AUTHOR: Shteyn, V. G. SOV-115-58-3-6/41

TITLE: The Inspection Work of Central Measurement Laboratories of Machine-Building Plants (Poverochnaya rabota tsentral'nykh izmeritel'nykh laboratoriy mashinostroitel'nykh zavodov)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 3, pp 20 - 22 (USSR)

ABSTRACT: In 1957, at the author's suggestion, the Vsesoyuznyy proyektno-tekhnicheskiy institut (VPTI) of Gosplan SSSR (All-Union Technical Design Institute of Gosplan USSR) started to re-organize and simplify the work of checking the measuring devices in workshops of machinebuilding plants. The article contains detailed information on these organizatory measures.

1. Laboratories--Organization 2. Laboratories--Inspection

Card 1/1

28(2) SOV/115-59-3-11/29

AUTHOR: Shteyn, V.G.

TITLE: The Periodical Inspection of Calipers (Periodicheskaya poverka kalibrov)

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 3, pp 16-18 (USSR)

ABSTRACT: At machine building plants, about 70-80% of the measuring instruments to be inspected are calipers. The inspection of the calipers is a labor consuming operation which is to be performed by the KPP (Kontrol'no-poverochnyy punkt - Control and Inspection Section) of the IRK (instrumental'no-razdatochnaya kladovaya - Instrument Issue and Storage Division) of the production shops of machine building plants. The problem of organizing regular inspections of calipers has not yet been completely solved and the author recommends an inspection system which is based on the experience of several industrial installations. He makes suggestions concerning the inspection intervals which depend on the type

Card 1/2

and use of the instrument, on logging and registration procedures, inspection operations (for example paraffinizing) and the distribution of calipers to the different control organs. Further, he makes recommendations for the withdrawal of worn-out calipers and methods of record-keeping. In his conclusions the author points out that this system eliminates the so-called passport for the calipers while the worker will know instantly whether the gage has been checked or not because of the recommended marking system. Improved inspection methods in turn will result in less rejections caused by inaccurate calipers. There is 1 table.

FD-1010

USSR/Nuclear Physics - Palletron collector

Card 1/1 : Pub. 153 - 14/24

Author : Shteyn, V. K.

Title : Investigation of the collector characteristics of the palletron

Periodical : Zhur. tekh. fiz., 24, 1062-1068, Jun 1954

Abstract : Shows graphically the transient regime of the palletron during change of load. Finds the size of the region of conduction - the most interesting part of the collector characteristics. Calculates the resolving capacity of the palletron mass-spectrometer when the accelerating force is of an impact character. During acceleration of ions by short impulses the resolving capacity is inversely proportional to the relative duration of impulse. Thanks Docent G. N. Shuppe and V. I. Veksler, cand. phys.-math. sci. Seven references, 4 USSR (e.g. V. K. Shteyn, Dan Uzbek SSR, 6, 9, 1951 and 3, 22, 1953; A. P. Grinberg, Metody uskoreniya zaryazennykh chastits [Methods for accelerating charged particles], pp 354-359, Moscow, 1950).

Institution : -

Submitted : December 30, 1953

SHTEYN, V.K.

A few basic properties of the palletron. Trudy SAGU no.65:39-46 '55. (MLRA 9:5)

(Klystrons)

SOV/180-59-2-16/34

AUTHOR: Shteyn, V.K. (Tashkent)

TITLE: Optical Figures of Tungsten Crystals (Svetovyye figury kristallov vol'frama)

PERIODICAL: Izvestiya akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 2, pp 90-95 (USSR)

ABSTRACT: Results are given of an investigation of the surface of tungsten crystals after chemical etching. Coarse grained bars of tungsten were prepared from fine powder, etched and examined. A narrow pencil of light is directed on to the surface and the reflected light forms optical figures (from the etch pits) by a gnomonic projection on a screen. Each spot on the screen is a reflection from several hundred faces of the same type. A condensing lens was used between the surface and the screen (Fig 1). The surface was not first polished since etching of the natural intercrystalline surfaces gives a sharp picture in a full hemisphere. The optical figures showed very uniform relief on the surface. The first etchant used was 3 parts HF to 1 part HNO_3. Fig 2a shows a sharp spot in the centre of the picture - (111) faces, the index being determined by the 3-fold symmetry and by

Card 1/3

Optical Figures of Tungsten Crystals

measuring the angles between various faces. Fig 3 shows a stereographic projection with the faces marked. Fig 2b shows the reflection from (110) faces. Fig 4 shows the picture produced after etching in potassium ferricyanide in sodium hydroxide, and a stereographic projection is produced in Fig 5. The ability of W to give optical figures with sharp detailed spots better than those of Ag, Al, Cu, or Fe is attributed to the anisotropy of W crystals in relation to etching. If the etched crystal is heated to red heat, an optical figure with spots and lines of different colours can be seen, because of the different rates of oxidation of different faces. Fig 6 shows a photograph of an optical figure of the (110) face produced by a narrow bundle of rays. Instead of one central spot, two series of reflections are seen. Microscopic examination (Fig 7) also shows two planes intersecting at a small angle. Only one spot is seen after etching in acid. Fig 8 is an optical figure for unetched tungsten at an intercrystalline boundary during recrystallization. Between the chaotic spots and lines "true" spots can be seen. These spots

Optical Figures of Tungsten Crystals

remain unchanged as the background changes, showing some connection exists between the boundary orientation and the crystal lattice.
There are 8 figures, 1 table and 6 references, 3 of which are Soviet, 2 German and 1 English.

SUBMITTED: December 12, 1958

VASIL'KOVSKIY, D.N., GOROVITS, T.T., SHTEYN, V.K.

Methods of producing prints of thin wires by the use of polystyrene and quartz. Trudy SAGU no.148:23-28 '59. (MIRA 13:7)

(Electric wire--Testing)

L 47207-66 EWT(1)

ACC NR: AR6026496 SOURCE CODE: UR/0274/66/000/004/B048/B048

47
B

AUTHOR: Shteyn, V. K.

TITLE: Passive quenching of oscillations in a kinematic magnetostriction filter

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz' , Abs. 4B311

REF SOURCE: Sb. Vopr. teorii i nadezhnosti apparatury i kanalov svyazi. Tashkent, Nauka, 1965, 191-198

TOPIC TAGS: oscillation, magnetostriction, pulse signal, magnetostriction filter

ABSTRACT: A study is made of the rapid quenching of oscillations required when high-Q filters are used for predetecting pulse-integrating signals. A diagram for quenching oscillations with the aid of pulse pressure which are triggered for the quenching time is proposed and analyzed. [Translation of abstract] [NT]

SUB CODE: 17/

L 44340-66 EWT(1) GW

ACC NR: AT6020748 SOURCE CODE: UR/2552/65/000/046/0090/0100

AUTHOR: Van'yan, L. L.; Terekhin, Ye. I.; Shtimmer, A. I.

61
B+1

ORG: none

TITLE: A method of calculating theoretical curves for transient processes induced by square current pulses

SOURCE: Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metody razvedki. Prikladnaya geofizika, no. 46, 1965, 90-100

TOPIC TAGS: electromagnetic field, frequency characteristic, heat conductivity

ABSTRACT: Curve characteristics of electromagnetic fields induced by applied square-current pulses in the earth were investigated using the equation for heat conductivity of a harmonic system and the transformation of frequency characteristics of a geoelectrical cross section into a transient process using a Fourier integral. The Fourier integral is given as

$$\varrho_t = \frac{1}{2\pi}\int_{-\infty}^{+\infty} \varrho_\omega \frac{e^{-i\omega t}}{-i\omega} d\omega,$$

where ϱ_t is the apparent resistivity obtained from a stimulated electromagnetic field,

ACC NR: AT6020748

ϱ_ω is the apparent resistivity from a method of frequency probing, and $\mathrm{Re}\,\varrho_\omega$ is the real part of ϱ_ω. The function $\mathrm{Re}\,\varrho_\omega$ is considered as the sum of elementary trapezoids $\Delta\mathrm{Re}\,\varrho_\omega$, and the corresponding trapezoidal frequency characteristics ϱ_τ are evaluated. By using a table of single transient processes, the curves of frequency probing are transformed into stimulated electromagnetic field curves. The study shows that the method of transformation is well suited to the construction of theoretical and experimental curves of stimulated fields on the basis of frequency probing. Orig. art. has: 3 figures, 12 formulas, and 1 table. [14]

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 009

ACC NR: AR6026488 SOURCE CODE: UR/0274/66/000/004/A024/A024

AUTHOR: Shteyn, V. K.; Fil'gus, Ya. Ye.

TITLE: Equivalent circuit and parameters of the magnetostriction filter

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 4A151

REF SOURCE: Sv. Vopr. teorii i nadezhnosti apparatury i kanalov svyazi. Tashkent, Nauka, 1965, 183-190

TOPIC TAGS: magnetostriction filter, magnetostriction oscillation QR

ABSTRACT: A complete electric network of a magnetostriction filter (MF) is considered, and from it the chain parameters of MF are determined. In the primary circuit, the network contains several dynamic contours with rod resonance frequencies $\omega_1 \ldots, \omega_n, \ldots, \omega_i$. A quadripole chain matrix is constructed for finding out the chain parameters; the matrix permits considering some particular cases, i. e., when the MF is operating with a specified input current and no load at the output and when MF has a strong direct coupling. Four figures. Bibliography of 8 titles. L. S. [Translation of abstract]

SUB CODE: 20, 09

ACC NR: AR6026489 SOURCE CODE: UR/0274/66/000/004/A024/A024

AUTHOR: Shteyn, V. K.

TITLE: Active suppression of oscillations in a kinematic magnetostriction filter

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 4A152

REF SOURCE: Sb. Vopr. teorii i nadezhnosti apparatury i kanalov svyazi. Tashkent, Nauka, 1965, 199-205

TOPIC TAGS: magnetostriction filter, ~~magnetostriction~~ oscillation

ABSTRACT: The factors are considered which determine the rate of suppression of oscillations in a magnetostriction filter (MF) vibrator, with an active method of suppression. Principal attention is paid to the equivalent Q-factor of the MF vibrator placed in an active circuit. With the active method, unlike in the passive method, the coefficient of electromechanical coupling K does not limit the rate of suppression because the low value of K can be compensated by a properly selected value of transmission conductance. In the last analysis, the maximum suppression rate is determined by MF parameters and by relative suppression of spurious transmission, not by K. Hints on the selection of operating conditions are given. Five figures. Bibliography of 5 titles. L. S. [Translation of abstract]

SUB CODE: 20, 09

UDC: 621.372.542.24

ACC NR: AR6026481 SOURCE CODE: UR/0274/66/000/004/A044/A044

AUTHOR: Lyakhovotskiy, G. Ya.; Shteyn, V.K.

