

L 57502-65

ACCESSION NR: AP5013999

with  $w_1 = 20$  m/sec the flame had a compact flow character with substantial discharge in the center region; the length of the recirculation zone was 2.0-2.5 d (d = outside diameter of pot); angle enclosing flame was below  $40-44^\circ$ . At lower  $w_2/w_1$  the angle increased but the flow irregularity (ratio between maximum and minimum velocity at a point and the average calculated flow velocity) was also increased. Maximum dimensionless axial velocities decreased with increasing  $w_2/w_1$  for  $x/d < 2-2.5$ , but were independent of  $w_2/w_1$  for  $x/d > 2.5$ . All parameters depended on whether the torch was operating with or without flow separation between the primary and secondary air supply. With flow separation, the length of the torch increased with a decrease in swirl. To control the position of the flame core, it was found advisable to change the distance between the primary and secondary air supplies. Comparison with other burners showed that the velocity change and length of flame penetration of the UT-11-2 are comparable to that of round double-helix burners, but that flame penetration is much lower than for Z10 burners with radial vanes. Most recirculation occurred in sections  $\approx 0.5$  d from the throat and comprised 9-10% of the total flow. Mixing of primary and secondary air supplies was found to be much better with separation between the flows than without. Since UT-11-2 offers comparable performance to double-helix burners (with a much lower hydraulic loss coefficient), these burners are recommended for industrial use. Orig. art. has:  
Card 2/4

L 57502-65

ACCESSION NR: AP5013999

7 figures, 2 tables, and 3 formulas. 2

ASSOCIATION: TsKTL; Z10

SUBMITTED: 00

ENCL: 01

SUB CODE: PR, ME

NO REF SOV: 004

OTHER: 000

Card 3/4

L 57502-65

ACCESSION NR: AP5013999

ENCLOSURE: 01

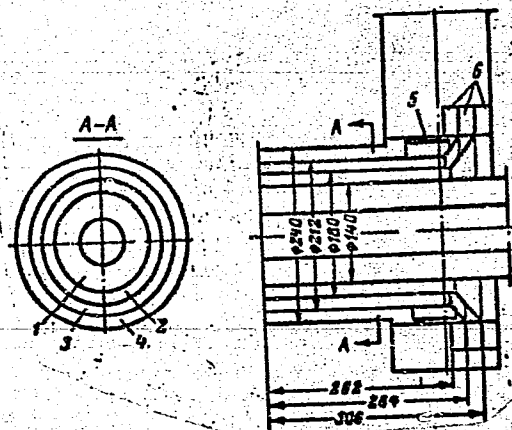


Fig. 1. Location of cylindrical channels in burner UT-11-2:  
1- primary channel; 2, 3, 4- inner, intermediate, and outer secondary  
channels respectively; 5- cylindrical throttle; 6- three-section vane  
assembly

282  
Card 4/4

PA 69T30

SHNITSER, L. M.

USSR/Electricity  
Transformers, Dry  
Heating

Apr 1948

"Heating Process in a Dry Transformer," L. M. Shnit-  
ser, Cand Tech Sci, Moscow Transformer Works imeni  
Kuybyshev, 3<sup>1</sup>/<sub>2</sub> pp

"Elektrichest" No 4

Describes laboratory process of operation necessary  
for calculating determined effects of factors and  
establishing relationship between various factors.  
Relationship may be represented either in curve form  
or by mathematical formulas.

~~69T30~~  
69T30

SHENTZER, I. I.

Mbr., Moscow Transformer Works im. V. V. Kuybyshev, -c1948-c49-. Cand. Technical Sci.  
"Heating Process in a Dry Transformer," Elektrichestvo, No. 4, 1948; "Standards for  
Transformers in Foreign Countries and GOST," ibid., No. 9, 1949.

SHNEIDER, L. I.

"On B. F. Bashurs's Remarks", No. 3, 1949; Cand. of Tech. Sci. , Moscow Transformer Plant. -c1949-

Transformers: Ind. A., pers. Moskva, Gos. energ. ind-vo, 1950. 91 p. (50-97356)

TH:11. 89 95

SHNITSER, L. M.

2386. Determination of available power rating of transformers under non-symmetrical loads. M. E. Syrkin and L. M. Shnitser. *Elekt. Stantsii*, 1952, No. 11, 42-6. In Russian.

Electrical Engineering  
Abstracts, v. 56, June  
1953, Machines

With maximum load in any phase of a transformer, under stable asymmetrical conditions, the amount of heat produced in this phase winding is equal to the nominal. Total amount of heat produced in all three phases is less than nominal, so that maximum temperature is reached either in the cooling oil or in the phase with greatest load. Under such conditions increase in phase rating is permissible. Formulae are derived for maximum asymmetrical loads in 2- and 3-winding transformers, which would not reduce service life.



SHNITSER, L.M.

[Load capacity of power transformers] Nagruzochnaia sposobnost'  
silovykh transformatorov. Moskva, Gos. energ. izd-vo, 1953. 111 p.  
(MLRA 6:12)  
(Electric transformers)

KAYLOV, G. M., Docent; SHILDER, L. M.

Electric Power Distribution

Remarks to G. M. Livshits' article: "Calculating and examining industrial electrical loads." Elektrichestvo No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

*SHNITSEY, L.M.*

ROZENSHTEYN, L.Ya., inzhener; SHNITSER, L.M., kandidat tekhnicheskikh nauk.

Selecting transformers for use in industrial electric power plants.  
Elektrichestvo no.4:83-84 Ap '54. (MLRA 7:5)

1. Promenergoprojekt (for Rozenshteyn). 2. Moskovskiy transformatornyy zavod (for Shnitser). (Electric transformers)

SHNITSER, L.M.

On S. A. Kudriashov's notes. Prom. energ. 12 no.4:32 Ap '57. (MLRA 10:5)  
(Electric transformers)

SHNITSER, L.M., inzh.

Ventilating transformer chambers. Prom. energ. 12 no.12:28-29

D '57.

(MIRA 10:12)

(Electric transformers--Ventilation)

AUTHOR: Shnitser, L.M., Engineer.

104-3-21/45

TITLE: Discussion of Grudinskiy's article.

PERIODICAL: "Elektricheskiye Stantsii" (Power Stations), 1957,  
Vol. 28, No.3, pp. 65 - 66 (U.S.S.R.)

ABSTRACT: In selecting transformers for a particular installation an effort must be made to make the best possible use of the installed rated output, to obtain the highest possible annual efficiency and to prevent possible overloading of the transformer that might shorten its life. These points are enlarged upon. In real conditions load growth cannot be foreseen and so sometimes the load cannot be limited to Grudinskiy's "economic value", in other cases the "economic value" might cause the transformer to have too short a life. After further consideration of transformer loading conditions it is claimed that if the existing series of standard transformers is not convenient from the standpoint of economic selection the real point is that the standard losses are higher than they should be and the economic characteristics are not associated with the load carrying capacity of the transformers.

