IVANOV, I.T.; MONFRED, Yu. B ; PILYUGIN, A.I.; SERGEYEV, D.D.; SYPCHUK, P.F.; IZRAILOVICH, N.Ye., inzhener, redaktor; YEGOROVA, N.O., redaktor; TOKER, A.M., tekhnicheskiy redaktor.

[Construction of dwellings and civil buildings in areas of underground coal mining] Konstruktsii zhilykh i grazhdhanskikh zdanii v raionakh s podzemnoi razrabotkoi uglia. Moskva, Gos.izd-vo lit-ry po stroit. i arkhitekture, 1955. 68 p. (MLRA 9:1)
(Building)

97-5-2/13

AUTHORS: Aleksandrova, O.I., (Cand. of Architecture), Maklakova, T.G., (Cand.Tech.Sciences) and Sergeyev, D.D. (Engineer).

TITLE: Problems of standardisation of precast concrete and reinforced concrete structural components for the mass production of large-block and large-slab buildings.(Voprosy tipizatsii sbornykh betonnykh i zhelezobetonnykh izdeliy dlya massovogo krupnoblochnogo i krupnopanel'nogo zhilishchnogo stroitel'stva).

PERIODICAL: "Beton i Zhelezobeton" (Concrete and Reinforced Concrete) 1957, No.5, pp.190-192 (USSR).

ABSTRACT: The "Catalogue of Types of Large Walling Concrete Blocks for Rural and Urban Buildings" approved by the Gosstroy of the USSR on the 17th February, 1955 is a standard handbook of standard building units. It includes a section on walling blocks for large-block houses, schools and hospitals. Plans were prepared by various ministries as, e.g., the Ministry for Industrial Buildings for the Metallurgical and Chemical Industries of the USSR (Ministerstvo Stroitel'stva Predpriyatiy Metallurgicheskoy i Khimicheskoy Promyshlennosti SSSR), the Ministry of Building of the USSR (Ministerstvo Stroitel'stva SSSR), the Ministry for Transport Constructions of the USSR (Ministerstvo Transportnogo Stroitel'stva),

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Problems of standardisation of precast concrete and reinforced concrete structural components for the mass production of large-block and large-slab buildings. (Cont.)

the Ministry for the Coal Industry of the USSR (Ministerstvo Ugol'noy Promyshlennosti SSSR), the Lengorispolkom and the Mosgorispolkom. The standards are based on the same constructional plan (with 3 longitudinal load-carrying walls) and varying heights of blocks and widths of span and for 2 floor heights - 3.3 and 3.9 m. The handbook contains 118 basic types (78 for external walls and 40 for internal walls and partitions). 80 standards are designed for housing purposes and 38 for schools and hospitals. With all modular variations there are 2766 different sizes of blocks, 1899 of which are for housing constructions. Apart from the above mentioned standards a further 10% of special units can be used in one project. During the Tbilisi Conference held in 1956, problems on assembled building methods were discussed with special reference to methods used in areas affected by earthquake and in undermined areas. The use of a different assortment of precast concrete blocks not contained in the above handbook was recommended. During an investigation on 8 large-block buildings constructed by Gorstroyproyekt, SAKB and Tsentrogiproshakht (on the basis

Problems of standardisation of precast concrete and reinforced concrete structural components for the mass production of large-block and large-slab buildings. (Cont.).

of the approved nomenclature) it was shown that in each of these projects between 9 - 43 standard blocks were used and between 2 - 14 special blocks, altogether 72 modular blocks and 49 special blocks. An investigation was carried out by the Institute for Building Techniques of the Academy of Architecture of the USSR (Institut Stroitel'noy Tekhniki Akademii Arkhitektury SSSR) on the possibility of obtaining a limited complete assortment of modular types of precast concrete and reinforced concrete units for both methods of construction, i.e. large block- and large panel-constructions. The result of the investigation was proved to be correct and the experimental planning of 5-storey blocks of flats was undertaken by the Academy of Architecture of the USSR in 1953, in cooperation with Gorstroyproyekt. The houses were of the non-skeleton panel-type. 28 modular blocks were used when the planning was based on load-carrying spine walls, 32 modular block types were needed when load carrying partitions were used.

AVAILABLE:

Card 3/3

MAKLAKOVA, Tat'yana Georgiyevna; SERGEYEV, D.D., nauchnyy red.; KALISH, V.G., nauchnyy red.; GORSHKOV, A.P., red.; SMOL'YAKOVA, M.V., tekhn.red.

[Panel housing construction; structural and architectural solutions] Panel'noe domostroenie; razvitie konstruktivnykh i arkhitekturno-planirovochnykh reshenii. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1959. 190 p. (MIRA 13:6)

(Concrete slabs) (Apartment houses)

ROZANOV, N., inzh.; SERGEYEV, D., inzh.

Large-panel housing construction in France. Zhil. stroi. no.7:29-32 '59. (MIRA 12:10)
(France--Apartment houses) (Concrete slabs)

SERGEYEV, D., inzh.

Large-panel housing construction in Sweden. Zhil. stroi. no.11:28-30 N '60. (MIRA 13:11)

(Sweden--Apartment houses)

SERGEYEV, D., inzh.

New method for assembling large-panel buildings. Zhil. stroi. no.12: 5-7 '60. (MIRA 13:11)

(Precast concrete construction)

SERGEYEV, D., inzh.

"AOS" [anti-freeze solution] in action or "like water off the duck's back." Nauka i zhizn' 28 no.8:18 Ag '61. (MIRA 14:8)
(Excavating machinery) (Anti-freeze solutions)

DROZDOV, Pavel Filaretovich, dots., kand. tekhn. nauk; SHESTOV, B.S., nauchn. red.; SERGEYEV, D.D., nauchn. sotr., retsenzent; MKRTUMYAN, A.K., nauchn. sotr., retsenzent; BOLOTINA, A.V., red. izd-va; KASIMOV, D.Ya., tekhn. red.

[Large-panel apartment houses from precast reinforced concrete] Krupnoelementnye zhilye zdaniia iz sbornogo zhelezobetona; konstruktsii i raschet. Moskva, Gosstroi-izdat, 1963. 177 p. (MIRA 16:7)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut industrial'nykh zhilykh i massovykh kul'turno-bytovykh zdaniy Akademii stroitel'stva i arkhitektury SSSR (for Sergeyev, Mkrtumyan).
(Apartment houses)

KOSITSYN, B.A.; LISHAK, V.I.; SERGEYEV, D.D.

Responses to P.P.Shagin's article "The problem of settling joints in frameless apartment houses on irregularly compressed and sagging foundations." Osn., fund. i mekh.grun. 6 no.2:23-26 '64. (MIRA 17:4)

ZIL'BERSHTEYN, Anatoliy Borisovich, mekhanik-nastavnik; KONCHAYEV, Viktor Ivanovich, mekhanik-nastavnik; SERGEYEV, D.I., red.; TIKHONOVA, Ye.A., tekhn. red.

[Main engines on seagoing motorships] Glavnye dvigateli morskikh teplokhodov. Moskva, Izd-vo "Morskoi transport," 1963. 170 p. (MIRA 16:7)

1. Chernomorskoye gosudarstvennoye morskoye parokhodstvo (for Zil'bershteyn). 2. Baltiyskoye gosudarstvennoye morskoye parokhodstvo (for Konchayev).

(Marine diesel engines)

FILIPPOV, Anatoliy Pavlovich; VASIL'YEV, Yuriy Nikolayevich; SERGEYEV, D.I., red.

[Operation of marine internal combustion engines on heavy fuel] Ekspluatatsiia sudovykh dvigatelei vnutrennego sgoraniia na tiazhelom toplive. Moskva, Transport, 1965. 343 p. (MIRA 18:10)

ZAMOTA, V.I.; SVICHINSKIY, N.N.; SERGEYEV, D.I., red.; TIKHONOVA, Ye.A., tekhn. red.

[Operation, repair, and modernization of the power plant on "Kazbek"-type tank vessels] Opyt ekspluatatsii, remonta i modernizatsii silovoi ustanovki tankerov tipa "Kazbek." Moskva, Izd-vo "Morskoi transport," 1963. 174 p. (MIRA 16:10)

(Marine diesel engines)

LUBOCHKIN, Boris Iosifovich; SERGEYEV, N.I., red.; USANOVA, N.B., tekhn. red.

[Marine steam boilers] Morskie parovye kotly. Izd.2., perer. i dop. Moskva, Izd-vo "Morskoi transport," 1963. 607 p. (MIRA 17:2)

AKIMOV, Pavel Petrovich, prof.; SERGEYEV, D.I., red.

[Power plants of seagoing vessels] Silovye ustanovki morskikh sudov. Izd.2., perer. Moskva, Transport, 1965. 290 p. (MIRA 18:6)

SHVED, Anatoliy Petrovich; VORUSHILO, Vladimir Ivanovich; SERGEYEV, D.I., red.

[Marine power plants and their operation; practical exercises for a course] Sudovye silovye ustanovki i ikh ekspluatatsiia; prakticheskie zaniatiia po kursu. Moskva, Transport, 1965. 101 p. (MIRA 18:3)

KUZ'MIN, Nikolay Ivanovich; SERGEYEV, D.I., red.

[Adjustment of marine diesel engines] Regulirovanie sudovykh dizelei. Izd.2., perer. i dop. Moskva, Transport, 1966. 132 p. (MIRA 18:2)

: [illegible] Problems of [illegible] Tumors. [illegible] Operative Oncology

. JOUR. : RZBiol., No. 12 1958, No. 56422

: [illegible], D.M., [illegible], I.D.

