

MANDEL'BLAT, I.S.

Object of control in a system for stabilizing the loading
of the rotor engine of the Yurkovka transporter bridge.
Fiz.-tekhn. probl. razrab. pol. iskoř. no.5:100-105 '65.
(MIRA 19:1)

1. Nauchno-issledovatel'skiy i proyektnyy institut ugol'noy
promyshlennosti, Kiyev.

MANDEL'BLAT, Marat Mikhaylovich, inzh.; BEREZOVSKIY, M.A., inzh.,
retsenzent

[Potentiometer function generators] Reostatnye funktsional'-
nye preobrazovateli. Kiev, Tekhnika, 1965. 110 p.
(MIRA 18:11)

L 35051-65 EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b) PF-k MJW/ED/

WB/EM

ACCESSION NR: AP5002227

S/0114/64/000/012/0031/0034

33
30
B

AUTHOR: Mandel'blit, M. N. (Engineer)

TITLE: Investigation of erosion of reinforced blades

SOURCE: Energomashinostroyeniye, no. 12, 1964, 31-34

TOPIC TAGS: blade, blade erosion, turbine blade

ABSTRACT: An "erosion machine" intended for testing the erosion characteristics of turbine blades and consisting of the machine proper, a speed multiplier (gear train), and a driving turbine is briefly described. The erosion of non-hardened and electric-spark-hardened 1Kh13 steel blades was investigated. VKT-100, PVK-150, MK-30, and other turbine blades have been manufactured from the above steel. At 275-449 m/sec peripheral speed, with $n = 2 \times 10^6$ cycles, the erosion wear of 1Kh13 steel was found to be a power function of the peripheral speed, with an exponent of 2.54; at 200 m/sec, the erosion wear was

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practically nil. After a 28-hr condensate-spray test in the erosion machine at 440 m/sec, the erosion wear of the blades hardened by T15K6 or Stellite-1 electrode amounted to a small percentage of the wear of the nonhardened blade. These test conditions were found to be severe enough (a comparison with 8800 hrs of actual turbine operation was made). Inspections after 15,000 and 20,000 hrs of operation of PVK-150 turbines revealed that the surfacing with T15K6 alloy was adequate. Some data on the blade wear in a VKT-100 turbine after 44,000 hrs of operation is supplied. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Khar'kovskiy turbinnyy zavod im. S. M. Kirova (Khar'kov Turbine Plant)

SUBMITTED: 00 ENCL: 00 SUB CODE: PR, MM

NO REF SOV: 008 OTHER: 000

Card 2/2

MANDEL, HOYIN, A. B. AND 2ND ORDER

Changes of the cerebrospinal fluid and blood in closed traumas of the central nervous system. I. Study of the cerebrospinal fluid and blood pressures. A. B. Mandel'-bolm. *Bull. Eksp. Biol. Med.* 17, No. 1-2, 22-8 (1944).

—Thirty-five patients were studied: (group 1) those with cerebral contusion of 3-6 month duration; (group 2) those with spinal contusion of 3-9 month duration; (group 3) those with commotio-contusion syndrome of 3-5 month duration. The cerebrospinal fluid was clear and colorless; its pressure was not const. and varied greatly. In patients with cerebral contusion, 2 types of initial fluid pressure were observed: (1) low (60-100 mm. of H₂O); (2) high (280-390 mm. of H₂O). The low pressure was characteristic of patients with general retardation, increased somnolence and persistent disorders of the sympathetic nervous system. The high pressure was characteristic of patients with various forms of hyperkinesis. The fluid pressure changed with the change in the clinical picture. All the patients had normal blood pressure, and the pulse rate was 69-100 per min. In patients with spinal contusion, increased initial fluid pressure was observed (190-359 mm. of H₂O). The pressure varied slightly. Blood pressure was normal; pulse rate, 66-105 per min. Patients with commotio-contusion syndrome had variable values for the initial and final fluid pressure. Blood pressure was normal; pulse rate, 90-110 per min. II. Chemical variations of the cerebrospinal fluid and blood. *Ibid.* No. 3, 13-16.—Morphological changes have not been observed in cerebral and spinal contusions or in commotio-contusion syndrome.

Fandy's and Nonne-Apel's colloidal tests were neg. The total protein content, 0.18-1.23%, was detd. by the Roberts-Brandberg-Stol'nikov method. Reducing substances in the cerebrospinal fluid and blood were investigated by the Hagedorn and Jensen method (cf. C.A. 17, 3721). Electrolytes in cerebrospinal fluid and blood were detd.: K by Kramer's method; Ca by de Vaard's method; Cl by the modified method of Bang. Colloidal reactions, Takata-Ara and Goldsol (Lange), were carried out in some cases. In cerebral contusion, the content of electrolytes in the cerebrospinal fluid and blood varied widely. In patients with general retardation and a sharply decreased motor initiative, an increased Ca content in the cerebrospinal fluid was observed. The improvement in the condition of the patients was accompanied by a slow decrease of the Ca content in the cerebrospinal fluid to normal. In patients with cerebral contusion, the sugar content in the cerebrospinal fluid was increased; the blood sugar was also increased. No change in Cl was observed. In the presence of various forms of hyperkinesis, there was an increase of K in the blood, and an increase of the K/Ca index in the cerebrospinal fluid. The sugar contents in the cerebrospinal fluid and the blood were decreased. Colloidal reactions, Goldsol (Lange) and Takata-Ara, in the cerebrospinal fluid showed curves of a distorted type. In patients with spinal contusion an increase of K in the blood was usually observed and, in some cases, also of the K/Ca index. The blood-sugar content was normal. Colloidal reactions in the cerebrospinal fluid showed distorted curves. In patients with commotio-contusion syndrome, the electrolyte content varied. The K content was increased in most cases. The ratio of K/Ca was not const. The sugar index was normal or slightly decreased. Colloidal reactions had a Leuzacke-type curve and, in rare cases, curves of the type lues cerebrospinalis. Sonya G. Machelson

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A 13-514 METALLURGICAL LITERATURE CLASSIFICATION

MANDEL'BOYM, A. B.

ca

116

PROCESSES AND PROPERTIES INDEX

Changes in the cerebrospinal fluid and blood in viral-
 central encephalitis. III. Disturbance of the carbo-
 hydrate-salt metabolism in acute and chronic stages of
 the disease. A. B. Mandel'boim (Inst. Physiol., Acad.
 Sci., SSSR). *Bull. Exptl. Biol. Med.* 20, No. 12, 42-5
 (1945); cf. C.A. 40, 7362¹.—K, Ca, chlorides, and sugar
 were detd. in blood and cerebrospinal fluid of cases with
 meningeal (I), hemiparetic (II), bulbar (III), polyradi-
 culon-rotic (IV), serous meningite (V), poliomyelitic
 (VI), hyperkinetic (VII), and atactic (VIII) syndromes.
 Except as noted there was no deviation from normal.
 The K level of the cerebrospinal fluid was variable in VI
 and high in VII, and of the blood, low in I. Ca in the fluid
 was normal to high in II, III, IV, and VII, and high in
 VI and VIII. Blood Ca was normal to high in VI and VII.
 The K:Ca ratio of cerebrospinal fluid and blood was low
 in II, III, IV, V, and VI. Blood sugar was low in I,
 and fluid sugar was low in I and IV and irregular in I,
 II, and III. Changes in salt equil. and carbohydrate
 metabolism in such cases are less than in other central
 nervous system diseases, and are attributed to disruption
 of the regulatory vegetative-endocrine centers by virus.
 Starr Chester

MANDEL'BOIM, A.B.

"Changes in the Cerebrospinal Fluid and Blood in Vernal-estival Encephalitis",
A.B. Mandel'boim (Inst Physiol, Acad Sci SSSR and Kazakh Med Inst, Alma-Ata)

"Byull Eksptl Biol Med". Vol. 20, No. 7-8, 1945, pp 45-8.

Changes in the pressure, morphological composition, proteins, and colloidal reactions in the cerebrospinal fluid in both acute and chronic stages of the disease are determined. Tests of 32 patients with both types of the disease showed that the cerebrospinal fluid was clear, colorless, and with significantly high pressure which reduced with abatement of clinical symptoms. Blood observations are also discussed.

SO: W-205, 5, Feb. 48.

MANDELBAUM, A. B.

