1674. **Morphological and immunohaematological changes in healthy subjects after an infusion of blood of patients with chronic lymphatic leukaemia.** II Morfologiczne i immunohematologiczne przejawy spostrzegane we krwi człowieka zdrowego po wstrzyknięciu krwi chorego na białaczkę limfatyczna przewlekla. II. ALEKSANDROWICZ J. III. Klin. Chor. Wewn. A. M., Kraków *Haematologica (Kraków)* 1958, 2/1–2 (151–157) Tables 2

At a few months' interval the author twice infused 5 ml. of blood from patients with chronic lymphatic leukaemia into a healthy subject. On each occasion he observed a histiocytic-lymphocytic reaction lasting some weeks. He concludes that in the leukaemic blood there is a factor of unknown origin which conditions this phenomenon although he was not able to prove the existence of any antilymphatic antibodies.

Wysocki – Poznań

EXCERPTA MEDICA Sec 16 Vol 7/11 Cancer November 59

4796. **Further research on the activity of ribonucleases in the blood and urine of patients suffering from proliferative hemocytopathia** ALEKSANDROWICZ J., URBANCZYK J., OSTROWSKA A. and SIERKO J. Third Med. Clin., Acad. of Med., Cracow, Poland *Blood* 1958, 13/7 (652-664) Graphs 8 Tables 7

A simple quantitative method (based on McCarty's method) of measuring the ribonuclease (RNase) activity in urine and blood is presented. The RNase activity was examined in the blood and urine of patients suffering from chronic granulocytic leukaemia, myeloblastic leukaemia, lymphatic leukaemia, granulocytopenia, Hodgkin's disease, and in cases of infectious disease with an increased leucocytosis. The RNase activity in the urine is increased in chronic granulocytic leukaemia, while the RNase activity in the blood serum remains unchanged. In other diseases, in spite of an increased or decreased leucocytosis, no essential changes in the RNase activity in the urine and blood serum were observed, which indicates that there is no close relationship between the number of leucocytes in the peripheral blood and the RNase activity in the 24-hour sample of urine.

NOWAKOWA, Krystyna; KOWALCZYKOWA, Janina; ALEKSANDROWICZ, Julian; JANICKI, Kazimierz

On difficulties in the differential diagnosis of sympathoblastoma from tumors of the hematopoietic system. Pol. arch. med. wewnet. 32 no.2: 237-247 '62.

1. Z Zakladu Anatomii Patologicznej AM w Krakowie Kierownik: prof. dr med. J. Kowalczykowa i z III Kliniki Chorob Wewnetrznych AM w Krakowie Kierownik: prof. dr med. J. Aleksandrowicz.

(NEUROBLASTOMA diag) (HEMATOPOIETIC SYSTEM neopl)

ALEKSANDROWICZ, Julian

The problem of prevention of neoplastic diseases with special reference to leukemias. Polskie arch. med. wewn. 32 no.3:303-318 '62.

1. Z III Kliniki Chorob Wewnetrznych AM w Krakowie Kierownik: prof. dr med. J.Aleksandrowicz.
(LEUKEMIA prev & control)

ALEKSANDROWICZ, Julian

From the medicine and humanism cycle. Attempted application of clinical tradition of internal medicine in modern therapy of neuroses. Pol. tyg. lek. 17 no.32:1272-1276 6 Ag '62.
(NEUROSES) (INTERNAL MEDICINE)

ALEKSANDROWICZ, Julian; TATAJ, Ludwika; WAZEWSKA-CZYZEWSKA, Maria; MARCHAND, Bernard

Content of Sr90 in bones of cadavers of leukemic patients. Pol. arch. med. wewn. 32 no.10:1203-1206 '62.

1. Z III Kliniki Chorob Wewnetrznych AM w Krakowie Kierownik: prof. dr med. J. Aleksandrowicz i z Instytutu Radiologii Uniwersytetu we Freiburgu Kierownik: prof. dr H. Langendorff.
(LEUKEMIA) (BONE AND BONES) (STRONTIUM ISOTOPES)

ALEKSANDROWICZ, Julian

Modern problems of the treatment of leukemias and of their prevention. Pol. med. wewnet. 32 no.7:687-696 '62.

1. Z III Kliniki Chorob Wewnetrznych AM w Krakowie Kierownik: prof. dr med. J. Aleksandrowicz.
(LEUKEMIA)

ALEKSANDROWICZ, Julian; OSTERCZY, Zbigniew; SZMIGIEL, Zbigniew

A rare case of thrombocytopenic hemorrhagic diathesis. Pol. med. wewnet. 32 no.7:761-763 '62.

1. Z III Kliniki Chorob Wewnetrznych AM w Krakowie Kierownik: prof. dr med. J. Aleksandrowicz.
(HEMORRHAGIC DIATHESIS) (CUSHING'S SYNDROME)
(ADRENAL CORTEX HORMONES) (VITAMIN B12) (ACETOPHENETIDIN)

ALEKSANDROWICZ, Julian; JANICKI, Kazimierz; KOPIA, Henryk; PLEWA, Stanislaw

Environment and leukemia morbidity. II. Studies on the relationship between leukemia and tumor morbidity and environmental radioactivity of the living area. Pol. med. wewnet. 32 no.7:839-843 '62.

1. Z III Kliniki Chorob Wewnetrznych AM w Krakowie Kierownik: prof. dr med. J. Aleksandrowicz i z Zakladu Geofizyki Przemyslu Naftowego w Krakowie Dyrektor: mgr Inz. K. Sojka.
(LEUKEMIA) (NEOPLASMS) (RADIATION) (ENVIRONMENT)

PLEWA, Stanislaw; ALEKSANDROWICZ, Julian; JANICKI, Kazimierz

Environment and leukemia morbidity. III. Distribution of leukemia morbidity and background ionizing radiations of the environment. Pol. med. wewnet. 32 no.7:844-849 '62.

1. Z Zakladu Geofizyki Przemyslu Naftowego w Krakowie Dyrektor: mgr inz. K. Sojka i z III Kliniki Chorob Wewnetrznych AM w Krakowie Kierownik: prof. dr med. J. Aleksandrowicz.
(LEUKEMIA) (RADIATION) (ENVIRONMENT)

ALEKSANDROWICZ, Julian

Studies on the pathogenesis of chronic granulocytic leukemias with special reference to the role of ribonuclease. Pol. arch. med. wewn. 32 no.12:1495-1499 '62.

1. Z III Kliniki Chorob Wewnetrznych AM w Krakowie Kierownik: prof. dr. med. J. Aleksandrowicz.
(RIBONUCLEASE) (LEUKEMIA)

MEISEL, H.; ALEKSANDROWICZ, J.; MIERZEJEWSKA, H.

Hyaluronidase (antigen μ) in extracts of vegetative cells of Clostridium perfringens type A. Bul Ac Pol biol 11 no.7:321-325 '63.

1. State Institute of Hygiene, Warsaw. Presented by E. Mikulaszek.

ALEKSANDROWICZ, Julian; WOLSKA, Anna; STUPNICKI, Tadeusz

Cattle leukemia and human lymphatic leukemia. I. Pol. tyg. lek. 19 no.13:457-459 23 Mr '64.

ALEKSANDROWICZ, Julian; KEPINSKI, Antoni; SKOTNICKA, Alina; ZUROWSKA, Alina

Attempted psycho-sociological analysis of leukemia patients. Pol. arch. med. wewnet. 33 no.10:1117-1121 '63.

1. Z III Kliniki Chorob Wewnetrznych AM w Krakowie Kierownik: prof. dr med. J. Aleksandrowicz i z Kliniki Psychiatrycznej AM w Krakowie Kierownik: prof. dr med. K. Spett.
(LEUKEMIA) (PSYCHOLOGICAL TESTS)
(SOCIAL CONDITIONS) (STATISTICS)

ALEKSANDROWICZ, Julian; JISTEWICZ, Jerzy

Edward Korczynski (1841-1905). Pol. tyg. lek. 19 no.8:310-311 17 F '64.

DYMOWSKA, Zofia; ZAKRZEWSKA, A.; ALEKSANDROWICZ, J.; ZAPART, Wanda; GANCARZ, Zygmunt

The use of fractioned Trichinella spiralis antigens in the diagnosis of trichinosis. Wiad. parazyt. 10 no.4:311-312 '64

1. Zaklad Parazytologii Lekarskiej Panstwowego Zakladu Higieny, Warszawa.

ALEKSANDROWICZ, Julian

Leukemias and environment; epidemiology of leukemias and studies on pathogenic effects of the physical and chemical environment. Pol. tyg. lek. 19 no.35:1313-1315 31 Ag '64.

