L 36462-66

ACC NR: AP6018802

2

The muon transition rate from the deuteron muon atom to carbon and oxygen has been found from experimental deuteron muon ranges and Auger electron yields. The formation rates of proton deuteron muon and deuteron deuteron muon molecules (reduced to the density of liquid hydrogen and deuterium) have been found to be $\lambda_{pd\mu} = (1.8 \pm 0.6) \cdot 10^6 \text{ sec}^{-1}$, $\lambda_{dd\mu} = (0.75 \pm 0.11) \cdot 10^6 \text{ sec}^{-1}$. Estimate of the relative yield of the reaction $d\mu + d \rightarrow dd\mu \rightarrow t\mu + p$ shows that the relation of the yield of $d\mu + d \rightarrow dd\mu \rightarrow t\mu + p$ to the yield of $d\mu + d \rightarrow dd\mu \rightarrow p + t + \mu^-$ is less than 0.14 with a 90% probability. Analysis of experimental data on the reactions $d\mu + p \rightarrow pd\mu \rightarrow He^3 + \mu^-$ and $d\mu + p \rightarrow pd\mu \rightarrow He^3\mu + \gamma$ leads to the conclusion that the resonance mechanism of the formation of deuteron deuteron muon molecules is likely to be the reason for the large yield of the two deuteron fusion reactions under conditions of experiments conducted by the authors. The authors thank Yu. V. Katyshev, M. Friml,

Card 2/3

L 36462-66

ACC NR: AP6018802

and Ye. D. Shcherbakov for their participation in the initial stage of this work, and S. S. Gershteyn for his valuable discussions. Orig. art. has: 9 figures, 19 formulas, and 5 tables. [Based on authors' abstract]

[NT]

SUB CODE: 20/ SUBM DATE: 23Dec65/   ORIG REF: 012/ OTH REF: 010/

Card 3/3

L 1 42 45   ENT(m)   DIAAP/AFWL/SSD/ESD(t)

ACCESSION NR: AP4047891   S/0056/64/147/004/1243/1256

AUTHOR: Dzhelepov, V. P.; Yermolov, P. F.; Moskalev, V. I. Fil'-
chenkov, V. V.; Friml, M.

TITLE: Elastic scattering of dMu mesic atoms by protons, deuter-
ons and complex nuclei

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47,
no. 4, 1964, 1243-1256

TOPIC TAGS: elastic scattering, mu mesic atom, proton scattering,
deuteron scattering, complex nucleus scattering, scattering cross
section

ABSTRACT: This is a continuation of earlier experiments by the
authors (ZhETF v. 42, 439, 1962; Proc. of 1962 Conf.
on High Energy Physics at CERN, p. 134 of the collection 1963)
gives further experiments on the kinetics of dµ atomic pro-

Card   1/4

L 13487-65
ACCESSION NR: AP4047891

cesses. The range distribution of d₀ atoms in hydrogen containing
... concentrations of deuterium and or Z-impurities ... and
... unknown cross sections for ...
... using a diffusion ...
... chamber has a diameter 380 mm, the material field was
... and the negative mesons were obtained from the ...
... cyclotron, slowed by a filter, and stopped in the ... of the
... A detailed description of the experimental ... and con-
... given in the cited earlier papers. The ... reduction
... and program are described. The cross sections ... de-
... a χ^2 comparison of the experimental distribution with
... calculated by the Monte Carlo method. The values obtained
... istic scattering cross sections agree well with the theory.
... of the d₀ atom in hydrogen is ...

... processes, obtained experimentally and the-

Card 2/4

ACCESSION NR: AP4047891

oretically, are:

Process	Experiment	Theory
$d\mu + d \rightarrow d\mu + d$	$(4.15 \pm 0.29) \cdot 10^{-12}$	$1.3 \cdot 10^{-12}$
$d\mu + p \rightarrow d\mu + p$	$\left(5.8^{-0.5}_{-0.4}\right) \cdot 10^{-11}$	$\sim 10^{-11}$
$d\mu + Z \rightarrow d\mu + Z$	$(1.2 \pm 0.3) \cdot 10^{-14}$	$\sim 10^{-14}$

An analysis analogous to that described in the article is in progress for the scattering of $p\mu$ atoms by protons and the results of the pre- sent which are being applied to an interpretation of the yields of the reactions $p + d\mu \rightarrow He^3 + \mu^-$ and $d\mu + d \rightarrow t + n + \mu^-$, which will be reported later. "The authors are grateful to S. Yu. M. Kazarinov, I. N. Silin, R. M.

the measurements." Orig. art. has: 10 figures, 9 formulas

Card 3/4

L 10487-65

ACCESSION NR: AP4047891

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy
(Joint Institute of Nuclear Research)

SUBMITTED: 13May64

SUB CODE: NP   NR REF SOV: 006

ENCL: 00

OTHER: 007

Card   4/4

L 5332-66   EWT(m)/T/EWA(m)-2

ACCESSION NR: AP5021098   UR/0056/65/049/002/0393/0405

AUTHORS: Dzhelepov, V. P.; Yermolov, P. F.; Fil'chenkov, V. V.

TITLE: Scattering of pμ atoms by protons

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no.
2, 1965, 393-405

TOPIC TAGS: mu meson, meson interaction, proton interaction,
elastic scattering, scattering cross section, proton scattering

ABSTRACT: This is a continuation of an earlier investigation (ZhETF
v. 42, 439, 1962) of the reaction $p\mu + p \to p\mu + p$. In the present
work this process was investigated in greater detail for the purpose
of determining the spin state of the pμ atom prior to muon decay or
muon capture by the proton. The experimental equipment and procedure
were similar to that used previously, and the statistics accumulated
were increased by one order of magnitude. The cross sections were
determined from the analysis of the distributions of the number of

Card 1/3

090/1080

L 5332-66
ACCESSION NR: AP5021098

events of a function of the μ-atom mean free path under different operating conditions. The mean free path distributions of the μ atoms were obtained with the aid of a diffusion chamber at various hydrogen densities and impurity (carbon, oxygen) concentrations. An analysis shows that the μ atom lifetime can be reconciled with theory by assuming for the μ + p system an effective cross section $1.73 \pm 0.19 \times 10^{-19}$ cm^2. The cross section for the elastic scattering of μ atoms by protons is found to be $1.67 \pm 0.30 \times 10^{-19}$ cm^2 for the singlet spin state of the μ atom. This is larger than predicted by the theory, and may be due to the existence of a low energy virtual level in the μp system. The most probable transition rate from the triplet state of the μ atom to the singlet state is $\sim 10^{10}$ sec^{-1}, with complete depolarization except when the pressure reaches the order of an atmosphere. The rate of formation of pμ-mesic molecules in the para state is negligibly small compared with the ortho state. It is also shown that the transition of the muon from the proton to the carbon and oxygen nuclei occurs predominately on the high Q_μ and Q_μ

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L 5332-66

ACCESSION NR: AP5021098

4

atomic orbitals, and the probability for direct transition to the 1s level is less than 3 per cent. 'The authors thank S. S. Gershteyn for interest and valuable discussions, and F. L. Shapiro and K. Parlinskiy for a discussion of problems connected with the Krieger-Nelkin method.' Orig. art. has: 7 figures, 15 formulas, and 4 tables

ASSOCIATION: Ob''yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 03Mar65   ENCL: 00   SUB CODE: NP

NR REF SOV: 009   OTHER: 008

Card 3/3 mst

FIL'CHENKOVA, M.D., inzh.; ZLODEYEV, A.V., inzh.

