KOROBCHANSKIY, I.M.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Korobchanskiy, I.M. Kuznetsov, M.D.	"Calculation of Equipment for Capturing Chemical Products of Coking"	Donets Industrial Institute imeni N.S. Khrushchev

SO: W-30604, 7 July 1954

S/081/61/000/020/001/089
B103/B101

AUTHOR: Korobchanskiy I. Ye.

TITLE: The Soviet Union as the country in which underground coal gasification was first developed

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1961, 1, abstract 20A4 (Tr. Donetsk. industr. in-ta, v. 38, 1960, 13 - 18)

TEXT: This is a short description of the history of the technical development of underground coal gasification in the USSR. The coming tasks in this field are indicated.

Card 1/1

5.1120

82774

SOV/184-59-5-1/17

AUTHORS: Sorochenko, A.F., Korobchanskiy, O.A., Engineers

TITLE: An Automatic Filtering Centrifuge With Sediment Removal by a Knife

PERIODICAL: Khimicheskoye mashinostroeniye, 1959, Nr. 5, pp. 1-3 (USSR)

ABSTRACT: The first industrial model of the "АГ-1200-2У" (AG-1200-2U) filtering centrifuge with sublayer regeneration by outside washing is described. The centrifuge was manufactured at the imeni Frunze plant in Sumy. It was tested on the regeneration of foundry loam under unfavourable conditions, because the pulp had a clay component and the sand had sharp edges. In the standard periodic action automatic filtering centrifuges the sediment cannot be removed entirely by a knife. The authors designed a special rotor and a sublayer regeneration device for centrifuging suspensions with both soluble and insoluble solid phases. The filtering base is a shell formed by a helically wound wire of trapezoidal cross-section having a clearance of 0.2-0.3 mm between wires. This sieve is fixed in the rotor (Fig. 2). The regeneration of the filtering base and the sublayer is performed by a strong water jet directed from outside to the rotor. The water sprayer moves reciprocally parallel to the rotor axis. The servomotor and the water supply are switched on by

Card 1/3

82774

SOV/184-59-5-1/17

An Automatic Filtering Centrifuge With Sediment Removal by a Knife

relays. Tests were carried out on the "АГ-600" (AG-600) semi-industrial centrifuge, confirmed the possibility of separating the molding loam suspension under conditions of full automation. Figure 6 shows an operational diagram of the AG-1200-2U centrifuge. The washed sand passes from the classifier into the container with a mixer (1) placed 1,5 m above the feed pipe of the centrifuge (2). The pulp is fed to the centrifuge through an automatic charging valve (3) in the bottom of the container. The separated liquid and the washing water are drained through a common pipeline into the settling tank. The centrifuge worked under the following conditions: RPM - 430; sandlayer thickness - 85 mm; sublayer thickness - 8 mm; pulp composition: sand - 68%, clay - up to 2%, the rest was water; water pressure for regeneration in the sprayer - 6 kg/cm^2; the removal of the fine solid phase with the separated liquid - 23.5 g/l. The different phases of one operating cycle of the centrifuge were: charging - 20 sec, centrifuging - 60 sec, discharging - 25 sec, regeneration of the sublayer - 60 sec, total - 2 min, 45 sec. The efficiency of the centrifuge was 4,600 kg/hour of sand dried to a humidity of 3.8 - 4.8%. Characteristics of the centrifuge are: rotor diameter - 1,180 mm; rotor speed - 430 rpm; electricmotor -

Card 2/3

82774

SOV/184-59-5-1/17

An Automatic Filtering Centrifuge With Sediment Removal by a Knife

10 kw; rotor volume - 240 l; weight of the centrifuge - 7,600 kg. During 100 hours of industrial tests the knife and the comb of the level regulator (easily removable steel parts with a hard alloy surface) had to be exchanged once. Other parts exposed to the pulp had no noticeable wear. The relatively low speed of the rotor is sufficient for the purpose described because of the good filtrability of sand. For centrifuging intermediate products of the plastics production, e.g. polyvinyl chloride resin suspensions, polyethylene and others, the rotor speed can be increased to the values necessary for each particular case and the liquid pressure for regeneration can be increased to 8-10 kg/cm^2. There are 2 photographs, 2 diagrams and 2 graphs.

Card 3/3

KOROBCHANSKII, V.I.

6377. RAPID METHOD [illegible] COAL
WITH A SOLID [illegible] HEAT CARRIER. [illegible]
[illegible] Pok. Donetsk. Ind. Inst. [illegible]
[illegible], 1956, (1), 106-[illegible]; [illegible]
1957, (7), 20186). [illegible]
brown coal and gassy and long flame [illegible]
[illegible] diameter [illegible] spheres [illegible]
[illegible] sodium chloride [illegible]
[illegible] the usual [illegible]
[illegible] retort). The yield [illegible]
[illegible]

The phenol content of the tar is less. So far as yields of products are concerned, this method comes between low temperature and medium temperature carbonisation.

KOROBCHANSKIY, V. I.

KOROBCHANSKIY, N.Ye. [deceased]; KUZNETSOV, M.D., dekter tekhnicheskikh nauk; EYDEL'MAN, Ye.Ya., kandidat tekhnicheskikh nauk; POTASHNIKOVA, M.M., inzhener; KOROBCHANSKIY, V.I., kandidat tekhnicheskikh nauk; SIRENKO, N.P., kandidat tekhnicheskikh nauk.

Investigating the precess of selective crushing of seme Denets Basin ceals. Keks i khim.ne.6:8-13 '56. (MLRA 9:10)

1.Chlen-kerrespendent Akademii nauk USSR (fer N.Ye.Kerebchanskiy).
2.Denetskiy industrial'nyy institut imeni N.S.Khrushcheva.
(Ceal preparatien)

Sov/68-59-10-11/24

AUTHORS: Kuznetsov, M.D., and Sagalovskiy, Sh.M., Korobchanskiy, V.I., Lyannaya, Z.G., and Popova, Ye.V.

TITLE: An Additional Dephenolisation of Spent Ammonia Liquor in an Injection Type of Apparatus

PERIODICAL: Koks i khimiya, 1959, Nr 10, pp 37-39 (USSR)

ABSTRACT: After dephenolising spent ammonia liquor with steam in filled scrubbers, the residual content of phenols amounts up to about 0.6 g/litres. The possibilities of an additional dephenolising in an injection type apparatus has been tested on the Makeyevka Works. The apparatus consists of a Venturi tube conveying a stream of steam, into the narrow part of which (throat) spent liquor is injected. The latter is dispersed into fine drops, thus developing a large area of contact between the gaseous and liquid phases. A similar apparatus was used for the dispersion of alkali solution with steam containing phenols which pass into the solution forming phenolates. The diagram of the experimental installation is shown in fig 3. After each venturi sprayer, the separation of gas and vapour phases was done in

Card 1/3

An Additional Dephenolisation of Spent Ammonia Liquor in an Injection Type of Apparatus

cyclones. The dependence of the degree of dephenolation of water on specific steam consumption at various steam velocities is shown in fig 1. A 77 to 90% dephenolation takes place on changing the consumption of steam from 2 to 5 m^3/litres, whereupon the concentration of phenols in water varied from 0.035 to 0.015 g/litre, ie, a high degree of purification was obtained. Data on the absorption of phenols from steam are given in fig 2. The coefficient of the useful action of the apparatus changes from 82.3 to 87.9% on changes in the steam velocity from 35 to 80 m sec for solutions containing below 6% of phenols. On the basis of the data obtained the degree of dephenolation of water after scrubbers for a system of recirculation of steam was calculated. The basic data: concentration of phenols in the feed water $C_1 = 0.2$ g/litre; the content of phenols in the alkali solution into dephenolising scrubber: $n_1 = 6$, 8 and 10 g/litre; the amount of recirculated steam $V \neq 2.5$ and 5m^3/litre of water. The results are given in the table, Sov/68-59-10-11/24

An Additional Dephenolisation of Spent Ammonia Liquor in an Injection Type of Apparatus

where: η - the degree of desorption of phenols from water %; C - concentration of phenols in dephenolised water, g/litre; S - consumption of fresh alkali solution, litre/m^3 of water. The content of phenols in the dephenolised water would be from 0.0247 to 0.0433 g/litre. Pressure drop in the ventury sprayer will be 350-400 mm H_2O. There are 3 figures, 1 table and 4 Soviet references.

ASSOCIATION: Donetskiy industrial'nyy institut (Donets Industrial Institute)

Card 3/3

KOROBCHANSKIY, V.I.; DUBROVSKAYA, D.P.; GOROKHOVA, Z.Ya.; SMOTKIN, Ya.N.

Removal of carbon disulfide from benzol by an alkaline solution of methanol. Koks i khim. no.12:36-38 '60. (MIRA 13:12)

1. Donetskiy politekhnicheskiy institut (for Korobchanskiy).
2. Makeyevskiy koksokhimicheskiy zavod (for Smotkin).
(Benzene) (Carbon disulfide)

KOROBCHANSKIY, V.I.; DUBROVSKAYA, D.P.; MIROPOL'SKIY, G.S.

Dephenolization of waste waters by the extraction method using an injection-type apparatus. Koks i khim. no.12:40-43 '63. (MIRA 17:1)

1. Donetskiy politekhnicheskiy institut (for Korobchanskiy).
2. Makeyevskiy koksokhimicheskiy zavod (for Dubrovskaya, Miropol'skiy).

KOROBCHANSKIY, YE. YE.

USSR/Processes and Equipment for Chemical Industries - Control and Measuring Devices. Automatic Regulation, K-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 64013

Author: Korobchanskiy, Ye. Ye., Gryaznov, Yu. N.