1. Z III Kliniki Chorob Wewnetrznych Akademii Medycznej w Krakowie (kierownik: prof. dr J. Aleksandrowicz).

ALEKSANDROWICZ, Julian, prof. dr.; BROZEK, Anna; KACZANOWSKI, Krzysztof; PASKOWSKI, Bogdan.

Anthropometry of patients with leukemia. Pol. tyg. lek. 19 no.43: 1636-1638 26 O '64

1. Z III Kliniki Chorob Wewnetrznych Akademii Medycznej w Krakowie (Kierownik: prof. dr. J. Aleksandrowicz i z Zakladu Antropologii UJ (Kierownik: prof. dr. E. Stolyhwo).

ALEKSANDROWICZ, Julian, prof. dr.;CHLAP, Zbigniew; WOLSKA, Anna; SZUPERSKI, Tadeusz; KAWECKA, Kalina

Further studies on cattle leukemias; verification of hematological tests with histopathological methods. Pol. tyg.lek. 19 no.48:1844-1847 30 N'64.

1. Z III Kliniki Chorob Wewnetrznych Akademii Medycznej w Krakowie (kierownik: prof. dr. Julian Aleksandrowicz) i z Zakladu Anatomii Patologicznej Akademii Medycznej w Krakowie (kierownik: prof. dr. Janina Kowalczykowa).

ALEKSANDROWICZ, Julian; URBANCZYK, Jan; SZNAJD, Jan

Pathogenesis of chronic granulocytic leukemia and prospects for its treatment in the light of current literature and our studies. Folia med. Cracov. 7 no.1:3-10 '65.

ALEKSANDROWICZ, Julian, prof. dr.; BLICHARSKI, Julian; CZYZEWSKA-WAZEWSKA, Maria; CICHOCKI, Tadeusz

Cytologic and dynamic examination of inflammatory skin exudate in healthy subjects and patients with various forms of leukemia. Pol. tyg. lek. 20 no.3:81-83 18 Ja '65

1. Z III Kliniki Chorob Wewnetrznych (Kierownik: prof. dr. J. Aleksandrowicz) i z Zakladu Histologii Akademii Medycznej w Krakowie (Kierownik: prof. dr. J. Ackermann).

ACC NR: AP6031249 SOURCE CODE: PO/0055/66/007/003/0299/0309

AUTHOR: Aleksandrowicz, Julian (Professor, Director, Doctor); Naskalski, Jerzy; Sznajd, Jan; Urbanczyk, Jan

ORG: Department of Biochemistry, Third Clinic of Internal Medicine, Medical Academy, Cracow

TITLE: Disorders of ribonuclease activity in chronic granulocytic leukemia

SOURCE: Acta medica polona, v. 7, no. 3, 1966, 299-309

TOPIC TAGS: rnase activity, leukemia, disease control, serology, enzymology, enzyme, ~~activity~~ blood disease, ribonuclease

ABSTRACT: Studies have been undertaken to elucidate the increased RNase activity in the urine of chronic granulocytic leukemia (cgl) patients. Included in the studies are 1) preliminary characterization of the factors responsible for serum and urinary nucleolytic activity; 2) search for interdependence between urinary and serum RNase activity and leukocytosis; 3) correlation between urinary and serum activity; 4) attempt to estimate the importance of the kidneys in disorders of RNase activity in leukemias on the bases of renal-function studies. Thirty-five clinical patients with cgl participated in the experiment; for

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ACC NR: AP6031249

comparison, there were 20 patients with lymphatic leukemia (ll) and 20 patients with myeloblastic leukemia (ml). The control consisted of 150 healthy people. The serum and urinary activity was determined by the orcinal method, and later by the spectrophotometric method. AcPase activity was determined by the Bessey method; creatine and serum nonprotein nitrogen were assayed by the methods of Jeffrey and Rappaport, respectively. The results were 1) Agreement of nucleolytic activity of serum and urine with well-known properties of ribonuclease was shown. 2) Serum RNase activity was markedly elevated both in the serum and in the urine of the patients. 3) AcPase activity was comparable in both groups. 4) There was a marked correlation between levels of serum and urinary RNase activity in the patients. In cgl, less pronounced correlation indicated disorders in the excretion of RNase. 5) RNase clearance values in cgl were shown to be neither dependent upon serum RNase activity nor related to the levels of leukocytosis. 6) A distinct correlation between leukocytes and RNase activity, described by the following formula, was shown:
where Y is the serum RNase activity in μg/ml and X is cgl leukocyte count in thousands. Maximal RNase activity occurred in range of low leukocytosis (around 3000) and highest leukocytosis (100,——300,000). Lowest values of RNase occurred

Card 2/3

ACC NR: AP6031249

in range of leukocytosis from 10,000——300,000. Experiments indicate that there is a state of equilibrium between RNase activity and level of leukocytosis in cgl. As a result, high levels of leukocytosis are accompanied by high RNase activity. The occasional drop in the leukocyte level is explained by a negative feedback relationship. This hypothesis supports the view that leukocytes are a source of serum RNase. The authors express their indebtedness to Miss Olga Sobejko for technical assistance. [WA-50; CBE No. 12]

SUB CODE: 06/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 013/

Card 3/3

Biochemistry

POLAND

PO/0055/66/007/003/0299/0309

AUTHOR: Aleksandrowicz, Julian (Professor, Director, Doctor); Naskalski, Jerzy; Sznajd, Jan; Urbanczyk, Jan

ORG: Department of Biochemistry, Third Clinic of Internal Medicine, Medical Academy, Cracow

TITLE: Disorders of ribonuclease activity in chronic granulocytic leukemia

SOURCE: Acta medica polona, v. 7, no. 3, 1966, 299-309

TOPIC TAGS: rnase activity, leukemia, disease control, serology, enzymology, enzyme, blood disease, ribonuclease

ABSTRACT: Studies have been undertaken to elucidate the increased RNase activity in the urine of chronic granulocytic leukemia (cgl) patients, Included in the studies are 1) preliminary characterization of the factors responsible for serum and urinary nucleolytic activity; 2) search for interdependence between urinary and serum RNase activity and leukocytosis; 3) correlation between urinary and serum activity; 4) attempt to estimate the importance of the kidneys in disorders of RNase activity in leukemias on the bases of renal-function studies. Thirty-five clinical patients with cgl participated in the experiment; for

1/3

2/3

KUCKIEWICZ, Witold, mgr., inz.; ALEKSANDROWICZ, Leon, mgr., inz.

The usability of old geodetical networks on the territory of the Upper-Silesian Coal Basin. Przegl geod 33 no.9:340-341 '61.

ALEKSANDROWICZ, T.; ALEKSANDROWICZ, R.; BEDNARSKI, Z.; CHRUSCIKOWSKI, R.; DAGAJEW, B.; [redacted]; KULAKOWSKI, A.; LAMPARSKI, M.; TOMASZEWSKI, M.

Amount of lost blood during certain operations. Polski przegl.chir. 26 no.11 Suppl.:316-320 1954.

1. Kolo Chirurgizne Studentow AM w Warszawie.
(SURGERY, OPERATIVE,
preop. loss of blood)
(HEMORRHAGE,
preop. loss of blood)

ALEKSANDROWICZ, Roscislaw, mgr inz.

Selection of the economical cruising speed. Techn lotn 18 no.8: 208-210 Ag '63.

1. Politechnika, Warszawa, I Polskie Linie Lotnicze Lot, Warszawa.

ALEKSANDROWICZ, Roscislaw, mgr inz.

Certain organization and economic and technological problems in air transportation. Techn lotn 19 no.10/11:289-293 O-N '64.

1. Technical University, Warsaw, and Polish Airlines "Lot," Warsaw.

ALEKSANDROWICZ, Ryszard

Ileo-colic invagination caused by lipoma of the cecum. Polski przegl.chir.32 no.2:185-187 F '60.

1. Z I Oddzialu Chirurgicznego Szpitala Miejskiego Nr. 4 w Warszawie. Ordynator: dr. M. Pyrzakowski.
(INTUSSUSCEPTION etiol.)
(LIPOMA compl.)
(CECUM neopl.)

ALEKSANDROWICZ, Ryszard; LOZINSKI, Janusz

Anatomical models made from laminates. Folia morphol 22 no. 2:195-199 '63.

