Some Results of Experimental Research into the Turbine Stages of Ring-Shaped Blade Systems

the blades at the outlet from the nozzle ring can be considerably lowered or even eliminated. Yet, in this case, the nozzle blades must have the special profile shown in Fig 2. Another series of experiments yielded some temporary results, e.g. that under certain conditions it is possible to cut down still further the radial gradient of the static pressure in the inter-ring clearance as well as the losses of the flow going through the rotating ring; that rings with nozzle blades having their back edges inclined toward the axis of the turbine are unacceptable, etc. Definite recommendations can not be given before further experimental work is completed. There are 8 diagrams, 7 graphs, and [illegible] Soviet references.

Card 3/4

4

67128

Some Results of Experimental Research into the Turbine Stages of Ring-Shaped Blade Systems SOV/143-59-11-11/19

ASSOCIATION: Leningradskiy korablestroitel'nyy institut (Leningrad Shipbuilding Institute)

SUBMITTED: June 29, 1959

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PHASE I BOOK EXPLOITATION SOV/4017

Leningradskiy metallicheskiy zavod. Otdel tekhnicheskoy informatsii

Issledovaniya elementov parovykh i gazovykh turbin i osevykh kompressorov (Investigations of the Components of Steam and Gas Turbines and Axial-Flow Compressors) Moscow, Mashgiz, 1960. 488 p. (Series: Its: Sbornik, No. 5) Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: RSFSR. Leningradskiy ekonomicheskiy administrativnyy rayon. Sovet narodnogo khozyaystva. Upravleniy tyazhelogo mashinostroyeniya.

Ed.: A.S. Zil'berman, Candidate of Technical Sciences; Eds. of Publishing House: G.P. Vasil'yeva and N.Z. Simorovskiy; Tech. Ed.: [illegible]; Managing Ed. for Literature on the Design of Machines (Leningrad Division, Mashgiz): F.I. Petisov; Editorial Board of Series: A.S. Zil'berman, Candidate of Technical Sciences, M.M. Koren', Engineer; V.K. Naumov, Candidate of Technical Sciences; and I.N. Shibalov, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical personnel of turbine-construction plants and

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[illegible] (Cont.) SOV/4017

[illegible] may also be used by engineers and technical personnel employing steam and gas turbines.

COVERAGE: The collection contains 43 reports which present the [illegible] investigations of the working process and the strength and dynamics of the operation of turbine and axial-flow compressor components. Also described are test setups, devices and instruments. The first part of the collection deals with the aerodynamics of turbine and compressor components. The following members of the aerodynamic, compressor, and turbine laboratories took part in the work: D.M. Reshet'ko, V.I. Z-miyanskiy, Ye.A. Rishkova, the technicians T.Ya. Kiyanova, V.I. Kh[illegible] N.I. [illegible]ova, and innovators N.F. Tutayev, and I.I. Ivanov. The second part of the collection consists of reports which illustrate that part of the work of the Laboratory (Central Laboratory of the Design Office for Steam and Gas Turbines of the Leningrad Metal Plant) concerned with the study of vibrations of turbines and their components, particularly the blades. The following members of the vibration laboratory participated in the work: Engineers I.D. Novikova, G.L. Lyudin, and V.I. Melent'yeva, technicians and workers A.N. Krasheninnikov, V.I. Zimin, Yu.I. Kuzinov, and Ye.P. Kudryavtsev. The third part

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is concerned with the calculation and experimental study of the state of stress and the deformations of turbine components. This work was performed by the Turbine-Component Laboratory. Personalities mentioned are the head of this laboratory M.M. Koren', Engineers Ye.S. [illegible] and I.V. [illegible], technicians and workers [illegible], and Z.[illegible]. The last part contains articles dealing with instruments, apparatus, and test setups. At the end of the volume methods for producing rotating parts of experimental turbines and compressors are presented. Personalities mentioned are the supervisors of the shop of the laboratory N.N. [illegible] and [illegible] Gavrilova, the leading innovators Ye.V. [illegible], I.I. [illegible], and V.P. [illegible]yrikova. References are to be found at the end of 24 of the 43 articles.

TABLE OF CONTENTS:

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134810007-6"

PART I. WORKING PROCESS

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134810007-6

PART II. VIBRATIONS OF TURBINES AND THEIR COMPONENTS

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134810007-6

2*329 S/124/61/000/005/010/032
A005/A130

26.2120

AUTHOR: Mityushkin, Yu. I.

TITLE: Experimental investigation of ring cascades and turbine stages with decreased radial pressure gradient

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 5, 1961, 35 - 36, abstract 5B1[illegible]. (V sb. Issled. elementov parovykh i gaz. turbin i osevykh kompressorov. [Tr.] Leningr. metallich. z-da, v. 6, Moscow-Leningrad, Masngiz, 1960, 27 - 35)

TEXT: The author presents the results of an experimental investigation of four ring cascades: 1) with cylindrical guiding surfaces and radial arrangement of blades; 2) with guiding surfaces profiled as hyperboloids of revolution and with radial arrangement of blades; 3) with cylindrical guiding surfaces and blades put in with their concave side towards the turbine axis (+45°); 4) the same with blades put in with their convex side towards the turbine axis (-45°). The blades of all four cascades had the same profile with a constant cross section over the height of the blade, $D^o/l \approx 9.5$ (D^o is the mean diameter, $l \approx 47$ mm is the height of the blade), the reduced velocity at the cascade outlet was $\lambda = 0.25$

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2*329 S/124/61/000/005/010/032
A005/A130

Experimental investigation of ring cascades...

- 0.45, the Reynolds number varied from $3 \cdot 10^5$ to $6 \cdot 10^5$. The capacity of cascade 3) was somewhat greater than that of 1) for equal losses and ensures total leveling of static pressure over the radius. Cascade 3) has less capacity than 1), its losses are greater. Cascade 4) has still less capacity and greater losses. All the four vane ring cascades were tested in an experimental air turbine with the same impeller of a standard ЛМЗ(LMZ) stage (radially arranged impeller blades with a constant cross section over the radius); the impeller has cylindrical guiding surfaces with small closed clearance and radial seal ($D^o/l = 9$, M number = 0.5, R number = $6 \cdot 10^5$). Stages 1) and 2) showed the same efficiency, but stage 2) ensures a greater capacity. Stages 3) and 4) had lower efficiency, but, in the author's opinion, the efficiency of stage 3) may be substantially increased by more favorable profiling of the vane cascades. The author holds that stage 4) cannot be effectively applied to turbine design.

Ya. Sirotkin

[Abstracter's note: Complete translation]

Card 2/2

MITYUSHKIN, Yu.I., kand.tekhn.nauk

Decrease of the radial gradient of static pressure in the nozzle screen of a turbine stage. Izv. vys. ucheb. zav.; energ. 3 no. 7:68-74 Jl '60. (MIRA 13:8)

1. Leningradskiy korablestroitel'nyy institut. Predstavlena kafedroy sudovykh parovykh i gazovykh turbin.
(Turbines)

MITYUSHKIN, Yu.I., kand.tekhn.nauk; U MIN-LAN', inzh. [Wu Ming-lan]

Calculation of losses in the nozzle row of a turbine stage. Izv. vys. ucheb. zav.; energ. 3 no.8:79-84 Ag '60. (MIRA 13:9)

1. Leningradskiy korablestroitel'nyy institut. Predstavlena kafedroy sudovykh parovykh i gazovykh turbin.
(Gas turbines)

27542
S/123/61/000/014/040/045
A004/A101

Yu.Y/YD

AUTHOR: Mityushkin, Yu.I.

TITLE: Determining the theoretical discharge through the nozzle rim

PERIODICAL: Referativnyy zhurnal. Mashinostroyeniye, no. 14, 1961, 27, abstract 14I196 ("Tr. Leningr. korablestroit. in-ta", 1960, no. 31, 87-94)

TEXT: Writing down the equation of gas discharge through the nozzle junction box assembly of a gas turbine in the integral form, the author determines the change in the mouth of the nozzle channel a along the radius. Nozzle junction box assemblies with rectilinear and curved outlet sections of the profile back edges are analyzed separately. For these cases the change of magnitude a was found, as well as the peripheral component of the reduced peripheral velocity along the radius for nozzle junction box assemblies with cylindrical meridional profile. It is pointed out that in nozzle junction box assemblies with blades of constant profile, the flow escape angle increases along the radius while the flow velocity increases towards the blade base. The calculation of gas discharge along the radius is performed with the aid of graphical

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Determining the theoretical discharge ...

27542
S/123/61/000/014/040/045
A004/A101

integration of the equation of discharge along the radius. The solution is correct if $M_1 < 0.8$ and $\alpha_1 < 20°$.

I. Barskiy

[Reviewer's note: Deriving the gas discharge equations the author does not take into account the thickness of the outlet edge of the nozzle blade which may lead to greater errors than those of ordinary equations which the author tries to make more precise.]

[Abstracter's note: Complete translation]

4

Card 2/2

MITYUSHKIN, Yu.I.; SEMENOV, Yu.I., student; SHITKOV, V.N., student

Compressible gas flow through an axial nozzle tip with cooled blading. Trudy LKI no.34:151-158 '61. (MIRA 15:3)

1. Kafedra sudovykh parovykh i gazovykh turbin Leningradskogo korablestroitel'nogo instituta (for Mityushkin). 2. Mashinostroitel'nyy fakul'tet Leningradskogo korablestroitel'nogo instituta (for Semenov, Shitkov).