TITLE: Evaluating the duration of transient processes in oscillatory systems

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 4A68

REF SOURCE: Sb. Vopr. teorii i nadezhnosti apparatury i kanalov svyazi. Tashkent, Nauka, 1965, 206-213

TOPIC TAGS: electromagnetic transient, oscillatory system, electronic circuit, transient electromagnetic field

ABSTRACT: The possibility of using the method of simulating circuit for calculating oscillatory systems is explored. It is assumed that the systems possess selective properties; hence, the shape of the free process is close to harmonic. From the mathematical viewpoint, the method of simulating circuit is a version of the method of slowly-varying amplitudes. Clarity and simplicity stemming from the possibility of using obvious physical concepts are the advantages of this method. A rather limited range of systems for which the method yields simple results is its disadvantage. Two figures. Bibliography of 2 titles. L. S. [Translation of abstract]

SUB CODE: 09

UDC: 621.391.14.018.782.3:538.56

ACC NR: AR6026487 SOURCE CODE: UR/0274/66/000/004/A024/A024

AUTHOR: Kozlov, V. A.; Nasyrov, R. V.; Shteyn, V. K.

TITLE: Stability of the kinematic magnetostriction filter

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 4A150

REF SOURCE: Sb. Vopr. teorii i nadezhnosti apparatury i kanalov svyazi. Tashkent, Nauka, 1965, 214-220

TOPIC TAGS: magnetostriction, filter, ~~magnetostriction~~ resonator

ABSTRACT: Factors are considered which assure stability to magnetostriction resonators (MR) used in kinematic magnetostriction filters. The thermal stability of Q-factor and resonance frequency and their effects on the cross attenuation at 20--60C are analyzed. Temperature variation impairs the cross attentuation (due to Q-factor instability) by 25 db or less. Instability of the resonance frequency has a greater effect. The effect of instability of electromechanical-coupling coefficient K and static inductance on the oscillation suppression has been studied. With a suppression duration of 1 microsec, a MR with $K > 12\%$ permits obtaining a depth of suppression upto 60 db; the effect of temperature instability can be neglected. The effect of inducatance instability is serious but it can be reduced by introducing a capacitor with a negative temperature coefficient into the suppression loop. Four figures. Three tables. Bibliography of 5 titles. L. S. [Translation of abstract]

SHTEIN, VIKTOR MORITSOVICH.

SHTEIN, VIKTOR MORITSOVICH.
Ekonomicheskaia geografiia Azii; uchebnoe posobie dlia geograficheskikh fakul'tetov universitetov i pedagogicheskikh institutov. Leningrad, Uchpedgiz, 1940. 510 p. (Geografo-ekonomicheskii nauchnoissledovatel'skii institut L.G.U.)
DLC: HC412.S57

SO:LC, Societ Geography, Part I, 1951, Uncl.

SHTEYN, V.M.

Iron and steel industry of India and the projected plant in Madhya Pradesh. Izv. Vses. geog. ob-va 88 no.1:16-29 Ja-F '56. (MLRA 9:6)
(India--Iron industry) (India--Steel industry)

SHTEYN, Viktor Moritsovich; KONRAD, N.I., akademik, otv.red.; FILIPPOV, A.M., red.izd-va; TSIGEL'MAN, L.T., tekhn.red.

[Kuan-tse; studies and translation] Guan'-tszy; issledovanie i perevod. Moskva, Izd-vo vostochnoi lit-ry, 1959. 379 p. (MIRA 12:9)

(China--Economic conditions)

BARSOV, Nikolay Nikolayevich, dotsent, kand.geograf.nauk; BONIFAT'YEVA, Lidiya Ivanovna, dotsent, kand.geograf.nauk; BURENKO, Sergey Fedorovich, dotsent, kand.geograf.nauk; GITLITS, Semen Aleksandrovich, dotsent, kand.ekonom.nauk; GUREVICH, Priam Vladimirovich, prof.; DARINSKIY, Anatoliy Viktorovich, dotsent, kand.geograf.nauk; DOLININ, Aleksey Arkad'yevich, dotsent, kand.geograf.nauk; DOROSHKEVICH, Lyudmila Ivanovna, dotsent, kand.geograf.nauk; YEFIMOVA, Yelena Semenovna, kand.geograf.nauk; LAVROV, Sergey Borisovich, dotsent, kand. geograf.nauk; LEDOVSKIKH, Stepan Ivanovich, dotsent, kand.geograf. nauk; NEVEL'SHTEYN, Grigoriy Solomonovich, dotsent, kand.geograf. nauk; NIKOLAYEVA, Nadezhda Vasil'yevna, dotsent, kand.geograf.nauk; OGANESOV, Vladimir Artem'yevich, kand.geograf.nauk; PINKHENSON, Dmitriy Moiseyevich, dotsent, kand.geograf.nauk; POSPELOVA, Nataliya Georgiyevna, prof., doktor ekonom.nauk; SEMEVSKIY, Boris Nikolayevich, prof., doktor geograf.nauk; SUTYAGIN, Pavel Grigor'yevich, dotsent, kand.geograf.nauk; SHTEYN, Viktor Moritsovich, prof., doktor ekonom.nauk; YEROFEYEV, I.A., red.; SMIRNOVA, N.P., red.; TYUTYUNNIK, S.G., red.kart; BORISKINA, V.I., red.kart; KOZLOVSKAYA, M.D., tekhn.red.

[Economic geography of foreign countries; student manual] Ekonomicheskaia geografiia zarubezhnykh stran; posobie dlia studentov. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1960. 702 p. 4 maps (MIRA 13:12)

(Geography, Economic)

AL'TER, L.B., doktor ekon. nauk; BLYUMIN, I.G., doktor ekon. nauk [deceased]; KARATAYEV, N.K., prof.; REUEL', A.L., doktor ekon. nauk; STEPANOV, I.G., doktor ekon. nauk; SHTEYN, V.M., doktor ekon. nauk; POLYANSKIY, F.Ya., doktorist. nauk; BOBKOV, K.I., kand. ekon. nauk; VASILEVSKIY, Ye.G., kand. ekon. nauk; MOROZOV, F.M., kand. ekon. nauk; PONOMAREV, Ye.I., kand. ekon. nauk; RYNDINA, M.N., kand. ekon. nauk; FIRSOVA, S.M., kand. ekon. nauk; TSAGA, V.F., kand. ekon. nauk; ZHUK, I., red.; VOSKRESENSKAYA, T., red.; NEZNANOV, V., red.; ULANOVA, L., tekhn. red.

[History of economic theories] Istoriia ekonomicheskikh uchenii. Moskva, Sotsekgiz, 1963. 549 p. (MIRA 17:2)

1. Akademiya nauk SSSR. Institut ekonomiki.

[redacted]

[redacted], V. M.

Engr., Central Sci. Res. Inst. Railway Transport, -c1949-. "Equivalent Circuits of Multipole Networks", Elektrichestvo, No. 7, 1949.

SHTEYN, V. M.

SHTEYN, V. M. -- "Investigation of Double Images in Coaxial Cable." Published by the Academy of Science USSR. Institute of Radio Engineering and Electronics. Moscow, 1955. (Dissertation for the Degree of Candidate in Technical Sciences.)

So; Knizhaya Letopis' No 3, 1956

SHTEYN, V.M.

Modeling double reflection in coaxial cables. Sbor. nauch. rab. po. prov. sviazi no.4:35-52 '55. (MLRA 9:2)
(Electric cables) (Telephone cables)

BATMANOVSKIY, Yevgeniy Aleksandrovich; KARPIKHIN, Vladimir Vasil'yevich; UDAL'TSOV, A.N., glavnyy redaktor; SHTEYN, V.M., inzhener, redaktor; SENKEVICH, I.V., inzhener, redaktor

[Recording double bridge for studying electric properties of alloys. Stand for measuring the remitance of duct capacitors] Samopishushchii dvoinoi most dlia issledovaniia elektricheskikh svoistv splavov, Stend dlia izmereniia soprotivleniia prokhodnykh kondensatorov. Tema 5, no.1-56-456. Moskva, 1956. 16 p. (MLRA 10:5)

1. Moscow. Institut tekhniko-ekonomicheskoy informatsii.
(Alloys--Electric properties) (Condensers (Electric))

AID P - 4533

Subject : USSR/Electronics

Card 1/2 Pub. 90 - 6/10

Author : Shteyn, V. M.

Title : Calculation of linear predistorting and restoring networks.

Periodical : Radiotekhnika, 2, 60-63, F 1956

Abstract : In order to increase the signal-to-noise ratio at the receiving end of a telephone channel without increasing the signal power at the sending end, the author applies predistorting and restoring linear four-terminal networks. He develops formulas for the calculation of such networks which aim at reducing the average signal power at the sending end when the signal-to-noise ratio at the receiving end is given. The author finds that in the case of white noise in the telephone channel the use of the above device permits a 2.1-time reduction of

6 (6) SOV/112-57-5-11361

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1957, Nr 5, p 264 (USSR)

AUTHOR: Shteyn, V. M.

TITLE: Investigation of the Influence of a Concurrent Stream Upon TV Picture Quality, and Standardizing the Concurrent-Stream Value (Issledovaniye vliyaniya poputnogo potoka na kachestvo televizionnogo isobrazhniya i normirovaniye velichiny poputnogo potoka)

PERIODICAL: Sb. nauch. rabot po provodnoy svyazi. Nr 5, M., AS USSR, 1956, pp 9-24

ABSTRACT: Results are reported of [illegible] investigation of the influence of a concurrent stream in long-distance TV cables [illegible] on the transmission quality of a TV picture. The concurrent stream is formed by double reflections from the cable inhomogeneities and can be characterized by the average and random components. Distortions caused by the random component, which play a major part, were investigated. The investigation was conducted by means of

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Investigation of the Influence of a Concurrent Stream Upon TV Picture Quality, ...

are connected as a group. The reflections whose spectrum lies in the range 200-1,300 kc in the video spectrum proved to be most obnoxious. The experimental results allow suggesting methods for standardizing the concurrent-stream value. It is pointed out that present requirements regarding the reflected-signal value are too high. In determining the suitability of newly-built trunk lines, it is expedient to rely on the measurement of the group propagation time, which varies considerably with frequency. The testing of acceptability of a cable shipping length should be made on the basis of the weighted mean energy of the reflected signal, and not on the basis of pulse characteristics as it has been made hitherto.