Institution: All Union Institute of Soda Industry

Title: Automation Means for Limekiln Shops of Soda Plants

Original Periodical: Tr. Vses. in-ta sodovoy prom-sti, 1955, 8, No 109-118

Abstract: Report of the work of the All Union Institute of Soda Industry on automation of limekiln shops of soda plants. Data are presented concerning the performance of an experimental plant unit for automatic control and remote control operation of a limekiln and a proposed diagram of composite automation of the entire shop.

Card 1/1

KOROBCHENKO, A., inzh.

"Automobile lamps and lighting devices" by A.S. Sokolov. Reviewed by A. Korobchenko. Avt. transp. 41 no.5:61-62 My '63. (MIRA 16:10)

(Motor vehicles--Lighting)
(Sokolov, A.S.)

KOROBCHENKO, Aleksandr Alekseyevich

[Krasnoyarsk Sea; a popular sketch] Krasnoiarskoe more; populiarnyi ocherk. Krasnoiarsk, Krasnoiarskoe knizhnoe izd-vo, 1961. 40 p. (MIRA 16:11)
(Yenisey River--Hydroelectric power stations)

107-57-2-24/56

AUTHOR: Korobchenko, E., senior engineer, DOSAAF radio club, Latvian SSR (Riga)

TITLE: A Rowing Contest. Radio Amateurs' Experience. Radio Communication Should Be Used on Boat Trips
(Na sorevnovaniyakh po greble. U radiolyubiteley yest' opyt. Ispol'zovat' radiosvyaz' v shlyupochnykh pokhodakh)

PERIODICAL: Radio, 1957, Nr 2, p 24 (USSR)

ABSTRACT: An All-Union Rowing Contest was organized in Riga, on the Lialupa River, in July 1956. Rowboats were equipped with radio stations A7A and A7B, which functioned at 38 to 40 mc over distances up to 5 km. Similar stations were used also for newspapermen reporting the contest. Members of the Riga DOSAAF radio club, Putyanin, Avotyn', Teodosiyenko, and others, helped to equip the boats with radio communication facilities.

AVAILABLE: Library of Congress

Card 1/1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824730002-5

KOROBCHENKO, E.

Forced charging of batteries. Avt. transp. 36 no. 6:17-19 Je '58. (MIRA 11:7)

(Automobiles--Batteries)

KOROBCHENKO, I., inzh.

Adjustment of headlights. Avt.transp. 40 no.4:45-46 Ap '62.
(MIRA 15:4)
(Motor vehicles--Headlights)

KOROBCHENKO, Igor' Aleksandrovich; GRINBERG, P.I., red.; BODANOVA, A.P., tekhn. red.

[Equipping motor vehicles and trailers with turn signals] Oborudovanie ukazateliami povorota avtomobilei i pritsepov. Moskva, Avtotransizdat, 1963. 46 p. (MIRA 16:5)
(Motor vehicles--Electric equipment)

L 39681-66 EWT(1)/ETC(f) TT/AT/GD-2

ACC NR: AP6009501 (A) SOURCE CODE: UR/0105/66/000/003/0009/0013

AUTHOR: Galteyev, F. F. (Candidate of technical sciences); Korobchenko, V. P. (Engineer); Morozov, V. G. (Engineer)

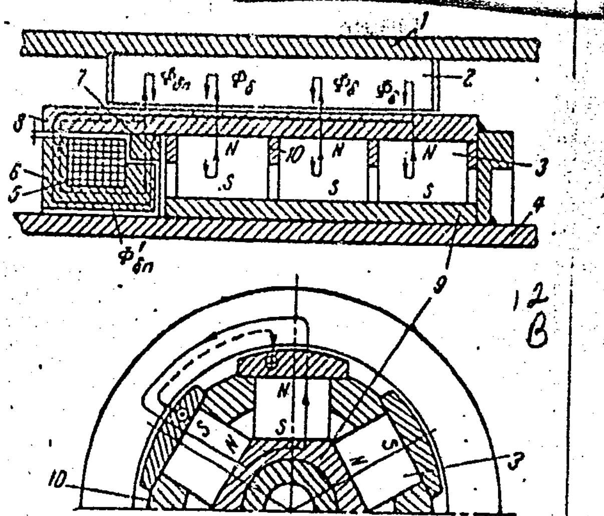
ORG: Moscow Power-Engineering Institute (Moskovskiy energeticheskiy institut)

TITLE: Operating characteristics of synchronous generators having compound-field permanent magnets

SOURCE: Elektrichestvo, no. 3, 1966, 9-13

TOPIC TAGS: electric generator, synchronous generator

ABSTRACT: Operation of a new (see figure) contactless synchronous generator is considered. A special design of the generator-field magnetic circuit permits the electromagnetic field component either to boost or to buck the main permanent-magnet flux, thus providing the means for regulating the generator voltage within a rather wide range. These design elements are shown in



Compound-field permanent-magnet synchronous generator with special-design pole shoes

Card 1/2

UDC: 621.313.322:012.6

KOROBCHENKO, Yu.S.; KOSMACH, V.F.; MINEYEV, V.I.

Coherent bremsstrahlung of electrons. Zhur. eksp. i teor. fiz. 48 no.5:1248-1256 My '65. (MIRA 18:7)

1. Leningradskiy politekhnicheskiy institut.

VOZNYUK, S.T.; KOROBCHENKO, Yu.T.; SKOCHINSKAYA, N.N.

Change in the characteristics of the improved peat soils in Polesye and the forest-steppe of the Ukraine under the effect of farming. Pochvovedenie no.1:19-28 Ja '64.
(MIRA 17:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut pochvovedeniya imeni A.N. Sokolovskogo i Khar'kovskiy sel'skokhozyaystvennyy institut imeni V.V. Dokuchayeva.

KOROBCHEVSKIY, I., brigadir slesarey

All this is important for efficiency promoters. Izobr. i rats. no.5:11 My '59. (MIRA 12:8)

1.Zavod "Kauchuk."

(Efficiency, Industrial)

KOROBCHINSKAYA, M.B.

Speed of shifting clamps in tensile testing of wire. Zav.lab. 22 no.5:588-589 '56. (MLRA 9:8)

1. Odesskiy staleprovolochno-kanatnyy zavod.
(Wire--Testing)

ACC NR: AP7002774

SOURCE CODE: UR/0281/66/000/004/0106/0110

AUTHOR: Kovshar, L. G. (Kiev); Korobchuk, K. V. (Kiev); Tsukernik, L. V. (Kiev)

ORG: none

TITLE: Uniqueness of the results and the convergence of the iteration calculation of the stationary electrical operating conditions within a power system

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 4, 1966, 106-110

TOPIC TAGS: iteration, algorithm, digital computer

ABSTRACT: Some authors mention briefly (see, e.g., L.V. Tsukernik, Tr. Instituta elektrotekhniki AN USSR, "Voprosy primeneniya vychislitel'noy tekhniki v energeticheskikh sistemakh" (Reports of the Institute of Electric Engineering of the AS UkrSSR, "Problems of Application of Computer Technology in Power Systems"), 1962, No 19) that because of the nonlinearity of the equations of nodal voltages in electrical networks, calculations on digital computers may lead to nonunique solutions. The authors thus investigated trial calculations carried out at the Institute of Electrodynamics of the AS Ukr SSR aiming at the clarification of the peculiarities of algorithms and programs for the calculations on digital computers of stationary operating conditions of complex power systems. Results of the calculations in which participated also V.N. Avramenko

Card 1/2

UDC: 621.311.1.001.24

0925 1652

Card 2/2

KOROBEL'NIKOV, I.D., professor (Chelyabinsk)

Iodine prevention of endemic goiter. Probl. endok. i gorm. 2 no.4: 120-121 Jl-Ag '56. (MLRA 9:11)

(GOITER, prevention and control, iodine in endemic areas (Rus))

(IODINE, therapeutic use, goiter prev. in endemic areas (Rus))

KOROBENIN, N.A.

"Ivanovo State Peat Trust" and the technological progress. Torf. prom. 40 no.4:37 '63. (MIRA 16:10)

(Ivanovo Province—Peat industry—Equipment and supplies)

L 07505-67 EWT(m) WE

ACC NR: AP6019559 (A) SOURCE CODE: UR/0416/66/000/001/0077/0080

15
B

AUTHOR: Korobenko, I. (Major)

ORG: none

TITLE: Newly reequipped fuel dump

SOURCE: Tyl i snabzh sov vooruzh sil, no. 1, 1966, 77-80

TOPIC TAGS: fuel storage, armed force organization

ABSTRACT: This article describes the daily activity of the fuel dump workers, the problems they face, the types of containers used, the precautions taken when storing special and toxic fluids, the paints used on containers to reduce evaporation, and the stencil system used on barrels which gives the data of pouring and the last analysis of the petroleum product or lubricant. In concluding the author states that competitive inspections for the best fuel dump are of great benefit and that they sould be carried out more often.

SUB CODE: 13,15,21/ SUBM DATE: none

Card 1/1 nh

KOROBENKOV, Semen Vasil'yevich, agronom-ekonomist; PEN'TYUKHOV, I.P., red.; PECHERSKAYA, T.I., tekhn. red.

[Economic accountability on the Kirov Collective Farm] Khoziaistvennyi raschet v kolkhoze imeni Kirova. Irkuts, Irkutskoe knizhnoe izd-vo, 1960. 65 p. (MIRA 14:9)

1. Kolkhoz im. S.M.Kirova, Usol'skogo rayona, Irkutskoy oblasti (for Korobenkov).
(Usol'ye District—Collective farms—Accounting)

FORORENKOVA, M.M.

Content of some microelements in the whole blood of people of advanced and old age in individual districts of the White Russian S.S.R. Vestsi AN BSSR. Ser. biial. nav. no.3:130-132 '65.
(MIRA 18:11)

KOROBENKOVA, M.M.

Cobalt, nickel, copper and zinc content in soils of some White Russian districts. Vestsi AN BSSR. Ser. biial nav. no.1:128-129 '65. (MIRA 18:5)

LEONOV, V.A.; KOROBENKOVA, M.M.

