, pp 33 - 34 (USSR)

ABSTRACT: The springs of mining machines, like sifters type GUP and BKG, work under conditions of continuous stress and often in an aggressive medium (mine water). The fatigue resistance of machine parts is increased by hardening their surfaces. At the Plant imeni Parkhomenko, a metal shot blast apparatus DU-1 (see Figure), constructed by TsNIITMASh, is used for this purpose. The shot has a maximal speed of 70 m/sec. After thermal processing of steel type 45Kh, the treatment by metal shots increases the strength by 54%, the life span increases 2-10 times. For the hardening of springs, cast iron shot of 0.9-1.2 mm in diameter was used with a speed optimum of 45-55 m/sec and at a blast angle of 75-90°. The shot blasting lasted 8-10 min.

ASSOCIATION: Luganskiy zavod imeni Parkhomenko (Lugansk Plant imeni Parkhomenko)

Card 1/1 1. Helical springs---Hardening 2. Metals---Hardening 3. Shotblasting --Metallurgical effects

DERBASOV, N.M.

Increasing the durability of coal-preparation machine parts by surface hardening. Trudy Sem.po kach.poverkh. no.5:115-122 '61. (MIRA 15:10)
(Surface hardening) (Coal-mining machinery)

DERBASOV, N. M.; MOSKALENKO, L. V.

The V-400, V-600 and V-800 dehydrating elevators with high-reliability chains. Biul.tekh.-ekon.inform.Gos.nauch.-issl. inst.nauch. i tekh.inform. no.10:26-28 '62. (MIRA 15:10)

(Coal washing--Equipment and supplies)

DERBASOV, N.M., inzh.; TODOROV, V.S., inzh.; SHISHOV, V.P., inzh.

Testing the reliability of reducing gears with Novikov's meshing. Mashinostroenie no.6:37-40 N-D '65.
(MIRA 18:12)

VOLOSHIN, N.Ye., inzh.; RESHETNYAK, Yu.V., inzh.; BERKOVICH, I.M., inzh.; DERBASOV, T.M., inzh.; BALINCHENKO, I.I., inzh.

Sudden outbursts of sand rocks in the "Shcheglovka-Glubokaya" mine. Shakht.stroi. 6 no.9:16-19 S '62. (MIRA 15:9)

1. Opornyy punkt Makeyevskogo nauchno-issledovatel'skogo instituta po bezopasnosti rabot v gornoy promyshlennosti, g.Donetsk (for Voloshin). 2. Shakhtostroitel'nyy trest Makeyevskogo rayona, Donbass (for Reshetnyak, Berkovich). 3. Makeyevskiy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti (for Derbasov). 4. Opornyy punkt Makeyevskogo nauchno-issledovatel'skogo instituta po bezopasnosti rabot v gornoy promyshlennosti tresta Oktyabr'ugol' (for Balinchenko).

(Donets Basin--Rock pressure)
(Mining engineering)

L 08047-67 EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/HW

ACC NR: AP6031515 SOURCE CODE: UR/0383/66/000/004/0035/0036

AUTHOR: Rudoy, V. S. (Candidate of technical sciences); Chekmarev, I. A. (Candidate of technical sciences); Sukonnik, I. M.; Geppa, S. A.; Serbin, I. V.; Yermolov, I. V.; Chizh, V. A.; Derbasov, V. I.; Kurilenko, V. Kh.; Kirvalidze, N. S.; Pasternak, N. M.

58

ORG: none

TITLE: Improving the plasticity of Kh18N10T tube steel by vacuum-arc melting

SOURCE: Metallurgicheskaya i gornorudnaya promyshlennost', no. 4, 1966, 35-36

TOPIC TAGS: austenitic steel, plasticity, ~~steel plasticity improvement~~, vacuum arc, ~~vacuum steel~~, VACUUM MELTING, METAL TUBE / Kh18N10T STEEL

ABSTRACT: The plasticity of conventionally arc melted and vacuum arc melted Kh18N10T steel was tested by rolling conical specimens in a piercing mill and by torsion tests, both at 1000—1300C. It was found that in piercing, the critical reduction depends primarily upon the α-phase content. Metal with a high α-phase content cannot be easily pierced at a temperature of 1200C or higher regardless of the melting method. The content of impurities and gases is of secondary importance. In torsion tests, plasticity was found to depend mainly upon the metal purity. Inasmuch as vacuum arc melting yields steel of a higher purity, its plasticity is also higher than that of conventionally melted steel. The increase of α-phase con-

Card 1/2 UDC: 669.15-194.621.774.35

L 08947-67

ACC NR: AP6031515 O

tent up to a certain limit does not substantially affect the plasticity of Kh18N10T steel, but an increase over this limit lowers the steel plasticity. Orig. art. has: 2 figures. [ND]

SUB CODE: 11,13 / SUBM DATE: none/ ORIG REF: 002/

Card 2/2 mst

DERBENEV, G.A.