(Marine gas turbines)

L 15733-63 EPA/FCS(f)/EWT(m)/BDS AEDC/AFFTC/ASD/AFGC Paa-4
ACCESSION NR: AR3002673 S/0124/63/000/005/B052/B052

SOURCE: Rzh. Mekhanika, Abs. 5B279 61

AUTHOR: Mityushkin, Yu. I.; U Min-lan'

TITLE: Supersonic jet turbines

CITED SOURCE: Tr. Leningr. korablestroit. in-ta, vyp. 35, 1962, 115-126

TOPIC TAGS: supersonic flow, jet turbine, turbine, discontinuity, compression, nozzle, frontal discontinuity

TRANSLATION: A study was made of supersonic flow in a turbine for $M_z > 1$ and the presence of a frontal axial symmetric discontinuity of compression in front of the blades of the operating wheel. The known discontinuity for the case of skew compression is introduced. Proceeding from these dependences, and the simplifed equations of radial equilibrium, the authors obtain the dependence which determines the variation of the statistical pressure along the line of the blades at the entrance to the working wheel. It is noted that, in profiling the nozzle cascade, one must consider the presence of the frontal discontinuity in the compression. V.V. Gol'tsev

Card 1/1 DATE ACQ: 14Jun63 SUB CODE: AE, AP ENCL: 00

ACCESSION NR: AR4021745 B/0285/64/000/002/0012/0013

SOURCE: RZh. Turbostroyeniye, Abs. 2.49.75

AUTHOR: Mityushkin, Yu. I.; Semenov, Yu. I.; Shitkov, V. N.

TITLE: Gas flow through cooled guide-vane assemblies with a variable temperature field at the intake

CITED SOURCE: Tr. Leningr. korablestroit. in-ta, vy*p. 39, 1962, 91-97

TOPIC TAGS: gas turbine engine, guide vane assembly, turbine vane, turbine cooling, gas-flow calculation

TRANSLATION: To strengthen the operating vanes it is advisable in certain gas turbine engine designs to increase the gas temperature from the base towards the tip of the vanes. The calculations of the gas flow through a cooled guidevane assembly take into account the variation of the temperature field at its intake. Under study is the steady axially-symmetric flow of compressed gas passing with friction through a guide-vane assembly from the cooled vanes. The gas flow is assumed to be cylindrical; the distribution of the parameters at the intake of

Card 1/3

ACCESSION NR: AR4021745

the guide-vane assembly is known. The presented method makes it possible to calculate the field of velocities at the outlet of a cooled guide-vane assembly equipped with arbitrarily twisted vanes, when the temperature field varies at the inlet to the turbine's stage and the drop in total pressure varies along the radius. It is noted that due to the rather small relative length of turbine blades ($\ell/D_{average}$ = 1/8-1/12) in high-pressure gas-turbine engines used on ships and due to the insignificant change in the angle of torsion α_1 and in the flow losses η_1 taking place along the height of the vanes, it can be assumed that both α_1 and η_1 are constant along the radius. No cooling is required for nozzle vanes made of ceramic or metallo-ceramic materials. This fact simplifies considerably the derived equations. In this article are given the results of calculating the field of velocities at the outlet of a cooled and an uncooled guide-vane assembly for various laws governing the change in temperature along the height of the vanes. On the basis of these results it is shown that for acceptable quantities of air used to cool the nozzle vanes (2% of the air passing through the engine) and for high gas temperatures it is practically possible to disregard the lowering of the gas temperature resulting from the cooling at the

Card 2/3

ACCESSION NR: AR4021745

outlet of the guide-vane assembly. In this case the velocity pla..es and their distribution over the height of the vanes are practically the same with and without cooling. It is noted that the unsteadiness of the temperature field at the intake changes substantially the field of velocities at the outlet of the guide-vane assembly and requires an appropriate shaping of the operating vanes. There are 2 illustrations and a bibliography of 4 titles. V. Tenyakov.

DATE ACQ: 05Mar64 SUB CODE: AI, PR ENCL: 00

Card 3/3

L 19553-65 EWT(d)/EWT(m)/EWP(f)/FCS(f)/T-2/EPA(bb)-2 AEDC(b)/ASD(s)/ASD(p)-3/
ArTC(a)
ACCESSION NR: AP4048332 S/0114/64/000/010/0015/0017

B

AUTHOR: Kurzon, A. G. (Doctor of technical sciences, Professor); Mityushkin, Yu. I. (Candidate of technical sciences, Docent); Levenberg, V. D. (Engineer); Yu, Ch'eng-an (Engineer)

TITLE: Investigation of a partial supersonic turbine stage

SOURCE: Energomashinostroyeniye, no. 10, 1964, 15-17

TOPIC TAGS: supersonic turbine, gas turbine, partial gas turbine

ABSTRACT: Results of the testing of a single-row supersonic gas-turbine stage with low and very low admission ratio ε are reported. The efficiency of the stage at $\varepsilon = 0.02-0.14$, with and without banding, is given. Turbine data follows: mean blade diameter, 530 mm; rotor-blade length, 14 mm; straight-axial nozzle angle, $6^{\circ}30'$; nozzle expansion capacity, 2.25; front nozzle angle, 18°; seven drilled nozzles per segment. The stage efficiency falls off

Card 1/2

L 19553-65
ACCESSION NR: AP4048332

appreciably under off-design operating modes, particularly at higher expansion ratios and lower admission ratios (detailed data supplied). With a low ε, the efficiency of a turbine equipped with a banding is 10—15% higher than that of a turbine without banding, while at sonic speeds, the beneficial effect of banding is much weaker. Orig. art. has: 4 figures and 1 formula.

ASSOCIATION: Leningradskiy korablestroitel'ny*y institut (Leningrad Ship-Building Institute)

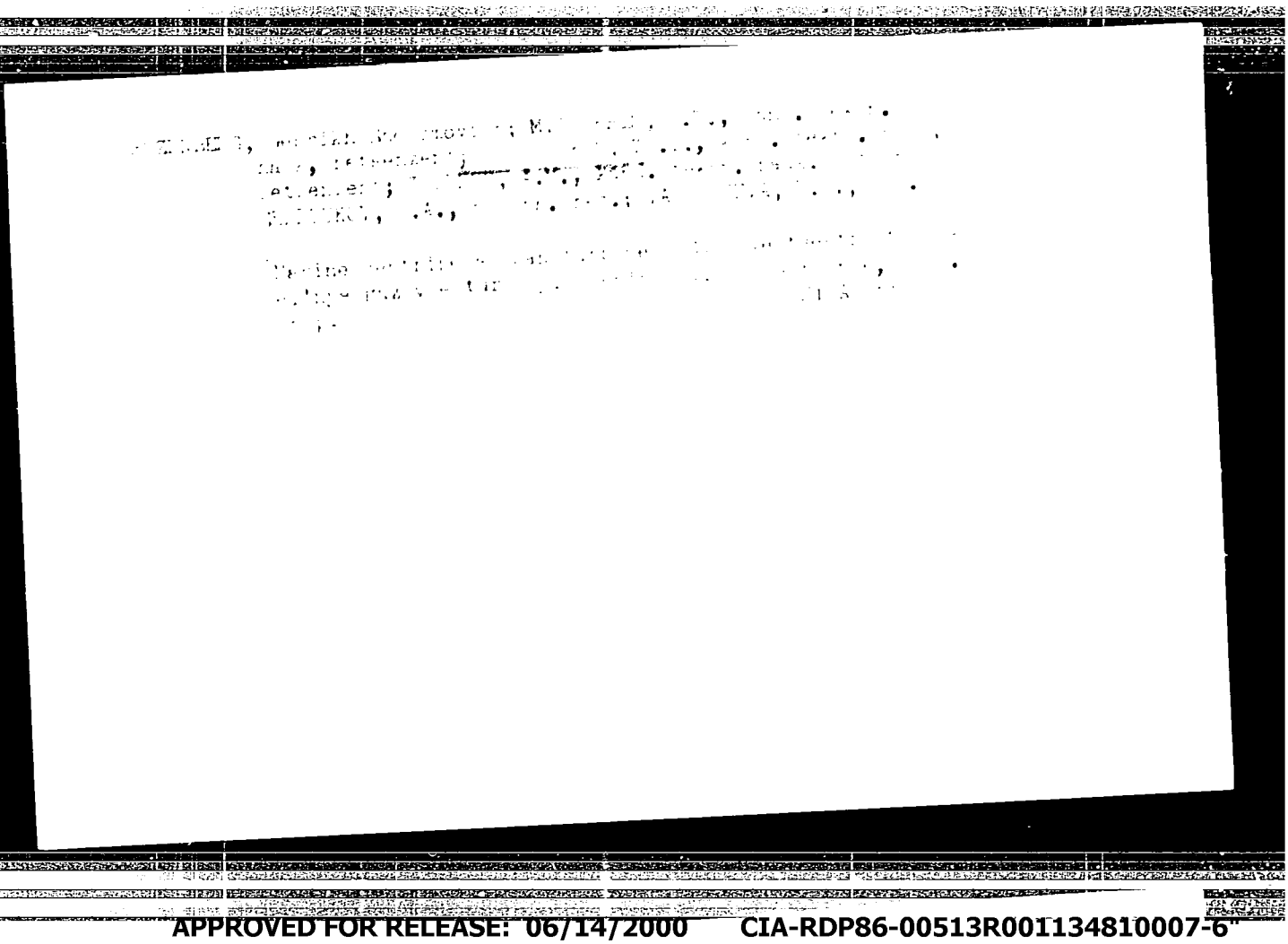
SUBMITTED: 00 ENCL: 00

SUB CODE: PR NO REF SOV: 008 OTHER: 000

Card 2/2

MITYUSHKIN, Yu.I., [illegible], [illegible] [illegible], kand. tekhn. nauk

Effect of a radial temperature [illegible] blades of axial turbines. [illegible] mashino[illegible] [illegible] 17:[illegible] [illegible] '64.



L 12866-66 EWT(d)/EWT(l)/EWP(m)/EWP(w)/EWP(f)/EWA(d)/EWP(v)/T-2/EWP(k)/FCS(k)/EWA(h)/
ACC NR: AR5025454 EWA(c)/ETC(m)/EWA(l) SOURCE CODE: UR/0285/65/000/008/0015/0015
EWT(m) WW/EM

SOURCE: Ref. zh. Turbostroyeniye, Abs. 8.49.102

AUTHORS: Levenberg, V. D.; Mityushkin, Yu. I.