Zink content of blood in children of nursery age. Dokl. AN BSSR 5 no.11:515-516 N '61. (MIRA 15:1)

1. Sektor gerontologii AN BSSR.
(ZINC IN THE BODY) (BLOOD--ANALYSIS AND CHEMISTRY) (CHILDREN)

KOROBENKOVA, M.M.

Copper content of the blood in middle-aged and senile people. Dokl. AN BSSR 6 no.3:196-198 Mr '62. (MIRA 15:3)

1. Sektor gerontologii AN BSSR. Predstavleno akademikom AN BSSR V.A.Leonovym.
(COPPER IN THE BODY) (AGED)

KOROBENKOVA, M.M.

Geographical distribution of long-lived people in the White Russian S.S.R. Vestsi AN BSSR. Ser. biial. nav. no.2:119-120 '64. (MIRA 17:11)

KOROBENOK, Ye.V.

Some subgroups of a projective plane and space group. Vestsi AN BSSR. Ser. Fiz.-tekh. nav. no.2:12-19 '63. (MIRA 17:1)

KOROBENOK, Ye.V.

Real canonical frame of reference of a surface in a three-dimensional projective space. Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.2:16-19 '64. (MIRA 18:1)

KOROBETS, P.; SINITSA, N.

Viticulture

Size of vineyard units and character of forest belts in non-irrigated level vineyards. Vin. SSSR 12 No. 9, 1952

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

1. KOROBETSKIKH, P. Ye

2. USSR (600)

4. GEOLOGY, Structural - Lys'va Valley

7. Geological structure of the foothills of the western Ural depression in the segment of the Chusovaya and Lys'va Rivers. (Abstract) Izv. Glav. upr. geol. fon. no.3, 1947

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified

Korobetskikh, P.Ye.

AUTHOR: None given 5-3-11/37

TITLE: Chronicle of the Geological Section (Khronika geologicheskoy sektsii)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiy, 1957, No 3, pp 153-157 (USSR)

ABSTRACT: On 11 December 1956, M.V. Muratov, Chairman of the Geological Section of the Moscow Society of Naturalists reported on the Section's activities during the last two years. The report was followed by elections of the new Bureau of the Section and of the delegates to the Conference of the Society. The following members were elected to the new bureau: M.V. Muratotov, D.P. Naydin, B.A. Petrushevskiy, D.S. Sokolov and A.L. Yanshin. The following reports were delivered in the Geological section during its meeting from 11 December 1956 to 26 February 1957: N.A. Kudryavtsev on "Basic Regularities of Petroleum Localization in the Earth's Crust"; M.V. Muratov on his Voyage to Mexico for the 20th session of the International Geological Congress; Yu.M. Sheynmann on "Some Differences in the Development of the Pacific and Atlantic Folded Belts"; P.Ye. Korobetskikh on "Objective Foundations of Tectonic Phenomena Systematization";

Card 1/2

Chronic… ion 5-3-11/37 APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824730002

V.A. Grossgeym on "History of Terrigenous Minerals in the Meso- and Cenozoic Systems of the North Caucasus and Adjacent Areas ("Predkavkaz'ye") in Connection with Geologic Development of this Region"; Yu.V. Krylkov on "Periglacial and Other Formations of Continental Sediments"; N.M. Chumakov on "New Data on Geological Structure of the South-West Part of the Vilyuy Depression"; V.B. Neyman on "Paleotectonic Control of Stratigraphic Classifications"; M.S. Burshtar on "New Data on the Structure of the Foundation of the Eastern "Predkavkaz'ye" and Adjacent Districts"; V.G. Korolev on "Peculiarities in the Tectonics of the Tyan'-Shan' in the Lower Paleozoic Era", and V.V. Bronguleyev on "Erosion Phenomena in the Middle-Paleozoic Sediments of the Karatau Range Mistaken for Overthrusts and Folded Overlappings".

AVAILABLE: Library of Congress

Card 2/2

KOROBEYNICHEV, O.P.

Kinetics of the reaction of hydrogen sulfide with reduced bauxite. Kin.i kat. 6 no.3:547-550 My-Je '65. (MIRA 18:10)

1. Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya AN SSSR.

KOROBEYNIK, N.

MIKHAYLOV, Nikolay Nikolayevich; TYURIN, M., redaktor; MALININA, G., redaktor; KOROBEYNIK, N.' redaktor; YEGOROVA, I., tekhnicheskiy redaktor.

[Looking at a map of our country] Nad kartoi rodiny. Izd.3-e, perer. i dop. [Moskva] Izd-vo TsK VLKSM "Molodaia gvardiia," 1954. 447 p. (MLRA 8:11)

(Geography)

AFANAS'YEV, V.N., kand.tekhn.nauk; BALYUK, F.B., inzh.; BERIN, A.L., inzh.; VASIL'YEV, A.G., kand.khimicheskikh nauk; GRUZIN, F.L., doktor tekhn.nauk; KOROBEYNIK, V.F., inzh.; POLOVCHENKO, I.G., kand.tekhn. nauk; SMIRNOV, V.G., inzh.; UZLYUK, V.N.

Control of the level of the blast furnace charge by means of gamma rays. Trudy Ukr. nauch.-issl. inst. met. no.7:51-80 '61. (MIRA 14:11)

(Blast furnaces--Equipment and supplies)
(Gamma rays--Industrial applications)

KOROBEYNIK, YU. F.

KOROBEYNIK, YU. F. --"Infinite Systems of Linear Differential Equations." Rostov-on-Don State U imeni Molotov, Rostov-on-Don, 1955 (Dissertation For the Degree of Candidate in Physicomathematical Sciences)

SO: Knizhnaya letopis' No. 37, 10 September 1955

20-3/64

AUTHOR KOROBEYNIK, Yu.F.

TITLE Solution of a Mixed Problem By Means of Fourier's Method for an Integral-Differential Equation.
(Resheniye smeshannoy zadachi metodom Fur'ye dlya odnogo integro-differentsial'nogo uravneniya - Russian)

PERIODICAL Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 1, pp 14 - 17 (U.S.S.R.)

ABSTRACT The paper under review investigates an equation of the kind of $\partial^2 u/\partial t^2 = Lu + a(X,t)u + d(X,t)\,\partial u/\partial t + b(X,t) + \int_\Omega K_0(X,Y,t)d\Omega + \int_\Omega K_1(X,Y,t)(\partial u/\partial t)d\Omega$. In this context, $Lu = \sum_{i,j=1}^{n} \frac{\partial}{\partial x_i}\left[a_{i,j}(X)\frac{\partial u}{\partial x_j}\right] - c(X)u$ denotes an operator, the coefficients of which can be measured and are limited in a finite continuous domain Ω. The paper under review also lists the domains of definition of the other terms of this equation. For the equation given in the beginning of the paper under review, the following problem is posed: Find the solution of this equation which satisfies the initial conditions $u|_{t=0} = \varphi(X)$, $\frac{\partial u}{\partial t}\Big|_{t=0} = \Psi(X)$ and the boundary condition $u|_S = 0$ at $t \in [0,l]$. In this context, S denotes the boundary of the domain Ω. First of all, a generalized solution of this problem is defined and the corresponding integral identity is given explicitly.

Card 1/2

AUTHOR: Korobeynik, Yu.F. SOV/20-122-3-4-/57

TITLE: On the Equation of Infinite Order With Polynomial Coefficients (Ob uravnenii beskonechnogo poryadka s polinomial'nymi koeffitsiyentami)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 3, pp 339-342 (USSR)

ABSTRACT: Leont'yev [Ref 2], Khaplanov [Ref 3] and Mirolyubov [Ref 4] investigated the equation

(1) $$P_o(x)y + P_1(x)y' + P_2(x)y'' + \ldots = f(x)$$

under the assumptions that the degrees of the polynomials $P_i = \sum_{k=o}^{p_i} a_i^k x^k$ are bounded by the same number q : $p_i \leqslant q$, and that the characteristic functions $\omega_k(x) = \sum_{i=o}^{\infty} a_i^k x^i$, $k = 0,1,..,p$ are analytic in a certain circle.

In the present paper the author proves the existence and uniqueness of the solution (in a certain class of analytic

Card 1/ 2

On the Equation of Infinite Order With Polynomial Coefficients SOV/20-122-3-4/57

functions) without using the restrictions mentioned above. Furthermore he gives an approximation method according to which (1) can be approximatively solved, and he determines the resulting error. The proofs are based on the consideration of infinite systems of linear algebraic equations. Altogether there are given 8 theorems, lemmata and definitions. There are 7 references, 4 of which are Soviet, 2 Dutch, and 1 French.

ASSOCIATION: Rostovskiy ~~na Donu~~ gosudarstvennyy universitet (Rostov na Donu State University)

PRESENTED: April 24, 1958, by A.N.Kolmogorov, Academician

SUBMITTED: January 20, 1958

Card 2/2

KOROBEYNIK, Yu.F.

16(1) PHASE I BOOK EXPLOITATION SOV/2660

Vsesoyuznyy matematicheskiy s"yezd. 3rd, Moscow, 1956

Trudy. t. 4: Kratkoye soderzhaniye sektsionnykh dokladov. Doklady inostrannykh uchenykh (Transactions of the 3rd All-Union Mathematical Conference in Moscow. vol. 4: Summary of Sectional Reports. Reports of Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959. 247 p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskiy institut.