1. Zaklad Anatomii Prawidlowej, Akademia Medyczna, Warszawa, Kierownik: prof. dr med. W. Sylwanowicz.

ALEKSANDROWICZ, Ryszard; LOZINSKI, Janusz

Simplified method of preserving dry and wet anatomical preparations in synthetic resins. Folia morphol 22 no. 2: 201-205 '63.

1. Zaklad Anatomii Prawidlowej, Akademia Medyczna, Warszawa, Kierownik: prof. dr med. W. Sylwanowicz.

ALEKSANDROWICZ, R., mgr inz.

Equivalent length of an airfield. Techn lotn 19 no.2:44-46 F '64.

ALEKSANDROWICZ, S.

"Feeding Piglings Variously Dosed High Protein Food During Quarantine", P. 538, (MEDYCYNA WETERYNARYJNA, Vol. 9, No. 12, Dec. 1953, Warszawa, Poland).

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5, May 1955, Uncl.

ALEKSANDROWICZ, S.

Journal of the Science
of Food and Agriculture
May 1954
Agriculture and Horticulture

(4)

Use of high-protein rations for young pigs during quarantine and inoculation. S. Alexandrowicz, T. Losunski, W. Kraupe, and S. Benedykcinski (*Roczn. nauk Roln.*, 1953, **68**, B, 5—19).—Under the experimental conditions skim milk in the ration was replaced by fish meal + blood meal (up to 200 g. per head daily) without ill effects. A supplement of green fodder was found desirable.

A. G. POLLARD.

ALEKSANDROWICZ, T.

The application of infrared rays for the automatic self-guidance of missiles to targets. p. 49.

WOJSKOWY PRZEGLAD LOTNICZY. (Dowodztwo Wojsk Lotnicznych) Warszawa, Poland, Vol. 12, no. 5, May 1959

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 8, August 1959

Uncl.

ALEKSANDROWICZ, T.; ALEKSANDROWICZ, R.; BADNARSKI, Z.; CHRUSCIKOWSKI, R.; DAGAJEW, B.; DOBRZANSKI, A.; KULAKOWSKI, A.; LAMPARSKI, M.; TOMASZEWSKI, M.

Amount of lost blood during certain operations. Polski przegl.chir. 26 no.11 Suppl.:316-320 1954.

1. Kolo Chirurgizne Studentow AM w Warszawie.
(SURGERY, OPERATIVE,
preop. loss of blood)
(HEMORRHAGE,
preop. loss of blood)

BOWKIEWICZ, Janusz; ALEKSANDROWICZ, Teresa

Radiodiagnosis of an acute bowel obstruction (ileus). Polski przegl. 22 no.3:169-186 May-June 58.

1. Z Zakladu Radiologii Lekarskiej A. M. w Warszawie Kierownik: prof. dr nauk med. W. Zawadowski i z I Kliniki Chirurgicznej A. M. w Warszawie Kierownik: prof. dr T. Butkiewicz.

(INTESTINAL OBSTRUCTION, diag.
acute, x-ray diag. (Pol))

ZELEWSKI, L.; ALEKSANDROWICZ, Z.; DZIADUL, C.

The influence of oestradiol benzoate and nicotinamide on citrate excretion in female rats. Acta biochim. pol. 9 no.4:351-355 '62.

1. Department of Biochemistry, Medical School, Gdansk.
(ESTRADIOL) (NICOTINAMIDE) (CITRATES)

SZCZERBAN, J.; ALEKSANDROW-WYSZNACKA, Wanda; IGNATOWSKA, H.

Diagnostic value of hepatic vein catheterization. Pol. tyg. lek. 20 no.24:897-898 14 Je '65.

1. Z I Kliniki Chirurgicznej AM w Warszawie (Kierownik: prof. dr. med. J. Nielubowicz) i z II Kliniki Chorob Wewnetrznych AM w Warszawie (Kierownik: prof. dr. med. D. Aleksandrow).

(32)

Warsaw, Medycyna Weterynaryjna, Vol 18, No 4, April 1962.
(continued)

8. "Determination of the Global Artificial Radioactivity Beta in the Bones of Slaughter Animals in 1959 and 1960," Marcin SZULC of the Chair for Hygiene of Animal Products (Katedra Higieny Produktow Zwierzecych) of the Faculty of Veterinary Science at SGGW at Warsaw (Director: Prof. Dr. Jan HAY); pp 212-215 (English summary).

9. "The Polish Portable Trichinescope 'M. Tr' for Field Work," Waclaw MATYSIAK; p 216.

10. "Selected Problems of Diseases of Calves," Marian WISLOCKI; pp 216-219.

11. "A Case of Parturient Paresis in a Cow in the Eighth Month of Pregnancy," Jan KRZYZANOWSKI; pp 219-220.

12. "Two Cases of Coryza gangraenosa bovum," Antoni CHOLEWA HUCZYNSKI of the PZLZ (Panstwowy Zaklad Lecznicy dla Zwierzat, State Animal Hospital) at Milosna; p 220.

13. "Branchiogenic Cyst in a Dog," Ryszard BADURA and Zbigniew MICHALSKI of the Chair of Surgery (Katedra Chirurgii) of the Faculty of Veterinary Science at the Higher School of Agriculture (WSR) at Wroclaw (Director: Docent Dr. Ryszard BADURA) and of the Chair of Pathological Anatomy (Katedra Anatomii Patologicznej) of the Faculty of Veterinary Science at the WSR at Wroclaw (Director: Prof. Dr. Aleksander ZAKRZEWSKI); pp 221-222.

14. "Insemination in Fowl," Franciszka OLBRYCHTOWA; pp 222-227.

15. "Effect of Fenactil on the Sexual Cycle of Female Rabbits," G. GRUNPETER, I. ALEKSANDROWSKA, Z. GLADKI, K. KOWIEC, J. KLOBUSZYNSKI, J. KOCZOCIK, W. OLECH, F. OLEJNIK, I. PUCZEK, E. SZYMANSKA, Z. WILKOS, and J. ZIELINSKI, students of the Faculty of Veterinary Medicine and members of the Science Club (Kolo Naukowe) of the Chair of Obstetrics (Katedra Poloznictwa) of the WSR at Wroclaw (Director: Prof. Dr. A. SENZE); pp 227-229.

16. "Attempts to Feed Horses with Surrogates," Zbigniew HEJLASZ; pp 229-232.

ALEKSANDROWSKI, C.

From Soviet experiences in rural building.

P. 16 (Budownictwo Wiejskie, Vol. 8, no. 3, 1956 Mar. Warszawa, Poland)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

ALEKSANDROYAN, V.V.

BYNYATYAN, L.B., kandidat tekhnicheskikh nauk; ALEKSANDROYAN, V.V., inzhener.

Calculation of the amount of water to be pumped in well-type subsurface drainage. Gidr. i mel. 8 no.12:14-21 D'56. (MLRA 10:1)
(Drainage)

KHASHEGANU. Mikhail [Haseganu, Mihail], prof.; GIKA, G.[Chica,G.]; KHOLAN, A.[Holan, A.]; SYMBOAN, S.[Simboan, S.]; MOKANU, K. [Mocanu, K.]; MUNTYANU, T.[Munteanu, T.]; ALEKSANDRU, D. [Alexandru, D.]: IOVENESKU, M.[Iovinescu, M.]; DZHAMO, N. [Djamo, N.]; KOZHEVNIKOVA, Ye.V.[translator]; KORMANOV , Yu.F. [translator]; LEONOV , V.M.[translator]; MOZHAROV, N.D. [translator]; ZHIRMUNSKIY, M.M., red.; TOPORKOV, G.N., red.; YANKOVICH, O.Yu., doktor, red.; BELEVA, M.A., tekhn. red.

[The economic geography of the Rumanian People's Republic] Ekonomicheskaia geografiia Rumynskoi Narodnoi Respubliki. Kniga napisana kollektivom avtorov pod rukovodstvom Mikhaila Khasheganu. Moskva, Izd-vo inostr. lit-ry, 1961. 551 p. Translated from the Rumanian. (MIRA 15:4)
(Rumania--Economic geography)

82897

S/120/60/000/02/028/052
E032/E414

24,2300

AUTHORS: Aleksandru, G. and Vasilevskaya, D.P.