TITLE: On the question of computing a supersonic jet

CITED SOURCE: Tr. Leningr. korablestroit. in-ta, vyp. 44, 1964, 151-156

TOPIC TAGS: turbine, turbine nozzle, turbine jet, supersonic flow, supersonic gas flow

TRANSLATION: Supersonic partial turbines are widely used for driving shipboard auxiliary mechanisms. In the majority of cases drilled conical jet nozzles are used with supersonic partial turbines and, in some cases, composite milled linear jets are employed. Losses of flow in linear supersonic jets are concentrated in the boundary layer within the jet and in the system of outlet and boundary bracing ridges in the oblique section zone and at the outlet of the nozzle segment. A theoretical computation method is proposed for the losses at the outlet bracing ridges in the segment of planar supersonic jets, with the assumption that the ridges of nozzle walls are infinitely thin. This modeling of gas flow in a segment of planar supersonic jets is similar to that of gas in the central part of the segment of milled jets with a cross-cut, even though the qualitative evaluation of ave losses in them by a theoretical means does not seem possible.

UDC: 621.438.001.24

Card 1/1 SUB CODE: 01

L 11202-67 EWP(m)/EWT(d)/EWT(l)/EWT(m)/EWP(k)/FS(m)/EWP(w)/EWP(f)/EWP(v) IJP(c)
ACC NR: AR6020066 EM/WW/RM (N) SOURCE CODE: UR/0124/66/000/001/B043/B043

AUTHOR: Levenberg, V. D.; Mityushkin, Yu. I.

TITLE: On the problem of calculating supersonic nozzles

SOURCE: Ref. zh. Mekhanika, Abs. 1B310

REF SOURCE: Tr. Leningr. korablestroit. in-ta, vyp. 44, 1964, 151-156

TOPIC TAGS: supersonic nozzle, guide vane, shock wave, wave mechanics

ABSTRACT: Formulas are given for calculating wave losses in plane supersonic guide vane assemblies having blades with flat walls and sharp trailing edges. A simplified computational scheme is used, in which it is assumed that there is only one curvilinear shock wave which arises in the outlet section of the intervane channel with an intensity which is determined from the conditions that the angle of flow beyond the guide vane assembly is equal to the angle of inclination of the back edge of the blade in an oblique section, while the flow velocity at each point preceding the shock wave is constant in magnitude and directed ong lines radiating from the point of intersection of the flat walls of the intervane channel. Abstractor's note: The assumed computational flow scheme is incorrect and cannot be used for determining wave losses. For a correct approach to this problem, see for example Gol'tsev, V. V., Inzhenernyy zh., 1963, 3, No. 3, 540-546 - RZhMekh, 1964, 2B245. V. P. Vakhomchik. [Translation of abstract]

SUB CODE: 20

Card 1/1 jb

L 09138-67 EWT(m)/EWP(w)/EWP(w)/EWP(k) LJP(c) FDN/EM/DJ
ACC NR: AR6028060 SOURCE CODE: UR/0285/66/000/005/0006/0006

47

AUTHOR: Mityushkin, Yu. I.

TITLE: Calculating the flow in the guide vane assembly of an axial turbine

SOURCE: Ref. zh. Turbostroyeniye, Abs. 5.49.17

REF SOURCE: Tr. Leningr. korablestroit. in-ta, vyp. 47, 1965, 39-50

TOPIC TAGS: guide vane, axial flow turbine, turbine blade

ABSTRACT: A simplified method is proposed for solving the direct problem in which the shape of the bounding surfaces and blades in the guide vane assembly of an axial-flow turbine is given and the longitudinal distribution of parameters must be found for the blade at the outlet with regard to twisting of the flow lines in the meridional cross section. It is assumed that flow of the compressible fluid is axisymmetric and stationary and that the deceleration parameters at the inlet to the guide vane assembly are constant with respect to radius; the guide vane assembly has conical or cylindrical bounding surfaces; the blades are mounted radially with respect to the trailing edges and forces of interaction between blades and flow are disregarded. [Translation of abstract]

SUB CODE: ~~21~~ 13 10

UDC: 621.165.001.24

Card 1/1 nst

ACCESSION NR: AP4042863 S/0114/64/000/007/0026/0028

AUTHOR: Mityushkin, Yu. I. (Candidate of technical sciences); Wu, Ming-lan (Candidate of technical sciences)

TITLE: Effect of the radial temperature gradient on the blade twist in axial-flow turbines

SOURCE: Energomashinostroyeniye, no. 7, 1964, 26-28

TOPIC TAGS: turbine, turbine blade, turbine blade twist, turbine blade design, gas turbine, nozzle box assembly

ABSTRACT: A new method for calculating the flow speed beyond the nozzle-box assembly in a gas turbine which has a variable temperature field at the inlet is offered. This formula:

$$\bar{\lambda}_1 \exp\left(\varphi_1^2 \int_{\bar{r}}^{\bar{r}} \frac{\cos^2 \alpha_1}{\bar{r}}\, d\bar{r}\right) = AB,$$

Card 1/2

ACCESSION NR: AP4042863

is developed for determining the variation of speed with the blade height at the nozzle-disk outlet; in the general case, the thermodynamic gas temperature, speed, and impact parameters at the turbine inlet may vary with the blade height. The angle of the stream entrance into the rotor blades varies less with the blade height in the case of a positive radial gradient of the impact temperature than in the case when this temperature is constant. Orig. art. has: 2 figures and 18 formulas.

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: PR, NO REF SOV: 005 ENCL: 00 OTHER: 000

Card 2/2

MITYUSHOV, M.I.

Cortical regulation of internal secretion of the pancreas. Trudy Inst. fiziol. 3:576-592 '54. (MLRA 8:2)

1. Laboratoriya nervnoy regulyatsii endokrinnykh funktsiy. Zaveduyushchiy Ye.N.Speranskaya.

(ISLANDS OF LANGERHANS, physiology,
conditioned reflex regulation)
(REFLEX, CONDITIONED,
regulation of islands of Langerhans)

MITYUSHOV, M.I.

Conditioned reflex incretion of insulin. Zhur. vys. nerv. deiat. 4 no.2:206-212 Mr-Ap '54. (MLRA 7:10)

1. Laboratoriya nervnoy regulyatsii endokrinnykh funktsiy Instituta fiziologii im. I.P.Pavlova Akademii nauk SSSR.

(INSULIN, physiology,
secretion, conditioned reflex regulation)
(REFLEX, CONDITIONED,
eff. on insulin secretion)

MITYUSHOV, M.I.(Leningrad)

Higher nervous activity in dogs in experimental diabetes mellitus.
Probl.endok. i gorm. 1 no.1:84-92 Ja-F '55 (MLRA 8:10)

1. Iz laboratorii fiziologii zhelez vnutrenney sekretsii (zav. prof. Ye.N.Speranskaya Instituta fiziologii imeni I.P.Pavlova (dir. akad. K.M.Bykov) Akademii nauk SSSR.
(DIABETES MELLITUS, experimental,
higher nervous funct. in)
(CENTRAL NERVOUS SYSTEM, in various diseases,
exper.,diabetes mellitus, higher nervous funct.)

MITYUSHOV, M.I.

Effect of collisions in higher nervous activity on the course of experimental diabetes in dogs. Trudy Inst.fiziol. 5:61-67 '56. (MLRA 10:1)

1. Laboratoriya nervnoy regulyatsii endokrinnykh funtsiy. Zaveduyushchiy - Ye.N.Speranskaya.
(CEREBRAL CORTEX) (DIABETES)

MITYUSHOV, M.I.

Conference on the role of neurohumoral and endocrine factors in the activity of the nervous system under normal and pathological conditions. Probl.endok. i gorm. 3 no.2:118-122 Mr-Ap '57. (MIRA 10:10)
(NERVOUS SYSTEM) (HORMONES)

MITYUSHOV, M.I.

Change in the higher nervous activity of dogs as related to the blood sugar level in normal and pathological states. Trudy Inst. fiziol. 8:290-296 '59. (MIRA 13:5)

1. Laboratoriya fiziologii zhelez vnutrenney sekretsii (zaveduyushchaya - Ye.N. Speranskaya) Instituta fiziologii im. I.P. Pavlova AN SSSR.
(BLOOD SUGAR) (CONDITIONED RESPONSE)

MITYUSHOV, M.I.; SPERANSKAYA, Ye.N.

Physiological analysis of the therapeutical effect of glucose. Sbor. nauch. turd. Ukr. nauch.-issl. inst. eksper. endok. 15: 132-139 '59. (MIRA 14:11)
(GLUCOSE)

BRESLAV, I.S.; ZHIRONKIN, A.G.; IL'NITSKIY, A.M.; KONZA, E.A.; MITYUSHOV, M.I.; NOZDRACHEV, A.D.; SALATSINSKAYA, Ye.N.; TROSHIKHIN, G.V.; SHMELEVA, A.M.

Some data on the effect of a closed space on the physiological functions in animals. Probl.kosm.biol. 2:291-302 '62. (MIRA 16:4)

(SPACE MEDICINE)

L 11370-67 EWT(1) SCTB DD/GD SOURCE CODE: UR/0000/66/000/000/0058/0058

ACC NR: AT6036493

AUTHOR: Barutkina, T. S.; Zarubaylo, T. T.; Mityushov, M. I.; Panov, A. [illegible]; Rakitskaya, V. V.; Sokolova, Ye. V.

ORG: none

TITLE: Characteristics of the activity of the adrenal cortex, the thyroid, and higher nervous activity under conditions of prolonged exposure to noise [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 58

TOPIC TAGS: acoustic biologic effect, biologic secretion, endocrinology, thyroid gland, blood chemistry

ABSTRACT: The adaptive reaction of the human organism to spaceflight stimuli includes change in the function of the pituitary-adrenal system, change in the thyroid gland, and in other endocrine glands. Study of spaceflight stress factors will enable explanation of the nature of the neuroendocrine changes which determine the organism's adaptation to unfavorable conditions. Experiments were conducted to determine the effect of constant noise (one of the above-mentioned stress factors) on the animal organism. White rats

Card 1/2

L 11370-67

ACC NR: AT6036493

were exposed to noise with a frequency of 650 cps and intensity of 70 db for periods ranging from 1 hr to 14 days. The sound was turned on 17 sec in every 30 sec.

The functional activity of the adrenal cortex, determined by the decrease in ascorbic acid and cholesterol concentrations, increased depending on the time of the noise effect, reaching a maximum after 6--12 hr. After eight days of noise the condition of the adrenal cortex in experimental animals was the same as its initial condition. Introduction of ACTH provoked a normal adrenal reaction, indicating adaptation of the organism to the effect of the stimulus.

