L 45281-66
ACC NR: AP6023570

2

of the torpedo electricians section, tells of the part played by his ship in protecting the landing operation from enemy ships and submarines. Sergeant I. Golub, commander of an air drop launcher ASU-57, reports on his assignment to effect an airborne landing in the rear of the enemy forces and describes the landing operation as seen from the air. Sergeant I. Nivolovich, head of a marine unit, describes the assault of his men in armored carriers landing directly from the ships. Lieutenant V. Zaytsev, commander of a motorized infantry platoon, reports on the operations of his group, which landed in armored cars and was assigned to the destruction of enemy rocket installations and the prevention of a nuclear hit on the advancing units. Orig. art. has: 6 figures. [GC]

SUB CODE: 01, 15, 05, 13/ SUBM DATE: none/

Card 2/2

DALAKOV, S.

Device on spinning machines to stop the feeding of yarn when thread is broken.
p. 19. Ratsionalizatsii Vol 8, No. 1, 1958. Sofiia, Bulgaria

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 10,
Oct. 58

DALAKOV, Stefan

Economizing in bobbins and transport. Tekstilna prom 12 no.1: 38-39 '63.

1. Direktor na DIP "Osmi mart," Sliven.

[illegible], M.

"How to obtain more cotton."

[illegible], Tirana, Albania., Vol. 1y, No. 3, [illegible]

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 7, July 1959, Unclas

AGULYAN, Sof'ya Liparitovna; DALANYAN, O.Kh., otvetstvennyy redaktor; TATEVOSYAN, S.A., redaktor izdatel'stva; KAPLANYAN, M.A., tekhnicheskiy redaktor

[Michurin apple varieties on the Leninakan Plateau in Armenia] Michurinskie sorta iabloni na leninakanskom plato Armianskoi SSR. Erevan, Izd-vo Akademii nauk Armianskoi SSR, 1955. 154 p. (MLRA9:9)
(Armenia--Apple--Varieties)

DAVIDESCU, D., DAVID, Melania; [illegible]

Contributions to the study of alfalfa culture. [illegible]
agr. tasi 14 no.2:355-362 '63.

DAVIDESCU, D.; DALAS, Melania

Period of application of mineral fertilizer on sunflowers under the agroclimatic conditions of Tirgu Frumos, Iasi region. Studii biol agr Iasi 13 no.2:359-370 '62.

TIMARIU, Gheorghe; COSTACHE, Ion; PETROVICI, Paul; DALAS, Melania

Effect of fertilizers applied to soybeans for grain, green bulk, and silage. Studii biol agr Iasi 14 no.2:331-336 '63.

RUMANIA / Cultivable Plants - Grains.

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10707

Author : Pryadchenku, A., Yazadzhi, A., Velikan, V., Dregich, L., Bretan, I., Gologan, I., Dalas, V., Melakrinos, A., Boldye, Ye., Chobotaru, V., Miklya, K.

Inst : Rumanian Academy.

Title : The Best Sorts of Spring Wheat for the Rumanian People's Republic.

Orig Pub : Biol., zh. Akad RNR, 1956, 1, No 1, 147-206.

Abstract : The results are given of the comparative testing of spring wheat varieties conducted in 1949-1952 on six experimental bases, situated in different productive zones of the Russian People's Republic

COUNTRY : Rumania
CATEGORY : Cultivated Plants. Grains.

ABS. JOUR. : RZBiol., No. 21, 1958, No. 95920

AUTHOR :Ialas, V.
INST. :Communist Acad. RPR
TITLE : A Valuable Line of Summer Wheat Derived from Winter Wheat

ORIG. PUB. : Comun. Acad. RPR, 1957, 7, No.10, 883-887

ABSTRACT : The Tyrgu Frumos 27T line of summer wheat is described, which has been developed at Tyrgu Frumos Agricultural Experimental Station in Iassi Province. This line surpasses the Academia RPR 46 variety allotted to the district in productivity. The average yield boost for the years of the experiment (1953-1956) totaled 134 kg/ha. (10.3%). This line which is very promising for Moldavia has been bred and put into trial in 1956.

CARD: 1/1

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77574.

wheat, good results were shown of the variety divided into districts "Chenad" 117 and the new varieties "Tyrgu Frumos" 16, divided into the steppe and forest-steppe regions of Moldavia, and "Beregan" 77. In the forest zones of both slopes of the Carpathian and Western Mountains (Muntsiy Apusen') the variety "Chenad" 117 prevailed. In the steppe and forest-steppe regions of the western part of Omeniye, Banat and the central part of Transylvania - "Ovdom" 241, divided into districts in Beregan. As regards a barley variety, "Chenad" 395 is the most early maturing and frost resistant, is divided into all zones of cultivation of winter barley. As regards

DALAS, V.

Studies on some species and varities of fall rye. Studii biol agr Iasi 14 no.2:309-313 '63.

DALAS, V.; SCUMPU, Natalia

Contributions to the determination of the resistance to frost of some new varities of wintor wheat. Studii biol agr Iasi 14 no.2:315-321 '63.

DALFAN, C.

Problems regarding the behavior and computation of steel-frame pillars in the field of elasticity and plasticity. p. 585.

REVISTA CONSTRUCTIILOR SI A MATERIALELOR DE CONSTRUCTII. (Asociatia Stiintifica a Inginerilor si Technicienilor din Romania si Ministerul Constructilor si al Materialelor di Constructii) Bucuresti, Rumania. Vol. 10, no. 12, Dec. 1958.

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

Uncl.

DALBAN, C.

Elements for the calculation of metallic structures of industrial halls with trusses rigidly fixed on columns, taking into account the plastic transmission of stresses. p.2-3.

REVISTA CONSTRUCTIILOR SI A MATERIALELOR DE CONSTRUCTII. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania si Ministerul Constructiilor si al Materialelor de Constructii)
Bucuresti, Rumania
Vol. 11, no. 6, June 1959.

Monthly list of Eastern European Accession Index (EEI) LC vol. 8, no. 11 November 1959
Uncl.

KARLSON, K.P.[Karlsons, K.], red.; BAYARS, V.[Bajars, J.], red. STONANS, Ja., red.; DALBIN', M.Ya.[Dalbins, M.], red.; PLATNIYEKS, R.F.[Platnieks, R.], redl; LAPUSHONOK, Yu.K., red.; TEYTEL'BAUM, A., red.; BITAR, A., tekhn. red.

[Transactions of the Conference on the New Methods of the Efficient Use of Local Fuels held in Riga, September 2 to 5, 1958] Trudy soveshchaniia po novym metodam ratsional'nogo ispol'zovaniia mestnykh topliv, Riga, 1958. (MIRA 16:5)

1. Soveshchaniye po novym metodam ratsional'nogo ispol'zovaniya mestnykh topliv, Riga, 1958. 2. Institut khimii Akademii nauk Latviyskoy SSR (for Bayars, Dalbin').
(Fuel--Congresses)

AUTHOR: Dalbin'sh, R.Ya., Senior Engineer SOV/111-59-1-21/35

TITLE: The New TsB-ATS Telephone Set (Novyy telefonnyy apparat TsB-ATS)

PERIODICAL: Vestnik svyazi, 1959, Nr 1, pp 20 - 22 (USSR)

ABSTRACT: The "VEF" Plant, in conjunction with the Nauchno-issledovatel'skiy institut radio-tekhnicheskoy promyshlennosti (Scientific Research Institute of the Radiotechnical Industry) has developed and (for test purposes) released a new telephone set, the considerably improved TsB-ATS. The article describes its outer streamlined appearance (Figure 1), the arrangement of the components including the TK-57 inset and the MK-14 microphone inset, the circuit (Figures 2 and 3), the electroacoustic parameters (Figures 4 - 6), and its basic properties. Housing, dial, and plug socket, which are the same as those of the "Barta-50" set, are of cast MSN copolymer plastic. The dimensions of the set are 230 x 147 x 114 mm. The circuit of the new TsB-ATS does not differ much from that of the BTS-TsB set. The amplifier

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The New TsB-ATS Telephone Set SOV/111-59-1-21/35

has a frequency range from 300 to 3,500 c. The set has an electromagnetic microphone with a transistorized amplifier. This equals the performance of a set with a carbon microphone, but takes in considerably less non-linear distortions. There are 3 graphs, 2 circuits and 1 photo.

ASSOCIATION: SKB zavoda "VEF" (The SKB of the "VEF" Plant)

Card 2/2

LAPUSHONOK, Yu.(Riga); BAYARS,V.[Bajars,V.](Riga); DALBIN'SH,Ya.
[Dalbins,J.](Riga)

High-speed semicoking of peat in the experiment installation using gas heat transfer medium. In Russian. Vestis Latv ak no.3: 127-134 '60. (EEAI 10:7)

1. Akademiya nauk Latviyskoy SSR, Institut khimi.
(Peat) (Coke) (Gases)

D'ALBON, G.; URSESCU, D.; GUTMAN, M.

Recent improvements in unipolar machines. p. 155.

STUDII SI CERCETARI STINTIEICE. FIZICA SI STINTE TEHNICE.
Iasi, Rumania. Vol. 8, no. 2, 1957

Monthly list of European Accessions (EEAI) LC, Vol. 8, no. 8, Aug. 1959

Uncl.

RUMANIA/Physical Chemistry - Electrochemistry. B

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67380

Author : D'Albon, Gerard; Ursescu, Dan; Gutman, Marcel

Inst : Polytechnical Institute Iasi

Title : A New Phenomenon Observed at a Mercury Chromium Contact (for a Thin Layer). Preliminary Report.

Orig Pub : Bul. Inst. politehn. Iasi, 1958, 4, No 1-2, 297-304

Abstract : When current was passed through a system: thin Cr layer on steel [Hg] Cr layer on steel, periodic variations of the resistance of the system were observed at constant voltage. The Cr layer was ~ 30 μ thick. The effect of the Cr layer on the phenomenon described and the effect on the layer of various chemical compounds, Hg purity, sublayer material, current magnitude, temperature, and other factors were studied. -- Yu. Pleskov

Card 1/1

L 25805-66

ACC NR: AP6015937 SOURCE CODE: UR/0239/65/051/003/0395/0397

AUTHOR: Valtneris, A. D.; Dale, M. Ya.

ORG: Department of Normal Physiology, Medical Institute, Riga (Kafedra normal'noy fiziologii Meditsinskogo instituta)

TITLE: Adaptation of MPO-2 and N-102 oscillographs to the recording of mechanical vibrations in the organism

SOURCE: Fiziologicheskiy zhurnal SSSR, v. 51, no. 3, 1965, 395-397

TOPIC TAGS: oscillograph, bioelectric phenomenon/MPO-2 oscillograph, N-102 oscillograph

ABSTRACT: An MPO-2 oscillograph was adapted to the direct recording of mechanical impulses without transforming them into electric pulses. An old, burned out vibrator cell of the oscillograph was converted into a cell sensitive to mechanical vibrations (a mechanovibrator) by equipping it with a tightly stretched silk thread to which a triangle made of plastic was affixed. The apex of the triangle was placed in contact with the membrane of the cell, while a mirror fastened to the base of the triangle was used to reflect a light beam onto the photosensitive film or screen of the recording part of the oscillograph. The cell was

Card 1/2 UDC: 612.08

L 25805-66

ACC NR: AP6015937

connected by means of a polyethylene tube to the receiving part of the system. The oscillograph was thus adapted to the direct recording of mechanical vibrations in the organism such as those involved in the determination of myograms, cardiograms, sphygmograms, etc. By using the modified oscillograph, simultaneous recording of mechanical and bioelectric oscillations can be carried out. The N-102 oscillograph (an improved model of the MPO-2 oscillograph) can be modified in the same manner. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 09, 06 / SUBM DATE: 24Sep63 / ORIG REF: 008

Card 2/2 CC

VALTNERIS, A.D.; DALE, M.Ya.

Adaptation of MPO-2 and N-102 oscillographs for the recording of mechanical oscillations in the body. Fiziol.zhur. 51 no.3:395-397 Mr '65. (MIRA 18:5)

1. Kafedra normal'noy fiziologii Meditsinskogo instituta, Riga.

BALE, Voldemar; [illegible]; [illegible]; SAVEL'YEVA, Ye., red.

[Optimization of electrical networks with increased loads] Optimizatsiia elektricheskikh setei s povyshennymi nagruzkami. Riga, AN Latv.SSR, 1964. 362 p. (MIRA 17:10)

Dalechin, A. P.

Operation of rotary kiln with heat exchanger. A. P. Dalechin, T. I. Mafdrova, and S. I. Alekseev. *Tsement*, 20 [3] 9–11 (1954).—A four-cell shelf-type heat exchanger installed in the narrow section (diameter 2.5 m.) of a rotary kiln for a distance of only 2.5 m. caused a drop of 100° in the temperature of the outgoing gases and resulted in a fuel saving of 3 to 4% and an increase in output of 2%. B.Z.K.

MT

(2)

DALECHIN, N.I.