Tech. Ed.: G.N. Shevchenko; Editorial Board: A.A. Abramov, V.G. Boltyanskiy, A.M. Vasil'yev, B.V. Medvedev, A.D. Myshkis, S.M. Nikol'skiy (Resp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, K.A. Rybnikov, P. L. Ul'yanov, V.A. Uspenskiy, N.G. Chetayev, G. Ye. Shilov, and A.I. Shirshov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: The book is Volume IV of the Transactions of the Third All-Union Mathematical Conference, held in June and July 1956. The book is divided into two main parts. The first part contains summaries of the papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The second part contains the text of reports submitted to the editor by non-Soviet scientists. In those cases when the non-Soviet scientist did not submit a copy of his paper to the editor, the title of the paper is cited and, if the paper was printed in a previous volume, reference is made to the appropriate volume. The papers, both Soviet and non-Soviet, cover various topics in number theory, algebra, differential and integral equations, function theory, functional analysis, probability theory, topology, mathematical problems of mechanics and physics, computational mathematics, mathematical logic and the foundations of mathematics, and the history of mathematics.

Card 7/34

12

16(1)

AUTHOR: Korobeynik, Yu.F. SOV/140-59-3-13/22

TITLE: On Analytic Solutions of an Equation of Infinite Order With Polynomial Coefficients

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 3, pp 130-146 (USSR)

ABSTRACT: The author considers the equation

$$(1) \qquad y(x) + \sum_{k=1}^{\infty} P_k(x) y^{(k)}(x) = f(x) ,$$

where $f(x)$ is an entire function, while $P_k(x)$ are polynomials of at most $(k-1)^{st}$ degree. Assumptions about the analyticity of the characteristic functions are not made. It is shown that to every equation (1) there exists a class S of entire functions so that (1) has a unique solution in S if $f(x)$ belongs to S. The author proposes a method for an approximate solution of (1) and the error of the approximation is estimated. It is shown that the postulate that the $P_k(x)$ shall have at most $(k-1)^{st}$ degree, in a certain sense is necessary for the existence and uniqueness

Card 1/2

On Analytic Solutions of an Equation of Infinite Order With Polynomial Coefficients SOV/140-59-3-13/22

of the solution. 5 theorems and 3 lemmas are given altogether. The author mentions similar investigations due to A.F.Leont'yev, A.A.Mirolyubov, A.O.Gel'fond, M.G.Khaplanov, and V.I.Protasov. There are 9 references, 6 of which are Soviet, 1 French, 1 Dutch, and 1 American.

ASSOCIATION: Rostovskiy gosudarstvennyy universitet (Rostov State University)

SUBMITTED: April 28, 1958

Card 2/2

36988
S/044/62/000/003/031/092
C111/C444

16,4500

AUTHOR: Korobeynik, Yu. F.

TITLE: On the convergency of the reduction method for the solution of denumerable systems of linear integral equations

PERIODICAL: Referativnyy zhurnal, Matematika, no. 3, 1962, 67, abstract 3B287. ("Uch. zap. Fiz.-matem. fak. Rostovsk.-n/D. un-t", 1959, 43, no. 6, 21-57)

TEXT: Considered are infinite systems of integral equations

$$u_m(t) = f_m(t) + \int_0^t \sum_{k=1}^{\infty} a_{m,k}(t, \tau)\, u_k(\tau)\, d\tau \quad (m = 1,2,\dots).$$

The system is interpreted to be a linear equation in a particularly constructed Banach space; the existence and the uniqueness of the solution is proved by successive approximation. One considers the connection between the solution of the system and the solutions of the reduced systems. The norm of the difference between the exact solution and the solution of the reduced system is estimated. Under certain suppositions on $a_{m,k}(t,\tau)$ one proves that the solutions of the reduced

Card 1/2

05354

16(1) SOV/39-49-2-3/5

AUTHOR: Korobeynik, Yu.F. (Rostov n/D)

TITLE: Investigation of Differential Equations of Infinitely High Order With Polynomial Coefficients by Means of Operator Equations of Integral Type

PERIODICAL: Matematicheskiy sbornik, 1959, Vol 49, Nr 2, pp 191-206 (USSR)

ABSTRACT: The author considers the equation

$$(1.1) \qquad y + \sum_{k=1}^{\infty} y^{(k)}(x) \sum_{n=0}^{k-1} a_n^k x^n = g(x).$$

Let the function $F(x,t) = \sum_{s=1}^{\infty} \sum_{n=0}^{s-1} \frac{a_n^s x^n}{t^s} s!$ be analytic in $T_{R_0}: |x| \leqslant R_0,\ |t| \geqslant R_1 = \delta R_0$. Let $\alpha(r) = \max_{|x| \leqslant r,\ |t| = \delta r,\ r \geqslant R_0} |F(x,t)|$. Let $f(r)$ be a nondecreasing function defined on $[R_0, \infty)$, where

Card 1/3

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05354
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Investigation of Differential Equations of Infinitely High Order With Polynomial Coefficients by Means of Operator Equations of Integral Type

(1.4) $\overline{\lim_{r\to\infty}} \frac{f(\beta r)}{f(r)} \alpha(r) = q_1 < 1, \quad \beta = 1+\delta$

holds. Let S denote the class of the entire functions φ for which

(1.6) $\overline{\lim_{r\to\infty}} \frac{M_r(\varphi)}{f(r)} < \infty$, where $M_r(\varphi) = \max_{|x| \leqslant r} |\varphi(x)|$.

Here let $\|\varphi\| = \sup_{r \geqslant R_2} \frac{M_r(\varphi)}{f(r)}$, $R_2 > \max(R_o, R_1)$

Theorem 1: If $F(x,t)$ is analytic in T_{R_o} and if $f(x)$ satisfies the condition (1.4), then (1.1) possesses a unique solution $y \in S$ for every $g(x) \in S$, where it is

(1.9) $\|y\| < \frac{\|g\|}{1-q}$, $q < 1$.

Theorem 2: Let 1.) $F(x,t)$ be analytic in T_{R_o} 2.) $f(x)$ satisfy

Card 2/3

05354
SOV/39-49-2-3/5

Investigation of Differential Equations of Infinitely High Order With Polynomial Coefficients by Means of Operator Equations of Integral Type

(1.4) and

(2.3) $\lim_{r\to\infty} \frac{\ln f(r)}{\ln r} = \infty$

3.) Let an $\theta > 1$ exist, so that $g(\theta x) \in S$. Then the polynomial solution y_n of the equation

$$y + \sum_{k=1}^{n} y^{(k)}(x) \sum_{m=0}^{k-1} a_m^k x^m = \sum_{k=0}^{n} \frac{g^k(0)}{k!} x^n$$

can be taken as approximative solution of (1.1). Here it is $\|y-y_n\| < \frac{D}{\theta^n}$ or $\max_{|x|\leqslant r} |y(x)-y_n(x)| \leqslant \frac{D}{\theta^n} f(r)$, where D depends on $g(x)$ but not on n.

Further 5 theorems contain applications to special cases ($g(x) = x^n$ or is bounded etc).

The author mentions V.I.Protasov. There are 3 Soviet references.

SUBMITTED: January 25, 1958

Card 3/3

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37609
S/044/62/000/004/050/099
C111/C333

AUTHOR: Korobeynik, Yu.F.

TITLE: The solution of the mixed problem for an integro-differential equation

PERIODICAL: Referativnyy zhurnal, Matematika, no. 4, 1962, 57, abstract 4B262. ("Tr. Seminara po funkts. analizu. Rostovsk.-n/D. un-t, Voronezhsk un-t", 1960, no. 3-4, 26-49)

TEXT: The author proves the existence and uniqueness of the generalized solution in the sense of O.A. Ladyzhenskaya of the mixed problem $u|_{t=0} = \varphi(x)$, $u'_t|_{t=0} = \psi(x)$, $u|_s = 0$ for the integro-differential equation

$$\frac{\partial^2 u}{\partial t^2} = Lu + a(x,t)u + d(x,t)\frac{\partial u}{\partial t} + b(x,t) + \int_\Omega k_0(x,y,t)u(y,t)dy + \int_\Omega k_1(x,y,t)u'_t(y,t)dy .$$

Here it is

Card 1/4

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$$Lu = \sum_{i,j=1}^{n} \frac{\partial}{\partial x_i} \left[a_{ij}(x) \frac{\partial u}{\partial x_j} \right] - c(x)u .$$

The coefficients $a_{ij}(x)$ are measurable and bounded functions in the finitely connected domain Ω of the $x(x_1, x_2, \ldots, x_n)$. In $\bar{\Omega}$ it is

$c(x) \geqslant 0$, $a_{ij} = a_{ji}$, $\sum_{i,j}^{n} a_{ij} \xi_i \xi_j \geqslant \alpha \sum_{i=1}^{n} \xi_i^2$, α = const>0. The

functions $a(x,t)$, $d(x,t)$ are measurable and bounded in $Q_1 = \Omega_x(0 \leq t \leq 1)$ $1 < \infty$, $b(x,t) \in L_2(Q_1)$; the integrals $\int_\Omega \int_\Omega | k_i(x,y,t)|^2 dydx$ are bounded on $[0,1]$, $\varphi \in D^0(\Omega)$, $\psi \in L_2(\Omega)$. The solution is represented as Fourier series in terms of eigenfunctions v_k of the operator L,

Card 2/4

$u(x,t) = \sum_{k=1}^{\infty} f_k(t) v_k(x)$, where $f_k(t)$ are particular solutions of the denumerable system of differential squations

$$y''_m(t) + \lambda_m^2 y_m(t) = \sum_{k=1}^{\infty} a_{mk}(t) y_k(t) + b_{mk}(t) y'_k(t) + c_m(t) ,$$

$m = 1,2,\ldots$, constructed by the author. Then it is shown that the series converges in the space $W_2^1(\Omega,t)$ and that its sum is the generalized solution of the problem. An estimation of the norm of the solution in $W_2^1(\Omega,t)$ is obtained ; from this the correctness of the problem is deduced ; the approximative solution of the problem according to Galerkin is established. The author mentions that the results of Z.I. Khalilov (RZhMat, 1955,233) can be obtained under much more general assumptions,

Card 3/4

namely, one can prove that the generalized solution introduced by Z.I. Khalilov is a generalized solution in the sense of O.A. Ladyzhenskaya (RZhMat, 1955, 3774K).