Struggle for the seaworthiness of ships. Voen.znan. 29 no.7:17 Jl '53. (MLRA 6:7)
(Naval art and science)

GLUKHOVTSEV, S.A.; DERBENEV, G.A., redaktor; MUNTYAN, T.P., tekhnicheskiy redaktor

[The seaworthiness of a ship; aids for student organizations, All-Union Volunteer Society for Assistance to the Army, Air Force, and Navy groups and builders of ship models] Morekhodnoye kachestva korablia; posobie dlia uchebnykh organizatsee, kruzhkov Dosaaf i morskikh modelistov. Moskva, Izd-vo Dosaaf, 1954. 26 p. (MLRA 8:5)
(Ship models)

ACCESSION NR: AP4040739 S/0050/64/000/006/0046/0048

AUTHOR: Derbenev, B. S.; Istomin, B. P.

TITLE: Accuracy of wind measurements by means of the "Meteor" probe

SOURCE: Meteorologiya i gidrologiya, no. 6, 1964, 46-48

TOPIC TAGS: meteorology, wind measurement, balloon probe, meteorological instrument, "Meteor" wind probe, Malakhit theodolite

ABSTRACT: Results of tests to determine the accuracy of wind direction and velocity measurements made with the "Meteor" balloon-borne wind probe in combination with the "Malakhit" meteorological theodolite are reported. Data obtained from 94 ascents made at 2- and 4-hour intervals were analyzed for two levels (1—12 km and 12 km and above), with the following results: 1) with increasing wind velocity the mean square error in wind direction decreases, especially in the range between 5 and 30 m/sec; 2) at altitudes of from 1 to 12 km and at wind velocities of up to 15 m/sec, the mean square error is 4° less than at altitudes above 12 km; and 3) with increasing wind velocity the error in velocity measurements increases: at 55—60 m/sec, the error

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ACCESSION NR: AP4040739

is three times greater than at 5—10 m/sec. These errors are described as inherent in balloon-borne measurements. Orig. art. has: 2 figures and 4 formulas.

ASSOCIATION: none

SUBMITTED: 00	ATD PRESS: 3042	ENCL: 00
SUB CODE: ES	NO REF SOV: 002	OTHER: 000

Card 2/2

DERBEDENEV, I.

Industrial wastes should be utilized. Prom.koop. 14 no.4:20 Ap '60. (MIRA 13:6)

1. Predsedatel' pravleniya arteli invalidov "4-ye pyatiletka," g. Beloretsk.
(Industrial wastes)

DERBEDENEV, I. P.; OMAROV, L. M.; ROMANOV, P. F.

A series of works in "Proceedings of the Kazakh Scientific Research Veterinary Institute" Vol. IV, 1940, Alma-Ata (Bibliography of article on "Culture of Bovine Peripneumonia" by M. M. Ivanov)

Biologicheskie i Khimioterapevticheskie Veterinarnye Preparaty, Moscow, 1948, pp 179-191
Trans. 313 by L. Lulich, p 20

DERBEDENEV, I. P.; Studentsov, K. P.; Stroganov, G. D.; Kozhakin, S. K.

Scientific Research Veterinary Institute, Kazakh Branch* of the All-Union Academy of Agricultural Sciences

" Therapy of chronic diseases of skin and subcutaneous cellular tissue "

SOURCE: Veterinariya, Vol 24, No 8, p 27, 1947

* Same as KAZAKH NIVI

DERBENEV, P.N.

Effect of intra-arterial transfusions of a leucocyte mass on the reactivity of cellular elements of connective tissue and blood in the focus of aseptic inflammation. Gemat. i perel. krovi 1:36-[illegible] '65.

Effect of a leucocyte mass and its ingredients on the permeability of vessels. Ibid.:41-43 (MIRA 18:10)

1. Khar'kovskiy institut perelivaniya krovi.

SHELAMOVA, A.S.; NAUMOVA, N.A.; SHELAPUTIN, V.I.; DERBEDENEVA, Z.A.

Dehydrofreezing of fruit and vegetables. Kons. i ov. prom. 18 no.8:15-18 Ag '63. (MIRA 16:8)

1. TSentral'nyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti (for Shelamova, Naumova). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti (for Shelaputin, Derbedeneva).
(Food, Frozen)

SHELAPUTIN, V.I., kand.tekhn.nauk; DERBEDENEVA, Z.A., inzh.; SHELAMOVA, A.S., kand.khim.nauk; NAUMOVA, N.A., inzh.

Dehydrofreezing of vegetables and fruits. Khol.tekh. 40 no.3:30-32 My-Je '63. (MIRA 16:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti (for Shelaputin, Derbedeneva). 2. TSentral'nyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti (for Shelamova, Naumova).
(Refrigeration and refrigerating machinery--Research)
(Food,Frozen)

DERBENOVA, M.P.; KUROCHKIN, B.I.; GLUMOVA, Z.I.; ZHIGUL'SKAYA, I.F.; VEVOR, P.A.; BORISOVA, A.I.; LYUBART, A.M.