BELYAKOV, F.Ye.; BABIN, B.N.; BAL', V.; BOROVKOV, P.N.; VOYEVODIN, I.N.; GUREVICH, G.M.; GORBUNOVA, P.I.; KONNOV, A.S.; KALANTAROVA, M.V.; KASHIRSKIY, A.Ya.; KAZANCHEYEV, Ye.N.; LEKSUTKIN, A.F.; LETICHEVSKIY, M.A.; LOPATIN, S.Z.; MIRSKIY, V.N.; PODSEVALOV, V.N.; SUBBOTINA, V.P.; TANASIYCHUK, N.P.; FEDOTOV, S.D.; FISENKO, K.N.; EL'KIND, I.G.; BOVIN, S.S.; VASIL'YEV, L.T.; DRINKOV, V.D.; DALECHIN, N.I.; DADAGOV, I.A.; YERMOSHINA, V.I.; ZHUKOV, I.V.; ZIMIN, D.A.; IVANNIKOV, A.Ya.; KOVALEV, M.K.; LUGAKOVSKIY, N.L.; NALEVSKIY, A.F.; SEREZHNIKOV, V.K.; SEMIGLASOV, M.D.; SOKOLOV, A.V.; STEPANOV, V.I.; SAKHARIN, G.S.; SAVENKO, P.A.; SOLODOV, V.P.; UMEROV, Sh.Kh.; CHIKINDAS, G.S.; SHCHERBUKHINA, S.N.; DYNKIN, G.Z.; LYSOV, V.S.; OSHEROVICH, A.N.; ROKITSINSKIY, E.V.; BRASLAVSKIY, M.S.; RUDENKO, I.A.; ZHUKOBORSKIY, M.S.; ZHDANOV, I.Ye.; SUSLIN, V.A.; BRUS, A.Ye.; VOLYNSKIY, S.A.; KLYUYEV, V.A.; ISTRATOV, A.G.; TIKHOMIROV, I.F.; BUTYRIN, Ya.N.; VOLYNSKIY, S.A.; MINEYEV, M.F.; MAL'TSEV, V.I.; VIDETSKIY, A.F., kand.tekhn.nauk, glavnyy red.; DEMIDOV, A.N., red.; KRAVETS, A.L., red.; KLIMOVA, Z.I., tekhn.red.

[Industrial Astrakhan] Promyshlennaia Astrakhan'. Astrakhan', Izd-vo gazety "Volga," 1959. 318 p. (MIRA 12:11)

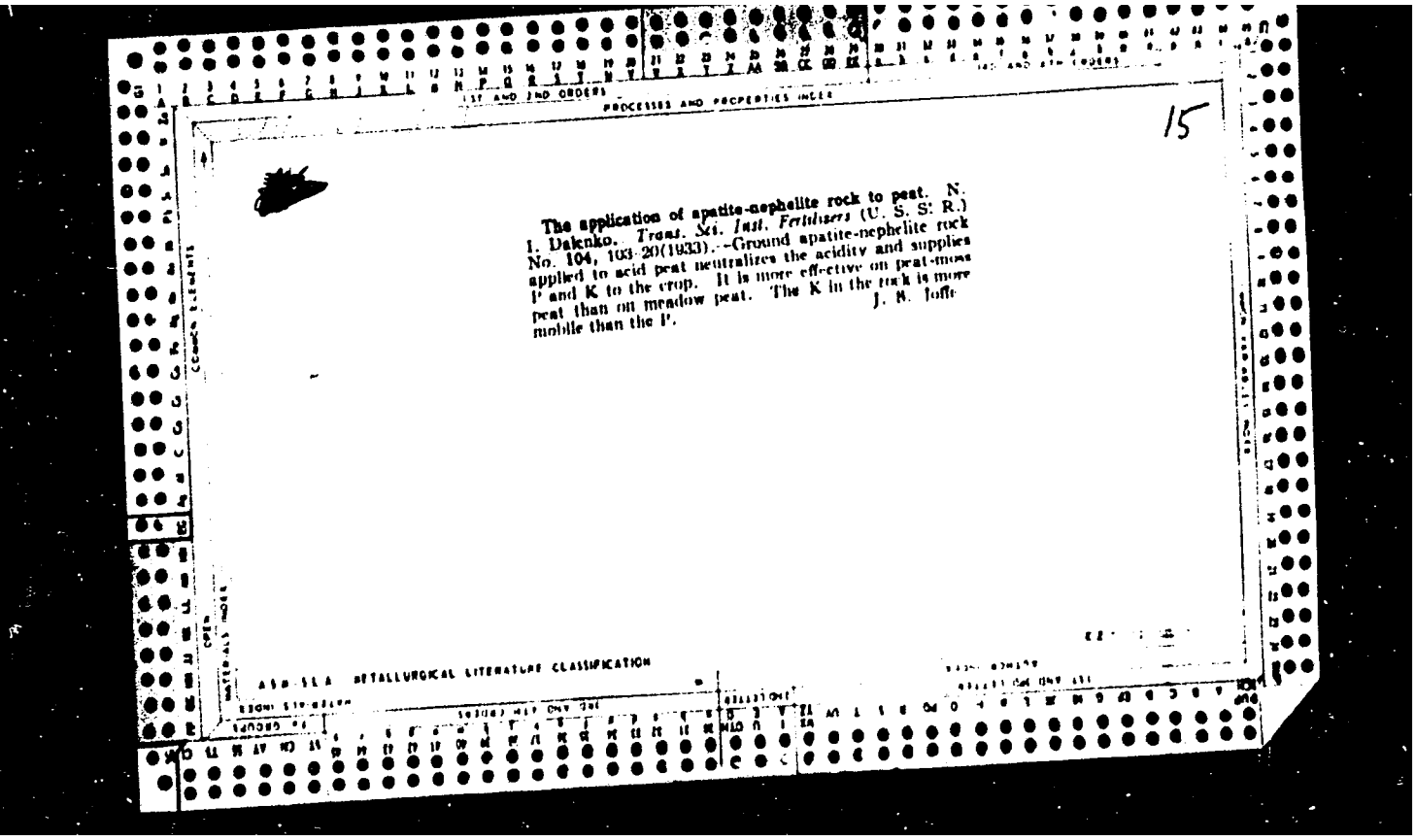
1. Astrakhan (Province) Ekonomicheskiy administrativnyy rayon. (Astrakhan Province--Economic conditions)

DALENKO, N.

BELASHOV,G.; DALENKO,N.

Useful and needed book ("Grain; laboratory research." E.D.Kazakov Reviewed by G.Belashov, N.Dalenko). Muk.-elev.prom.21 no.6:3 of cover Je 55. (MIRA 8:10)

1. Moskovksiy tekhnologicheskiy institut pishchevoy promyshlennosti. (Grain) (Kazakov,E.D.)



15

The application of apatite-nephelite rock to peat. N. I. Dalenko. *Trans. Sci. Inst. Fertilisers* (U. S. S. R.) No. 104, 103-20(1933).--Ground apatite-nephelite rock applied to acid peat neutralizes the acidity and supplies P and K to the crop. It is more effective on peat-moss peat than on meadow peat. The K in the rock is more mobile than the P. J. S. Joffe

Dalenko, N. I.

20-5-30/54

AUTHORS: Dalenko, N.I., Kretovich, V. L.

TITLE: On the Direct Effect Produced by Reducing Agents upon Gluten Proteins (O neposredstvennom vozdeystvii vosstanoviteley na belki kleykoviny)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 115, Nr 5, pp. 961-963 (USSR)

ABSTRACT: As is generally known, reducing agents, especially hydrosulphide compounds produce a loosening effect upon gluten. Yet there is no uniform opinion concerning the nature of this effect. Jorgensen developed the conception of the effective mechanism of the so-called baking-powders, or of the therein contained hydrosulphide compounds which activate the latent "proteinases" of flour due to which the proteolysis is intensified and a "loosening" of both the gluten and the dough is effected. This effect has also been proved experimentally, whereas Ford and Maiden came to the conclusion that glutation produces a direct effect on the gluten proteins. It is, however, quite obvious and evident that the dissolution of protein in 0,1 m acetic acid with a subsequent thorough heating

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On the Direct Effect Produced by Reducing Agents upon Gluten Proteins

at 95 to 96°C is a too drastic procedure which causes irreversible alterations of denaturization of the protein. Recently, the works by De Deken and collaborators, who had to prove the said direct influence, brought about the dissolution of "lysophilized" gluten at 0° by pH of up to 11 in the presence of reducing substances. Under these conditions too, the irreversible fission of protein by a "milieu" of such an alkaline extent is not impossible. The sulphurous amino acids are most easily affected in this respect. The present work was performed in view of an experimental investigation of this question. Its solubility both in water and phosphate buffer, as well as its plastic properties (measured by a plastometer AB) served as indices of the physical gluten properties. The effect of the reducing agents was investigated at 0°C, this being a temperature at which the effect of proteolytic ferments seams impossible the results of the effect of the "Zystein" and of the "Askorbin"-acid upon the physical properties of the "lyophilisyized" gluten are given in fig. 1. This makes it clear that it seams impossible to determine the quality of the gluten by adding 0,1 to 0,001 M "Zystein" at 0°C. This is correlated with the fact that the gluten is quickly converted into a creamy substance. Only with the lowest "Zystein"-con-

On the Direct Effect Produced by Reducing Agents upon Gluten Proteins

centration did they succeed in determining the quality of the gluten. At the same time it appears from fig. 1 that with all samples, except those to which "Zystein" was added, have been solidified.

It is thus quite obvious that "Zystin" has a direct effect upon gluten, its reaction being followed by radical changes of the gluten. The results of special tests of the same effect with different reaction of the "milieu" is given in table 2. Gluten subsequently lost all its plastic properties and was transformed into a glutinous substance independent of the reaction of the milieu. Without "Zystein" gluten solidified little by little, especially in an alkaline milieu. The results of the tests of the solubility of gluten - "lyophilizised" - or of the respective protein change. The solubility of "Zystein" is substantially changed at 0°C. Contrary to the Jorgensen-Hypothesis, it is shown in table 4 that in the case of a joint effect of "Zystein" and "Bromate" (KBr) the quantity of nitrogen passing over into the solution increases with particular abruptness which was proved by the authors by a series of tests with unique results. If, therefore,

20-5-30/54

On the Direct Effect Produced by Reducing Agents upon Gluten Proteins

"Zystein" involves a substantial bond re-grouping of the gluten proteins by causing a radical change of its condition and of the solubility of the protein, the "Bromate" intensifies the effect of the "Zystein" and acts in this respect as a sort of synergist. There are 4 tables and 2 Slavic references.

ASSOCIATION: Moscow Technological Institute of Food Industry (Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti)

PRESENTED: by A.I. Oparin, Academician, May 21, 1957

SUBMITTED: May 16, 1957

AVAILABLE: Library of Congress

Card 4/4

DAIER, Milos, inz.

Selective crushing of pegmatite ores. Rudy 10 no.5:171-172 My '62.

1. Geologicky pruzkum, Brno.

DALER, Milos, inz.

Technical problems of rock examination for building purposes. Geolog pruzkum 5 no.1:13-15 Ja '63.

1. Geologicky pruzkum, n.p., Brno.

DALESZYNSKA, H. J.

3

1758. Inorganic indicator applicable to acidimetric titrations. A. Krause and H. J. Daleszyńska (Roczn. Chem., 1954, 28 (1), 13[illegible]. If to an aq. soln. of $FeSO_4,7H_2O$ some H_2O_2 is added at 20° C, a yellow basic ferric sulphate is pptd. This is converted by OH' into red iso-orthoferrihydroxide amorphous to X-rays. The coagulation of the ppt. is best achieved at the iso-electric point (pH = 8), which is identical with the acid - base neutralization point. The basic ferric sulphate is a convenient indicator for titrations with NaOH of strong inorganic acids in dilutions to 0·01 N, and of strong organic acids like formic and acetic acids at dilutions to 0·1 N. The indicator, however, cannot be used to titrate bases with acids. To prepare the indicator, dissolve 8 g of $FeSO_4,7H_2O$ in 100 ml of distilled water at 20° C, filter, mix with 15 ml of H_2O_2; after 2 to 3 hr. filter the yellow coagulate, wash with distilled water to remove all Fe''' and SO_4'', and dry as much as possible on a Buchner funnel. The indicator is used in form of a pulp, which is obtained by thoroughly mixing the filter cake with twice its amount of water. Very accurate results are obtained in the titration of H_2SO_4, owing to the common anion; to titrate dil. HCl, some K_2SO_4 should be added to suppress the peptising influence of HCl. The indicator is not applicable to the titration of orthophosphoric, tartaric and citric acids, owing to the formation of complex compounds. Comparison with phenolphthalein and methyl orange indicators showed agreement to 1 per cent. for inorganic acids and approx. 4 per cent. for organic acids.

H. BURSTIN

DALETS'KA, L.P.

Various aspects of the clinical picture and pathogenesis of Botkin's disease in children. Ped., akush. i gin. 25 no.2: 23-27'63. (MIRA 16:9)

1. Kafedra pediatrii likuval'nogo fakul'tetu (zav. - prof. R. Yu. Kol'ner) Kiivs'kogo medichnogo institutu (rektor - dotsent V.D.Bratus').
(HEPATITIS, INFECTIOUS)

L 31186-66 EWT(1) SCTB DD
ACC NR: AP6022565

SOURCE CODE: UR/0219/66/061/002/0006/0009

AUTHOR: Daletskaya, G. V.