TITLE: Magnetometer Based on the Hall Effect and Working on Alternating Current

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, Nr 2, pp 107-110 (USSR)

ABSTRACT: A description is given of an instrument based on the Hall effect (Ref 1) in n-type germanium. The instrument has been designed for: a) measurement of the absolute magnitude of magnetic fields between 0.05 and 17000 Oe to an accuracy of ± 1% ± 0.5 Oe; b) relative measurement of the topography of magnetic fields to an accuracy of 1 to 3% and c) measurement of fluctuations in the magnetic field at a given point. The probe is excited by an alternating current (4 mA) at 2500 cps. The Hall emf is amplified by a narrow-band amplifier having an overall amplification coefficient of 1.5×10^6. The instrument was calibrated with the aid of a nuclear magnetometer. There are 1 figure and 17 references, 4

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82897

S/120/60/000/02/028/052
E032/E414

Magnetometer Based on the Hall Effect and Working on Alternating Current

5 of which are Soviet, 10 English and 2 German.

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

SUBMITTED: February 18, 1959

Card 2/2

ALEKSANDRU, L.

"Investigations of the Preparation Conditions and the Properties of Stable Derivatives of Cellulosexanthogenic Acid." Min Higher Education USSR, Moscow Texile Inst, Moscow, 1952
(Dissertation for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis', No. 32 6 Aug 55

AIEKSANDRU, L.; ROGOVIN, Z.

Investigation of conditions for the production of, and properties of stable derivatives of cellulose xanthogenic acid. Zhur.ob.khim. 23 no. 7:1199-1203 Jl '53. (MLRA 6:7)

1. Moskovskiy tekstil'nyy institut. (Xanthic acid) (Cellulose)
(CA 47 no.22:12802 '53)

3

ALEKSANDRU, L.; ROGOVIN, Z.

Distribution of thiocarbonic groups among primary and secondary alcohol groups in cellulose xanthate. Zhur.ob.khim. 23 no.7:1203-1205 Jl '53. (MLRA 6:7)

1. Moskovskiy tekstil'nyy institut. (Xanthates) (Cellulose)

25069

S/080/60/033/010/023/029
D216/D306

158540

AUTHORS: Mikhail, R., Aleksandru, L., Koman, M., and Yurchenko, V.

TITLE: Modified polyethylene terephthalate as an electro-insulating varnish

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960, 2336 - 2340

TEXT: To obtain modified polyethylene terephthalate three routes were taken: 1) Introduction of all components into general reaction. 2) Transesterification of dimethyl terephthalate (DMT) with corresponding glycols, followed by polycondensation (all reagents entering general reaction); 3) Products from transesterification for the given glycol separated and then polycondensed. The basic study was done on polyethylene terephthalate modified with glycerol, i.e. the effect of change in (a) molar proportions of components (b) temperature of the reaction and (c) time of reactions.

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Modified polyethylene ...

The data obtained show that the melting temperature depends on the temperature of reaction; the melting points of the products rise with the rise in reaction temperature. On reaching the temperature at which the tri-dimensional polymer structure of co-polyester is formed the latter remains high melting. The melting temperature of the polyester is affected by the molar proportion of the components. The increase of reaction time affects the melting point of copolyesters, i.e. the increase in time increases the melting points approaching completion of the reaction. Some investigations were done at normal while some at reduced pressures. In the latter case the increase in reaction time went in two stages: The first stage at which time was kept same as under normal pressure (90 mins.), and the second stage at 3 mm Hg, over 30 - 150 min. Increasing the time above 150 min. at temperature 180-200°C. the copolyesters became high melting. The number of OH groups depends on the temperature and length of the reaction, being 200-500 in temperature region 200-270°C; it then remains constant on formation of the tridimensional structure of the copolymer. To study the polycondensa-

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S/080/60/033/010/023/029
D216/D306

Modified polyethylene ...

tion, 30 moles of dimethyl terephthalate were used, 50, 60, 65 moles of ethylene glycol and 20, 10, 5 moles of pentaerythrite. On polycondensation of dimethyl terephthalate, ethylene glycol, glycerol and pentaerythrite in proportions 25:50:22:3 respectively and at 190°C for 180 min and at 3 mm Hg, a soluble transparent product was obtained with a melting point of 85° and 350 OH groups. On polycondensation of dimethyl terephthalate, ethylene glycol and glycerol with proportions 40:40:20 at 240°C for 270 min., a transparent soluble product is obtained with a melting point of 95°C and 377 OH groups. Synthetized products had molecular weights from 1200 to 1400 and these were determined by the cryoscopic method, in phenol. Use of these varnishes on copper conductors has given resistance to 5000 volts potential, thermal stability up to 155°C, and good resistance to wear. Especially good results were obtained with the varnish based on polyethylene terephthalate modified with ethylene glycol, glycerol, pentaerythrite. There are 6 figures, 1 table and 2 references: 1 Soviet-bloc and 1 non-Soviet-bloc.

Card 3/4

25069
S/080/60/033/010/023/029
D216/D306

Modified polyethylene ...

ASSOCIATION: Nauchno-issledovatel'skiy khimicheskiy institut Bukharest (Scientific-Research Chemical Institute, Bucharest)

SUBMITTED: February 19, 1960

Card 4/4

ALEKSANDRU, L.; OPRISH, M.

Kinetics of vinyl acetate polymerization in methanol. Vysokom. soed. 3 no.2:306-209 F '61. (MIRA 14:5)

1. Khimicheskiy issledovatel'skiy institut Ichekhim, Bukharest, Rumynia.

(Vinyl acetate)
(Polymerization)

ALEKSANDRU, L. [Alexandru, L.]; KOMAN, M. [Coman, M.]; RIZESKU, T. [Rizescu, T.]; POPOVICH, A. [Popovici, A.]

Effect of the nature of stabilizers on the stability of polycaprolactam. Khim.volok no.4:4-8 '62. (MIRA 15:8)

1. Nauchno-issledovatel'skiy institut khimii, Bukharest, Rumynskaya Narodnaya Respublika.

(Nylon)

ALEKSANDRU, L.; DASKALU, L. [Dascalu, L.]; KRISTESKU, I. [Kristescu, I.]

Catalytic depolymerization of polyethylene terephthalate wastes. Khim.volok. no.3:25-27 '62. (MIRA 16:2)

1. Nauchno-issledovatel'skiy institut khimii, Bukharest, Rumynskaya Narodnaya Respublika.
(Textile fibers, Synthetic) (Ethylene polymers)
(Terephthalic acid)

36302
S/190/62/004/004/018/019
B117/B138

5,3820
11,8010

AUTHORS: Aleksandru, L., Oprish, M., Chiokenel, A.

TITLE: Synthesis of highly crystalline polyvinyl alcohol

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 4, 1962, 613-614

TEXT: The effect of the medium on the degree of crystallization of polyvinyl acetate was studied and a new possibility of producing highly crystalline polyvinyl alcohol was shown. The lowest ketones were found to be the best media for crystallization of polyvinyl alcohol. Vinyl acetate was polymerized in methyl-ethyl ketone (1:1) in the presence of azoisobutyric acid dinitrile at 60°C. By saponifying polyvinyl acetate in methanol, polyvinyl alcohol with a characteristic viscosity of 32 was obtained in the presence of 4% caustic soda at 40°C. The chain transfer, intensified by the medium, was found to accelerate crystallization. Much higher values of the chain transfer constant were found for the lowest ketones than for other substances. The polymers developing under these conditions have a lower molecular weight. There are 2 tables.

Card 1/2

ALEKSANDRU, L. [Alexandru, L.] (Bukharest); BUTACHU, F. [Butaciu, F.] (Bukharest); BALINT, I. (Bukharest)

Hydrolysis of polyvinyl acetate to polyvinyl alcohol by the continuous method. Plast.massy no.9:6-8 '64. (MIRA 17:10)

ALEXANDRU,M., ing.; BLUM,R.; DICEA,O., geolog; TRIMBITAS,I., ing.

Considerations on the seismic prospecting works in platform zones. Petrol si gaze 14 no.6:273-290 Je'63

15-57-1-497

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 1, p 80 (USSR)

AUTHORS: Starik, I. Ye., Melikova, O. S., Kurbatov, V. V., Aleksandruk, V. M.

TITLE: The Relation of Temperature to the Emanation Factor of Uraninite for Radon, Thoron, and Actinon (Zavisimost' emaniruyushchey sposobnosti uraninita po radonu, toronu i aktinonu ot temperatury)

PERIODICAL: Byul. Komis. po opredeleniyu absolyut. vozrasta geol. formatsii AN SSSR, 1955, Vol 1, pp 33-38.