Automatic control of a ventilation and drainage apparatus. Ugol'. prom. no.6:48-53 N-D '62. (MIRA 16:2)

1. Gosudarstvennyy proyektno-konstruktorskiy institut avtomatizatsii rabot v ugol'noy promyshlennosti.
(Mine drainage)   (Fans, Mechanical)   (Automatic control)

5(4)

AUTHORS:

SOV/76-33-2-28/45

Antonova, L. G., Ivanovskiy, F. F., Fil'chenkova, T. G.,
Krasil'shchikov, A. I.

TITLE:

Adsorption Phenomena in the System Hydrogen - Carbon Dioxide -
Carbon Monoxide - Water Vapor I (Adsorbtsionnyye yavleniya v
sisteme vodorod - uglekislota - okis' ugleroda -vodyanoy
par.I)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 2,
pp 416 - 421 (USSR)

ABSTRACT:

The catalytic reaction of carbon monoxide with water vapor
yielding hydrogen and carbon dioxide has been often inves-
tigated (Refs 1-7). The present experiments concerning the
adsorption of these components were carried out according
to a somewhat modified method (Ref 8). No electrode polari-
zation was produced, but the potential of the internal
electrode was measured. The gas was adsorbed onto a porous
metal film which served as an electrode and which was
applied to glass. A metal film of silver maintained in an
air atmosphere served as the comparison electrode. The
reaction cell (Fig 1) was produced from a special glaseous

Card 1/3

Adsorption Phenomena in the System Hydrogen - Carbon   SOV/76-33-2-28/45
Dioxide - Carbon Monoxide - Water Vapor I

material conductive at higher temperatures and which was
attached to the testing apparatus (Fig 2). Experiments on
copper films showed (Fig 3) that at 300°C (potential
ca - 1250 mv) an extension of the potential to positive
values takes place with an increase in moisture. The hydro-
gen adsorption at 250°C (potential ca -1200 mv) (Fig 5)
has a different character than at 300°C since the influence
of the moisture exerts a stronger irreversible effect. The
adsorption of CO_2 on copper occurs at 250°C with a potential
of ca -500 mv (Fig 6). The adsorption of H_2 and CO_2 on
cobalt films occurs similarly to that on the copper films
(potential at 250°C ca - 1100 mv) (Figs 8-10). The experi-
mental results show that the measurement of the potential
of metallic films is an important method for investigating
gas adsorption. There are 10 figures and 21 references,
12 of which are Soviet.

ASSOCIATION: Institut azotnoy promyshlennosti, Moskva (Institute of the
                Nitrogen Industry, Moscow)
Card 2/3

Adsorption Phenomena in the System Hydrogen - Carbon   SOV/76-73-2-29/45
Dioxide - Carbon Monoxide - Water Vapor I

SUBMITTED: July 9, 1957

Card 3/3

S/076/60/034/012/012/027
B020/B067

AUTHORS: Antonova, L. G., Fil'chenkova, T. G., Ivanovskiy, F. P.,
              and Krasil'shchikov, A. I.

TITLE: Adsorption Phenomena in the System Hydrogen - Carbon
              Dioxide - Carbon Monoxide - Water Vapor. II. Adsorption of
              Carbon Monoxide

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 12,
              pp. 2766-2771

TEXT: The authors attempted to study the electrochemical adsorption
potential of carbon monoxide on various metals by using the same methods
as described in Ref. 1. The reproducibility of the measurements was
approximately $\pm$ 25 mv, the accuracy of measurement was $\pm$ 1 mv. The
adsorption experiments with carbon monoxide were made to study the
conversion of carbon monoxide with water vapor. CO was purified by passing
it through a furnace filled with reduced copper at 350°, furthermore
through a furnace filled with copper, precipitated on silica gel at 250°,
by a freezing trap at approximately -70°, askarite, charcoal, and

Card 1/3

Adsorption Phenomena in the System Hydrogen -   S/076/60/034/012/012/027
Carbon Dioxide - Carbon Monoxide - Water Vapor   B020/B067
II. Adsorption of Carbon Monoxide

silicagel. At the beginning of the measurements the curves potential
versus time took a somewhat irregular course which was, however,
equalized after 1.5 to 2 hours. The adsorption of CO by a cobalt film
at 250°C (Fig. 1) and of CO and hydrogen on iron at 425°C (Fig. 2), and
on nickel at 425°C (Fig. 3) is graphically illustrated. The adsorption
diagrams of hydrogen and CO on silver at 425°C (Fig. 4), copper at
425°C (Fig. 5), and after nitrogen adsorption at 425°C (Fig. 6) are also
given. Fig. 7 shows the adsorption potentials of carbon monoxide on
various metals which clearly express the characteristic behavior of
copper. The adsorption potential of carbon monoxide on copper is
approximately by 300 mv more negative than in all other metals studied.
This fact can be explained by the complex electron structure of carbon
monoxide and by the selective character of the adsorption affinity.
Actually, copper is usually recommended as specific catalyst for the
reaction of CO with oxygen, whereas nickel and iron are used for its
reaction with hydrogen. There are 7 figures and 15 references: 12 Soviet,
1 US, and 2 British.

Card 2/3

Adsorption Phenomena in the System Hydrogen -   S/076/60/034/012/012/027
Carbon Dioxide - Carbon Monoxide - Water Vapor   B020/B067
II. Adsorption of Carbon Monoxide

ASSOCIATION: Gosudarstvennyy institut azotnoy promyshlennosti (State
               Institute for the Nitrogen Industry)

SUBMITTED: March 25, 1959

Card 3/3

KRASIL'SHCHIKOV, A.I.; ANTONOVA, L.G.; BIRYUKOVA, Z.M.; KARATAYEVA, I.M.;
  FIL'CHENKOVA, T.G.

Activated adsorption of nitrogen. Zhur.fiz.khim. 37 no.1:204-206
Ja '63.   (MIRA 17:3)

1. Institut azotnoy promyshlennosti.

L 5380-66   EWT(m)/EPF(c)/EWP(j)/T   RM
ACC NR: AP5025022   SOURCE CODE: UR/0286/65/000/016/0081/0081

AUTHORS: Dobrynina, L. Ye.; Fil'chikov, A. S.; Khromova, N. S.; Pavlov, S. A.