The functional condition of the thyroid gland was estimated using the protein-bound iodine blood test (PBI) and histological study. Increase in thyroid activity was observed only after one day of noise. Deviations from the norm were not observed in the remaining periods.

Higher nervous activity was studied using the motor electric defense method [Fedorov and Glebovskiy -- 1954]. Under the influence of noise (lasting seven days) the latent period of the reaction increased and a tendency to lengthening of the time of the animal's gait was observed. On the first day after cessation of noise, the number of errors increased for some of the animals, which can be considered adaptation to the noise effect. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2

L 11369-67

ACC NR: AT6036492

tion caused an intensification of glycolysis. Injection of hydrocortisone lowered the content of ATP while the concentration of ADP, AMP, and citric acid was increased. [W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3

L 58910-65 EWT(m)/EPF(c)/EWP(t) ET/EWA(c) Pc-4/Pr-4 RPL JW/RM

ACCESSION NR: AP5017064 UR/0269/65/000/001/0151/0152
547.234

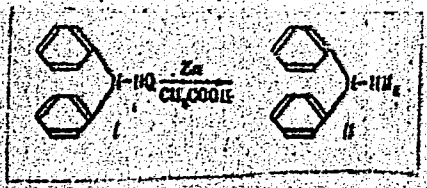
AUTHOR: Kotlyarevskiy, I. L.; Terpugova, M. P.; Mityushova, A.A.

TITLE: Synthesis of diphenylpicrylhydrazyl

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk, no. 1, 1965, 151-152

TOPIC TAGS: diphenylpicrylhydrazyl, diphenylhydrazine, ESR spectrum

ABSTRACT: Diphenylpicrylhydrazyl, used as a standard in electron spin resonance studies, is synthesized from diphenylhydrazine by the well-known method of S. Goldschmidt and K. Renn (Ber., 55, 636, 1922). The authors of the present article found that diphenylhydrazine (II) is obtained in good yield from nitrosoamine (I) and zinc dust by a somewhat modified procedure of E. Fischer (Ann. 190, 174, 1878), which they describe. The reaction is:



Card 1/2

L 58910-65

ACCESSION NR: AP5017064

From 20 g of nitrosoamine and 32 g of zinc dust, 5.2 g of diphenylhydrazine are obtained as a yellow oil which does not crystallize; this was then used to prepare diphenylpicrylhydrazyl by S. Goldschmidt's technique. Orig. art. has: 1 formula.

ASSOCIATION: Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya AN SSSR, Novosibirsk (Institute of Chemical Kinetics and Combustion, Siberian Branch, AN SSSR)

SUBMITTED: 17Jan64 ENCL: 00 SUB CODE: OC

NO REF SOV: 001 OTHER: 002

Card 2/2

L 27752-66 EWI(m)/EWP(t)/ETI/EWA(h) IJP(c) JD/JG

ACC NR: AP6015694 (A) SOURCE CODE: UR/0413/66/000/009/0093/0093

INVENTOR: Aleksakhin, I. A.; Morzakova, A. F.; Mityushov, V. A.; Karbolin, V. M.

ORG: none

TITLE: Thermocouple for temperatures up to 2100C. Class 42, No. 181343 [announced by the Institute of "Giprotsvetmetobrabotka"]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 93

TOPIC TAGS: iridium, iridium alloy, ruthenium containing alloy, rhodium containing alloy, thermocouple, thermocouple alloy

ABSTRACT: This Author Certificate introduces a thermocouple for measuring temperatures up to 2100C, in which the positive thermoelectrode is made from iridium-50% rhodium alloy to ensure high sensitivity, oxidation and corrosion resistance, and reliability, and the negative thermoelectrode is made from iridium-10% ruthenium alloy. [AZ]

SUB CODE: 11/ SUBM DATE: 22Mar65/ ATD PRESS: 5001

Card 1/1

UDC: 536.532:537.324

MITYUSHOVA, N.M.

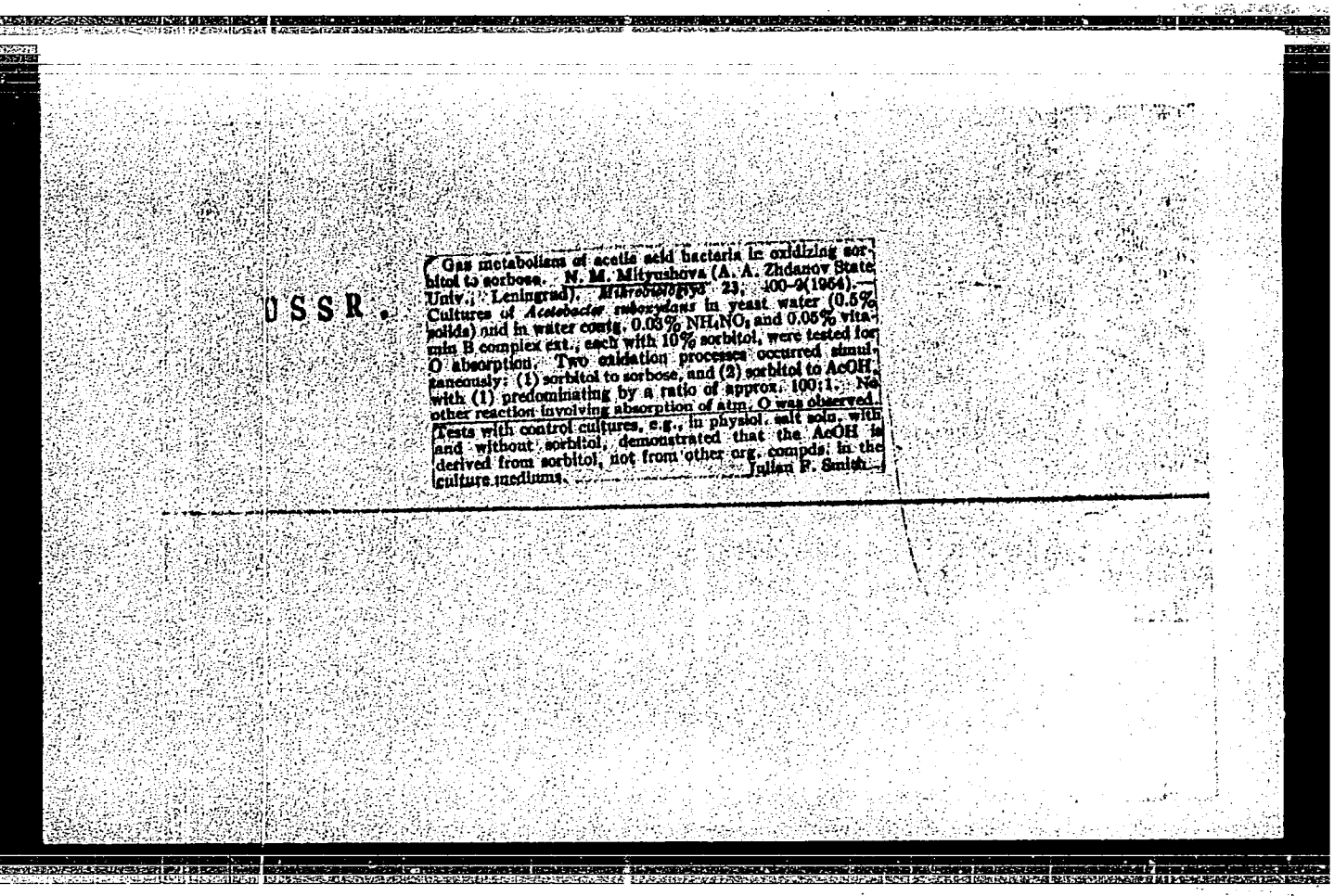
Carbon dioxide requirement in bacteria oxidizing sorbitol into sorbose. Mikrobiologiia, Moskva 21 no. 3:265-272 May-June 1952. (CLML 22:3)

1. Leningrad State University imeni A. A. Zhdanov.

MITYUSHOVA, N.M.

Relation of multiplication and oxidation of Acetobacter suboxydans to content of medium. Mikrobiologiia, Moskva 22 no.3:249-255 May-June 1953. (CIML 25:5)

