

GERGINOV, Stoicho, gl. inzhener; DUNDOV, D., inzh., gl. konstruktor

Realization of economy from carbamide glue. Durvomebel pro  
5 no.2:10-11 Mr-Ap '62.

1. Durzhavno industrialno predpriatie "23 dekemvri", Sofia.

DUNDOV, Dimitur, inzh.

What was shown at the International Furniture Exhibition in Cologne,  
German Federal Republic. Durvomebel prom 7 no.2/3:35-39 Mr-Je '64.

1. Chief Constructor, "23 dekemvri" State Industrial Enterprise.

FOGELZANG, Zisfrid [Vogelsang, Siegfried], dipl. khim.; DUNDOV, Dimitur,  
inzh. [translator]

Nitrocellulose polisher and Schwavel-lacquers; their properties  
and processing. Durvomebel prom 7 no.6:5-8 N-D. 1964.

1. Lacquer and Printing-Ink Factory, Coswig, German Democratic  
Republic (for Vogelsang).

DUNDR, J. - INZENYRSKE STAVBY - Vol. 3, no. 4, Apr. 1955.  
Proceedings and resolution of the National Conference of Activists in  
Construction Engineering held March 7-8, 1955. p. 133.

Experience in the reconstruction of industrial plants. p. 145.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955.  
Uncl.

DUNDUA, N.G.; LYUBARSKAYA, K.V.

Electroencephalographic control of the depth of anesthesia in  
the orthopedic surgery of children. Soob. AN Gruz. SSR 39 no.2:  
493-497 Ag '65. (MIRA 18:9)

I. Nauchno-issledovatel'skiy institut travmatologii, Tbilisi.  
Submitted February 26, 1965.

S/276/63/C00/002/028/052  
A052/A126

AUTHOR: Dundr, Jiří

TITLE: A method of applying thermosetting and thermoplastic plastics  
(in particular on artificial resin base) as corrosion protec-  
tion

PERIODICAL: Referativnyy zhurnal, Tekhnologiya mashinostroyeniya, no.2,  
1963, 107, abstract 2B573 P. (Czech. pat., cl. 75c, 5/01,  
no. 101400, October 15, 1961)

TEXT: The article has not been reviewed.

Card 1/1

KUCERA, Jaroslav, inz.; DUNDR, Jiri, inz.

Methods of modelling in furnaces. Stroj cas 13 no.2:136-160 '62.

1. Ustav pro vyzkum stroju, Ceskoslovenska akademie ved, Praha.

DUNDR, Jiri, inz., CSc.

Mechanism of germanium concentration in coal combustion. *Acta  
techn Cz 8 no.4:375-386 '63.*

1. Czechoslovak Academy of Sciences, Praha 6 - Bubeneč,  
Puskinovo namesti 9.



DUNDR, J., inž., CSc.; KUCERA, J., inž.

Problems of velocity measurement in industrial furnaces. Strojirenstvi  
13 no.7:526-533 J1 1963.

1. Ustav pro vyzkum stroju, Ceskoslovenska akademie ved, Praha.

DUNDR, Jiri, inz., C.Sc.

A conference on large boilers of electric power plants. Stroj cas 14  
no.2:196-197 '63.

DUNDR, J.

~~Research on large electric power plant boilers.~~ Vestnik CSAV  
72 no.1:86-88 '63.

ACCESSION NR: AP4022220

Z/0041/64/000/002/0140/0159

AUTHOR: Dunder, Jiri (Dunder, Yirzhi) (Engineer, Candidate of technical sciences);  
Kucera, Jaroslav (Kuchera, Yaroslav) (Engineer)

TITLE: Investigation of turbulence in models of combustion chambers

SOURCE: Strojnický časopis, no. 2, 1964, 140-159

TOPIC TAGS: combustion, combustion chamber, turbulence, fuel, pulverized fuel, fuel combustion

ABSTRACT: Measurements were made of the turbulence intensity with isothermic flow in aerodynamic models of a laboratory cylindrical furnace 200 mm. in diameter and a vertical cyclone furnace 3000 mm. in diameter in order to determine the effect of turbulence on the intensity of fuel combustion. In the absence of a suitable method in the literature for measuring turbulence in furnaces it was not possible to make a quantitative comparison of the laboratory results with data for industrial furnaces. However, since the results obtained in laboratory burners indicated that combustion does not undergo substantial change in the course of turbulence intensity, it is assumed that there is no qualitative

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ACCESSION NR: AP4022220

change in furnaces using pulverized fuel. Orig. art. has: 6 formulas, 15 figures, and 2 tables.

ASSOCIATION: Ustav pro vyzkum stroju CSAV, Prague (Institute for Machinery Research, CSAV).

SUBMITTED: 05Mar63

DATE ACQ: 08Apr64

ENCL: 00

SUB CODE: IE

NO REF SOV: 009

OTHER: 011

Card 2/2

DUNDR, Jiri, inz. CSc.

Measurement of gas jet velocity at high temperatures up to 4500°K and velocity M2. Stroj cas 16 no.2:253-259 '65.

1. Institute of Thermomechanics of the Czechoslovak Academy of Sciences, Prague. Submitted October 5, 1964.

DUNDR, Josef, inz.

The steel supporting structure for the Czechoslovak pavilions  
at the 1958 Universal Exhibition in Brussels. Inz stavby  
6 no.3:136-141 Mr '58.

1. Hutni projekt, Praha.

JANOUGH, Frantisek; MIKULA, Bretislav; DUNDR, Josef

New method of leather finishing by curtain-coating machine.  
Kozarstvi 13 no.5:145 My '63.

1. Zavody Antonina Zapotockeho, n.p., Tyniste nad Orlici.



KORDIK, Evzen; DUNDR, Vladimir; FORST, Zdenek; KLOFEC, Miroslav; MICEK, Frantisek; ROCEK, Otto

Physical and chemical principles of the production of carbonate type combined fertilizer. Chem prum 12 no.12:641-645 D '62.

1. Vyzkumny ustav anorganicke chemie, Usti nad Labem.

DUNDROVA, Vera, inz., CSc.; KOVARIK, Vaclav, inz., CSc.; SLAPAK, Pavel, inz.,  
CSc.

Some problems of the theory of sandwich plates. Stav cas 11  
no.5:313-331 '63.

1. Ustav teoreticka a aplikovane mechaniky, Ceskoslovenska  
akademie ved, Praha.

DUNDROVA, Vera, inz. CSc.; KOVARIK, Vaclav, inz. CSc.; SLAPAK, Pavel,  
doc. inz. CSc.