ASSOCIATION: Moscow Transformer Works (Moskovskiy Transformatornyy Zavod)

AVAILABLE: Library of Congress

Card 1/1

GRUDINSKIY, P.G., professor; SHNITSER, L.M., inzhener; ROZENBERG, B.I.,  
kandidat tekhnicheskikh nauk; BALASHOV, K.K., kandidat tekhnicheskikh  
nauk; MEL'NIKOV, N.A., kandidat tekhnicheskikh nauk.

Calculating load-carrying capacity in selecting transformers. Elek.sta.  
28 no.3:61-70 Mr '57. (MLBA 10:5)  
(Electric transformers)

AUTHOR: Shnitser, L.M. 91-58-6-35/39

TITLE: Correspondence With Readers (Perepiska s chitatelnyami),  
The Emergency Overloading of Transformers up to 140%  
(Ob avaryynoy peregruzke transformatorov do 140%)

PERIODICAL: Energetik, 1958, Nr 6, p 36 (USSR)

ABSTRACT: In reply to a question from Sebekin (Metrogiprotrans, Moscow)  
the author details the limits to be observed when overloading  
dry and oil-cooled transformers in case of emergency. There  
is one table.

AVAILABLE: Library of Congress

Card 1/1 1. Transformers-Operation



PHASE I BOOK EXPLOITATION SOV/3666

Shnitser, L.M.

Osnovy teorii i nagruzochnaya sposobnost' transformatorov (Basic Theories and Load-Carrying Capacity of Transformers) 5th ed., rev. Moscow, Gosenergoizdat, 1959. 230 p. (Series: Transformatory, vyp. 1) Errata slip inserted. 20,000 copies printed.

Ed.: V.I. Timokhina; Tech. Ed.: P.M. Asanov; Eds. of Series: B.B. Gel'perin, and P.P. Skvortsov.

PURPOSE: This book is intended for technicians, qualified foreman, and practical workers.

COVERAGE: The book deals, in an elementary way, with the theory of the transformer as an electromagnetic apparatus for the transmission and distribution of electrical energy. Transformer load-carrying capacity and the related problems of heating and insulation aging are discussed. This book is the first volume of the series "Transformers", which series will treat the following subjects: Production of Transformer Windings; Assembling the Magnetic Circuit; Assembling Medium Capacity

Card 1/6

Basic Theories (Cont.)

SOV/3666

Transformers; Testing Oil Immersed Transformers of Low and Medium Capacity; Parallel Operation of Transformers; and Repair of Power Transformers. These volumes will all be based on material from the Moskovskiy transformatornyy zavod (Moscow Transformer Plant). No personalities are mentioned. There are 10 references, all Soviet.

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Basic Theories (Cont.)

SOV/3666

Appendix 2

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Bibliography

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AVAILABLE: Library of Congress (TK2551.T73)

Card 6/6

JP/jb  
6-10-60

8 (5)

AUTHORS: Simonov, L. I., Engineer, Shnitser, L. M., SOV/105-59-11-25/32  
Candidate of Technical Sciences

TITLE: On the Duty Factor of Load Diagrams of Transformers

PERIODICAL: Elektrichestvo, 1959, Nr 11, pp 88-90 (USSR)

ABSTRACT: L. I. Simonov showed by an example that a formula given in the instructions of MES for determining the duty factor of the daily load curves is wrong in his opinion. L. M. Shnitser expresses his opinion on this subject and points out that the formula (1) mentioned by Simonov is given in these instructions. However, he shows that the admissible daily load of the transformer should be determined according to the diagram shown on the same page and not according to formula (1). This is explained more in detail and illustrated by two examples. There are 3 figures, 3 tables, and 1 Soviet reference.

Card 1/1

SHNITSER, L.M., kand.tekhn.nauk

Concerning the three per cent rule. Elektrichestvo no.11:84 N  
'61. (MIRA 14:11)

(Electric transformers)

SHNITSER, L.M., kand.tekhn.nauk (Moskva)

Concerning the load carrying capacity of power transformers.  
Elektrichestvo no.1:73-75 Ja '63. (MIRA 16:2)  
(Electric transformers) (Electric power distribution)



SHNITSER, L.M., kand.tekhn.nauk (Moskva)

Operating efficiency of electric transformers in municipal  
electric power distribution networks. Elek. sta. 34  
no.3:65-66 Mr '63. (MIRA 16:3)  
(Electric power distribution)  
(Electric transformers)

SHITNER, L. Ya.

SHITNER, L. Ya.: "Fozadilon' extra-bladder prostatectomy." Second Surgical Department, Tyumen' Oblast Hospital and Hospital Surgical Clinic, Sverdlovsk Medical Inst. Tyumen'-Sverdlovsk, 1955.  
(Dissertation for the degree of Candidate in Medical Sciences)

30: Knizhnaya Letopis', No 36, 1956, Moscow.

SHNITSER, L.Ya.

A.T. Lidskii's retropubic extravesical prostatectomy. Urologia  
no.1\*55-71 Ja-Mr '55. (MLRA 8:10)

1. Iz Tyumenskoy oblastnoy bol'nitsy.  
(PROSTATE, surgery,  
retropubic extravesical A.T.Lidskii's technic)

SAZONOV, P.I., zasluzhenny vrach RSFSR; SHNITSER, L.Ya.

Report on the work of the Tyumen' Surgical Society in 1956.

Khirurgiia 33 no.11:146-148 N '57.

(MIRA 11:2)

1. Predsedatel khirurgicheskogo obshchestva Tyumeni (for Sazonov)
2. Sekretar' khirurgicheskogo obshchestva Tyumeni (for Shnitser)  
(TYUMEN'--SURGERY--SOCIETIES)

SHNITSER, L. Ya.  
UTROBINA, V.V., SHNITSER, L.Ya.

Replacement of an injured ureter by a section of the small intestine.  
Urologia 23 no.3:51-52 My-Je '58 (MIRA 11:6)

1. Iz 1-go khirurgicheskogo otdeleniya (zav. V.V. Utrobina) i  
2-go khirurgicheskogo otdeleniya (zav. - kand.med.nauk L.Ya. Shnitser)  
Tyumenskoy oblastnoy bol'nitsy (glavnyy vrach A.A. Moiseyenko).  
(URETERS, wds. & inj.  
ureteroileoplasty after surg. inj. (Rus))  
(ILEUM, surg.  
ureteroileoplasty after surg. inj. to ureter (Rus))

SHNITSER, L. Ya., kand. med. nauk. (Tyumen')

"Extravesicular prostatectomy; experimental and clinical study" by  
G.A. Zul'fugarov. Reviewed by L. Ia. Shnitser. Urologia 24 no.1:78-80  
Ja-F '59. (MIRA 12:1)  
(PROSTATE GLAND--SURGERY)

SHNITSER, L.Ya., kand.med.nauk

Retropubic fascial plastic repair of the vesical neck in functional urinary incontinence in women. Urologia 24 no.2:26-29 Mr-Apr '59.  
(MIRA 12:12)

1. Iz Tyumenskoy oblastnoy bol'nitsy (glavnyy vrach A.A. Moiseyenko).  
(URINATION DISORDERS, surg.  
incontinence in women, retropubic fascial plastic  
repair of vesical neck (Rus))

SHNITSER, L.Ya.