Diagnostic value of the determination of blood serum aldolase activity in Botkin's disease. Sov.med. 25 no.1:92-95 Ja '61. (MIRA 14:3)

1. Iz Virusologicheskoy laboratorii Astrakhanskoy oblastnoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach I.I.Troitskiy), kafedry mikrobiologii Astrakhanskogo meditsinskogo instituta, Bol'nitsy imeni Bekhtereva (glavnyy vrach V.I.Gembitskiy) i Gorodskoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach G.A.Gul'gaz'yants).
(ALDOLASE) (HEPATITIS, INFECTIOUS)

DMITRIYEV, A.P., kand.tekhn.nauk; DERBENEV, L.S., gornyy inzh.; KAPUSTIN, A.A., gornyy inzh.; KUZYAYEV, L.S., gornyy inzh.; DOBROVOL'SKIY, G.N., gornyy inzh.

Boring holes with thermal jet piercing machines with the use of air. Gor.zhur. no.1:44-45 Ja '65. (MIRA 18:3)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki.

DERBENEV, P. N. (Khar'kov, Shatilovka, ul. Kolomenskaya, d. 48)

Treatment of wounds and ulcers with delayed healing by intra-arterial transfusions of leucocytes. Nov. khir. arkh. no.3: 8-13 '62. (MIRA 15:4)

1. Klinika (zav. - prof. N. N. Milostanov) i patofiziologicheskaya laboratoriya (zav. - doktor med. nauk Z. G. Arlozorov) Ukrainskogo nauchno-issledovatel'skogo instituta perelivaniya krovi i neotlozhnoy khirurgii.

(WOUNDS--TREATMENT) (ULCERS) (LEUCOCYTES)
(BLOOD--TRANSFUSION)

L 65073-65

ACCESSION NR: AR5018569 UR/0299/65/000/014/M016/M016
591.169

SOURCE: Ref. zh. Biologiya. Svodnyy tom, Abs. 14M124

18
B

AUTHOR: Arlozorov, Z. G.; Dzhanaev, P. N.

TITLE: Activation of regeneration processes by intra-arterial administration of leukocytes

CITED SOURCE: Sb. Patol. fiziologiya serd.-sosud. sistemy. T. 2. Tbilisi, 1964, 125-126

TOPIC TAGS: experimental animal, blood plasma, tissue physiology, tracer study, therapeutics

TRANSLATION: In experiments on rabbits with intra-arterial transfusion of leukocytes tagged with P^{32}, the leukocytes collected at the inflamation focus in much larger numbers than with intravenous injections. Administration of a suspension of leukocytes or of a plasma devoid of leukocytes or isolated leukocytes increased the permeability of capillaries and the reactivity of connecting tissue, and stimulated the course of asceptic inflamation. N.S.

Card 1/1 SUB CODE: LS ENCL: 00

DERBENEV, S. I.

Derbenev, S. I. "Investigation of the deformation of the chamber in the Yakhroma lock of the Moscow Canal by means of S/3v phototheodolite", Nauch. zapiski (Mosk. gidromeliorat. in-t im. Vil'yamsa), Vol. XV, 1948, p. 161-70.

SO: U-3261, 10 April 53, (Letopis 'Zhurnal 'nykh Statey, No. 11, 1949).

DERBENEV, S.I., kand. tekhn. nauk

Selection and improvement of mechanisms for the aeration of the liquid in aerated water retting. Nauch.-issl. trudy TSNIILV 16:3-33 '62. (MIRA 16:10)

1. Rukovoditel' mikrobiologicheskoy laboratorii TSentral'nogo nauchno-issledovatel'skogo instituta promyshlennosti lubyanykh volokon.

DERBENEV, S.I.

[illegible]

Vital problems in planning and building mills for the processing of retted flax on an industrial scale. Tekst. prom. 15 no.2: 7-10 F '55.

1. Inzhenery Gosudarstvennogo proyektnogo instituta No.2. (Flax) (Industrial buildings)

DERBENEV, S.I., inzh.

Investigating the mechanism of the thermal retting of flax using aerated water emulsions. Nauch.issl.trudy TSNIILV 12:3-35 '59. (MIRA 15:8)

(Flax) (Retting)

DERBENEV, S. I., CAND TECH SCI, "DEVELOPMENT OF A TECHNOLOGICAL PROCESS FOR [redacted] OF A WATER-AND-AIR EMULSION. MOSCOW, 1960. (MOSCOW [redacted] INST).

(KL, 2-61, 208).

MARKOV, Valentin Vasil'yevich; SUSLOV, Nikolay Nikolayevich; TRIFONOV, Vadim Georgiyevich; ANDREYEV, V.V., retsenzent; ARIFKHANOV, U.Kh., retsenzent; ARNO, A.A., retsenzent; DERBENEV, S.I., retsenzent; SHUSHKIN, A.A., retsenzent; MAKEYEV, V.S., nauchnyy red.; DUKHOVNYY, F.N., red.; SHAPENKOVA, T.A., tekhn. red.

[Primary processing of bast fibers] Pervichnaia obrabotka lubianykh volokon. Moskva, Gos. izd-vo "Rostekhizdat," 1961. 463 p. (MIRA 15:4)
(Textile fibers) (Textile machinery)

DMITRIYEVA, A.I.; SHUSHKIN, A.A.; MIRONOV, K.M.; DERBENEV, S.I.; GRANICHNOVA, Z.P.; OKUN', M.M.; MIKHAYLOVA, N.N.; ANDREYEV, V.V.; MAKEYEV, V.S.; OSIPOVA, V.M.; L'VOVYY, V.S.; SMIRNOV, G.N., nauchnyy sotr.; ZAIKIN, I.N.; TAL'NISHNIKH, G.N.; MORKOVIN, V.A.; GALAGAN, V.A.; RAZUVAYEV, A.A., red.; SOKOLOVA, V.Ye., red.; TRISHINA, L.A., tekhn. red.