Theory of sandwich plate bending. Pt.3. Stav cas 12  
no.9:580 '64.

DUNDROVA, Vera, inz. CSc.; KOVARIK, Vaclav, inz. CSc.; SLAPAK, Pavel, inz. CSc.

Application of new theories of sandwich plate bending. Stav  
cas 12 no.10:622-640 '64.

1. Institute of Building of the Czech Higher School of Technology,  
Prague. Submitted February 1, 1964.

AM5012938

0

mathematical methods (variational, numerical, application of series) in solving particular problems, and evaluation of the range of applicability of the theory developed (Chapters 6 to 10).

The breakdown is evident from the table of contents. No person-  
mentioned. There are 92 references: 1 French, 1 German, 2 Dutch, 1

REFERENCES:

1. Introductory notes -- 9

- 2. Geometrical and physical equations in the theory of plates with plates -- 14
- 3. Application to sandwich plates -- 22
- 4. Character of loading -- 26

I 50214-65  
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- Estimate of the error of the finite solution
- Tables of complete energy functions --
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AM5012938

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AVAILABLE: Library of Congress

SUBMITTED: ... NOV 80V: 033

DUNDOVA, Vera, inz. CSc.

Deformation of a cylindrical shell due to arbitrary load applied along a curve. Stav cas 13 no.4:220-236 '65.

1. Institute of Building of the Czech Higher School of Technology, Prague. Submitted June 18, 1964.



L 44615-66 EWP(w)/EWP(k) IJP(c) EM

ACC NR: AT6033130

SOURCE CODE: HU/2504/66/053/03-/0343/0357

AUTHOR: Dundrova, V. (Prague); Kovarik, V. (Prague); Slapak, P.--Shlapak, P. (Prague)

ORG: none

30  
B+1

TITLE: Non-linear bending theory for sandwich plates. Part 1: The sandwich plate with very thin external layers

26

SOURCE: Academia scientiarum hungaricae. Acta technica, v. 53, no. 3-4, 1966, 343-357

TOPEC TAGS: thin plate, approximation method

ABSTRACT: The theory for bending of rectangular sandwich plates with isotropic core and very thin transversely isotropic external layers was developed from Laméian equations solved by a stepwise approximation method. Non-linear conditions existed only in some boundary conditions and the principal equations were all linear. The application of the theory was illustrated with a numerical example. The intermediate and final terms were interpreted in terms of actual physical factors. Thirty-two equations were presented to characterize the relations involved.

Orig. art. has: 3 figures, 32 formulas and 1 table. [Orig. art. in German]  
[JPRS: 36,645]

SUB CODE: 13, 12 / SUBM DATE: 01Jul64

Card 1/1 blg

0920 11684

DUNDROVA, V.

Welding curved rods, p. 359, ZVARANIE (Ministerstvo hutneho prumyslu a  
rudnych bani a Ministerstvo strojarstvo) Bratislava, Vol. 3, No. 12,  
Dec. 1954

SOURCE: East European Accessions List (EEAL) Library of Congress,  
Vol. 4, No. 12, December 1955

DUNDROVA-FALTUSOVA, V. - Inženýrské Stavby Vol. 3, no. 1, Jan. 1955

First railroad bridge with prestressed high-strength bolts as  
connecting elements built by the German Railroads. p.36

SO: Monthly List of East European Accessions, (KEAL), LC, Vol. 4, No. 9, Sept. 1955, Uncl.

DUNDUCHENKO, L. Ye.

"Some External Problems of Special Classes of Analytic Functions."

Card Phys-Math Sci, Inst of Mathematics, Acad Sci Ukrainian SSR, Kiev, 1955.  
(KL, No 18, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations  
Defended at USSR Higher Educational Institutions (16).

DUNDUCHENKO, L.Ye.

Some properties of analytical functions of special classes. Dop.  
UH URSR no.2:119-122 '56. (MLRA 9:12)

1. Kiivs'kiy politekhnichniy institut. Predstavleno akademikom  
Akademii nauk USSR B.V. Gnedenko.  
(Functions, Analytic)

AUTHOR: Dunduchenko, L. Ye. SOV/21-58-2-3/26

TITLE: On Univalent Functions Parabolically Convex in a Circle  
(Ob univalentnykh funktsiyakh, parabolicheskii-vypuklykh v krug)

PERIODICAL: Dopovidi Akademii nauk Ukrain's'koi RSR; 1958, Nr 2,  
pp 128-130 (USSR)

ABSTRACT: The author studied unifoliate parabolically convex functions in a unit circle which transform this circle in a  $\mathcal{H}$ -domain. A  $\mathcal{H}$ -domain is defined as one possessing the following properties: 1) it lies in a plane notched along the non-negative part of the axis of real quantities; 2) if the point  $\bar{a} = \alpha + i\beta$  belongs to the  $\mathcal{H}$ -domain, then the point  $a = \alpha - i\beta$  also belongs to it together with the section of the parabola  $y^2 = 4c^2x + 4c^4$  ( $0 < c < \dots$ ) joining these two points. Making use of some results of V.A. Zmorovich and M. Robertson [Ref 1] the author derives a structural formula for the class of the studied functions  $w = -1 - 2z + a_2z^2 + \dots$  expressing the necessary and sufficient condition of the given function of the given class belonging to given domain. The author gives also precise appraisals of

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SOV/21-58-2-3/28

On Univalent Functions Parabolically Convex in a Circle

the modulus of the function and its derivative and the moduli of the Taylor expansion co-efficients. Analogous appraisals are given for the more general class of parabolic convex functions normalized only by the condition  $\varrho(0)=-1$ . There is 1 non-Soviet reference.