ABSTRACT: Uraninite containing $2.16 \cdot 10^{-7}$ g/g Ra, $2.39 \cdot 10^{-1}$ g/g Th, and $8.0 \cdot 10^{-11}$ g/g Ac was studied for emanations of radon, actinon, and thoron during heating. It was found that the emanation factor for radon (K_{Rn}), equal to 2.1, remains almost constant up to 90°. It decreases sharply to 1.0 in the interval from 90° to 100°. The emanation factor for thoron (K_{Tn}) is 1.14 at 21°, and it gradually decreases to 0.75 on heating to 100°. The

Card 1/2

ALEKSANDRUK, V.M.

Absolute age determination by the rhenium method. Biul.Kom. po opr.abs.vozr.geol.form. no.4:144-147 '61. (MIRA 15:1)
(Geological time)
(Rhenium)

SOBOTOVICH, E.V.; GRASHCHENKO, S.M.; ALEKSANDRUK, V.M.; SHATS, M.M.

Determining the age of ancient rocks by the lead-isochronous and isotope-spectrum strontium methods. Izv. AN SSSR. Ser. geol. 28 no.10:3-14 O '63. (MIRA 16:11)

1. Radiyevyy institut imeni V.T. Khlopina, Leningrad.

L 12420-63 EWT(m)/EDS AFFTC/ASD

ACCESSION NR: AP3001415 S/0020/63/150/004/0904/0906

AUTHOR: Starik, I. Ye.; Aleksandruk, V. M. 53 51

TITLE: The application of isotope spectral analysis to the strontium method for determination of age

SOURCE: AN SSSR. Doklady, v. 150, no. 4, 1963, 904-906

TOPIC TAGS: determination of age in minerals, isotope spectra, spectral method, geochronological problems, lipidolit, purple muskovite, biotit, mass spectrometer

ABSTRACT: The relative and absolute determination of Sr sup 87 in minerals for the purpose of age determination has been accomplished by the Rb-Sr isotope - spectral method. The obtained accuracy of the relative content of Sr sup 87 is greater compared to the accuracies previously published and therefore, it is satisfactory for the solution of a number of geochronological problems. The results of age determination of minerals such as lipidolit, purple muskovite and biotit determined by two different methods with Rb sup 87 and Sr sup 87 isotopes are in good agreement with each other. The time required for an analysis is much less than the time required for an analysis with a mass spectrometer. "

Card 1/2

L 27618-65 EWT(1)/EWT(m)/EPA(s)-2/EWP(t)/EWP(b) Pt-10 DIAAP/IJP(c) JD/JG/GW
ACCESSION NR: AP5001513 [illegible]/159/005/1055/1058

AUTHOR: Starik, I. Ye. (Deceased) (Corresponding member AN SSSR); Aleksandruk, V. M.

TITLE: Spectral method of determining the Rb-Sr absolute age of rocks and minerals

SOURCE: AN SSSR. Doklady, v. 159, no. 5, 1964, 1055-1058

TOPIC TAGS: isotopic dating, rock age, mineral age, rubidium analysis, flame spectrophotometry, isotope dilution technique, strontium analysis, lepidolite dating, granite dating, microcline dating

ABSTRACT: The isotopic-spectral method was used to measure the Rb-Sr absolute age. Rb was determined with a flame spectrophotometer (hydrogen - air flame) by means of the 7948 A line. The ratio Sr^{87}/Sr was measured with an isotopic-spectral device; Sr was determined by the isotope dilution technique, after being first separated from accompanying impurities. [illegible] of the measurements performed on lepidolite, various samples of granite, and microcline are tabulated. The maximum deviation in age values from the data of mass-spectrometric results was 10% (the average was 6%). The sensitivity of the isotopic-spectral deter-

Card 1/2

L 27618-65
ACCESSION NR: AP5001513

mination was adequate for the analysis of samples containing 10 x 10^{-6} g Sr per gram, in samples weighing no more than 1 gram. The analysis required 40-50 min. "The authors thank E. K. Gerling for supplying the samples and results of mass-spectrometric analyses, and A. V. Lotsyus for determining the isotopic strontium composition of the standard samples." Orig. art. has: 2 tables and 1 formula.

ASSOCIATION: none

SUBMITTED: 17Jun64 ENCL: 00 SUB CODE: ES, IC

NO REF SOV: 004 OTHER: 001

Card 2/2

STARIK, I. Ye. [deceased]; ALEKSANDRUK, V.M.

Spectral method for the determination of the Rb—Sr absolute age of rocks and minerals. Dokl. AN SSSR 159 no.5:1055-1058 D '64 (MIRA 18:1)

1. Chlen-korrespondent AN SSSR (for Starik).

ALEKSANDRYAN, A.

"On the Ultra-Energetical Particles," Journal Physics, 9, No.2, 1945

Hd., Cosmic Ray Expedition, Mt. Alagez, Armenia
Physics Inst., AS ArmSSR

Geophysical + Extraterrestrial Phenomena

537.591 : 523.165 1764

On Narrow Showers.—A. Alichanian & A. Alexandrian. (J. Phys., U.S.S.R., 1940, Vol. 10, No. 3, pp. 296-297.) From an investigation of cosmic ray showers at heights of 900 m and 3 250 m it is concluded that there exist: (*a*) Auger showers of radius about 100 m, (*b*) narrow showers of radius about 30 cm, the radius decreasing with increase of altitude, and (*c*) dense penetrating showers of undetermined radius.

S/169/63/000/001/022/062
D263/D307

AUTHORS: Aleksandryan, A.A., Yeganyan, Ts.A. and Kocharyan, V.T.

TITLE: Solar radiation at the Dilizhan spa in the summer

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1963, 19, abstract 1B119 (Tr. Yubileyn. plenuma Uch. med. soveta M-va zdravookhr. ArmSSR, posvyashch. 40-letiyu ustanovleniya Sov. vlasti v Armenii. T.I. Yerevan. 1961, 87-96)

TEXT: The results are given of the intensities of full direct, ultraviolet, visible, and infrared solar radiation, in dependence of the elevation of the sun, at Dilizhan, during the summers of 1958-1960. The measurements were carried out by thermoelectric and photoelectric methods.
[Abstracter's note: Complete translation]

Card 1/1

ALEKSANDRYAN, G.A.

Territorial distribution of yearly sums of precipitations in the Armenian S.S.R. Trudy Tbil. NIGMI no.2:96-107 '57. (MIRA 11:4)
(Armenia--Precipitation (Meteorology))

ALEKSANDRYAN, G.A.

Showers in the Vokhchi Basin. Izv. AN Arm. SSR. Ser. geol. i geog. nauk 11 no.1:55-63 '58. (MIRA 11:7)

1.Vodno-energeticheskiy institut AN ArmSSR.
(Vokhchi Valley--Rain and rainfall)

ALEKSANDRYAN, R. A.
SDS 11/6/57

ALEKSANDRYAN, G.A.

Seasonal distribution of atmospheric precipitation in the Armenian S.S.R. Izv. AN Arm. SSR. Nauki o zem. 18 no.3/4: 101-110 '65. (MIRA 18:9)

1. Sektor geografii Instituta geologicheskikh nauk AN Armyanskoy SSR.

...ANIAN, G. A.

3(8)

PHASE I BOOK EXPLOITATION SOV/2263

USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby

Sbornik rabot po sinoptike, Nr. 2 (Collection of Articles on Synoptics, nr 2) Leningrad, Gidrometeoizdat, 1958. 157 p. 1,200 copies printed.

Ed. (Title page): G. D. Zubyan; Ed. (Inside book): R. V. Grosman; Tech. Ed.: A. E. Sergeyev.

PURPOSE: This collection of articles is intended for meteorologists.

COVERAGE: The book contains 12 abridged articles written by synoptic meteorologists of the Weather Bureau, the Gidrometbyuro, and the AMSG (Air Weather Station of the Civil Air Fleet). All articles deal with the local features in the development of atmospheric processes and weather. There are no personalities mentioned. There are 35 references: 34 Soviet and 1 German.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

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MM/mg
10-21-59

ALEKSANDRYAN, G.A.

Catastrophic showers in the southeastern part of the Armenian S.S.R. in August 1956. Shor.rab.po sinop. no.2:83-86 '58. (MIRA 12:6)

1. Yerevanskoye byuro pogody.
(Armenia--Rain and rainfall)

ALEKSANDRYAN, K.V., inzh.

Using vibration in subtilling compact stony soils. Mekh. i elek. sots. sel'khoz. 21 no.3:49-50 '63. (MIRA 16:8)

1. Armyanskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Armenia--Tillage) (Vibrators)

ANTONYAN, K.A.; ALEKSANDRYAN, M.A.