Adenoma of the prostate at an early age. Urologia 24 no.5:63 S-0 '59.  
(MIRA 12:12)

1. Iz Tyumenskoy oblastnoy bol'nitsy.  
(PROSTATIC HYPERTROPHY case reports)



SHNITSER, L. Ya., kand.med.nauk

Extravesical retropubic prostatectomy by A.T. Lidskii's method.  
Khirurgiia 36 no.12:89-93 '60. (MIRA 14:1)

1. Iz Tyumenskoy oblastnoy bol'nitsy (glavnyy vrach A.A. Moise-  
yenko).

(PROSTATE GLAND—SURGERY)

SHNITSER, L.Ya., dotsent

Our experience in the treatment of vaginal fistulas. Akush.  
i gin. 39 no.5:138-142 S-0 '63. (MIRA 17:8)

1. Kurs urologii (zav. - dotsent L.Ya. Shnitser) kafedry  
fakul'tetskoy khirurgii (zav. - dotsent M.A. Likhtentul)  
Semipalatinskogo meditsinskogo instituta.

SHNITSER, L.Ya., dotsent; FESTEREV, A.A.

Boari's operation in ectopy of the orifice of an accessory  
ureter. Urologiia no.6:54-55 N-D '63. (MIRA 17:9)

1. Iz urologicheskogo otdeleniya (zav. A.A. Festerev) bol'nitsy  
vodnikov i urologicheskoy kliniki (zav. dotsent L.Ya. Shnitser)  
Sempalatinskogo meditsinskogo instituta.

SHNITSER, L.Ya., dotsent; DZAN-KHVA

Closure of persistent recurrent rectovaginal fistula by lowering the  
rectum. Akush. i gin. no.6:131-132 N-D '63.

(MIRA 17:12)

1. Iz urologicheskogo otdeleniya bol'nitsy vodnikov (glavnyy vrach  
S.A.Smelovskiy) i kursa urologii (zav. -- dotsent L.Ya.Shnitser)  
Sempalatinskogo meditsinskogo instituta.

SHNITSER, S.; LEVINA, L.

Improved organization of boning meat. Mias.ind.SSSR 32  
no.6:35 '61. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy  
promyshlennosti.

(Meat industry)

GEVORGYAN, B.; GORBATOV, V.; TROFIMOVSKIY, V.; SHNITSER, S.

Improving planning in the meat industry. *Mias.ind.SSSR* 32 no.2:  
35-36 '61. (MIRA 14:7)  
(Meat industry) (Industrial management)

SHNITSER, S.S.

[Production planning at meat industry enterprises] Planirovanie proizvodstva  
na predpriatiakh miasnoi promyshlennosti. [ ] Pishchepromizdat, 1952.  
167 p. (MLRA 6:11)  
(Meat industry and trade) (Industrial management)

SHNITSER, S., kandidat ekonomicheskikh nauk.

Methods of lowering costs in the meat packing industry. Mias.  
ind. SSSR 24 no.5:40-43 '53. (MLRA 6:12)

(Meat industry--Costs)



SHNITSER, S.S., kandidat ekonomicheskikh nauk; KARAKOZOVA, V.V.; KAPLAN,  
N.M.; GUREVICH, A.I.

Comparative economic effectiveness of building meat enterprises  
of different capacities. Trudy VNIIMS no.6:127-139 '54. (MLRA 10:8)  
(Meat industry)

SHNITSER, S., kand. ekon. nauk

Types and capacities of meat combines on the construction  
schedule between 1959 and 1965. *Mias. ind. SSSR* 30 no. 2:31-34  
'59. (MIRA 13:4)

(Meat industry)

SHNITSER, S.

Several problems in measuring labor productivity. Sots. trud 7  
no.10:36-39 0 '62. (MIRA 15:10)

(Productivity accounting)

SHNITSER, S.S., kand.ekonom. nauk

Methods for measuring labor productivity in the meat industry.  
Trudy VNIIMP no.14:111-118 '62. (MIRA 16:8)  
(Meat industry--Labor productivity)

SHNITSER, Solomon Solomonovich; YELISEYEV, I.D., inzh., retsenzent;  
NOVIKOV, V.G., inzh., spets. red.; KORBUT, L.V., red.;  
SOKOLOVA, I.A., tekhn. red.

[Potentials for increasing labor productivity in the meat  
industry] Rezervy rosta proizvoditel'nosti truda v miasnoi  
promyshlennosti. Moskva, Pishchepromizdat, 1963. 193 p.  
(MIRA 17:4)

SHNITSER, V. I. (Main Veterinary Surgeon, Galich Raion), SHCHAVINSKIY, O. I. (Veterinary Surgeon, Stanislavsk Oblast'), KOVALEV, A. A. (Candidater of Veterinary Sciences, Ukrainian Scientific-Research Institute of Experiment Veterinary Medicine), NECHVAL', I. T. (Director of Poltava Oblast' Veterinary Bacteriological Laboratory), and BRATKOVSKIY, E. I. (Main Veterinary Surgeon, Tlumachevsk Raion).

"Application of "aminoacriquin" for treatment of bulls infested with Trichomonas".

Veterinariya, Vol. 38, No. 2, 1961, p. 32.

KOVALEV, A.A., kand. veterin. nauk; NECHVAL', I.T.; BRATKOVSKIY, Ye.I.;  
SHNITSER, V.I.; SICHAVINSKIY, G.I., veterin. vrach (Stanislavskaya  
obl.)

Treating trichomoniasis in bulls using aminoacrichine. Veterinariia  
38 no.2:32-35 F '61. (MIRA 18:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy  
veterinarii (for Kovalev). 2. Direktor Poltavskoy oblastnoy veteri-  
narno-bakteriologicheskoy laboratorii (for Nechval'). 3. Glavnyy  
veterinarnyy vrach Tlumachevskogo rayona, Stanislavskaya oblast'  
(for Bratkovskiy). 4. Glavnyy veterinarnyy vrach Galichskogo  
rayona Stanislavskoy oblasti (for Shnitser).

SHNITTSE, N.S.

Successes in tuberculosis control in the Shevchenko District of  
Lvov [with summary in French]. Probl. tub. 36 no.6:11-13 '58  
(MIRA 11:10)

1. Glavnyy vrach protivotuberkuleznogo dispansera Shevchenkovskogo  
rayona L'vova.

(TUBERCULOSIS, prev. & control.  
in Russia (Rus))



SHNITSER, M.S., FAY, T.I.

Experience with inhalation-tracheal administration of streptomycin in pulmonary tuberculosis therapy. Probl.tub. 37 no.3:49-52 '59. (MIRA 12:6)

1. Iz protivotuberkuleznogo dispansera No.3 Shevchenkovskogo rayona L'vova (glavnyy vrach dispansera M.S.Shnitsers, rukovoditel' raboty - prof.I.T.Stukalo).