A.B.P.

Card 3/3

AUTHOR: SHTEYN, V.M.

TITLE : A-U Sci Conf dedicated to "Radio Day", Moscow, 20-25 May 1957. "Quantum Noise of Group Signal in Frequency Separation of Signals,"

PERIODICAL: Radiotekhnik i Elektronika, Vol. 2, No. 9, pp. 1221-1224, 1957, (USSR)

For abstract see L.G. Stolyarov

SHTEYN, V. M.

"Quantization Noise of a Group Signal in Frequency Sharing of Channels,"

report presented at the Session on Information Theory, All-Union Scientific Session of VNORiE, Moscow, 20 - 25 May 1957.

The paper by V. M. Shtein showed that in pulse-code modulation of a large number of telephone channels it is necessary to have from 128 to 256 quantization steps. The effect of the loading of the group channel on the quantization noise was considered.

Electronic Design, 22 January 1958

SHTEYN V. M.

В. Г. Дубенецкий,
А. И. [illegible]

Прямо показывающие приборы для записи характеристик согласования

А. Я. [illegible]

Некоторые технические применения фазометрических методов измерения геометрических величин

В. В. [illegible],
Е. А. [illegible],
Г. П. [illegible],
П. А. [illegible]

Опыт разработки микроволнового радиоспектрометра

Н. С. Степанов

Некоторые приборы для автоматизации производственных измерений элементов аппаратуры дальней связи.

11 июня

(с 18 до 22 часов)

Н. В. [illegible]

Вопросы разработки комплекса СВЧ измерительной аппаратуры для радиорелейных линий.

А. М. Прохоров

Вопросы методики измерения и аппаратурного решения при измерении группового времени запаздывания на СВЧ и видеочастотах

В. М. Штейн,
~~В. И. [illegible]~~
Д. А. [illegible]

Использование импульсной модуляции для измерения временных характеристик

А. М. [illegible]

Установка для исследования высокочастотных трактов и замедляющих систем посредством импульсов.

Н. Н. [illegible],
В. Я. [illegible]

Прибор для визуального наблюдения модуля коэффициента передачи четырехполюсников в диапазоне частот

8. СЕКЦИЯ ОБЩЕЙ РАДИОТЕХНИКИ

Руководитель Г. А. [illegible]

9 июня

(с 10 до 12 часов)

report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNORIE), Moscow, 8-12 June. 1959

AUTHOR: Shteyn, V.M. SOV/106-59-2-6/11

TITLE: Transmission by a Pulse Code Modulation Method of a Group Signal with Frequency Division of the Channels (O peredache gruppovogo signala s chastotnym deleniyem kanalov metodom kodovo-impul'snoy modulyatsii)

PERIODICAL: Elektrosvyaz', 1959, Nr 2, pp 43 - 54 (USSR)

ABSTRACT: Because the pulse code modulation (PCM) method has a number of advantages, development of such a system capable of handling a large number of channels can be expected in the near future. It is particularly suitable for waveguide links where a wide bandwidth is available. With PCM the continuous signal is sampled in time and quantised in amplitude. In quantising a group signal with frequency division of channels it is impossible to avoid non-linear quantising noise. This article investigates the quantising noise power in a frequency-division, pulse code modulation (Fd - PCM) transmission system.
Figure 1 shows the non-linear characteristic of the signal quantiser with a quantisation step Δ. This characteristic can be considered as the sum of two characteristics: linear (2) and non-linear (3). In its turn, the non-linear characteristic (3) can be considered as the sum of the

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saw-tooth characteristic (4) and the load range characteristic (5). If the signal applied to the quantiser input is a series of amplitude-modulated pulses U (6), then the quantised signal at the output (7) can be presented as the sum of the undistorted signal U (8) and the error U_o (9), which, in its turn, consists of the quantisation errors U_k (10) and the errors due to the load range characteristic U_n (11). The random sequence of the errors U_o is the source of the quantising noise.
If the number of channels is large, then the group signal is approximately Gaussian. If it is assumed that the spectrum of the group signal power is:

$$P(\omega) = c \quad \text{when} \quad 0 < \omega < \Omega$$

and

$$P(\omega) = 0 \quad \text{when} \quad \omega > \Omega \ ,$$

then, with sampling at a frequency Ω/π , the successive

Transmission by a Pulse Code Modulation Meth... Also,
with Frequency Division of the Channels

signal values will be independent and random.. the successive values of the error U_o will be uncorrelated random values. Therefore, the spectrum of the quantising noise power will be uniform and the power will be equally distributed between the channels. It is shown that, providing the number of channels is large, then the widely held view that the group signal with frequency division is so sensitive to non-linear distortions that a very large number of quantisation steps is necessary with PCM transmission, is erroneous. As far as quantising noise is concerned, PCM systems with time-division and frequency-division are comparable.

The number of quantisation steps n must be such that the psophometric power of the quantising noise in a single telephonic channel does not exceed a permissible value. Letting the root mean square of the Gaussian signal be:

$$\sigma = \sqrt{\overline{U^2}} \gg \Delta$$

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Transmission by a Pulse Code Modulation Method of a Group Signal with Frequency Division of the Channels

to be reduced twice. Finally, comparison is made between time-division and frequency-division PCM . An example of the application of the theory is given. There are 3 figures and 4 references, 3 of which are English and 1 German.

SUBMITTED: December 4, 1958

Card 5/5

67375

SOV/106-59-9-2/13

9.3230

AUTHOR: Shteyn, V.M.

TITLE: Measurement of Transients by a Method of Modulation of a Pulse Train

PERIODICAL: Elektrosvyaz', 1959, Nr 9, pp 12-19 (USSR)

ABSTRACT: The time-characteristics of four-terminal networks are usually measured by applying a pulse to the input to the network and displaying the response from the output on a CRT oscillograph. When the ratio of the maximum instantaneous amplitude to the minimum instantaneous amplitude is higher than 50, then difficulties are experienced in this method. The author briefly describes the causes; transients in the CRT, amplifiers, distortion due to overloading the amplifiers, and noise in the wide-band amplifiers. The article describes another method based on the use of amplitude-pulse or pulse-phase modulation. The block diagram is shown in Fig 2. The repetition frequency f of the two pulse generators 1 and 2 is set by the sinusoidal drive oscillator. The pulse trains of the pulse generators can be displaced by a known time σ relative to each other by the variable, graduated,

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Measurement of Transients by a Method of Modulation of a Pulse Train

phase-shifters 1 and 2. The pulse train of oscillator 1 (Fig 3a) is modulated by a low frequency, sinusoidal oscillator at a frequency $F < f/2$. Here the author considers the first variant of the circuit, which uses amplitude-pulse modulation (Fig 3b). The train of amplitude-modulated pulses is applied to the input to the four-terminal network, and at its output occurs a train of pulses (Fig 3в), distorted as a result of the transients in the four-terminal network. The four-terminal network output terminals are connected to the strobe apparatus. The strobe apparatus is periodically switched-in by the pulses from oscillator 2. A train of amplitude modulated pulses with a sinusoidal envelope (Fig 3д) arises at the output of the strobe apparatus. By using the phase shifters 1 and 2 to displace the generator pulse trains, any section of the time-characteristic of the four-terminal network can be "cut-out". An adjustable attenuator is connected to the output of the strobe apparatus and the attenuator is followed by an amplifier tuned to the frequency F.

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4

Measurement of Transients by a Method of Modulation of a Pulse Train

The voltage at the amplifier output is measured by the usual valve voltmeter or by a phase-sensitive voltmeter. The constant component passes from the output of the phase detector through a low-frequency filter to a magneto-electric apparatus. By displacing the pulse trains which control the pulse modulator and the strobe apparatus and noting the readings of the magneto-electric apparatus and of the attenuation of the attenuator, the time characteristic of the four-terminal network can be obtained. The proposed method of measurement can be modified to measure the time-characteristic of both linear and non-linear circuits. In this variant of the circuit the pulse modulator phase-modulates the pulses with sinusoidal frequency F. The advantage of pulse-phase-modulation is that all the pulses have the same amplitude and shape and therefore suffer the same distortions in the non-linear, four-terminal network. Finally, the author analyses the dependence of the measured results on the duration and shape of the strobing pulses and also compares the

VLASKIN, B.G.; SHTEYN, V.M.

Measurement of pulse characteristics of nonlinear four-terminal networks. Elektrosviaz' 14 no.9:68-71 S '60. (MIRA 13:9)

(Transistors) (Pulse techniques (Electronics))

S/106/63/000/001/004/007
A055/A126

AUTHOR: Shteyn, V.M.

TITLE: Transmission of telephone communications by the pulse-code modulation method

PERIODICAL: Elektrosvyaz', no. 1, 1963, 36 - 47

TEXT: This article is a general review of the pulse-code modulation technique. The fundamental principles of multichannel transmission of telephone communications by the pulse-code modulation method are examined. The following items are dealt with in this first part of the article: 1) Transmission of continuous communications by the pulse-code modulation method; 2) frequency band in pulse-code transmission and quantization noise; 3) Δ-modulation. The second part of the article will be published in the next number of the same periodical. There are 15 figures.

Card 1/1

S/106/63/000/002/004/007
A055/A126

AUTHOR: Shteyn, V.M.

TITLE: Transmission of telephone communications by the pulse-code modulation method

PERIODICAL: Elektrosvyaz', no. 2, 1963, 37 - 47

TEXT: This is the second and last part of a general review of the pulse-code modulation technique, intended not for specialists in this technique, but for electrocommunication engineers in general. The first part of this article was published in Elektrosvyaz', no. 1, 1963. This second part deals with: 1) The transmission of pulse-code modulated signals through communication lines; a) transmission of the modulated carrier; b) transmission of d-c pulses. 2) The correction of linear distortions in the transmission of PCM signals. 3) The various methods for transmitting PCM signals. 4) The sources of noise in the transmission of PCM signals; a) noises due to exterior sources and fluctuation noises; b) noises due to the PCM signal itself. 5) The practical applications of pulse-code modulation. There are 8 figures.

SUBMITTED: August 29, 1962

Card 1/1

SOURCE CODE:

ACC NR: AP6025692

AUTHOR: Shteyn, V. M.