ORG: none

TITLE: A method for plasticizing polyamide products. Class 39, No. 173932

SOURCE: Byulleten' izobretsh. i tovarnykh znakov, no. 16, 1965, 81

TOPIC TAGS: plastic, polyamide, formaldehyde

ABSTRACT: This Author Certificate presents a method for plasticizing polyamide
products (such as films) with polyesters. To improve their quality, the products
are treated with formaldehyde.

SUB CODE: MT,GC/   SUBM DATE: 02Jul64/   ORIG. REF: 000/   OTH REF: 000

Card 1/1   UDC: 678.675.674.002.2:547.281.1

FILICHKIN, I.F.; KUKURUZNYAK, I.S.; ZEL'TSER, I.G.; VITIN, G.V.;
LIFSHITS, A.G.

Open-hearth furnaces or oxygen converters. Stal' 21 no.9:
792-798 S '61.   (MIRA 14:9)

1. Cherepovetskiy metallurgicheskiy zavod (for Filichkin).
2. Zavod "Krivorozhstal'" (for Kukuruznyak, Zel'tser). 3.
Gosudarstvennyy soyuznyy institut po proyektirovanjyu
metallurgicheskikh zavodov (for Vitin, Lifshits).
          (Open-hearth furnaces) (Converters)

FILCHOVSKA, P.D.

Spectral determination of germanium in coal ashes. Khim i industriia
34 no.6:204-205 '62.

FIL'CHUK, A.

Photographic pictures in wall newspapers.   Sov.foto 20
no.2:47 F '60.   (MIRA 13:7)

1. Slantsepererabatyvayushchiy kombinat "Kokhtla-Yarve".
                (Wall newspapers)

SHCHUROVA, P.G.

Weeds among the crops on the collective farms of Ordynskoye
District. Trudy TSSBS no.6:338-342 '63. (MIRA 17:7)

5(4)

AUTHORS: Lamp, F. V., Fild, F. G.   SOV/76-33-3-37/41

TITLE: On the Proton Affinity of Methane Determined by the Method of
                  Ion Impact (O srodstve metana k protonu, opredelennom metodom
                  ionnogo udara)

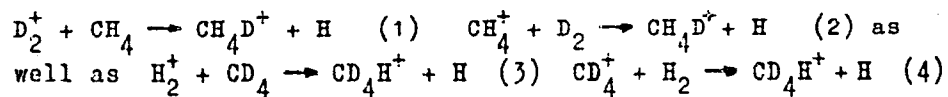PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 3, pp 732-733
                  (USSR)

ABSTRACT: Talrose and Frankevitch demonstrated in a paper (Ref 1) how
                  it is possible to determine the upper and lower limit of
                  proton affinity of saturated molecules by investigating the
                  reaction of the molecular ion in the ionization chamber of a
                  mass spectrometer. In this paper it is stated that, "if no re-
                  action is observed, an endothermic reaction takes place", which
                  is refuted by the authors of the present paper. The experimen-
                  tal results of a previous paper were therefore listed and ex-
                  plained. Mention is made of the results obtained with the mix-
                  tures CH_4-D_2 (Table 1) at changed pressure of D_2, constant
                  pressure of D_2 (Table 2), and changed pressure of CH_4 and the
                  mixtures CD_4-H_2 (Table 3). It was found that the reactions

Card 1/2

On the Proton Affinity of Methane Determined by the   SOV/76-33-3-37/41
Method of Ion Impact

$$D_2^+ + CH_4 \rightarrow CH_4D^+ + H \quad (1) \quad CH_4^+ + D_2 \rightarrow CH_4D^+ + H \quad (2) \text{ as}$$

well as $H_2^+ + CD_4 \rightarrow CD_4H^+ + H$ (3) $CD_4^+ + H_2 \rightarrow CD_4H^+ + H$ (4)

do not take place. It is assumed that this holds also for
similar reactions with compounds containing only hydrogen.
The reactions which lead to the formation of CH_5^+ and the cor-
responding deuterium isotopes indicate that the proton
affinity of methane is not below 113 kcal/mole. There are
3 tables and 2 references.

ASSOCIATION: Khumbl Oyl and Rifayning Kompani, Otdeleniye nauchno-issle-
                dovatel'skikh rabot i usovershenstvovaniy, Beytaun, Tekhas
                (Humble Oil and Refining Company, Department for Scientific
                Research Work and Development, Baytown, Texas)

SUBMITTED: November 19, 1958

Card 2/2

FILDAN, Mircea
Surname (in caps); Given Names

Country: Rumania

Academic Degrees: --

Affiliation: --

Source: Bucharest, Comunicarile Academei Republicii Populare Romine,
No 5, 1961, pp 525-527.

Data: "On Ensembles With Non-Connected Complementaries."

FILDAN, Mircea

Enxembles with nonconnex complement. Comunicarile AR 11 no.5:525-527 My '61.

1. Comunicare prezentata de academician Miron Nicolescu, membru al Comitetului de redactie, "Comunicarile Academiei Rupublicii Populare Romine"

USSR/Cultivated Plants - Fruits. Berries.   M

Abs Jour   : Ref Zhur Biol., No 18, 1958, 82557

Author   : Fil'dberg, K.A.
Inst   :
Title   : Frost Resistance in Grape in Donbas

Orig Pub   : Sad. i ogorod, 1958, No 1, 68-70

Abstract   : Winter injuries to grape in Stalinskaya and Voronezhskaya
               oblasts lower severely the productivity of the vineyards.
               According to the data of the test at the Donetskaya Expe-
               rimental Station of Viticulture (Stalino) in 1953-1956, t
               the following varieties have a heightened frost resistan-
               ce: Krasavitsa Tsegleda, Zhemchug Saba, Lidiya, Seedling
               Malengra and Matyash Yanosh.   Moderately and mildly win-
               ter resistant varieties are also indicated.

Card 1/1

FIL'DBRIN, M. G.

GRYAZNOV, N.S.; LAZOVSKIY, I.M.; FIL'DERIN, M.G.

Basic principle of coal crushing in preparation for coking. Koks i khim. no.8:3-10 '56.

(MLRA 10:1)

1. Vostochnyy uglekhimicheskiy institut.
(Coal, Pulverized)

FILDER, B.

"Remarks on an REI Lecture", p. 3

"The Flyers' Organization in Szolnok, a Leading Fighter in the Ful-
fillment of the Plan", p. 3 (REPULES, Vol. 7, no. 3, Feb. 1954,
Budapest, Hungary).

Source: Monthly List of East European Accessions, LC, Vol. 3, no. 5,
May 1954/Uncl.

FILDISEVSKI, P.