ASSOCIATION: Kiyevskiy politekhnicheskii institut (Kiyev Polytechnic Institute)

PRESENTED: By Member of the AS UkrSSR, B.V. Gnedenko

SUBMITTED: May 21, 1957

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

Card 2/2

AUTHOR: Dunduchenko, L. Ye. SOV/140-58-3-11/34  
 TITLE: Some Properties of Schlicht Functions With Axial Symmetry  
 (Nekotoryye svoystva odnolistnykh funktsiy s osevoy  
 simmetriyey)  
 PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy: Matematika, 1958,  
 Nr 3, pp 84-95 (USSR)  
 ABSTRACT: In the unit circle the author considers schlicht functions  
 with the representation

$$f(z) = \frac{1}{\pi} \int_0^{\pi} F_{\alpha}^{*}(z; \theta) d\mu(\theta) ,$$

where  $z = re^{i\varphi}$ ,  $0 \leq r < 1$ ,  $0 \leq \varphi < 2\pi$ ;  $\mu(\theta)$  is a nondecreasing function on  $[0, \pi]$ ,  $\mu(0) = 0$ ,  $\int_0^{\pi} d\mu(\theta) = \pi$ , and

$$F_{\alpha}^{*}(z, \theta) = \int_0^z \left( \frac{1-\xi}{1+\xi} \right)^{1-2\alpha} \frac{d\xi}{1 - 2\xi \cos \theta + \xi^2} \quad (0 < \alpha < 1)$$

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Some Properties of Schlicht Functions With Axial Symmetry

SOV/140-58-3-11/34

Such functions have the Taylor expansion

$$f(z) = z + a_2 z^2 + \dots + a_n z^n + \dots$$

Let

$$\left(\frac{1-z}{1+z}\right)^{1-2\alpha} = \sum_{n=0}^{\infty} d_n z^n, \quad d_0 = 1, \quad \frac{1}{(1+z)^2} = \sum_{k=0}^{\infty} c_k z^k, \quad c_0 = 1$$

Then it holds

$$|a_\nu| \leq \frac{1}{\nu} \sum_{p=0}^{\nu-1} |d_p c_{\nu-1-p}|$$

For  $|\operatorname{Re} \frac{1}{2}(z + \frac{1}{z})| \geq 1$ ,  $\frac{1}{2} \leq \alpha < 1$ , there hold the following estimations

- 1.)  $|f(z)| \leq \frac{1}{4\alpha} \left[ \left(\frac{1+r}{1-r}\right)^{2\alpha} - 1 \right]$
- 2.)  $|f'(z)| \geq \frac{(1-r)^{2\alpha-1}}{(1+r)^{2\alpha+1}}$

Some Properties of Schlicht Functions With Axial  
Symmetry

SOV/140-58-3-11/34

$$3.) |f(z)| \geq \frac{1}{4\alpha} \left[ 1 - \left( \frac{1-r}{1+r} \right)^{2\alpha} \right]$$

Similar estimations are given in the other cases. Furthermore

$\arg \frac{f'(z)}{z}$  is estimated from above and from below. For  $\alpha = \frac{1}{2}$

one obtains from the above estimations the distortion theorems for functions which are convex in the direction of the imaginary axis.

There are 9 references, 6 of which are Soviet, 2 American, and 1 Finnish.

ASSOCIATION: Kiyevskiy politekhnicheskij institut (Kiyev Polytechnic  
Institute)

SUBMITTED: November 18, 1957

Card 3/3

DUNDUCHENKO, L.Ye. [Dunduchenko, L.O.] .

On a class of functions univalent in the circle  $|z| < (\sqrt{2})^{-1}$ .  
Dop. AN URSSR no.6:595-596 '58. (MIRA 11:9)

L.Kiyevskiy politekhnicheskii institut. Predstavil akademik M.A.  
Lavrent'yev [M.O.Lavrent'iev]  
(Functions of complex variables)

16(1)

PHASE I. BOOK EXPLOITATION

SOV/2653

Dunduchenko, Leonid Yemel'yanovich, Docent

Teoriya funktsiy kompleksnogo peremennogo; konspekt lektsiy (Theory of Functions of Complex Variables; Abstracts of Lectures) Kiyev, 1958. 71 p. 1,200 copies printed.

Sponsoring Agency: Kiyevskiy politekhnicheskij institut. Kafedra vyshey matematiki.

PURPOSE: This book is intended as a textbook for students of radio, electrical, and heat engineering.

COVERAGE: This book is based on lectures the author gave on the subject in various courses he taught to students in the second and third years of study in radio, electrical, and heat engineering at the Kiyev Polytechnic Institute from 1953 to 1956. The concepts of the complex number and the functions of the complex variable and their differentiations are given, on the basis of which the analytic function is defined. The integral in the complex plane, Taylor and Laurent series for analytic functions, and a short theory of residues are

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SOV/2653

## Theory of (Cont.)

presented and applied to the study of particular elementary functions of a complex variable. The theory of conformal mapping is not discussed in detail. No personalities are mentioned. There are no references.

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## Theory of (Cont.)

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Theory of (Cont.)

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AVAILABLE: Library of Congress (QA 331.D86)

Card 4/4

LK/jb  
12-22-59

16(1) SOV/21-59-2-1/26  
 AUTHORS: Dunduchenko, L.Ye., and Kas'yanyuk, S.A. (Dunduchenko, L.O. and Kas'yanyuk, S.A.)  
 TITLE: On Analytical Functions Limited in n-Connected Circular Regions (Ob analiticheskikh funktsiyakh, ogranichennykh v n-svyaznykh krugovykh oblastyakh)  
 PERIODICAL: Dopoviđi Akademii nauk Ukrain's'koi RSR, 1959, Nr 2, pp 111- 15 (USSR)  
 ABSTRACT: Proceeding from the results of V.A. Zmorovich [Ref 1] the authors establish a structural formula for a class of functions limited in their modulus in the vicinity of the boundary  $K_n$  and analytic functions (regular and meromorphic) in an n-connected circular region  $K_n$ . A series of exact values was obtained in classes of limited regular functions, also exact evaluations of expressions  $f'(z)$  and  $\operatorname{Re} f(z)$  in the class  $C(K_n)$  of functions regular in  $K_n$  and possessing a positive real part. Inequality

Card 1/3

$$|f(z)| \leq M \prod_{i=1}^m |H(z; a_i)| \cdot \prod_{s=1}^m |H^{-1}(z; b_s)|$$



SOV/21-59-2-1/26

## On Analytical Functions Limited in n-Connected Circular Regions

analogous to the lemma of Schwarz was examined and made more exact by the authors, yet was not shown in final form, in view of its combersomeness. Terms used in the text are standard mathematical. Prearranged designations are:  $K_n$  is n-connected monophylous region obtained from the whole area by the exclusion from it of n circles  $|z-C_k| \leq R_k$ ,  $k=1,2,\dots,n$ .  $C_k$  is circle  $|z-C_k|=R_k$ ,  $C_k$  is affix of that circle's point.  $H(z;a)$ ,  $a \in K_n$  designate a regular and univalent in  $K_n$  function, that reflects  $K_n$  upon single circle cut across (n-1) arc of concentric circles. function  $f(z)$  is regular.  $\varphi(z)$  is a regular function in  $K_n$ .  $\beta$  is real constant,  $H(z;a)$  is defined at  $z^0$  point. Function  $h$  has properties analogous to function  $H$ . Four theorems are examined and proved.

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SOV/21-59-2-1/26  
On Analytical Functions Limited in n-Connected Circular Regions

There is 1 Soviet reference.