ORG: All-Union Scientific Research Institute of Railroad Hygiene/Directed by A. A. Prokhorov/, Ministry of Communications (Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnoy gigiyeny Ministerstva putey soobshcheniya); Department of Labor Hygiene/headed by Professor Z. I. Izrael'son/, I Moscow Order of Lenin Medical Institute (Kafedra gigiyeny truda I Moskovskogo ordena Lenina meditsinskogo instituta)

TITLE: Study of fatigue in work involving a large sensory and small muscular component

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny, v. 61, no. 2, 1966, 6-9

TOPIC TAGS: bodily fatigue, cerebral cortex, human sense, muscle physiology, autonomic nervous system

ABSTRACT: The author studied various indices of fatigue in railroad engineers whose work involves numerous visual and auditory impressions but comparatively little physical exertion. The changes noted in the physiological functions tested after the first hour of work indicate that the cortical centers become quite labile. At the same time the tone of the sympathetic nervous system increases, promoting maximum functional efficiency of the somatic apparatus. During the next 5-6 hours performance and function become stable, a sign of adjustment of the dominant centers of the working functions and balance in the main nervous processes in the cerebral cortex.

Card 1/2

UDC: 612.825.8+612.766.1].014.32+613.6:656

L 31186-66

ACC NR: AP6022565

A frosh increase in function after 6-7 hours of work is apparently due to mobilization of the restorative and compensatory mechanisms aimed at maintaining the former level of efficiency. This phase precedes a decrease in efficiency and functional capacity, despite conscious effort to prevent it, and it may be regarded as the period of gradual onset of protective inhibition.

The author concluded that the pattern of work with the sensory component predominant is similar to that of work requiring considerable physical effort - familiarization with the routine, stable working conditions, functional decline. This article was presented by Active Member, AMN SSSR, V. V. Parin. Orig. art. has: 4 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 13Feb65

Card 2/2

DALETSKAYA, I.F.; CHULANOVSKAYA, M.T.

Effect of temperature on the growth and photosynthesis of the chlorella. Bot. zhur. 49 no.8:1147-1150 Ag '64.

(MIRA 17:11)

1. Botanicheskiy institut Kiyevskogo gosudarstvennogo universiteta imeni Shevchenko i Institut fiziologii rastenii Akademii nauk SSSR, Moskva.

KHOKHOL, Yelena Nikolayevna , prof.; GOLOVIN, Pavel Vasil'yevich, prof.; BABKO, I.M.; BOREYKO, V.T.; DALETSKAYA, L.P.; KASHKAREVA, Ye.I.; OTT, V.D.; STAL'NENKO, Ye.S.; SHAPOSHNIKOVA, Z.B.; NARINSKAYA, A.L., tekhn. red.

[Ionized milk; its preparation and use] Ionitnoe moloko; izgotovlenie i primenenie. [By] E.N.Khokhol i dr. 2 izd. perer. i dop. Kiev, Gosmedizdat USSR, 1963. 150 p. (MIRA 16:12)

1. Chlen-korrespondent AMN SSSR (for Khokhol). 2. Chlen-korrespondent AN Ukr.SSR (for Golovin).

(MILK--THERAPEUTIC USE) (INFANTS--NUTRITION)

NIKOLAYEVA, M.G.; DALETSKAYA, T.V.

Study of the physiologically active substances of dormant seeds.
Trudy Bot. inst. Ser. 4 no.16:49-63 '63. (MIRA 17:2)

DALETSKAYA, T.V.

Possible causes of the physiological dwarfishness of embryos. Bot. zhur. 48 no.9:1361-1368 S '63.
(MIRA 16:11)

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR, Leningrad.

NIKOLAYEVA, M. S.; YUDIN, V. G.; DALETSKAYA, T. V.

"The role of growth substances in seed dormancy."

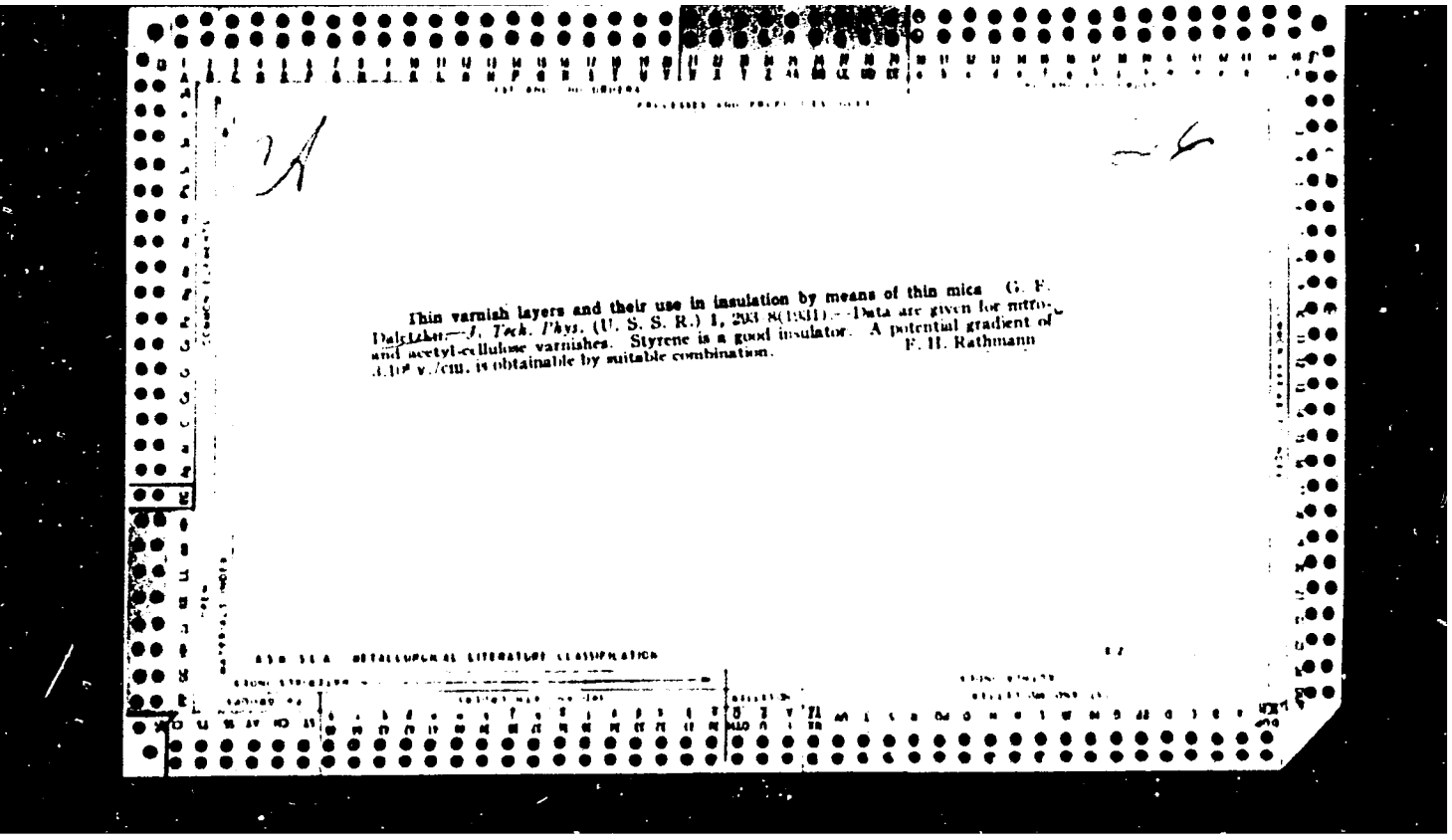
report submitted for 10th Intl Botanical Cong, Edinburgh, 3-12 Aug 64.

AS USSR, Leningrad.

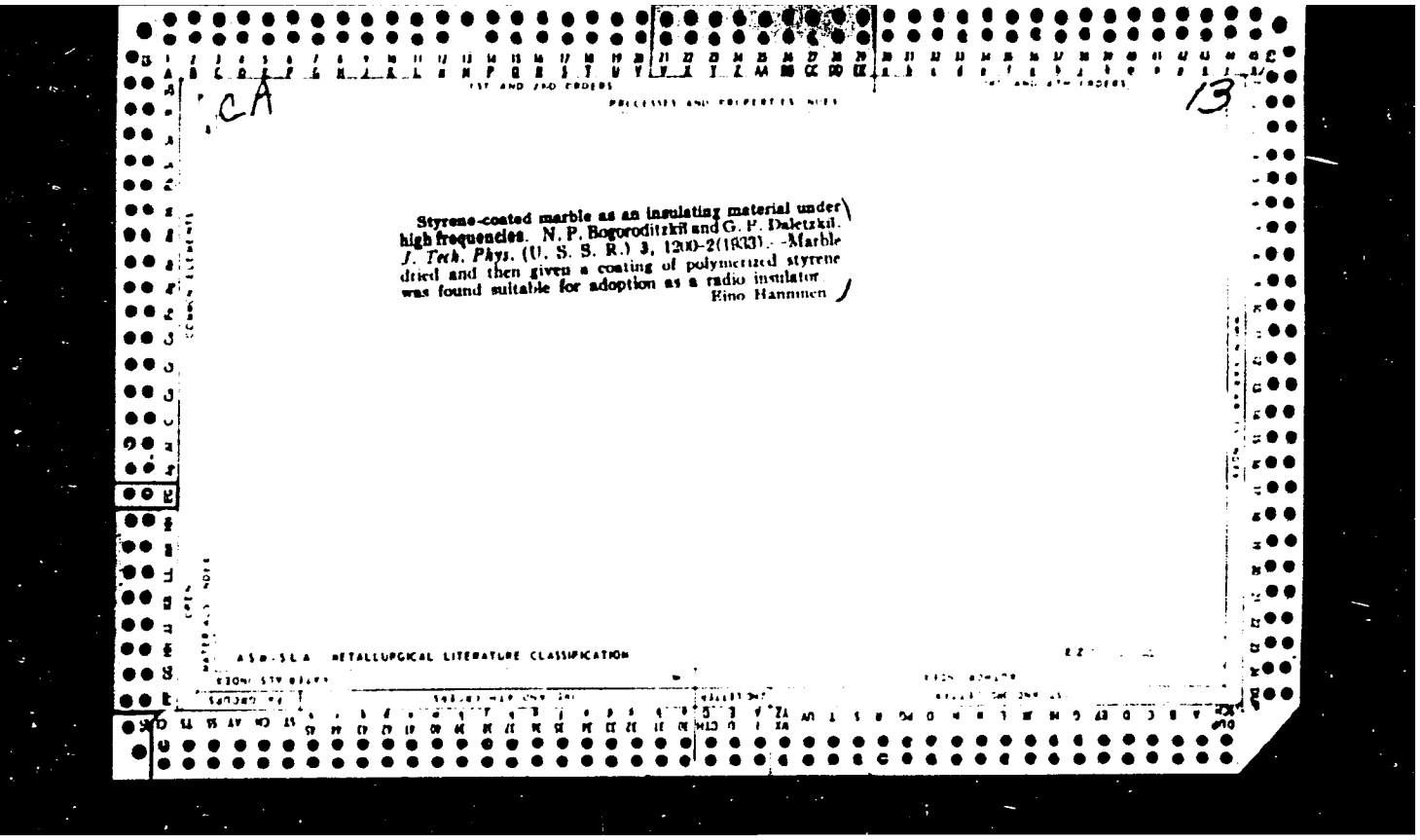
DALETSKAYA, T.V.