(TUBERCULOSIS, PULMONARY, ther.

streptomycin, inhalation-tracheal admin.  
(Rus))

~~SHNITZER~~, I.; FABIN, Sh.; KONIA, L.

Bone transplantation into the vertebral body in tuberculous spondylitis. Khirurgia 15 no.2/3:200-201 '62.

(TUBERCULOSIS SPINAL surg)  
(BONE AND BONES transpl)

SETKERESTY, B.; SHNITZLER, I.

Synovectomy in tuberculous gonitis. Probl. tub. no.7:59-61 '64.  
(MIRA 18:10)

1. Tuberkuleznaya klinika Debretsenskogo meditsinskogo instituta.

37767

S/661/61/000/006/056/081  
D267/D302

5.3700

AUTHORS: Shnobl', L., Chernmak, I. and Dvorzhak, N.

TITLE: Evaluating the activity of silicon-copper alloys used for the direct synthesis of methyl-chlorosilanes

SOURCE: Khimiya i prakticheskoye primeneniye kremenorganicheskikh soyedineniy; trudy konferentsii, no. 6: Doklady, diskussii, resheniye. II Vses. konfer. po khimii i prakt. prim. kremenorg. soyed., Len. 1958. Leningrad, Izd-vo AN SSSR, 1961, 235-239

TEXT: The following results were obtained by the authors from an X-ray diffraction investigation of 10 specimens of these alloys: (1) The value of the lattice constant does not depend on Cu content and coincides with the constant for pure Si. (2) Since the alloying components cannot be identified as independent phases or as a compound, they must be present in the form of solid solution, both types of which are present in all alloys. (3) The presence of Cu and other impurities is manifested in the arising of satellite-

Card 1/2

X

SHNOL, E.

V Šnol', E. Behavior of eigenfunctions and the spectrum of Sturm-Liouville operators. Uspehi Mat. Nauk (N.S.) 9, no. 4(62), 113-132 (1954). (Russian) I.- F/W

MS Let  $L(y) = -y''(x) + q(x)y(x)$ . The author considers  $Ly = \lambda y$  on  $a \leq x \leq b$ , where  $a$  or  $b$  can be unbounded. The author gives an account of work of his own and includes results of Gelfand, Levitan, Sears, Putnam, Hartman, Wintner, Glazman, Molchanov, Naimark, and Krein on the nature of the spectrum and eigenfunctions of the boundary-value problems of  $Ly = \lambda y$ . N. Levinson.

USSR

SHNOL', E.

Behavior of eigenfunctions and of spectra of Sturm-Liouville  
operators. Usp.mat. nauk 9 no.4:113-132 '54. (MIRA 8:1)  
(Eigenfunctions) (Differential equations, Partial)

SHNOL', E. E.

Shnol', E. E. -- "On the Behavior of the Eigen Functions of the Schroedinger Equation." Moscow Order of Lenin State U imeni M. V. Lomonosov, Moscow, 1955. (Dissertations for Degree of Doctor of Physicomathematical Science)

SO: Knizhnaya Letopis', No. 23, Moscow, PP. 87-104.

SUBJECT USSR/MATHEMATICS/Theory of functions CARD 1/2 PG - 797  
 AUTHOR ŠNOL' E.  
 TITLE On the connection between the theorem of Müntz and the  
 orthogonal decompositions.  
 PERIODICAL Doklady Akad.Nauk 109, 910-912 (1956)  
 reviewed 5/1957

The author states that by the "analytic continuation" of the orthogonal decompositions in terms of eigenfunctions certain theorems can be obtained

which are of the type of the theorem of Müntz (if  $\sum_1^{\infty} \frac{1}{\lambda_k} = \infty$ , then the  $x^{\lambda_k}$  ( $\lambda_k > 0$ ) form a complete system on  $(0,1)$ ).

The following theorem is proved: Let  $q(x) > 0$  and  $\lambda_k < 0$ . Let  $\psi(x, \lambda_k)$  be the unique solution of the equation

$$-\psi'' + q(x)\psi = \lambda_k \psi$$

which is integrable in the square on  $(0, \infty)$ . If  $\sum \frac{1}{\sqrt{|\lambda_k|}} = \infty$ , then the

function system  $\psi(x, \lambda_k)$  is complete in  $L_2(0, \infty)$ .

As an example the equation  $-x^2 y'' + q(x)y = -1(1+1)y$  is considered and an



SHNOL'E.E.

AUTHOR: SHNOL' E.E. (Moscow)

39-3-1/6

TITLE: On the Behavior of Eigenfunctions of the Equation of Schrödinger  
(O povedenii sobstvennykh funktsiy uravneniya Shredingera)

PERIODICAL: Mat.Sbornik, 1957, Vol.42, Nr.3, pp.273-286 (USSR)

ABSTRACT: The author considers the equation

$$-\Delta u(P) + q(P)u(P) = \lambda u(P).$$

He investigates the following questions: 1. When from the boundedness of the solution  $u(P, \lambda)$  there follows that  $\lambda$  is a point of the spectrum. 2. What can be said about the behavior of  $u(P, \lambda)$  if  $\lambda$  belongs to the spectrum. The author uses earlier results of H.Weyl in order to show: 1. The limit spectrum consists of those points of the spectrum which do not depend on  $q$  in every finite domain. 2. If  $|u(P, \lambda)| < C(\epsilon)e^{\epsilon r}$  for every  $\epsilon > 0$ , then  $\lambda$  belongs to the spectrum. 3. For  $q(P) > q_0$  (outside of a domain)

the eigenfunctions of the discrete spectrum decrease exponentially. The author's paper partially has become obsolete by new investigations of Kostyuchenko (Doklady Akad.Nauk, Ser.Mat., Vol.114, Nr.2, 1957). 4 Soviet and 4 foreign references are quoted.

SUBMITTED: September 23, 1955

Card 1/1

AVAILABLE: Library of Congress

SHNOL', E.E. (Moskva)

Comments on the work of E.E. Balash "One expansion of a logarithmic  
function into a series." Mat. pros. no.5:152-154 '60. (MIRA 13:12)  
(Fourier's series) (Functions)

35548

S/558/61/000/007/002/008  
D299/D301

16.6500 10.6200

AUTHORS: Vvedenskaya, N.D., and Shnol', E.E.  
TITLE: On a computational method for stresses in a circular cylinder  
SOURCE: Akademiya nauk SSSR. Vychislitel'nyy tsentr. Vychislitel'naya matematika, no. 7, 1961, 15 - 94

TEXT: The axisymmetrical distribution of stresses in a finite (hollow or solid) cylinder, is determined. This involves the following steps: 1) Choice of the system of differential equations; this could be of interest to specialists in elasticity theory, whereas the selected elliptic system is of interest to mathematicians. 2) Choice of the system of difference equations and discussion of its properties. 3) Method of solving a two-dimensional difference system; this is of interest for specialists in numerical methods, as the argument is quite general. As in the problems under consideration, the ends of the cylinder are under various loads (and a temperature field may exist in the interior); the authors use instead