1. Leningrad State University imeni A. A. Zhdanov.



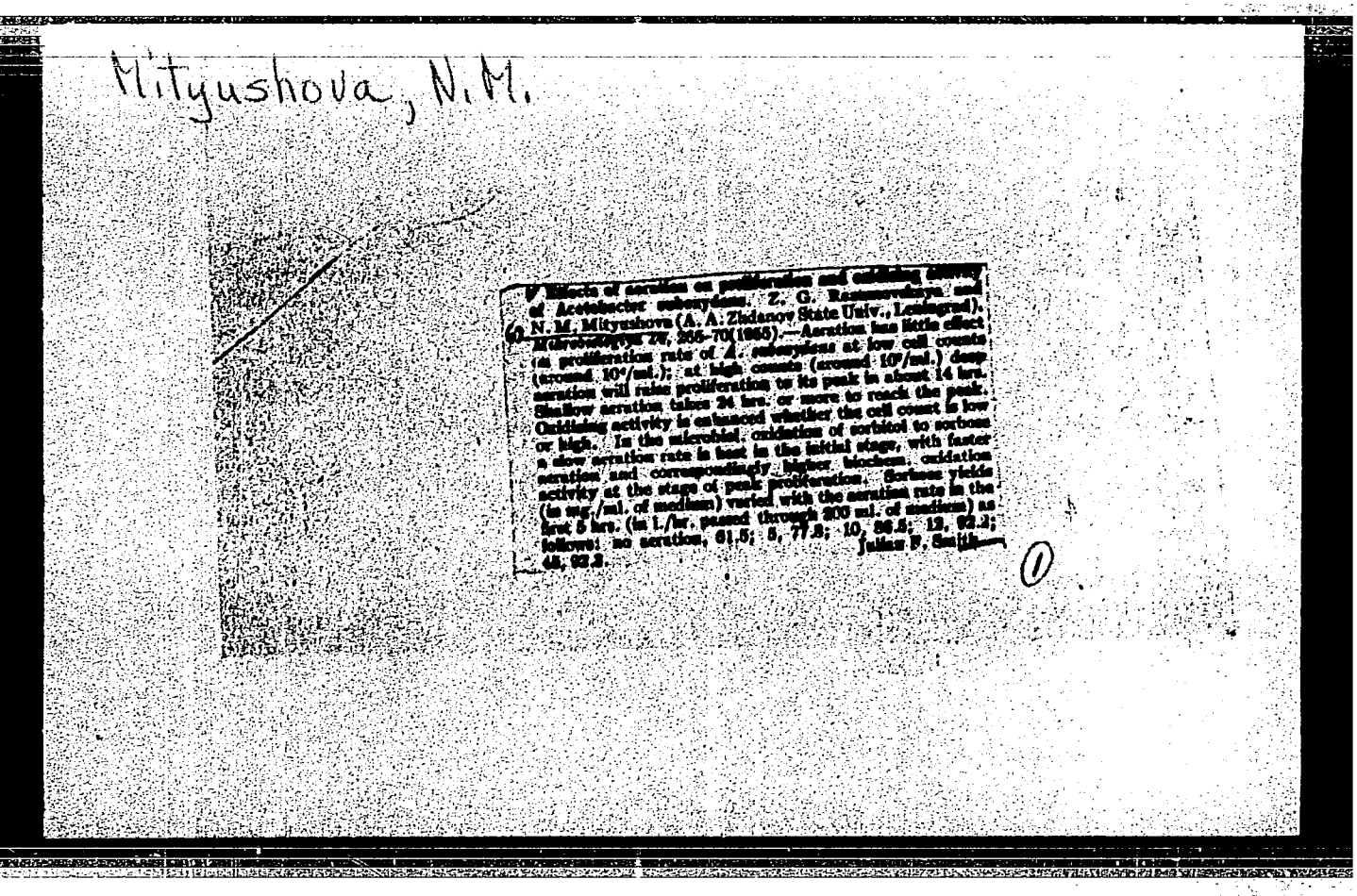
USSR

Gas metabolism of acetic acid bacteria in oxidizing sorbitol to sorbose. N. M. Mityushova (A. A. Zhdanov State Univ., Leningrad). *Mikrobiologiya* 33, 400–4(1964).—Cultures of *Acetobacter suboxydans* in yeast water (0.5% solids) and in water contg. 0.03% NH_4NO_3 and 0.05% vitamin B complex ext., each with 10% sorbitol, were tested for O absorption. Two oxidation processes occurred simultaneously: (1) sorbitol to sorbose, and (2) sorbitol to AcOH, with (1) predominating by a ratio of approx. 100:1. No other reaction involving absorption of atm. O was observed. Tests with control cultures, e.g., in physiol. salt soln. with and without sorbitol, demonstrated that the AcOH is derived from sorbitol, not from other org. compds. in the culture mediums. Julian F. Smith

RAZUMOVSKAYA, Z.G., professor, redaktor; LOYTSYANSKAYA, M.S.; CHIZHIK, G.Ya.; MITYUSHOVA, N.M.; MEL'NIKOVA, G.G., redaktor; IVANOV, V.V., tekhnicheskiy redaktor.

[Manual on laboratory work on microbiology] Rukovodstvo k laboratornym zaniatiiam po mikrobiologii. [Leningrad] Izd-vo Leningradskogo universiteta, 1955. 68 p. (MLRA 8:12)
(Microbiological laboratories)

Mityushova, N.M.



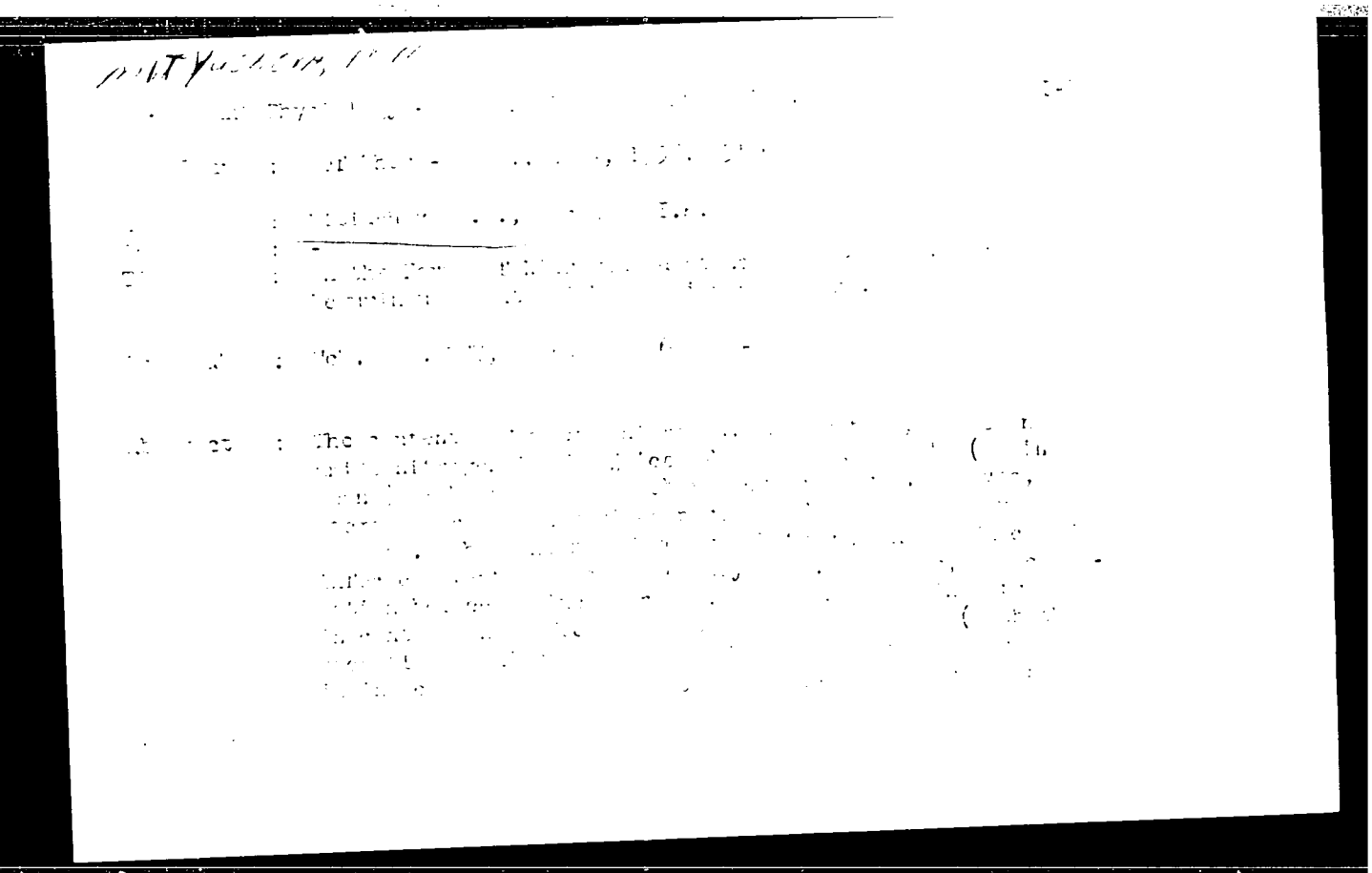
Effects of aeration on proliferation and oxidizing activity of Acetobacter suboxydans. Z. G. Rasumovskaya, and N. M. Mityushova (A. A. Zhdanov State Univ., Leningrad). Mikrobiologiya 27, 265-70(1958).—Aeration has little effect on proliferation rate of *A. suboxydans* at low cell counts (around 10^6/ml.); at high counts (around 10^9/ml.) deep aeration will raise proliferation to its peak in about 14 hrs. Shallow aeration takes 24 hrs. or more to reach the peak. Oxidizing activity is enhanced whether the cell count is low or high. In the microbial oxidation of sorbitol to sorbose a slow aeration rate is best in the initial stage, with faster aeration and correspondingly higher biochem. oxidation activity at the stage of peak proliferation. Sorbose yields (in mg./ml. of medium) varied with the aeration rate in the first 5 hrs. (in l./hr. passed through 200 ml. of medium) as follows: no aeration, 61.5; 5, 77.5; 10, 86.5; 12, 92.2; 45, 92.2. Julian P. Smith