Role of B-indolylacetic acid in seed dormancy. Dokl. AN SSSR 156 no. 3:708-711 '64. (MIRA 17:5)

1. Predstavleno akademikom A.L.Kursanovym.



Thin varnish layers and their use in insulation by means of thin mica. G. F. Dalzhar.—*J. Tech. Phys.* (U. S. S. R.) I, 203-8(1931).—Data are given for nitro- and acetyl-cellulose varnishes. Styrene is a good insulator. A potential gradient of 4.10⁶ v./cm. is obtainable by suitable combination. F. H. Rathmann

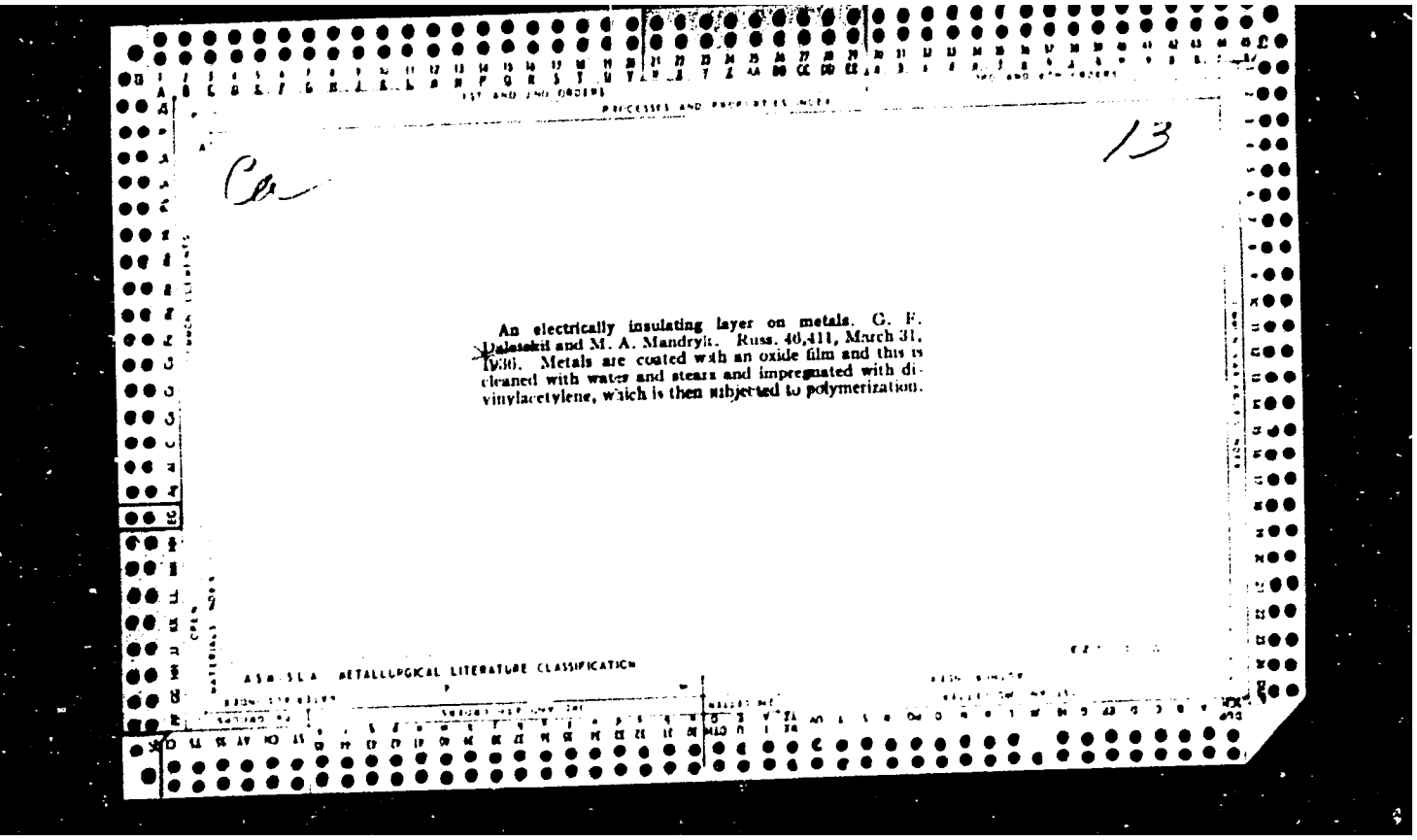


CA

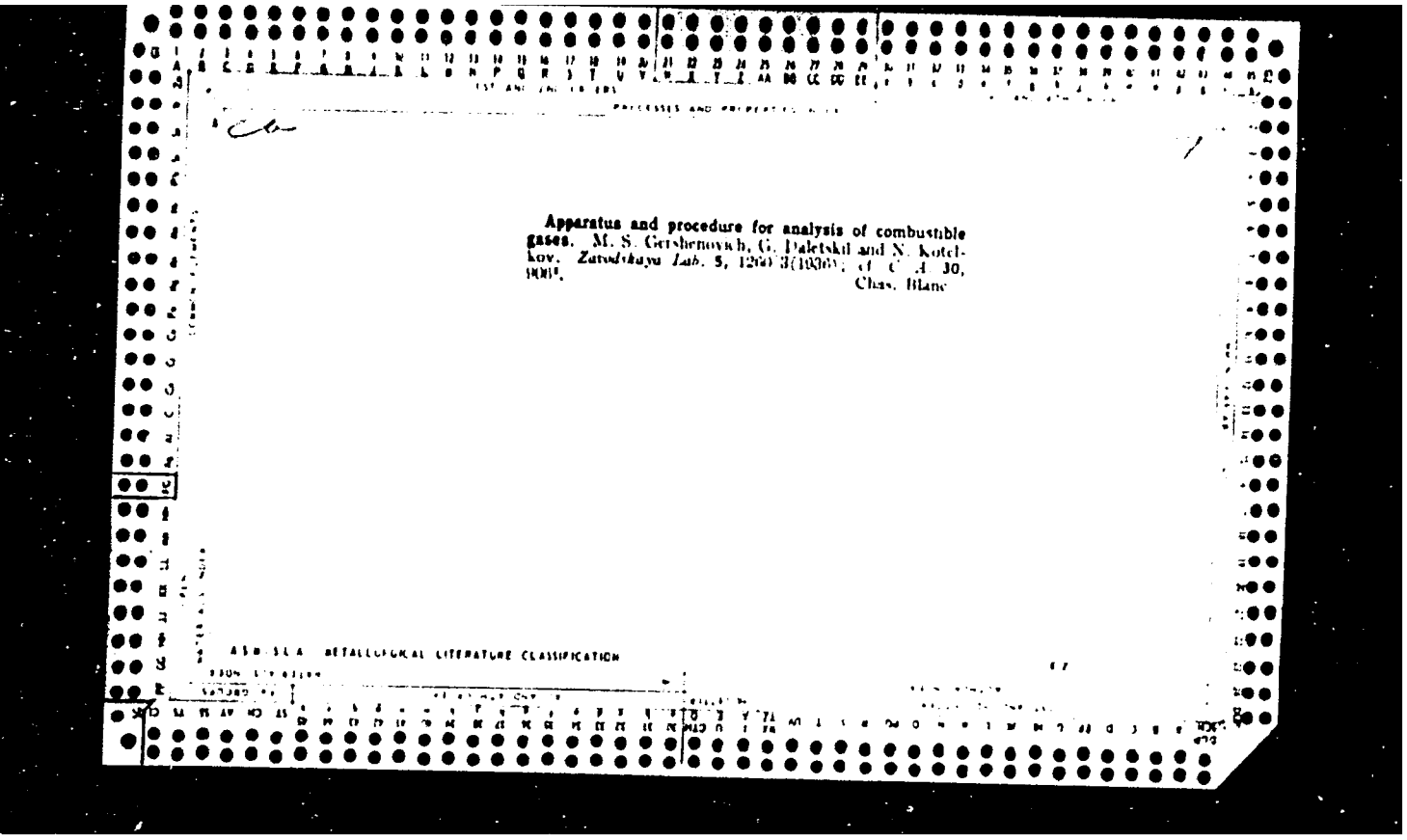
13

Styrene-coated marble as an insulating material under high frequencies. N. P. Bogoroditzkiĭ and G. F. Daletzkiĭ. *J. Tech. Phys.* (U. S. S. R.) 3, 1200-2(1933).—Marble dried and then given a coating of polymerized styrene was found suitable for adoption as a radio insulator.
Eino Hannunen

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

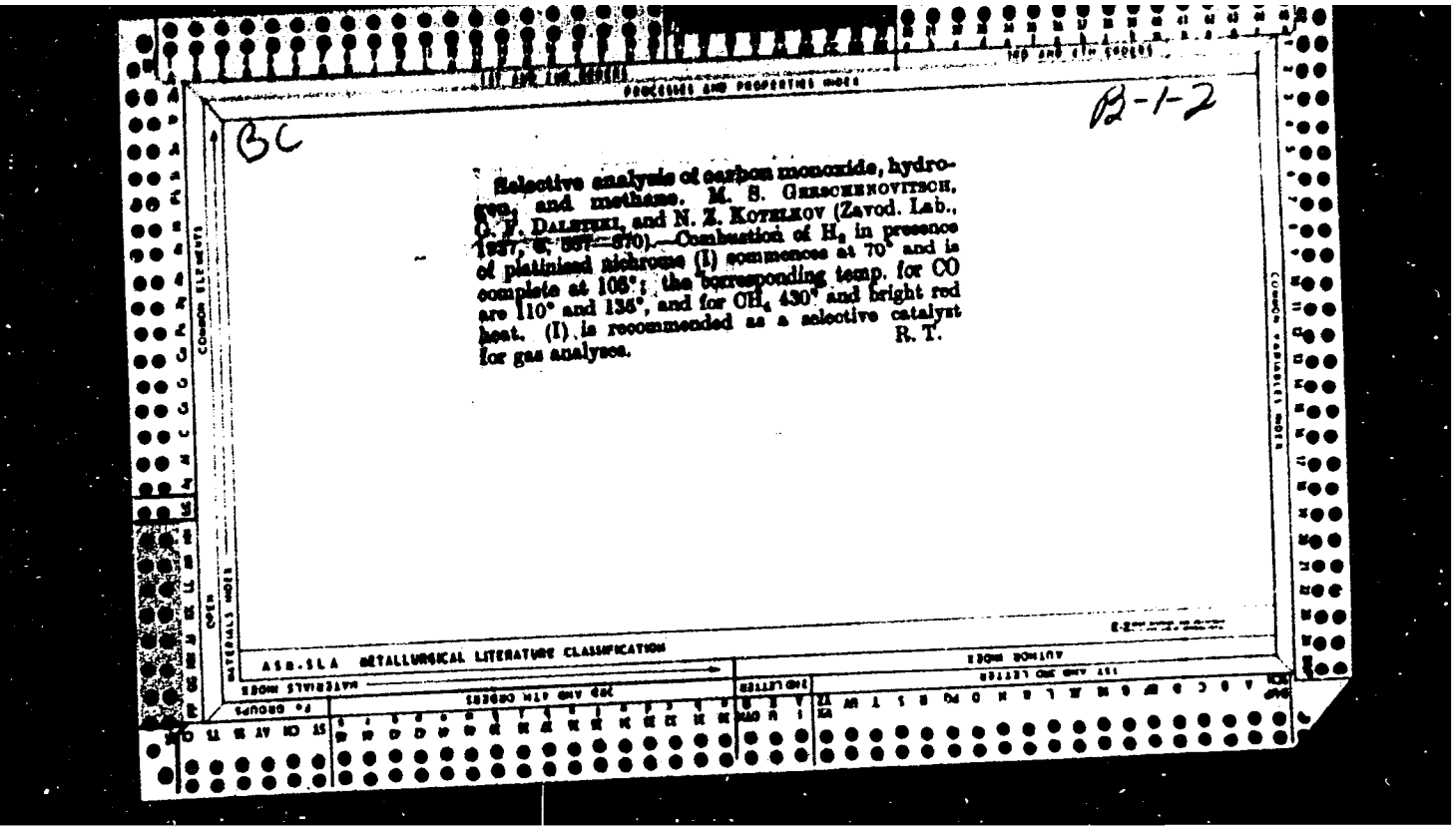


An electrically insulating layer on metals. G. F. Dalaiskii and M. A. Mandrykt. Russ. 40,411, March 31, 1936. Metals are coated with an oxide film and this is cleaned with water and steam and impregnated with divinylacetylene, which is then subjected to polymerization.



Apparatus and procedure for analysis of combustible gases. M. S. Gershenovich, G. Daletskii and N. Kotelkov. *Zavodskaya Lab.* 5, 1260-3(1936); cf. *C. A.* 30, 8001[9].
Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



B2-1-2

BC

Selective analysis of carbon monoxide, hydrogen, and methane. M. S. GERSCHENOVITSCH, O. V. DALENTSKI, and N. Z. KOTELKOV (Zavod. Lab., 1937, 6, 867—870).—Combustion of H_2 in presence of platinised nichrome (I) commences at 70° and is complete at 105°; the corresponding temp. for CO are 110° and 136°, and for CH_4 430° and bright red heat. (I) is recommended as a selective catalyst for gas analyses. R. T.

S. ? C. L.

Polymers from Hydrocarbons

Anisotropy phenomena in polystyrene with oriented distribution of particles. G. I. Dalevsky (Compt. Rend. Acad. Sci. U.S.S.R., 1946, 54, 311-3; Chem. Abs., 1947, 41, 853a). In English. Oriented layers of polystyrene were obtained up to 3 mm. thick from solution, and up to 12 mm. thick by polymerisation of monostyrene. Gentle polishing of these oriented films caused them to acquire a positive charge, whereas strong polishing restored the negative charge customarily present in bulk polystyrene. These oriented films were optically anisotropic, whereas bulk polystyrene is optically isotropic. They probably consist of layers with identical groups toward each other (phenyl to phenyl and methylene to methylene). Mechanical treatment causes removal of material at the methylene layers, which have a smaller bond energy than the phenyl groups. These oriented films, when stretched acquire a 3-dimensional orientation and resemble a crystal of the rhombic system. 882123.3123

Physics Inst., Saratov State Univ. im N. G. Chernyshevskiy

DALETSKII, G.