[Manual on the industrial primary processing of flax] Spravochnik po zavodskoi pervichnoi obrabotke l'na. Izd.2., perer. i dop. Moskva, Rostekhizdat, 1962. 755 p. (MIRA 15:12)

1. TSentral'nyy nauchno-issledovatel'skiy institut lubyanykh volokon (for Dmitriyeva, Shushkin, Mironov, Derbenev, Granichnova, Okun', Mikhaylova, Andreyev, Makeyev, Osipova). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany truda (for Smirnov). 3. Upravleniye zagotovk i pervichnoy obrabotki l'na Kalininskogo sovnarkhoza (for Zaikin, Tal'nishnikh, Morkovin, Galagan, L'vovyy).

(Flax) (Flax processing machinery)

DERBENEV, S.I.; MIRONOV, K.M.; MURATOVA, M.A., retsenzent; SOKOLOVA, V.Ye., red.; PYATNITSKIY, V.N., tekhn. red.

[Technology of the industrial biological retting of bast raw materials] Tekhnologiia promyshlennoi biologicheskoi mochki lubianogo syr'ia. Moskva, Gizlegprom, 1963. 199 p. (MIRA 16:9)

(Retting)

DERBENEV, S.I., kand. tekhn. nauk; MIRONOV, K.M.; FILIPPOV, Yu.G., red.

[New developments in the techniques of mill retting of flax and hemp in the socialist countries of Europe] Novoe v tekhnike zavodskoi mochki l'na i konopli v sotsialisticheskikh stranakh Evropy. Moskva, 1963. 13 p. (MIRA 17:9)

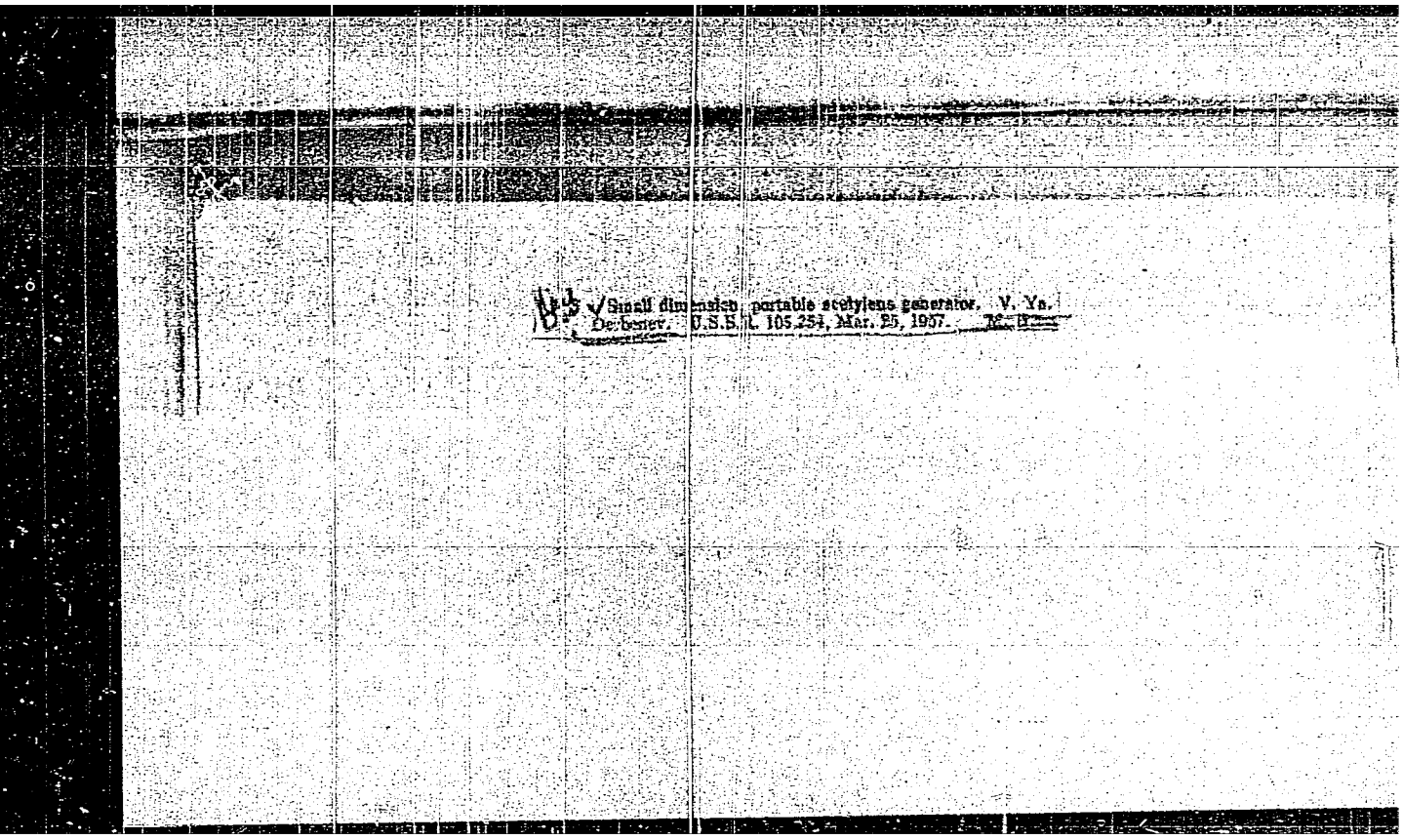
1. Moscow. TSentral'nyy institut nauchno-tekhnicheskoy informatsii legkoy promyshlennosti.