Preserved immune blood according to differential indices.
Probl. gemat.i perel krovi 6 no.1:47-49 '61. (MIRA 14:2)
(BRUCELLOSIS) (SERUM)

ALEKSANDRYAN, R. A.

Dissertation: "Dependence of the near periodicity in solutions of differential equations on the kind of region." CAND PHYSICOMATH SCI

20 April 49

Sci Res Inst of Mathematics, Moscow Order of Lenin State V imeni M. V. Lomonosov.

SO Vecheryaya Moskva

ALEKSANDRYAN, R. A.

176T59

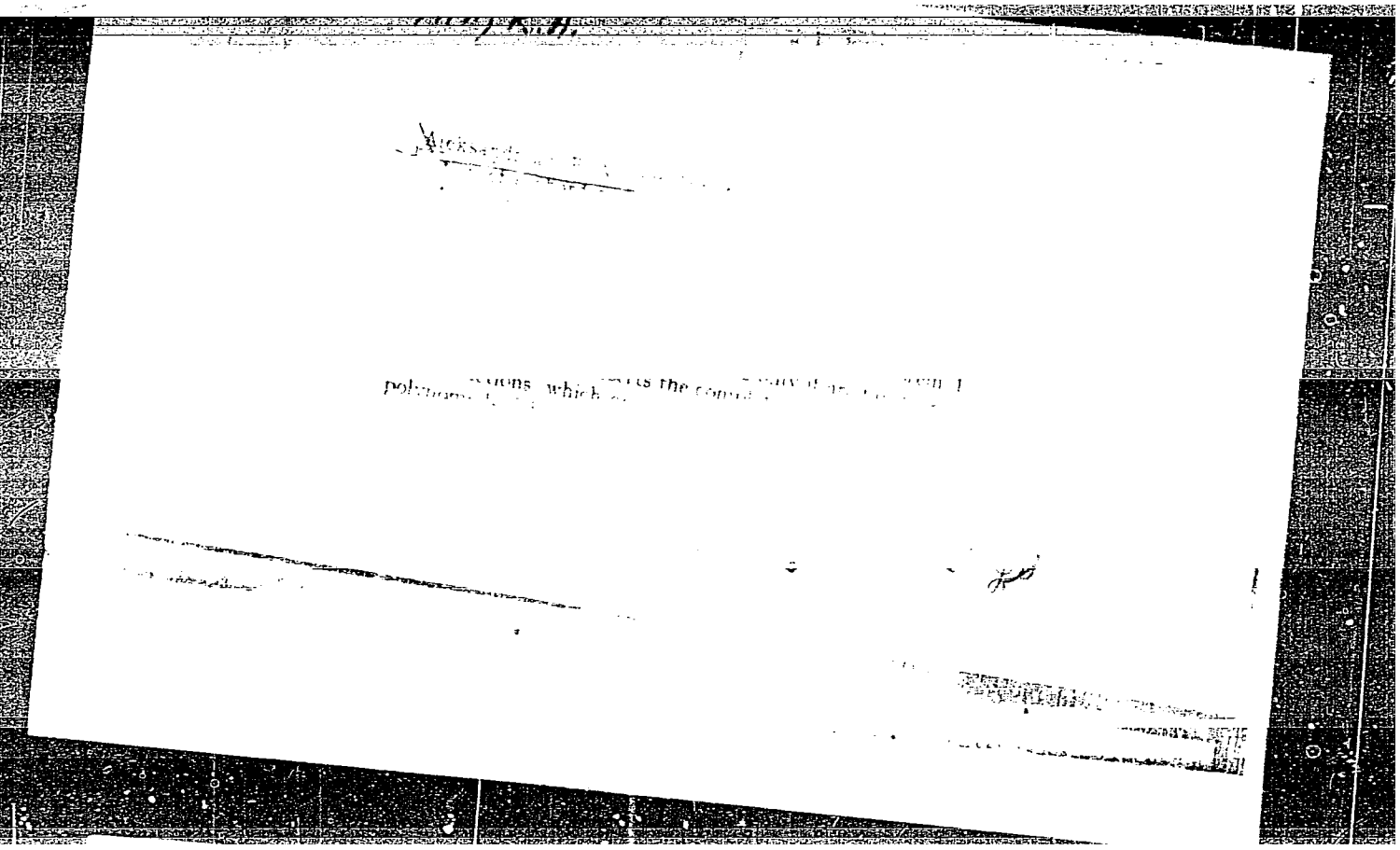
USSR/Mathematics - Differential Equations, Partial 1 Aug 50

"Sobolev's Problem of Special Equation With Fourth-Order Partial Derivatives," R. A. Aleksandryan, Inst Math and Mech, Acad Sci Armenian SSR

"Dok Ak Nauk SSSR" Vol LXXIII, No 4, pp 631-634

Considers eq $\frac{\partial^2}{\partial t^2}\Delta u + \omega\frac{\partial^2 u}{\partial y^2} = 0$ where $\Delta \equiv \partial^2/\partial x^2 + \partial^2/\partial y^2$ and w is real constant. Six theorems demonstrated, giving existence and conditions for soln in certain regions. Submitted 21 May 50 by Acad S. L. Sobolev.

176T59



Aleksandryan, R.A.

Transactions of the Third All-union Mathematical Congress (Cont.) Moscow, Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp. There are 2 references, both of them USSR.

Call Nr: AF 1108825

ALEKSANDRYAN, R.A.

On the correctness of a mixed problem and on the spectral equivalence of two related operators. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 10 no.1: 69-83 '57. (MLRA 10:6)

1. Institut matematiki i mekhaniki Akademii nauk Armyanskoy SSR. (Differential equations)

ALEKSANDRYAN, R.A.

ARUTYUNYAN, N.Kh.; DZHRBASHYAN, M.M.; ALEKSANDRYAN, R.A.

On a method of solving a hyperbolic equation containing a mixed derivative. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 10 no.1:113-121 '57.

1. Institut matematiki i mekhaniki Akademii nauk Armyanskoy SSR.
(Differential equations, Partial) (Mathematical physics)

ALEKSANDRYAN, R.A.; ARUTYUNYAN, N.Kh.; MANUKYAN, M.M. (Yerevan)

Torsion of thin-walled rods of a closed cross section under conditions of unsettled creep. Prikl.mat. i mekh. 22 no.6: 766-780 N-D '58. (MIRA 11:12)

1. Institut matematiki i mekhaniki, Vychislitel'nyy tsentr AN ArmSSR.

(Torsion) (Creep of materials)

SOV/179-59-1-10/36

AUTHORS: Aleksandryan, R. A., Arutyunyan, N. Kh., Manukyan, M. M. (Yerevan)

TITLE: Relaxation Problems in Bending of a Prismatic Bar (Relaksatsionnaya zadacha ob izgibe prizmaticheskogo sterzhnya)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 1, pp 73-81 (USSR)

ABSTRACT: The paper is a continuation of previous work (Refs.5 and 6). Earlier papers by other workers (Refs.1-4) have dealt with the creep of prismatic bars; in the present paper the stress relaxation in a bent prismatic bar undergoing unsteady creep is discussed. The cross-section of the bar possesses two perpendicular symmetry axes, and stresses in longitudinal planes are neglected in comparison with stresses in the cross-section. It is assumed that the non-linear relation between stress and creep strain is characterised by the function:

$$F(\sigma) = \alpha\sigma + \beta\sigma^m \quad (m>0) \qquad (1.8)$$

where α, β and m are constants. This equation has been

Card 1/2

Relaxation Problems in Bending of a Prismatic Bar

found to fit the experimental results over a wide stress range for many materials, e.g. concrete and wood. On the basis of the above assumptions, a non-linear integral equation is obtained and a method of solving it is described. The solution is then applied to the problem of the relaxation of bending moment in a bar with rectangular cross-section. Approximate evaluation in the case of a particular concrete beam 20 x 30 cm in cross-section shows that relaxation of bending moment depends markedly on the value of β in Eq.(1.8). There are 1 figure, 1 table and 6 Soviet references.

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR, Vychislitel'nyy tsentr AN Armyanskoy SSR (Institute of Mathematics and Mechanics and Computational Centre, Academy of Sciences, Armenian SSR)

SUBMITTED: December 15, 1958.