A new class of inhibitors. Polymerization retarders. G. Daletskii (State Univ., Saratov). *J. Phys. Chem.* (U.S.S.R.) 21, 231–2(1947)(in Russian).—Cu, Ag, Au, and their compds. retard polymerization of styrene, especially at low temps. The viscosity of styrene increased at 50° 155,000 times within 6 days without Cu, and 3.6 times within 20 days in the presence of 0.01% of Cu (as a salt). J. J. Bikerman

BALETSKII, S. F.

Baletskiy, S. F. "The effect of metals in the colloidal and ionic state in the process of polymerization," Uchen. zapiski (Saratov. gos. un-t im. Chernyshevskogo), Vol. XXIII, vyp. khim., 1949, p. 116-45, - Bibliog: p. 144-45

SO: U-4631, 29 Oct 53 (Letopis 'Zhurnal'nykh Statey, No. 34, 1949)

DAL'STSKIY, G. F.

Dalstdkiy, G. F. "Optical and electrical properties of styrene and metacrylate polymers," Uchen. zapiski (Saratov. gos. un-t im. Chernyshevskogo), Vol. XXI, vyp. khim. 1949, p. 161-65

SO: U-4934, 29 October 1953, (Letopis 'Zhurnal'nykh Statey, no. 16, 1949)

DALETSKIY, G. F.

Daletskiy, G. F. "The catalytic reation of c rtain acids and their salts on the process of polymerization of methyl metacrylate," Uchen. zapiski (Sarat. gos. un-t im. Chernyshevskogo), Vol. XXI, vyp. khim., 1949, p, 166-71

SO: U-4934, 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 18, 1949)

2

Optical anisotropy in styrene and in methyl methacrylate polymers with oriented disposition of the particles. G. P. Daletskii (Saratov State Univ.). *Doklady Akad. Nauk S.S.S.R.* 74, 685-6(1950).—Polymers with an oriented lamellar structure were produced by thermal polymerization of the monomer on a Hg surface. The metal orients the Ph groups of the polystyrene towards itself, and the CH_3 groups in the opposite direction. Subsequent layers of the polymers are influenced by the preceding layer, resulting in pairs (doublets) of layers with identical groups of neighboring layers pointing towards each other. "Quasicrystals" produced in this way from Me methacrylate proved to be isotropic in the direction perpendicular to the surface of the Hg, and anisotropic along the plane of the Hg. Blocks 24-30 mm. thick were anisotropic over all their thickness, with $n_y - n_x$ varying from 3.0 to 3.5 $\times 10^{-4}$. Another quasicryst. structure was produced by thermal polymerization (20 days at 56°) of styrene in a ring of Ni sheet held in the middle of the height of a glass tube. Slices of the polymer obtained showed, as expected, an axis of anisotropy coinciding with the axis of the cylindrical Ni ring, and no anisotropy in the direction perpendicular to the periphery of the ring. No anisotropy was found in the polymer formed in the glass tube outside the Ni ring. In the anisotropic portion of the polymer, formed within the Ni ring, $n_y - n_x$ increased from about 7.2×10^{-4} at the periphery to a max. of about 27×10^{-4} approx. half-way along the radius, and fell to about 17×10^{-4} in the center. The cylindrical axially anisotropic polymers show generally a lower degree of orientation than the plane-oriented polymers.

N. Thon

33952
S/665/61/000/003/016/018
E194/E420

26.1512

AUTHORS: Daletskiy, G.S., Shavrin, N.V.

TITLE: The construction and electrical characteristics of batteries of silicon photo-converters

SOURCE: Akademiya nauk SSSR. Energeticheskiy institut Teploenergetika. no.3, 1961. Poluprovodnikovyye preobrazovateli solnechnoy energii. 137-151

TEXT: Batteries of silicon photo-converters are made up in many different forms according to application. Single crystal silicon is produced as round rods, it is expensive and so it is cheapest to make the individual cells circular, however when it is important to save space in the generator the cells are made rectangular, even though this involves some loss of silicon. The diameter of a circular photo-converter ranges from 22 to 45 mm, depending upon the original size of the single crystal. In sunlight of 100 mW/cm^2 with an element temperature of 30°C, the electrical characteristics are as follows: efficiency at maximum output 7 to 9%, maximum output 7 to 9 mW/cm^2, voltage at maximum output 0.38 to 0.40 V; current at maximum

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The construction and electrical ...

output 20 to 24 mA/cm^2. Rectangular elements are made up in the sizes shown in Table 1. These photo converters are made up into sections of eight in series which gives sufficient voltage to charge an accumulator and the sections are connected in parallel to form batteries. Various methods of mounting the sections and batteries are described. The batteries are mounted on tripods and gimbals according to application. For example, a portable battery for supplying portable radio equipment has an overall size of 250 x 250 x 20 mm, weight of 900 g, output voltage of 9 V output current of 450 mA in a radiation of 100 mW/cm^2 at an element temperature of 30°C. As it is necessary to orient the batteries towards the sun every half hour or so, the authors have designed and tested batteries which automatically follow the sun. The use of reflectors to increase the output of batteries is discussed and the theory of a reflector in the form of a truncated cone is briefly explained. It is shown that the optimum angle between the incident rays and the reflector surface is 30°. Tests were made of the increase in output of a battery of 40 photo-converters as function of the area of metal reflector

The construction and electrical ...

and the battery output is found to increase almost in direct proportion to the area of the reflector. Thus in one case using four reflectors each equal in surface to the area of the solar battery the output of the battery was increased by a factor of 1.9 by using the reflectors. When reflectors are used the short circuit current of the battery is increased much more than the power output. With quite simple reflectors it is possible to increase the specific output of a battery by a factor of up to 2.2 and to obtain a power of 1.0 to 1.6 W from an area of 1 dm^2 with an illumination of 100 mW/cm^2. An experimental battery has been made up with four reflectors, the useful area of the photo converters is about 4.5 dm^2, the output power is 6.5 W with incident radiation of 100 W/cm^2 and an element temperature of 30 C, corresponding to a specific output of 1.44 W/dm^2. There are 16 figures and 4 tables.

Card 3/4

S/166/62/000/001/006/009
B125/B104

26.1512

AUTHORS: Daletskiy, G. S., Knigin, P. I., Landsman, A. P., Plyushch, O. P., Shavrin, N. V., Yagudayev, M. D.

TITLE: Effect of solar energy concentration upon the operational properties of (silicon) solar photopiles

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 1, 1962, 49-52

TEXT: A joint investigation with the VNIIT was conducted by the authors in Tashkent from April to June, 1961 on the output power of silicon photoconverters of luminous flux. The aim is to collect data for the construction of a solar power station. The Sun's light was concentrated through an ordinary parabolic cylindrical mirror onto the 280-cm^2 water-cooled silicon photopile constructed at the above Institute. The angle of incidence of the Sun's rays was of no practical significance for the present purpose. The maximum yield function of the piles rose, although somewhat more slowly, even at photocurrents of 6600-7700 watts/m^2, at surface temperatures from 10°C to 70°C and air temperatures from 8 to 15°C (i.e.,

Card 1/2

Effect of solar energy ...

under practical operational conditions). This also holds in the case of considerable temperature differences between the pile and the surrounding medium. It probably takes higher luminous fluxes for saturation to be brought about. The maximum output power was 4-4.2 watts. At an increase of the luminous flux from 0 to 7000 kcal/m·hour, the pile emf rose by only 5-6%. Since pile heating by luminous flux produces a linear power reduction, it is necessary to develop efficient cooling systems. The reciprocal exchange of photoconverters in the pile would also serve to check this power drop. Since the temperature difference between pile and air can attain rather high values in the extremely hot summers of Soviet Central Asia, the power drop can be considerable. The yield function of solar power stations could be augmented to the eight to tenfold by improving the cooling system, by providing uniform illumination all over the pile surface, and by ensuring optimum commutation conditions. There are 6 figures and 1 Soviet reference.

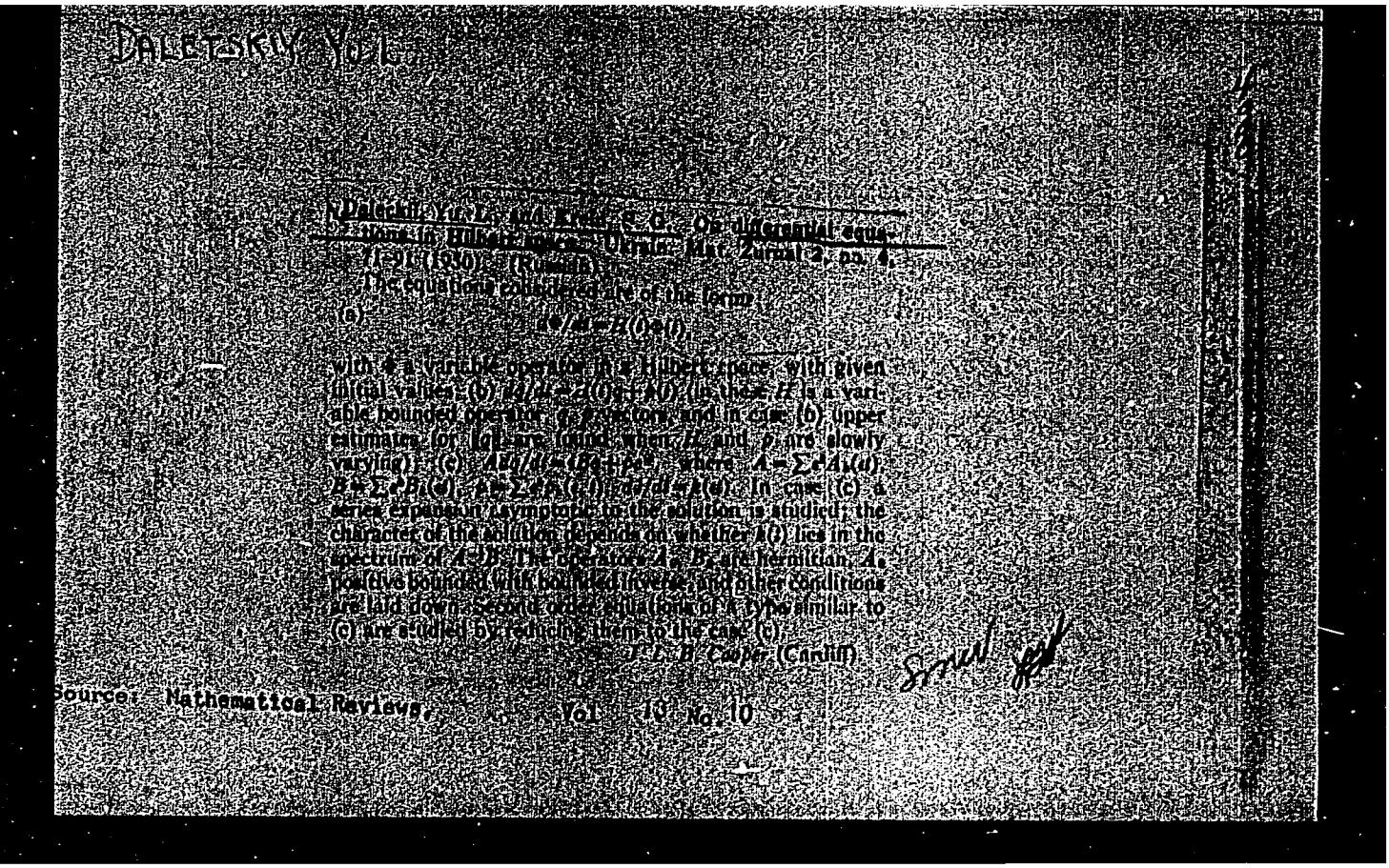
ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR (Physicotechnical Institute of the AS Uzbekskaya SSR). Vsesoyuznyy n.-i. institut istochnikov toka (All-Union Scientific Research Institute of Current Sources)

SUBMITTED: August 4, 1961

Card 2/2

DOLGOV, V.M., inzh.; DALETSKIY, G.S., inzh.; ZAYTSEVA, A.K., inzh.

Use of photoelectric converters for measuring the surface of plane figures with random profiles. Elektrotekhnika 34 no.9: 66-68 S '63. (MIRA 16:11)



DALETSKIĬ, Yu. L.

Daletskiĭ, Yu. L. and Krein, S. G. On differential equations in Hilbert space. Ukrain. Mat. Zurnal 2, no. 1, 39–80 (1950). (Russian)

The equations considered are of the form

(a) $$du/dt = B(t)u(t),$$

with u a variable operator in a Hilbert space, with given initial values; (b) $d^2u/dt^2 = A(t)u + bu$ (in this A is a variable bounded operator, u a vector, and in case (b) upper estimates for $\|u\|$ are found when A and b are slowly varying); (c) $dU/dt = (A + \epsilon B)U$, where $A = \sum \epsilon^k A_k(t)$, $B = \sum \epsilon^k B_k(t)$, $A = \sum \epsilon^k A_k(t)$, $d^2u/dt^2 = A(t)u$. In case (c) a series expansion asymptotic to the solution is studied; the character of the solution depends on whether $\lambda(t)$ lies in the spectrum of $A + \epsilon B$. The operators A_k, B_k are hermitian, A_0 positive bounded with bounded inverse, and other conditions are laid down. Second order equations of type (b) are similar to (c) and are studied by reducing them to the case (c).