[Abstracter's note : Complete translation.]

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16,3000

AUTHOR: Korobeynik, Yu.F.

TITLE: Some Properties of Functional Series 16

PERIODICAL: Uspekhi matematicheskikh nauk, 1960, Vol.15, No.4, pp.149-156

TEXT: Let $u(z)$ be a positive continuous function. Let the curves $C_\varrho : u(z) = \varrho$ for $\varrho \to 0$ retract in the point $z = 0$, where from $\varrho_1 < \varrho_2$ it follows that C_{ϱ_1} lies in C_{ϱ_2}. Let D_ϱ be a simply connected domain in C_ϱ and let $R_1 < u(z) < R_2$ be the annular domain between C_{k_1} and C_{k_2}. Let the system of the functions $\varphi_n(z)$ analytic in D_{R_2} be regular in the sense of M.A.Yevgrafov (Ref.5), where the conditions of (Ref.5) between R_1 and R_2 are satisfied. Let z_0 lie on C_{ϱ_0}; let $\delta > 0$ be chosen so that $|z-z_0| \leqslant \delta$ lies in D_{R_2}. Let $\mu_n(z_0, \delta)$ be the number of zeros of the function $S_n(z) = \sum_{k=0}^{n} a_k \varphi_k(z)$, lying in $|z-z_0| < \delta$.

Card 1/4

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C111/C222

Some Properties of Functional Series

Theorem 1: Let the regular (in the above sense) system $\{\varphi_n(z)\}$ admit a non-trivial decomposition of zero in no subdomain of D_{k_2}. Let the series

(1) $\sum_{n=0}^{\infty} a_n \varphi_n(z)$

satisfy the condition $\overline{\lim_{n\to\infty}} |a_n|^{1/n} = \frac{1}{\varrho_0}$, $R_1 < \varrho_0 < R_2$. Then for every z on C_{ϱ_0} and every $\delta < \varrho(z, C_{R_2})$ there holds the inequation

(2) $\overline{\lim_{n\to\infty}} \frac{\mu_n(z,\delta)}{n} > 0.$

Theorem 2: Let the curves C_ϱ, $R_1 < \varrho < R_2$, be inverse images of the circle, i.e. lines $|\phi(z)| = \varrho$, where $\phi(z)$ is a function analytic in the domain $R_1 < u(z) < R_2$ mapping conformally this domain onto the ring $R_1 < |z| < R_2$. Let $\{\varphi_n(z)\}$ be a system of functions analytic in $R_1 < u(z) < R_2$ satisfying the condition

Card 2/4

84754

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C111/C222

Some Properties of Functional Series

(6) $\overline{\lim_{n\to\infty}}\left[\max_{z\in C_\varsigma}|\varphi_n(z)|\right]^{1/n}\leqslant\varsigma,\quad R_1<\varsigma<R_2.$

Then: If in the series $f(z)=\sum_{n=0}^{\infty}a_n\varphi_n(z)$, $\overline{\lim_{n\to\infty}}|a_n|^{1/n}=\frac{1}{\varsigma_0}\in\left(\frac{1}{R_2},\frac{1}{R_1}\right)$ there exist infinitely many gaps: $a_n=0$ for $p_k<n<q_k$ $(k=1,2,\ldots)$, where $q_k\geqslant(1+\theta)p_k$ and θ is a fixed positive number, then the sequence of corresponding partial sums $S_{p_k}(z)=\sum_{n=0}^{p_k}a_n\varphi_n(z)$ converges uniformly in a certain domain containing all points of C_{ς_0} in which f(z) is regular.

Theorem 3 contains the same assertion as theorem 2 without restrictions for the C_ς, but only for greater gaps, i.e. instead of $q_k\geqslant(1+\theta)p_k$ it is put

$$\lim_{k\to\infty}\frac{q_k}{p_k}=\infty.$$

The theorems 4 and 5 contain assertions on the non continuability of series

Card 3/4

84754

S/042/60/015/004/012/017XX
C111/C222

Some Properties of Functional Series

$f(z) = \sum_{n=0}^{\infty} a_n \varphi_n(z)$ with sufficiently long gaps and of series $\sum_{n=0}^{\infty} \varepsilon_n c_n \varphi_n(z)$, where $\varepsilon_k = 1$ or -1. It is assumed that the system of functions $\{\varphi_n(z)\}$ is almost regular in $R_1 < u(z) < R_2$. This notion is defined as follows: $\{\varphi_n(z)\}$, where $\varphi_n(z)$ are analytic in $R_1 < u(z) < R_2$, is called an almost regular system in (R_1, R_2) if every series $\sum_{n=0}^{\infty} a_n \varphi_n(z)$, where $\overline{\lim} |a_n|^{1/n} = \frac{1}{\varsigma}$ and $\varsigma \in (R_1, R_2)$ converges uniformly in the interior of the domain between C_{R_1} and C_{ς}, in every domain, however, containing only one point of C_{ς} it can converge uniformly no longer.

The author mentions M.G.Khaplanov, M.M.Dragilev and S.Ya.Al'per. There are 10 references: 6 Soviet, 2 English, 1 French and 1 Swedish.

[Abstracter's note: (Ref.5) concerns M.A.Yevgrafov, Trudy Mosk. ob-va, 1956, 5, pp.89-203]

SUBMITTED: October 22, 1958

Card 4/4

Korobeynik, Yu.F.

81855

S/020/60/133/02/06/068
C111/C222

16.3500

AUTHOR: Korobeynik, Yu.F.

TITLE: Some Problems in the Analytic Theory of Partial Differential Equations 16

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 2, pp. 273-276

TEXT: Given the equation

$$(1) \qquad \frac{\partial^r u}{\partial x^r} = a y^m \frac{\partial^{m+1} u}{\partial y^{m+1}} ,$$

where r,m are natural numbers and a is a constant number.
Theorem 1 asserts that the function

$$(3) \qquad u(x,y) = \sum_{l=0}^{m-1} P_l(x) y^l + f_m(x) y^l + \sum_{k=1}^{\infty} y^{m+k} \frac{f_m^{(kr)}(x)(k-1)!(k-2)!\dots2!}{a^k(m+k)!(m+k-1)!\dots(m+1)!}$$

where $P_l(x)$ are polynomials, is an entire solution of (1) then and only then

Card 1/4

81855

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C111/C222

Some Problems in the Analytic Theory of Partial Differential Equations

if the function of increase $\left.\frac{\partial^m u}{\partial y^m}\right|_{y=0}$ of the solution belongs to the class $H_{m,r}$, i.e. if it is an arbitrary entire function, if $m + 1 \geqslant r$, and an entire function of the order $\frac{1}{1-(m+1)/r}$ and of the type 0, if $m + 1 < r$.

Problem A. Let $y = \mu(x) \equiv \sum_{i=0}^{l} A_i x^i$, $l < r$. Determine a solution of (1) entire in (x,y) so that a) $\left.\frac{\partial^s u}{\partial y^s}\right|_{y=0} = P_s(x)$, $s = 0,1,\ldots,m-1$, where $P_s(x)$ are polynomials of at most $(r-1)^{st}$ degree; b) $u(x,\mu(x)) = \lambda(x)$, where $\lambda(x)$ is a given entire function.

Card 2/ 4

81855

S/020/60/133/02/06/068
C111/C222

Some Problems in the Analytic Theory of Partial Differential Equations

Theorem 2 : Let u(x,y) be a solution of (1) integral in (x,y). Then 1) the functions $\left.\frac{\partial^s u}{\partial y^s}\right|_{y=0} = P_s(x)$, $s = 0,1,\dots, m-1$ are polynomials of at most $(r-1)^{st}$ degree, 2) if $\lambda(x)$ is the value of the solution u(x,y) on the parabola $y = \mu(x)$, then the function

(4) $$\nu(x) = \frac{\lambda(x) - \sum_{l=0}^{m-1} [\mu(x)]^l P_l(x)}{[\mu(x)]^m}$$

must be entire. Reversely, for every parabola $y = \mu(x)$ of the order $< r$ a class $G \subset H_{m,r}$ of sufficiently slowly increasing entire functions can be given so that for arbitrary polynomials $P_0, P_1, \dots, P_{m-1}$ of degree $\leq r-1$ and arbitrary integral $\lambda(x)$ for which $\nu(x) \in G$, the problem A has a solution. The solution is unique in the class of solutions of (1) entire

Card 3/4

16 3400

S/044/62/000/008/017/073
C111/C333

AUTHOR: Korobeynik, Yu. F.

TITLE: On some examination methods for a linear differential equation of infinite order

PERIODICAL: Referativnyy zhurnal, Matematika, no. 8, 1962, 45, abstract 8B207. ("Issled. po sovrem. probl. teorii funktsiy kompleksn. peremennogo." M., Fizmatgiz, 1961, 150-159)

TEXT: Proven (in a certain class of entire functions) is the existence and uniqueness of the solution of the equation

$$y(x) + \sum_{k=1}^{\infty} P_k(x)\, y^{(k)}(x) = f(x) \qquad (1)$$

where $P_k(x) = \sum_{m=0}^{k-1} a_m^k x^m$ is a polynomial of at most (k-1)-th degree ($k = 1,2,\dots$) and f(x) is analytical in $|x| < R$. Under these assumptions (1) is called regular. As solution of (1) is considered an function y(x) analytic in the vicinity of the origin, for which the series

Card 1/3

$y + \sum_{k=1}^{\infty} P_k(x)\, y^{(k)}$ converges in a certain circle $|x| < \rho \leq R$ uniformly to $f(x)$. It is shown that the condition of regularity ($a_m^k = 0$ for $m \geq k$) with arbitrary coefficients a_m^k is to a certain extent necessary for the existence and uniqueness of the solution of (1). The examination is carried out with two mutually complementary methods. To the first method belongs the reduction of the examination of (1) to infinite systems of linear algebraic equations in Banach spaces (cf., e.g., Sheffer, I.M., Amer. J. Math., 1945, 67, no. 1, 123-140). Here, in addition to the theorems on existence and uniqueness, an approximation method is given for solving (1); the error resulting when using the approximation solution $y_n(x)$ instead of the rigorous solution $y(x)$ is estimated (the only polynomial solution of the ordinary differential equation

$$y(x) + \sum_{k=1}^{n} P_k(x) y^{(k)}(x) = \sum_{k=0}^{n} \frac{f^{(k)}(0)}{k} x^k ,$$

can, in this case, be used for $y_n(x)$). To the second method belongs the reduction of (1) to an integral equation which can be understood as an operator equation with an approximation operator in a specially selected Banach space of sufficiently slowly growing functions. Here, existence and uniqueness theorems are obtained in new classes of functions, which to the present were not obtained with the first method. The second method is, however, not as general as the first.