ASSOCIATION: Zaporozhskiy mashinostroitel'nyy institut (Zaporozh'-  
ye Institute of Machine Building)

PRESENTED: By B.V. Gnedenko, Member of the AS Ukr SSR

SUBMITTED: October 15, 1958

Card 3/3

16(1)

AUTHORS:

Dunduchenko, L.Ye., and Kas'yanyuk, S.A.

SOV/21-59-3-1/27

TITLE:

On Analytical Functions of Limited Boundary Rotation in n-Connected Circular Regions (Ob analiticheskikh funktsiyakh s ogranichennym granichnym vrashcheniyem v n-svyazannykh krugovykh oblastiakh)

PERIODICAL:

Dopovidi Akademii nauk Ukrain's'koi RSR, 1959, Nr 3, pp 227-230 (USSR)

ABSTRACT:

Proceeding from the work by V.A. Zmorovich [Ref 1], the authors introduce a class  $P(K_n)$  of functions with limited boundary rotation, which generalizes the corresponding class of functions of Paatero [Ref 3] on n-connected circular regions  $K_n$ . The obtained exact expressions of values of arguments of functions  $f'(z)$  and  $|f'(z)|$  generalize the before-obtained results when  $N=2$  in the authors versions and when  $N=1$  in Paatero's version. (The consideration of expressions with  $n=2$  has been borrowed by the authors from the text of their lecture at the IV All-Union conference on the theory of functions

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SOV/21-59-3-1/27

On Analytical Functions of Limited Boundary Rotation in n-Connected Circular Regions

of a complex variable, that took place in Moscow in May 1958). An n-connected synonym of the polygonal formula of Schwarz-Christoffel, applicable in the conformal mapping theory, has been formulated:

wherein  $j = 1, 2, \dots, n$ ;  $f(z)$ ,  $j(\ )$  are functions;  $m_j$  is number of disruption points of functions  $j(\ )$ ,  $j, s$  is a fixed point of circle  $R_j e^{i - c_j} = R_j$ . Other designations are standard mathematical, changing their values according to the character of the aim. Three theorems are considered and proved. There are 3 references, 2 of which are Soviet and 1 Italian.

Card 2/3

SOV/21-59-3-1/27  
On Analytical Functions of Limited Boundary Rotation in n-Connected Circular Regions

ASSOCIATION: Zaporozhskiy mashinostroitel'nyy institut (Zaporozhye Machine Construction Institute)

PRESENTED: October 27, 1958, by B.V. Gnedenko, Member of the AS UkrSSR

Card 3/3

DUMENKOV, V.I.; NEKRASOV, V.I.; PLAKS, A.V.; SHELESKOV, K.K.; YARCHUK, A.Ya.  
(Leningrad)

Investigation of some parts of the electric equipment of M8  
electric locomotives. Elek.i tepl.tiaga no.10:18-19 O '57.  
(MIRA 10:11)

(Electric locomotives)

32(3)

SOV/112-59-5-9110

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 5, p 100 (USSR)

AUTHOR: Dunenkov, V. I., Nekrasov, V. I., Plaks, A. V., Sheleshkov, K. K.,  
and Yarchuk, A. Ya.

TITLE: Investigation of Electrical Equipment of Type N8 Electric Locomotive

PERIODICAL: Sb. Leningr. in-ta inzh. zh.-d. transp., 1957, Nr 155, pp 29-44

ABSTRACT: To introduce final corrections, the scheme of a type N8 electric locomotive had been tested under various conditions before serial manufacturing of the locomotive was started. Under regenerative braking conditions, the current reached 2,000 amp. On the section where the sub-stations had no inverter equipment, the contact-wire voltage reached 4,200 v, with NB-406 traction motors operating normally. Investigation of the transients accompanying the transition to series connection showed that sometimes, under regenerative conditions, the residual EMF of traction motors is so combined with the contact-wire voltage that voltages up to 5,100-6,000 v appear on the motor brushes. This caused flashovers from energized motor parts and

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SOV/112-59-5-9110

Investigation of Electrical Equipment of Type N8 Electric Locomotive

equipment to ground. To eliminate such overvoltages, it was suggested that the motors next to ground be short-circuited. To eliminate burning of contacts of the braking switch under transient conditions, it was recommended that two contactors be used for breaking the traction-motor field circuit when regeneration is cut off. Tests of a new laminated-core D-4 relay showed that it provides a satisfactory differential protection of the power circuit. Buffer protection, under traction conditions, is realized by introducing starting resistors; its operating time is 0.1-0.2 sec, the motor current being reduced to one-third of its value. Investigation of the functioning of the protective system under regenerative conditions permitted setting a course for solving this important problem. Forced ventilation is recommended for improving the operating conditions of "fekhral" resistors. Detailed investigations of air exchange within the locomotive body permitted providing some recommendations on how to improve the ventilating system. Bibliography: 3 items.

V.N.K.

Card 2/2



DUNENKOV, V.L., insh.

Switch adjustment in the DK-103 traction motor. Elek. i topl. tiaga 2  
no.4:20-22 Ap '58. (MIRA 12:3)  
(Electric switches)  
(Electric railway motors)

LUFKIN, D.M., kand.tekhn.nauk, dots.; GOLYNCHIK, L.S., inzh.; DUBENKOV, V.L.,  
inzh.; PERSVOZCHIKOV, S.H., inzh.

Electric locomotives using single-phase-3-phase current of  
industrial frequency with multi-speed asynchronous short-  
circuit traction motors. Sbor.LIIZHT no.159:71-91 '58.  
(MIRA 12:2)

(Electric locomotives)

GOLYNCHIK, Leonid Stepanovich; DMITRIYEV, Stepan Ivanovich; DUBENKOV, Vladimir Leonidovich; LUPKIN, Dmitriy Mikhaylovich; YAKOVLEV, D.V., insh., red.; BOBROVA, Ye.N., tekhn.red.

[Operation and repair of electric machinery on electric rolling stock] Eksploatatsia i remont elektricheskikh mashin elektropedyishnogo sostava. Moskva, Gos.transp.shel-dor.izd-vo, 1959. 223 p.

(MIRA 12:6)

(Electric locomotives)

(Electric machinery)

DUNENKOV, V.L., inzh.

Investigating commutation of single-phase a.c. collector traction  
motors. Sbor. LIZHET no. 167:5-22 '59. (MIRA 13:5)  
(Commutation (Electricity))  
(Electric railway motors)

DUNENKOV, V. L. Cand Tech Sci -- (diss) "Analysis of the commutation process of single stage collector traction motors with industrial frequency," Moscow, 1960, 18 pp, 150 cop. (Moscow Institute of Engineers of Railroad Transport im I. V. Stalin) (KL, 44-60, 130)

DUNENKOV, V.L.; LAPIN, V.B.; PLAKS, A.V.