"Changes in the Cerebrospinal Fluid and Blood in Vernal Estival Encephalitis:
Disturbance of the Carbohydrate-Salt Metabolism in Acute and Chronic Stages of the
Disease," Byul. Eksper. i Med., 20, No. 12, 1945

Inst. Physiol., AS USSR

MANDEL'BOYM, A. D. 119

ca

Diagnostic value of comparative examination of spinal fluid composition at various heights of the subarachnoidal space. A. H. Mandel'boim (Molotov Med. Inst., Alma-Ata). *Bull. Eksp. Biol. Med.* 24, 359-64(1948).—A considerable increase of protein and pos. globulin test are characteristic for tubercular spondylitis, sarcomatosis of the spinal cord sheath, and extra-medullary tumors. Accumulation of Ca in the lumbar fluid is observed in intra- and extra-medullary tumors, sarcomatosis of the brain sheath, and tubercular spondylitis. The same ailments also lead to lowered sugar level in the lumbar fluid; the 1st 2 diseases also are characterized by increased lipid level in the lumbar fluid. In all cases the Wassermann test is neg. in both suboccipital and lumbar punctures. (G. M. Kosolapoff)

ASA-31A METALLURGICAL LITERATURE CLASSIFICATION

BRANDT, P. A. KORNILOVA, L. A.

Neurohist. Lab., Leningrad Neurosurg. Res. Inst. *Histological and biochemical changes in cerebral scars following shotwounds (Russian text) ARKH. PATOL. (Mosk.) 1953, 5 (14-20) Tables 2 Illus. 4

Investigations were made in 30 biopsy specimens from cerebral scars. Distinction is made between 4 layers, viz.: (1) the external layer of connective tissue, (2) a loose, porous layer, (3) a gliomesodermal layer and (4) adjacent cerebral substance. There was unmistakable histological evidence of inflammatory phenomena in 22 cases. Fractional cholesterol determinations were made. The free cholesterol content in the vicinity of the scar was markedly decreased; cholesterol ester values were increased, particularly in association with inflammatory changes. Cholesterol esters were also increased in the cicatricial tissue; this fraction was suggestive, here too, of marked inflammatory and destructive changes. Brandt - Berlin

SO: Excerpta Medica
Section V
Vol. 7 No. 10

USSR/Medicine - Cholesterol Level,
Tumors Jul/Aug 53

"The Interrelationship of Individual Fractions of Cholesterol in Tumor Tissues, Spinal Fluid, and Blood," A. B. Mandel'boym, Leningrad Neurosurgical Institute imeni Prof A. L. Polenov

Vop Neyrokhirurg, Vol 17, No 4, pp 56-58

Describes expts revealing a characteristic increase of free cholesterol in malignant brain tumors, with a marked increase of this substance in the blood and

270T81

spinal fluid. Observes an increase of free cholesterol level running parallel with an increase of the cholesterol ester level in malignant tumors with neurotic degeneration. Slowly growing tumors of the brain show a considerably lower amount of cholesterol. Free cholesterol prevails in glial tumors, while cholesterol esters predominate in mesodermal tumors.

270T81

MANDEL BOY M. A. B.

Comparative evaluation of cholesterol fractions in blood and cerebrospinal fluid and of arterial and subarachnoid pressures in hypertension. A. B. Mandel'bojm and S. E. Narodov Iseva (A. P. Polenov Sci. Research Neurosurg. Inst., Leningrad). *Klin. Med. (U.S.S.R.)* 31, No. 8, 74-8 (1953).—There is no correlation between total cholesterol (I) of serum and that of cerebrospinal fluid (CSF). Serum I may remain normal while CSF I is increased and vice versa. An increase of serum I is usually at the expense of the free fraction, that of CSF I at the expense of the esters. When CSF I is increased the total protein increases similarly. There is no parallelism between the amt. of serum I and the height of arterial pressure, nor between that of CSF I and the height of subarachnoid pressure. The amt. of CSF I did not depend upon the no. of formed elements. A. M.

MANDELBOYM, A. A.

med ✓ The cholesterol fractions in the blood and spinal fluid in traumatic epilepsy. A. B. Mandelboym (A. M. Palenov, Leningrad Sci. Research Neurosurg. Inst.), *Zhur. Neurobol. i Psikhologii im. Korsakova* 55, 345 (1959). Expts. and tests were performed on patients with brain injuries to det. the possible significance of cholesterol fractions as indicators of the extent and intensity of localized brain inflammations. M. concludes that such detns. can be used as auxilliary procedures in obtaining information regarding the intensity of inflammation within the brain scar and in the surrounding brain tissue. — B. S. Levine

VOLKOV, A.A.; MANDEL'BOYM, A.B.

Atypical course of acute myeloid leukemia. Nev.khir.arzh. no.6:80
H-D '57. (MIRA 11:3)

1. Leningradskiy nauchno-issledovatel'skiy institut neyrokhirurgii
(LEUKEMIA)

MANDEL'BOYM, A.B.; MIKHAYLOVA, Ye.N.; MEN'SHIKOVA, V.N.

Blood prothrombin changes in endarteritis obliterans. Vop. neirokhir.
21 no.6:24-26 N-D '57. (MIRA 11:2)

1. Leningradskiy nauchno-issledovatel'skiy neyrokhirurgicheskiy
institut imeni prof. A.L.Polenova.

(THROMBOANGIITIS OBLITERANS, blood in
prothrombin time)

(PROTHROMBIN TIME, in various dis.
thromboangiitis obliterans)

SHAMOV, V.N.; BABCHIN, I.S.; BADMAYEV, K.N.; CHAYKA, T.V.; MANDEL'BOYM, A.B.;
MEYMAN, B.G. (Leningrad)

Some observations on radiogold therapy in inoperable cerebral
tumors. Vop.neirokhir. 23 no.3:1-6 My-Je '59. (MIRA 12:8)

1. Nauchno-issledovatel'skiy neyrokhirurgicheskiy institut
imeni prof.A.L.Polenova.

(BRAIN NEOPLASMS, ther.

radiogold in inoperable tumors (Rus))

(GOLD, radioactive,

ther. of cancer of brain, inoperable cases
(Rus))

STEBLOV, Ye.M.; MANDEL'BOYM, A.B.

Changes in the cellular structure of the cerebrospinal fluid in metastatic tumors of the brain. Zhur. nevr. i psikh. 62 no.4:529-536 '62. (MIRA 15:5)

1. Likvorologicheskaya laboratoriya (zav. - doktor med.nauk A.B. Mandel'boym) kafedry nervnykh bolezney (zav. - prof. Ye.M.Steblov) Ivanovskogo meditsinskogo instituta.
(BRAIN--CANCER) (CEREBROSPINAL FLUID)

STEBLOV, Ye.M., prof.; MANDEL'BOYM, A.B., doktor med. nauk

Characteristics of the cellular composition of the cerebrospinal fluid in medulloblastomas of the posterior cranial fossa in children. Sbor. nauch. trud. Ivan. gos. med. inst. no. 28:172-178 ' 63. (MIRA 19:1)

1. Iz kliniki nervnykh bolezney (zav. - prof. Ye.M. Steblov' Ivanovskogo gosudarstvennogo meditsinskogo instituta (rektor - dotsent Ya.M. Romanov).

MANDEL'BOYM, A.M.; TABASHNIKOVA, Z.A.

Histological and biochemical modifications in cerebral cicatrix caused by gunshot wounds. Arkh. pat., Moskva 15 no.5:14-20 Sept-Oct 1953.
(GLML 25:4)

1. Of the Neurohistology Laboratory (Head -- Prof. Yu. M. Zhabotinskiy), Leningrad Scientific-Research Neurosurgical Institute imeni Prof. A. L. Polenov (Director -- V. N. Shamov, Active Member AMS USSR).

MANDEL'BOYM, Kh. B. Doc Med Sci -- (diss) "Cytologic and
biochemical changes of the cerebro-spinal fluid in traumata
~~Injuries~~ and tumors of the brain." Len, 1957. 24 pp 20 cm.
(Min of Health RSFSR. Len Sanitary-Hygiene Med Inst). 200 copies.
(KL, 23-57, 116)

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-116-

MANDELBROIT, S.

Mandelbroit, S., et Agmon, S. Une généralisation du théorème tauberien de Wiener. Acta Sci. Math. Szeged 12, Leopoldo Fejér et Federico Riesz LXX anisotis natis dedicatus, Pars B, 167-176 (1950).