ORG: None

TITLE: Some questions concerned with the construction of pulse-code modulation (IKM) communications systems

SOURCE: Elektrosvyaz', no. 5, 1966, 21-28

TOPIC TAGS: pulse communication, voice communication, multichannel communication, communication equipment, communication network, communication R and D, coaxial cable, PULSE CODE MODULATION

ABSTRACT: This article is the concluding part of an article, Part I of which appeared in Elektrosvyaz', no. 3, 1966, and deals with the transmission of IKM signals over cable lines. This idea involves the use of a single-pole transmission method, since such method has certain advantages over the quasi-tropic (or bipolar) method of transmitting IKM signals over cable lines, as is the generally accepted method. The transmission of IKM signals in both directions over the same physical circuit is possible in certain cases, a method for so doing is discussed, and the possibilities of using IKM systems in local telephone networks are analyzed. When coaxial cables are used there is less copper needed, section attenuation is reduced,

UDC: 621.394.42:621.376.56

ACC NR: AP6025692

and it becomes possible to increase considerably the number of channels by replacing standard 12-channel systems with larger ones. The advantages are countered by such disadvantages as difficulty in servicing, and the need to take steps to provide for uniformity of wave impedance. Orig. art. has: 7 figures and 2 tables.

SUB CODE: 17/SUBM DATE: 02Jun65/ORIG REF: 002/OTH REF: 002

LENSKIY, V.M.; SHTEYN, V.P.

Reconstruction of bone transplants following arthroereisis surgery in the talocrural joint. Ortop., travm. i protez. 26 no. 10:49-54 O '65. (MIRA 18:12)

1. Iz Sverdlovskogo instituta travmatologii i ortopedii (dir. - kand. med. nauk Z.P. Lubegina). Adres avtorov: Sverdlovsk 14, Bankovskiy pereulok, dom 7, Institut travmatologii i ortopedii. Submitted Sept. 15, 1964.

GREBENSHCHIKOV, Vasiliy Orestovich. Prinimali uchastiye: GURCHENOK, I.F., SOLOV'YEVA. V.Ye.; SHTEYN, V.S. KARAKULOV, I.K., prof., doktor med. nauk, red.; NUGER, M.M., red.; SVICHKAR', N.N., tekhn.red.

[Public health and medicine in prerevolutionary Kazakhstan; bibliographic index to literature, 1731-1917] Zdravookhranenie i meditsina v dorevoliutsionnom Kazakhstane; bibliograficheskii ukazatel' literatury, 1731-1917 gg. Alma-Ata, Gos.nauchn.med. biblioteka Kazakhstana, 1960. 288 p. (MIRA 13:11)

1. Direktor Gosudarstvennoy nauchnoy meditsinskoy biblioteki Kazakhstana (for Grebenshchikov). 2. Gosudarstvennaya nauchnaya meditsinskaya biblioteka Kazakhstana (for Gurchenok, Solov'yeva, Shteyn). 3. Chlen-korrespondent Akademii nauk Kazakhskoy SSR (for Karakulov).
(BIBLIOGRAPHY--KAZAKHSTAN--MEDICINE)
(KAZAKHSTAN--BIBLIOGRAPHY--MEDICINE)

SEYFER, A.L.; SHTEYN, V.S.

Concerning the conversion algorithm of a complex compound given in a rational nomenclature to a linear formula. Soob. LEM AN SSSR no.1:172-183 '60. (MIRA 15:2)
(Chemistry)
(Information theory)

28.2000 1013, 1031, 1121 25505

S/078/61/006/008/003/018
B121/B203

AUTHORS: Seyfer, A. L., Shteyn, V. S., and Shchurova, S. S.

TITLE: Use of electron computers for transducing names of complex compounds into formulas

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 6, no. 8, 1961, 1759-1761

TEXT: The authors give some chemical and logical principles for transducing names of complex compounds into formulas with a universal electron computer of the type ЛЭМ-1 (LEM-1). The use of electron computers is made on the basis of four basic blocks:
(1) block for the separation of syllables,
(2) analytic block,
(3) block for combinations,
(4) block for the synthesis of formulas.
In block (1), the chemical compound is divided into single syllables. The formula is simplified in block (2). Block (3) records parantheses and indices of formulas. Block (4) distributes parantheses and indices of complex compounds as dependent on the number of ligands and the character of complex compounds (anionic and cationic). The entire process from

Card 1/2

introducing the name of the complex compound to the printing of the formula is automatic and consists of 3500 - 6000 logical and arithmetical operations. It takes 3-5 seconds. The process is explained with the aid of examples such as: dicyano-(1+)-potassium argentate was introduced; the electron computer supplied the following figures: 00212 00001 37777 00201 00001 00205 00002 37777 00001, which correspond to the formula: $K_1(Ag_1,(CN)_2)_1$. There are 1 table and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: Ref. 7: JUPAC, Nomenclature of Inorganic Chemistry, 1957. Report of the Commission of Nomenclature of Inorganic Chemistry, L, 1959.

ASSOCIATION: Institut nauchnoy informatsii Akademii nauk SSSR (Institute of Scientific Information of the Academy of Sciences USSR)

SUBMITTED: May 5, 1960

SEYFER, A.L.; SHTEYN, V.S.

Topology of the diagrams: composition - property for binary systems. Zhur.neorg.khim. 6 no.12:2719-2723 D '61. (MIRA 14:12)

1. Institut nauchnoy informatsii AN SSSR.
(Systems (Chemistry))

SHTEYN, V.S.

Principles of machine recording of phase fields on diagrams of states in case of binary metal systems. NTI no.3:31-35 '63. (MIRA 16:11)

NOVIK, P.K.; SHTEYN, V.S.

Unification of designations in the fields of binary metal systems. NTI no.5:25-28 '64. (MIRA 17:10)

L 42812-66 EWT(m)/T/EWP(t)/ETI IJP JD/JXT(BF)

ACC NR: AP6014159 SOURCE CODE: UR/0315/65/000/011/0019/0021

56
54
B

AUTHOR: Shteyn, V. S.

ORG: none

TITLE: Fundamental principles for an information-retrieval system for ternary state diagrams in physicochemical analysis

SOURCE: Nauchno-tekhnicheskaya informatsiya, no. 11, 1965, 19-21

TOPIC TAGS: digital computer, data retrieval, physical chemistry, computer storage device

ABSTRACT: The role of the state diagram in the representation of physicochemical analytic information is briefly discussed, and it is pointed out that, except for the simplest conversions (single and binary systems), the satisfactory use of state diagrams requires the employment of machine methods of information processing, inasmuch as the material in question must be represented in a linear form suitable for handling by electronic digital computers. The presence of a formalized language (the so-called international geometric language) for use in physicochemical analysis is noted, and the essential features of topographical representation are briefly reviewed. The limitations of the topographical form of state diagram representation are considered, and general principles for the recording of ternary state diagrams in the computer

memory, based on the mathematical operations of the least square method, are described. For access to a specific diagram stored in the computer memory a set of filters is devised, with which are associated the components forming the physicochemical system, the method in which the composition is expressed, as well as a number of other attributes. The result is a descriptor or factographic information-retrieval system which is of value to specialists in the field of physical chemistry. The problem of the linearization of the information in the diagrams is solved through the use of topographical representations and also the fundamental postulates of physicochemical analysis (for example, the correlation principle and the rule of "tangential state spaces"). The principles underlying the organization of an information-retrieval system for ternary diagrams outlined in this paper are the result of a further development of techniques used by the author for the design and realization of a similar system for binary diagrams("NTI", 1963, No. 3, 31-35). The author expresses his gratitude to P. K. Novik for some valuable comments in the development of the topic.

SUB CODE: 09,07/ SUBM DATE: 18May65/ ORIG REF: 009/ OTH REF: 001

computer applications in metallurgy 18

MATOV, A.L., inzh.; SHTEYN, V.Ya., inzh. [deceased]; LEVITSKIY, V.Ya., inzh.

Protecting crushing machinery from the accidental trapping of metallic objects. Gor. zhur. no. 12:52-54 D '65. (MIRA 18:12)

1. Novo-Krivorozhskiy gornoobogatitel'nyy kombinat.

SHTEYN, Ya.

report to be submitted for the IUPAC 21st Conference and 18th Intl. Congress of
Pure and Applied Chemistry, Montreal, Canada, 2-12 August 1961