: [illegible] Treatment with Phytoncides of Garlic of Certain Forms of Precancer of the Lip

ORIG. PUB. : Sb. Nauchn. Rabot Vrachey Kirovogradsk. Obl., 1957, No.1, 59-61

: Observations were made of 194 patients with [illegible] diseases of the lip. 69 ([illegible]) were residents of the city and 1[illegible] ([illegible]) lived in agricultural settlements. The author explains [illegible] in terms of the influence of meteorologic factors acting on the area of the lip and face of persons working in the open air. 134 (7[illegible]) were men, and 60 (30) were women. 7[illegible] ([illegible]) were of middle age. 106 (5[illegible]) of the patients showed local hyperkeratoses, 64 (3[illegible]) leukoplakia, 14 (7.[illegible]) fissures of the lip, 7 ([illegible]) simple ulcer of the lip, and 2 a suspicion of cancer of the lip. The patients were subjected to

: 1/2

SERGEYEV, D.M.; LEONOV, I.D.

Trial treatment of some precancerous forms of lip lesions with garlic. Vop.onk. 4 no.2:205-206 '58. (MIRA 12:8)

1. Iz Kirovogradskogo oblastnogo onkologicheskogo dispansera (glavnyy vrach - D.M.Sergeyev). Adres avtorov: Kirovograd, ul. K.Libknekhta, 81, Oblonkodispanser.

(GARLIC ther. use
precancerous lesions of lips (Rus))
(LIPS, dis.
precancerous lesions, ther., garlic (Rus))

SERGEYEV, D. N.

Shipbuilding

Remont stal'nykh sudov zhelezobetonom. Leningrad, Izdatel'stvo Ministerstva Rechnogo Flota SSSR, 1959.pp. 160, diags., tables bibliog., 26 x 17.

LXIII-1

SERGEYEV, D.P., inzh.

The TNAG acetylene generator with vacuum insulation. Izobr.v SSSR 2 no.12:11-12 D '57. (MIRA 10:12)
(Acetylene generators)

SERGEYEV, D.P., inzh.

Devices used in cleaning filtering plates. Izobr.v SSSR 3 no.1:12-13 Ja '58. (MIRA 11:1)
(Filters and filtration)

SERGEYEV, D.P., inzh.

New techniques for quenching glowing coke. Izobr.i rats. no.7:9 Jl '58. (MIRA 11:9)
(Coke)

SERGEYEV, D.P., inzh.; SUKHAREVA, R.A., red.; KAMYSHNIKOVA, A.A., tekhn. red.

[Collection of inventions; machine building for the petroleum industry] Sbornik izobretenii; neftianoe mashinostroenie. Moskva, TSentr.biuro tekhn.informatsii, 1961. (MIRA 15:7)
59 p.
1. Russia (1923- U.S.S.R.) Komitet po delam izobreteniy i otkrytiy.
(Petroleum industry--Technological innovations)

KALITENKO, K.L., inzh.; SERGEYEV, D.P., inzh.

Self-propelled equipment for continuous production of glass-reinforced plastic pipes and their placement in trenches. Stroi. i dor. mash. 9 no.3:4-5 Mr '64. (MIRA 17:6)

SERGEYEV, D. V.
FEDOROV, Georgiy Vasil'yevich; MIZIKOV, S.M.; SERGEYEV, D.V.; SOKOLOV, L.S., inzhener, redaktor; BOBROVA, Ye.N., tekhnicheskiy redaktor

[Subway rolling stock; type D cars] Podvizhnoi sostav metropolitena vagony tipa D. Moskva, Gos.transp.zhel-dor.izd-vo, 1957. 251 p. (MLRA 10:9)
(Subways--Rolling stock)

SERGEYEV, D.V.

Method of placing helminth test eggs in the soil. Med.paraz. i paraz. bol. 26 no.2:194-195 Mr-Ap '57. (MLRA 10:7)

1. Iz Vsesoyuznogo instituta gel'mintologii imeni akad. K.I. SKryabina (dir. instituta - akad. K.I.Skryabin)

(HELMINTHS
method of placing test eggs into soil)

(OVUM
helminth test eggs, method for placing into soil)

SERGEYEV, D.Ye., master; FADEYEV, V.M., master; IVANOV, V.N., master; GOMZA, M.S., master

"Design and regulation of Cotton machines" by N.I.Malysheva, A.V.Baryshnikov, N.I.Kosenkov. Reviewed by D.E.Sergeev and others. Tekst.prom. 20 no.6:78-81 Je '60. (MIRA 13:7)

1. Leningradskaya trikotazhnaya fabrika "Krasnoye Znamya." (Knitting machines)
(Malysheva, N.I.) (Baryshnikov, A.V.) (Kosenkov, N.I.)

S/146/61/004/002/006/011
B124/B206

9,7000

AUTHORS: Vavilov, A. A., Bezvikonnyy, A. A., Sergeyev, E. V.

TITLE: Potentiometer-type tracking system with dynamic error compensation

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 2, 1961, 58-66

TEXT: This paper presents the results of developing the system mentioned in the title for joint operation with a programming device performing the approximation to a given function by means of linear sections. For the total elimination of the steady dynamic error and considerable reduction of the transitional dynamic error of the tracking system it is of advantage to use compensation circuits in the main feedback and at the system input. The diagram of such a tracking system is given in Fig. 1. The tracking system contains: ПУ a programming device for linear approximation of the given function; $W_1(p)$ the elements of the main part of the tracking system; $W_{kI}(p)$ a compensating circuit at the input of the system, and $W_{kII}(p)$ a compensating circuit in the main feedback of the system. For elaboration

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Potentiometer-type tracking...

of the system it is suitable to achieve a velocity compensation of the steady dynamic error by using the compensation circuit in the main feedback of the system, and of the transitional dynamic error by using a compensation circuit connected to the input of the system. For the tracking system shown in Fig. 1, the following correlations exist between the output value x(p), the dynamic error of the system x(p), and the controlling action $x_c(p)$:

$$x(p)=\frac{W_1(p)\,[1+W_{kI}(p)]}{1+W_1(p)\,W_{kII}(p)}\,x_y(p); \qquad (1)$$

$$\Delta x(p)=\frac{1+W_1(p)\,[W_{kII}(p)-1-W_{kI}(p)]}{1+W_1(p)\,W_{kII}(p)}\,x_y(p), \qquad (2)$$

where $W_1(p)=N_1(p)/D_1(p)$ is the transmission function of the open tracking system without considering the compensation circuits, $W_{kI}(p)=N_{kI}(p)/D_{kI}(p)$ the transmission function of the compensation circuit at the input of the system, and $W_{kII}(p)=N_{kII}(p)/D_{kII}(p)$ the transmission function of the compensation circuit in the main feedback of the system. Fig. 2 shows a potentiometer-type tracking system with the amplifier ЭМУ-3А(EMU-3A) and

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Potentiometer-type tracking...

the electric motor СЛ-621 (SL-621). For the transmission function of the compensation circuit with respect to the controlling action,

$$W_{kI}(p) = u_{kI}(p)/u(p) = K_{3t}R''_4C_1p^2/\left[(R'_4 + R''_4)Cp + 1\right]$$

$$= \left[(R''_4/R'_4 + R''_4)(K_{3t}/T_3)T_3^2p^2\right]/(T_3p + 1) = (\alpha T_3^2p^2)/(T_3p + 1) \quad (5)$$

holds, where $T_3 = (R'_4 + R''_4)C_1$ is the time constant of the differentiating circuit, $\alpha = (R''_4/R'_4 + R''_4)K_{3t}/T_3$ the transmission coefficient of the compensating circuit $W_{kI}(p)$, which connects the voltage u_{kI} at the output of the compensation circuit with the controlling action to the system u, and K_{3t} the transmission coefficient of the voltage u' at the potenticmeter pickup to the controlling action u. The logarithmic amplitude-frequency characteristics $L_1(\omega)$ and phase-frequency characteristics $\varphi_1(\omega)$ of the open system under consideration of the flexible and rigid feedbacks are given in Fig. 3. The low-frequency range of the simplified equivalent system determines the steady dynamic error, and the mean frequency range the

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Potentiometer-type tracking...

transitional dynamic error. On the basis of the asymptotic characteristics $L_1(\omega)$ and $\varphi_1(\omega)$ shown in Fig. 3, the simplified transitional function of the system has the form $W_{1e}(p) = K/\left[p(Tp+1)^2\right]$ (8), where K is the quality of the system without consideration of the compensation circuits and T the time constant of the simplified equivalent system. In Fig. 3, the logarithmic frequency characteristics of the open system are given under consideration of the compensation circuit $W_{kII}(p)$: $L(\omega) = L_{e1}(\omega) + L_{kII}(\omega)$ and $\varphi(\omega) = \varphi_{e1} + \varphi_{kII}(\omega)$. As can be seen from these characteristics, the introduction of a compensation circuit with the time constant $T_1 = 0.5$ sec into the main feedback of the system is of no essential effect on the stability of the system. The oscillogram 4,a shows the operation of the tracking system without compensation of the dynamic error at a transmission speed $\vartheta = 1.2$ v/sec; in this case the steady error is $\Delta\bar{u}_{st} = 170$ mv and the maximum transitional dynamic error $\Delta\bar{u}_{max} = 195$ mv. Fig. 4,б shows the operation of the tracking system with compensation of the steady error by means of a compensation circuit in the main feedback of the system, 4,б