Card 1/4

S/558/61/000/001/002/008  
D299/D301

On a computational method for ...

of the ordinary system of 2 differential equations for the displacements, a system of 4 differential equations for the stress-tensor components  $\sigma_{rr}$ ,  $\sigma_{rz}$ ,  $\sigma_{zz}$ ,  $\sigma_{\phi\phi}$ ; the first of these differential equations is

$$\frac{\partial \sigma_{rr}}{\partial r} + \frac{\partial \sigma_{rz}}{\partial z} + \frac{1}{r} (\sigma_{rr} - \sigma_{\phi\phi}) = 0. \quad (4a)$$

Thereby very simple boundary conditions are obtained; yet this has the disadvantage that the boundary-value problem has non-zero index; this means that not every "nonhomogeneous" problem has a solution. The main consequence of the non-zero index is the following: Although the very simple difference scheme used, leads to as many equations as there are variables, yet a degenerate system of linear equations is obtained. In the difference scheme, Eq. (4a) is written as

$$\frac{\partial f}{\partial r} \rightarrow \frac{1}{h_r} [f(k+1, l + \frac{1}{2}) - f(k, l + \frac{1}{2})]$$

where  $h_r$  is the mesh size. The reason for the degeneracy is the  
Card 2/4

On a computational method for ...

S/558/61/000/007/002/008  
D299/D301

fact that the boundary conditions cannot be entirely arbitrarily given, i.e. the resultant force ought to vanish. From the difference equations one obtains the condition for the solvability of the 2-dimensional system. The main difficulty is in the solution of the "principal" problem, in which only the normal loads differ from zero; thereupon other related problems can be readily solved. The solution to the "principal" problem is found in the form of a linear combination of a few particular solutions. The particular solutions (called basic solutions) satisfy homogeneous boundary-conditions at the faces which is impossible for solutions with "separated variables". In finding the basic solutions, the constancy of the system coefficients with respect to  $z$  is used in expanding the sought functions in Fourier series. Thereby the 2-dimensional difference scheme is reduced to one-dimensional boundary-value problems for the system of 4 difference equations. These problems are solved by S.K. Godunov's numerical method (given in the references). This method involves the following steps: 1) Choice of the grid, calculation of the boundary values of  $\sigma_{zz}$  for the  $M$  basic variants ( $M$  being the number of points) for which the right-hand sides of

Card 3/4

On a computational method for ...

S/558/61/000/007/002/008  
D299/D301

$F^{(n)}(k + \frac{1}{2})$  are pre-assigned; 2) From the corresponding matrix one obtains the required  $F^{(n)}(k + \frac{1}{2})$ ; 3) The sought-for stresses are calculated at the required points. The above method was found to be accurate to within 1 %. There are 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc (in translation).

Card 4/4

S/044/62/000/011/041/064  
A060/A000

AUTHORS: Vvedenskaya, N. D., Shnol', E. E.

TITLE: On a method of calculating stresses in a circular cylinder

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1962, 32,  
abstract 11V139 (Vychisl. matematika, sb. 7, 161, 75 - 94)

TEXT: The authors consider the problem of finding the axially symmetric distribution of stresses in a finite (hollow or solid) cylinder. Here the following three problems are investigated: 1) The choice of differential equations. 2) Approximation of the differential equations by difference equations (without an error estimate). 3) The method of solution of the system of difference equations. ✓

[Abstracter's note: Complete translation]

Card 1/1

KORCHAGINA, V.I.; RUTMAN, L.I.; SHNOL', F.M.

Evaluating methods for determining the group composition of  
bitumens. Nefteper. i neftekhim. no.2:18-21 '64. (MIRA 17:8)

1. Odesskiy neftepererabatyvayushchiy zavod.



KORCHAGINA, V.I.; KUTYAN, L.I.; PIRAGO, A.A.; SHOLOV, P.M.; SEMER', L.M.;  
AMERSON, R.V.; VULIKH, Yu.L.

Plant use of a cracking residue in the production of bitumens.  
Nefteper. i neftekhim. no.6:25-28 '64. (MIRA 17:9)

L. Odesskiy neftepererabatyvayushchiy zavod i Odesskiy politekhnicheskii institut.

KORCHAGINA, V.I.; RUTMAN, L.I.; SHNCEL', F.M.

Change in the quality of road bitumen in asphaltic concrete.  
Nefteper. i neftekhim. no.5:21-24 '65. (MIRA 18:7)

L. Odesskiy neftepererabatyvayushchiy zavod i Odesskiy politekhnicheskii institut.

SHNOL', I. E.

Šnol', I. E. The structure of ideals in rings  $R_a$ . *Mat. Sbornik N.S.* 27(69), 143-146 (1950). (Russian)

The rings  $R_a$  considered here are normed rings of continuous functions contained between the ring  $C$  of all continuous functions on  $[0, 1]$  and the ring  $D_1$  of all functions with continuous first derivatives on  $[0, 1]$ . These rings were studied by Šilov [*Mat. Sbornik N.S.* 26(68), 291-310 (1950); these Rev. 11, 602]. In the present paper it is proved that every closed ideal in a ring  $R_a$  is the intersection of primary ideals. This result was obtained by Stone [*Trans. Amer. Math. Soc.* 41, 375-481 (1937)] for the ring  $C$  and by Šilov for the ring  $D_1$  [cf. *Trav. Inst. Math. Stekloff* 21 (1947), § 5, chapter I and reference cited there; these Rev. 9, 596].

*C. E. Rickart* (New Haven, Conn.).

Source: *Mathematical Reviews*,

Vol. 12, No. 3.

SHNOL, I. E.

Šnol', I. E. Closed ideals in the ring of continuously differentiable functions. Mat. Sbornik N.S. 27(69), 281-284 (1950). (Russian)

Let  $D_1^N$  be the class of functions which are defined and of class  $C^1$  on the unit cube  $\Omega$  in  $N$ -dimensional Euclidean space  $E_N$ . Under the ordinary algebraic operations and norm

$$\|f\| = \max_{P \in \Omega} \left( |f(P)| + \left| \frac{\partial f(P)}{\partial x_1} \right| + \dots + \left| \frac{\partial f(P)}{\partial x_N} \right| \right),$$

where  $P = (x_1, \dots, x_N)$ ,  $D_1^N$  is a normed ring. The author proves that every closed ideal in  $D_1^N$  is an intersection of closed primary ideals. A primary ideal is one which is contained in exactly one maximal ideal. It is shown that every closed primary ideal in  $D_1^N$  is equal to the set of all  $f \in D_1^N$  which vanish at some point  $P_0 \in \Omega$  and whose total differentials  $df = \sum (\partial f / \partial x_i) dx_i$  at  $P_0$  vanish identically for  $(dx_1, \dots, dx_N)$  in some linear subspace of  $E_N$  determined by the ideal.  
C. E. Rickart (New Haven, Conn.).

Source: Mathematical Reviews,

Vol 12, No. 6

SMJ  
1951

SHNCL, I. E.