GORODISKIY, A. V., Academy of Sciences UkSSR, Kiev - "The oscillographic investi-
gation of the electrochemical kinetics in fused salts" (Section A.3,e.2 - Session
I, 11 Aug 61, afternoon)
GURVICH, L. V., Academy of Sciences USSR, Moscow - "The calculation of thermodynamic
functions of gases in a wide temperature range" (Section A.3,c,(1), Session II -
8 Aug 61, afternoon)
KARGIN, V. A., Physico-Chemical Institute imeni L. Ya. Karpov, Moscow - "Vitrification
phenomena in crystallin polymers" (Section B.4 - 7 Aug 61, afternoon)
KISELEV, A. V., Moscow State University imeni M. V. Lomonosov - "The influence of
surface heterogeneity and adsorbate-adsorbate interaction on the adsorption
properties of solid surfaces" (Joint Session, Sections A.2 and B.1 - 8 Aug 61,
morning)
KONDRAT'YEV, V. N., Institute of Chemical Physics, Academy of Sciences USSR, Moscow -
"The HO_2 radical" (Section A.1, Session I - 11 Aug 61, morning) (Also, Section
A.1, Chairman, Session I - 8 Aug 61, morning)
KUZNETSOV, V. I., Institute of Geochemistry and Analytical Chemistry imeni V. I.
Vernadskiy, Academy of Sciences USSR - "A novelty in the use of organic co-
precipitants for concentration of small amounts of the elements" (To be presented
in Russian) (Section C.2 - 11 Aug 61, morning)
LAVRUKHINA, A. K., RAKOVSKIY, E. E., and MOSKALEVA, L. P., Institute of Geochemistry
and Analytical Chemistry imeni V. I. Vernadskiy, Academy of Sciences USSR - "New
data on radiochemical investigations of the processes of fission and fragmentation
induced by high energy protons" (Section A.4 - 8 Aug 61, afternoon)
LOVACHEV, L. A., Academy of Sciences USSR, Moscow - "Determination of rate constants
of elementary processes from flame velocities as a function of temperature,
pressure, and molecular transfer coefficients" (Section A.3,b,(2) - 7 Aug 61,
afternoon)
MUNDIATH, S. (Probably MUNDYATH, S.) and GERASIMOV, Y. I., Moscow State University
imeni M. V. Lomonosov - "Study of the thermodynamic properties of the system
iron-latinum" (Section A.3,c,(3), Session II(A) - 11 Aug 61, morning)
PANCHENKOV, G. M., KOLCHIN, A. M., MALAKOV, V. F., and SHTEYN, Ya., Moscow State
University imeni M. V. Lomonosov - "Emission of complex ions in solid-phase
reactions" (Joint Session, Sections A.2 and B.1, 8 Aug 61, morning)
SEMENOV, N. N., Institute of Chemical Physics, Academy of Sciences USSR, Moscow -
"Certain chemical reactions at reduced temperatures and related problems of energy
transfer" (To be presented in Russian) (Plenary lecture - Saturday, 12 Aug 61)
SHILOV, Ye. A., Academy of Sciences UkSSR, Kiev - "The active agents and the inter-
mediary complexes in the heterolytic reactions of halogenation of the organic
compounds" (Section A.1, Session II - 11 Aug 61, morning)
SMIRNOV, M. V., Electrochemistry Institute, Sverdlovsk - "The equilibrium between
the titanium subgroup metals and the salt melts" (Section B.3 - 7 Aug 61, afternoon)
TAL'ROZE, V. L., Institute of Chemical Physics, Academy of Sciences USSR - "Reactions
of ions and molecules in the gas phase" (Section A.1, Session I - 9 Aug 61,
afternoon)
TERENIN, Aleksandr N., Leningrad State University imeni A. A. Zhdanov - (Section A.1,
Chairman, Session I - 8 Aug 61, afternoon Session) (Also on program for Section
A.1, Session I - 9 Aug 61, afternoon)
TERENIN, Aleksandr N., VILESOV, F. I., KURBATOV, B. ?, and DODONOVA, N. ?/ Leningrad
State University imeni A. A. Zhdanov - "Mass-spectrometry and luminescence of
radicals in the photodissociation and photoionization of molecules by vacuum
ultra-violet radiation" (Section A.1, Session I - 9 Aug 61 - afternoon)
TUNITSKIY, N. N., Scientific Research Physico-Chemical Institute imeni L. Ya. Karpov-
"On the dissociation of molecules on electron impact and the early states of
radiation-chemical processes" (Section A.1, Session I - 8 Aug 61, afternoon)
VAYNSHTEYN, Emmanuil Ye., and KOROLEV, V. V., Institute of Geochemistry and
Analytical Chemistry imeni V. I. Vernadskiy, Moscow - "The plasma generator and
its use for spectral analysis of alloys and rocks" (Section C.1 - 8 Aug 61, morning)
VINOGRADOV, A. P., LAVRUKHINA, A. K., and REVINA, L. D., Institute of Geochemistry
and Analytical Chemistry imeni V. I. Vernadskiy, Academy of Sciences USSR - "The
study of nuclear reactions in iron meteorites under the action of high energy
protons" (Section A.4 - 8 Aug 61, afternoon)
YAKOVLEV, Yu V., and ALIMARIN, I. P., Institute of Geochemistry and Analytical
Chemistry imeni V. I. Vernadskiy, Academy of Sciences USSR - "The determination
of trace impurities in some materials for semiconductor techniques by radio-
activation analysis" (To be presented in Russian) (Section C.1 - 8 Aug 61, afternoon)

YEROFEYEV, Boris V., Institute of Physical-Organic Chemistry, Minsk - "The effect
of donor and acceptor admixtures on the decomposition rate of solids" (Section
A.2 - 8 Aug 61, afternoon)

L 23474-66 EWT(m)

ACC NR: AP6013980 SOURCE CODE: UR/0228/65/000/002/0017/0019

AUTHOR: Shteyn, Ya. Sh. (Candidate of technical sciences); Yakub, I. A. (Candidate of technical sciences); Starostina, V. P. (Engineer)

14
B

ORG: none

TITLE: Porous clay aggregate for high-strength concrete

SOURCE: Stroitel'nyye materialy, no. 2, 1965, 17-19

TOPIC TAGS: concrete, clay

ABSTRACT: Not all heat-expanded clay aggregates are suitable for high-strength concrete, and this paper reports on studies made to determine the better kinds. Both laboratory and regular industrial concrete samples were tested. Samples of concrete with expanded filler were prepared for strength testing. The aggregates were graded by specific weight and strength. In all cases the grains were similar in shape and surface characteristics and the intergranular space was about 47%. Samples were also made with crushed aggregates of various strengths and specific weights. Strength as a function of cement content was also tested, and results are shown by ternary diagrams (nomograms).

Concrete mixtures contained the following fractions by volume: 15% 12 mm, 20% 1.2 to 5 mm, 27% 5 to 10 mm, 38% 10 to 20 mm. Samples were cured in steam ovens. Strength details of samples containing various proportions of Portland cement and aggregates of various strengths are compared in tables and graphs and are discussed extensively. Certain expanded aggregates are shown

L 23474-66

ACC NR: AP6013980

to permit savings of up to 30% to 50% cement for given strengths as compared to ordinary heavy concrete. [JPRS]

SUB CODE: 13 / SUBM DATE: none

[redacted]

[redacted], Yu. N., kand. tekhn. nauk; YAKUB, L.S., kand. tekhn. nauk; [redacted], V.I., inzh.

Keramzit gravel for high-strength concrete. Stroi. mat. 11 no.8:27-29 Ag '65. (MIRA 18:8)

SHTEYN, Ya. Sh. Cand Tech Sci -- (diss) "Effect of the quality of porous fillers upon the basic properties of concretes." Mos, 1958. 22 pp (Acad of Construction and Architecture USSR. Sci Res Inst of ~~Modern~~ New Construction Materials. Laboratory of Slags and Agglomerates), 350 copies. (KL, 52-58, 104)

MIRONOV, S.A., prof., doktor tekhn.nauk; BUZHEVICH, G.A., kand.tekhn.nauk; PONASYUZHENKOV, Ya.D., inzh.. Prinimali uchastiye: ELINZON, M.P., kand.tekhn.nauk; SHTEYN, Ya.S., kand.tekhn.nauk; KLIMOVA, G.D., red.izd-va; TEMKINA, Ye.L., tekhn.red.

[Instructions for selecting mixes and making keramzit concrete] Ukazaniia po podboru sostava i prigotovleniiu keramzitobetona. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1959. 30 p. (MIRA 13:3)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Mironov). 3. Laboratoriya legkikh zapolniteley Vsesoyuznogo nauchno-issledovatel'skogo instituta novykh stroitel'nykh materialov (for Elinzon, Shteyn). 4. Laboratoriya yacheistykh i legkikh betonov i uskorennogo tverdeniya betona Nauchno-issledovatel'skogo instituta betona i zhelezobetona (for Buzhevich, Ponasyuzhenkov).

(Lightweight concrete)

POPOV, Nikolay Anatol'yevich, zasl. deyatel' nauki i tekhniki, prof.; ELINZON, Mark Petrovich, kand. tekhn. nauk; SHTEYN, Yakov Shimelevich, kand. tekhn. nauk; GLEZAROVA, I.L., red. izd-va; NIKHEYEVA, A.A., tekhn. red.

[Choosing the composition of lightweight concrete made with artificial porous aggregates] Podbor sostava legkikh betonov na iskusstvennykh poristykh zapolniteliakh. Pod red. N.A.Popova. Moskva, Gosstroiizdat, 1962. 81 p. (MIRA 15:5)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Popov).

(Lightweight concrete)

POPOV, N.A., prof.; SHTEYN, Ya.Sh., kand.tekhn.nauk; TACHKOVA, N.A., inzh.

Heat conductivity of concrete made with slag pumice. Stroi.mat. 8 no.3:13-15 Mr '62. (MIRA 15:8)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Popov).

(Lightweight concrete--Testing)

SHTEYN, Ya.Sh., kand.tekhn.nauk; STAROSTINA, V.P., inzh.

Properties of agloporites and concretes made with them. Sbor. trud.VNIINSM no.6:181-187 '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR.

(Aggregates (Building materials))
(Lightweight concrete)

SHTEYN, Ya.Sh., kand.tekhn.nauk

Effectiveness of using agloporite. Sbor.trud.VNIINSM no.6:191-200 '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR.

(Aggregates (Building materials))
(Lightweight concrete)

ELINZON, M.P., kand.tekhn.nauk; VASIL'KOV, S.G., kand.tekhn.nauk;
SHTEYN, Ya.S., kand.tekhn.nauk

Industrial mastering of the production of agloporite in Electrostal'. Sbor.trud.VNIINSM no.6:110-135 '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR.
(Electrostal'--Aggregates (Building materials))
(Lightweight concrete)

LAZAREVICH, S.K., kand.tekhn.nauk; SHTEYN, Ya.Sh., kand.tekhn.nauk;
ELINZON, M.P., kand.tekhn.nauk; STEBAKOVA, I.Ya., inzh.;
STRIZHEVSKIY, M.F., inzh.

Economic efficiency of producing and using keramzit, agloporite and alag "pumice." Stroi.mat. 8 no.10:12-16 O '62. (MIRA 15:11)
(Aggregates (Building materials))

SHTEYN, Ya.Sh., kand.tekhn.nauk, starshiy nauchnyy sotrudnik;
REZNIKOV, I.N., kand.tekhn.nauk, starshiy nauchnyy sotrudnik;
ALEKSANDROV, A.Ye., inzh.

Lightweight concretes made with slag "pumice." Bet. i zhel.-bet. 8 no.11:511-513 N '62. (MIRA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR (for Shteyn, Reznikov). 2. Nachal'nik TSentral'noy nauchno-issledovatel'skoy laboratorii Lipetskogo soveta narodnogo khozyaystva (for Aleksandrov).
(Slag)
(Lightweight concrete)

ANIKANOVA, K.F.; BETTS, G.E.; ZHAKOVA, V.G.; KOMSKAYA, N.F.; KARMIN, B.K.; PRISS, L.S.; REZNIKOVSKIY, M.M.; CHERNIKINA, L.A.; SHTEYN, Ye.B.

Structural and characteristic similarity of Soviet SKU polyusoprene rubber and natural rubber. Kauch.i rez.no.1:4-14 Ja '57. (MLRA 10:2)
(Rubber--Synthetic)

ACC NR: AP6030661 SOURCE CODE: UR/0020/66/169/006/1446/1448

AUTHOR: Shteyn-Margolina, V. A.; Cherni, N. Ye.; Razvyazkina, G. M.