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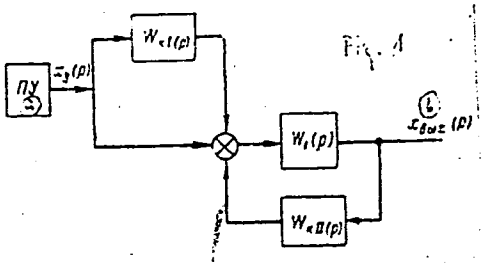
Potentiometer-type tracking...

the operation of a tracking system with compensation of the steady and transitional dynamic errors for the same transmission speed of $\dot{f} = 1.2$ v/sec. From Fig. 4,б results that the steady error of the tracking system practically equals zero and the maximum transitional dynamic error is $\Delta U_{max} = 25$ mv. This study was recommended by the Department of Automation and Telemechanics. There are 4 figures and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: King L. H. Reduction of Forced Error in Closed-Loop Systems. Proc. I. R. E. 1953, v. 41, No. 8, August, 4648, pp. 1037-1043.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Electrotechnical Institute imeni V. I. Ul'yanov (Lenin))

SUBMITTED: December 19, 1960

Fig. 1



Legend to Fig. 1:
а) ПУ programming device
б) $x_{outp}(p)$

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L 14645-66 EWT(d)/EWT(1) GW SOURCE CODE: UR/3175/65/000/026/0084/0089
ACC NR: AT6004298

AUTHOR: Sergeyev, E. V.

ORG: none

TITLE: Filtering periodic signals which are quantized with respect to time

SOURCE: USSR. Gosudarstvennyy geologicheskiy komitet. Osoboye konstruktorskoye byuro. Geofizicheskaya apparatura, no. 26, 1965, 84-89

TOPIC TAGS: filter circuit, ~~periodic pulse~~, electric filter

ABSTRACT: The author considers two methods for filtration of a discrete signal. The first method consists of using an integrator to convert the discrete signal to a continuous quantity with subsequent filtration by a continuous filter. The second method consists of adding the values of the signal taken at discrete instants during a certain time interval. Block diagrams are given of the devices used for filtration by both these methods. A comparison of these two filtering methods shows that the second method gives higher accuracy and requires less time for determining the value of the constant components. Orig. art. has: 3 figures, 7 formulas.

SUB CODE: 09/ SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 001

Card 1/1

L 33261-66 EWT(d)/FSS-2

ACC NR: AT6012789 (N) SOURCE CODE: UR/3175/66/000/027/0120/0124

65
B+1

AUTHOR: Sergeyev, E. V.

ORG: GIPKh

TITLE: Methods for the determination of amplitude and phase of a time-quantized periodic signal

SOURCE: USSR. Gosudarstvennyy geologicheskiy komitet. Osoboye konstructorskoye byuro. Geofizicheskaya apparatura, no. 27, 1966, 120-124

TOPIC TAGS: harmonic analysis, detection, ~~synchronous detection~~, signal correlation, ~~sampled signal correlation~~, signal processing, ~~signal processing method~~

ABSTRACT: This paper discusses methods for the determination of amplitudes and phases of the harmonic components of a suitable data hold of a "time quantized" (sampled) signal. With reference to the block diagram of a computational system, Fig. 1, expressions for the demodulator outputs in the case of the synchronous detection method, and in the case of the harmonic analysis method are given. The central topic is the choice of a sufficient, effective integration time interval, in terms of the number of the discreet sampling intervals, which would assure optimum precision. Expressions for the minimum attainable errors are developed for the synchronous detection method, and conditions for the attainment of perfect precision with the harmonic analysis method are specified. Comparison of these two methods shows the superiority of the harmonic analy-

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sis method, as far as precision is concerned. However, the method requires consideration of a double number of harmonic components and requires an additional operation of multiplication. The method of synchronous detection recommends itself only in those cases when the data hold function of the discrete signal is in its form close to a sinusoid. The proposed computational block diagram can be realized by either analogue or digital components.

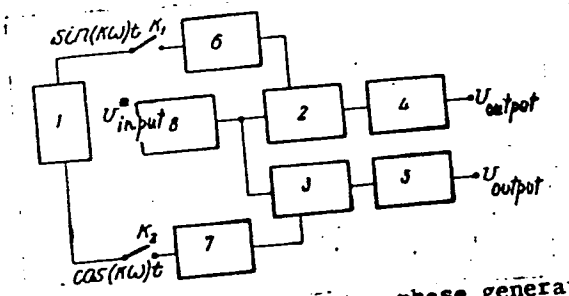


Fig. 1. Block Diagram of computations. 1 - two-phase generator of sinusoidal oscillations; 2, 3, - demodulators - for the synchronous detection; or - multipliers - for the harmonic analysis; 4, 5, - integrators; 6,7,8 - memories; K_1, K_2 - instantaneous switches.

Orig. art. has: 10 formulas

SUB CODE: 09, 12/ SUBM DATE: None/ ORIG REF: 002

Card 2/2

ACC NR: AN7004540 SOURCE CODE: UR/9030/67/000/007/0014/0015

AUTHOR: Sergeyev, F.

ORG: none

TITLE: Helms at the CIA

SOURCE: Nedelya, no. 7, 5-11 Feb 67, p. 14, cols. 1-4, p. 15, cols, 1-2, and pages 22-23, cols. 1-4

TOPIC TAGS: intelligence, intelligence system, intelligence personnel

ABSTRACT:
The author discusses the organization and function of the CIA, the reasons for the nomination of Helms, and the difficulties that he is already encountering. It is still difficult to say how many months or years Helms will remain and in what measure his arrival will solve the internal quarrel between the CIA and DIA. His nomination, which reflects a general reshuffling in the American state apparatus, is designed to breathe new life into the intelligence organism; it means even more CIA activity in foreign territories. The author also discusses the relations of CIA with Congress and with the press.

SUB CODE: 15/05/ SUBM DATE: none/ ATD PRESS: 5114

Card 1/1 UDC: none

SERGEYEV, F.

Mechanized receiving of ear corn. Muk.-elev. prom. 26 no. 12:11 D '60. (MIRA 13:12)

1. Tekhnoruk Yevpatoriyskoy realizatsionnoy bazy.
(Yevpatoriya--Grain-handling machinery)
(Corn (Maize))

SERGEYEV, F.

Using a bulldozer to dig a transportation gallery. Muk.-elev. prom. 28 no.1:26 Ja '62. (MIRA 16:7)

1. Zamestitel' direktora po kachestvu Yevpatoriyskoy realizatsionnoy bazy. (Bulldozers)

KIRICHENKO, P.; RATANOVA, V.; SERGEYEV, F.; POLCHANINOVA, G.

Disinfecting grain with methyl bromide in the silos of elevators equipped with recirculating units. Muk.-elev. prom. 29 no.2: 8-9 F '63. (MIRA 16:8)

1. Khar'kovskaya mashinoispytatel'naya stantsiya (for Kirichenko). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki (for Ratanova, Sergeyev, Polchaninova).
(Methane) (Grain--Disinfection)

SOLODOVNIK, P.; POLCHANINOVA, G.; SERGEYEV, F.; VIKHANSKIY, Yu.

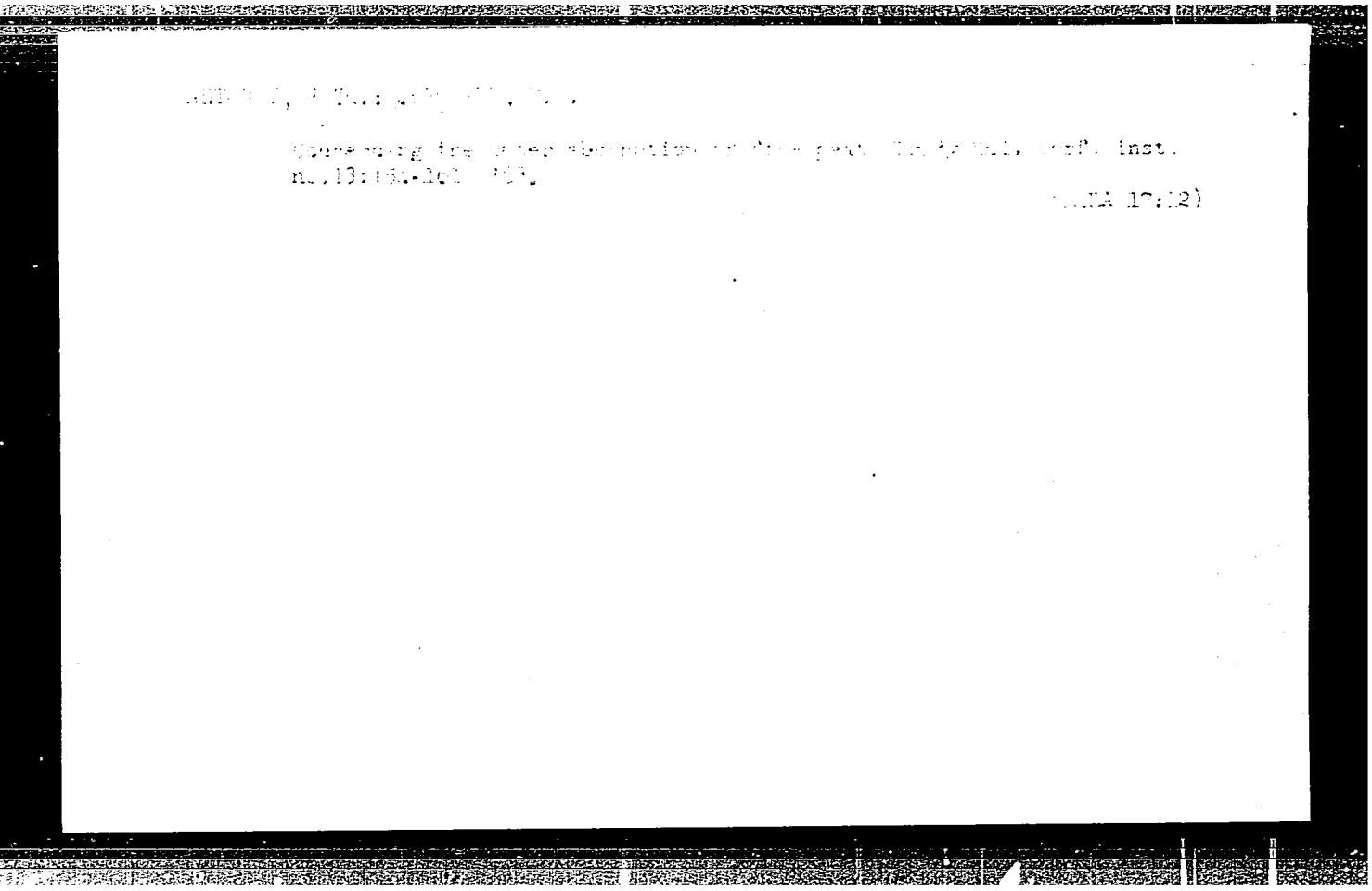
Practices in disinfecting seed peas with chloropicrin in winter. Muk.-elev. prom. 29 no.3:9 Mr '63. (MIRA 16:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki.