Conference on a.c. electric traction. Elektrichestvo no.10:  
88-89 0 '61. (MIRA 14:10)  
(Electric railroads)

PLAKS, A.V., kand.tekhn.nauk, (Leningrad); DUNENKOV, V.L., kand.tekhn.  
nauk (Leningrad)

Interuniversity conference on a.c. electric traction. Izv.vys.  
ucheb.zav.; elektromekh. 4 no.8:101-104 '61. (MIRA 14:8)  
(Electric railroads--Current supply)

DUNENKOV, Vladimir Leonidovich, kand.tekhn.nauk, assistent

Adjustment of the additional poles in collector-type a.c. machines.  
Izv.vys.ucheb.zav.; elektromekh. 5 no.4:461-463 '62. (MIRA 15:5)

1. Kafedra elektricheskikh mashin Leningradskogo instituta  
inzhenerov zheleznodorozhnogo transporta.  
(Electric machinery--Alternating current)



KOROVIN, V.T.; DUNERMAN, N.G.; TARASENKO, V.Ys.

Modernizing the stop unit of the automatic four-spindle machine  
manufactured by Hasse Wrede Company. Stan.i instr. 34 no.4:  
34-35 Ap '63. (MIRA 16:3)

(Machine tools)

5

SHUGOL', M.B.; KUNAYEV, V.G.; DUNETS, A.M.; BABIN, P.N.; SHCHEGLOV, A.G.

Service of open-hearth furnace checkerwork. Ogneupory 29 no.7:313-  
317 '64. (MIRA 18:1)

1. Kazakhskiy metallurgicheskii zavod (for Shugol', Kunayev,  
Dunets). 2. Institut metallurgii i obogashcheniya AN KazSSR  
(for Babin, Shcheglov).

DUMETS, G. I., insh.

Operation of electric equipment at a present-day thermal electric  
power plant. Energetik 8 no.8:3-6 Ag '60. (MIRA 13:10)  
(Steam power plants--Equipment and supplies)

DUNETS, G.I., inzh.

Concerning the operation of auxiliary electric transformers.  
Energetik 9 no.6:14 Je '61. (MIRA 16:7)

(Electric transformers)  
(Electric power distribution)

DUNETS, G.I., inzh.; BATHON, I.S., inzh.

Concerning V.G. Vasil'ev's article "Decrease in the number of  
elements in stationary lead-acid storage batteries." Elek. sta.  
32 no.7:86 J1 '61. (MIRA 14:10)  
(Storage batteries)

SHUMAN, A.K.; DUNETS, G.I.

Concerning A.I. Safronov's article "Mobile high-voltage laboratories."  
Prom. energ. 18 no.8:59-60 Ag '63. (MIRA 16:9)

1. Promenergogaz (for Shuman). 2. Upravleniye energokhozyaystva  
Volgogradskogo soveta narodnogo khozyaystva (for Dunets).  
(Electric laboratories)  
(Safronov, A.I.)

DUNETS, G.I. inzh.

Time intervals between the repairs of the main equipment  
of electrical systems of industrial enterprises. Prom.  
energ. 21 no. 1:21-23 Ja '66 (MIRA 19:1)

DUNEV, N. B.

High-speed Driving of Mine Excavations as a Working Method. Minno Delo  
(Mining), #2:22:Feb 55



FINETS, Ye. M.; SEMASHKO, A. P.

"Slow neutron scattering by the bonded hydrogen."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva,  
31 Aug-9 Sep 64.

DUNEV, St.

A machine for transformer winding. Radio i televizia ll  
no.5:151-152 '62.

DUNEV, St.

Balancing of receiving antennae for 305 mc/s. Radio i  
televiziia 12 no.1:5-6 '63.

DUNEV, St. .

A receiver for 3.5 mc/s. Radio i televizia 12 no.3:69-79  
'63

DUNEV, St.

Favorite sport of Sofia radio amateurs. Radio i televisia 12  
no.9:261 '63.

DUNEV, St.

Radio Club of the Sofia Fourth Precinct. Radio i televiziia  
13 no.1:2 '64

DUNEV, Vl.

A rare case of jejunal cyst in a 4 and half year old child. Khirurgia, Sofia 14 no.8:753-754 '61.

1. Iz khirurgichnoto otdelenie na Gradskata obedinena bolnitsa, Gorna Oriskhovitsa.

(JEJUNOMA dis) (CYSTS in inf & child)

SHAMOVSKIY, L.M.; DUNINA, A.A.

X-ray luminescence of NaI(Tl) phosphor. Opt. i spektr. 18 no.4:728-  
729 Ap '65. (MIRA 18:8)



L 2825-66 EWT(l)/EWT(m)/EMP(t)/EMP(b) LP(c) JD

ACCESSION NR: AP5016173

UR/0051/65/018/006/1011/1018

535.373.1

30  
B

AUTHORS: <sup>44.55</sup> Shamovskiy, L. M.; Dunina, A. A.; Gosteva, M. I.

TITLE: Study of the mechanism of recombination luminescence in the phosphor NaCl(In<sup>3+</sup>) <sup>44.55</sup> <sub>21.44.55</sub>

SOURCE: Optika i spektroskopiya, v. 18, no. 6, 1965, 1011-1018

TOPIC TAGS: luminor, luminescence, x ray irradiation, luminescence center, luminescence quenching, recombination luminescence

ABSTRACT: The samples for the study were grown from a melt in quartz ampoules, using a method described elsewhere (Izv. AN SSSR ser. fiz. v. 22, 3, 1958). The crystals were excited by x-rays at different temperatures and the build up of luminescence and subsequent thermal de-excitation were investigated. The brightness was measured with a photomultiplier (FEU-29) and recorded with an automatic potentiometer. The intensity of the stationary x-ray luminescence was low at room

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L 2825-66

ACCESSION NR: AP5016173

temperature, being one order of magnitude less than the brightness produced in  $KCl(Tl)$ . The maximum intensity is reached 3.5 minutes after the start of the excitation. Approximately 50 per cent of the total brightness increases instantaneously, and the phosphorescence quenching is also faster than hyperbolic, the stationary brightness dropping 90 per cent without a time delay. The maximum attainable brightness increases with increasing temperature. The thermal de-excitation curve exhibits three peaks with maxima at 50, 95, and 190C (at a heating rate of 10 deg/min). The first peak is approximately twelve times stronger than the second and 24 times stronger than the third. Some secondary peaks appear at lower temperatures. The results are interpreted from the point of view of the hole mechanism of recombination luminescence. Orig. art. has: 3 figures, 1 formula, and 1 table.