DERBENEV, V.K.

Regulating the operation of medium-pressure angular injection burners. (MIRA 18:6)
Gaz. prom. 10 no.5:28-29 '65.

DERBENEV, V.I.

Graphic method for calculating gas consumption by medium-pressure injection gas burners. Gaz. prom. 10 no.7:22-23 '65. (MIRA 18:8)



L 4382-66 EWT(m)/T/EWA(m)-2

ACC NR: AP5020262 UR/0367/65/002/001/0119/0123

AUTHOR: Derbenev, Ya. S. 44,55

TITLE: Some effects in the electromagnetic interactions of particles with colliding bunches 19, 44, 55

SOURCE: Yadernaya fizika, v. 2, no. 1, 1965, 119-123

TOPIC TAGS: electromagnetic interaction, particle collision, betatron, particle acceleration

ABSTRACT: One-dimensional betatron oscillations of a particle interacting with a colliding particle bunch in a storage ring are investigated, with special attention paid to the effects that are due essentially to the nonlinearity of the electromagnetic fields of the bunches. The colliding currents are assumed to greatly different, and the reaction of the smaller beam on the larger one is neglected. It is shown that the perturbation of the betatron oscillations of the particle by the field of the colliding beam leads to the occurrence of a large number of stable equilibrium orbits, the mean-square deflection of which from the main orbit increases with the total number of particles in the beam. An analysis of the motion in the stability region of these orbits shows that particles can accumulate near the resultant large number of equilibrium orbits, so that the reduction of the interaction of the bunches to a manifestation of any single resonance cannot be regarded as satisfactory. "The author thanks A. N. Skrinskiy for suggesting the topic and for numerous useful dis-

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L 4382-66
ACC NR: AP5020262 9

cussions, and V. M. Galitskiy and Yu. F. Orlov for interest in the work and valuable advice." Orig. art. has: 2 figures and 10 formulas.

ASSOCIATION: Institut yadernoy fiziki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Nuclear Physics of the Siberian department of the Academy of Sciences, SSSR)

SUBMITTED: 21Jan65 ENCL: 00 SUB CODE: NP

NR REF SOV: 004 OTHER: 001

Card 2/2

L 07055-67 EWT(1) I F(c) AT

ACC NR: AP6021623 (N) SOURCE CODE: UR/0089/66/020/003/0217/0220

49
B

AUTHOR: Derbenev, Ya. S.; Mishnev, S. I.; Skrinskiy, A. N.

ORG: none

TITLE: Effects of electromagnetic interaction of particles with a colliding plasmoid

SOURCE: Atomnaya energiya, v. 20, no. 3, 1966, 217-220

TOPIC TAGS: plasmoid acceleration, betatron accelerator, synchrotron, storage ring, plasma electron oscillation

ABSTRACT: The authors investigate the influence of the electromagnetic field of the colliding plasmoid on the betatron oscillations of particles of a small plasmoid. The differential equations are written out for the one-dimensional oscillations of a particle periodically acted upon by a colliding plasmoid of given configuration, and the effect of various initial conditions is discussed. Special attention is paid to effects due to nonlinearity of the transverse component of the field of the colliding plasmoid. The conditions under which resonances appear are derived and effects corresponding to given resonances are approximately evaluated. The influence of parasitic equilibrium orbits is taken into account. Instability due to the action of the plasmoids on the synchrotron oscillations is shown to be important for electron-electron systems but not for electron-positron systems. Orig. art. has: 3 figures and 13 formulas.

SUB CODE: 20/ SUBM DATE: 22Nov65/ ORIG REF: 004

UDC: 621.384.612.4

Card 1/1 vmb

[redacted] SHARONOVA, A.

Lyrids in 1956. Astron.tsirk.no.170:22-23 '56. (MLRA 9:10)

1.Stalinabadskaya astronomicheskaya observatoriya, Stalinabadskoye otdeleniye Vsesoyuznogo astronomo-geodezicheskogo obshchestva.
(Meteors--April)

DERBENEVA, A.

Observations of meteors with radiants in Aquarius. Astron.tsir. no.207:22-23 D '59. (MIRA 13:6)

1. Institut strofiziki AN Tadzhikskoy SSR.
(Meteors--September)

YUR'YEV, YU. K., KONDRAT'YEVA, G. YA., DERBENEVA, A. A.