ALEKSANDRYAN, R.A. (Yerevan); MANUKYAN, M.M. (Yerevan); ARUTYUNYAN, N.Kh. (Yerevan)

Relaxation problem of the bending of a prismatic rod. Izv. AN SSSR. Otd.tekh.nauk.Mekh. i mashinostr. no.2:73-81 Ja-F '59. (MIRA 12:5)

1. Institut matematiki i mekhaniki AN ArmSSR i Vychislitel'nyy tsentr AN ArmSSR.

(Creep of materials)

16(1)

AUTHORS: Aleksandryan,R., and Karabegov,V.

TITLE: Congress on Differential Equations in Yerevan

SOV/42-14-2-17/19

PERIODICAL: Uspekhi matematicheskikh nauk,1959,Vol 14,Nr 2,pp 259-261 (USSR)

ABSTRACT: Incited by the Yerevan State University and by the Computing Center of the Academy of Sciences Arm.SSR in November 1958 a congress on differential equations took place in Yerevan. Deliveries were given by: R.A.Aleksandryan (Yerevan), B.M.Babich (Leningrad), Yu.M.Berezanskiy (Kiyev), B.L.Boyarskiy (Moscow), A.B.Vasil'yeva (Moscow), I.N.Vekua (Moscow), V.S.Vinogradov (Moscow), M.I.Vishik and L.A.Lyusternik (Moscow), V.S.Vladimirov (Moscow), S.A.Gal'pern (Moscow), F.D.Gakhov (Rostov), I.M. Gel'fand (Moscow), A.L.Gol'denveyzer (Moscow), I.I.Danilyuk (Moscow), G.A.Dzhanashiya (Tbilisi), M.M.Dzhrbashyan (Yerevan), V.A.Il'in (Moscow), A.M.Il'in and O.A.Oleynik (Moscow), A.S. Kalashnikov and O.A.Oleynik (Moscow), V.D.Kupradze (Tbilisi), Ye.M.Landis (Moscow), B.M.Levitan (Moscow), V.K.Mel'nikov (Moscow), Yu.S.Sayasov (Moscow), Mustafayev (Baku), L.N. Prokopenko (Kiyev), B.L.Rozhdestvenskiy (Moscow), A.A.Samarskiy

Card 1/2

Congress on Differential Equations in Yerevan SOV/42-14-2-17/19

(Moscow), A.N.Tikhonov (Moscow), P.Ye.Sobolevskiy (Voronezh), S.A.Tersenov (Tbilisi), I.Kh.Khayrullin (Rostov), Z.I.Khalilov (Baku), L.A.Chudov (Moscow), A.L.Shaginyan (Yerevan).

Card 2/2

report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb '60.

1. A. A. Abbasov, A. F. Kasimov, Ia. A. Shvarts (Baku): Supersonic motions of visco-plastic solids and the basis for improving well cementation.
2. A. A. Abbasov, V. M. Makhiyev, A. A. Mirsoian (Baku): Heat transfer in moving viscous and visco-plastic solids.
3. B. L. Abramian (Erevan): Torsion of cylindrical shafts.
4. B. L. Abramian, A. A. Babloian (Erevan): Torsion of circular hollow shafts with longitudinal notches.
5. V. L. Agamirov, A. S. Volmir, V. E. Mineev (Moscow): Buckling and post-buckling behavior of shells under dynamic loading.
6. A. Ia. Aleksandrov (Novosibirsk): Some relations between the solutions of plane and axisymmetrical problems in the theory of elasticity.
7. A. Ia. Aleksandrov (Novosibirsk): Experimental investigation of plane elastic-plastic problems by means of photoelastic films.
8. V. M. Aleksandrov, Iu. I. Ustinov (Rostov-na-Donu): Some contact problems in elasticity.
9. R. A. Aleksandrian, N. Kh. Arutiunian, M. M. Manukian (Erevan): Torsion of prismatic bars under transient creep.
10. S. A. Alekseev (Moscow): Two-dimensional bodies of equal strength.
11. N. A. Alumiae (Tallin): Axisymmetrical vibration of an elastic conical shell.
12. S. A. Ambartsumian (Erevan): On the theory of anisotropic shells and plates.
13. S. A. Ambartsumian, L. A. Movsisian (Erevan): Some problems in the theory of anisotropic (non-orthotropic) shells.
14. I. Ia. Amiro (Kiev): Stability analysis of a stiffened cylindrical shell under axial compression.
15. V. V. Andreev, A. M. Kosevich, L. V. Tanatarov (Kharkov): The inelastic deformation and residual strains in a plane layer of a solid under allotropic transformations.
16. L. G. Aramanovich (Moscow): The stress distribution in a heavy half-space with a circular hole, the edge of which is subject to non-equilibrated forces.
17. M. Arama, M. Tanenbaum (Bucharest): Photoelastic model studies of cracked reinforced concrete beams.
18. N. Kh. Arutiunian (Erevan): The plane contact problem of the theory of creep.
19. T. V. Assonova, T. I. Zaitsanina, A. A. Trapeznikov (Moscow): Shear strengths and limits of reversible strains of solutions and gels of some rubbers.
20. I. B. Baida (Leningrad): The general solution of the problem of elastic strains in a cylinder of finite length.
21. G. I. Barenblatt (Moscow): The theory of equilibrium cracks under brittle rupture.
22. G. M. Bartenev (Moscow): Rheological properties of rubber-like polymers.
23. M. F. Barshtein (Moscow): Dynamic design of structures subjected to random effects.
24. N. F. Bashlubenko (Moscow): Temperature distribution in container and metal during extrusion.
25. Bai an Pin (Peking), Hsu Tsehu-Hsun (Tsamsha), G. S. Shapiro (Moscow): On the dynamics of rigid-plastic structures.
26. V. G. Berezantsev (Leningrad): The theory of the limit state of stress in soil mechanics and its applications.
27. A. Iu. Birkgan, A. S. Volmir (Moscow): The use of electronic digital computers for solving non-linear problems in the theory of plates and shells.
28. V. I. Blokh (Kharkov): Stress displacement functions.
29. V. A. Bobin (Dnepropetrovsk): Difference-variational methods of the theory of structures.
30. V. I. Bozhko (Kiev): On solving Hertz's contact problem with interior fields of plasticity.
31. V. V. Bolotin (Moscow): Method of space transformations in the non-linear theory of plates and shells.
32. V. V. Bolotin (Moscow): The non-linear problems of aero-elasticity at supersonic speeds.
33. V. V. Bolotin (Moscow): Strength and damage under action of random forces.
34. V. V. Bolotin (Moscow): The statistical theory of seismic design of structures.

ALEKSANDRYAN, R.A.; KARAHEGOV, V.I.

[All-Union Conference on Differential Equations. Transactions] Trudy Vsesoyuznogo soveshchaniia po differentsial'nym uravneniiam. Erivan, 1958. Erevan, Akad. nauk Armianskoi SSR, 1960. 188 p. (MIRA 15:1)

1. Vsesoyuznoye soveshchaniye po differentsial'nym uravneniyam. Erivan, 1958.
(Differential equations)

16.3400

1936

S/044/62/000/006/027/127
B158/B112

AUTHOR: Aleksandryan, R. A.

TITLE: Mixed problem for one class of systems of differential equations of the S. L. Sobolev type

PERIODICAL: Referativnyy zhurnal. Matematika, no. 6, 1962, 72, abstract 6B298 (Tr. Vses. soveshchaniya po differentsial'n. uravneniyam, 1958. Yerevan, AN ArmSSR, 1960, 10 - 15)

TEXT: In a bounded domain D of points $x = (x_1,\ldots,x_n)$ with a sufficiently smooth boundary Γ a system of differential equations is considered:

$$\frac{\partial^2 v_i}{\partial t^2} = \sum_{j=1}^{n} \left\{ a_{ij}(x) v_j + b_{ij} \frac{\partial u}{\partial x_j} \right\} \quad (i = 1, \ldots, n), \tag{1}$$

$$\sum_{i=1}^{n} \frac{\partial v_i}{\partial x_i} = 0$$

where $t > 0$, and the matrices $A = \|a_{ij}(x)\|$ and $B = \|b_{ij}(x)\|$ are real,

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symmetric, and differentiable a sufficient number of times in $D+\Gamma$. Moreover, $AB = BA = \| c_{ij} \|$, $A^2 = E$, and such a constant $\mu > 0$ exists that

$$\sum_{i,j=1}^{n} b_{ij} a_i a_j \geqslant \mu \sum_{i=1}^{n} \alpha_i^2.$$

The problem posed is to find functions $v_i(t,x)$, $(i=1,\ldots, n)$, $u(t,x)$ satisfying system (1) and the conditions

$$v_i\Big|_{t=0} = v_i^{(0)}(x), \quad \frac{\partial v_i}{\partial t}\Big|_{t=0} = v_i^{(1)}(x) \quad (i=1, \ldots, n),$$

$v_i|_\Gamma = 0$ at $t > 0$.