SERGEYEV, F.A.

Heart wound. Khirurgiia 35 no.10:116 O '59. (MIRA 12:12)

1. Iz khirurgicheskogo otdeleniya (zav. F.A. Sergeyev) Voroshilovskoy bol'nitsy No.1, Dzerzhinsk Gor'kovskoy oblasti.
(HEART--WOUNDS AND INJURIES)



21(7) SOV/56-35-5-45/56

AUTHORS: Kirillov-Ugryumov, V. G., Kotenko, L. P., Kuznetsov, Ye. P., Sergeyev, F. M.

TITLE: The Elastic Scattering of π^+-Mesons on Carbon at Energies of 5 ÷ 22 MeV (Uprugoye rasseyaniye π^+-mezonov na uglerode pri energiyakh 5 ÷ 22 MeV)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1300-1302 (USSR)

ABSTRACT: For their measurements the authors used a propane bubble chamber having a volume of 750 cm^3. This chamber was irradiated on the phasotron of the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute for Nuclear Research) with a beam of positive pions. The energy interval investigated corresponds to the residual ranges of from 0.125 to 2 g/cm^2 of pions in propane. The pions were ascertained by the $\pi \rightarrow \mu \rightarrow e$ decay when being slowed down in the working substance. A total of 5675 photographs of photon traces was dealt with. Formation of stars by pions at from 5 to 22 MeV was not investigated, the inelastic scattering of positive pions is only inconsiderable at these energies. The authors determined the angular projections of the single scattering

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of pions to the plane of the film in the photographic camera. Of the 5675 pions 75 were scattered round an angle (within the energy interval investigated), the projection of which is greater than 15°. After Coulomb (Kulon) scattering was taken into account, 31 nuclearly scattered particles remained. The corrections taken into account when determining the nuclear scattering on carbon are given. A table contains the elastic scattering cross sections of pions determined by the authors of the present paper as well as by other authors. At energies of 8 - 22 MeV the cross sections found have the same values within the error limits as the elastic scattering cross sections at 33 MeV. At 5 - 8 MeV the scattering cross section increases quite considerably. Within this energy range the wavelength of the pion already exceeds the dimensions of the carbon nucleus. An analysis of the cross section energy dependence and of the angular distributions will be published later. The authors thank Professor A. I. Alikhanyan for the interest he displayed in this work, and Professor V. P. Dzhelepov for making it possible to carry out measurements on the phasotron of the Institute for Nuclear Research. There are 1 table

SOV/56-35-5-45/56

The Elastic Scattering of π^+-Mesons on Carbon at Energies of 5 ÷ 22 MeV

and 15 references, 4 of which are Soviet.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences, USSR)

SUBMITTED: July 10, 1958

Card 3/3

SERGEYEV, F. M.

95

S/089/62/013/006/019/027
B102/B186

AUTHORS: G. T. and M. R.

TITLE: Nauchnaya konferentsiya Moskovskogo inzhenerno-fizicheskogo instituta (Scientific Conference of the Moscow Engineering Physics Institute) 1962

PERIODICAL: Atomnaya energiya, v. 13, no. 6, 1962, 603 - 606

TEXT: The annual conference took place in May 1962 with more than 400 delegates participating. A review is given of these lectures that are assumed to be of interest for the readers of Atomnaya energiya. They are following: A. I. Leypunskiy, future of fast reactors; A. A. Vasil'yev, design of accelerators for superhigh energies; I. Ya. Pomeranchuk, analyticity, unitarity, and asymptotic behavior of strong interactions at high energies; A. B. Migdal, phenomenological theory for the many-body problem; Yu. D. Fiveyskiy, deceleration of medium-energy antiprotons in matter; Yu. M. Kogan, Ya. A. Iosilevskiy, theory of the Mössbauer effect; M. I. Ryazanov, theory of ionization losses in nonhomogeneous medium; Yu. B. Ivanov, A. A. Rukhadze, h-f conductivity of suboritical plasma;

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S/089/62/013/006/019/027
B102/B186

Nauchnaya konferentsiya...

Ye. Ye. Lovetskiy, A. A. Rukhadze, electromagnetic waves in nonhomogeneous plasma; Yu. D. Kotov, I. L. Rozental', the origin of fast cosmic muons; Yu. M. Ivanov, muon depolarization in solids; V. G. Varlamov, Yu. M. Grashin, B. A. Dolgoshein, V. G. Kirillov-Ugryumov, V. S. Roganov, A. V. Samoylov, μ^- capture by various nuclei; V. S. Demidov, V. G. Kirillov-Ugryumov, A. K. Ponosov, V. P. Protasov, F. M. Sergeyev, scattering of π^- mesons at 5 - 15 Mev in a propane bubble chamber; S. Ya. Nikitin, M. S. Aynutdinov, Ya. M. Selektor, S. M. Zombkovskiy, A. F. Grashin, muon production in π^-p interactions; B. A. Dolgoshein, spark chambers; N. G. Volkov, V. K. Lyapidevskiy, I. M. Obodovskiy, study of operation of a convection chamber; K. G. Finogenov, production of square voltage pulses of high amplitudes; G. N. Aleksakov, problems of color vision; V. K. Lyapidevskiy, relation between number of receivers and number of independent colors; Ye. M. Kudryavtsev, N. N. Sobolev, N. I. Tizengauzen, L. N. Tunitskiy, F. S. Fayzulov, determination of the moment of electron transition of oscillator forces and the widths of the Schuhman-Runge bands of molecular oxygen; B. Ye. Gavrilov, A. V. Zharikov, V. I. Rayko, decomposition of the volume charge of intense ion beams; Ye. A. Kramer-Ageyev, V. S. Troshin, measurement of neutron spectra; G. G. Doroshenko, new methods of fast-neutron recording; V. I. Ivanov, dosimetry terminology; R. M. Voronkov,

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5

L 58953-65 EPF(c)/EWT(1)/EEC(t) Pi-4 IJP(c) GO/WW
ACCESSION NR: AT5010455 UR/3138/64/000/273/0001/0008 31 29 B+1

AUTHORS: Vorobyuvov, V. S.; Veselovskiy, O. S.; Orashin, A. F.; Demidov, V. S.; Kuznetsov, Ye. V.; Kuznetsov, Ye. P.; Ponosov, A.K.; Protasov, V. P.; Sergeyev, F. M.; Shalamov, Ya. Ya.

TITLE: Data on pp resonance with Q = 148 MeV 27

SOURCE: USSR. Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii. Institut teoreticheskoy i eksperimental'noy fiziki. Doklady no. 273, 1964, Dannyye o pp-rezonanse s Q = 148 Mev, 1-8

TOPIC TAGS: proton, proton resonance, diproton resonance, pion nucleon resonance, excitation energy

ABSTRACT: The authors present data on a possible new photon resonance with excitation energy 148 MeV. The photographs were obtained with a 17-liter bubble chamber filled with a freon mixture (without magnetic field), using the extracted beam of ϕ^+ mesons of the OIYaI(Joint Institute of Nuclear Research) synchrocyclotron with energy E_0 = 80 MeV.