ORG: Electron Microscopy Laboratory, Academy of Sciences, SSSR (Laboratoriya elektronnoy mikroskopii, Akademiya Nauk SSSR)

TITLE: Wheat-streak mosaic virus in plant cells and its tick carrier

SOURCE: AN SSSR. Doklady, v. 169, no. 6, 1966, 1446-1448

TOPIC TAGS: wheat streak mosaic virus, plant disease, disease vector, tick, ~~[illegible]~~ virus, animal parasite

ABSTRACT: Ticks from the family *Eriophylidae* carry wheat-streak mosaic virus particles. Electromicrographic study shows that the particles are carried intracellularly as well as on the surface of the tick. Laboratory induction of the carrier state in the tick vector was accomplished by coating the vectors with a buffered leaf extract. The electron micrographs and aspects of related mosaic viruses were also discussed. [WA-50; CBE No. 12]

SUB CODE: 06/ SUBM DATE: 26Feb66/ ORIG REF: 005/ OTH REF: 015/

SMIRNOVA, V.A.; SHTEYN-MARGOLINA, V.A.

Electron microscope study of the cucumber mosaic disease No.2 (Cucum s virus 2). Dokl. AN SSSR. 144 no.6:1384-1386 Je '62. (MIRA 15:6)

1. Laboratoriya elektronnoy mikroskopii Akademii nauk SSSR. Predstavleno akad. A.L.Kursanovym.

(Cucumber mosaic virus)

SMIRNOVA, V.A.; SHTEYN-MARGOLINA, V.A.

Removal of methacrylate and the contrasing of viral particles in plant tissue sections; a method for electron microscopic study. Biofizika 7 no.4:476-478 '62. (MIRA 15:11)

1. Laboratoriya elektronnoy mikroskopii Otdeleniya biologicheskikh nauk AN SSSR, Moskva.
(VIROLOGY) (ELECTRON MICROSCOPY)

DRUZHININ, N.I., kandidat tekhnicheskikh nauk; SHTEYNBAK, G.Yu., inzhener, redaktor; SENKEVICH, I.V., inzhener, redaktor; UDAL'TSOV, A.N., glavnyy inzhener

[Portable instruments for electrohydrodynamic analogy] Portativnye pribory EGDA. Tema 5, no.P-56-435. Moskva, Akademiia nauk SSSR, 1956. 35 p. (MIRA 10:3)
(Electromechanical analogies)
(Soil percolation) (Water, Underground)

3. (7)

AUTHORS: Shteynbakh, B. V., Romashin, V. V. SOV/50-59-3-12/24

TITLE: Some Results and Suggestions (From the Working Experience of the Riga Estuary Station) (Nekotoryye itogi i predlozheniya (iz opyta raboty Rizhskoy ust'yevoy stantsii))

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 3, pp 44 - 46 (USSR)

ABSTRACT: Although the Rizhskaya ust'yevaya stantsiya (Riga Estuary Station) was established already ten years ago, it has developed only in the course of the last 3 - 4 years. In 1955 the Station was re-organized and provided with qualified experts. At present its name "Estuary Station" is justified. During the last two years archive data of observations made in the estuaries of the Western Dvina, Liyelupe, and Gauya rivers were collected. On the basis of this material the book "The Hydrological Conditions in the Estuary of the Western Dvina" will be published in 1960. - Some essential deficiencies in the work carried out by this Station are mentioned. Thus, e.g. in the annual program not all means, and the possibilities of the Station were taken into account. The complex character of all hydrological phenomena is not the only characteristic feature of the estuaries. Also the

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extraordinary instability of these phenomena is characteristic of these areas. Above all, this instability and changeability can not be determined by the usual hydrometrical means, especially, if the time at the disposal for these investigations is taken into consideration. In this connection some examples are given. It is pointed out to the necessity of using high speed measuring recorders for the determination of various hydrological elements. Although such devices exist already they are but slowly introduced in the Gidrometeosluzhba (Hydrometeorological Service). Portable radio stations play an especially important part in the investigations at the river mouths. In this connection it is pointed to the working experience of the TsNII morskogo flota (Central Scientific Research Institute of the Maritime Fleet). On the basis of the experience gained by the Riga Estuary Station advice is given for the future. An exchange of opinion and experience between the various estuary stations and organizations interested in them is regarded as necessary. A renewal and a completion of the technical equipment of the estuary stations is recommended. The improvement of the scientific and organizational supervision of the estuary stations on behalf of the GOIN

and the GUGMS is desired. It is pointed out that it is necessary to specialize the estuary stations and to discharge them from the tasks that are not in connection with the investigations of the estuary conditions.

SHTEYNBAKH, B.V.

Methodology of observing breaker phenomena in a shoal coastal area. Trudy GOIN no.66:121-126 '62. (MIRA 15:11)
(Waves) (Photography--Scientific applications)

ROGOV, Mikhail Mikhaylovich, kand. geogr. nauk, st. nauchn. sotr.;
ROMASHIN, Vladimir Vladimirovich, st. inzh.-gidrolog;
SHTEYNBAKH, Boris Vladimirovich; MIKHAYLOV, V.N., red.;
MINENKO, V.M., red.

[Hydrology of the estuary area of the Western Dvina] Gidrologiia ust'evoi oblasti Zapadnoi Dviny. Moskva, Gidrometeoizdat, 1964. 348 p. (MIRA 17:12)

1. Gosudarstvennyy okeanograficheskiy institut (for Rogov).
2. Nachal'nik Rizhskoy ust'yevoy gidrometeostantsii (for Shteynbakh). 3. Rizhskaya ust'yevaya gidrometeostantsiya (for Romashin).

SHTEYNBAKH, N.Kh.

Teaching of epidemiology at the Donetsk Medical Institute. Zhur. mikrobiol.; epid. i immun. 41 no.6:7-12 Je '64.
(MIRA 18:1)

1. Donetskiy meditsinskiy institut.

SHTEYNBAKH, N. Kh.

Occupational Diseases

Dissertation: "The Problems of Phagocytosis in Dysentery." Cand Med Sci, Kiev Order of Labor Red Banner Medical Inst imeni Acad A.A. Bogomol'yets, 25 Mar 54. (Pravada Ukrainy, Kiev, 15 Mar 54).

SO: SUM 213, 20 Sep 54

SHTEYNBAKH, N.Kh.; DENISOV, K.A.

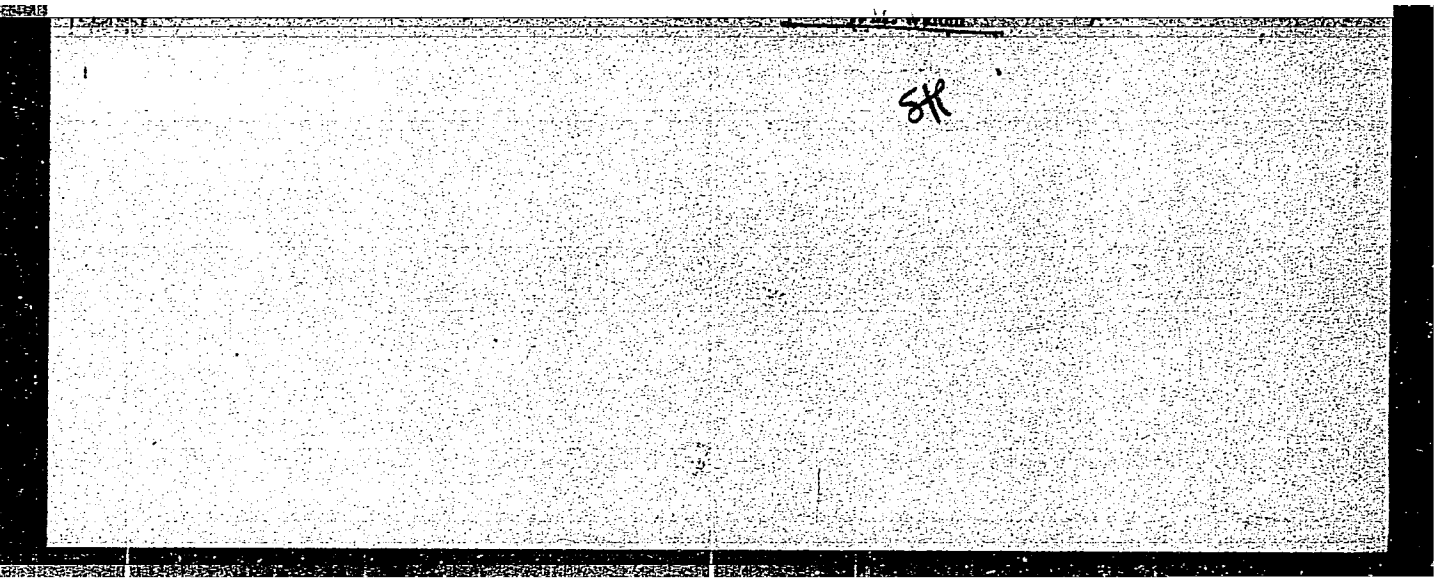
Vocational practice for students of the public health faculty.
Zhur.mikrobiol., epid. i immun. 42 no.12:78-82 D '65.
(MIRA 19:1)

1. Donetskiy meditsinskiy institut.

Shteynbakh, Ye. Ye.

Shteynbakh, Ye. Ye. "Electrotonic elimination of subordination and determination of constitutional chronaxy," in the collection: Subordinatsiya v nervnoy sisteme i yeye znacheniye v fiziologii i patologii, Moscow, 1948, p. 77-85.

SO: U-3042, 11 March 53, (Letopis 'zhurnal 'nykh Statey No. 7 1949)



SHTEYNBEK, M

"Methods of Precision Measurement of the Peltier Effect and the Thermo-E.M.F." M. Shtenbek and P. I. Baranskiy (*Zhur. Tekhn. Fiziki*, 1956, 26, (7), 1373–1388).—[In Russian]. S. and B. describe a method of measuring the Peltier potential (P) and the thermo-e.m.f. (α) with the object of testing the thermodynamic relation $P = \alpha T$ for non-homogeneous semi-conductors, i.e. when P and α are functions both of temp. and position in the crystal. The accuracy of the measurements is $\sim \pm 1\%$. More detailed consideration of the results on Ge by S. and B. (*Ibid.*, (3), 683; *M.A.*, 24, 326) indicates that the relation $P = \alpha T$ has to be modified for semi-conductors.

—A. F. B.

SHTEYNBERG, A.

Automation of the production and training of workers for the paper industry. Prof.-tekh. obr. 18 no.7:28-29 Jl '61. (MIRA 14:7)
(Automation) (Paper industry)

AUTHOR: Shteynberg, A. 27-7-10/37

TITLE: Pages of History: The Preparation of Workmen in the First Years of Soviet Power (Stranitsy istorii: Podgotovka rabochikh v pervyye gody sovetskoy vlasti)

PERIODICAL: Professional'no - Tekhnicheskoye Obrazovaniye, 1957, # 7(146), pp 12-13 (USSR)

ABSTRACT: The lengthy article deals with the measures introduced by the Communist Party and the Soviet Government for training young people to become qualified workmen in the first years of Soviet power. In 1940, the existing industrial schools in heavy industry were dissolved and a new system of State Labor Reserves was established. The industrial schools were retained only in the light, food and local industries.