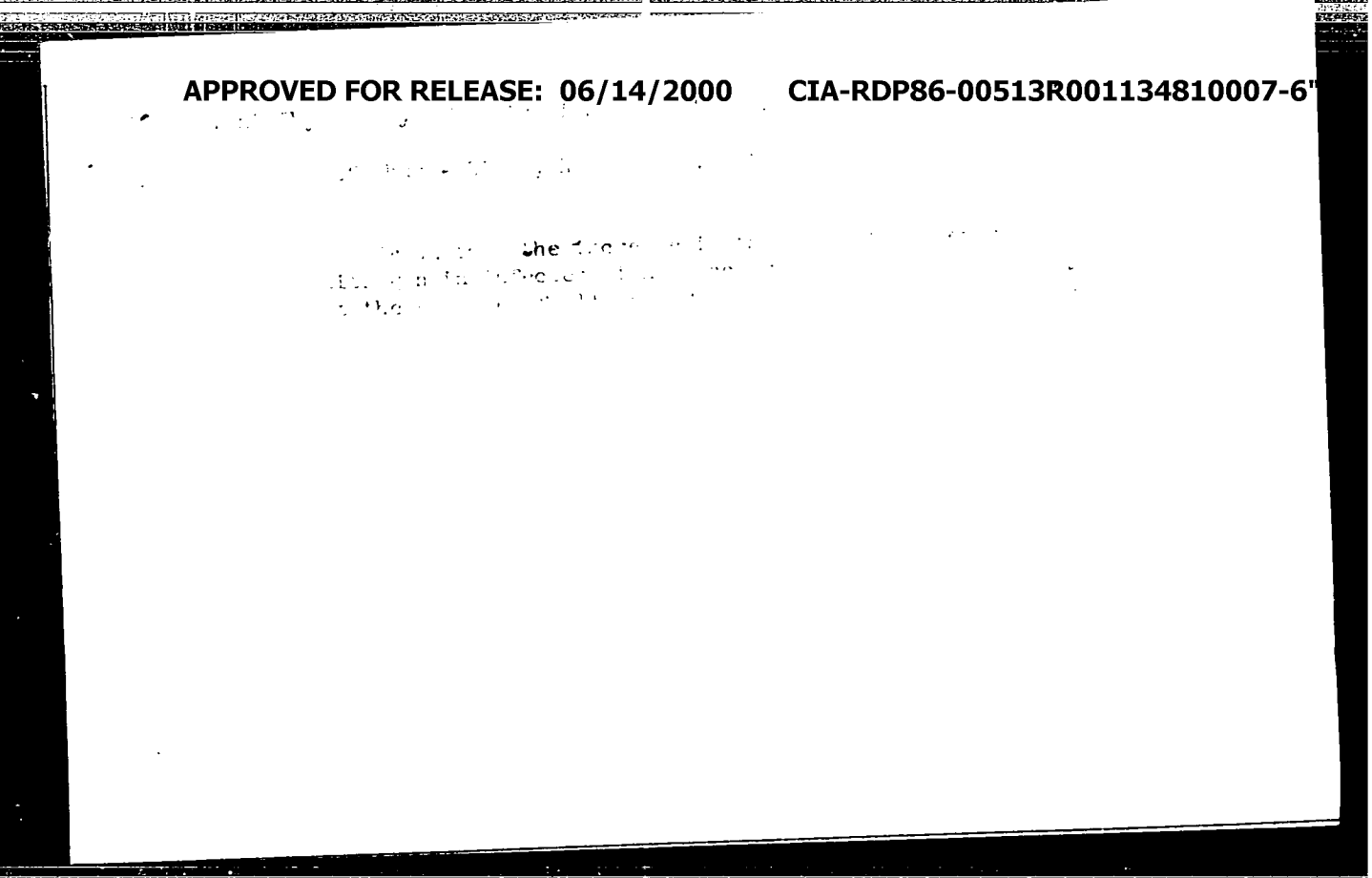
(1)

The nitrogen content of the sap of the phaseolus plant with tubercles and without tubers. N. M. Mityushova. *Uchenye Zapiski Leningrad. Gosudarst. Univ. im. A. A. Zhdanova* No. 186, *Ser. Biol. Nauk* No. 39, 233-40(1955).—The total N content of the sap of the phaseolus plant grown under the conditions of the field is greater for plants with tubercles than for those without. When the plant is grown in a plant chamber, the N content in the sap of plants with and without tubercles has a sharper difference than when grown under the conditions of the field. If the tubercles are removed from a plant, the quantity of N in the sap is considerably less than in the sap of plants contg. tubercles. The amt. of amides and amines is slightly higher in plants contg. tubercles than in those without. I. M. W.

MITYUSHOVA, N.M.; GOLUBOVSKAYA, E.K.; VOROTOVA, I.K.

Nitrogen content of the sap of leguminous plants with and without nodules. Uch.zap.Len.un. no.216:180-187 '56. (MLRA 10:3)
(LEGUMES) (ROOT TUBERCLES) (NITROGEN)





APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134810007-6"

BARSUKOV, V.S.; MALINOVSKIY, O.V.; MITYUSHOVA, N.M.

Postradiation restoration of yeast cells irradiated under aerobic and anaerobic conditions. Dokl. AN SSSR 153 no.5: 1199-1201 D '63. (MIRA 17:1)

1. Institut fiziologii im. I.P. Pavlova AN SSSR. Predstavleno akademikom V.N. Chernigovskim.

ACCESSION NR: AP4006497 S/0020/63/153/005/1199/1201

AUTHOR: Barsukov, V. S. ; Malinovskiy, O. V.; Mityushova, N. M.

TITLE: Postradiation restoration of yeast cells irradiated under aerobic and anaerobic conditions.

SOURCE: AN SSSR. Doklady*, v. 153, no. 5, 1963, 1199-1201

TOPIC TAGS: yeast cell, Saccharomyces cerevisiae, irradiation, yeast cell, cell restoration, yeast cell restoration, dose effect, genetic damage, oxygen effect, cytoplasmic structure, cytoplasm injury, radiosensitivity, aerobic irradiation, anaerobic irradiation

ABSTRACT: The points of attack of the oxygen effect under the described conditions were studied on a suspension of a 3 day-old culture of Sacch. cerevisiae (tetraploid strain), capable of recuperation in water without propagation. Test conditions and procedure for removing O_2 are described. After irradiation with a Co^{60} source at varying doses the suspensions were placed

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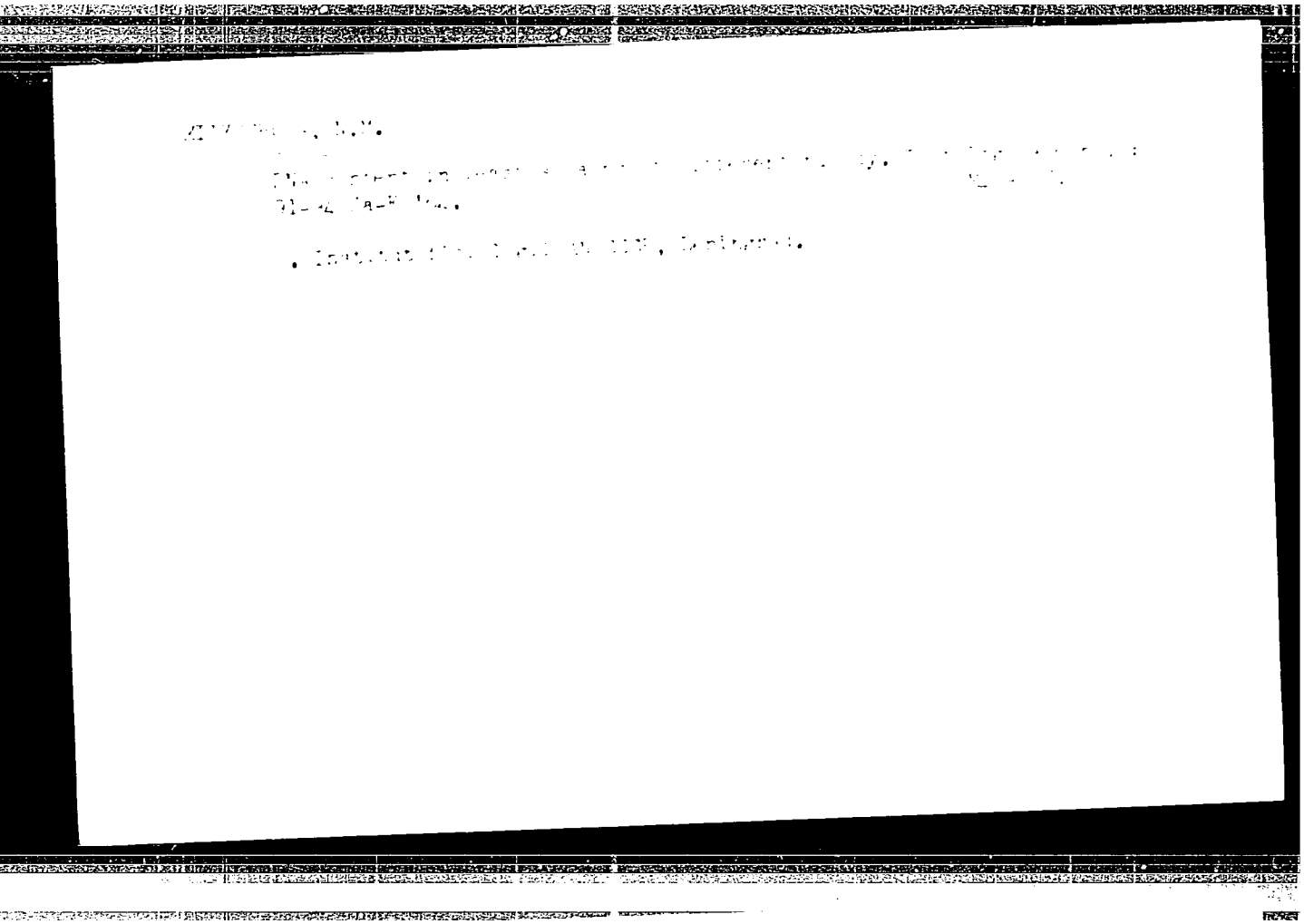
ACCESSION NR: AP4006497

in water at 30C for 0-20 hours for recuperation of both lots under aerobic conditions, then transferred to agar; their survival was determined by the macrocolony method. In the graphed results the curves of survival and recuperation rates coincided for aerobic and anaerobic conditions, suggesting therefore that oxygen acts only as a "dose-modifying factor" and does not qualitatively modify the radiation injury. The oxygen ratio with respect to the recuperation rate (based on LD_{50}) was 3 ± 0.2, with respect to the survival rate 2.96 ± 0.09, and remained unchanged within the error limits for all test doses. Under both conditions the recuperation rates were equal for equal survival rates. The probability equations referring to these tests are presented and agree with the above findings. Thus the influence of oxygen during irradiation is restricted to increasing destruction of massive cytoplasmic cell structures, with a less probable influence on the number of primary genetic injuries. Orig. art. has: 1 figure and 3 equations

ASSOCIATION: Institut fiziologii im. I. P. Pavlova Akademii nauk SSSR (Institute of Physiology, Academy of Sciences, SSSR)

Card 2/3



BARSUKOV, V.S.; MALINOVSKIY, [illegible].V.; MITYUSHOVA, N.V.