Together with this is considered the following problem: find a function $u(t,x)$ which satisfies the equation

$$\frac{\partial^2}{\partial t^2}\left(\sum_{i,j=1}^{n} \frac{\partial}{\partial x_i}\left(b_{ij}\frac{\partial u}{\partial x_j}\right)\right) + \sum_{i,j=1}^{n} \frac{\partial}{\partial x_i}\left(c_{ij}\frac{\partial u}{\partial x_j}\right) = 0$$

and the conditions

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AUTHOR: Aleksandryan, R.A. (Yerevan)

TITLE: Spectral properties of operators generated by systems of differential equations of S.L. Sobolev's type

SOURCE: Moskovskoye matematicheskoye obshchestvo. Trudy, v. 9, 1960, 455 - 505

TEXT: The basic results of this article were reported to the Moscow Mathamtical Association on April 20, 1954 and November 10, 1959. A system

$$\left.\begin{aligned} \frac{\partial^2 V_i}{\partial t^2} &= \sum_{j=1}^{n} \left\{ a_{i,j}(x) V_j + b_{i,j}(x) \frac{\partial P}{\partial x_j} \right\} \qquad (i = 1, 2, 3, \ldots, n), \\ \sum_{i=1}^{n} \frac{\partial V_i}{\partial x_i} &= 0, \end{aligned}\right\} \qquad (1)$$

is considered where $x = (x_1, \ldots, x_n) \in$ in D, whose boundary is

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and $t > 0$. The author constructs the operator $\mathfrak{A}$ in the Hilbert vector space H, described by Lemma 2. $V(x) \in H$ if and only if

$$(V, \operatorname{grad}\varphi)_0 = \int_D \sum_{i=1}^{n} V_i(x) \cdot \frac{\partial \varphi}{\partial x_i}\, dx = 0 \qquad (10)$$

for all $\varphi(x) \in \mathfrak{T}_0$. $\mathfrak{A}$ exists in the linear vector space Ω and is given by $W = \mathfrak{A}V$ if

$$W_i(x) = \sum_{j=1}^{n} \left\{ a_{i,j}(x) V_j + b_{i,j}(x) \cdot \frac{\partial P}{\partial x_j} \right\} \qquad (i = 1, 2, \ldots, n), \qquad (14)$$

where P(x) is the solution of

$$L(P) = \sum_{i,j=1}^{n} \frac{\partial}{\partial x_i}(a_{i,j} V_j), \qquad (15)$$

$$P|_\Gamma = 0. \qquad (4)$$

and it is shown that $\mathfrak{A}$ is bounded and self-conjugate. A mixed pro-

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blem for

$$\frac{\partial^2 L(u)}{\partial t^2} + M(u) = f(t, x) \qquad (5^*)$$

which is equivalent to

$$\frac{\partial^2 u}{\partial t^2} = Qu \qquad (22)$$

where

$$Qu = \int_D G_B(x, y) \cdot \sum_{i, j=1}^{n} \frac{\partial}{\partial y_i}\left(c_{i,j} \frac{\partial u}{\partial y_i}\right) dy, \qquad (23)$$

and where $G_B(x, y)$ = Green's function of the operator L, is discussed, and the author shows that H can be represented as an orthogonal sum of subspaces H_A and H_G invariant with respect to a basic operator. In H_A that operator coincides with the matrix $A(x) = /a_{i,j}(x)/$. Then it is shown that the investigation of spectral properties of the basic operator in the subspace H_G is equivalent to that

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of the homogeneous boundary problem for the 2nd order differential operators with generally no definite quadratic form. A family of special automorphisms of the boundary is introduced and its dependence on the relation between the appearance of the bounded region and a numerical parameter is investigated. A uniqu-eness theorem is proved which is Theorem 8b. Let D be an arbitrary "allowed" region and the relation $\tau\lambda(\Gamma)/2\pi$ given by

$$\lim_{N\to\infty} \frac{F_\lambda^N(t)}{N} = \tau_\lambda(\Gamma) \qquad (59')$$

be irrational. Then the solution of (4) identically equal to zero will be unique in the class of partly discontinuous functions. The region is "allowed" if an arbitrary straight line intersects its boundary at not more than two points and (59'). Necessary conditions are given for the existence of associated functions of the first homogeneous boundary problem for the equation of vibrating string, and sufficient conditions are derived for the value of the numerical parameter λ to belong to the spectrum of the basic opera-

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tor. The above conditions being formulated in terms of Γ-automorphism. Next, the author derives the conditions sufficient for constructing a smooth function associated with

$$(1 + \lambda_o) \frac{\partial^2 u}{\partial x^2} - (1 - \lambda_o) \frac{\partial^2 u}{\partial y^2} = 0 \qquad (55)$$

and (4) out of discrete solutions by integrating them along a special parameter and another condition sufficient for constructing some class of differential solutions for the basic operator. This condition also assures the continuity of the spectrum of the operator in some interval, and the method is given for constructing smooth "allowed" regions which differ as little as necessary from the circle and in which the above conditions are fulfilled. Then it is shown that there exists a complete system of functions which assumes zero value on the surface of the n-dimensional hypersphere and which satisfy inside that sphere, an ultra-hyperbolic equation containing one numerical parameter. The equation is

$$(1+\lambda)\sum_{i=1}^{r}\frac{\partial^2 u}{\partial x_i^2}-(1-\lambda)\sum_{i=r+1}^{n}\frac{\partial^2 u}{\partial x_i^2}=0 \qquad (52')$$

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with the parameter λ, and D in this case in the n-dimensional sphere. Assuming next that D is a circle, the author gives the method for constructing the elements of the operators $\mathfrak{A}$ and Q in terms of Tchebyshev polynomials shows their completeness on H, and gives the final corollary, namely: If the region D is a circle, the solution of

$$V_i|_{t=0} = V_i^{(0)}(x), \quad \left.\frac{\partial V_i}{\partial t}\right|_{t=0} = V_i^{(1)}(x) \qquad (i = 1, 2, \ldots, n), \tag{3}$$

$$P|_\Gamma = 0, \quad t > 0. \tag{4}$$

for

$$\left.\begin{aligned} \frac{\partial^2 V_1}{\partial t^2} &= -V_1 + \frac{\partial P}{\partial x_1}, \\ \frac{\partial^2 V_2}{\partial t^2} &= \frac{\partial P}{\partial x_2}, \\ \frac{\partial V_1}{\partial x_1} &= \frac{\partial V_2}{\partial x_2} = 0, \end{aligned}\right\} \tag{A*}$$

when arbitrary initial conditions are in H, is an almost periodic function of time in H. There are 26 references: 17 Soviet-bloc and 9 non-Soviet-bloc. The references to the English-language publica-

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tions read as follows: E.R. Van Kampen, The topological transformations of a simple closed curve into itself, Amer.Journ. 57, 1934, 142; F. John, The Dirichlet problem for a hyperbolic equation, Amer. Journ. 63, no. 1, 1941, 141; D. Bourgin, R. Duffin, The Dirichlet problem for the vibrating string equation, Bull. Amer. Math. Soc. 45, 1939, 851 - 59.

SUBMITTED: October 27, 1959

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S/020/60/134/003/001/020
C111/C222

16.3500

AUTHOR: Aleksandryan, R.A.

TITLE: Discontinuous Solutions of a First Homogeneous Boundary Value Problem for the Equation of String Oscillation

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol.134, No.3, pp.503-506.

TEXT: The present paper is a continuation of the author's preceding publication (Ref.1) and his dissertation (Ref.3). The author uses the notations of (Ref.1). Let Γ be the boundary of D. Let Φ be a linear topological space of functions infinitely often differentiable in $D+\Gamma$. A functional $T_\lambda \in \Phi^*$ different from zero is called the eigenfunctional of the boundary value problem

$$Mu + \lambda Lu = 0, \tag{1}$$
$$u|_\Gamma = 0, \tag{2}$$

which corresponds to the eigenvalue λ, where M and L are formally self-adjoint differential operators of second order and the quadratic form corresponding to the operator L is uniformly definite in D if for all $\varphi(x) \in \Phi_0$ it holds:

$$T_\lambda(M\varphi + \lambda L\varphi) = 0, \qquad \varphi(x) \in \Phi_0. \tag{3}$$

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