[Abstracter's note: Complete translation.]

KOROBEYNIK, Yu.F.

One uniqueness theorem for an equation of infinite order with rapidly growing coefficients. Sib. mat. zhur. 2 no.4: 547-550 Jl-Ag '61. (MIRA 14:9)
(Functional equations)

VARGANOVA, S.V.; KOROBEYNIK, Yu.F.

Superconvergence and incontinuability of functional series. Dokl. AN SSSR 137 no.3:499-501 Mr '61. (MIRA 14:2)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Predstavleno akademikom A.N.Kolmogorovym.
(Functions, Analytic)

16.3500

29807
S/020/61/140/006/001/030
C111/C444

AUTHOR: Korobeynik, Yu. F.

TITLE: Analytic solutions to a certain class of partial differential equations

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 6, 1961, 1248-1251

TEXT: Considered are analytic solutions of

$$\frac{\partial^r u}{\partial x^r} = a y^m \frac{\partial^n u}{\partial y^n} \qquad (1)$$

where a is a constant; r, m, n are positive integers, $m < n$; and by aid of them there is considered the Cauchy problem for (1) with respect to y and a new problem.

Let u(x,y) be an analytic solution of (1) in $|x| \leq R$, $|y| \leq R_1$. If written as a series in terms of y and substituted into (1), one obtains the following representation

$$u(x,y) = \sum_{l=0}^{m-1} y^l P_l(x) + \sum_{l=m}^{n-1} y^l f_l(x) + \sum_{d=0}^{n-m-1} \sum_{k=0}^{\infty} y^{m+d+k(n-m)} \alpha_{k,d} f_{m+d}^{(kr)}(x) \quad (2)$$

Card 1/6

where

$$\alpha_{k,d} = \frac{[(k-1)(n-m)+d]!\,[(k-2)(n-m)+d]!\ldots(d)!}{[(k-1)(n-m)+n+d]!\,[(k-2)(n-m)+n+d]!\ldots(n+d)!\,a^k}$$

and $P_c(x) = u(x,0)$ is a polynomial of degree $\leq r-1$. The functions $f_s(x) = \partial^s u/\partial y^s\big|_{y=0}$, $s = m,\ldots, n-1$, are denoted as growth functions of $u(x,y)$.

The class M_{R,R_1} of analytic functions $\varphi(z)$ be defined as follows:

1) if $n > r$, then M_{R,R_1} consists of the analytic functions in $|z| \leq R$

2) if $n = r$, then all functions, being analytic in $|z| < R + \left[R_1^{n-m}/|a|\left(\frac{n-m}{r}\right)^n\right]^{1/r}$, belong to M_{R,R_1}

3) if $r > n$, then M_{R,R_1} is the set of all entire functions of order

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C111/C444

Analytic solutions to a certain . . .

$\frac{r}{r-n}$ and of a type smaller than $(1 - \frac{n}{r}) \left[|a| (\frac{n-m}{r})^n / R_1^{n-m} \right]^{1/(r-n)}$ (as well as the set of all entire functions of an order smaller than $\frac{r}{r-n}$).

Theorem 1: In order the solution u(x,y) of (1) to be analytic in the bicylinder $|x| \leq R$, $|y| \leq R_1$, it is necessary and sufficient that its growth functions $\partial^s u/\partial y^s \big|_{y=0}$, s = m, ..., n-1, belong to M_{R,R_1}.

Let $F_{n,r}$ be the set of all entire functions for $n \geq r$ and the set of all entire functions of at most $\left[\frac{r}{r-n}, 0\right]$- th order of growth, if $n < r$.

Theorem 2: In order the solution u(x,y) of (1) to be entire in x,y (i.e. analytic in every bicylinder), it is necessary and sufficient that its growth functions $\partial^s u/\partial y^s \big|_{y=0}$, s = m, ..., n-1 belong to $F_{n,r}$.

The Cauchy problem: Determine in $|x| \leq R$, $|y| \leq R_1$ an analytic solution of (1) such that

Card 3/6

29807
S/020/61/140/006/001/030
Analytic solutions to a certain . . . C111/C444

a) $\partial^s u/\partial y^s \Big|_{y=0} = P_s(x)$, $s = 0, 1, \ldots, m-1$

b) $\partial^s u/\partial y^s \Big|_{y=0} = \varphi_s(x)$, $s = m, \ldots, m-1$,

where $P_s(x)$ are polynomials of degree $< r$ and $\varphi_s(x)$ are analytic in the neighborhood of $x = 0$.

From theorem 1 it follows that for the existence of the solution it is necessary and sufficient that $\varphi_s(x) \in M_{R,R_1}$, $s = m, \ldots, n-1$.

Problem C: Determine a primitive of (1), entire in (x, y), satisfying the conditions

$$\left.\frac{\partial^s u}{\partial y^s}\right|_{y=0} = P_s(x), \quad s = 0, 1, \ldots, m-1;$$

$$u(x, k_i x) = \lambda_i(x), \quad i = 1, 2, \ldots, n-m \qquad (3)$$

where $P_s(x)$ are arbitrary polynomials of degree $\leq r-1$, k_i are real

Card 4/6

or complex numbers, different from each other; $\lambda_i(x)$ are analytic functions in the neighborhood of $x = 0$, satisfying

$$\tilde{\lambda}_i^{(p)}(0) = 0,\ p = 0,1,\dots,\ m-1;\ \tilde{\lambda}_i^{(s)}(0) = \sum_{j=m}^{s} a_{s,j} k_i^j \qquad (4)$$

$$s = m,\dots,n-2;\ i = 1,2,\dots,\ n-m,$$

where $\tilde{\lambda}_i(x)$ indicates the difference $\lambda_i(x) - \sum_{l=0}^{m-1} (k_i x)^l P_l(x)$.

Theorem 3: Let $u(x,y)$ be the solution of the problem C. Then:

a) $\partial^s u/\partial y^s \big|_{y=0}$, $s = 0,1,\dots,m-1$ must be polynomials $P_s(x)$ of degree $< r$.

b) the entire functions $\lambda_i(x)$ and the polynomials $P_s(x)$ satisfy (4).

Now let $r \geqslant 2(n-m)$. Then it is possible to obtain for arbitrary $n-m$ different straight lines $y = k_i x$ a lower class G of sufficiently slowly increasing entire functions such that in case $P_s(x)$, $s = 0,1,\dots$ ... $m-1$ are polynomials of degree $\leq r-1$ and $\lambda_i(x)$ are entire functions of G, satisfying (4), the problem C possesses a solution.

This solution is unique in the class of primitives entire in x, y with sufficiently small growth (i.e. of those, the growth functions of which belong to G).

A more detailed consideration of the problem C is accomplished for the special cases.

$$\frac{\partial^4 u}{\partial x^4} = \frac{\partial^2 u}{\partial y^2}, \quad \frac{\partial^r u}{\partial x^r} = a\frac{\partial u}{\partial y} \quad \text{and} \quad \frac{\partial^2 u}{\partial x^2} = a\frac{\partial^2 u}{\partial y^2}.$$

Another problem C' similar to problem C is shortly defined.
The author mentions V. P. Mikhaylov. There is 1 Soviet-bloc and 1 non-Soviet-bloc reference.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet (Rostov-na-Donu State University)

PRESENTED: May 24, 1961, by J. G. Petrovskiy, Academician

SUBMITTED: May 19, 1961

Card 6/6

S/140/62/000/004/004/009
C111/C333

AUTHOR: Korobeynik, Yu. F.

TITLE: On a class of differential equations of infinite order with variable coefficients

PERIODICAL: Vysshiye uchebnyye zavedeniya. Izvestiya. Matematika, no. 4, 1962, 73-80

TEXT: Considered is the equation

$$\sum_{k=0}^{\infty} x^k f_k(x)\, y^{(k)}(x) = g(x) \qquad (2)$$

where $g(x) = \sum_{l=0}^{\infty} g_l x^l$ and $f_k(x) = \sum_{m=0}^{\infty} a_m^k x^m$ $(k = 1,2,\dots)$ are analytic in $|x| < R$ and $A_1)$ $\mu_r \equiv \sum_{k=0}^{r} a_0^k \frac{r!}{(r-k)!} \neq 0$ for $r=0,1,\dots,$ $A_2)$ $a_0^k \neq 0$ for at least one k. Let denote: T_1 - the class of the

Card 1/4

functions $f(x) = \sum_{k=0}^{\infty} f_k x^k$ with $\sup_k |f_k| = d_f < \infty$; T_2 - the class of the functions $h(x) = \sum_{k=0}^{\infty} h_k x^k$ with $|h_k| \neq \infty$ $(k = 0,1,2,\dots)$, $\sup_k |h_k \beta_k| < \infty$, where $\beta_r = r! \sum_{k=0}^{r} \frac{|a_0^k|}{(r-k)!}$ $(r=0,1,2,\dots)$.