J. L. B. Cooper (Cardiff)

Source: Mathematical Reviews, Vol. 13, No. 10

DALETS'KIY, Yu.L.; KREYN, S.G.

Some properties of operators depending on the parameter. Dop. AN URSR no.6:433-436 '50. (MLRA 9:8)

1. Institut matematiki Akademii nauk Ukrains'koi RSR. Predstaviv diysniy chlen Akademii nauk Ukrains'koi RSR B.V. Gnedenko.
(Operators (Mathematics)) (Spaces, Generalized)

DALETS'KIY, Yu.L.

DALETS'KIY, Yu.L.; ISHLINS'KYY, O.Yu., diysnyy chlen.

Evaluation of the residual member in Taylor's formula for functions of Hermitian operators. Dop.AN URSR no.4:234-238 '51. (MLRA 6:9)

1. Akademiya nauk Ukrayins'koyi RSR (for Ishlins'kyy). 2. Instytut matematyky Akademiyi nauk Ukrayins'koyi RSR (for Dalets'kyy). (Series, Taylor's)

DALETSKIY, Yu. L.

Daleckiĭ, Yu. L. and Krein, S. G. Formulas of differentiation according to a parameter of functions of Hermitian operators. Doklady Akad. Nauk SSSR (N.S.) 76, 13–16 (1951). (Russian)

For each value of τ in (a, b) let $H(\tau)$ be a bounded Hermitian operator in Hilbert space. It is stated that if $f(\lambda)$ is a function of the real variable λ with an absolutely continuous derivative $df/d\lambda$ in some neighbourhood of the spectrum of $H(\tau_0)$, and $E_\lambda(\tau)$ is the spectral set of $H(\tau)$, then

$$\frac{df(H(\tau_0))}{d\tau} = \int\int \frac{f(\lambda)-f(\mu)}{\lambda-\mu} dE_\lambda(\tau_0)\frac{dH(\tau_0)}{d\tau}dE_\mu(\tau_0),$$

where the integral is interpreted as an abstract repeated Stieltjes integral. Analogous formulae are given for derivatives of the form $\partial f(H(\tau), \tau)/\partial\tau$ and for higher order derivatives of $f(H(\tau))$. The latter are applied to give the expansion of $f(H+\varepsilon H_1)$ in powers of ε. Further applications are to solution of the equation $H(\tau)x(\tau)=g(\tau)$ for the unknown element $x(\tau)$ of the space, and of the equation $H(\tau)X(\tau)-X(\tau)H(\tau)=F(\tau)$ for the unknown operator $X(\tau)$.

J. L. B. Cooper (Cardiff).

Source: Mathematical Reviews, Vol 12 No. 8

(1)

Daleckiĭ, Yu. L. On the asymptotic solution of a vector differential equation. Doklady Akad. Nauk SSSR (N.S.) 92, 881–884 (1953). (Russian)

The equation discussed is

$$A(\tau, \epsilon)\frac{dq(t)}{dt} = iB(\tau, \epsilon)q(t) + p(\tau, \epsilon)e^{i\theta(t,\epsilon)},$$

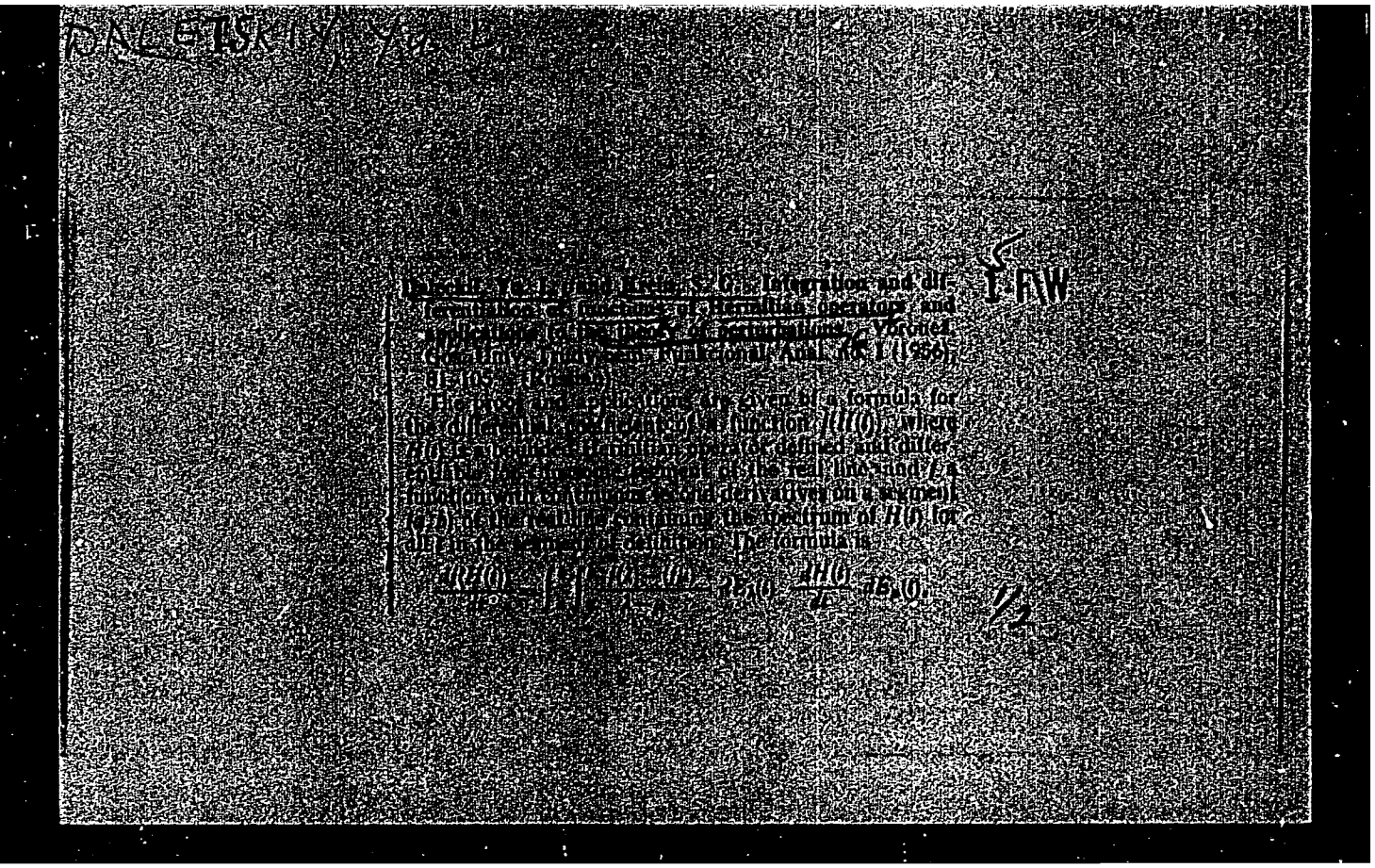
where $\tau = \epsilon t$, p and q are vectors in Hilbert Space, and A, B are linear operators in that space. The results do not admit of a short resumé. *J. L. B. Cooper* (Cardiff).

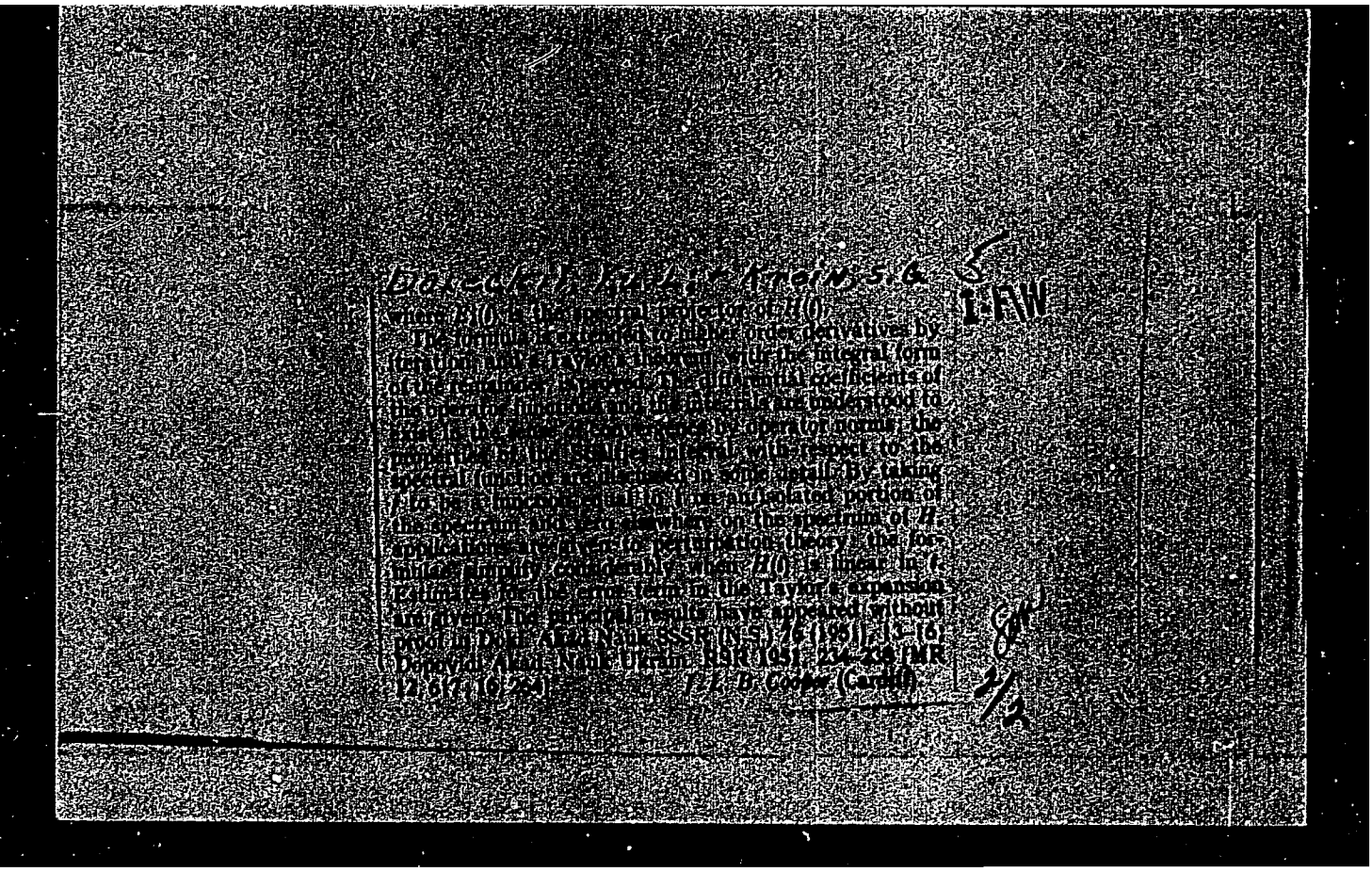
10-28-54 LL

DALETSKIY, YU. L.

Dissertation: "An Investigation of the Differential Properties of Functions on Linear Operators Depending on a Parameter." Cand Phys-Math Sci, Kiev State U, Kiev, 1954. (Referativnyy Zhurnal--Matematika, Moscow, Aug 54)

SO: SUM 393, 28 Feb 1955





TS

SUBJECT USSR/MATHEMATICS/Theory of functions CARD 1/1 PG - 753
AUTHOR DALEZKIJ Ju.L.
TITLE The integration and differentiation of functions of Hermitean operators which depend on one parameter.
PERIODICAL Uspechi mat.Nauk 12, 1, 182-186 (1957)
reviewed 5/1957

Joining an earlier paper (Dalezkij and Krejn, Doklady Akad.Nauk 76, no.1 (1951)) for several cases the author gives formulas for the derivatives of the functions of a Hermitean operator which depends on one parameter, estimations of the norm of the derivative and a method for the series development of operators of the considered kind which depend linearly on the parameter. The formulas can be applied for investigations of convex and monotone matrix functions and in quantum electrodynamics.

DALETSKIY, Yu.L.

Continuous rotation of subspaces in a Banach space. Usp.mat.nauk 12 no.3:147-154 My-Je '57. (MIRA 10:10)
(Operators (Mathematics)) (Spaces, Generalized)

16(1)

AUTHOR: Daletskiy, Yu.L. SOV/42-14-1-10/27

TITLE: On a Linear Equation With Respect to the Elements of a Normalized Ring(Ob odnom lineynom uravnenii otnositel'no elementov normirovannogo kol'tsa)

PERIODICAL: Uspekhi matematicheskikh nauk, 1959, Vol 14, Nr 1, pp 165-168(USSR)

ABSTRACT: The author gives a result announced by him already some times ago [Ref 3] (earlier obtained by Kreyn) on the integral representation of the solutions of linear operator equations, and a generalization. Partly the results overlap with those of Rosenblum [Ref 4].
There are 4 references, 2 of which are Soviet, and 2 American.