Ultraviolet regeneration of yeast cells during the stationary phase of growth. Dokl. AN SSSR 161 no.1:228-229 Mr '65. (MIRA 18:3)

1. Institut fiziologii im. I.P. Pavlova AN SSSR. Submitted May 27, 1964.

L 16809-66 EWT(1)/EWT(m)/T. JK
ACC NR: AT6003879 SOURCE CODE: UR/2865/65/004/000/0451/0460

AUTHOR: Barsukov, V. S.; Malinovskiy, O. V.; Mityushova, N. M. 49 B+1

ORG: none 6.4455

TITLE: Significance of postradiation restoration of genetic structures for cell radiosensitivity. I. Quantitative principles of postradiation restoration of yeast cells 19

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 451-460

TOPIC TAGS: ionizing radiation, radiobiology, yeast, radiation injury, cytoplasm, radiation protection, chromosome, mitosis

ABSTRACT: A tetraploid strain of *Saccharomyces cerevisae* yeast cells was irradiated with a GUT-Co^{60}-400 source at a dosage of 1300 rad/min. The temperature of the suspension was held at 4° to preclude restoration during the irradiation. Part of the cells were sown on agar and the remainder immersed in water at 30° for various periods up to 24 hrs. Taking t as the time the cells were immersed in water and the initial number of damaged cells at $t = 0$ as unity, the number of damaged cells

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L 16809-66
ACC NR: AT6003879

was found to decrease according to the formula

$$\omega(D,t)=e^{-\int_0^t v(\tau)d\tau},$$

where $\omega(D, t)$ is the number of damaged cells irradiated with dose D (in rads) and immersed in water for t hour, v is the rate of restoration of the population of damaged cells or the probability for restoration of an individual cell in unit time. It was found that the rate of restoration did not depend on time within a 24 hr period. However, after 24 hrs the rate of restoration dropped and unirradiated cells in the control sample started dying. The rate of restoration as a function of irradiation dose is graphed. Injured structures were restored throughout the entire cell. It is concluded that radiation injuries of the dominant lethal type are largely reversible in yeast cells and that virtually all cytoplasmic structures participate in their restoration. Orig. art. has: 3 figures, 8 formulas.

SUB CODE: 06/ SUBM DATE: 00/ ORIG REF: 004/ OTH REF: 009

Card 2/2

ACCESSION NR: AT4044487 S/0000/64/000/000/0041/0046

AUTHOR: Barsukov, V.S., Malinovskiy, O.V., Mityushova, N.M.

TITLE: The importance of the cytoplasm in the recovery of cells from genetic radiation damage

SOURCE: Vosstanovitel'ny*ye protsessy* pri radiatsionny*kh porazheniya kh (Recovery from radiation injuries); sbornik statey. Moscow, Atomizdat, 1964, 41-46

TOPIC TAGS: radiation damage, genetic radiation damage, mutation, cytoplasm

ABSTRACT: In experiments on several diploid and tetraploid strains of Saccharomyces cerevisiae, the yeast was irradiated in aqueous suspension at 30C with gamma rays (Co^{60}) at an intensity of 880 rads/minute. At various times after irradiation, the cells were plated on nutrient agar and the survival rate was determined by the appearance of colonies. The results showed that the recovery rate is qualitatively the same for all strains of yeast, but is inversely dependent on dosage. The rate of recovery is constant for the first 20-30 hours, after which it drops markedly. Since the degree of damage to the cytoplasm also increases in direct relation to the dose, it appears that the recovery from genetic mutations of the dominant lethal type involves the participation of cytoplasmic structures

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ACCESSION NR: AT4044487

and follows the all-or-none law. Most such mutations are apparently reversible. Irradiated populations of yeast cells can be described by a number of parameters characterizing the ability of the cells to recover. Orig. art. has: 2 figures and 5 formulas.

ASSOCIATION: none

SUBMITTED: 29Jan64 ENCL: 00 SUB CODE: LS

NO REF SOV: 004 OTHER: 003

Card 2/2

MITYYEV, I.D.

New subgenus and species of the genus Pitnyotettix Rib., 1942 (Auchenorrhyncha, Cicadellidae) from the southern Altai. Zool.zhur. 44 no.8:1[illegible]-1[illegible] '65.

(MIRA 18:11)

1. Institut zoologii AN Kazakhskoy SSR, Alma-Ata.

MITZEL, Adam, prof. dr.

Model research as a method of designing industrial constructions. Inz i bud 20 no.8/9:267-275 Ag-S '63.

1. Politechnika, Wroclaw.

RUMANIA

NICOLAU, Cl., Conf. Dr.; MAURESAN, V.; CHRISTEA, Al.; NICOLAU, Elena; MIU, C., Lieutenant-Colonel, Pharmacist; VOICU, V., Lieutenant-Major, Medical Corps; and STROESCU, Eugenia

"Correlation Between Changes in Structure and Changes in Pharmacodynamic Activity of Acetylcholine and Some Derivatives of Irradiated Compounds"

Bucharest, Revista Sanitara Militara, Vol 16, Special No., 1965; p 498

Abstract: X-irradiation with 10^5, $2x10^5$, $5x10^5$ r of acetylcholine, acetylcholine iodide, benzensulfonate and paratoluene-sulfonate of acetylcholine; paramagnetic resonance spectral calculation of density of labile electrons were correlated with nicotinic effect changes.

1/1

Radiobiology

RUMANIA

POPESCU, Gh., Dr, Lt-Col, CAVULEA, O., Veterinarian, Lt-Col, APOSTOLESCU, R., Dr, MIU, C., Pharmacist, Maj, VOICU, V., Dr, Lt-Col, and CHILIANU, Gh., Dr, Cpt (affiliation not given)

"Observations Concerning the Effect of Radioprotection on Irradiated and Burned Animals."

Bucharest, Revista Sanitara Militara, Vol 62, No 2, Mar-Apr 66, pp 289-297.

Abstract: A report on an experimental study to determine the radioprotective effectiveness of cystamine and cystine for burned and irradiated animals. The study, which used 180 mature rats, showed that the protected animals, especially those irradiated with 400 roentgen units, showed a more attenuated evolution of the disease and a somewhat smaller intensity of histopathologic lesions. The difference in mortality between the protected animals and the controls was not significant.

Includes 7 figures, 2 tables and 12 references, of which 5 Rumanian, 2 Russian and 5 Western. -- Manuscript submitted 19 July 1965.

Miu, I., Integration of differential equations with constant coefficients with the aid of first integrals, Gaz. Mat. Fiz. Ser. A. 8 (1956), 467-471. (Romanian)

1-FW

1/1

MIU, I.

Wall girders. p. 431.

REVISTa CAILOR FE:ATE. (Caile Ferate Romine) Bucuresti, Rumania.
Vol. 7, no. 8, Aug. 1959.

Monthly list of East European Accessions (EEAI) LC Vol. 9, no. 2, Feb. 1960

Uncl.

MIU, I.M., conf. univ. (Bucuresti)

About the zeros of some functions. Gaz mat fiz 14 no.9:473-479 S '62.

MIU, I. M.

A theorem and a generalization of the theorem of average. Bul Inst Politeh 25 no.6:29-39 N-D '63.

1. Chair of Mathematics, Politechnic Institute, Bucharest.

MIH, I.M.

Contributions to the theory of algebraic equations. Bul Inst Politeh 25 no.5:[illegible] [illegible] '63.

1. Department of Mathematics, Bucharest Polytechnic Institute.

MIU, I.M.

Real zeros of certain functions. Bul Inst Politeh [illegible]
29-37 Mr-Ap '64.

1. Chair of Mathematics, Polytechnic Institute, Bucharest.

MIU, I.M

A generalization of the mean value theorem [illegible] Inst Politeh
26 no.3-4:25-33 My-Je '64.

1. Chair of Mathematics, Polytechnic Institute, Bucharest

MIU, I M.

On a Sturm theorem. [illegible]

1. Chair of Mathematics, [illegible] Polytechnic Institute, Bucharest

BURLUI, D.; PRISCU, Al.; MIULESCU, I.; MUNTEANU, R.; MIHAI, V.; SPINEANU, I.

Surgical treatment of the peripheral ischaemia syndrome by Ognev's operations associated in a single stage with medullosclerosis of the left adrenal gland. Rumanian med. rev. no.2:76-81 '62.
(VASCULAR DISEASES) (SYMPATHECTOMY) (ADRENALECTOMY)

BECHESKU, M. [Bacescu, M.] GOMOIU, M.T. [Gomoiu, M. T.]; BODIANU, N. [Bodeanu, N.]; [illegible], Adriana; MÜLLER, G. [Muller, G.] MANIA, V. [Manea, V.]

Ecologic investigations of the Black Sea. Rev biol 7 no. 4: 561-582 '62.

POPESCU, Matei, ing.; MIULESCU, Nicolae, ing.

How we Rumanians apply preventive technical control. Constr Buc 15 no.725:3 30 N '63.

1. Trustul de constructii no.5, Brasov.

BENETATO, Gr., acad: VASILESCU, V.; MIULESCU, Viorica; GRUNSPAN, M.; COVASNANU, Zenobia; STEMESCU, N.

On the output and rate of adrenocortical-pituitary secretion in dogs. (Experimental investigations by means of the "isolated head and brains" perfusion method). Rumanian M Rev. no.1:85-93 Ja-Mr '61.
(ADRENAL CORTEX physiology) (PITUITARY GLAND physiology)
(CORTICOTROPIN blood)

VASILESCU, V., assist. prof.; MIULESCU, Viorica; GARDEV, Maria

Some data concerning the action of tubocurarine on the nerve centres. Rumanian M Rev. no.3:3-6 '61.
(BRAIN pharmacology) (CURARE pharmacology)

MIUNING, Khans

Pocket transistor receiver. Radio i televizia 12 no.10-11 '63.

S/070/63/008/002/009/017
E039/E435

AUTHOR: Miuskov, V.F.

TITLE: A chamber for the detection of dislocations in the body of large crystals by X-rays

PERIODICAL: Kristallografiya, v.8, no.2, 1963, 255-258

TEXT: The basic parameters of this chamber are chosen to secure a resolution of about 1 μ in the horizontal and vertical planes. It makes use of a simple scanning mechanism which provides a reciprocating motion of the crystal with practically no backlash. The principle dimensions are: distance from collimator to crystal, L = 500 mm, distance from crystal to film ℓ = 5 mm, slit width s = 0.1 mm. It has been used for studying the structure of lithium fluoride and corundum, for studying twinning and also for the investigation of dislocations in silicon. In addition it can be used for studying the early stages in the disintegration of solid solutions and for investigating phase transitions etc. There are 3 figures.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography AS USSR)

Card 1/1 SUBMITTED: July 9, 1962

MIUSKOVA, R.