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L 58953-65

ACCESSION NR: AT5010455

Absorption of positive pions with formation of 1, 2, and 3 heavy particles (p, d, etc.) was investigated. The meson energy at the instant of absorption was 60 ± 20 MeV. Distributions of the event with production of two particles shows peaks at excitation energy values of 148 and 128 MeV. The same spectrum plotted for more symmetrical stars shows the 148 MeV peak more clearly. It is shown that the spectra can contain, besides the distribution with respect to the diproton mass, also components due to pd, dd, and similar stars, which can be mistaken for pp stars. The 128-MeV peak may be due to the presence of pd stars. The results indicate the possible existence of a diproton resonance with excitation energy 148 ± 3 MeV and width ~5 MeV, and also a pd resonance with approximate excitation energy 143 ± 3 MeV and width ~5 MeV. Such resonances could be observed in the presence of πN resonance with mass 938 ± 150 MeV, producing 'hypernuclei' by interacting with other nucleons. Work on a direct observation of the possible new πN resonance is continuing. 'The authors thank I. A. Alikhanov for a discussion of the results.' Original article has: 2 figures

Card 2/3

L 58953-65

ACCESSION NR: AT5010455

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics, GKAE)

SUBMITTED: 01Aug64 ENCL: 00 SUB CODE: NP

NR REF SOV: 001 OTHER: 002

Card 3/3

38875

S/056/62/042/006/047/047
B104/B112

AUTHORS: Demidov, V. S., Kirillov-Ugryumov, V. G., Ponosov, A. K., Protasov, V. P., Sergeyev, F. M.

TITLE: Elastic scattering of π^- mesons with energies of 5-12 Mev by carbon nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 6, 1962, 1687-1688

TEXT: The experiments were made with a propane bubble chamber (dimensions, 370 by 140 by 100 mm^3) exposed to the pion beam of the synchrocyclotron of the OIYaI. 19,576 π^- mesons, identified from the characteristic star at the end of their path, were selected to measure the angle of singly scattered π^- mesons projected onto the plane of the film. 81 π^- meson decay events were registered between 15 and 180°. The sign of the potential of the system pion - carbon nucleus can be determined directly from the difference between the angular distributions of π^+ and π^- mesons. There is 1 table.

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Elastic scattering of π^- mesons ... S/056/62/042/006/047/047
B104/B112

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Engineering Physics Institute)

SUBMITTED: April 23, 1962

Card 2/2

S/056/63/044/004/004/044
B102/B186

AUTHORS: Demidov, V. S., Kirillov-Ugryumov, V. G., Ponoscv, A. K., Protasov, V. P., Sergeyev, F. M.

TITLE: Absorption of stopped negative pions in carbon

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 4, 1963, 1144 - 1146

TEXT: Previously taken photographs (ZhETF, 42, 1689, 1962) of interactions of slow π^- in a 4-liter propane bubble chamber were now used to investigate the pion absorption by carbon nuclei. Among 3500 π^- stops there were 1130 selected for an analysis of the pion star distribution with respect to prongs, and 1180 two-pronged stars for investigating the distribution with respect to the angle between the prongs. If one assumes (Phys. Rev. 84, 258, 1951) that π^- are absorbed only by nucleon pairs (pn, pp), the absorption probability may be calculated. On comparing the experimental results with those calculated by the method of least squares, the π^- absorption probability by a pn-pair amounts to 70 - 80%, that for a pp-pair to 30 - 20%, and the probability of an intranuclear collision is 60 - 80%.

Absorption of stopped negative...

The mean number of prongs was found to be 0.84 and the distribution of stars with respect to the angle between the prongs had a sharp maximum at about 180°. The results speak in favor of the two-nucleon absorption mechanism. The absorption probability is energy-independent in the range 0 - ~200 Mev. There are 1 figure and 1 table.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Institute of Physical Engineering)

SUBMITTED: November 2, 1962

DEMIDOV, V.S.; ZHIZHIN, Ye.D.; KIRILLOV-UGRYUMOV, V.G.; PONOSOV, A.K.; SERGEYEV, F.M.; SHALAMOV, Ya.Ya.

Effect of the nucleus on π^0-meson production. Zhur. eksp. i teor. fiz. 45 no.3:437-442 S '63. (MIRA 16:10)

1. Institut teoreticheskoy i eksperimental'noy fiziki i Moskovskiy inzhenerno-fizicheskiy institut.
(Mesons) (Collisions (Nuclear physics)

VESELOVSKIY, G.S.; GRACHIN, A.F.; DEMIDOV, V.S.; KUZNETSOV, Ye.V. (deceased); KUZNETSOV, Ya.P.; PONOSOV, A.K.; PROTASOV, V.P.; SERGEYEV, F.M.; SHALAMOV, Ya.Ya.

Production of slow π^--mesons on light nuclei, and $\pi\pi$-interaction. Izv. fiz. 2 no.3:496-500 S '65. (MIRA 18:9)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.

L 11913-66 EWT(m)/T/EWA(m)-2
ACC NR: AP6001156 SOURCE CODE: UR/0367/65/002/003/0406/0500

AUTHOR: Veselovskiy, G.S.; Grashin, A.F.; Demidov, V.S.; Kuznetsov, Ye. P.; Ponosov, A.K.; Protasov, V.P.; Sergeyev, F.M.

ORG: Institute of Theoretical and Experimental Physics, GKIAE (Institut teoreticheskoy i eksperimental'noy fiziki)

TITLE: Production of slow pi mesons on light nuclei and the pi-pi interaction

SOURCE: Yadernaya fizika, v. 2, no. 3, 1965, 496-500

TOPIC TAGS: pi meson, pion pion interaction

ABSTRACT: The object of the study was to find the possible resonance states in a system composed of two π-mesons at low energies:

$$Q = M_{\pi\pi} - 2\mu = [(\omega_{\pi_1} + \omega_{\pi_2})^2 - (p_{\pi_1} + p_{\pi_2})^2]^{1/2} - 2\mu \lesssim \mu$$

μ being the mass of a π-meson. The statistical material was obtained by studying the production of slow $\pi^{\pm}$ mesons upon collision of π^- mesons (initial momentum 2.8 GeV/sec) with nuclei of a freon mixture in a 17- and 200-liter bubble chambers. In analyzing the films, all those cases were selected which involved interaction between π-mesons and the nuclei of the working liquid, resulting in the formation of two or more slow π-mesons which stopped in the working substance of the chamber. The Q distributions of the bipion in the range $Q < 100$ MeV were obtained. The distribution for $\pi^+\pi^-$ pairs differs from that for $\pi^+\pi^+$ and

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L 11913-66

ACC NR: AP6001156

$\pi^-\pi^-$ pairs; this may be explained by the presence of a strong $\pi\pi$ interaction in the isotopic state T = 0. Orig. art. has: 5 figures.

SUB CODE: 20 / SUBM DATE: 03Jul64 / ORIG REF: 004 / OTH REF: 001

Card 2/2

ACC NR: AT7008896 SOURCE CODE: UR/0000/66/000/000/0041/0047

AUTHOR: Demidov, V. S.; Kirillov-Ugryumov, V. G.; Ponosov, A. K.; Protasov, V. P.; Sergeyev, F. M.

ORG: none

TITLE: Elastic scattering of Pi-mesons by carbon at energies of 5-22 Mev

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Fizika elementarnykh chastits, 1966, 41-47

TOPIC TAGS: elastic scattering, pi meson, synchrocyclotron, angular distribution
SUB CODE: 20
ABSTRACT: The authors state that in their present undertaking they have succeeded to considerable extent in overcoming the procedural difficulties which have hitherto hindered the study of interactions of slow pi-mesons with complex nuclei. An investigation was made of the elastic scattering of pi-mesons of both signs with energies of 5-22 Mev by carbon C^{12} nuclei. The pi-mesons were recorded in propane bubble chambers exposed to pi-meson beams of the synchrocyclotron of the Joint Institute for Nuclear Research. The purpose of the work was to investigate properties of the potential of the nuclear interaction of a pi-meson with a light nucleus. Selected for the investigation were 8,727 positive and 19,576 negative pi-mesons stopped in the chambers. Certain corrections were made in the experimental data for computing the cross sections. The corrected statistical material was used to

Card 1/2 UDC: 539.1
0929 [70]

ACC NR: AT7008896

obtain the angular distributions of the elastic scattering of pi-mesons. The article lists the experimental values of the differential cross sections for energies of 5-8, 8-15, and 15-22 Mev in the case of positive mesons and 5-8 and 8-15 Mev for negative mesons. A phase-shift analysis was made by the least-squares method on a "Ural" digital computer and a comparison was made of the angular distributions for positive and negative pi-mesons in identical energy ranges. It was established that the potential of the nuclear interaction between a pi-meson and a carbon nucleus at energies 5-22 Mev corresponds to repulsive forces. The phase shifts and potential value which were found agree with data obtained in the investigation of pi-meson atoms and elementary meson-nucleon scattering. The authors express their thanks to A. I. Alikhanyan, L. P. Kotenko, Ye. P. Kuznetsov, and A. V. Samoylov for their help in the work and to Z. S. Galkina, V. A. Yeliseyeva, and Z. A. Volobuyeva for taking part in the measurements. Orig. art. has: 2 formulas and 3 tables. [JPRS]

Card 2/2

ACC NR: AT7008898 SOURCE CODE: UR/0000/66/000/000/0076/0082

AUTHOR: Alikhanyan, A. I.; Aleksanyan, A. S.; Verebryusov, V. S.; Veremeyev, M. M.; Ivanilov, V. S.; Kirillov-Ugryumov, V. G.; Protasov, V. P.; Ponosov, A. K.; Tarasyev, F. M.