SUBMITTED: June 5, 1957

Card 1/1

85949
S/020/60/134/005/C25/035XX
C111/C222

16,4600

AUTHOR: Daletskiy, Yu.L.

TITLE: Representability of Solutions to Operator Equations in the Form of Continuous Integrals

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol.134, No.5, pp.1013-1016

TEXT: Let $\mathfrak{H}$ be a Hilbert space, T be a selfadjoint positive definite operator the domain of definition D of which is the space of fundamental elements (cf.(Ref.1,2)) which is obtained from the linear set D by the introduction of the scalar product $(x,y)^* = (Tx,Ty)$. Let A be a selfadjoint positive definite operator $\mathfrak{H}$. Let the domain of definition D_{A^m} of A^m be contained in D for an $m>0$, where for $x \in D_{A^m}$ it holds

(7) $\|A^m x\| \geqslant M \|Tx\|$.

Let B be a selfadjoint operator in $\mathfrak{H}$ with the decomposition of the unity E_λ, the generalized eigenelements γ_λ and the spectral function $\sigma(\lambda)$. Let $C = V(B) = \int_{-\infty}^{\infty} V(\lambda) dE_\lambda$, where $V(\lambda)$ is a function. Let $\|C\| < \infty$, $\|A^m C A^{-m}\| < \infty$.

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85949
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C111/C222

Representability of Solutions to Operator Equations in the Form of Continuous Integrals

Under certain further conditions it is shown that the so-called "fundamental solution generated by B" $x_\alpha(t) = e^{-(A-C)t}\xi_\alpha$ of the differential equation

(9') $\frac{dx}{dt} = -Ax+V(B)x$

is representable in the form of a continuous integral:

$$x_\alpha(t) = \int_{-\infty}^{\infty}\left[\int_{M(\alpha,\nu)} \exp\left[\int_0^t V(\lambda(\tau))d\tau\right] d\mu_{A,B}\right]\xi_\nu \; d\sigma(\nu) .$$

The peculiarly defined continuous integral $\int_{M(\alpha,\nu)}$ is a certain generalized function and is identical with the classical continuous integral with respect to the Wiener measure only in exceptional cases.

The author mentions M.A.Krasnosel'skiy, S.G.Kreyn and P.Ye.Sobolevskiy. He thanks S.G.Kreyn and G.I.Kats for the theme and discussions.

Card 2/3

85949

S/020/60/134/005/025/C35XX
C111/C222

Representability of Solutions to Operator Equations in the Form of Continuous Integrals

At the Fourth All-Union Congress on Functional Analysis in Odessa, 1958, the author reported about the contents of the paper.
There are 8 references: 5 Soviet, 2 American and 1 Japanese.

[Abstracter's note: A complete translation of the article is recommended since the description of the numerous new notations and constructions would be equivalent to a translation].

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnical Institute)

PRESENTED: May 6, 1960, by A.N.Kolmogorov, Academician.

SUBMITTED: December 14, 1960

Card 3/3

26456
S/140/61/000/003/002/009
C111/C333

16.4600

AUTHOR: Daletskiy, Yu. L.

TITLE: Fundamental solutions of an operator equation and continuous integrals

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, no. 3, 1961, 27-48

TEXT: A representation by so-called continuous integrals is given for the fundamental solution of the equation

$$\frac{dx}{dt} = A(t)x + C(t)\,x,$$

where x is vector of a Hilbert space. The results were announced in the paper of the author (Ref.22: O predstavimosti resheniy operatornykh uravneniy v vide kontinual'nykh integralov [On the representability of the solutions of operator equations by continuous integrals], DAN SSSR, 134, No. 5, 1013-1016, 1960).

Let T be a self-adjoint positive definite operator, the domain of definition D of which is dense in the Hilbert space $\mathfrak{H}$; let T^{-1} be

Fundamental solutions of an . . .

bounded. Assume that the norm $\| x \|_*$ is generated by the scalar product $(x,y)_* = (T^{-1}x, T^{-1}y)$. The space N of the generalized elements is assumed to arise from $\mathfrak{H}$ by completion relative to this norm. T possesses a closure $\tilde{T}$ in N, where $\tilde{T}^{-1}$ is bounded. If the norm $\| x \|^*$ is introduced in the linear set D with the aid of the scalar product $(x,y)^* = (Tx,Ty)$ then D becomes a complete Hilbert space. The operator $Q = \tilde{T}T = \tilde{T}^2$ gives a one-to-one mapping from D onto N, where for $x \in D$, $y \in N$ it holds $\| y \|_* = \| x \|^*$. Every generalized element ξ generates a linear continuous functional in D; $\xi(x) = (x, Q^{-1}\xi)^* = (Tx, TQ^{-1}\xi) = (Tx, \tilde{T}^{-1}\xi)$ and conversely. Write (x,ξ) instead of $\xi(x)$, where $(\xi,x) = \overline{(x,\xi)}$. The operator T^{-1} is assumed to have a finite absolute norm: $\| T^{-1} \|_H < \infty$. Let B be a self-adjoint operator in $\mathfrak{H}$, E_λ its partition of the unit and $\sigma(\lambda)$ the spectral measure. Let $\Delta = [\lambda_1, \lambda_2)$ denote an arbitrary finite interval, $E(\Delta) = E_{\lambda_2} - E_{\lambda_1}$.

Card 2/8

Fundamental solutions of an . . .

Condition

(β) : $\| E(\Delta)T^{-1} \|_H < \infty$.

The differential equation

$$\frac{dx}{dt} = - Ax \qquad (2.1)$$

is considered, where A is a self-adjoint positive definite operator. A number m is assumed to exist such that the domain of definition D_{A^m} of A^m is contained in D, and the condition

$$\| A^m x \| \geqslant M \| Tx \| \qquad (\chi_m)$$

is assumed to hold for $x \in D_{A^m}$. The author considers

$$\frac{dx}{dt} = -Ax + C \qquad (2.4)$$

here

$$M = \max \left\{ \| C \|, \| A^m C A^{-m} \|, \| A^m C^* A^{-m} \| \right\} < \infty \qquad (\alpha_m)$$

Card 3/8

Fundamental solutions of an ...

is assumed to be satisfied.

Let M be the space of the bounded functions $\lambda(t)$, $0 \leq t \leq 1$. Let $M(\lambda_0, \nu)$ be the subspace of M consisting of those $\lambda(t)$ which satisfy the conditions $\lambda(0) = \lambda_0$, $\lambda(1) = \nu$. Let q be the decomposition of the interval $[0,1)$ by the points $0 < t_1 < t_2 < \ldots < t_n < 1$. Let R be an ordered system of finite or infinite intervals $[a_i, b_i)$, $(i = 1,2,\ldots,n)$. Let $Q(q,R)$ denote the set of those $\lambda(t) \in M(\lambda_0, \nu)$ for which $a_i \leq \lambda(t_i) < b_i$, $(i = 1,2,\ldots,n)$. Assume that A and B satisfy the conditions (β), (γ_m). Let

$$\mu_{A,B}\, Q(q,R) = \int_{a_n}^{b_n} \ldots \int_{a_1}^{b_1} (e^{-At_1} \xi_{\lambda_0}, \xi_{\lambda_1})(e^{-A(t_2-t_1)} \xi_{\lambda_1}, \xi_{\lambda_2}) \ldots$$

$$\ldots (e^{-A(1-t_n)} \xi_{\lambda_n}, \xi_{\nu})\, d\sigma(\lambda_1) \ldots d\sigma(\lambda_n) .$$

Card 4/8

Fundamental solutions of an . . .

The continuous integral is constructed as follows: Let $\phi[\lambda(t)]$ be a continuous functional on $M(\lambda_0, \nu)$. For the decomposition q of $[0,1]$ by $0 < t_1 < \ldots < t_n < 1$ let the step function be defined:

$\lambda_q(t) = \nu$ for $t > t_n$; $\lambda_q(t) = \lambda(t_k)$ for $t_{k-1} < t \leq t_k$ $(k=1,\ldots,n)$.

The expression $\phi[\lambda_q(t)]$ is a function of the $\lambda_k = \lambda(t_k)$:

$$\phi[\lambda_q(t)] = \phi_q(\lambda_1, \lambda_2, \ldots, \lambda_n) .$$

Let denote $I_q(\phi) = \int_{R_n} \phi_q(\lambda_1, \ldots, \lambda_n)\, \mu_{A,B}\, Q(q, d\lambda)$. Let $n \to \infty$ so that the diameter d(q) of the decomposition q tends to zero. If there exists a limit value $\lim_{d(q)\to 0} I_q(\phi) = I(\phi)$ independent of q, then this limit is denoted as the continuous integral, in symbols:

$$I(\phi) = \int_{M(\lambda_0,\nu)} \phi[\lambda(t)]\, d\mu_{A,B}$$

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Let $\xi_\lambda \in N$ be generalized eigen elements of B. Let the spectrum of B be simple.

Theorem 2: If the operators A,B and C = V(B) satisfy the conditions (β), (γ_m), (δ_m), then the fundamental solutions

$$x_{\lambda_0}(t) = e^{-(A-C)t}\xi_{\lambda_0}$$

of the differential equation

$$\frac{dx}{dt} = -Ax + V(B)x$$

is representable in the form

$$x_{\lambda_0}(t) = \int_{-\infty}^{\infty}\left[\int_{M(\lambda_0,\nu)} e^{\int_0^t V(\lambda(\tau))\,d\tau} d\mu_{A,B}\right]\xi_\nu\, d\sigma(\nu) \qquad (4.6)$$

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Fundamental solutions of an . . .

Especially, there exists the continuous integral of the functional

$$e^{\int_0^t V(\lambda(\tau))\, d\tau} .$$

Finally, the author considers equations of Schrödinger type, generalizations to the case of functions of several operators, operators B with multiple spectrum, operators A = A(t), C = C(t). Results of G. J. Kats (Ref. 1: O razlozhenii po sobstvennym funktsiyam samosopryazhennykh operatorov [On the expansion in terms of eigenfunctions of self-adjoint operators], DAN SSSR, 119, No. 1, 19-22, 1958) are essentially used.

The author mentions: S. G. Kreyn, P. Ye. Sobolevskiy, S. L. Sobolev, M. A. Krasnosel'skiy, A. G. Kostyuchenko, O. A. Ladyzhenskaya, O. V. Guseva, S. D. Eydel'man.

There are 15 Soviet-bloc and 7 non-Soviet-bloc references. The three references to English-language publications read as follows:

26456
S/140/61/000/003/002/009
C111/C333

Fundamental solutions of an . . .

P. D. Lax, On Cauchy's problem for hyperbolic equations and the differentiability of solutions of elliptic equations. Comm. Pure Appl. Math., v. 8, 1955. (Russk. perevod sm. Sb. perevodov Matematika, 1:1, 1957); R. P. Feynman, Space-time approach to non-relativistia quantum mechanics. Rev. mod. Phys, t. 20, No. 2, p. 367-387, 1948; M. Kac, On distributions of certain Wiener functionals. Trans. Amer. Math. Soc., 65, No. 1, p. 1-13, 1949.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiev Polytechnic Institute)

SUBMITTED: February 14, 1959

Card 8/8

20732

S/020/61/137/002/003/020
C111/C222

11.3400 16.4600

AUTHOR: Daletskiy, Yu.L.

TITLE: Continual integrals connected with some differential equations, individual and simultaneous

PERIODICAL: Akademii nauk SSSR. Doklady, vol.137, no.2, 1961, 268-271

TEXT: The method described by the author (Ref.1: DAN,134,no.5 (1960)) is extended to further classes of differential equations. Let $M(x_0,x_1)$ be the space of the bounded vector functions $x(t)$, $0 \leq t \leq 1$ with the values of R_ν, where $x(0) = x_0$, $x(1) = x_1$. Let q: $0 = t_0 < t_1 < \ldots < t_n < t_{n+1} = 1$; R^q_ν -- space of the $(x_1,x_2,\ldots,x_n)$, where $x_k \in R_\nu$. Let $Q(q,R)$ -- cylindrical set of $M(x_0,x_1)$ generated by q and the Borel set R of R^q_ν. On $Q(q,R)$, let be given a function $\mu(q,R)$ the values of which are m-dimensional matrices and which represents an abstract measure of bounded variation in every R^q_ν. Such a function $\mu_s(q,R)$ is constructed as it is usual if a family of matrices $S(t_1,t_2;x_1,x_2)$ $(t_1<t_2)$ is given which for a certain measure $\sigma(x)$ in R_ν satisfies

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$$\int_{R_y} S(t_2,t_3;x_2,x_3)S(t_1,t_2;x_1,x_2)d\mathfrak{C}(x_2) = S(t_1,t_3;x_1,x_3). \quad (1)$$

If $\Phi(x(t))$ is a functional on $M(x_o,x_1)$ then let

$$I(\Phi) = \lim_q I_q(\Phi) = \lim_q \int_{R_y^q} \Phi(x_q(t))\mu(q,dx), \quad (2)$$

where $x_q(t) = x(t_{k-1})$ for $t_{k-1} < t \leq t_k$ $(k=1,\ldots,n+1)$ and $x_q(t) = x_1$ for $t = 1$. If $I(\Phi)$ has a sense then it is called a continual integral:

$$I(\Phi) = \int^{*}_{M(x_o,x_1)} \Phi(x(t)d\mu(x(t)). \quad (3)$$

If $\mu(q,R)$ is of bounded variation then the integral (3) is written without the asterik.