USSR/Mathematics - Differential  
Equations

21 Mar 53

"Bounded Solutions of a Second-Order Equation in  
Partial Derivatives," I. E. Shnol'

DAN SSSR, Vol 89, No 3, pp 411-413

Demonstrates that, for certain limitations im-  
posed on coeff  $q$  in equation  $\Delta u + (q - \lambda)u = 0$ ,  
the existence of a bounded solution of this  
equation implies that  $\lambda$  belongs to the  
spectrum of operator  $L$  determined by  $Lu = \Delta u + qu$ .  
Presented by Acad M. V. Keldysh 18 Nov 52.

272161

SHNOL, I. Ye.

Shnol, I. E. On the behavior of eigenfunctions. Doklady Akad. Nauk SSSR (N.S.) 94, 389-392 (1954). (Russian)  
Let  $Ly = -y'' + q(x)y$ . Let  $\phi(x, \lambda)$  satisfy  $L\phi = \lambda\phi$  for  $0 < x < \infty$ ,  $\phi(0, \lambda) = 1$ ,  $\alpha\phi(0, \lambda) + \beta\phi'(0, \lambda) = 0$ . Let  $\rho(\lambda)$  be the spectral function associated with the expansion theorem for this problem. The author proves that if  $q > 0$  (or  $> \text{constant}$ ) then for almost all  $\lambda$  (with respect to measure by  $\rho(\lambda)$ ) and for any  $\epsilon > 0$ ,  $|\phi(x, \lambda)| < c(\lambda, \epsilon)x^{1+\epsilon}$ . Other results are given.  
N. Levinson (Cambridge, Mass.)

SHNOL, L.  
MALYSHEV, A.; SHNOL, L.

Mixing machine for road repair work. Avt. dor. 20 no.2:27 F '57.  
(Germany, West--Road machinery) (MLRA 10:4)

SHNOL', R. B.

USSR/ Physics-Combustion-Flame Propagation

Jun 48

"Research on the Combustion of Gaseous Mixtures: XIX, Area of Cold Flame Propagation in Mixtures of Ethyl Ether With Air," M. B. Neyman, Kh. M. Rubina, R. B. Shnol', Inst of phys Chem, Acad Sci USSR, Chair of Phys Chem, Gor'kiy State U, 6 pp

"Zhur Fiz Khim" Vol XXII, No 6

Although the area of ether cold flame propagation is considerably greater than that of its cold flame, temperature variation between the two is less than  $110^{\circ}$ . Area of propagation is maximum when the ether cold flame is directed upwards. It can be increased by increasing pressure, temperature or diameter of the jet. Propagation area depends on composition of mixture, reaching a maximum at  $\alpha \approx 0.2$ . Submitted 2 Sep 47.

PA 56/49T93



SHNOL', R. B.

USSR/ Physics - Combustion - Flame Propagation

Jun 48

"Research on the Combustion of Gaseous Mixtures: XX, Fundamental Rate of Propagation of the Cold Flame in Mixtures of Ethyl Ether With Air," M. B. Neyman, Kh, M. Rubina, P. B. Shnol', Inst of Phys Chem, Acad Sci USSR, Chair of PhysChem, Gor'kiy State U, 7 pp

"Zhur Fiz Khim" Vol XXII, No 6

Fundamental Rate (speed when shot vertically downwards) of propagation of the cold flame depends on pressure and temperature rather than on diameter of the jet. Maximum rate is obtained when composition of mixture is expressed by  $\alpha = 0.15$ .  $N_2$  and  $CO_2$  slow up propagation, the latter to a greater degree than the former. Peroxide increases the rate, but tetramethyl lead and methylamine slow it down. Flame has a chain-thermal nature. Submitted 2 Sep 47.

PA 56/49T92

SHWOL R. B., GORODISSKAIA G. Ia., NEIDMAN M. B. and RIBAKOVA S. I.

5185. GORODISSKAIA G. Ia., NEIDMAN M. B., RIBAKOVA S. I., and SHWOL R. B. Effect of camphor and tetramethylammonium iodide on phosphorus metabolism in rats and frogs Dokladi Akademii Nauk SSSR, Moscow 1950, 69/6 (833-836) Graphs 3 Tables 2

A study of phosphorus metabolism under the influence of camphor (I) and tetramethylammonium iodide (II), using radioactive phosphorus, showed that the I increases phosphorus metabolism in various tissues of the rat, while II has the opposite effect on phosphorus metabolism in frog muscles. The kinetic method of investigation used is recommended for this kind of work, since the usual methods sometimes lead to gross errors.

Fuks - Zagreb

SO: Excerpta Medica, Section 11 Volume 111 No. 9

S/852/62/000/000/020/020  
B185/B102

AUTHORS: Sheyer, E. A., Aleksandrova, L. K., Shnol', R. B.  
TITLE: New trends in protective and decorative coating techniques  
SOURCE: Primeneniye polimerov v antikorrozionnoy tekhnike. Ed. by  
I. Ya. Klinov and P. G. Udyma. Moscow: Mashgiz, 1962, Vses.  
sovet nauchno-tekhn. obshchestv., 297 - 312

TEXT: The most suitable materials and methods for coating of metal parts have been selected and tested on the basis of published data. Special attention is paid to physical and mechanical properties, corrosion resistance and the easy realization of various decorative effects. PVC resin applied to aluminum sheets 0.5 to 1 mm thick was found to produce a very efficient PVC-Al laminate, called Vinylal. In the experiments, Soviet type PVC "M" ("M") and Al foils of the types AO (AO), AM<sub>4</sub> (AMts), AD1 (AD1), AN (AN) were used. Technological manufacturing processes were investigated in detail. Physical properties such as strength, elongation, thermal expansion, elasticity, electric conductivity etc. were found to be modifiable by using various types of plasticizers and different concentrations of these. As efficient plasticizers tricresyl phosphate and dioctyl  
Card 1/2

New trends in protective and...

S/852/62/000/000/020/020  
B185/B102

sebacate were used. In certain cases, fillers and pigments (caolin; carbon black, titanium oxide, blue phthalocyanine) were used to prepare suitable pastes. Data and recipes for 21 trial pastes were tabulated. Four pastes containing mixtures of the "M" type resin, the above two plasticizers, caolin and carbon black were found to be the most suitable in application. Additives to prevent decomposition by UV light are mentioned. Preparatory treatment of Al foils of the pastes to be applied were carefully examined with a view to an optimum adhesion. Adhesion could be improved by using vinylite type resins as undercoatings or buffer layers. This resin was dissolved in cyclohexane to eliminate the use of the highly toxic dichloro ethane. Triangle test methods were employed to check the adhesion of the finished laminates. Finally, possible applications of Vinylal for domestic and industrial purposes (automotive, shipbuilding, radio manufacturing, RR car construction industries etc.) are mentioned. There are 11 figures and 2 tables.

Card 2/2

ALEKSANDROVA, L.K., inzh.; BEREZOVSKIY, V.V., inzh.; VITKIN, A.I., doktor  
tekhn.nauk; KEGELES, A.S., inzh.; SHEYER, E.A., inzh.; SHNOL', R.B.,  
inzh.; SHUMNAYA, V.A., inzh.