Furanidines

Simultaneous catalytic dehydration of 2, 5-dialkyland 2, 2, 5, 5-tetraalkylfuranidines with hydrogen sulfide. Uch. zap. Mosk. un., No. 132, 1950.

Monthly List of Russian Accessions, Library of Congress, October 1952 UNCLASSIFIED.

DERBENEVA, A.D.; SHODIYEV, U.

Observation of Scorpionid meteor shower in 1960. Astron.tsir. no.215: 25-27 O '60. (MIRA 14:3)

1. Institut astrofiziki AN Tadzhikskoy SSR.
(Meteors--June)

BAKHAREV, A.M.; DERBENEVA, A.D.; SHODIYEV, U.

Meteor shower of δ Aquarides. Biul. Kom. po komet. i meteor. AN SSSR no.9:39-43 '64. (MIRA 17:10)

L 05250-67 EWT(1)/FCC GW

ACC NR: AP6018931 SOURCE CODE: UR/0203/66/006/003/0606/0607

53
51
B

AUTHOR: Derbeneva, A. D.

ORG: Institute of Astrophysics, AN TadzhSSR (Institut astrofiziki AN TadzhSSR)

TITLE: On the ionization factor for meteor atoms

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 3, 1966, 606-607

TOPIC TAGS: meteor, ionospheric physics, radar meteor observation, impact ionization

ABSTRACT: A formula for the ionization factor of meteor atoms is given, based on the sections of the elementary processes. Computations are made of the ionization and diffusion sections for collisions of Ca, Fe, Si, and Mg with atomic oxygen and nitrogen at velocities of $4 \cdot 10^6$—$7 \cdot 10^6$ cm/sec. The computation is made according to O. B. Firsov's theory (Zhur. Eksperim. i teor. fiziki, 1959, 36, 1517; and 1958, 34, 447), which is based on a statistical Thomas-Fermi model. The resultant system of impacting particles is regarded as an excited quasi-molecule, the excitation energy of which is the result of the tranference of the pulse by the electrons to the overlapping regions of the shells. The ionization factors so computed make it possible to calculate the ionization efficiency factor which indicates the ratio of the kinetic energy of the incident atom expended on ionization to the entire kinetic energy of the atom. The

Card 1/2 UDC: 523.53

L 05250-67
ACC NR: AP6018931

2

author thanks G. F. Drukarev and T. V. Zhikhareva for their comments on the paper. Orig. art. has: 1 table and 4 formulas.

SUB CODE: 03,20/ SUBM DATE: 31Jul65/ ORIG REF: 004/ OTH REF: 002

Card 2/2 gd

DERBENEVA, I.V. (Ussuriysk)

Organization of two-stage care for children in the hospital.
Med. sestra 19 no.6:38 Je '60. (MIRA 14:1)
(USSURIYSK—NURSES AND NURSING)

DERBENEVA, K.

In a house on Stepan Razin Street. Pozh.delo 5 no.7:6 Jy '59. (MIRA 12:9)

1. Predsedatel' yacheyki Dobrovol'nogo pozharnogo obshchestva domoupravleniya, g.Kuybyshev.
(Kuybyshev--Fire prevention)

DERBENEVA, M.M.

9

[illegible] I BOOK EXPLOITATION SOV/5834

Akademiya nauk SSSR. Institut merzlotovedeniya

Issledovaniya po fizike i mekhanike merzlykh gruntov (Investigations in Frozen-Ground Physics and Mechanics) no. 4, Moscow, 1961. 251 p. Errata slip inserted. 1500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut merzlotovedeniya im. V. A. Obrucheva.

Resp. Eds.: Z. A. Nerseseva and N. A. Tsytovich; Ed. of Publishing House: L. F. Nikolayeva; Tech. Ed.: V. V. Volkova.

PURPOSE: This collection of articles is intended for geocryologists and agriculturists.

COVERAGE: The collection was written by staff members of the Institut merzlotovedeniya, AN SSSR -- Institute of Permafrost Studies, AS USSR -- on the basis of their scientific research work conducted at the Laboratory of Physics and Mechanics of Frozen Ground. The articles in the first part

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Investigations in Frozen-Ground Physics (Cont.)

of the collection deal with the physics of the cryogenic processes. Physical and chemical investigations in this field were based on the "theory of thermodynamical potentials" developed by I. A. Tyutyunov, Doctor of Geological and Mineralogical Sciences. The works in the second part of the collection are of considerable interest as they concern problems of mechanics of frozen ground and ice and include important results of investigations in Antarctica dealing with the processes of ice flow and deformation and the structural strength of frozen ground. A new method for calculating the plastic viscous flow of ice-sheets is proposed by S. S. Vyalov; his deductions are based on the data of field observations which he undertook during the second Soviet Antarctic Expedition (1956-1958). References follow each article.

TABLE OF CONTENTS:

Card 2/4

TYUTYUNOV, I.A.; DERBENEVA, M.M.

Some physicochemical and morphological properties of soils and permanently frozen rocks in the Far North. Issl.po fiz. i mekh. merzl. grun. no.4:86-99 '61. (MIRA 14:12)
(Ilireleekh Valley--Frozen ground)

DERBENEVA, M.M.