   Case of Dercum's disease. Neuropsihijatrija 2 no.1-2:66-71 1954

   1. Iz Neuropsihijatrijske klinike Medicinskog fakulteta u Skoplju
   (Direktor: Prof. Dr. B.Miketic)
         (ADIPOSIS DOLOROSA, case reports)

YUGOSLAVIA/Human and Animal Physiology. The Nervous System   T-12

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65695

Author   : Fildisovski P.
Inst   : -
Title   : The Problem of Activation of the EEG in Epilepsy

Orig Pub : Neuropsihijatrija, 1957, 5, No 1, 56-66

Abstract : In order to elicit diffuse pathology on the EEG in epilepsy,
            hyperventilation and stimulation with a flashing light were
            employed with success. For purposes of topical diagnosis
            in focal epilepsy, use was made of megimide, which does
            not cause the undesirable side effects characteristic of
            metrazol.

Card   : 1/1

FILDISEVSKI, Petar; SERDOBINSKAJA, Lidija

Personal experiences in the treatment of psychosis with
chlorpromazine. Med. glasn. 11 no.2:44-48 Feb 57.

1. Neuropsihijatriska klinika Medicinskog fakulteta u Skoplju
Upravnik: prof. dr. B. Niketic.
    (CHLORPROMAZINE, ther. use
        psychosis (Ser))
    (PSYCHOSES, ther.
        chlorpromazine (Ser))

FILDISEVSKI,P.

Electroclinical manifestations of syncopal seizures. Neuro-
psihijatrija 7 no.1-2:74-86 '59.

1. Neuropsihijatrijaska klinika Mediciniskog fakulteta - Skopje,
upravnik: prof. dr. B. Niketic.
    (SYNCOPE physiol.)
    (ELECTROENCEPHALOGRAPHY)

FILDISEVSKI,P.,doc. dr.; SERDOBINSKAJA,L.,dr.; KALICANIN,P.,dr.

Tetany and epilepsy. Med. glasn..13 no.5:253-258 My '59.

1. Neuropsihijatrisak klinika Medicinskog fakulteta u Skopju,
upravnik: prof. dr. B. Niketic.
        (TETANY compl.)
        (EPILEPSY compl.)

FILDISEVSKI, P.; TARNIK-MITREVA, Lj.; JANEVA, S.

Neuromyelitis optica (with report of a case). Neuropsihijatrija 8 no.1/2:86-96 '60.

1. Neuropsihijatrijska klinika (Upravnik: Prof. dr. B.Niketic) i Ocna klinika (Upravnik: dr. A.Keckarovski) Medicinskog fakulteta Skopje
  (MYELITIS)
  (OPTIC NERVE dis)

FILDISEVSKI, P.

Some current concepts of narcolepsy. Neuropsihijatrija 9 no.2/3:
141-155 '61.

1. Neuropsihijatrijska klinika Medicinskog fakulteta -- Skopje
(Upravnik: Prof. dr Bozidar Niketic).
(SLEEP DISORDERS)   (ELECTROENCEPHALOGRAPHY)

YUGO LAVIA

Docent Dr Petar FILDISEVSKI, Neuropsychiatric Clinic of Medical Faculty
in Skopje (Neuropsihijatrijska klinika Medicinskog fakulteta) Head
(Upravnik) Prof Dr B. NIKETIC, Skopje.

"Antidepressants."

Belgrade, Medicinski Glasnik, Vol 17, No 2, Feb 63; pp 63-66.

Abstract [French summary modified]: After a review primarily of French
and US literature, report on 54 patients in six diagnostic classifications,
treated during the last 18 months with 4 common antidepressants; 23
excellent, 19 good and 12 poor results - latter may depend more on the
diagnostic classification than on drug used, all of these drugs represent
a definite progress in therapy.

1/1

FILDISEVSKI, Petar; JOVANOVIC, Tih.

On some problems in the diagnosis of sciatica. God.Zborn.
Med. Fak.Skopje no.10:64-78 '63.

1. Neuropsikhijatrijska klinika medicinskog fakulteta, Skopje
(upravnik: prof. d-r Bozidar Niketic).

FILDISEVSKI, P.; KALICANIN, P.; JOVANOVIC, T.; MICEV, M.

On some problems of remote sequelae from cerebrocranial injuries.
God. zborn. med. fak. Skopje 11:99-117 '64.

1. Neuropsihijatriska klinika medicinskog fakulteta, Skopje
(upravnik: prof. dr. Petar Filuisevski).

FILDISEVSKI, P., prof. dr.

Some mental hygienic problems related to aging. Med. glas. 18 no.12:433-437 D '64

1. Neuro-psihijatrijska klinika Medicinskog fakulteta u Skopju (Upravnik: prof. dr. P. Fildisevski).

DJORDJEVSKI, P.

Activation of EEG by cardiazol and its role in the differentiation
of some clinical pictures in psychiatry. God. zborn. med. fak.
Skopje 11:125-238 '64.

1. Neuropsihijatriska klinika medicinskog fakulteta, Skopje
(v.d. upravnik: doc. d-r. P. Fildisevski).

PA 26/49T31

MULDISH, M. YA.

USSR/Engineering
Construction Industry
Earthquakes

Aug 48

"A Project for New Technical Specification in
Planning Buildings and Constructions in Seismic
Regions," M. Ya. Mildish, 3¼ pp

"Stroitel: Prom" No 8

Based on data from various USSR seismological
stations, a map has been constructed showing
relative seismic activity in the USSR. Regions
are classed according the "Ball" scale intensity
of seismic activity. Suggests that specifications

26/49T31

USSR/Engineering   (Contd)   Aug 48

for buildings in such regions, issued in 1939,
are obsolete, and that a new edition should be
published based on up-to-date data from recent
observations (since 1939).

26/49T31

FILIPISHEV, Slavcho, inzh.

Determining the capacity of pressure reservoirs in water supply.
Khidrotekh i melior 9 no. 4:106-108 '64.

GANCHEV, Iordan N., dots. inzh.; FILDISHEV, Slavcho, inzh.

Brick, reinforced siphons. Khidrotekh i mellor 9 no.8:246-247 '64.

GANCHEV, Iordan, N., dots. inzh.; FILOTCHEV, Slavcho Al., inzh.

A new construction of surface water reservoirs. Kihdrotehn i melior 9 no.9:264-265 '64.

KASSAI, Ferenc, dr., a muszaki tudomanyok kandidatusa; FILE, Andras

Optical methods and instruments in deep drilling. Hidrologiai koz-
leny 43 no.2:122-129 Ap '63.

1. Orszagos Foldtani Foigazgatosag, Budapest.

FILE, Jenono

"Development of productivity and the settlement of the
balance of payments in growing national economies" by
Jurgen Kromphardt (from "Jahrbucher fur Nationalokonomie
und Statistik," no.2, 1962). Reviewed by Mrs. Jeno File.
Stat szemle 41 no.4:428-429 Ap '63.

FILE, Jeno, dr.

Differentiation of collective farms. Stat szemle 42 no.11:
1103-1121 N '64.