Suppose that $\phi(x)$ is bounded and measurable, $K_0(x)$ and $K(x)$ belong to $L(-\infty, \infty)$ and that

$$\int_{-\infty}^{\infty} \phi(x) K_0(x-t) dx = 0, \quad \phi(x) = \int_{-\infty}^{\infty} \phi_0(t) K(x-t) dt.$$

Then it is shown that the function $F(z)$ defined by $F(z) = \int_{-\infty}^{\infty} \phi(t) e^{-itz} dt$ for $\text{Im}(z) > 0$ is regular in the whole complex plane except for a perfect subset Σ of the intersection $I(K_0, K)$ of the frontier sets of the sets $\Omega(K_0)$, $\Omega(K)$ of real zeros of the Fourier transforms of K_0 , K , respectively. Moreover, if $\Omega(K) \supset \Omega(K_0)$ and $I(K_0, K)$ is countable, then for any $\epsilon > 0$ it is possible to define an integer N and real α, ξ so that

$$\int_{\alpha}^{\xi} |K(x) - \sum_{i=1}^N a_i K_0(x - \xi_i)| dx < \epsilon,$$

a result which includes Wiener's general Tauberian theorem. The countability condition on $I(K_0, K)$ may be omitted if certain extra conditions are imposed on $K(x)$ and $K_0(x)$ or, in particular, if $\alpha K(x)$ belongs to L .

H. R. Felt.

Source: Mathematical Reviews.

Vol. 11 No. 9

MANDELBROJT, S.

(2)

Mathematical Reviews
Vol. 11 No. 11
Dec. 1953
Analysis

Mandelbrojt, S. Quelques nouveaux théorèmes de fermeture. Ann. Soc. Polon. Math. 25 (1952), 241-251 (1953).
 Let $f(x)$ be a function defined on $(-\infty, \infty)$ whose n th derivative satisfies $\int_{-\infty}^{\infty} |f^{(n)}(x)| dx < M_n$ ($n=0, 1, 2, \dots$). Let $g(x)$ be a function of L , $\{v_n\}$ a sequence of positive integers of lower density $> \frac{1}{2}$. The author gives conditions bearing on the sequences $\{M_n\}$ and $\{v_n\}$ and on the zeros of the Fourier transforms of $f(x)$ and $g(x)$ which insure that $f(x+\alpha)$ is in the span of the $f^{(n)}(x)$ and the translates $g(x+b)$ of $g(x)$. The full statement is too long for reproduction. This work generalizes previous results by the author [J. Analyse Math. 1, 180-208 (1951); these Rev. 13, 540] which covered the case $v_n = n$.
 W. H. J. Fuchs (Ithaca, N. Y.).

MANDEL'BROYT, S.

2

✓ * Mandel'brojt (Mandelbrojt) S. Primykasušče ryady, Regulyarizaciya posledovatel'nostel. Priloženiya. [Series adherentes. Régularisation des suites. Applications.] Izdat. Inostrannoj Literaturny, Moscow, 1955. 268 pp. (12 tables).

Series 16

The original appeared in 1952. (Gauthier-Villars, Paris; MR 14, 542). The translation is straightforward except that "Schwarz's inequality" becomes "Bunyakosvki's inequality" and except for an error, in a footnote on the first page where "le premier indice d'une suite sera 1" is incorrectly translated into "the first term of a sequence will be one". At the end there is added a bibliography of papers concerning the subject published after 1952. There is an introduction by V. L. Gončarov.

smw
1952

S/O44/62/000/011/012/064
A060/A000

AUTHOR: Mandelbrojt, S.

TITLE: On the singularities of a Taylor series on its circle of convergence

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1962, 20, abstract 11B91
(Ann. Univ. scient. Budapest. Sec. math., 1960 - 1961, 3 - 4, 183 - 187; French)

TEXT: The following theorem is demonstrated: Let $f(z) = \sum_0^{\infty} a_n z^n$ be a Taylor series with unit radius of convergence and let $\lambda > 0$, $0 \geq \alpha > \frac{\lambda}{\lambda + 1} - \ln(1 + \lambda)$. Moreover, let $\{h_j\}$ be a sequence of positive numbers converging to zero. Assume that to every j there corresponds a sequence of positive integers $\{m_n^j\}$ and a sequence of positive numbers $\{\beta_n^j\}$ such, that the conditions:

$$1) R(a_m e^{i\beta_n^j}) \geq 0 \text{ for } (1 - \lambda h_j) m_n^j < m < (1 + h_j) m_n^j,$$

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A060/A000

On the singularities of a Taylor series on

$$2) \overline{\lim}_{n \rightarrow \infty} |R(a_{m_n^j} e^{i\beta_n^j})| \frac{1}{m_n^j} \geq 1 + \alpha h_j + o(h_j)$$

are satisfied. Then the function $f(z)$ has at least one singular point $e^{i\theta}$ with $|\theta| \leq |\arccos e^\alpha|$ ($|\arccos e^\alpha| \leq \frac{\pi}{2}$). The following assertion is cited as a corollary: Let α, λ be defined just as in the theorem, and let $\{u_j\}$ be a sequence of positive numbers converging to zero. Assume, that to every j there corresponds a sequence of positive integers $\{m_n^j\}$ such that

$$\overline{\lim}_{n \rightarrow \infty} |a_{m_n^j}| \frac{1}{m_n^j} \geq 1 + \alpha u_j + o(u_j)$$

and

$$a_m = 0 \text{ for } (1 - \lambda h_j) m_n^j < m < (1 + h_j) m_n^j, \quad m \neq m_n^j.$$

... singular point on every arc of the circle $|z| = 1$

On the singularities of a Taylor series on
with span $2|\arccos e^\alpha|$.

[Abstracter's note: Complete translation]

S/044/62/000/011/012/064
A060/A000

A.F. Leont'yev

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Card 3/3

MANDEL'BROYT, S. [Mandel'brojt, Shulim]; GORIN, Ye.A. [translator];
DYNIN, A.S. [translator]; MITYAGIN, B.S. [translator];
PLUZHNIKOVA, N.I., red.; PRIDANTSEVA, S.V., tekhn. red.

[Closed theorems and theorems of composition] Teoremy zamknuto-
tosti i teoremy kompozitsii; zapis' lektsii i perevod vypolnenny
E.A.Goriny, A.S.Dyniny, B.S.Mitiaginy. Moskva, Izd-vo ino-
str. lit-ry, 1962. 153 p. (MIRA 16:1)
(Fourier transformations) (Series, Taylor's)

IYEVLEV, V.I., inzh.; MANDEL'BROYT, Ye.L., inzh.

Mechanized preparation of clay suspension in founding shops.
Mashinostroenie no.3:40-41 My-Je '64.

(MIRA 17:11)

MANDELEYEVA, T.V. [Mandelieieva, T.V.]; MAZARCHUK, M.M.

Effect of temperature and pressure increase on the efficiency of heat
supply during the flow of a gas in canals. Zbir. prats' Inst. tepl. AN
URSR no.24:111-117 '62. (MIRA 1c:3)
(Fluid dynamics) (Heat—Transmission)

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2209,1043,1273

S/073/60/026/001/007/02
B004/B054

AUTHORS: Pamfilov, A. V., Lopushanskaya, A. I., and Mandel'eyl', A M.

TITLE: Polarography of Polyphosphate Complexes

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol 26, No. 1,
pp. 41-47

TEXT: The authors report on the polarographic investigation of complexes of sodium tetrapolyphosphate with nickel, cobalt, zinc, cadmium, and lead. Preliminary experiments confirmed that the polarographic waves of the reduction of polyphosphate complexes are irreversible. Therefore, the theory of irreversible waves developed by various investigators (Refs 4-6) was used to interpret the experimental data. For the ratio between the current i of the dropping mercury electrode and the pure diffusion current i_d , the relation $i/i_d = B\pi^{1/2}\lambda \exp(\lambda^2) \operatorname{erfc}(\lambda)$ (4) is written. B is a coefficient, $\lambda = kt^{1/2}/D^{1/2}$ (5), D is the diffusion coefficient, erfc the error integral. λ was calculated from the graphically shown function $i/i_d = f(\lambda)$, and the velocity constant k from (5). The activation energy ΔF

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Polarography of Polyphosphate Complexes

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B004/B054

and the product αn_a were calculated from the equation $k = (KT/h)\delta \exp [(-\Delta F + \alpha n_a F \eta) / RT]$. α = transfer coefficient, n_a = number of electrons of part-
 ing in the activation, K = Britzmann constant, δ = mean distance between
 two ions in the solution, η = overvoltage. Sodium tetrapolyphosphate was
 produced: a) by hydrolysis of sodium tetrametaphosphate in alkaline
 medium, b) according to J. A. Campbell (Ref. 10), from NaPO_3 and $\text{Na}_4\text{P}_2\text{O}_7$
 at a ratio of 2:1. Polarography was conducted by a ПБ-1 (PV-1) polarograph
 of the zavod Geologorazvedka ("Geologorazvedka" Plant). The semiwaves for
 Co- and Zn sulfate on a KCl background, and for Ni-, Cd-, and Pb nitrate
 on a KNO_3 background agreed with published data. An addition of tetra-
 polyphosphate first leads to a formation of white flakes which dissolve
 in excess tetrapolyphosphate. The polarographic waves are shifted toward
 more negative potentials. Complexes were studied for Zn at pH 2.8-11.8,
 for Cd at pH 3.3-10, and for Pb at pH 2.0-11.1, at different tetra-
 polyphosphate concentrations, and temperatures of 18-60°C. k , ΔF , and
 αn_a are independent of pH and temperature. In the case of Cd and Pb, i_d
 is about 1.5 times stronger at 60°C than at 17°C. While the function
 αn_a is