ASSOCIATION: None

SUBMITTED: 07 Jun 63

ENCL: 00

SUB CODE: OP

NR REF SOV: 0011

OTHER: 001

BVK  
Card 2/2



DUNIAMALYAN, M.S.

Characteristics of forest soils rich in humus and carbonates under  
the yew plantations of Dilizhan District. Izv. AN Arm. SSR. Biol.  
i sel'khoz. nauki 10 no.3:43-49 Mr '57. (MIRA 10:5)

1. Armyanskiy sel'skokhoyaystvennyy institut.  
(Dilizhan District--Yew) (Forest soils)

DUNIAMALYAN, M.S.

Group and fractional composition of humus in the forest soils of  
Armenia. Izv. AN Arm. SSR. Biol. nauki 17 no.3:25-34 Mr '64.  
(MIRA 17:5)

DUNIAMALYAN. V. S.

32573. Zavisisimost' Vodootdachi Ot Dispersnykh Svoystv Pochvy. Izvestiya Gruz. Nauchissled. In-ta Gidrotekhniki i Melioratsii, t. 1, 1949, s. 63-70  
--- Rezyuome Na Gruz. Yaz. --- Gignogr: 8 Nazv.

So: Letopis' Zhurnal'nykh Statey, Vol 44, Moskva, 1949

COUNTRY : USSR J  
CATEGORY : Soil Science. Physical and Chemical Properties  
of Soil.  
ABS. JOUR. : RZhBiol.; No. 4, 1959, No. 15348  
AUTHOR : Duniamalyan, V.S.  
INST. : Georgian Sci. Res. Inst. of HydroEngineering and  
TITLE : Question of the Capillary Border of Salt Soil  
Bottoms of the Right Bank of the Alazani River  
valley.  
ORIG. PUB. : Tr. Gruz. n.-i. In-ta gidrotakhn. i melior.,  
1957, vyp. 18-19, 186-197  
ABSTRACT : The soil-melioration laboratory of the Georgian  
NIIG (Scientific Research Institute of Hydro-  
engineering) conducted experiments on nonoliths  
in order to determine the height of the capil-  
lary rise of water in a stratum of 1- and 2-m  
layers of the clayey salt soil of the right bank  
of the Alazani valley. The investigators used tensi-  
meters to observe the water flow. Evaporation  
was taken into account. The saturation process  
went on for 3 years with a rate of 0.12 - 0.13cm  
\*Melioration

75  
COUNTRY :  
CATEGORY :

ABST. JOUR. : RZhBiol., No. 4, 1959, No. 15348

AUTHOR :  
INST. :  
TITLE :

ORIG. PUB. :

ABSTRACT : in twenty-four hours at a depth of 1 m. and 0.3 - 0.4 at a depth of 2 m. The water-lifting capacity of the soil was very weak; the height of the film-capillary volume of water did not exceed 60 cm in the 1st m and 70 cm in the 2nd m. In melioration of the situation the low capillary state of these soils could be rated positively, since salt restoration after washing, and also water loss by evaporation, will occur in limited quantities, especially in maintain-

Card: 2/3



DONIAMALYAN, V.S.

Capillary properties of a loamy variety of saline soils in the  
rightbank area of the Alazan' Valley. Trudy GruzNIIGiM no.20:  
44-54 '58. (MIRA 15:5)  
(Alazan' Valley--Soil moisture) (Capillarity)

DUNIAMALYAN, V.S.; CHILINGAROVA, L.V.; FYRKOV, A.S.

Practice of improving the soda-sulfate Solonetz soils on the  
right bank of the Alazani Valley. Trudy Gruz NIIGIM no.21:  
77-84 '60. (MIRA 16:1)  
(Alazani Valley--Solonetz soils)  
(Reclamation of land)

MIKELADZE, G.Sh.; NADIRADZE, Ye.M.; PKHAKADZE, Sh.S.; GOGORISHVILI, B.P.;  
DGEBAUDZE, G.A.; SOLOSHENKO, P.S.; SEMENOV, V.Ye.; BARASHKIN, I.I.;  
SHIRYAYEV, Yu.S.; POSPELOV, Yu.P.; KATSEVICH, L.S.; ROZENBERG, V.L.;  
Prinimali uchastiye: LORDKIPANIDZE, I.S.; TSKHVEDIANI, R.N.;  
DZODZUASHVILI, A.G.; DUNIAVA, A.G.; PEKARSKIY, L.F.; GRITSFNYUK, Yu.V.;  
ZHELTOV, D.D.; LUZANOV, I.I.; GLADKOVSKIY, V.P.; PODMOGIL'NIY, V.P.;  
VOROPAYEV, I.P.; BRIKOVA, O.V.; VRUBLEVSKIY, Yu.P.; KLYUYEV, V.I.;  
BAYCHER, M.Yu.; LOGINOV, G.A.; SHILIN, V.K.; POPOV, A.I.; ZASLONKO, S.I.

Industrial experiments in the smelting of 45 o/o ferrosilicon in  
a heavy-duty closed electric furnace. Stal' 25 no.5:426-429 My '65.  
(MIRA 18:6)

1. Gruzinskiy institut metallurgii (for Lordkipanidze, Tskhvediani,  
Dzodzuashvili, Guniava). 2. Nauchno-issledovatel'skiy i proyektnyy  
institut metallurgicheskoy promyshlennosti (for Brikova, Vrublevskiy,  
Klyuyev). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut elektro-  
termicheskogo oborudovaniya (for Baycher, Loginov, Shilin, Popov,  
Zaslanko).