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SHTEYNBERG, A.

Shortcomings in the training of young workers. Prof.-tekh. obr. 19 no.9:27-28 S '62. (MIRA 15:10)

(Sverdlovsk Province—Education, Cooperative)

SHTEYNBERG, A. A.

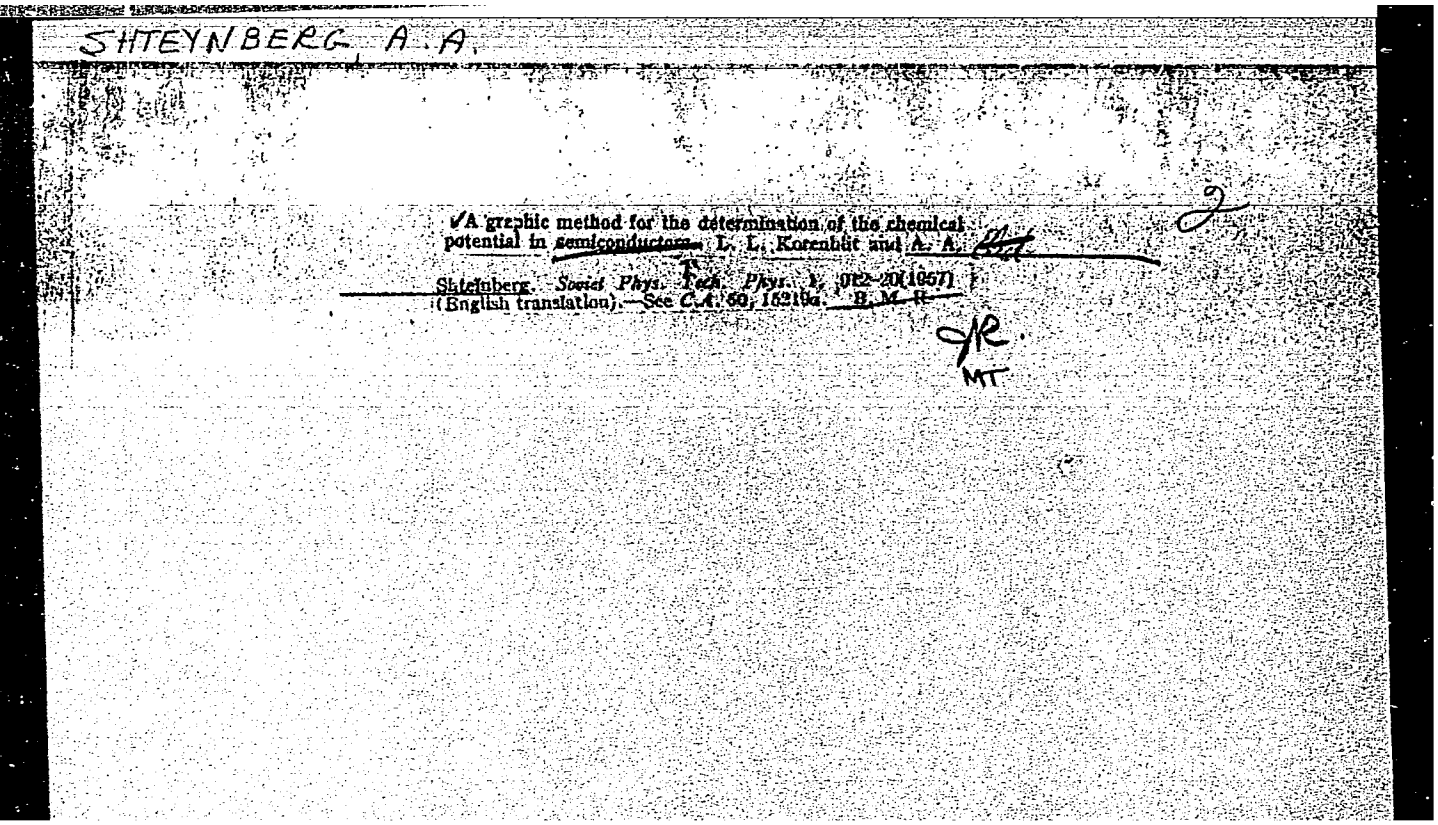
Shteynberg, A. A. "Problems of education among non-Russian peoples before the Great October Socialist Revolution and the construction of national schools in the RSFSR during the first years of Soviet power (1917-1920)." (Based on material concerning the Volga and Ural Autononous Republics). Min Education RSFSR. Moscow City Pedagogical Inst imeni V. P. Potemkin. Chair of Pedagogy. Moscow, 1956. (Dissertation for the Degree of Candidate in Pedagogical Science)

So: Knizhnaya letopis', No. 27, 1956. Moscow. Pages 94-109; 111.

SHTEYNBERG, A.A.

537.311.33 1477

A Graphical Method for Determining the Chemical Potential of Semiconductors.—L. L. Korenblit & A. A. Shteinberg. (*Zh. tekh. Fiz.*, May 1956, Vol. 26, No. 5, pp. 927–937.) A method is proposed using a glass sheet illuminated from below. A transparent sheet ruled with millimetre squares is placed on the glass and also two tracings with 'universal' graphs. By appropriately displacing these sheets with respect to one another, the chemical potential and its temperature dependence are determined. This method has been used for investigating electrical and thermoelectric properties of semiconductors, and some results of these investigations are reported.



SHTEYNBERG A.A.

✓A graphic method for the determination of the chemical potential in semiconductors. L. L. Korenblit and A. A. Shteinberg. *Soviet Phys. Tech. Phys.* 1, 1022-20(1957) (English translation).—See *C.A.* 60, 16218a. R.M.R.

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SHTEYNBERG, A.A.

[illegible] method for the determination of the chemical [illegible]

[illegible] tials and their changes with respect to temp. in semiconductors of various types. This method was then applied for the solution of certain problems, like the thermo-e.m.f. of semiconductors with mixed conductivities, and the electroconductivities of good-conducting semiconductors, like Si - B

Werner Jacobson

SH

S/054/62/000/002/012/012
B117/B101

AUTHORS: Mel'nikov, N. P., Ostroumov, G. A., Shteynberg, A. A.

TITLE: Method of stabilizing spark discharges in water

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 2, 1962, 157 - 158

TEXT: The delay of breakdown in water or salt solutions, which follows statistical laws, was investigated, as well as its avoidance applying an electrolyte solution. Shock waves were excited by capacitor discharge in water, and the delays of the breakdown was recorded with an oscillograph. Experiments in tap water ($\sigma = 6 \cdot 10^{-5}$ ohm^{-1}·cm^{-1}; spark gap 1 mm) showed delays of about 1 - 5 μsec referred to the breakdown of air. Instead of using metal wire ("Exploding Wires". New York, 1959), rinsing of the lower electrode with a concentrated electrolyte solution, flowing out from the tubular upper electrode is proposed. Experiments with saturated sodium chloride solution revealed no delays in breakdown of the discharge space. Delays (shorter than those in fresh water) occurred in a 3.5% solution of sodium chloride solution in tap water without rinsing electrolyte. These

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Method of stabilizing spark...

disappeared on concentrated sodium chloride solution being added, and reappeared on supplying fresh water. Sometimes, no delay took place and the capacitor was discharged through the electrolyte. Similar results were obtained using concentrated solutions of other chemical compounds. The use of acids and bases proved to be unfavorable. Further investigations are necessary. There are 2 figures.

SUBMITTED: February 1, 1962

Card 2/2

MEL'NIKOV, N.P.; OSTROUMOV, G.A.; SHTEYNBERG, A.A.

Method for stabilizing spark discharges in water. Vest.LGU 17 no.10:157-158 '62. (MIRA 15:5)
(Electric spark)

S/020/62/147/004/013/027
B117/B186

AUTHORS: Mel'nikov, N. P., Ostroumov, G. A., Shteynberg, A. A.

TITLE: Some characteristics of the disruptive discharge in electrolytes

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 4, 1962, 822-825

TEXT: As an addition to previous papers (Vestn. Leningradsk. univ. no. 10, 157 (1962)), the behavior of several electrolyte solutions under high voltage was studied over a wide range of concentration. This behavior was shown not to depend on the chemical composition of the electrolytes but only on their conductivity. Graphic representations of the behavior of electrolytes with a conductivity of $\sigma = 0.52 \cdot 10^{-4}$-$0.74$ $ohm^{-1} \cdot cm^{-1}$ and a discharge gap in liquid of 0.25-20 mm were studied by oscillographs. Three sections were distinguished: (I) Discharge is possible. A potential jump is clearly recognizable; its height decreases as the conductivity of the electrolyte increases. Larger electrode spacing causes a gradual increase in the delay of voltage drop after disruption of the air gap. (II) Aperiodic discharge: no disruption occurs. An increase in conductivity

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OSTROUMOV, G.A.; SHTEYNBERG, A.A.

Method for measuring pulse voltages. Prib. i tekh. eksp. 8 no.3:85-89 My-Je '63. (MIRA 16:9)

1. Leningradskiy gosudarstvennyy universitet.
(Oscillography)

ZAKIMATOV, D.P., inzh.; LOKSHIN, A.M., inzh.; OSTROUMOV, G.A., prof.; SHTEYNBERG, A.A., inzh.

One cause for accelerating the corrosion of hydrogenerator thrust bearings. Elek. sta. 34 no.7:38-42 Jl '63. (MIRA 16:8)

ANDREYEV, G. Ya., prof.; LAKTIONOV, N.N., inzh.; SHTEYNBERG, A.A., inzh.