Effect of temperature on rock leaching. Geokhimiia no.11:1204-1206 N '64. (MIRA 18:8)

1. Institut merzlotovedeniya AN SSSR, Moskva.

DERBENEVA, M.M.

Experimental studies of the migration of moisture and sodium, potassium, and lithium ions in frozen ground. Pochvovedenie no.1:58-62 Ja '65. (MIRA 18:7)

1. Institut merzlotovedeniya imeni V.A. Obrucheva, Moskva.

ACC NR: AT6036519 SOURCE CODE: UR/0000/66/000/000/0097/0098

AUTHOR: Vasil'yev, I. S.; Ryzhov, N. I.; Dorboneva, N. N.; Portman, A. I.; Dorofeyeva, N. Zh.; Khlaponina, V. F.; Kabachenko, A. S.

ORG: none

TITLE: Effect of proton and gamma irradiation on the mitotic activity of transplanted human cell cultures /Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966./

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 97-98

TOPIC TAGS: proton radiation biologic effect, ionizing radiation biologic effect, relative biologic officiency, human cell culture, radiation tissue effect, mitosis

ABSTRACT: Transplanted cell cultures are a valuable object of radiobiological study because of their high radiosensitivity. They are sometimes the only biological objects available for study of low-energy radiation effects. This series of experiments was conducted to determine the comparative effect of proton and gamma irradiation on the mitotic activity of human amniotic cells. Two-day-old cultures of amniotic cells, in single layer or in suspension, were irradiated with 630-Mev protons from an OIYAI

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synchrocyclotron or with Co^{60} gamma rays. The dose power of protons was 35 rad/sec and of gamma rays, 3 rad/sec. The activation and luminescent methods of proton dosimetry were used. Ionization chambers were used to monitor the beam. Mitotic activity was determined immediately after gamma irradiation, and then at intervals of 12, 24, 36, and 48 hr: Similar determinations were made 10, 20, 40, and 60 hr after proton irradiation.

A definite change in mitotic activity due to gamma and proton irradiation was observed in these experiments. Immediately after gamma irradiation with all doses the mitotic index decreased, reaching 1.6—1.3 with a 1000—1500 rad dose, as compared with 5.5 in the control. With doses of gamma rays from 750 to 1500 rad the mitotic index fell to 0.5—0.6 within 12 hr. A different pattern was observed following proton irradiation: within 10 hr of irradiation with 40—450 rad the mitotic index increased approximately 50% as compared with the control. Only with large proton doses did mitotic activity decrease. Twenty hr after proton irradiation with 40—1000 rad, the mitotic index reached a low of 1.4—0.07 (1.9 in the control).

Intensive recovery of the mitotic index in the postradiation period was

ACC NR: AT6036519

observed with both types of radiation: the index had reached initial levels within 36—40 hr for almost all doses. Two days after gamma irradiation the mitotic index was 2—3 times higher than the initial level, whereas after proton irradiation the mitotic index recovered in three days.

Comparison of changes in mitotic activity after both proton and gamma irradiation showed the clear dose dependence of depression of mitotic activity. The same pattern of changes was observed after both types of irradiation, and quantitative relationships in observed processes were identical in both cases. [W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3

ACC NR: AT6036629 SOURCE CODE: UR/0000/66/000/000/0331/0332

AUTHOR: Ryzhov, N. I.; Derbeneva, N. N.; Seraya, V. M.; Mashinskaya, T. Ye.; Oparina, D. Ya.; Govoruk, R. D.

ORG: none

TITLE: Relative biological effectiveness of 126-Mev protons in repeated exposures imitating the frequency of solar flares [Paper presented at the Conference on Problems of Space medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 331-332

TOPIC TAGS: cosmic radiation biologic effect, proton radiation biologic effect, radiation hematologic effect

ABSTRACT:
A study was made of the RBE of protons during repeated exposures approximating the frequency of solar flares in years of maximum solar activity. Half of the test group of 360 Wistar rats were irradiated with

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ACC NR: AT6036629

126-Mev protons, and the other half with 180-kv x-rays in single doses of 25, 50, 100, 200, and 400 rad. In the course of a year the animals received nine-fold exposure, amounting to total doses of 225, 450, 900, 1800, and 3600 rad, respectively. The dose power of proton radiation was 24—48 rad/min, and of x-ray radiation, 36 rad/min. It was found that nine-fold irradiation with protons and x-rays caused radiation sickness, the severity of which depended on the magnitude of single and total doses.

Definite differences were observed between the effects of protons and x-rays: protons caused greater depression of leukocytosis, and also further retarded the rate of recovery processes. Observed changes in the leukocyte count basically depended on corresponding shifts in the lumphocyte count. The content of neutrophils and other blood elements changed less under the influence of both types of radiation. Repeated irradiation with protons and x-rays caused progressive decrease in erythrocyte and hemoglobin content; the degree of decrease (which was slightly less pronounced for proton irradiation) depended directly on the magnitude of single and total doses. Changes in reticulocyte and thrombocyte content were less regular, and no reliable difference in the effects of protons and x-rays on these elements could be established. In many cases the formation of malignant tumors was a remote aftereffect of irradiation. Irradiation in a total dose of 3600 rad caused 100% death of rats with both x-ray and

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ACC NR: AT6036629

proton irradiation: the average time of life was 236 and 247 days, respectively. It was concluded that the RBE of 126-Mev protons does not differ essentially from 180-kv x-rays, and thus equals 1.0 under the given conditions.