The main result of the paper is the statement: Let R = 1, and except of A_1) and A_2) let the following conditions be satisfied:

A_3) $\overline{\lim}_{r\to\infty} \frac{\beta_r}{\mu_r} < \infty$;

A_4) $f_m(x) \in T_1$;

A_5) $\overline{\lim} \frac{\beta_r}{\mu_r} \sum_{n=j}^{r-1} \frac{n!}{\beta_n} \sum_{k=0}^{n} \frac{|a_{r-n}^k|}{(n-k)!} < 1.$

Then (2) possesses in $|x| < 1$ for every $g(x) \in T_1$ a solution $y(x) \in T_2$ which is unique in the class of all analytic solutions.

From this it follows for the equation

$$\sum_{n=0}^{\infty} a_n x^n y^{(n)}(x) = F(x) \qquad (1)$$

considered by Davis (Ref. 1: H. T. Davis. The Euler differential equation of infinite order. Amer. Math. Monthly, vol. 32, p.p. 223-233, 1925):

If $\mu_r \neq 0$ for all r, where $\mu_r = r! \sum_{k=0}^{r} \frac{a_k}{(r-k)!}$; and $\lim \frac{\beta_r}{|\mu_r|} < \infty$,

where $\beta_r = r! \sum_{k=0}^{r} \frac{|a_k|}{(r-k)!}$, then (1) possesses a unique solution, analytic in $|x| < R$, if $F(x)$ is analytic in $|x| < R$. The special cases, where $F(x)$ is analytic in the whole plane or where all coefficients of (1) are non-negative, are considered.

On a class of differential equations ... S/140/62/000/004/004/009
C111/C333

For (2) one investigates the case where finitely or infinitely many μ_r vanish; in this case there exists the solution only, if g(x) satisfies certain linear relations; the uniqueness is disturbed.

ASSOCIATION: Rostovskiy gosudarstvennyy universitet (Rostov State University)

SUBMITTED: July 1, 1959

Card 4/4

KOROBEYNIK, Yu.F. (Rostov-na-Donu)

Method for investigating a differential equation of infinite order. Mat. sbor. 56 no.1:107-128 Ja '62. (MIRA 15:1)

1. Rostov gosudarstvennyy universitet.
(Differential equations)

34738
S/020/62/142/003/003/027
C111/C333

16.3500

AUTHOR: Korobeynik, Yu.F.

TITLE: Analytic solutions of Tricomi equations

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 3, 1962, 518-521

TEXT: As an analytic solution of

$$y \frac{\partial^2 z}{\partial x^2} + \frac{\partial^2 z}{\partial y^2} = 0 \qquad (1)$$

in the neighborhood of (x_0, y_0) the author denotes a complex-valued function $z(x,y)$ which is analytic in a bicylinder $|x - x_0| < r_1, |y-y_0| < r_0$ and satisfies (1) in the bicylinder.

Two problems are investigated.

Problem T_1 : Determine an entire solution in x,y of (1) which satisfies the conditions

$$u(x,0) = \varphi_0(x), \quad u(x,c\sqrt[3]{x}) = \varphi_1(x) \qquad (3)$$

Card 1/4

for all finite x, where $\varphi_0(x)$, $\varphi_1(x)$ are given and c is a given complex number.

Theorem 1 : The problem T_1 is solvable if $\varphi_0(x)$ is an entire function of order $< \frac{1}{3}$ and $\varphi_1(x)/\sqrt[3]{x}$ an entire function of order $< \frac{1}{2}$. Uniqueness takes place in the class of those entire solutions in x,y for which z(x,0) is an entire function of order $< \frac{1}{3}$ and $\partial z/\partial y|_{y=0}$ an entire function of order $< \frac{1}{2}$.

Problem T_2 : Determine that analytic solution z(x,y) of (1) in the neighborhood of (0,0) for which it holds

$$z(x,0) = \varphi_0(x) \; ; \quad z(x, c\sqrt[3]{x^2}) = \varphi_1(x) \quad \text{for } |x| \leq h . \qquad (5)$$

Theorem 2 : Let $c < 0$, $\varphi_0(x)$ be analytic in $|x| < \varrho$, $\varphi_1(x) = \lambda(x) + x^{2/3}\mu(x)$, where $\lambda(x)$ and $\mu(x)$ are analytic in :

$$|x| < \frac{\varrho}{1 + \frac{2}{3}|c|^{3/2}} .$$

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824730002-5

Then the problem T_2 possesses a solution z(x,y) which is analytic in $|x| < R$, $|y| < [3/2 (\varrho - R)]^{2/3}$ for every $R < \varrho$. The condition $z(x,0) = \varphi_0(x)$ is satisfied in $|x| < \varrho$ and $z(x, c\sqrt[3]{x^2}) = \varphi_1(x)$ in $|x| < \frac{\varrho}{1 + \frac{2}{3}|c|^{3/2}}$

The solution of T_2 is unique in the class of all functions v(x,y) which are analytic in the neighborhood of (0,0).

Let c be complex, $h(z) = e^z \omega(c^{3/2} z)$, $\omega(z) = 1 + \sum_{n=1}^{\infty} \frac{(-1)^n \prod_{k=1}^{n} (3k-1)}{(3n+1)!} x^{2n}$.

Theorem 3 : Let the following conditions be satisfied :

1) All Taylor coefficients $B_m/m!$ of h(z) are assumed to be different from zero and $\lim_{m\to\infty} \sqrt[m]{|B_m|} = a > 0$;

KOROBEYNIK, Yu. F.

On a certain class of differential equations of infinite order with variable coefficients. Izv. vys. ucheb. zav.; mat. no.4: 73-80 '62. (MIRA 15:10)

1. Rostovskiy gosudarstvennyy universitet.

(Differential equations)

KOROBEYNIK, Yu.F.

Equations of infinite order in generalized variables. Sib. mat. zhur. 5 no.6:1259-1281 N-D '64. (MIRA 17:12)

L 21319-65 EWT(d) IJP(c)/ASD(a)-5

ACCESSION NR: AP5004472 S/0038/64/028/004/0833/0854

AUTHOR: Korobeynik, Yu. F.

TITLE: Operators of generalized differentiation applied to any analytic function

SOURCE: AN SSSR. Izvestiya. Seriya matematicheskaya, v. 28, no. 4, 1964, 833-854

TOPIC TAGS: mathematic operator, differentiation, analytic function

Abstract: The operator of generalized differentiation introduced by A. O. Gel'fond and A. F. Leont'ev is studied in detail. Necessary and sufficient conditions are given for the application of this operator to any function at every point where the function is analytic. The properties of such operators are studied. "The author thanks A. F. Leont'yev for his attention to the work." Orig. art. has 21 formulas.

ASSOCIATION: Rostovskiy gosuniversitet (Rostov State University)

SUBMITTED: 23Jun63 ENCL: 00 SUB CODE: MA

NO REF SOV: 006 OTHER: 001 JPRS

Card 1/1

KOROBEYNIK, Yu.F. (Rostov-na-Donu)

Region of determination of an analytic solution to a differential equation of infinite order. Mat. sbor. 64 no.2:153-170 Je '64. (MIRA 17:9)

KOROBEYNIK, Yu.F.

Properties of the limit function of a sequence of linear aggregates.
Dokl. AN SSSR 154 no.6:1254-1257 F '64. (MIRA 17:2)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Predstavleno akademikom I.N.Vekua.

KOROBEYNIK, Yu.F.

Integral analytic solutions to equations of infinite order with polynomial coefficients. Dokl. AN SSSR 157 no.5:1031-1034 Ag '64. (MIRA 17:9)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Predstavleno akademikom I.M. Vinogradovym.

L 23206-66 EWT(d) IJP(c)

ACC NR: AP6013589 SOURCE CODE: UR/0140/65/000/001/0081/0090

AUTHOR: Korobeynik, Yu. F. (Rostov-na-Donu)

ORG: none

TITLE: Generalization of the Liouville theorem

SOURCE: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, no. 1, 1965, 81-90

TOPIC TAGS: integral function, complex number

ABSTRACT: The Liouville theorem is generalized, resulting in the proof of five theorems, of which Theorem 5 is:

Let an integral function $f(z)=\sum^{\infty} a_n z^n$, $a_n \neq 0$, $n=0, 1, \ldots$,

satisfy the condition

$$\overline{\lim_{n\to\infty}} \frac{\ln\left|\frac{a_{n-1}}{a_n}\right|}{n^{\rho}} = \sigma < \infty, \quad 0<\rho<1,$$

with complex and natural numbers u_k, such that

$$\overline{\lim_{m\to\infty}} \frac{|s_m|^{\frac{\rho}{1-\rho}}}{\ln|\lambda_m|} < C < \infty, \quad s_m = \sum_{k=1}^{m} n_{k1} \quad C>0;$$

Card 1/2

L 23206-66

ACC NR: AP6013589

and let also the sequence of linear aggregates

$$Q_n(z) = \sum_{i=1}^{p_n} \sum_{m=0}^{n_i-1} a_{i,m}^{(n)} z^m f^{(m)}(\lambda_i z)$$

converge uniformly in any finite circle and the limit function $\Phi(z) = \sum_{n=0}^{\infty} g_n z^n$ increase sufficiently slowly so that $\overline{\lim_{n \to \infty}} n^{-\rho} \ln \sqrt[n]{|g_n|} < -\frac{\sigma}{\rho + 1}$.

Then ϕ (Z) is a polynomial of at most degree p-1, where p = $n_1 \geqslant 1$, if $\lambda_1 = 0$, and identically zero if $\lambda_1 \neq 0$. Orig. art. has: 15 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 16Dec63 / ORIG REF: 006 / OTH REF: 001

Card 2/2 PB

L 59514-65 EWT(d) Pg-4 IJP(c)

ACCESSION NR: AP5017600 UR/0199/65/006/003/0516/0527
517.9

AUTHOR: Korobeynik, Yu. F.