1. Division Chief, Ministry of Agriculture, Budapest.

ACCESSION NR: AP5016912   CZ/0016/64/000/010/0373/0376

AUTHOR: Filo, Juraj (Engineer)

TITLE: Contrast adjustment in the plate circuit of a video amplifier

SOURCE: Sdelovací technika, no. 10, 1964, 373-376

TOPIC TAGS: video amplifier, TV receiver, potentiometer

ABSTRACT: Technical data are given on the contrast adjustment in television re-
ceiving a potentiometer in the plate circuit of the video amplifier. The
device has been in use in Czechoslovakia since 1957. Circuit specifications
are given and its operation described. Orig. art. has 2 figures.

ASSOCIATION: 00   INCL: 00   SUB CODE: EC, EE

SUB REF SOV: 000   OTHER: 011   JPRS

Card 1/1

RUMANIA

FILEA, Ivana, Veterinarian, of the Lunca Veterinary District
(Circumscriptia Veterinara Lunca), Turnu-Magurele Raion.

"Observations on a Focus of External Mammary Papillomatosis in
Cows."

Bucharest, Revista de Zootehnie si Medicina Veterinara, Vol 16,
No 11, Nov 66, pp 74-76.

Abstract: A discussion of an outbreak of external mammary
papillomatosis on a cooperative farm. The disease was trans-
mitted from sick cows to healthy ones by milking, and to calves
by suckling. The focus was successfully extinguished by the
use of an autovaccine combined with surgical removal of the
tumors starting the tenth day after vaccination. A brief sur-
vey of the therapeutic methods proposed by Rumanian and other
authors for this condition is included.
      Includes 4 Rumanian references.

1/1   80

YERMOLINSKIY, V.I.; PILEKIN, P.A.

Effect of the ground upon the amount of hydrocarbons in a caisson.
Gig.i san. no.4:45-46 Ap '54.   (MLRA 7:4)

1. Iz sanitarno-epidemiologicheskoy stantsii Kuybyshevskoy zhelez-
noy dorogi.   (Caissons) (Hydrocarbons)

SOV/124-58-3-3210

AUTHOR: Filekin, V. P.

TITLE: Determination of Resistance by Means of Oscillograms of the
           Nonlinear Decaying Vibrations of an Elastic System (Opredele-
           niye sily soprotivleniya po ostsillogrammam nelineynykh
           zatukhayushchikh kolebaniy uprugoy sistemy)

ABSTRACT: The problem of determining the expression of the nonlinear
           relationship between the force of resistance and the velocity is
           investigated for vibrations of nonhomogenous bars and plates.
           It is shown that the problem can be solved on the basis of an
           analysis of the oscillograms of subsiding vibrations of the
           tested specimen with application of asymptotic methods of
           nonlinear mechanics. A specific calculation sample is given.
           The conditions of smallness of the small parameter the powers
           of which appear in the expansion are not specified.

                                                   G. V. Savinov

Card 1/1

AUTHORS: Soyfer, A.M. and Filekin, V.P.   SOV/147 -58-1-19/22

TITLE: The Structural Damping of Oscillations in Thin-walled
             Shells of a Type Used in the Components of a Turbo-jet
             Engine (Konstruktivnoye dempfirovaniye kolebaniy tonko-
             stennykh obolochek tipa korpusnykh detaley GTD.)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy,
             Aviatsionnaya Tekhnika, 1958, Nr 1, pp 158-164 (USSR).

ABSTRACT: There is a large group of thin-walled plates and shells
     which have a very dense spectrum of natural frequencies in
     their working range. For these the known methods of reducing
     the amplitude of oscillation are difficult to apply and but
     little effective. For this reason, the authors have investi-
     gated the damping of oscillations by introducing into the
     structure distributed internal resistances using natural
     elements of the structure. The basic features of the method
     are as follows: 1) Damping is achieved by internal resis-
     tances arising in the component elements of the structure as
     it oscillates; 2) Damping of the oscillations is accomplished
     by distributed (over the surface of the components of the
     structure) resistive forces; 3) To create a damping effect
     natural components of the structure are used. The experimental
Card1/2

SOV/147-58-1-19/22

The Structural Damping of Oscillations in Thin-walled Shells of
a Type Used in the Components of a Turbo-jet Engine

method described in this paper makes possible a qualitative
conclusion about the effectiveness of structural damping for
thin-walled shells. It is to be noted that a reduction in
amplitude by dissipation of energy is accomplished over a wide
range of resonance frequencies. This is explained by the
resistive forces being distributed. The inner layer of a two-
layer shell can be used not only for damping the oscillations
and as a force element, but also to increase the heat resis-
tance of the outer layer. This paper is a first attempt at
making and investigating shells with structural damping. There
are 4 tables and 6 figures.

ASSOCIATION: Kafedra konstruktsii aviadvigateley, Kuybyshevskiy
                aviatsionnyy institut (Chair of Aircraft Engine Con-
                struction, Kuybyshev Aviation Institute)
SUBMITTED: November 10, 1957
                1. Cylindrical shells--Oscillation   2. Cylindrical shells
Card 2/2   --Structural analysis   3. Oscillations--Reduction

69321
S/147/60/000/01/010/018
E191/E581

16.7300   24.1000

AUTHOR: Filekin, V. P.

TITLE: Structural Hysteresis in a Built-up Beam in the Absence
            of Slipping of the Ends

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya
            tekhnika, 1960, Nr 1, pp 83-93 (USSR)

ABSTRACT: In several types of structure, slipping of the beam ends
            is prevented by the type of joint and no slipping takes
            place at points of maximum deflection. The mechanical
            model for the analysis is, therefore, a cantilever
            built-up beam loaded at the free end either by a
            transverse force alone or together with a bending moment.
            Compared with Goodman, L.E. and Klumpp, J.H. ("Analysis
            of Slip Damping with Reference to Turbine Blade Vibration",
            Journal of Applied Mechanics, 1956, Nr 3), in the problem
            considered here, slip is absent at the fixing point and
            the free end. In addition the end bending moment
            maintains a zero slope at the free end. The beam is
            built-up of two strips, generally of different depth,
Card 1/4   clamped together with a uniform pressure. The joint

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Slipping of the Ends

face can transmit shear stresses, whose maximum is the
friction stress due to the pressure. The stressed
condition in which the joint shear stress exceeds the
maximum is examined, The stress function for each
strip separately is expressed as a polynomial,
quadratic in terms of the length coordinate and cubic
in terms of the depth coordinate. Introducing the
boundary conditions, the stresses in each strip are
derived, first for the transverse force loading and
then for the force and moment loading. The results
are compared with Goodman and Klumpp, after expressing
the displacements and finding the relative slip. A
static loading cycle is defined from which the energy
dissipation due to slip is derived. The dissipation
coefficient, defined as the energy dissipated per cycle
to the maximum potential energy during the cycle, is
derived and illustrated in a family of curves (Fig 4),