Polarography of Polyphosphate Complexes

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S/073/60/026/001/007/021
B004/B054

$E = f(\log k)$ showed two steps between 17 and 60°C, with α_a of the second step being larger than α_a of the first step, only one step was observed at 62°C. The different course of the curve $E = f(\log k)$ for the individual metals is explained by the different stability of tetrapolyphosphate complexes, which is characterized by the difference between the ionization potential of the metal atom and the hydration heat of the resulting ion. It is 159 cal for Cd, 156 cal for Pb, 136 cal for Zn, 97 cal for Ni, and 93 cal for Co. In contrast to the irreversible course of reaction of tetrapolyphosphates, reversible waves were observed in an equimolar mixture of tripolyphosphate with metaphosphate. This proved that the tetrapolyphosphate is a compound, not a mixture. N. A. Rodionova and Yu. V. Khodakov are mentioned. There are 5 figures, 2 tables, and 12 references: 5 Soviet, 5 US, 1 Czechoslovakian, and 1 German.

ASSOCIATION: Chernovitskiy universitet. laboratoriya fizicheskoy khimii
(Chernovtsy University, Laboratory of Physical Chemistry)

SUBMITTED: May 26, 1958

Card 3/3

MANDEL'GEYM, Kh.M.

Double ear manometer. Vest.oto-rin. 15 no.5:71-72 S-0 '53. (MLBA 6:11)
(Medical instruments and apparatus)

MANDELIK, J

7

Titration in strongly alkaline solutions. VII. Potentiometric determination of copper and bismuth with vanadyl sulfate. O. Tomáček and J. Mandelík. *Chem. Listy* 43, 169-76 (1949); cf. C.A. 43, 8559. Cu was titrated successfully in its citrate complex with VOSO₄. Two distinct maxima were observed corresponding to reduction of Cu⁺⁺ to Cu⁺ and Cu⁺ to Cu⁰. The titration of Bi in KOH soln. leads to one max. corresponding to the reduction of Bi⁺⁺⁺ to Bi⁺. Conditions were found for the titrations of mixts. of Cr^{VI} and Cu^{II}, Cr^{VI} and Bi^{III}, and Bi^{III} and Cu^{II}. Neg. results were obtained in the attempts to titrate Pb, As, Sb, Sn, Fe, Mo, W, Se, and CH₃O with VOSO₄ in strongly alk solns. Exptl. details are given. M. Hudlický

MANDELK, J

1394. Quantitative spectrography of powdered samples on dish-shaped copper electrodes. J. P. Dvořák and J. Mandelík (Ústí nad Labem, Czechoslovakia). *Chem. Zvest.* 1968, 60 (8), 738-742.

A method for the spectrographic determination of Si in raw materials and products containing fluorine was developed. Various factors having an influence on the values of $\log I/I_0$ were studied. The same procedure can be used for the determination of Li in lepidolites. The approximate error is $\pm 8\%$.

J. ŽRKA

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clean
MK

VANICKOVA, Vera; MALINOVSKAYA, Milena; LANGROVA, Marketa; CEJNAROVA, Ada, inz.

Foreign Standards. Normal issue 12 no.2: 51-60 P'64

VANICKOVA, Vera; BLINDLIKOVA, Milena; PAVLOVA, Zdenka; ...

Foreign standards. Normalized. ...

VANICKOVA, Vera; MANDELIKOVA, Milena; LANGROVA, Marketa;
CEJNAROVA, Ada, inz.

Foreign standards received by the Office of Standardization
and Measurement in August and September 1963. Normalizace
12 no. 4: 102-120 Ap '64.

VANICKOVA, Vera; MANDELIKOVA, Milena; LANGROVA, Marketa

Foreign standards. Normalizace 11 no.2:62-72 F '63.

VANICKOVA, Vera; MANDELIKOVA, Milena; LANGROVA, Marketa

Foreign standards. Normalizace ll no.6:193-204 Je '63.

VANICKOVA, Vera; LANGROVA, Marketa; CEJNAROVA, Ada, inz.;
MANDELIKOVA, Milena

Foreign standards. Normalizace 11 no.7:232-236 JI '63.

VANICKOVA, Vera; MANDELIKOVA, Milena; LANGROVA, Marketa;
CEJNAROVA, Ada, inz.

Foreign standards. Normalizace 11 no.8:258-264 Ag '63.

VANICKOVA, Vera; MANDELIKOVA, Milena; LANGROVA, Marketa; CEJNAROVA, Ada, inz.

Foreign standards. Normalizace 12 no.1:30-32 Ja'64.

AUTHOR: Mandel'kern, L. SOV/74-27-2-4/5

TITLE: On the Crystallization of Elastic Polymeric Molecules
(Kristallizatsiya gibkikh polimernykh molekul)

PERIODICAL: Uspekhi Khimii, 1958, Vol. 27, Nr 2, pp. 193 - 239 (USSR)

ABSTRACT: This paper is a translation of Chem. Revs., 56, Nr 5, pp. 903 - 958 (1956), translated by M. V. Lazareva under the editorial direction of G. L. Slonimskiy. This one has introduced the work by some critical notes, and he has added the appropriate Soviet works to the register of publications (References 173 - 196). Some computation errors of the original were corrected.

The following is criticized in the work:

- 1) A number of amorphous polymers are taken for crystalline ones, especially cellulose, e.g. polyvinylchloride and polyvinylalcohol.

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SOV/74-27-2-4/5

On the Crystallization of Elastic Polymeric Molecules

- 2) The conception "degree of crystallization" is introduced uncritically.
- 3) The processes of gel-formation are incorrectly treated as phase transformation.
- 4) The part played by the spherulites in crystallization processes of polymers is overestimated.

There are 12 figures, 3 tables, and 196 references, 24 of which are Soviet.

Card 2/2

~~MANDREIS, S. I.~~

Unusual case of accomodation spasm. Vest. oft. 33 no.6:38-39
N-D '54. (MLRA 8:1)

1. Is 16-y polikliniki Leningrada.
(OCCOMODATION, OCULAR,
spasm)

S/661/61/000/006/067/081
D243/D302

AUTHORS: Mandel'shtam, A. E., Dolgov, B. N., Kharitonov, N. P.,
Gorsikov, M. I. and Shurov, N. V.

TITLE: A tubular electrical heater with silico-organic insula-
tion stable against heat, dampness and electricity, of
watertight construction

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganiches-
kikh soyedineniy; trudy konferentsii, no. 6: Doklady,
diskussii, resheniye. II Vses. konfer. po khimii i prakt.
prim. kremneorg. soyed., Len. 1958. Leningrad, Izd-vo
AN SSSR, 1961, 294-296

TEXT: In this supplement to their previous paper the authors note
some positive features of electroheating elements with silico-or-
ganic insulation, for example, their good adhesion and elasticity.
The introduction of such an electro-heating spiral element into a
metal tube is described and methods of effecting polymerization of
the silico-organic coating considered. In the following discussion



A tubular electrical ...

S/661/61/000/006/067/081
D243/D302

the change in corrosion coefficient of the metal on using AC-1 (AS-1), and the elasticity of an insulation layer 1.5 mm thick, after treatment at 550°C, are considered. V. V. Vrochenskiy (Leningrad) gives an account of a thermolement of different construction which was efficient and stable.

1 242-22 1011/1011/1011 10
ACCESSION NO: A500047

S/0286/65/000/006/0076/0026

AUTHOR: Handel'man, A. E.; M'in, A. S.; Shneyder, A. B.; Lavrov, V. V.

TITLE: A method for fastening electrical strain gauge resistance elements to a metal frame. Class 22, No. 169161

SOURCE: *Izvestiya i tovarnykh znakov*, no. 6, 1965, 36

TOPIC TAGS: fastening method, strain gauge, (

ABSTRACT: This Author's Certificate introduces a method for fastening electrical strain gauge resistance elements to a metal frame by heating a polymerized adhesive layer. Effective polymerization of the adhesive composition on the side adjacent to the metal frame is provided by making the device in the form of nichrome springs in a flat metal housing coated with an organosilicon insulating substance. There is a central opening in this housing which corresponds to the area where the element is to be attached when the unit is fastened to the metal frame.