ORG: none

TITLE: Bubble chamber designed to operate in a magnetic field

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Fizika elementarnykh chastits, 1966, 76-82

TOPIC TAGS: austenite steel, bubble chamber, pi meson, synchrotron, photography

SUB CODE: 20, 14

ABSTRACT: The article describes a bubble chamber with an effective volume of 200 liters made of nonmagnetic austenite 1Kh18N9T steel and consisting of a permanent outer vessel and the working chamber proper located inside it. The design of the inner chamber, outer vessel, and expander is generally similar to that described in an earlier article by A. V. Bogomolov et al. The upper lid of the permanent vessel has six windows for photography. Differential three-stage valves are used for increasing pressure and for depressurization in the chamber. The working space of the chamber is illuminated by eight out of sixteen IFK-120 flash bulbs mounted in pairs on a special panel; the lighting system design also permits the use of IFP-4000 bulbs. The photographing is done on two standard aerial photographic films, with a sensitivity of 1200 GOST [Gosudarstvennyy Obshchesoyuznyy

UDC: 539.1

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ACC NR: AT7008898

[illegible] State Standard] units and 80 mm width, by two "Gidrorussar-4"-type objectives. During operation of the chamber chromatic aberration was observed, resulting in a ghost effect in the particle track image. This was eliminated by photographing in monochromatic light through an experimentally chosen orange light filter. The chamber is heated by three 2-kw electric heaters, with one of the heaters set directly on the inner chamber. There are two versions of thermostat system control. The first employs a standard contact thermometer mounted in the chamber casing. The second version employs an electrocontact manometer. The article includes a block diagram of the chamber's control circuit. The chamber was tested in operation with various working fluids: propane, a mixture of Freon-12 and Freon-13, a propane-ethane mixture, and propane-Freon and propane-ethane-Freon mixtures. The chamber is at present set up in an MS-12 magnet in the path of a beam of negative pi-mesons, 4 Gev in energy, of the proton synchrotron of ITEF [Institut teoreticheskoy i eksperimental'noy fiziki; Institute of Theoretical and Experimental Physics]. The actuation cycle of the chamber is 4 seconds. The authors express their thanks to Yo. V. Kuznetsov, Ye. P. Kuznetsov, M. G. Gornov, G. M. Tymin, A. F. Falin, and E. S. Levonyan for their assistance and "valuable advice" and to Yu. A. Budagov for "useful discussions". Orig. art. has: 8 figures. [JPRS]

Card 2/2

SERGEYEV, F. N.

PA 32/49T66

USSR/Mines Oct 48
Lignite

"The Chelyabinsk Lignite Field," F. N. Sergeyev, Mining Engr, "Chelyabinskugol" Combine, 1 p

"Ugol'" No 10

Summarizes history of subject field from its discovery in 1832 to the present.

32/49T66

SERGEYEV, F. N.

"Selection of Appropriate Mine Types and of Methods of Opening and Preparation of Mining Fields with "Limited" Deposits in Geological Conditions of the Chelyabinsk Basin." Min. Higher Education USSR, Sverdlovsk Mining Inst imeni V. V. Vakhrushev, Sverdlovsk, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

BUTKEVICH, Roman Veniaminovich, kand.tekhn.nauk; SIDOROV, Ivan Nikolayevich, kand.tekhn.nauk; YACHMENEV, Viktor Ivanovich, inzh.; Prinimali uchastiye: SERGEYEV, F.N., kand.tekhn.nauk; BUTKEVICH, G.R., inzh.; TERESHKIN, S.V., inzh. GAPANOVICH, L.N., otv.red.; ZHUKOV, V.V., red.izd-va; SHKLYAR, S.Ya., tekhn.red.; GALANOVA, V.V., tekhn.red.

[Use of the underground method for the mining of Ural coal deposits] Razrabotka ugol'nykh mestorozhdenii Urala podzemnym sposobom. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 323 p. (MIRA 14:1)

(Ural Mountains--Coal mines and mining)

ACCESSION NR: AP4031142 S/0056/64/0046/004/1220/1225

AUTHORS: Demidov, V. S.; Verebryusov, V. S.; Kirillov-Ugryumov, V. G.; Ponosov, A. K.; Sergeyev, F. N.

TITLE: Absorption of negative pions stopped in propane

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 4, 1964, 1220-1225

TOPIC TAGS: pion absorption by carbon, two nucleon model, many nucleon model, nuclear structure, bubble chamber, propane bubble chamber, secondary particle angular distribution, secondary particle energy spectrum, np pair absorption, pp pair absorption

ABSTRACT: To compare the effectiveness of pion absorption in carbon by the two-nucleon mechanism against the effectiveness of other possible mechanisms, a four-liter propane bubble chamber was used to obtain the energy spectra of the secondary singly-charged particles resulting from the absorption of slowing-down pions by carbon and to

Card 1/3

ACCESSION NR: AP4031142

obtain the distributions with respect to the angle between the prongs of the pion stars. Bubble-chamber photographs from an earlier investigation of the scattering of low-energy pions (ZhETF v. 42, 1687, 1962) were used as the source material. The estimates based on the energy spectra show that the maximum possible contribution of pion absorption by a complex of several nucleons ($\geq$ 4) does not exceed 20%. A Monte Carlo electronic-computer analysis of more than 2000 interactions has shown that the experimental data agree with the two-nucleon mechanism, and that the probability of absorption of the pion by an np pair is two or three times larger than the probability of absorption by a pp pair; the latter agrees with the author's earlier results (ZhETF v. 44, 1144, 1963). "In conclusion, the authors are indebted to Professor A. I. Alikhanyan and L. B. Kotenko, whose efforts made this experiment possible, to V. P. Protasov who participated in the early stage of the work, to E. A. Savina and M. G. Gornov for help with the measurements, and to the entire mathematics group of Institut teoreticheskoy i eksperimen-

Card 2/3

ACCESSION NR: AP4031142

tal'noy fiziki (Institute of Theoretical and Experimental Physics) for the laborious calculations." Orig. art. has: 7 figures and 3 tables.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Engineering Physics Institute)

SUBMITTED: 25Oct63 DATE ACQ: 07May64 ENCL: 00

SUB CODE: PH NO REF SOV: 012 OTHER: 005

Card 3/3

SERGEYEV, G.

Automatic control of radio facilities. Grazhd.av. 14 no.7:3 Jl '57.
(MIRA 10:9)

(Radio in aeronautics

SERGEYEV, G., polkovnik meditsinskoy sluzhby

"Aviation medicine" by A.A.Lavnikov. Reviewed by G.Sergeev.
Av.i kosm. 45 no.7:90-91 '62. (MIRA 15:8)
(Aviation medicine) (Lavnikov, A.A.)

SERGEYEV, G., prof., doktor med. nauk

The "Electroson" apparatus cures hypertension. Nauka i zhizn' 30 no.9:48-50 S '63. (MIRA 16:10)

SOV/96-59-3-7/21

AUTHOR: Sergeyev, G.A., Engineer

TITLE: A New High-Efficiency Compressor Stage with 50% Degree of Reaction (Novaya vysokoeffektivnaya kompressornaya stupen' s 50-protsentnoy stepen'yu reaktivnosti)

PERIODICAL: Teploenergetika, 1959, Nr 3, pp 32-35 (USSR)

ABSTRACT: Because of the increase in the unit output of gas turbines, it is now necessary to develop high-efficiency compressors with outputs of 200-300 kg/sec at speeds of 3000 rpm and blade peripheral velocities of 250-300 m/sec. For this purpose it was necessary to develop special stages with 50% reaction. In recent years theoretical and experimental work at the Central Boiler-Turbine Institute has resulted in the development of a new high-efficiency stage type K-50-1, the main characteristics of which are given. An expression is written for the distribution of the discharge component of the velocity over the blade radius. Curves of this velocity distribution and of the inflow angles for stage K-50-1 are given in Figures 1 and 2. The main stages of the design are described. Wind tunnel tests were made on individual blades. The stage as a whole was tested on a single-stage axial compressor

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A New High-Efficiency Compressor Stage with 50% Degree of Reaction

rig and it was found that the angles of attack and the fields of velocity and total pressures differed from the calculated values. The stage was accordingly adjusted to bring the test figures more into line with the calculated values. For this purpose it sufficed to turn the blades slightly and to displace them somewhat radially. The resulting fields of velocity and pressure, plotted in Fig.3, approximated closely to the theoretical values. However, the distribution of reaction over the radius was somewhat changed. In the final adjusted stage, the reaction remained at 0.5 of the mean section of the blade and was 0.55 at the periphery and 0.45 at the blade root. The main test results on the completed blading are presented graphically in Figures 4-7. It will be seen from Fig.5 that the maximum efficiency of the stage occurs at a peripheral velocity of 150-200 m/sec and is approximately 95%. In order to obtain data about the operation of the stage with a group of similar stages, a four-stage compressor was made up with K-50-1 blading

A New High-Efficiency Compressor Stage with 50% Degree of Reaction

and was tested on the rig of the Central Boiler-Turbine Institute. It was established that this stage operates satisfactorily in a group. It is concluded that the stage can be used in the construction of multi-stage high-efficiency axial compressors. There are 7 figures and 1 table.

ASSOCIATION: Tsentral'nyy kotloturbinnyy institut (Central Boiler-Turbine Institute)

TISHCHENKO, Nikolay Mikhaylovich; NEGNEVITSKIY, I.B., retsenzent; SYSOYEV, N.V., red.; SHIROKOV, M.M., tekhn. red.

[Noncontact magnetic relays] Beskontaktnye magnitnye rele. Moskva, Gos. energ. izd-vo, 1961. 127 p. (Biblioteka po avtomatike, no.39) (MIRA 14:10)

(Electric relays) (Magnetic amplifiers)

SERGEYEV, G.A., inzh.