Using electronic calculating machines in developing [illegible]
Sots. trud [illegible] no.9:81-89 S '61. [illegible]
(Production standards) (Electronic calculating machines)

Polish Technical Abstracts
No. 4, 1953
Building Industry and
Architecture

MITZEL, A.

Mitzel A., Suwalski J. Model Tests as a Basis for the Dimensioning of Reinforced Concrete Structures.

„Badania modelowe jako podstawa wymiarowania konstrukcji żelbetowych". Inżynieria i Budownictwo, No. 12, 1955, pp. 398—405, 12 figs.

The computation and dimensioning of reinforced concrete structures of somewhat unusual shapes, on the basis of the static and strength method, can be neither economical nor correct. In such instances it appears more advantageous to carry out tests on small-scale models. The object of model testing is: to test the state of stress, to determine the static values, and to check a new method worked out for a hitherto unsolved construction. The article contains a description of tests made on a model of a viaduct 58.1 m. in length, with an abutment forming with the carriageway an angle of 27°, at one end, and at the other an expansion joint running perpendicularly to the axis of the viaduct. The object of the tests carried out by means of the model was, in this instance, to check the static values computed and the work of the structure. The model of the viaduct was made of alabaster gypsum, to a scale 1:5:100. A research method was worked out together with formulae by means of which static values may be obtained from measurements taken. On the basis of test results, diagrams of shearing moments and stresses have been prepared; in this connection, it was ascertained that moments obtained experimentally were considerably lower than those arrived at by means of computations.

MITZEL, Adam, prof. dr inz.; DZIENDZIEL, [redacted]fred, mgr inz.

Model studies of a roof structure shaped like a bicycle wheel.
Inz i bud 19 no.1[redacted]Maly por konstr 3 no.1:24-28 Ja '62.

MIUNING, Khans

A simple amateur capacitor microphone. Radio i televiziia 11 no.9:285 '62.

MIUNNING, Khans

Transistor megaphone. Radio i televiziia 12 no.7:206-208 '63.

MIUSKOV, V. F.

PHASE I BOOK EXPLOITATION SOV/3559

Akademiya nauk SSSR. Institut metallurgii. Nauchnyy sovet po probleme zharoprochnykh splavov

Issledovaniya po zharoprochnym splavam, t. 5 (Investigations of Heat-Resistant Alloys, Vol 5) Moscow, Izd-vo AN SSSR, 1959. 425 p. Errata slip inserted. 2,000 copies printed.

Ed. of Publishing House: V.A. Klimov; Tech. Ed.: I.F. Kus'min; Editorial Board: I.P. Bardin, Academician, G.V. Kurdyumov, Academician, N.V. Ageyev, Corresponding Member, USSR Academy of Sciences (Resp. Ed.), I.A. Oding, I.M. Pavlov, and I.F. Zudin, Candidate of Technical Sciences.

PURPOSE: This book is intended for metallurgical engineers, research workers in metallurgy, and may also be of interest to students of advanced courses in metallurgy.

COVERAGE: This book, consisting of a number of papers, deals with the properties of heat-resisting metals and alloys. Each of the papers is devoted to the study of the factors which affect the properties and behavior of metals. The effects of various elements such as Cr, Mo, and W on the heat-resisting properties of various alloys are studied. Deformability and workability of certain metals as related to the thermal conditions are the object of another study described. The problems of hydrogen embrittlement, diffusion and the deposition of ceramic coatings on metal surfaces by means of electrophoresis are examined. One paper describes the apparatus and methods used for growing monocrystals of metals. Boron-base metals are critically examined and evaluated. Results are given of studies of interatomic bonds and the behavior of atoms in metal. Tests of turbine and compressor blades are described. No personalities are mentioned. References accompany most of the articles.

MIUKOV, V.F.

Modern representations of the structure and properties of grain boundaries. Itogi nauki: Fiz.-mat. nauki 3:159-210 '60.
(MIRA 13:7)

(Crystals) (Dislocations in crystals)

KLASSEN-NEKLYUDOVA, M.V.; ORLOV, A.N.; MIUSKOV, V.F.; TYAPUNINA, N.A.; SHASKOL'SKAYA, M.P.

Symposium on dislocations in and mechanical properties of solids, held in Cambridge (England). Kristallografiia 6 no.5:809-812 S-O '61. (MIRA 14:10)

1. Institut kristallografii AN SSSR.
(Dislocations in crystals—Congresses)

MIUSKOV, V.F.

Growing single crystals of molybdenum at high rates of speed.
Issl.po zharopr.splav. 8:210-21[illegible]. (MIRA 16:6)
(Crys[illegible])

MINSKOV, V.F.; [illegible]

X-ray diffract[illegible]
Dokl. AN [illegible]

1. Institut [illegible]
im. A.Ye.Fers[illegible]

MIUSKOV, V.F.

Camera for X-ray photographing of diffraction [illegible].
Kristallografiia [illegible] Mr-Ap '63.

1. Institut kristallografii AN SSSR.

MILSKOV, V.F.; LANG, A.R.

Topographic X-ray study of MgO crystals. Kristallografiia 8 no.4: 652-656 Jl-Ag '63. (MIRA 16:9)

1. Institut kristallografii AN SSSR i Bristol'skiy universitet, Angliya.
(Magnesia) (X-ray diffraction examination)

MIUSKOVA, R.

Unification of time norms for standard functions and their combination. Sots.trud 4 no.8:89-93 Ag '59. (MIRA 13:1)
(Time study)

MIUSKOVA, R.

Unification of sectional work norms. Biul.nauch.inform.: trud i zar. plata no.12:28-33 '59. (MIRA 13:10)
(Machinery industry--Production standards)

MIUSKOVA, R.

Compiling time norms in calculating consolidated norms on electronic calculating machines. Biul. nauch. inform.: trud i zar. plata 5 no.5:8-16 '62. (MIRA 15:7)
(Machine-shop practice--Production standards)
(Electronic calculating machines)

MIUSSKIY, P.Ye.

Duration of the period between sowing and sprouting in sunflowers as related to the temperature of the air and moisture resources. Trudy OGMI no.22:45-47 '60. (MIRA 14:10)
(Sunflowers) (Meteorology, Agricultural)

MUSSKY, P.Ya.

[illegible]

MIUSSKIY, P.Ye.

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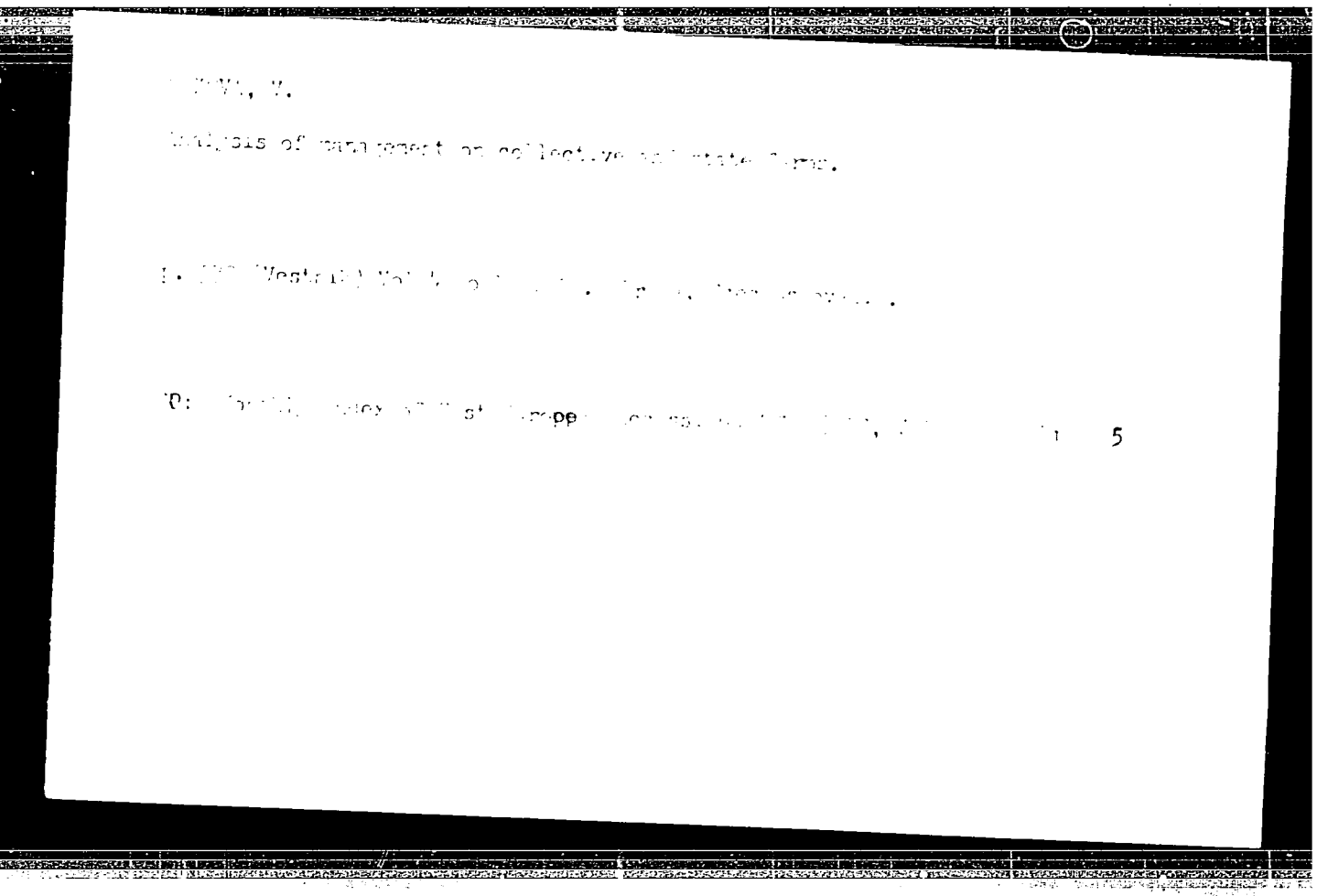

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