AUTHOR: Dunichev, K.I. (Moscow) SOV/140-58-1-5/21

TITLE: Fibered Pairs of  $\mathcal{M}_3$  Straight Lines and  $\mathcal{K}_3$  Planes in  $P_4$   
(Rassloyayemye pary iz  $\mathcal{M}_3$  pryamykh i  $\mathcal{K}_3$  plaskostey v  $P_4$ )

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy Ministerstva vysshego obrazovaniya SSSR, Matematika, 1958, Nr 1, pp 43-55 (USSR)

ABSTRACT: In the space  $P_4$  a three-parameter family of straight lines  $\mathcal{M}_3$  and a three-parameter family of two-dimensional planes  $\mathcal{K}_3$  in one-to-one correspondence are considered. The pair  $(\mathcal{M}_3, \mathcal{K}_3)$  is called one-side fibered in the direction of  $\mathcal{M}_3$  to  $\mathcal{K}_3$ , if each straight line  $m \in \mathcal{M}_3$  can be completed by  $\infty^1$  lines  $(M)$  lying in a ruled surface of  $\mathcal{M}_3$ , so that the three-dimensional tangential planes on these lines in the points of a straight line pass through the corresponding plane of  $\mathcal{K}_3$ . With the aid of  $\infty^2$  lines  $N$  the author analogously defines the notion "the pair  $(\mathcal{K}_3, \mathcal{M}_3)$  is one-side fibered in the

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Fibered Pairs of  $\mathcal{M}_3$  Straight Lines and  $\mathcal{N}_3$  Planes

SOV/140-58-1-5/21

in P<sub>4</sub>

direction of  $\mathcal{M}_3$  to  $\mathcal{N}_3$ ". If the pair is fibered in both directions, then it is called simply fibered. Furthermore the author distinguishes a general and a degenerated case. In the first case for given  $\mathcal{M}_3$ ,  $\mathcal{N}_3$  is determined by three arguments except an arbitrary function, and the configuration possesses the following properties: 1. The tangents on the lines (M) in points of a straight line of  $\mathcal{M}_3$  go through a point of the corresponding plane of  $\mathcal{N}_3$ . Under variation of the parameters of  $\mathcal{N}_3$  this point describes a three-dimensional focal surface. The lines (N) lie in the corresponding focal subfamily. 2. Analogous property for the lines (N). 3. The tangents on the lines (N) intersect the focal surface of  $\mathcal{M}_3$  along the reversal edge of a developable surface, the generatrices of which are the straight lines of  $\mathcal{M}_3$ .

The paper consists of four paragraphs.

ASSOCIATION: Moskovskiy gorodskoy pedagogicheskiy institut imeni Potemkina (Moscow Municipal Pedagogical Institute imeni Potemkin)

Card 2/3

Fibered Pairs of  $\mathcal{K}_3$  Straight Lines and  $\mathcal{K}_3$  Planes  
in  $P_4$

SUBMITTED: October 16, 1957

SOV/140-58-1-5/21

Card 3/3

16(1)

SOV/21-59-5-3/25

AUTHORS: Dunduchenko, L.Ye. and Kas'yanyuk, S.A.

TITLE: On Two Classes of Functions Regular in n-Connected Circular Regions

PERIODICAL: Dopovidi Akademii nauk Ukrain's'koi RSR, 1959, Nr 5, pp 468-472 (USSR)

ABSTRACT: This article constitutes a furthering of the authors' work /Ref. 1/ and the authors invite the reader to refer to that work prior to studying this one. Two very general classes  $\Gamma_o(K_n)$  and  $\Gamma_*(K_n)$  regular in n-connected circular regions of functions are under study, between which there exists a correlation of the Alexander type. Seven theorems are presented. 1) Possibility of expressing the function  $f(z)$  of  $\Gamma_o(K_n)$  class by its structural formula (3). 2) Contingency of joining the function  $\varphi(z)$  to  $\Gamma_*(K_n)$  class upon its fitness to be expressed by its

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SOV/21-59-5-3/25

On Two Classes of Functions Regular in n-Connected Circular Regions

structural formula (4). 3) The correctness of evaluations (6), (7) and (8), if the function  $f(z)$  belongs to  $\Gamma^0(K_n)$  class. 4) and 5) The correctness of evaluations (9) and (10) if  $f(z)$  is  $\Gamma^0(K_n)$ . 6) and 7) The correctness of evaluations (11), (12) and (13), if the function  $\Psi(z)$  belongs to  $\Gamma^*(K_n)$  class. Concretization of the parameters of the above named classes makes it possible to single out most classes of functions which are n-connected analogues of the respective classes of functions, adequately studied in the circle and annulus. There are 7 references, 5 of which are Soviet, 1 US and 1 Japanese.

ASSOCIATION: Zaporozhskiy mashinostroitel'nyy institut (Zaporozh'ye Machine Building Institute)

PRESENTED: By B.V. Gnedenko, Member of the AS UkrSSR

SUBMITTED: October 27, 1958

Card 2/2



16(1)

SOV/21-59-9-4/25

AUTHORS: Dunduchenko, L.O. and Kas'yanyuk, S.A.TITLE: On Classes of Functions of Limited Form in  $n$ -Connected Circular Regions

PERIODICAL: Dopovidi Akademiya nauk Ukrayins'koyi RSR, Nr 9, 1959, pp 945-948 (USSR)

ABSTRACT: In this paper, the authors discuss the functions regular in  $K_n$  of a limited form of classes  $A$  and  $H_p$  ( $p > 0$ ). The following structural formula of class  $A$  has been established generalizing V.I. Smirnov's well-known result for  $n$ -connected circular regions:

$$\zeta(z) = e^{-\alpha + i\beta} g(z) \times \exp \left\{ \frac{1}{2\pi} \sum_{j=1}^n \int_0^{2\pi} F_j(z; \xi_j) \ln p_j(\theta) d\theta \right\} \times$$

$$\times \exp \left\{ \frac{1}{2\pi} \sum_{j=1}^n \int_0^{2\pi} F_j(z; \xi_j) d\omega_j(\theta) \right\};$$

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SOV/21-59-9-4/25

On Classes of Functions of Limited Form in  $n$ -Connected Circular Regions

whereby  $\beta$  stands for constant;  $\gamma_j(z, \xi_j)$  - function which reflects the  $n$ -connected circular region  $K_n$  on the right half-plane with sections along segments parallel to the imaginary axis [Ref 4]; such inseparable function whose logarithms  $\omega_j(\theta)$  are added to the segment  $[0, 2\pi]$ ;  $\omega_j(\theta)$  function of a limited variation with a derivative which equals zero almost everywhere on the segment  $[0, 2\pi]$ ;  $b(z)$  function of Blaschke, constructed according to the zeros of the function  $f(z)$ . There are 5 Soviet references.

ASSOCIATION: Zaporiz'kyy mashynobudivnyy instytut (Zaporozh'ye Machine Building Institute)  
Card 2/3

DUNDUCHENKO, L. Ye.

16(1)

SOV/21-59-7-2/25

AUTHOR: Dunduchenko, L. Ye. / (Dunduchenko, L. Ye.)  
and Kas'yanyuk, S.A.