Coating thin steel strips with plastics. Sbor. trud. TSNIICHM  
no.34:70-81 '63. (MIRA 17:4)

SHNOL', S.F.

Nature of action and excretion of water soluble adenosinetriphosphatase  
in the kidneys. Biokhimiia, Moskva 17 no.4:420-426 July-Aug 1952.  
(CIBL 25:1)

1. Laboratory of Physiological Chemistry of the Academy of Sciences USSR,  
Moscow.

SHNOL', S E  
Medicine - Radiology

FD-2521

1/1

Pub 17-20/20

Author : Shnol', S. E.  
Title : Some details of a method of working with radioactive isotopes  
Journal : Byul. eksp. biol. i med. 4, 76-79, Apr 1955  
Abstract : Describes some details of a method of working with radionuclides, including a description of simple methods for preparing small cups of aluminum foil for use in counting radioactive samples, a description of an isotope disintegration curve for the purpose of calculating corrections for radioactive breakdown, and a method for working with weak beta-radiators. Graph; table. No references.  
Institution : Chair of Medical Radiology (Head - Prof. V. K. Modestov) of the Central Institute for Improvement of Doctors  
Submitted : April 5, 1954, by S. Ye. Severin, Member of the Academy of Medical Sciences USSR, Moscow

SHNOL', S.E.

FD-2563

USSR/Medicine - Biochemistry

Card 1/1            Pub. 17-21/23

Author            : Shnol', S. E.

Title             : Separating the derivatives of thiamine by means of paper chromatography

Periodical        : Byul. eksp. biol. i med.<sup>2/</sup> 5, 72-74, May 1955

Abstract          : Gives results of experiments on the separation and identification of a group of derivatives of thiamine by means of paper chromatography and determinations of radioactivity, using thiamine tagged in the thiazole ring with radioactive S<sup>35</sup>. Synthesized phosphorous derivatives of thiamine containing radioactive P<sup>32</sup> were also used. Graph; tables. Four references, none USSR.

Institution       : Chair of Medical Radiology (Head - Prof V. K. Modestov) of the Central Institute for Improvement of Physicians, Moscow

Submitted        : April 4, 1954 by S. Ye. Severin, Member of the Academy of Medical Sciences USSR



FD-2947

USSR/Medicine/Biochemistry - radiology

SHNOI', S. E.

Card 1/1 Pub. 17-11/23

Author : Usanova, M. I. and Shnoi', S. E.

Title : Distribution of tagged coffeine in the animal organism and its transfer from mother to embryo

Periodical : Byul. eksp. biol. i med. <sup>110</sup>7, 41-44, July 1955

Abstract : Author investigated the progress of tagged coffeine in the animal organism, dynamics of its transmission from mother to embryo, and methods of its administration by experiments on rats. The rats were given 1 ml of an aqueous solution of coffeine with radioactive carbon C<sup>14</sup> by subcutaneous injection. The coffeine was found in all organs and in the cerebrum - in pregnant rats also in the placenta and the tissues and organs of the embryo. One hour and 40 minutes after administration radioactivity can be observed simultaneously in all organs in the following order: kidneys, liver, lungs, cerebral hemispheres. (Distribution in the central nervous system will be taken up later in more detail.) 4 references, 2 USSR, 4 since 1940, graphs

Institution : Chair of Obstetrics and Gynecology (Head: Prof. F. A. Syrovatko) and Chair of Medical Radiology (Head: Prof. V. K. Modestov) Central Institute for the Advanced Training of Physicians, Moscow

Submitted : 24 May 1954

SHNOL, S. E.

USSR/ Chemistry - Conversion processes

Card 1/1 Pub. 22 - 26/47

Authors : Shnol', S. E.; Syrkin, Ya. K., Memb. Corresp., Acad. of Sc., USSR; Yakerson, V. I.; and Blyumenfeld, L. A.

Title : Conversions of alpha-naphthalinsulfonic acid into beta-naphthalinsulfonic acid

Periodical : Dok. AN SSSR 101/6, 1075 - 1078, Apr. 21, 1955

Abstract : The mechanism of conversion of alpha-naphthalinsulfonic acid into beta-naphthalinsulfonic acid was established by the marked atom method in combination with the paper chromatography and spectrophotometry methods. The absence of radioactivity in the calcium sulfate deposition used in liberating the radioactive sulfate, served as proof of perfect purity of the converted compound. The effect of temperature on the conversion process and the final results are discussed. One USSR reference (1944-1950). Table; diagram.

Institution : The M. V. Lomonosov Inst. of Prec. Chem. Techn., Moscow

Submitted : December 1, 1954

SHNOL'. S.E.

Existence of thiamine dehydrase. Biul. eksp. biol. i med. 41 no.1:  
49-50 Ja. '56. (MLRA 9:5)

1. Iz kafedry meditsinkoy radiologii (zav.-prof. V.K. Modestov)  
TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.  
Predstavleno deystvitel'nym chlenom AMN SSSR S.Ye. Severinym.  
(ENZYMES,  
thiamine dehydrase, determ.)

Shnol, S.E.

✓ Labeled atoms in the study of the distribution of aminazine in the organism following different methods of the drug administration. N. A. Fedorov and S. E. Shnol (Central Med. Inst. Post Graduates, Moscow; *Zhurnal Vsesoyuzn. Psikiatrii im. Korsakova* 56, 139-45 (1958)). --A method is described for the synthesis of  $S^{35}$ -aminazine. Expts. were performed with 30 white rats 90-100 g. wt. The aminazine was administered subcutaneously or per os. At intervals following the administration of the labeled aminazine (0.5, 1, 1.5, 2, 2.5, 3, 4, 5, 8, 14, 24 and 48 hrs.) animals were decapitated, thoroughly bled and the radioactivity was detd. of the lungs, liver, kidneys, spleen, heart, muscles, stomach, large and small intestines, the blood and various regions of the brain. The routes and rate of aminazine elimination by the organism were also studied. A high level of  $S^{35}$ -aminazine accumulation was observed in the lungs and a low level in the blood. Aminazine easily penetrates into the organs and tissues, and through hematoencephalic barriers. Results of the study of the distribution of aminazine among the various regions of the central nervous system do not clearly point to its predominance in any specific central region, even though a rather high level of its accumulation was observed in the cerebral cortex. Of subcutaneously injected aminazine 97.4% was eliminated in the urine in 4 days. Only 16-17% of the aminazine administered per os was absorbed into the system, the remainder being eliminated with the feces in a period of 8-9 days. It was shown by the method of paper chromatography that aminazine is eliminated by the organism in its unchanged form.

Med

2

State Sci Res Inst Psychiatry

SHNOL, S. E.

✓ A study of the distribution of veronal in the central nervous system with the aid of labeled atoms. S. G. Zagrabyan and S. E. Shnol. *Zhur. Nevropatol. i Psikiatrii* 56, 654-8(1958). A special procedure was devised for this study. <sup>met</sup>  $C^{14}$ Veronal was used. The distribution of veronal in all sections of the central nervous system was of an even character, with only a slightly preponderant accumulation in the hypothalamic region and in the cerebral cortex.