Studying the low-consumption axial stage of a multistage compressor. Teploenergetika 8 no.11:23-27 N '61. (MIRA 14:10)

1. TSentral'nyy kotloturbinnyy institut.
(Gas turbines)

ACCESSION NR: AP4038627 S/0109/64/009/004/0741/0743

AUTHOR: Sergeyev, G. A.; Romanenko, A. F.

TITLE: Evaluating the error in determining the correlation interval

SOURCE: Radiotekhnika i elektronika, v. 9, no. 4, 1964, 741-743

TOPIC TAGS: information theory, computer, radar theory, correlation interval

ABSTRACT: For evaluating the interval of correlation of random processes — important in radar and computer work — various formulas have been proposed; they contain a parameter: $\tau_0 = \int_0^\infty R_{11}^2(\tau)\,d\tau$. This parameter and an error, due to defining the correlation function within a limited range of the values of its argument τ, are evaluated. Orig. art. has: 1 figure and 11 formulas.

ASSOCIATION: none

SUBMITTED: 28Dec62 DATE ACQ: 05Jun64 ENCL: 00

SUB CODE: DP, DC NO REF SOV: 003 OTHER: 001

Card 1/1

GUR'YEV, A.V.; ROMANENKO, A.F.; SERGEYEV, G.A.

Filtration of random processes. Radiotekhnika 19 no.1:63-70 Ja '64. (MIRA 17:1)

1. Deystvitel'nyye chleny Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni Popova.

GUR'YEV, A.V.; ROMANENKO, A.F.; SERGEYEV, G.A.

Properties of a generalized smoothing operator. Radiotekhnika 19 no.2:67-72 F '64. (MIRA 17:6)

1. Deystvitel'nyye chleny Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni A.S. Popova.

L 41422-65 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) Pf-4 GS
ACCESSION NR: AT5009737 UR/0000/65/000/000/0221/0232

28
B+1

AUTHOR: Sergeyev, G. A.; Romanenko, A. F.

TITLE: Use of orthogonal filters for the optimization and study of statistical properties of errors in adaptive systems

SOURCE: Analiticheskiye samonastraivayushchiyesya sistemy avtomaticheskogo upravleniya (Analytical adaptive control systems). Moscow, Izd-vo Mashinostroyeniye, 1965, 221-232

TOPIC TAGS: orthogonal filter, adaptive system error, error statistical property, smoothing out operator, correlator choice, mathematical error expectation, smoothing out interval, automatic control system

ABSTRACT: The correlation method is used widely for the synthesis of the dynamic characteristics of analytical adaptive systems; the pulsed transient functions are calculated by taking into account the correlation connections between the input and exit signals (see, e.g., V. V. Solodovnikov, Statisticheskaya dinamika lineynykh sistem avotmaticheskogo upravleniya Fizmatgiz, 1960). Consequently, it is urgent that someone study the fine structure of control systems

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coupled to electronic digital computers, particularly when the computer is used for the reiterative processing of information. A successful correlational analysis of control system errors requires that one 1) finds an optimum smoothing-out operator needed for the evaluation of the mathematical expectation of control system errors; and 2) chooses the correlator type. The authors show that

$$S_T\xi(t) = \frac{1}{2T}\int_{t-T}^{t+T} h(x)\xi(x)\,dx, \qquad (1)$$

can be used for the definition of a simple and comparatively efficient smoothing out operator S_T convenient for the processing of nonstationary processes. Here, ξ (t) is the random process under study, h(t) is the weight function of the smoothing out filter, and 2T is the smoothing out interval. The choice of the optimum smoothing out conditions, the analysis of experimental data, and the use of orthogonal filters for the optimization of adaptive systems are all discussed in considerable detail. The experimental study of the control system errors utilized 12 smoothing out channels, each of which corresponded to a fixed value

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of the smoothing out interval within the 1-12 second limits. The optimum size of the smoothing out interval was determined after correlation processing of the error fluctuations, and this led to the choice of one among the 12 information processing channels. Orig. art. has: 17 formulas, 5 figures, and 1 table.

ASSOCIATION: None

SUBMITTED: 15Dec64 ENCL: 00 SUB CODE: IE, MA

NO REF SOV: 008 OTHER: 001

mc

Card 3/3

L 29431-66 EWT(d)/EWP(1) IJP(c) BB/GG/GD

ACC NR: AT6012897 SOURCE CODE: UR/0000/65/000/000/0185/0196

AUTHOR: Sergeyev, G. A.; Sukhodol'skiy, G. V.; Bodlozerov, V. M.

ORG: None

TITLE: Investigation of the statistical characteristics of a human operator for the case of nonstationary input signals

SOURCE: Sistema chelovek i avtomat (Man-automaton systems). Moscow, Izd-vo Nauka, 1965, 185-196

TOPIC TAGS: automatic control system, man machine communication, human engineering, error minimization, bionics

ABSTRACT: The authors consider the stability of individual elements in a man-machine system under the effect of random control signals. The extreme variability in the dynamic parameters of the human operator in each specific case makes it necessary to use statistical characteristics to account for the degree of nonlinear information conversion by the operator. A generalized statistical characteristic is given which reflects the structural properties of input and output errors made by the operator. The degree of nonlinear information conversions made by a human operator is experimentally evaluated by studying the effect of nonstationary input action on the output errors of the operator. The operator was required to follow a target moving in conformity with a nonstationary random function with various parameters. Specimens of the programmed motion of the target are given together with the results of human tracking. The efficiency of the opera-

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ACC NR: AT6012897

tor was evaluated by the output error defined as the root-mean-square deviation of the pointer used to follow the target from the mathematical expectation. A hypothetical model is proposed for the human tracking system based on two control circuits: external-exteroceptive and internal -proprioceptive. The characteristic features of this human cybernetic model are discussed and the correlation functions for error components calculated on the basis of this model are compared with experimental data. The results indicate that a human operator should be used in the final links of a man-machine system. Orig. art. has: 2 figures, 3 formulas. [08]

SUB CODE: 05 / SUBM DATE: 02Aug65 / ORIG REF: 009 / ATD PRESS: 5009

Card 2/2

L 07211-67 EWT(d)/EWP(c)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AT6022689 SOURCE CODE: UR/0000/66/000/000/0222/0232

AUTHOR: Sergeyev, G. A.

45
B41 14

ORG: none

TITLE: Experimental investigation of self-adjustment functions of the human operator

SOURCE: Moscow. Institut avtomatiki i telemekhaniki. Samoobuchayushchiyesya avtomaticheskiye sistemy (Self-instructing automatic systems). Moscow, Izd-vo Nauka, 1966, 222-232

TOPIC TAGS: self organizing system, man machine communication, human engineering

ABSTRACT: This work examines results of experimental studies of the self-adjusting functions of human operators working at consoles under the effect of nonsteady input signals. These functions are effected by means of a certain class of operatively computable information estimates taking into account the variation in structural characteristics of the output errors. The study makes it possible to investigate the effectiveness indexes of operator self-adjustment function, to disclose the structure of informational elements comprising the cybernetic model of the human operator, and to obtain qualitative characteristics necessary for mathematical and physical simulation of self-adjusting systems. An automatic stochastic regulator system operating under the effect of random input signals was the general model used for output signal analysis. In human-operator systems the time lost in establishing the fixed dominant

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L 07211-67
ACC NR: AT6022689

state in which operator efficiency reaches a given level is characterized by the variable time taken by exteroceptive and propioceptive regulating systems to regulate error structure of the muscle motors. A table, based on a study of the self-adjustment function using instantaneous information parameters in the compensator regime, gives data showing relative reduction of average error period in the frequency region in comparison to error parameters in the time region and demonstrates that intrinsic frequencies of internal and external regulating circuits are displaced. Orig. art. has: 20 formulas, 1 table, and 11 figures.

SUB CODE: 06/ 05/ SUBM DATE: 02Mar66/ ORIG REF: 003/ OTH REF: 001

Card 2/2

L 22355-66 EWT(1) SCTB DD

ACC NR: AP6013267 SOURCE CODE: UR/0413/66/000/008/0059/0059

INVENTOR: Sergeyev, G. A., Romanenko, A. F.

ORG: none

TITLE: Device for the operational statistical processing of biopotentials. Class 30, No. 180734

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 59

TOPIC TAGS: biostatistics, data processing, biopotential

ABSTRACT: An Author Certificate has been issued for a device used to process biopotential data statistically. To obtain variable information parameters adequate

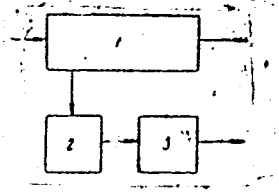

Fig. 1. Block diagram of the device.

for investigation processes, the analog system is made up of: 1) a variable dispersion channel; 2) a correlation interval channel; 3) a channel of the product of variable dispersion and the correlation interval (see Fig. 1). [CD]

SUB CODE: 06 SUBM DATE: 02Jul64/ UDC: 615.471:
:616-07:621.038

AID PRESS: 4240

Card 1/1

SERGEYEV, G.B.