Card 2/4   It depends only on the relative load amplitude (defined

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Slipping of the Ends

as the absolute load amplitude divided by the load at
which slipping begins) during the cycle and the ratio
of depths of the two strips. However, the maximum
of the dissipation coefficient does not depend on the
absolute load amplitude, but only on the limiting
friction forces and relative strip thicknesses.
Experimental verification was obtained on a test rig
in which the stress distribution and the slip were
measured along the length of the specimen. The slip
was measured optically by the movement between marks
on the two strips. Good agreement between analysis
and measurement was obtained. Nonuniform clamping
between the two strips admits local slipping and some
dissipation of energy. The dissipation is reduced by
increasing the difference in depth between the two
strips. Owing to the dependence of the dissipation
Card 3/4   coefficient on the relative load amplitude, it is

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Structural Hysteresis in a Built-up Beam in the Absence of Slipping of the Ends

concluded that in the course of dynamic loading when the specific joint pressure decreases, and with the same load amplitude a larger relative amplitude develops, a substantial increase of damping takes place up to a maximum (as illustrated in Fig 4). Subsequently, the relative amplitude increases still further and the damping diminishes and approaches zero asymptotically. At this point, the structure loses its load carrying capacity.
There and 9 figures, 1 table and 6 references, 4 of which are Soviet and 2 English.

ASSOCIATION: Kafedra konstruktsii aviadvigateley, Kuybyshevskiy aviatsionnyy institut (Chair of Aircraft Engine Construction, Kuybyshev Aviation Institute)

SUBMITTED: October 5, 1959

Card 4/4

88619

3/147/60/000/004/011/016
E191/E281

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ID 9110

AUTHOR: Filekin, V. P.

TITLE: Structural Hysteresis in Flange and Lap Joints

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
              Aviatsionnaya tekhnika, 1960, No. 4, pp. 107-116

TEXT: Bolted, riveted and welded joints in machine and
other structures are subject to deformation. Under certain
conditions, slippage along the contact faces is possible. Such
slippage will cause a dissipation of energy which can be used for
damping purposes. A composite cantilever beam consisting of two
parts bolted together, is used as the simplest example for analy-
sis. Experiments were carried out to verify the analytical and
numerical derivations. Certain general conclusions were obtained.
An increase in the number of slippage zones (fastening element
in the joint) leads to an increase of the relative stiffness of
the joint. Other things being equal, the energy dissipation
coefficient which expresses the damping property of the structure
is reduced. Riveted and bolted (or pinned) joints have, under
otherwise identical conditions, a larger damping capacity

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S/147/60/000/004/011/016
E191/E281

Structural Hysteresis in Flange and Lap Joints

compared with welded joints. With a large number of slippage
zones, it is necessary to take account of the elasticity of the
fastening element. The dissipation coefficient should then be
determined from an experimentally measured value of the relative
stiffness (relating the stiffness of the fastener elements to the
stiffness of the structural element between them. The majority
of practical structures operate at relative stiffnesses near
unity. For this reason, small variations in the manufacture
processes of batch produced structures (increasing the pre-load of
bolts, the conditions of the surface and other factors) may lead
to variations of the damping capacity of the structure by a factor
of several dozen. As a result, of such variations, sudden
inexplicable vibration troubles may appear in individual
specimens of otherwise acceptable batches. Making use of
vibration damping in practical designs, it is possible to obtain
dissipation factors for damping purposes in the range of 6-30%
(defined as the dissipation of energy per cycle in terms of the
energy stored under maximum deformation).

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88619
S/147/60/000/004/011/016
E191/E281

Structural Hysteresis in Flange and Lap Joints

There are 8 figures and 3 Soviet references.

ASSOCIATION: Kuybyshevskiy aviatsionnyy institut, Kafedra
              konstruktsii aviadvigateley
              (Kuybyshev Aviation Institute, Department of Design
              of Aircraft Engines)

SUBMITTED: March 21, 1960

Card 3/3

S/681/62/000/008/002/004
E081/E141

AUTHOR: Filekin, V.P.

TITLE: Forced vibrations of a compound bar with an end mass

SOURCE: Akademiya nauk Latviyskoy SSR. Institut avtomatiki i
            mekhaniki. Voprosy dinamiki i prochnosti.
            no.8, 1962, 13-27

TEXT: The paper is a continuation of previous work by the
present author (IVUZ, Aviatsionnaya tekhnika, no.1, 1960, and
no.4, 1960). The vibrations of a compound bar with an end mass
serve as a model for the vibration behaviour of many systems
containing flange and seam joints, for example the vibrations of a
gas turbine under the influence of the inertial forces of the
rotor. Consideration of the vibrations is necessary to determine
the dependence of natural frequency on amplitude, the conditions
for the onset of resonance, the dynamic coefficient of amplitude
amplification, and the parameters of the system corresponding to
maximum damping. The differential equation appropriate to the
vibrations of a compound bar is set up and solved in generalised
coordinates by the method of asymptotic analysis and by the Ritz
Card 1/2

Forced vibrations of a compound...   S/681/62/000/008/002/004
                                      E081/E141

method. The dependence of relative amplitude on frequency detuning, and phase shift between the forces and displacements are both considered. Experimental equipment for studying resonance curves is briefly described, and results obtained with it are shown to agree satisfactorily with theory. It is concluded that the damping of vibrations in a compound bar occurs under certain conditions because of slip in the flange and seam joints. The magnitude of the resonance amplitude depends on the relative stiffness of the joints and the relative amplitude of the driving force. The resonance frequency depends on the relative stiffness of the joints and the relative amplitude of deflection. The equations obtained enable the sequence of tuning of similar systems at maximum damping to be assessed. There are 9 figures and 1 table.

Card 2/2

L 02529-67   EWT(d)/EWT(1)/EWT(m)/EWP(w)/EWP(v)/T-2/EWP(k)   IJP(c)   JD/WW/EM

ACC NR:
        AR6017084   SOURCE CODE: UR/0285/66/000/001/0015/0015

AUTHOR: Setin, A. D.; Soyfer, A. M.; Polyanskiy, I. A.; Filekin, V. P.