ASSOCIATION: none

MANDEL'SHTAM, A. E.

"Etiopathogenesis and Therapy of Essential Uterine Hemorrhage,"

SO: Akusher. i Ginekol No. 3, 1949. Prof. Hon Worker in Science (Leningrad).
-c1949-

Sci. Supervisor, Central Inst. Obstetrics & Gynecology, -1948. (Akusher i Ginekol.
No. 4, 1948).

MANDEL'SHTAM, A.E., professor, zasluzhennyy deyatel' nauki (Leningrad);
MISECHUK, B.N., professor, direktor

Preserving menstruation after hysterectomy. Sov.med. 17 no.6:12-15 Je '53.
(MLRA 6:6)

1. Kafedra akusherstva i ginekologii Gosudarstvennogo ordena Lenina insti-
tuta usovershenstvovaniya vrachey imeni S.M.Kirova.
(Uterus--Surgery) (Menstruation)

1. MANDEL'SHTAM, A. YE., Prof.
2. USSR (600)
4. Sterility
7. Clinical aspects and organization of control of female sterility,
Vop. pediat., 21, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

11.14.1956
FIGURNOV, K.M., professor, redaktor; MANDELISHTAM, A.E., professor, zasluzhennyi deyatel' nauk, redaktor; BOGOROV, I.I., professor, redaktor; PETROV-MASLAKOV, M.A., professor, redaktor; MAKAROV, R.R., dotsent, redaktor; TUMANOVA, Ye.S., dotsent, redaktor; RUDAKOV, A.V., redaktor; KHARASH, G.A., tekhnicheskii redaktor

[Problems in the neurohumoral regulation of physiological and pathological processes of the sexual functions in women] Voprosy neuro-gumoral'noi reguliatsii fiziologicheskikh i patologicheskikh protsessov zhenskoi polovoi sfery. [Leningrad] Gos. izd-vo med. lit-ry, Leningradskoe otd-nie, 1956. 146 p. (MLRA 10:3)

1. Chlen-korrespondent AMN SSSR (for Figurnov)
(NERVOUS SYSTEM) (GENITOURINARY ORGANS--DISEASES)
(HORMONES, SEX)

MANDEL'SHTAM, A.E., professor, zasluzhenny deyatel' nauki (Leningrad)

Vaginal approach in suturing ureterovaginal fistulas. Akush. i gin.
32 no.4:58-60 J1-Ag '56. (MIRA 9:11)

(VAGINA, fistula
ureterovaginal, surg., vaginal approach)

(URETERS, fistula
same)

MANDEL'SHTAM, A.Ye.

[Inflammatory diseases of female generative organs in the light
of the theory of neuroses] Vospalitel'nye zabolovaniia zhenskikh
polovykh organov v svete ucheniia o nervizme. Leningrad, 1957.
194 p. (MIRA 11:6)

(GENERATIVE ORGANS, FEMALE--DISEASES)

Fifth All-Union Congress of Obstetricians and Gynecologists began on December 11, 1957 in the House of Soviets, Moscow, its agenda consisting of the following five problems: (1) Asphyxia and trauma of the fetus and newborn child; (2) psychical prophylactic preparation of pregnant women for childbirth; (3) inflammatory gynecological infections; (4) cancer of the female sexual organs; (5) functional gynecological pathology.

30: Akusherstvo i Ginekologiya, 1958, No. 2; Meditsiny Rehotnik, Nos. 99-103, 1957
Review of Eastern Medical Sciences, Munich, July-September 1958, 11/12, Unclassified.

Concluding the discussion, Professor E. A. Stovrova, Solograd, stressed the importance of organization in raising the level of pathophysiologic preparation prior to surgery.

The first report on the third problem on the agenda was read by Professor A. E. Kuznetsov, Solograd, on the subject of "The Role of the Vegetative Nervous System in Regulating the Organism's Reaction to Bacteriological Irritants and Pathological Infections." The speaker noted the role played by microbes should not be underestimated and attention concentrated on the struggle against infection, since as a result of the defeat of infection, the organism is likely to perish. The introduction of favorable conditions for the macroorganism by arousing an energetic defensive concentration in it are extremely important. So too is the exact determination of the cause of the infection, here various laboratory methods of diagnosis could well be used. He argued that treatment should be aimed at the cause of infection, and not merely at the removal of its symptoms. In cases of multiple infection the secondary infections should be treated and measures taken to prevent relapses. A combination of etiotropic and pathogenic, therapeutic treatment is most effective in an advanced stage, although etiotropic treatment is of secondary importance in chronic diseases. This should be done in the form of immunization, vaccination, physical methods of treatment, and medicinal, diathermy, ultraviolet, and ultrasonic irradiation. A good effect is produced by using on a delayed, slow-inflammatory reaction. A good effect is produced if a broad-spectrum antibiotic should be carried out from early on in cases of pelvic infection. The operation should be performed in the early stages of the disease, not be prevented by suctional drainage. Operation is also necessary if a band has formed in the bladder, intestines, or vagina. In conclusion, the speaker stressed against employing posterior colporrhomy, often used in cases of severe proctitis, on the grounds that it is a very dangerous operation, which can lead to the formation of a suppurative abscess which will not heal.

Professor S. K. Lashov, Moscow, spoke of the possibility of conservative therapy of inflammatory infections of the female genital tract. He stressed that in most cases the hospitalization of patients during the first two or three days, antibiotics should be avoided so as not to hinder diagnosis, and only symptomatic treatment and stimulation of the organism's powers of resistance carried out. In cases of sharp focal reactions he recommended the use of antibiotics, in caudal formations, that the serum and pus be drawn off by perforation through the vagina and the introduction of antibiotics into the vagina. He stressed that large doses of antibiotics of penicillin into the veins, and in abscesses, carrying in the parametrium or Douglas's cul de sac be advanced perforation and the draining of the abscess through the vagina.

Professor A. B. Pristava, Ashkhabad, spoke on the factors of conservative therapy in cases of inflammatory gynecological infections. In his opinion, a rational

MANDEL'SHTAM, Aleksandr Emil'yevich

[Symptomatology and diagnosis of women's diseases; manual for physicians] Semiotika i diagnostika zhenskikh boleznei; rukovodstvo dlia vrachei. Leningrad, Medgiz, 1959. 690 p.

(MIRA 13:7)

(WOMEN--DISEASES)

MANDIL'SHEAM, A.B., prof. (Leningrad)

Choriocarcinoma of the uterus. Sov.med. 23 no.7:54-62

J1 '59.

(MIRA 12:11)

(CHORIOCARCINOMA)

(UTERUS neoplasms)

BUBLICHENKO, Lazar' Ivanovich; MANDEL'SHTAM, Aleksandr Emil'yevich;
ALIPOV, V.I., red.; ROLEVA, M.S., tekhn.red.

[D.O. Ott; essay on his life and work, 1855-1929] D.O.Ott;
o cherk zhizni i deiatel'nosti, 1855-1929. Leningrad, Gos.izd-vo
med.lit-ry, Leningr.otd-nie, 1960. 142 p. (MIRA 13:11)
(OTT, DMITRII OSKAROVICH, 1855-1929)

MANDEL'SHTAM, A.E., prof., zasl. deyatel' nauki; GESSEN, A.I., red.

[Obstetrical and gynecological practice; transactions] Akushersko-ginekologicheskaya praktika; trudy. Pod red. A.E.Mandel'shtama. Leningrad, 1960. 214 p. (MIRA 15:1)

1. Leningrad. Institut usovershenstvovaniya vrachey, im. S.M. Kirova. 2. Zaveduyushchiy kafedroy akusherstva i ginekologii Gosudarstvennogo instituta dlya spetsializatsii i usovershenstvovaniya vrachey (for Mandel'shtam). (OBSTETRICS) (GYNECOLOGY)

MANDELSHTAM, A.E. (LENINGRAD, USSR)

Konservative Operationen bei gutartigen Tumoren des Uterus und der Ovarien.

Report submitted for the 3rd World Congress, Intl. Federation of Gynecology and Obstetrics, Vienna, Austria, 3-9 Sep 1961.

MANDELSHTAM, A.S.

Urethroplasty and urethrotomy in large urethral fistulas
and urethral rupture. Akush. i gin. Zh. no. 5:117-122, S-0 '63.

(MIRA 17:8)

1. Iz kafedry akusherstva i ginekologii (zav. - zasluzhennyy
deyatel' nauki prof. A.S. Mandel'shtam) Instituta sovetskoye-
vovaniya vrachey imeni Nitova.