Photochemical sensitization by bromine in the oxidation of propane. G. B. Sergeev and V. Ya. Shtern. *Doklady Akad. Nauk S.S.S.R.* 91, 1357–60(1953); cf. *C.A.* 48, 13306*e*, 9023*h*.—The kinetics of the oxidation of a mixt. of 200 mm. C_3H_8 + 100 mm. O + 4.8 mm. Br in the presence of ultraviolet light was investigated. This process differs from thermal oxidation by the initial decrease of total pressure, owing to PrO_2H formation as postulated, then after reaching a min., assumed the known *S*-shaped form. Discontinuation of irradiation at the time of the initial decrease of pressure did not affect the process. The pressure continued to decrease, and the formation of PrO_2H further increased. Without ultraviolet light even at 210° oxidation did not take place. Oxidation products at 210° were investigated polarographically. PrO_2H, CO, CO_2, CH_4, C_2H_6, H, but no acetone nor aldehyde, were found. Cf. Knox and Norrish (*C.A.* 48, 7279*d*). Michael Dymicky

USSR/ Chemistry Hydrocarbon oxidation

Card : 1/1

Authors : Revzin, A. F., Sergeyev, G. B., and Shtern, V. Ya.

Title : Mechanism of oxidation of hydrocarbons in gaseous phase. Part 7.-Effect of homogeneous (NO_2, Br_2) additions on propane oxidation

Periodical : Zhur. fiz. khim. 28, Ed. 6, 985 - 996, June 1954

Abstract : The effect of NO_2 additions on the oxidation of $2C_3H_8 + O_2$ - mixture and the photochemical Br_2 - sensitization of the oxidation of a $2C_3H_8 + O_2$ mixture, were investigated. A reduction in the length of the induction period, without change in the chemism of the consequent propane oxidation during the addition of NO_2, was established. The results of Br_2 addition and simultaneous bombardment with ultraviolet rays, are described. Ten references: 5 USSR, 3 English, 2 German. Tables; graphs.

Institution : The M. V. Lomonosov State University, Moscow

Submitted : April 18, 1953

SERGEYEV, G. B

Kinetics of the thermal decomposition of propyl bromide and isopropyl bromide. N. N. Semenov, G. B. Sergeev, and G. A. Kapralova (M. V. Lomonosov State Univ., Moscow). *Doklady Akad. Nauk S.S.S.R.* 105, 291–4 (1955).—The decompn. reactions of propyl bromides were studied in a vacuum app. of quartz glass at pressures not exceeding the vapor pressure of the bromides at room temp. The progress of the reaction was observed by the vapor-pressure changes. The results were poorly reproducible until many tests were made in the app, and it became coated with carbonaceous material, after which the reaction was no longer affected by the vessel-wall materials. PrBr decompn. was studied at 350–500° at an initial pressure of 90 mm. Hg, and its decompn. rate was $W = k_1[PrBr]$, where $k_1 = 3.8 \times 10^{9}\, e^{-41,000/RT}$, whereas the rate for iso-PrBr was $W' = k_2$ [iso-PrBr], where $k_2 = 5.5 \times 10^{13}\, e^{-50,000/RT}$/sec. The reaction rates remain const. to about 15% conversion, after which they begin to drop, and the reaction becomes autoinhibiting. Br_2 addn. accelerates the reaction about 6 fold at 400°; 10% C_3H_8 at 403° slowed it down somewhat; O also accelerated the reaction. W. M. S.

Sergeyev, G.B.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 33/54

Authors : Sergeyev, G. B.

Title : Kinetics of thermal decomposition of butyl bromides

Periodical : Dok. AN SSSR 106/2, 299-302, Jan 11, 1956

Abstract : Four kinds of butyl bromides were investigated in a vacuum static vessel to determine their thermal decomposition kinetics. The reaction kinetics was studied by the occurring pressure fluctuations by means of a membrane pressure gage. The content of hydrogen bromide and olefins in equal amounts in the decomposition products was analytically established. The relation between the rate of butyl bromide decomposition and pressure is explained in a table. Three references: 2 USSR and 1 USA (1953-1955). Table; graphs.

Institution : Moscow State University im. M. V. Lomonosov

Presented by: Academician N. N. Semenov, July 4, 1955

KABANOV, V.A ; SERGEYEV, G.B.; ZUBOV, V.P.; KARGIN, V.A.

Electron resonance study of polymerization in the system acrylonitrile - magnesium, obtained by molecular beam condensation. Vysokom.soed. 1 no.12:1859-1861 D '59. (MIRA 13:5)

1. Moskovskiy gosudarstvennyy universitet.
(Polymerization--Spectra) (Acrylonitrile) (Magnesium)

5(1,3), 21(8) SOV/153-2-4-12/32

AUTHORS: Burlakova, Ye. B., Dzantiyev, B. G., Sergeyev, G. B., Emanuel', N. M.

TITLE: Radiolytical Oxidation of Fat

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 4, pp 533 - 540 (USSR)

ABSTRACT: The investigation of the kinetics and processes of fat oxidation is necessary for an economical production technology of edible and technical fats and oils as well as for the investigation of the assimilation mechanism of the fats consumed by living organisms. The oxidation reaction of fats forms a chain reaction with degenerate ramifications (Semenov, N. N., Academician, Ref 1). It has been pointed out recently (Tarusov, B. N., Refs 2,3) that the oxidation processes proceeding in the lipoprotein phase of the cell structures play an important role in radiation damage of the organism. The initiation of oxidative chain reactions can be achieved by a short effect of catalysts (initiators) at the beginning of the reaction (Refs 4,5). This phenomenon has many analogies in the developmental dynamics of radiation damages (Ref 6). Purified fresh cod-liver oil was

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chosen for the investigation. It was oxidized by means of atmospheric oxygen at 20-130° in a glass cell (Ref 7). It was irradiated with gamma rays from Co^{60} X-rays, and beta particles from P^{32} and Au^{198}. Figure 1 shows typical kinetic curves of the peroxide aggregation with thermal oxidation at 65-100°. They are characterized by an induction period which is shortened with increasing temperature: 8 hours at 65°; the period is almost entirely missing at about 100°. The curves of acid aggregation seen in figure 2 are analogous to the above curves. Acid formation, however, is somewhat retarded since acids are secondary oxidation products (Ref 9). The effect of ionizing radiations on fat containing dissolved oxygen leads to the appearance of oxidation products already at room temperature. The intensities of oxidation in the range of doses used, however, are not high ($D = 10^3$-10^5p). The extent of the effect depends on the temperature at which the fat is irradiated. The yield rises with increasing temperature (Figs 3,4). This seems to be connected with the attaining of conditions favoring the chain extension (Fig 3). The authors introduce the symbol G for the value of the radiation effect. Equations are derived for G as well as for the reaction rate W. Curve 1 (Fig 5) concerning the oxidation

of irradiated and nonirradiated fat at 100° illustrates the presence of an "upper temperature limit". Above this limit the irradiation dose does no longer affect the oxidation kinetics. The effect of a previous irradiation at 20° on the formation kinetics of peroxides in fat with an oxidation at a higher temperature is analogous (Fig 6). Thus, the separation of the irradiation period and the oxidation period with respect to time only affects the duration of the induction period whereas the chemism of the process remains unchanged. The types of radiation mentioned at the beginning neither influence the kinetics nor the chemism of fat oxidation. The quantity of radiation yield depends on the temperature extreme. There are 8 figures and 11 references, 8 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova, Kafedra khimicheskoy kinetiki (Moscow State University imeni M. V. Lomonosov, Chair of Chemical Kinetics)

SUBMITTED: May 16, 1958

5(4),5(3)

AUTHORS: Lishnevskiy, V. A., Sergeyev, G. B. SOV/20-128-4-36/65

TITLE: Rapid Addition of Chlorine Across a Double Bond at Low Temperatures

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 4, pp 767-768 (USSR)

ABSTRACT: A. M. Chaykin (Ref 1) ascertained in 1955 that chlorine at low temperatures in the condensed phase is rapidly added to ethylene. The authors assumed that under these conditions the steric hindrances are reduced, and investigated this reaction in the vacuum at the temperature of liquid nitrogen on ethylene, propylene, isobutylene, cyclohexene, styrene, and thiophene. Reaction occurs immediately. Except for thiophene which supplied hardly separable mixtures, quantitative yields of dichlorosubstituted compounds were obtained (Table 1). On the basis of these results it should be possible to develop a new preparative method of synthesizing dichlorosubstituted compounds. There are 1 table and 1 Soviet reference.

Rapid Addition of Chlorine Across a Double Bond at Low Temperatures SOV/20-128-4-36/65

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: May 25, 1959, by N. N. Semenov, Academician

SUBMITTED: May 23, 1959

Card 2/2

GURMAN, V.S.; LISHNEVSKIY, V.A.; SERGEYEV, G.B.

Interaction between molecular and atomic chlorine, and metallic silver. Izv.vys.ucheb.zav.; khim.i khim tekh. 3 no.1:29-32 F '60. (MIRA 13:5)

1. Kafedra khimicheskoy kinetiki Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.
(Chlorine) (Silver)

S/153/60/003/02/09/034
B011/B003

5.3200

AUTHORS: Burlakova, Ye. B., Dzantiyev, B. G., Zefirova, A. K., Sergeyev, G. B., Emanuel', N. M.

TITLE: The Thermal and Radiolytic Oxidation of Methyl Oleate

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 2, pp. 265-271

TEXT: The authors studied the kinetics of the accumulation of products of the thermal and radiolytic oxidation of the methyl oleate by atmospheric oxygen at 50 - 120°. For this purpose a vessel was used which was analogous to that described in Ref. 10. The peroxide amount was determined iodometrically. The acids were determined by titration of the oxidate dissolved in neutral ethanol with an 0.05 N-solution of alcohol-alkali solution. An x-ray apparatus of type RUP 1-M-2, 200 kW was used as radiation source. Air was blown through at a rate of 5 - 7 l/h. The authors proved that the principal amount of the oxidation products is formed by conversion of the hydroperoxides (Refs. 1-4).

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