TITLE: Rigidity variation and damping capacity of a gas turbine engine housing
with horizontal flanged connection

SOURCE: Ref. zh. Turbostroyeniye, Abs. 1.49.114

REF SOURCE: Tr. Kuybyshevsk. aviats, in-t, vyp. 19, 1965, 183-193

TOPIC TAGS: turbine engine, vibration damping, bending stress, material deformation

ABSTRACT: The rigidity of the gas turbine housing has a strong effect on critical
rotor conditions. The authors study the change in rigidity and damping capacity
when the housing is deformed in models of gas turbine engine housings with horizon-
tal flanged connection. It is shown that bending deformation in housings of this
type may cause slippage which reduces the bending rigidity of the housing and in-
creases power dissipation. This type of housing has a two-phase static deformation
cycle which is satisfactorily represented by the static cycle of a composite rod
properly designed to act as an equivalent rod for the housing. The reduction in
housing rigidity due to slippage is 10-30% of the initial value which gives a dissi-
pation factor $\psi=0.2$-0.6. The relative rigidity of the housing and the dissipation
factor basically conform satisfactorily to the theoretical relationships. The

Card 1/2   UDC: 621.438-21.001.5

I. 02529-67

ACC NR: AR6017084

amplitudes of forced vibrations may be calculated quite accurately from the parameters of the static cycle for the housing as well as from the optimum tightening forces corresponding to maximum deformation. [Translation of abstract]

SUB CODE: 13, 21

Card   2/2

L 07496-67   EWP(k)/EWT(d)/EWT(1)/EWT(m)/EWP(w)   IJP(c)   EM/WW/JD

ACC NR: AR6021257   SOURCE CODE: UR/0264/66/000/002/A008/A009

AUTHOR: Filekin, V. P.

TITLE: Free vibrations of a sectional rod with a mass at one end

SOURCE: Ref. zh. Vozd transp, Abs. 2A95

REF SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 19, 1965, 247-257

TOPIC TAGS: vibration stress, mechanical strength, stress analysis

ABSTRACT: The report discusses theoretical and experimental studies of free vibrations of a composite rod in the form of two bars clamped to each other. Slippage can occur along the line of contact. The author evolves a nonlinear differential equation for the combined elastic vibrations of the bars, giving effect to the dissipation of energy in the system. A perturbation function is written for different variants of propagation of the slippage phase. The solution is obtained in the form analogous for systems with one degree of freedom in generalized coordinates. Use is made of the method of asymptotic expansions in small parameter stages. Experimental setup is described. Calculated and experimental data were compared, the author notes that dispersion factor values defined from static cycles of such system, which are much easier to obtain experimentally, can be employed with sufficient levels of accuracy when calculating vibrations of real systems with a composite rod deformation pattern. [Translation of abstract] 9 illustrations and bibliography of 5 titles. V. Sibiryakov

SUB CODE: 20

Card 1/1   UDC: 539.4

L 07497-67   EWP(k)/EWT(d)/EWT(l)/EWT(m)/EWP(w)/EWP(v)   IJP(c)   EM/RM/RM/WW
ACC NR: AR6021258   SOURCE CODE: UR/0264/66/000/002/A009/A009

AUTHOR: Filekin, V. P.

TITLE: Rigidity and damping capacity of joints, considering the compliance of re-
inforcing components

SOURCE: Ref. zh. Vozd transp, Abs. 2A97

REF SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 19, 1965, 287-297

TOPIC TAGS: structural analysis, stress analysis, structure panel , WELD EVALUATION

ABSTRACT: The analysis involves an overhang beam of constant cross section, built up
from two lengthwise components joined by a hidden seam. The beam is stressed by a
uniformly distributed compressive force and a shearing force at its end. The author
compiles a system of equilibrium equations for segments between spot welds, giving
effect to the rigidity of such welds and the friction between beam components. The
calculation program is illustrated. Results of numerical calculations for several
methods of joining elements of the beam are compared to experimental data. [Translatio
of abstract] 5 illustrations and bibliography of 4 titles. V. Zalesov

SUB CODE: 20 ,13

Card 1/1   UDC: 539.4

FILEMON, E.

"Production and analysis of polygon profiles." In English, p. 81

PERIODICA POLYTECHNICA. (Budapesti Muszaki Egyetem) Budapest, Hungary
Vol. 3, No. 1, 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959
Uncl.

FILEMON, I.

Two aspects of additionally stressed elements.

p. 3
Vol. 3, no. 1, 1955
STAVEBNICKY CASOPIS.
Bratislava

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 3
    March 1956

FILEMON, Jozsef, adjunktus

Measuring the cutting moment caused by drilling and
tapping. Gep 15 no.6:222-226 Je '63.

1. Budapesti Muszaki Egyetem Gepgyartastechnologiai Tanszek.
Tanszekvezeto Dr. Lettner Ferenc, egyetemi tanar.

LETTRIK, F., prof. (Budapest, XI.,Stoczek u.2); FILEMON, J.   (Budapest,XI.,
Stoczek u.2)

Economic machine tool investment. Periodica polytechn eng 6 no.4:237-250
'62.

1. Department of Mechanical Engineering Technology, Polytechnical
University, Budapest.

FILEMON, Jozsef, Adjunktus

Kinematic principles of designing precision mechanisms. Finommechanika 2 no.5:129-133 My '63.
1. Budapesti Muszaki Egyetem Muszaki Mechanikai Tanszek.

FILENKO, A.I.

Amperometric determination of manganese, chromium, and vanadium in alloyed steels. Zav.lab. 29 no.12:1423-1425 '63.   (MIRA 17:1)

1. Kramatorskiy industrial'nyy institut.

FILENKO, A. I.

Determination of manganese, chromium, and vanadium in alloyed steels by amperometric titration with two indicator electrodes. Zhur. anal. khim. 19 no.6:709-714 '64.

(MIRA 18:3)

1. Kramatorskiy Industrial'nyy institut.

FILENKO, A.I.

Determination of manganese and chromium alloyed steels by amperometric titration with two indicator electrodes. Ukr.khim. zhur. 31 no.2:225-228 '65.   (MIRA 18:4)

1. Kramatorskiy industrial'nyy institut.

FILENKO, A.I.

Determination of chromium and vanadium in alloyed steels by the amperometric titration method with two indicator electrodes. Izv. vys. ucheb. zav.; khim. i khim. tekh. 8 no.3:397-401 '65.
(MIRA 18:10)

1. Kramatorskiy industrial'nyy institut, kafedra khimii.

FIANF A R

160. Quantitative determination of brilliant green by an iodimetric method. G. A. Valeman and A. R. Fienko (Cent. Pharm. Res. Lab., "GAPU," Ministry of Health, Ukr. SSR) *Farmatsevt. Zh.* 1963, 5 (3) 93-94 — The iodine reaction of peroxide $C_2H_6 \cdot N \cdots$. a weighed sample (0-82 to 0 1 g) of brilliant green in 10 ml of dil H_2SO_4 in a 1-ml calibrated flask add 25 ml of 0·1 N iodine soln, add the iodine and make the soln up to 1-ml and ... through cotton wool, rejecting the first portion and titrate the excess of iodine in a 25-ml portion of the filtrate against 0·1 N $Na_2S_2O_3$. 1 ml 0·1 N iodine soln. = 0·00593 g of brilliant green.

FILENKO, H.R

RAPAPORT, L.A.; FILENKO, A.R.

Refractometric method for the quantitative determination of alcohol solutions. Apt.delo 6 no.4:21-26 Jl-Ag '57.   (MIRA 10:9)

1. Iz TSentral'noy nauchno-issledovatel'skoy aptechnoy laboratorii (TsNIAL) Glavnogo aptechnogo upravleniya Ministerstva zdravookhraneniya USSR
          (REFRACTOMETRY)   (ALCOHOL)

FILENKO, G.G.