TRAPZNIKOV, M.N., kand.ked.nauk; MANDEL'SHTAM, A.E., prof.,
ssluzhennyi deyatel' nauki RSFSR

Book reviews. Vop.onk. 11 no.11:117-122 '65.

(MIRA 19:1)

MANDEL'SHTAM, A.M.

Preliminary information on the works of the upper Zeravshan Valley group in 1953. Dekl. AN Tadjh. SSR no. 11:31-37 '54. (MLRA 9:9)

1. Institut istorii arkhologii i etnografii AN Tadjhikskoy SSR.
Predstavleno deystvitel'nym chlenom AN Tadjhikskoy SSR, prof.
A.A. Semenovym.
(Zeravshan Valley--Excavations (Archaeology))

MANDEL'SHTAM, B.Ye.; PRASOLOV, S.A.

Automation in the preparation departments of rubber tire
plants. Kauch. i rez. 23 no.7:36-42 JI '64. (MIRA 17:8)

1. Nauchno-issledovatel'skiy konstruktorsko-tehnologicheskii
institut shinnoy promyshlennosti, g. Omsk.

MANDEL'SHTAM, F. M.

33540

THORACOSCOPY THORACOSCANTERY
~~THORACOSCOPY~~

Povtornaya Torakoskopiya I torakokavuzi Ka. Problemy Tuberkuleza, 1949, No 5, c. 39-44
STI

SO: Letopis' Zhurnal'nykh Statey, Vol. 45, Maskva, 1949

MANDYL'SHTAM, F. M.; OBLOGINA, Ye. Ya.

E

Tuberculosis

Significance of kymographic investigation of the lungs in the study of the mechanism of phrenicotomy. Probl.tub. No. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

MANDEL'SHTAM, F.M.

ASEYEV, D.D., professor; BERLIN, I.I., professor; VOZNESENSKIY, A.N., professor; SOROKIN, I.E., professor; UGRYUMOV, B.P., professor; TOPCHAN, A.B., professor; AGAPKIN, I.N., kandidat meditsinskikh nauk; AGRACHEV, G.I., kandidat meditsinskikh nauk; AL'TSHULER, N.S., kandidat meditsinskikh nauk; BERENZON, Ya.Ye., kandidat meditsinskikh nauk; ZORIN, Ye.N., kandidat meditsinskikh nauk; KOROVINA, Yu.P., kandidat meditsinskikh nauk; KOSITSKIY, G.I., kandidat meditsinskikh nauk; MANDEL'SHTAM, F.M., kandidat meditsinskikh nauk; MOCHALOVA, T.P., kandidat meditsinskikh nauk; OBLOGINA, Ye.Ya., kandidat meditsinskikh nauk; PATSKHVEROVA, A.G., kandidat meditsinskikh nauk; POKOTILOV, K.Ye., kandidat meditsinskikh nauk; ROZANOVA, M.D., kandidat meditsinskikh nauk; SAKHAROV, A.N., kandidat meditsinskikh nauk; YASHCHENKO, T.N., kandidat meditsinskikh nauk

"Tuberculosis"; handbook for physicians edited by Z.A.Lebedeva and N.A.Shmelev. Reviewed by D.D.Azeev and others. Probl.tub. 34 no.2: 76-80 Mr-Ap '56. (MLR 9:8)

(TUBERCULOSIS) (LEBEDEVA, Z.A.) (SHMELEV, N.A.)

MANDEL'CHT.M, L.

Collective Farms

Structure of collective farms' means of production. Sov. coll. Econ. 23, no. 1, 1971.

MONTHLY LIST OF RES. INT. ACQUISITIONS, DEPT. OF COMMERCE, AUGUST 1972. (CLASSIFIED)

MANDEL'SHTAM, L. A.

14-57-6-12983

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6,
p 166 (USSR)

AUTHORS: Mandel'shtam, L. A., Bubnov, D. V.

TITLE: Natural and Economic Divisions in the Balashovskaya
Oblast' (Prirodno-ekonomisheskiye zony Balashovskoy
Oblasti)

PERIODICAL: S. kh. Fovolzh'ya, 1956, Nr 8, pp 7-11

ABSTRACT: The economics of agricultural production and the soil-
climate variations of the district were studied during
the process of dividing the district into natural and
economic-agricultural zones. Collective farm production
was estimated by administrative districts (AD), state
farm production in terms of individual products and
specialized product groups. This resulted in 38 AD's
which were divided into three zones (groups) of similar
units raising similar products. 1) A group of ten AD's

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14-57-6-12983

Natural and Economic Divisions (Cont.)

in the northwest. These grow cereals, numerous winter crops, sunflowers and beets, and also raise cattle and pigs for milk and meat. 2) A group comprising 13 AD's in the northwest. These raise beets, cereals, and pigs. They also produce winter crops. 3) A group comprising 15 AD's which raise cereals and cattle. Here the bulk of the planting is spring wheat, and cattle and sheep are raised for milk and meat. The article contains a brief description of the basic indices of agricultural economy for each group and an outline map of the area.

A. M.

Card 2/2

MANDEL'SHTAM, L. O.

MESTNYE ORGANY GOSUDAR-STVENNOY VLASTI V SSSR. MOSKVA, GOS. IZD-VO YURID. LIT-RY
1953. 93 p.

MANDEL'SHTAM, M.I.; SHNEYDER, G.F.; KUZNETSOVA, Z.V.; KATS, F.I.

New ostracod genera in the families Cypridae and Cytheridae.
Ezhegod. Vses. paleont. ob-va 16 '57. (MIRA 11:4)
(Ostracoda, Fossil)

ABUSHIK, A.F.; NETSKAYA, A.I.; POZNER, V.M.; SHNEYDER, G.F.; TIL'KINA, K.F.;
SAMOYLOVA, R.B.; SMIRNOV, R.F.; POLENOVA, Ye.N.; MANDEL'SHTAM, M.I.;
LYUBIMOVA, P.S.

New genera and species of Ostracoda. Trudy VNIIGRI no.115:232-299
'58. (MIRA 11:10)

(Ostracoda, Fossil)

MANDEL'SHTAM, M. I.

Ostracoda from Paleocene sediments of Central Asia. Trudy
VNIGRI no. 136:442-543 '59. (MIRA 13:4)
(Soviet Central Asia--Ostracoda, Fossil)

ROZYIEVA, Toty Rozyyevna; MANDEL'SHTAM, M.I., starshiy nauchnyy sotr.,
red.; HASIBOVA, S.G., red. izd-va; FLUTKOVA, S.G., tekhn. red.;
IVONT'YEVA, G.A., tekhn. red.

[Ostracods from Paleogene sediments of Turkmenistan and their
stratigraphic distribution] Ostrakody iz otlozhenii paleogena
Turkmenistana i ikh stratigraficheskoe rasprostranenie.
Ashkhabad, Izd-vo Akad. nauk Turkmenskoi SSR, 1962. 138 p.
(MIRA 15:10)
xxxi tables.

1. Vsesoyuznyy nauchno-issledovatel'skiy gornorudnyy institut
(for Mandel'shtam).
(Turkmenistan—Ostracoda, Fossil)

MANDEL'SHTAM, Mikhail Iosifovich; MARKOVA, Leonilla Pavlovna;
ROZYIYEVA, Toty Rozyyevna; STEPANAYTYS, Nina Yevgen'yevna;
MAYOROVA, Yu.M., red. izd-va; IVONT'YEVA, G.A., tekhn.red.

[Ostracoda of Pliocene and Post-Pliocene sediments in
Turkmenistan] Ostrakody pliotsenovykh i postpliotsenovykh
otlozhenii Turkmenistana; spravochnik. [By] M.I. Mandel'-
shtam i dr. Ashkhabad, izd-vo Akad. nauk Turkmenskoi SSR,
1962. 287 p. (MIRA 16:3)
(Turkmenistan--Ostracoda, Fossil)

MANDEL'SHTAM, Mikhail Iosifovich; SHNEYDER, Gerda Fridrikhovna; POZNER, V.M.,
nauchnyy red.; RUSAKOVA, L.Ya., vedushchiy red.; YASHCHURZHINSKAYA, A.B.,
tekhn.red.

[Fossil Ostracoda of the U.S.S.R.; Cyprididae family] Iskopaemye
ostrakody SSSR; semeistvo Cyprididae. Leningrad, Gostoptekhizdat,
1963. 330 p. (Leningrad. Gosoluznyi neftianoi nauchno-issledovatel'skii
geologo-razvedochnyi institut. Trudy, no.204). (MIRA 16:5)
(Cyprididae, Fossil)

MANDEL'SHTAM, M.I.; RESHETNIKOVA, M.V.