B. S. Levine

2

TRANS M-3,653,145

USSR/Human and Animals (Normal and Pathological).  
Metabolism. Nitrogen Metabolism.

T-2

Abs Jour : Ref Zhur - Biol., No 16, 1958, 74467

Author : Shnol', S.E.

Inst : -

Title : ~~Some Regularities of the Process of Connection of Labeled~~  
Amino Acids with Proteins.

Orig Pub : Tr. Vses. konferentsii po med. radiol. Eksperim. med.  
radiol. M., Medgiz, 1957, 244-250

Abstract : The nature and mechanism of the linkage of radioactive methionine  $S^{35}$ , glycine- $C^{14}$  and thyrosine- $C^{14}$  in vitro with protein of the chicken egg, with serum albumin and myosin was studied. The radioactivity of the protein during its incubation with marked amino acid (AA) increased with time, reaching determined maximum. The treatment of protein (after its incubation with glycine- $C^{14}$ ) with ninhydrin lead to a loss of only  $\sim 50\%$  of the

Card 1/2

- 5 -

USSR/Human and Animals Physiology (Normal and Pathological)  
Metabolism. Nitrogen Metabolism.

T-2

Abs Jour : Ref Zhur - Biol., No 16, 1958, 74467

radioactive COOH-groups. Consequently, at least 50% of this AA is attached to the protein with peptide linkage which formed COOH of glycine and NH<sub>2</sub> of protein. However, the rate of splitting off of the labeled COOH-groups was significantly higher than that of the unmarked. The study of the dependence of the radioactive protein on the increasing quantity of the unmarked glycine lead to the conclusion that the interaction of the protein with AA carries no character of anabolism (metabolism), but of immediate linkage (connection. The kinetic and thermodynamic parameters of this process were also studied. The addition of a small quantity of several substances (NaCl, glucose and urea) exerted a marked influence on the intensity of the linkage of AA with protein. -- Yu.N. Kremer.

Card 2/2

SHNOL', S.E.; KONDRASHOVA, M.N.; SHOL'TS, Kh.F.

Multiphase changes in the adenosinetriphosphatase activity of actomyosin and myosin preparations related to different factors. [with summary in English] Vop. med. khim. 3 no.1:54-64 Ja-F '57 (MLBA 10:4)

1. Kafedra meditsinskoy radiologii TSentral'nogo instituta usovershenstvovaniya vrachey i laboratoriya farmakologii obmena veshchestv Instituta farmakologii i khimioterapii AMN SSSR, Moskva.

(ADENOSINETRIHOSPHATASE,  
activity of actomyozin & myozin, eff. of various factors)  
(MUSCLE PROTEINS  
myosin,  
adenylpyrophosphatase activity, eff. of various factors, actomyosin & myosin)



MODESTOV, V.K., prof., red.; LEBEDEVA, V.P., otv. red.; SHNOL', S.E., red.;  
PETROV, S.P., tekhn. red.

[Using radioactive isotopes in clinical and experimental examinations]  
Primenenie radioaktivnykh izotopov v klinicheskikh i eksperimental'nykh  
issledovaniyakh. Pod red. V.K.Modestova. Moskva, 1958. 209 p.  
(MIRA 11:10)

1. Moscow. Tsentral'nyy institut usovershenstvovaniya vrachey.  
(RADIOISOTOPES)

SHNOL, S. E.

A spontaneous synchronous conversion of actomyosin molecules in a solution from one state into another [with summary in English].  
Vop.med.khim. 4 no.6:443-454 N-D'58 (MIRA 12:1)

1. Chair of Medical Radiology, Central Institute for Postgraduate Medical Training, Moscow.  
(MUSCLE PROTEINS,  
spontaneous conversion of actomyosin molecules in solution (Rus))

SHNOL', S.E.; SHOL'TS, Kh.F.; RUDNEVA, O.A.

Changes in the adsorptive capacity of protein in relation to spontaneous changes in the state of actomyosin in solution. Vop.med.khim. 5 no.4:259-264 JI-Ag '59. (MIRA 12:12)

1. Kafedra meditsinskoy radiologii Tsentral'nogo instituta usovershenstvovaniya vrachey, Moskva.  
(MUSCLE PROTEINS)

SHLYAKHMAN, A.L.; GRISHINA, V.I.; SHNOL', S.E.

Studies on the distribution and chemical conversion of novocaine  
in the rat organism. Vop.med.khim. 5 no.6:422-428 N-D '59.

(MIRA 13:3)

1. Kafedra l-y terapii i kafedra meditsinskoy radiologii Tsentral'-  
nogo instituta usovershenstvovaniya vrachey, Moskva.  
(PROCAINE metab.)

SOV/79-29-1-40/74

AUTHORS: Syrkin, Ya. K., Yakerson, V. I., Shnol', S. E.

TITLE: The Transformation Mechanism of the o-Toluenesulfonic Acid Into the p-Toluenesulfonic Acid (Mekhanizm prevrashcheniya o-toluolsul'fokisl'ty v p-toluolsul'fokisl'otu)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 187-194 (USSR)

ABSTRACT: Previously (Ref 1) the authors tried to clear the question of the migration mechanism of the sulfo group on the transformation of  $\alpha$ -naphthalene sulfo acid into the  $\beta$ -isomer. Although it was proved that an intramolecular rearrangement takes place, some points remained unsolved. Hollemann and Calland (Ref 2) investigated the transformation of o-toluenesulfonic acid into the para-isomer. The authors assume that the process proceeds intramolecularly and not, as supposed, by way of the hydrolysis and subsequent sulfurization in the para-position. They proved that there is no desulfurization because the rearrangement prevails. Furthermore, the sulfurization yields 4% meta-product which previously had not been found. Ye. A. Shilov and F. M. Vaynshteyn (Ref 3) investigated the transition of the ortho-isomer into the para-isomer by means of radioactive  $S^{35}$  at

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The Transformation Mechanism of the *o*-Toluenesulfonic Acid Into the *p*-Toluenesulfonic Acid

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120 and 126°; they concluded that the reaction takes place intermolecularly. They underline, however, that they had not been able to determine the specific radioactivity of the rearrangement products in the initial stage of the reaction. In order to investigate this process more exactly the authors thought it useful to pay special attention to the transformation from the very beginning of the reaction. They did not only apply the radioactive but also the spectroscopic method. In the present paper they tried to connect the radiochromatographic method with the spectrophotometric one. It was found that in acid medium the process mainly proceeds intramolecularly; in part, however, through the medium, i. e. intermolecularly. For the explanation of the intra- and intermolecular reaction process a scheme is suggested. There are 4 figures and 10 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii (Moscow Institute of Fine Chemical Technology)

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1. Chair of medical radiobiology and Chair of infectious diseases,  
Central Institute for Postgraduate Training of Physicians, Moscow.  
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