TITLE: On Blaszk'e's Function for n-Connected Circular Regions

PERIODICAL: Dopovidi Akademii Nauk Ukrain's'koi RSR, 1959, Nr 7  
pp 699-701 (UkrSSR)ABSTRACT: An n-connected analogue of Blaszk'e's function is constructed for an n-connected circular region  $K_n$  and a well-known theorem
$$\lim_{\rho \rightarrow r} \frac{1}{2\pi} \int_0^{2\pi} \ln [f(\rho e^{i\theta})] d\theta < +\infty$$

is generalized for region  $K_n$ : for every function  $f(z)$ , analytical in  $K_n$ ,  $f(z) \neq 0$ , the zeroes of which form a sequence with densification points on the border of  $K_n$ , a Blaszk'e function  $b(z)$  may be constructed, and the function itself may be presented in the form  $f(z) = b(z) \phi(z)$ , where  $\phi(z)$  is a single-value function regular in  $K_n$ , which is not reduced to zero at any point  $z \in K_n$ . There are 7 mathematic formulas

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SOV/21-59-7-2/25

On Blaszkę's Function for n-Connected Circular Regions  
and 1 Soviet reference.

ASSOCIATION: Zaporiz'kyi mashynobudivnyi instytut (Institute of  
Machine-Building of Zaporozh'ye)

PRESENTED: B.V. Gnedenko, Member AS UkrSSR

SUBMITTED: January 22, 1959

Card 2/2

DUNDUCHENKO, L.Ye. [Dunduchenko, L.Ye.]; KAS'YANYUK, S.A.

On n-connected analogs of certain theorems in classes of regular functions of a limited type. Dop. AN URSS no.1: 13-16 '60. (MIRA 13:6)

1. Zaporozhskiy mashinostroitel'nyy institut. Predstavleno akademikom AN URSS B.V. Gnedenko [B.V. Gnedenko].  
(Functions)

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S/042/60/015/005/011/016XX  
C111/0222

16.3000

AUTHORS: Dunduchenko, L.Ye., and Kas'yanyuk, S.A.TITLE: On Spiral Functions Schlicht Within an Annulus

PERIODICAL: Uspekhi matematicheskikh nauk, 1960, Vol.15, No.5, pp.165-170

TEXT: Let  $K_z(q;1)$  be the annulus  $0 < q < |z| < 1$ . A function  $w = f(z)$  schlicht in  $K_z(q;1)$  belongs to the class  $S_\omega(f)$  of the spiral functions:  $w \in S_\omega(f)$  if it maps  $K_z(q;1)$  onto a doubly connected domain intersecting with every logarithmic spiral of the family

$$(1) \quad |w| = \exp \left\{ \operatorname{ctg} \omega (\arg w - \varphi_0) \right\}, \quad |\omega| < \frac{\pi}{2}, \quad 0 \leq \varphi_0 \leq 2\pi,$$

where  $\omega = \text{const}$ ,  $\varphi_0$  - parameter on an arc not containing 0 and  $\infty$ . Let

$$\mathfrak{F}_1 \left( \frac{\ln \xi}{2\pi i} \right) = A \cdot (1 - \xi) \prod_{k=1}^{+\infty} (1 - q^{2k} \xi) (1 - q^{2k} \xi^{-1})$$

$$\mathfrak{F}_0 \left( \frac{\ln \xi}{2\pi i} \right) = A \prod_{k=1}^{+\infty} (1 - q^{2k-1} \xi) (1 - q^{2k-1} \xi^{-1})$$

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On Spiral Functions Schlicht Within an Annulus

$$A = \prod_{k=1}^{+\infty} (1 - q^{2k}), \quad 0 < q < |z| < 1.$$

For  $|f(z)|$  and  $\arg \left( \frac{f(z)}{z} \right)$ , where  $f(z) \in S_{\alpha}(f)$ , the authors give upper and lower estimations, e.g.:

$$|f(z)| \leq r \exp \left\{ \cos 2\alpha \left[ \frac{\mathfrak{J}_0 \left( \frac{\ln r e^{+i\beta_2}}{2\pi i} \right)}{\mathfrak{J}_1 \left( \frac{\ln r e^{+i\beta_2}}{2\pi i} \right)} \right]^2 + \sin 2\alpha \arg \frac{\mathfrak{J}_0 \left( \frac{\ln r e^{+i\beta_2}}{2\pi i} \right)}{\mathfrak{J}_1 \left( \frac{\ln r e^{+i\beta_2}}{2\pi i} \right)} \right\},$$

where  $r = |z|$ ,  $q < r < 1$ , and  $\beta_2, \beta_2'$  are solutions of certain auxiliary equations.

In a theorem it is proved that the strong upper and lower estimations of

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S/042/60/015/005/011/016XX  
C111/C222

On Spiral Functions Schlicht Within an Annulus

$\arg \left( \frac{f(z)}{z} \right)$  and  $|f(z)|$  in the class  $S_{\omega}(f)$  are reached by the following schlicht spiral function:

$$(4) \quad f_0(z) = z \left\{ \rho_0^2 e^{-i\alpha} \cos \alpha \left( \frac{\ln z e^{-i\delta}}{2\pi i} \right) \cdot \tilde{\rho}_1^{-2} e^{-i\alpha} \cos \alpha \left( \frac{\ln z e^{-i\omega}}{2\pi i} \right) \right\}, \quad \checkmark$$

where the constants  $\delta$  and  $\omega$ ,  $-\pi < \delta, \omega \leq \pi$  must suitably be chosen. The authors mention V.A. Zmorovich. There are 6 Soviet references.

SUBMITTED: February 24, 1959

Card 3/3



DUNDUCHENKO, L.Ye. [Dunduchenko, L.O.]; KAS'YANYUK, S.A.

A-convolutions of Laurent series. Dop.AN URSS no.7:845-849  
'61. (MIRA 14:8)

1. Zaporozhskiy mashinostroitel'nyy institut. Predstavleno  
akademikom AN USSR B.V.Gnedenko [Hniedenko, B.V.].  
(Functions, Analytic) (Series, Taylor's)

DUNDUCHENKO, L. E.

On a generalization of the classes of analytic functions, examined by  
L. Chakalov. Izv Mat inst BAN 5 no.1:35-41 '61.

~~DUNDUCENKO, L.E.~~ [Dunduchenko, L.Ye.]; KASIANIUK, S.A. [Kasyanyuk, S.A.]

The limited-type functions in a circular ring. I. Analele  
mat 16 no.2:63-81 Ap-Je '62.

DUNDUCHENKO, L.Ye. (Kiyev)

Reduction to the single-valued type of certain functions analytic  
in a finitely connected region. Mat. Sbor. 67 no.1:3-15 My '65.  
(MIRA 18:5)