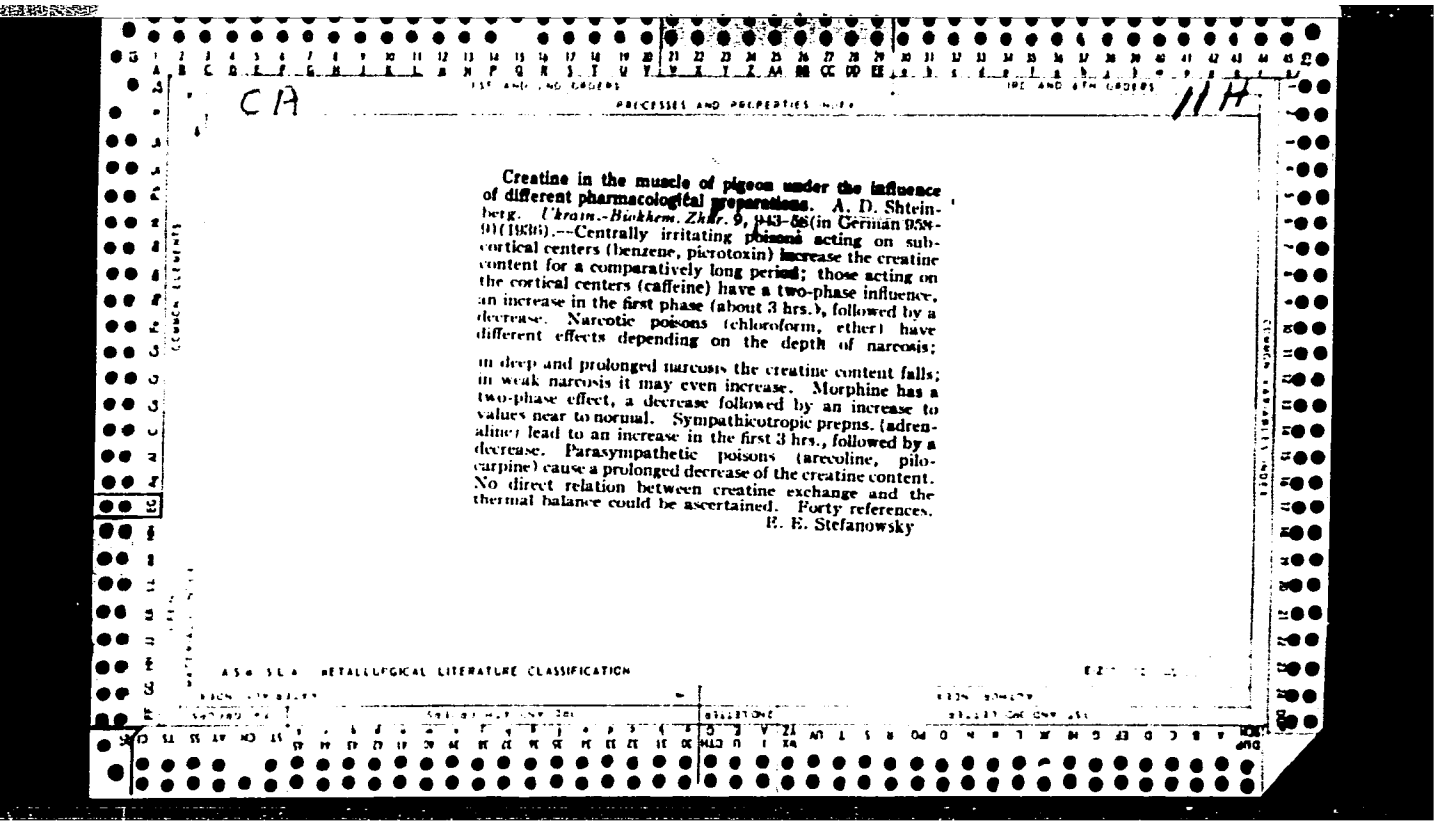
Automatic assembly of wheel pairs. Mekh. i avt.proizv. 18 no.8:3-4 Ag '64. (MIRA 17:10)

SHTEYNBERG, A. D.

ZHAVORONKOV, I.I. [translator]; NEMUKHIN, V.P. [translator]; GRAMP, A.N. [translator]; SHTEYNBERG, A.D. [translator]; MADEYEVA, R.I. [translator]; KARPUSHINA, I.M. [translator]; PEYSAKHZON, B.E., kand.tekhn.nauk, otv.red.; VERINA, G.P., tekhn.red.

[World railroads; survey of the operation and equipment of railroads throughout the world] Zheleznye dorogi mira; obzor ekspluatatsionnoi raboty i tekhnicheskogo osnashcheniia zheleznykh dorog mira. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 587 p. (MIRA 13:2)

(Railroads)



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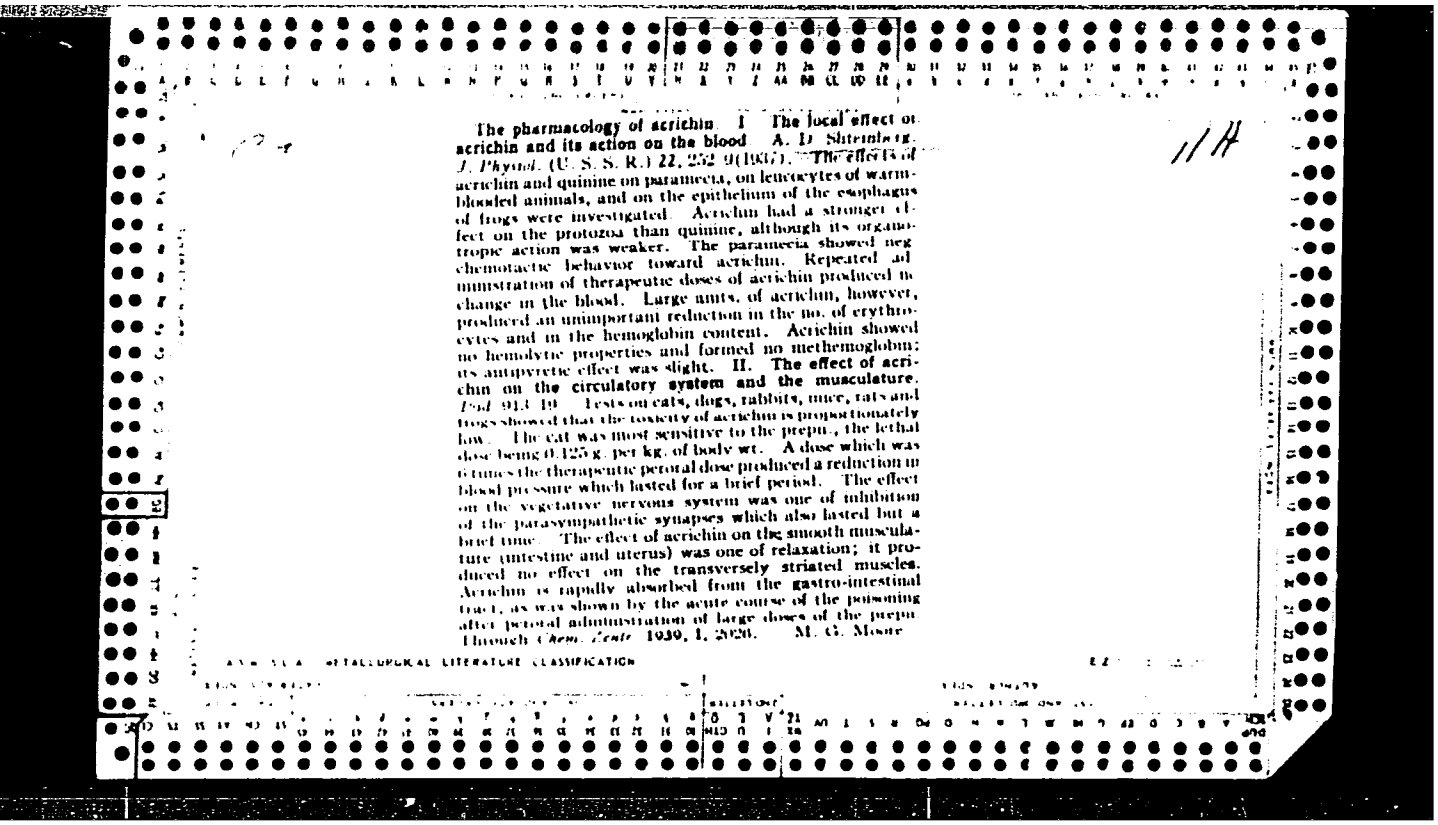
11H

PROCESSES AND PROPERTIES

Creatine in the muscle of pigeon under the influence of different pharmacological preparations. A. D. Shteinberg. *Ukrain.-Biokhem. Zhur.* 9, 943-88 (in German 958-90) (1936).—Centrally irritating poisons acting on subcortical centers (benzene, picrotoxin) increase the creatine content for a comparatively long period; those acting on the cortical centers (caffeine) have a two-phase influence, an increase in the first phase (about 3 hrs.), followed by a decrease. Narcotic poisons (chloroform, ether) have different effects depending on the depth of narcosis; in deep and prolonged narcosis the creatine content falls; in weak narcosis it may even increase. Morphine has a two-phase effect, a decrease followed by an increase to values near to normal. Sympathicotropic prepns. (adrenaline) lead to an increase in the first 3 hrs., followed by a decrease. Parasympathetic poisons (arecoline, pilocarpine) cause a prolonged decrease of the creatine content. No direct relation between creatine exchange and the thermal balance could be ascertained. Forty references.

B. E. Stefanowsky

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION



The pharmacology of acrichin. I. The local effect of acrichin and its action on the blood. A. D. Shtenberg. *J. Physiol.* (U. S. S. R.) 22, 252-9 (1937). The effects of acrichin and quinine on paramecia, on leucocytes of warm-blooded animals, and on the epithelium of the esophagus of frogs were investigated. Acrichin had a stronger effect on the protozoa than quinine, although its organotropic action was weaker. The paramecia showed negative chemotactic behavior toward acrichin. Repeated administration of therapeutic doses of acrichin produced no change in the blood. Large amts. of acrichin, however, produced an unimportant reduction in the no. of erythrocytes and in the hemoglobin content. Acrichin showed no hemolytic properties and formed no methemoglobin; its antipyretic effect was slight. II. **The effect of acrichin on the circulatory system and the musculature.** *Ibid.* 913-19. Tests on cats, dogs, rabbits, mice, rats and frogs showed that the toxicity of acrichin is proportionately low. The cat was most sensitive to the prepn., the lethal dose being 0.125 g. per kg. of body wt. A dose which was 6 times the therapeutic peroral dose produced a reduction in blood pressure which lasted for a brief period. The effect on the vegetative nervous system was one of inhibition of the parasympathetic synapses which also lasted but a brief time. The effect of acrichin on the smooth musculature (intestine and uterus) was one of relaxation; it produced no effect on the transversely striated muscles. Acrichin is rapidly absorbed from the gastro-intestinal tract, as was shown by the acute course of the poisoning after peroral administration of large doses of the prepn. Through *Chem. Zentr.* 1939, I, 2020. M. G. Moore