[W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3

ACC NR: AT6036635 SOURCE CODE: UR/0000/66/000/000/0340/0341

AUTHOR: Seraya, V. M.; Ryzhov, N. I.; Derbeneva, N. N.; Mashinskaya, T. Ye.; Oparina, D. Ya.; Sychkov, M. A.

ORG: none

TITLE: Changes in the hematopoietic system of rats irradiated with 126-Mev protons and Co^{60} gamma rays [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 340-341

TOPIC TAGS: proton radiation biologic effect, ionizing radiation biologic effect, relative biologic efficiency, hematopoiesis, bone marrow, radiation tissue effect

ABSTRACT:

The comparative effect of single whole-body irradiation with 126-Mev protons and Co^{60} gamma rays on the cellular composition of peripheral blood, bone marrow, and spleen was studied using 618 male rats. Animals

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were irradiated with 126-Mev protons from an OIYAI synchrocyclotron in doses of 100, 200, 400, 550, 700, and 1000 rad, and with the same doses of gamma rays from an EGO-2 apparatus. The dose power of protons was 0.57 rad/sec and of gamma rays, 3.1 rad/sec.

The following indices of hemodynamic change were used: total number of leukocytes, absolute number of neutrophils and lymphocytes, absolute number of karyocytes (normoblasts), and impressions of femoral bone marrow. Tests were conducted 1, 3, 6, and 12 hr, and 1, 2, 4, 7, 12, 20, and 30 days after irradiation.

Identical processes of disruption of hematopoiesis were observed under the influence of both protons and gamma rays. Change in the number of leukocytes and the number of nucleated bone-marrow cells in the first hours and days after irradiation had a phase character. During the first phase, the bone-marrow cell level was maintained near the normal level. In this period a considerable increase in the number of leukocytes in the peripheral blood was observed and neutrophilia developed. These phenomena may be connected with reflex reaction to irradiation and with redistribution of blood.

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The duration of leukocytosis and the degree of its development depended on the radiation dose. The second phase of postradiation change was characterized by disintegration of young bone-marrow cell elements and by disintegration of lymphocytes. Considerable decrease in the number of bone-marrow cells occurred in this period. The number of leukocytes was close to normal with doses of 700 and 1000 rad and somewhat lower with doses up to 400 rad.

In the third phase of change in blood indices, total depression of hematopoiesis was observed, as shown by the considerable decrease in number of bone-marrow cells and leukocytes in the peripheral blood. Maximum decrease in the number of nucleated cells occurred two days after irradiation with doses of 100, 200, and 400 rad. However, with proton irradiation in doses of 700 and 1000 rad, decrease in the number of nucleated bone marrow cells was less pronounced. The maximum decrease in leukocyte content was noted on the fourth day: it was considerable for gamma rays and dose-dependent for both types of irradiation.

A period of relative stabilization followed at the end of the third phase. With radiation doses of 100, 200, and 400 rad the number of bone-marrow cells in this period was close to normal or slightly higher. There was no

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ACC NR: AT6036635

abrupt increase in the number of bone-marrow cells (period of abortive increase). The greater the dose, the less pronounced this abortive phase. The number of leukocytes normalized by the end of this period. The period of abortive increase in bone-marrow cells preceded the period of final normalization with doses of 100, 200, and 400 rad.

Comparing functional changes in rat hematopoiesis during proton and gamma irradiation revealed the same pattern of processes, although the degree of manifestation of phenomena and the sequence of their occurrence were somewhat different. With large radiation doses (700—1000 rad), processes of bone-marrow destruction were more intensive during gamma irradiation; the RBE of protons in this case was less than one. However, with proton doses of 100, 200, and 400 rad, RBE values with respect to the number of nucleated bone-marrow cells was close to one.

[W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

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5(4) SOV/78-4-2-23/40

AUTHORS: Ryskin, Ya. I., Zemlyanukhin, V. I., Solov'yeva, A. A. Derbeneva, N. A.

TITLE: Investigation of the State of Water in Anhydrous Solutions of Uranylnitrate by the Method of Infrared Spectroscopy (Izucheniye sostoyaniya vody v nevodnykh rastvorakh uranil-nitrata metodom infrakrasnoy spektroskopii)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 2, pp 393-396 (USSR)

ABSTRACT: The paper under discussion describes the investigation of the state of water in anhydrous solutions of uranylnitrate by infrared spectroscopy. The following frequencies of the water spectrum were used in the determinations: frequency of the deformation vibration $\nu_2 = 1645\ cm^{-1}$ ($\lambda = 6.1\mu$), $(\nu_1 + \nu_3) = 6882\ cm^{-1}$ ($\lambda = 1.45\mu$) and $(\nu_2 + \nu_3) = 5110\ cm^{-1}$ ($\lambda = 1.96\mu$). ν_1... frequency of the symmetrical valence vibration of the water molecule; ν_3... frequency of the asymmetrical valence vibration of the water molecule.

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