Phylum Arthropoda. Class Crustacea: Subclass Ostracoda. Trudy
SNIIGGIMS no.21:389-403 '62. (MIRA 16:12)

REYMAN, V.M., glav. red.; DZHALILOV, M.M., red.; MANDEL'SHTAM, M.I.,
red.

[Paleontology of Tajikistan] Paleontologiya Tadzhikistana.
Dushanbe, Izd-vo "Tadzhikskoi EN", 1967. 142 p.
(MIRA 18:3)

ANDREYEV, Yu.N.; MANDEL'SHTAM, M.I.

Systematic position of the genus Lyubimovina. Paleont. zhur.
no.2:152-154 '64. (MIRA 17:7)

1. Kompleksnaya laboratoriya geologii nefi i gaza Tadzhikistana
Vsesoyuznogo nauchnogo issledovatel'skogo geologorazvedochnogo
neftyanogo instituta.

MANDEL'SHTAM, M.I.; ANDREYEV, Yu.N.

Present status of studies and ways for further investigations of
the ostracod fossils of the suborder Podocopina. Vop. mikropaleont.
no.8:223-230 '64. (MIRA 18:5)

1. Tadzhikskaya kompleksnaya laboratoriya Vsesoyuznogo nauchno-
issledovatel'skogo geologorazvedochnogo neftyanogo instituta.

MANDEL'SHTAM, M. C.

ANDREYEVA, Ye.M.; MANDEL'SHTAM, M.O.; RADCHENKO, G.P.; ROTAY, A.P.;
KHALFIN, E.L.; YAVORSKIY, V.I.; OVCHINNIKOVA, S.V., redaktor
izdatel'stva; GUROVA, O.A., tekhnicheskij redaktor

[Atlas of principal forms of fossil fauna and flora of the Permian
deposits in the Kuznetsk Basin] Atlas rukovodiashchikh form isko-
paemykh fauny i flory permskikh otlozhenii Kuznetskogo basseina.
Pod obshchei red. V.I. Iavorskogo. Moskva, Gos. nauchno-tekhn. izd-vo
lit-ry po geol. i okhrane nedr, 1956. 409 p. (MIRA 10:2)
(Kuznetsk Basin--Paleontology, Stratigraphic)

31947
S/057/62/032/001/007/018
B104/B138

9,4/20

AUTHOR: Mandel'shtam, M. Ya.

TITLE: Propagation of a shf discharge along the axis of a coaxial line with gas-discharge internal conductor

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 1, 1962, 48-56

TEXT: The dependence was studied, of the height of the glow in a coaxial line with a gas-discharge internal conductor, on the power of the shf generator exciting the discharge and on the pulse duration. If the shf generator is in continuous operation, the height of glow is shown to be directly proportional to the square root of the power of the excitation source. When using neon in the gas-discharge conductor, the relation $dx/dt = \delta \gamma h q |U|^2$ is obtained for the growth rate of the glowing column. δ is a proportionality factor which depends on the dimensions of the coaxial line, γ is a factor of the order of some unities, h is the Debye screening radius, q is a proportionality factor ($z_{ion} = qE^2$, z_{ion} - ionization factor), and U is the field strength between the metal cylinder and \dots at a neon pressure of 20 mm Hg,

Propagation of a shf discharge ...

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S/057/62/032/001/007/018
B104/B138

the reflection coefficient of the shifting boundary of ionized gas is neglected. Thus, one obtains

$$\frac{dx}{dt} = \varepsilon(l-x)^2 \left[1 + \frac{1}{4\pi^2} \left(\frac{\lambda}{l-x} \right)^2 \right], \quad (14),$$

where $\varepsilon = \delta \gamma h q K^2 / 4$ is a proportionality factor which depends on the coaxial line dimensions, the neon pressure, and the frequency of the excitation source. At a given pulse duration τ , $l_\tau = \varepsilon \tau l (1 + \varepsilon \tau l)$ holds for the height of glow, l being the length of the ionized part of the gas discharge tube. For $\tau \ll 1/\varepsilon l$, l_τ is proportional to the power of the excitation source, and for $\tau \gg 1/\varepsilon l$, l_τ is proportional to its root. Experiments were conducted with the apparatus shown in Fig. 3, at 2600 Mc, a pulse duration of 6 microseconds, and a pulse repetition rate of 1000 cps. The height of glow, as a function of time showed good agreement with the present theoretical results. Within 6 μ sec the velocity of the edge of the column varied from $2.6 \cdot 10^7$ cm/sec to $1.8 \cdot 10^6$ cm/sec. The amplitude of shf voltage decreased linearly with distance from the exciter, with an error

Propagation of a shf discharge ...

S/057/62/032/001/007/018
B104/B138

Rubinshteyn, V. A. Savshinskly, and A. M. Starik are thanked for advice. There are 8 figures and 11 references: 7 Soviet and 4 non-Soviet. The three references to English-language publications read as follows: L. G. Huxley. A Survey of the Principles and Practice of Wave Guides, Cambridge, 1947; A. D. MacDonald, D. D. Betts, *Canad. J. Phys.*, 30, 560, 1952; P. Rosen, *J. Appl. Phys.*, 20, 868, 1949.

SUBMITTED: January 25, 1961

Fig. 1. Neon tube. Legend: (1) getter; (2) radioactive substance.
Fig. 3. Experimental setup. Legend: (1) modulator; (2) shf generator; (3) attenuator; (4) calibrated attenuator; (5) coaxial waveguide junction; (6) limit attenuator; (7) graduation; (8) neon tube; (9) probe; (10) calibrated attenuator; (11) double Tee; (12) absorber; (13) quarter-wave section with wavemeter; (14) wavemeter; (15) detector section; (16) synchroscope.

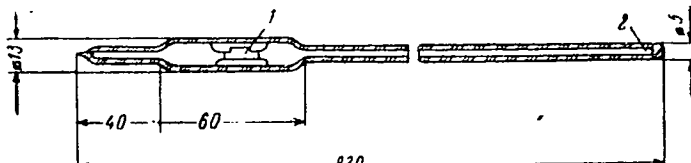


Fig. 1

MANDEL'SHTAM, M. Ya

Reverse current in the spheric condenser type instrument.
M. Ya. Mandel'shtam, *Zhur. Tekh. Fiz.* 76, 2234-42
(1966).—A reverse current was observed from the collector
to the target, when a spherical condenser was used to investi-
gate the energy distribution of secondary electrons and
photoelectrons. In this study the dependence of the re-
verse current on the difference in potentials between the
target and the collector was calcd. for the given relation
between the target and the collector diam. and fixed energy
of emerging electrons from the collector. It was shown that
the use of the reverse current curve for detn. of contact
difference of potentials, as recommended in literature, may
lead to a substantial error. An expression was derived,
which permits evaluation of the effect of reverse current
on the results of detg. energy distribution of secondary
electrons. P. Paliyenko.

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JP

SOV/109-4-4-12/24

AUTHORS: Golant, V.Ye. and Mandel'shtam, M.Ya.

TITLE: Methods of Simulating the Increased Power for the Testing of the T-R Tubes in Radar Antenna Switches (Metody imitatsii povyshennoy moshchnosti pri ispytaniyakh razryadnikov radiolokatsionnykh antennoykh pereklyuchateley)

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 4, pp 660 - 673 (USSR)

ABSTRACT: Two test equipments permitting the simulation of the increased test power for T-R tubes are suggested. The first system is illustrated in Figure 1. It consists of a magnetron oscillator, a T-junction, a phase shifter, two reactive diaphragms, a matched load and the investigated tube (symbol R). It is seen that the investigated tube is situated inside a cavity resonator, which is limited by two reactive diaphragms. The resonator is tuned by varying the electrical distance between the diaphragms (e.g. by means of the phase shifter). The second system, shown in Figure 2, employs a resonator which is bounded by a reactive iris and by a plunger. The resonator is tuned

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by varying the position of the plunger. The system employs a ring-type balanced bridge, which provides a matched load to the transmitter. If the phase in the arm 2 of the bridge is properly chosen and the load in the arm 3 is matched, it is possible to match the input of the bridge, while a full reflection is obtained in the arm. The second system is more complex than the first but the tuning of the resonator is accomplished very easily. The parameters characterising the test operating conditions in the two systems are determined analytically. It is shown that for the first system, the magnification coefficient K and the modulus of the reflection coefficient G_{vkh} at the input are given by Eqs (7);

K is defined as the ratio of the field amplitudes squared at the tested switch tube and at the input of the test device, G is the reflection coefficient of a diaphragm with a matched load; the parameter β represents the characteristic of the T-junction whose scattering matrix