Reconditioning of the sorbent in condensate filters. Koks i
khim. no.9:53 '62.   (MIRA 16:10)

1. Zhdanovskiy koksokhimicheskiy zavod.
        (Coke industry—Equipment and supplies)
              (Filters and filtration)

LEVIN, R.S., professor; BOGOPOL'SKIY, I.A.; FILENKO, M.D.

Mass fluorography of young children. Vest.rent.i rad. no.6:45-48
N-D '53. (MLRA 7:1)

1. Iz rentgenologicheskogo otdeleniya (zaveduyushchiy I.A.Bogopol'skiy
Ob"yedineniya detskoy bol'nitsy im. K.A.Raukhfusa v Leningrade
(glavnyy vrach V.A.Vinogradova).
(Diagnosis, Fluoroscopic) (Tuberculosis--Diagnosis)

FILENKO, M. D.

USSR/Medicine - Roentgenology

FD 223

Card 1/1

Author   : Levin, R. S., Professor; Bogopol'skiy, I. A.; Filenko, M. D.

Title   : The technique of fluorographic examination of small children

Periodical : Vest. Rent. i Rad. 89-91, Mar/Apr 1954

Abstract   : The fluorographic method should find wide use in the prophylactic exami-
              nation of small children. Describes a special attachement to the fluoro-
              graph with which the chest cavity can be examined on an ordinary fluoro-
              graph filling the entire screen. Two drawings; two photographs (X-rays).

Institution : X-Ray Department (Chief - I. A. Bogolpol'skiy) United Children's Hospi-
              tal imeni K. A. Raukhfus in Leningrad (Head Physician V. A. Vinogradova).

L 29836-66   EWT(m)
ACC NR: AP6012874   SOURCE CODE: UR/0205/66/006/002/0272/0277 $2 \frac{7}{8}$

AUTHOR: Kudryashov, Yu. B.; Kakushkina, M. L.; Mekhtiyeva, S. M.; Rachinskiy, F. Yu.;
Sumarukov, G. V.; Filenko, O. E.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy
universitet)

TITLE: Comparative evaluation of the protective activity of potential radioprotective
agents (Bunte salts) on various biological models

SOURCE: Radiobiologiya, v. 6, no. 2, 1966, 272-277

TOPIC TAGS: radioprotective agent, radiation biologic effect, experiment animal
mouse, blood

ABSTRACT: It has been postulated that the aminoalkylthiosulfuric acids or Bunte salts can
be hydrolized in vivo to yield radioprotective aminoalkylthiols. In order to confirm this
and develop a means of testing potential radioprotective agents against in vitro models,
the activity of 7 of these salts was compared with that of 3 known radioprotective agents
in male white mice irradiated with 200 — 1000 rad, and in intact human erythrocytes,

Card 1/3   UDC: 577.391:628.58

L 29836-66

ACC NR: AP6012874

Radio-protective agents	No. of the preparation	Chemical formula	Mice 1	Mice 2	Mice 3	% protection compared to β-mercaptoethylamine: yeast cells 4	yeast cells 5	erythrocytes 6	erythrocytes 6	erythrocytes 7	chemical model: oxidation of β-carotene
						8	8	9: 0.01M	9: 0.02M	9: 0.02M	
Aminothiols	1	$H_2N(CH_2)_2SH$	200	100	−140±10	100 (1.6)	100 (1.7)	100 (3.1±0.1)	80 (2.0±0.2)	100 (2.6±0.3)	100
	2	$H_2N(CH_2)_2S-C{NH \atop NH_2}$	150	80	−103±7.0	100	100	100 (3.1±0.1)	—	100 (3.0±0.4)	[illegible]
Aminodisulfides	3	$H_2N(CH_2)_2-S$ $H_2N(CH_2)_2-S$	250	100	−120±11.1	100	100	100 (3.1±0.1)	—	50 (2.5±0.3)	—
Bunte salts	4	$H_2N(CH_2)_2SSO_3H$	500	90	−110±13.3	30	15	—	41 (1.4±0.1)	2.5 (1.1±0.05)	Preparations were insoluble in the samples
	5	$(CH_3)_2N(CH_2)_2SSO_3H$	200	16	−80±6.4	25	35	—	80 (2.1±0.2)	toxicity (0.3±0.13)	
	6	$HN \atop H_2N$ >C−NH(CH_2)_2SSO_3H	—	—	—	—	—	—	60 (1.8±0.1)	30 (2.2±0.17)	
	7	$H_2N-(CH_2)_3SSO_3H$	500	65	−72±7.7	30	15	—	—	—	
	8	$(CH_3)_2N(CH_2)_3SSO_3H$	100	53	−85±4.8	—	—	—	30 (1.8±0.2)	5.0 (1.2±0.05)	0
	9	$(CH_3)_2NCH_2CHSSO_3H$ CH_3	200	20	−35±4.0	20	45	—	30 (1.4±0.3)	5.0 (1.2±0.1)	0
	10	$H_2NCH(CH_2)_2SSO_3H$ CH_3	—	—	—	20	15	—	--	—	—

1 - Maximal tolerated dose of the preparation (mg/kg); 2 - Survival to 30 days after irradiation with 700 r, %; 3 - ΔEh of mouse tissue (mv) 20-30 min. after inj. of the preparation; 4 - radiation model; 5 - radiomimetic model; 6 - radiation model (300 kr); 7 - radiomimetic model; 8 - concentration of each preparation in 0.02 M; 9 - Concentration of the preparations.

Note: The numbers in parentheses indicate the absolute value of the protective coefficient, representing the ratio $\frac{t_{50\%\,(a)}}{t_{50\%\,(k)}}$ for the erythrocyte models and the ratio $\frac{S_{D_{50}(a)}}{S_{D_{50}(k)}}$ for the yeast models, where t_{50} = time for 50% hemolysis, $S_{D_{50}}$ = survival of colonies in % at dose D_{50}. (a) indicates addition of a radioprotective agent, and (k) indicates control, i.e. without the addition of a radioprotective agent.

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L 29836-66

ACC NR: AP6012874

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haploid yeast cells (Zygosaccharomyces baillii), or solutions of β-carotene irradiated with 1000 rad/min; the protective agents were injected intraperitoneally 25 — 30 min before irradiation or added to the suspension 1 — 5 min before irradiation or addition of a radio-mimetic agent. The results shown in the   table indicate that compounds can be tested for radioprotective activity in in vitro systems, but that prolonged contact is re-quired. Orig. art. has: 1 table, 1 figure, and 2 formulas.   [08]

SUB CODE: 06/   SUBM DATE: 05Aug64/   ORIG REF: 009/   OTH REF: 001/   ATD PRESS:
5,013

Card 3/3: KV

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