Theorem 1: If $S(t_1,t_2;x_1,x_2)$ is a real function continuous in x_1,x_2,

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and $\int_{R_\nu} S(t_1,t_2;x_1,x_2)d\sigma(x_2) \neq 1$, then $\mu_s(q,R)$ has a bounded variation

then and only then if the equal sign holds in the written formula and $S(t_1,t_2;x_1,x_2) \neq 0$.

Let $\mathfrak{H}$ be a Hilbert space, T -- selfadjoint operator, T^{-1} -- bounded, $D = D_T$ -- the space of fundamental elements constructed with respect to T, N -- corresponding space of generalized elements (cf. (Ref. 1)).

Let $U(\tau,t)$ be the solution of $dU/dt = A(t)U$, $U(\tau,\tau) = I$. Let $\|TA^{-P}\| < \infty$; $S_{jk}(t_1,t_2;x_1,x_2) = (U(t_1,t_2)\xi_{jx_1}, \xi_{kx_2})$, where ξ_{kx} $(k=1,\ldots,m;\ x \in R_\nu)$ is the complete family of the generalized elements, where $S = \|S_{jk}\|$ satisfies (1).

Theorem 2: Let $m = 1$ and $S(t_1,t_2;x_1,x_2) = (e^{A(t_2-t_1)}\xi_{x_1}, \xi_{x_2})$ $(A = \text{const})$.

Let exist a sequence $\varphi_n \in D$ so that $A\varphi_n \in D$, the sequences $f_n(x) = (f_n, \xi_x)$

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and $\psi_n(x) = (A\varphi_n, \xi_x)$ are uniformly bounded, and almost everywhere in R_ν with respect to $\sigma(x)$ it holds: $\varphi(n) \to 1$, $\psi_n(x) \to 0$ for $n \to \infty$. If then $\int_{R_\nu} |S(t_1, t_2; x_1, x_2)| \, d\sigma(x_2) < \infty$ for $t_2 > t_1$ then

$$\int_{R_\nu} S(t_1, t_2; x_1, x_2) \, d\sigma(x_2) = 1.$$

An analogous theorem shall be valid for $m \neq 1$ and $A \neq$ const.
Let A be a selfadjoint negative definite operator; let B be an operator so that A+B is a generating operator of the semigroup which transfers $\mathfrak{H}$ into D.
Theorem 3: The relation

$$e^{(A+B)t}\xi = \lim_{q} \sum_{k=1}^{n} e^{A(t_k - t_{k-1})} e^{B(t_k - t_{k-1})} \xi \quad (\xi \in N) \qquad (4)$$

is valid if for certain $\varkappa > 0$, $p_1 \geq p$ the conditions $\| A^p B A^{-p_1} \| < \infty$,

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$\|A^{p_1} e^{Bt} A^{-p_1}\| \leq e^{\gamma t}$, are satisfied.

Let $W(t;x,y) = \|(e^{(A+B)t}\xi_{ix}, \xi_{jy})\|_{i,j=1}^{m}$ be the fundamental matrix of the operator equation $d\psi/dt = (A+B)\psi$ which corresponds to the chosen system of generalized elements.
From (4) there follows the representation

$$W(1;x_0,x_1) = \lim_{q} \int_{R_\xi^c} \sum_{r=1}^{n+1} G(t_r - t_{r-1}; x_{r-1}, x_r)\, d\sigma(x_1) \ldots d\sigma(x_n), \quad (5)$$

where $G_{ij}(t;x,y) = (e^{At}e^{Bt}\xi_{ix}, \xi_{jy})$.

Some special cases are considered. Let $a_k(x,t)$ and $V(x,t)$ be certain matrices, $I(\psi)$ -- selfadjoint elliptic operator.
Theorem 4: In the system

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$$\frac{\partial \psi}{\partial t} = L(\psi) \cdot I + \sum_{k=1}^{\nu} a_k(x,t) \frac{\partial \psi}{\partial x^{(k)}} + V(x,t)\,\psi \qquad (10)$$

let $L(\psi) = a \Delta \psi$ and $a_k = U_k \Lambda_k U_k^{-1}$, where Λ_k are diagonal matrices. Then it holds

$$W(l;\ x_0,\ x_l) =$$

$$= \int_{M(x_0,\ x_l)}^{\cdot} \exp\left\{-\frac{1}{2a}\int_0^l \sum_{k=1}^{\nu} a_k dx^{(k)} - \frac{1}{4a}\int_0^l \sum_{k=1}^{\nu} (a_k^2 - U_k^1 U_k^{-1} a_k)\, dt - \int_0^l \operatorname{div} a\,(x)\, dt\right\} \times$$

$$\times\, d\mu\,(x\,(t)). \qquad (11)$$

Here for a functional $\Psi(x(t)) = \int_0^1 f(x,t)dx(t)$ it is put:

$$\Psi(x_q(t)) = \sum_{r=1}^{n+1} f(x_{r-1}, t_{r-1})(x_r - x_{r-1}). \qquad (12)$$

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Theorem 5 considers (10) in the scalar case.
There are 9 Soviet-bloc and 4 non-Soviet-bloc references. The three references to English-language publications read as follows: E.Hill, Funktsional'nyy analiz i polugruppy (Functional analysis and semigroups) I.L.1951. R.Feynman, Sborn.Voporosy prichinnosti v kvantovoy mekhanike (Collected volume on questions of causality in quantum mechanics) I.L. 1955. J.Doob, veroyatnostnyye protsessy (Probability processes) I.L. 1956.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnical Institute)

PRESENTED: September 23,1960, by A.N.Kolmogorov, Academician

SUBMITTED: September 14, 1960

Card 7/7

[illegible] : Cultivated Plants. Potatoes. [illegible]. Cucurbits.

[illegible] JOUR. : [illegible]-Biologiya, No.5, [illegible] No. 20252

AUTHOR : [illegible], J.; Vonauvicious, V.; Morkunas, V.

INST. : Lithuanian Inst.of Agriculture

TITLE : The Effect of Micronutrients on the Potato Harvest.

ORIG. PUB.: Soc. zemes ukis, 1957, No.5, [illegible]

ABSTRACT : At the experimental farm of the Lithuanian Institute of Agriculture a study was made in 1956 of the effect of copper and manganese fertilizers on the potato yield, the optimum doses of these and the application method of the fertilizers (regular and foliar dressing), putting industrial wastes to use. The optimum dose applied per hill was 6 kg/ha of $CuSO_4$ and 15 kg/ha of $MnSO_4$, boosting the yield by 10.5 centners and 27 centners per hectare,

CARD: 1/2

DALETSKIY, Yu.L.

Differentiation of non-Hermitian matrices depending on the parameter. Izv.vys.ucheb.zav.; mat. no.2:52-64 '62. (MIRA 15:8)

1. Kiyevskiy politekhnicheskiy institut.
(Matrices) (Algebra, Linear)

S/042/62/017/005/001/001
B112/B186

AUTHOR: Daletskiy, Yu. L.

TITLE: Continual integrals and operatorial equations of evolution

PERIODICAL: Uspekhi matematicheskikh nauk, v. 17, no. 5 (107), 1962, 3 - 115

TEXT: The fundamental solution of the abstract (parabolic) equation of evolution, $d\psi/dt = -A(t)\psi + B(t)\psi$, is represented by a continual integral of the form $W(\tau,t,x,y) = \lim \int\ldots\int \{\prod G(\tau,t,x,y)\} d\sigma(x_1)\ldots d\sigma(x_n)$, where $G(\tau,t,x,y) = (C(t,\tau)U(t,\tau)\xi_x, \xi_y)$, $C(t,\tau) = \exp B(t-\tau)$, $U(t,\tau) = \exp(-A(t-\tau))$. The concepts of the fundamental solution to an abstract equation of evolution and that of the continual integral are defined on the basis of a triple of spaces, $D \subset \mathfrak{H} \subset N$, where D and N are spaces containing ordinary and generalized elements. The following case is considered: in particular; that the continual integral can be regarded as a Lebesgue integral with respect to a certain measure. Furthermore, abstract equations of the Schrödinger type and abstract second-order hyperbolic equations are investigated. For the hyperbolic case, the concept of the

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Continual integrals and ...

characteristic curves is generalized. The most important English-language references are: R. P. Feynman, Spacetime approach to non-relativistic quantum mechanics, Rev. Mod. Phys. 20, 2 (1948), 367 - 387; M. Kac, On distributions of certain Wiener functionals, Trans. Amer. Math. Soc. 65, 1 (1949), 1-13; M. Schechter, Integral inequalities for partial differential operators and functions satisfying general boundary conditions, Comm. Pure Appl. Math. 12 (1959); R. H. Cameron, A family of integrals serving to connect the Wiener and Feynman integrals, Journ. of Math. and Phys. 39, No. 2 (1960).

SUBMITTED: March 8, 1962

Card 2/2

16,4100

36906
S/020/62/143/005/001/018
B112/B102

AUTHOR: Daletskiy, Yu. L.

TITLE: Asymptotic method for certain differential equations with oscillating coefficients

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 5, 1962, 1026-1029

TEXT: The author considers differential equations of the form $d\psi/dt = H(t)\psi(t)$, where

$$H(t,\varepsilon) = H_0 + \sum_{k=1}^{\infty}\sum_{m=-\infty}^{\infty} \varepsilon^k H_{km}(\tau)e^{im\omega t} \quad (\tau = \varepsilon t).$$

It is assumed that for each k only a finite number of operators $H_{km}(\tau)$ are different from zero and that the spectrum Λ of the operator H_0 disintegrates into the components $\Lambda_0, \Lambda_1, \ldots, \Lambda_p$ each of which is bounded by a contour Γ. The solution $\psi(t,\varepsilon) = U(t,\varepsilon)\psi(0)$ is constructed in the following way: $U(t,\varepsilon) = \sum_{s=0}^{p} U_s(\tau,t,\varepsilon)Y_s(t,\varepsilon)$, $dY_s/dt = \Omega_s(\tau,\varepsilon)Y_s$,

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$$\Omega_s(\tau,\varepsilon) = H_0 P_s + \sum_{r=1}^{\infty} \varepsilon^r \Omega_{sr}(\tau),\quad U_s(\tau,t,\varepsilon) = \sum_{r=0}^{\infty} \varepsilon^r \sum_{m=-\infty}^{\infty} e^{im\omega t} U_{sr}^m(\tau),$$

$$\left\{\sum_{r_1=0}^{r} U_{sr-r_1}^m(\tau)\,\Omega_{sr_1}(\tau) + im\omega U_{sr}^m(\tau) + U_{sr-1}^{m'}(\tau)\right\} P_s =$$

$$= \sum_{m_1=-\infty}^{\infty} \sum_{r_1=0}^{r} H_{r-r_1}^{m_1}(\tau)\, U_{sr_1}^{m-m_1}(\tau)\, P_s$$

$$(r = 0, 1, \ldots;\ s = 0, 1, \ldots, p;\ -\infty < m < \infty). \qquad (7)$$

where

$$P_k = -(1/2\pi i) \oint_{\Gamma_k} (H_0 - \mu I)^{-1} d\mu.$$

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnical Institute)

PRESENTED: November 15, 1961, by N. N. Bogolyubov, Academician

SUBMITTED: November 14, 1961

Card 2/2

DALETSKIY, Yu.L.; LADOKHIN, V.I.

A class of functionals integrable by nonpositive distributions.
Ukr. mat. zhur. 15 no.4:418-420 '63. (MIRA 17:4)

L 10282-63
ACCESSION NR: AP3001129 S/0108/63/018/006/0056/0061

AUTHOR: Vollerner, N. F.; Gatkin, N. G.; Daletskiy, Yu. L.; Yaroshenko, V. V. Members of the Society (see Association)

TITLE: Multichannel measurement of fluctuating voltages

SOURCE: Radiotekhnika, v. 18, no. 6, 1963, 56-61

TOPIC TAGS: measuring fluctuating voltages

ABSTRACT: A case is considered when low-level fluctuating voltages on several channels are to be combined and measured. Each voltage is amplified, and the amplifier noise is also assumed fluctuating. Gaussian distribution and similar spectral characteristics are assumed. The amplifier output voltages are combined by a transducer and then measured by a permanent-magnet moving-coil instrument. The mixture of measurand and noise voltages undergoes an "optimum conversion" in the transducer. A mathematical analysis presented in the article shows that: (1) in case of entirely uncorrelated measurands, they should be first summed and then squared; (2) in case of entirely correlated measurands, they should be first squared and then summed. Orig. art. has: 23 formulas and 1 figure.

Card 1/1

DALETSKIY, Yu.L.; FOMIN, S.V. (Moscow)

Generalized measures in functional spaces. Teor. veroiat. i ee prim. 10 no.2:329-343 '65. (MIRA 18:6)