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is given by Eq (2). The same characteristic operating parameters for the second test system are expressed by Eqs (12). The parameters K and G_{vkh} are plotted in Figures 3 and 4. The dependence of the parameters K and G_{vch} on the de-tuning of the resonators is represented by Eqs (11) and (16); the first test system obeys Eqs (11), while the second system is governed by Eqs (16). The effect of the de-tuning in both systems is illustrated graphically in Figures 5 and 6. From the analysis, it follows that at wavelengths of 3-10 cm, it is possible to obtain magnification coefficients of the order of 10-20. The methods are disadvantageous, however, in that the de-tuning of the resonator leads to an increase in the reflection coefficient at the output of the magnetron and, secondly, the methods are not fully equivalent to the usual test conditions. In view of the above, it was decided to investigate a ring-type resonator with a travelling wave (instead of a standing wave resonator); a system of

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this type is shown in Figure 7. The coupling between the principal waveguide and the resonator is directional and the tuning of the resonator is done by changing its electrical length (by means of a phase shifter). In the absence of irregularities in the resonator waveguide, a travelling wave is formed in it. The amplitude of the field of this wave can be considerably greater than that of the wave in the principal waveguide. If it is assumed that the coupling slot of the system has infinite directivity and is matched, the scattering matrix of the directional filter formed by the principal waveguide, the resonator and the slot is given by Eq (22), where α is the coupling coefficient. The magnification coefficient and the input reflection coefficient for the system are given by Eqs (25). The de-tuning effect on the magnification and the reflection is represented by Eqs (27). Analysis of these equations shows that the system of Figure 7 is preferable to the systems of Figures 1 and 2. A test equipment based on a travelling

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Methods of Simulating the Increased Power ^{SOV/109-4-4-12/24} for the Testing of the
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wave resonator was devised. This is shown in Figure 10. The equipment consists of: 1) a modulator; 2) a magnetron oscillator; 3), 7) and 8) directional couplers; 4) a directional coupler between the resonator and the principal waveguide; 5) a matched load absorber; 6) a phase shifter; 9) a waveguide section of variable length; 10) a waveguide tap; 11) a calibrated attenuator; 12) a thermistor probe and 13) a thermistor bridge. A system of Figure 10 was investigated experimentally and it was found that the magnification coefficients obtainable were of the order of 4-5. The authors express their gratitude to M.L. Pesina for her collaboration. There are 11 figures and 7 references, 4 of which are English, 1 French and 2 Soviet.

SUBMITTED: November 19, 1957

Card 5/5

29324
S/109/61/006/010/022/027
D201/D302

9.13/0

AUTHOR: Mandel'shtam, M.Ya.

TITLE: A tuned directional coupler with a constant phase shift

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 10, 1961, 1761 - 1764

TEXT: A waveguide post phase shifter produces a phase shift of the transmitted wave directly proportional to the displacement of the bloc arrangement; this feature permits the realization of a tuned directional coupler having a constant phase shift. The author describes a similar arrangement in which the constant phase shift is achieved by means of ferrite phase shifters in the shape of phase shifting rectangular waveguides, partially filled with ferrite and placed in the transverse magnetic field of an electro-magnet. A graph shows the experimentally obtained phase shift as a function of the current in the electromagnet winding. It may be seen that within points a and b the phase shift is practically pro-
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portional to the current. When changing the forward attenuation keeping the phase shift constant it is necessary to vary simultaneously between $0 - \pi/2$ the electrical length of one of the waveguides connecting the slotted bridges, and between 0 to $-\pi/2$ the length of the other. This requirement is met by following the characteristic of one of the phase shifters from point a to b and of the second from point b to a. The circuit of this control is given. The differences in the parameters of the two tubes may be used for compensating the differences between the two phase shifters. Measurements performed in the range $\Delta\lambda/\lambda = \pm 3\%$ have shown that the slope of the straight portion of the phase shift characteristic between points a and b is practically independent on wavelength; this fact makes it possible to tune the coupler within a given frequency band. Experiments carried out using a model arrangement have shown that within $\Delta\lambda/\lambda = \pm 3\%$ the phase shift remains constant within $\pm 2.5\%$ for a variation of forward attenuation from 1 to 15.20 db. At the same time with one phase shifter disconnected, the same changes in attenuation produced a phase shift of the output wave of about 90° . Of interest is the fact that the difference-

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A tuned directional coupler . . .

tial phase shift remains constant with tuning. For the chosen dimensions of ferrite plates this phase shift was nearly 180° and did vary by no more than $\pm 2\%$ for a change in forward attenuation from 1 to 15-20 db. This feature of the coupler may be used in particular for attenuating the backward wave in the travelling wave ring resonator. There are 7 figures and 7 references: 2 Soviet and 5 non-Soviet-bloc. The references to English-language publications read as follows: W.L. Teeter, K.R. Bushose, IRE Trans. 1957, MTT 5, 227; R.F. Soohoo, IRE Convention Record, 1956, pt. 5, 84-88; M.L. Kales, H.N. Chait, N.G. Sakiotis, Appl. Phys. Lett., 1953, 24, 816.

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SUBMITTED: May 3, 1961

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1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX
100 AND 4TH ORDERS

M

Application of Spectro-Analytical Methods to the Analysis of Metals. S. L. Mandel'shtam. (*Trudy Vsesoyuz. Konf. Anal. Khim.*, 1943, 2, 189-197).—(In Russian.) Spectral analysis is used for three different purposes in industry: (i) rough quantitative control of raw materials, (ii) accurate quantitative control of semi-finished and finished products, and (iii) highly accurate quantitative analyses for impurities. It can be used either alone or in conjunction with chemical analyses, with which it compares very favourably in respect of cost of labour and material. Examples of accuracies obtained with different methods are given for various alloys; comparative costs are also included.—V. K.

OPEN METALLURGICAL LITERATURE CLASSIFICATION

GROUPS

LETTERS

GROUPS

LETTERS

MANDEL'SHTAM, S. L., Prof

PA 36 73

USSR/Physics
Spectrum Analysis
Spectroscopy

Nov 1947

"Spectrum Analysis in the USSR," Prof S. L. Mandel'shtam, 11 pp

"Zavodskaya laboratoriya" Vol XIII, No 11

The industrialization of the Soviet Union has necessitated the introduction of a rapid and exact means of control over items being manufactured. One of the more efficient methods for determining the chemical composition of matter is by spectrum analysis. At the present time intensive research is going on in some tens of laboratories, institutions, large fac

3677b

Nov 1947

LC
USSR/Physics (Contd)

ories, and upper technical schools, for the development of apparatus for spectrum analysis, and at the same time many other institutions are involved in furthering the idea of utilizing such apparatus in various industrial enterprises. Discusses styles, copy, quantitative analysis of metals and alloys, analysis of ores and minerals, and various research being undertaken.

LC

3677

11591. Gas density and temperature in a spark discharge. G. G. DOLOV AND S. L. MANDEL'SHTAM. Zh. eksper. teor. fiz., No. 6, 691-701 (1953) in Russian. 537.521.4

Describes the apparatus used, comprising the interferometer of Razhdetsvenskii (1910), which enabled the gas-density distribution across the spark discharge to be investigated at different moments of time. The results obtained confirm the hydrodynamic theory developed for the formation of the spark-discharge channel by Abramson, Gegechkori, Drabkina and Mandel'shtam [Zh. eksper. teor. fiz., 17, 562 (1947)]. The average gas density in the discharge channel is $\bar{\rho} \approx 5 \times 10^{-6} \text{ g/cm}^3$, the corresponding concentration of particles being $N \approx 10^{11} \text{ cm}^{-3}$. The average gas temperature in the channel is $T \approx 40000^\circ \text{K}$. F. LACUSIAN

RAW

1ST AND 2ND ORDERS 3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

BC

B-1-5

Application of spectral methods in analysis of metals. S. L. MANDUSKOVAN (Bull. Acad. Sci. U.R.S.S., 1987, no. 7, 123-147).—Apparatus and technique for the routine determination of alloy constituents in steels, Fe alloys, and non-ferrous alloys are discussed. J. S. A.

COMMON ELEMENTS

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OPEN

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSING AND PROPERTIES INDEX

105 AND 6TH ORDERS

9

On the Application of Spectrographic Methods to the Analysis of Metals.
S. I. Matulevich (*Zvezdskaya Laboratoriya (Works' Lab.)*, 1937, 6, (1), 35-35).
[In Russian.] Spectrographic methods for the analysis of Fe and non-ferrous metals and alloys are reviewed. — D. N. S.

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ASME-SL-A METALLURGICAL LITERATURE CLASSIFICATION

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