TITLE: Infinitely differentiable solutions of a linear differential equation of infinite order

SOURCE: Sibirskiy matematicheskiy zhurnal, v. 6, no. 3, 1965, 516-527

TOPIC TAGS: differential equation

ABSTRACT: Using a method worked out by A. F. Leont'yev (Ryady polinomov Dirikhle i ikh obobshcheniya, Tr. matem. in-ta im. V. A. Steklova, t. XXXIX, 1951) and (O posledovatel'nostyakh lineynykh agregatov, obrazovannykh iz resheniy differentsial'nykh uravneniy, Izv. Ak. nauk SSSR, ser. matem., 22, No. 3 (1958), 201-241), the author obtains under certain assumptions a representation of an infinitely differentiable solution of

$$\sum_{k=0}^{\infty} a_k y^{(k)}(x) = 0 \qquad (1)$$

in the form of a sum of boundary values of two analytic solutions. His main result is that infinitely differentiable solutions of (1) for certain functional classes

Card 1/2

L 59514-65

ACCESSION NR: AP5017600

may be represented as limits of sequences of functions converging uniformly on [a,b] of elementary form, that is, of the form

$$\psi_n(x) = \sum_{k=0}^{n} P_{k,n}(x) e^{\lambda_k x}, \qquad (2)$$

where λ_k is a zero of multiplicity n_k of the characteristic function $\omega(x) = \sum_{k=0}^{\infty} a_k x^k$ of equation (1) and $P_{k,n}(x)$ is a polynomial of degree not higher than $n_k - 1$. "In conclusion the author expresses his gratitude to Professor A. F. Leont'yev for discussing the results of this work." Orig. art. has: 10 formulas.

ASSOCIATION: none

SUBMITTED: 27Mar64 ENCL: 00 SUB CODE: MA

NO REF SOV: 007 OTHER: 007

Card 2/2

KOROBEYNIK, Yu.F. (Rostov-na-Donu).

Completeness of a certain system of analytic functions.
Mat. sbor. 67 no.4:561-569 Ag '65. (MIRA 18:8)

L 27604-66 EWT(d) IJP(c)

ACC NR: AT6018487 SOURCE CODE: UR/2924/65/005/001/0097/0115

AUTHOR: Korobeynik, Yu. F.

ORG: Rostov State University (Rostovskiy gosudarstvennyy universitet)

17
B+1

TITLE: Concerning an integral operator

SOURCE: Litovskiy matematicheskiy sbornik, v. 5, no. 1, 1965, 97-115

TOPIC TAGS: integral operator, analytic function, integral function

ABSTRACT: The article concerns an integral operator of the form

$$Py = \frac{1}{2\pi i} \int_{C_z} y(t)\, \omega\left(\frac{z}{t}\right) \frac{dt}{t^s},$$

where y(t) is an arbitrary analytic function, $\omega(x)$ is a function which is analytic in the region $|x-1| > 0$ and has a root no lower than the second degree at infinity, C_z is any Jordan curve of bounded length surrounding the point z and lying in the region of analyticity of y(z).

The author determines the increase of the powers $P^N y = P(P^{N-1} y)$ and investigates the region of uniform convergence of the series

$$\sum_{n=0}^{\infty} \varphi_n(z) z^n y(z),$$

where $\varphi_n(z)$ are integral functions. Orig. art. has: 6 formulas.

Based on author's Eng. abstract. [JPRS]

SUB CODE: 12/ SUBM DATE: 01Apr64/ ORIG REF: 008/ OTH REF: 005

Card 1/1

ACC NR: AP7009570

SOURCE CODE: UR/0039/67/072/001/0003/0037

AUTHOR: Koroboynik, Yu. F. (Rostov-na-Donu)

ORG: none

TITLE: Applications of the theory of normally solvable operators to infinite-order differential equations

SOURCE: Matematicheskiy sbornik, v. 72, no. 1, 1967, 3-37

TOPIC TAGS: mathematic operator, mathematics

SUB CODE: 12

ABSTRACT: The author defines a sufficiently general class of equations $\sum_{k=0}^{\infty} P_k(x)\, y^{(k)}(x) = f(x)$ whose coefficients satisfy the conditions

$$P_0(x) = a_0 \neq 0,\ P_k(x) = \sum_{s=0}^{n_k} a_s^k x^s \ (k = 1, 2, \ldots),\ \sup_{k \geq 1} \frac{n_k}{k} = \alpha \ (0 \leqslant \alpha < 1).$$

The additional condition is also placed on the coefficients a_s^k: for at least one $Q > 0$ the inequality

$$A(Q) = \sum_{k=1}^{\infty} \sum_{s=0}^{n_k} \frac{|a_s^k|\, Q^{k-s}}{\{([\alpha k] - s)!\}^{\frac{1}{1-\alpha}}} < \infty,$$

where $[x]$ is the integral part of the number x, must hold.

The following theorems are proven for this equation satisfying these conditions:

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ACC NR: AP7009570

I. For any function f(x) in E_o there exists a particular solution of the equation of the same order and type as f(x).

II. If homogeneous ($f \equiv 0$), the equation has v linearly independent solutions in E_o, where v is the number of zeros of the function w(x) in the interval $|x| < Q$; moreover, every group of m zeros (taking into account their multiplicity) lying in the interval $|x| = R < Q$ corresponds to m linearly independent solutions of a homogeneous equation of order 1 - a and type $\frac{R^{1-\alpha}}{1-\alpha}$.

Corollary: For any function f(x) in E_1 the equation has a unique solution in E1. Orig. art. has: 7 formulas. [JPRS: 40,100]

KOROBEYNIKOV, A., zootekhnik.

Let's provide plenty of feed and warmth in wintering livestock. Sel'khoz. Kirg. 3 no.10:10-11 O '57. (MIRA 10:11)

1. Kolkhoz "Krasnyy Oktyabr'" Stalinskogo rayona.
(Kirghizistan--Stock and stockbreeding)

KOROBEYNIKOV, A.

"Geography of Moscow Province." G.IU.Griunberg. Reviewed by A. Korobeinikov. Geog. v shkole 26 no.1:88-89 Ja-F '63. (MIRA 16:5)
(Moscow Province—Physical geography)

KOROBEYNIKOV, A.F.

Basic characteristics of the fissure tectonics of the Kommunarovskoye gold ore zone. Geol. i geofiz. no.11:111-123 '64.
(MIRA 18:4)

1. Tomskiy politekhnicheskiy institut.

1. KOROBEYNIKOV, A. I.

2. USSR (600)

4. Electric Lines - Overhead

7. Device for determining the dip of electric transmission line cables, Rab. energ., 2, No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

KOROBEYNIKOV, A. I.

Couplings

Apparatus for testing cable connecting couplings. Rab. energ. 2, no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952, UNCLASSIFIED.

KOROBEYNIKOV, A.I.

AID P - 3707

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 12/25

Author : Korobeynikov, A. I., Head foreman

Title : Experiment with the operation of steel cable coupling boxes

Periodical : Energetik, 12, 17-18, D 1955

Abstract : The author describes his experience from 1950 to 1955 with operating 20 steel cable coupling boxes which were installed in 1950 in a Alma-Ata cable network. Heavy corrosion of steel was observed and the author recommends insulating the couplings and producing them according to some standards which should be elaborated as soon as possible. One drawing.

Institution : None

Submitted : No date

KOROBEYNIKOV, A.I., master.

[redacted]

Using pole-mounted joints on 6-10 kv. cables. Energetik 4 no.10: 24 O '56. (MLRA 9:11)

(Electric connectors)

KOROBEYNIKOV, A.S.

"Methodology of teaching geography" by S.F. Kargalova, T.S. Panfilov, V.G. Erdeli. Reviewed by A.S. Korobeinikov. Geog. v shkole 24 no. 1:91-92 Ja-F '61. (MIRA 14:2)

(Geography--Study and teaching)
(Kargalova, S.F.) (Panfilov, T.S.) (Erdeli, V.G.)

KOROBEYNIKOV, A.T.; SKLYARENKO, V.K.; ALFEROV, I.A.; MALYKHIN, Yu.Z.; BURCHENKO, P.N.

Letter to the editor. Sel'khozmashina no.4:22 Ap '56. (MLRA 9:7)
(Machinery--Testing)

KOROBEYNIKOV, A.T.; LOKTEV, L.S.

Practices in the use of the KGP-2 potato harvesting combine for sorting sugar beets. Trakt. i sel'khozmash. 33 no.7:28-29 Jl '63. (MIRA 16:11)

1. TSentral'no-Chernozemnaya mashinoispytatel'naya stantsiya.

ACC NR: AP7006049 SOURCE CODE: UR/0144/66/000/008/0910/0912

AUTHOR: Mikhaylov, V. V.; Korobeynikov, B. A.

ORG: none

TITLE: Dual-operation thyristor

SOURCE: IVUZ. Elektromekhanika, no. 8, 1966, 910-912

TOPIC TAGS: thyristor, pn junction, control circuit

ABSTRACT: Currently Soviet industry is organizing the fabrication of dual-operation thyristors which, as distinct from single-operation thyristors, can be disconnected by supplying a signal to the control electrode circuit. A thyristor of this kind contains four layers with alternating conductivity which form three p-n junctions. Low-power dual-operation thyristors can be used to further perfect the design of automatic devices. The newly produced thyristors of this kind, designed for a working current of up to 50 ma and a permissible disconnection current of up to 15 ma can be successfully used for this purpose. In these thyristors, the p_1 layer performs the functions of the anode A, and the n_2 layer, the functions of the cathode C. The control electrode is connected to the base p_2. The central region, n_1, is connected to the same ohmic anode con-

Card 1/2 UDC: 621.314.63+621.382.2

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