"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
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GINTSBURG, Ya.S.; ANDRATSKIY, K.K.: PROTASOV, A.A., inzh., retsenzent; DZUGUTOV, M.Ya., inzh., retsenzent; ZAROSHCHINSKIY, M.L., prof. doktor tekhn.nauk, red.; GORDON, L.M., red.izd-va; PETROVA, N.S., tekhn.red.

[Rolling high-grade steel] Prokatka kachestvennoi stali. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1953. 464 p. (MIRA 11:6)
(Rolling (Metalwork))

GINTSBURG
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PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 444 - I

BOOK Call No.: TA460.G5

Author: GINTSBURG, YA. S., Kand. of Tech. Sci.
Full Title: TESTING OF METALS AT HIGHER TEMPERATURES
Transliterated Title: Ispytaniya metallov pri povyshennykh temperaturakh

Publishing Data
Originating Agency: None
Publishing House: State Scientific and Technical Publishing House of Literature on Machine Building and Shipbuilding ("Mashgiz")
Date: 1954 No. pp.: 252 No. of copies: 5,000
Editorial Staff
Editor: Gel'derman, L. Sh., Kand. of Tech. Sci.
Appraiser: Kudryavtsev, I. V., Prof., Dr. of Tech. Sci.

Text Data
Coverage: In this monograph the prevalent modern methods of mechanical testing the properties and quality of metals at temperatures up to 600°C are dealt with in detail. Because of the wide use of high-pressure steam equipment (boilers, turbines, etc.) in postwar USSR, machine parts are now under higher strain. Special attention is given to the effects of creep, fatigue and relaxation. A short survey of corrosion testing procedures is included.

Evaluation B-84718, 3 Jan 55

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Ispytaniya metallov pri povyshennykh temperaturakh

Soviet methods and testing machines are discussed at length: e.g., the Brinell hardness test developed by I. L. Mirkin and D. E. Livshits, and the original device of N. T. Gudtsov and M. G. Lozinskiy for determining the aging of metals by the hardness test. This device, according to the author, excels all foreign installations (pp. 50-54, with illustrations). Various testing machines and furnaces of the Central Institute for Boilers and Turbines (TsKTI), of the Central Scientific-Research Institute of Technology and Machine Building (TsNIITMASH) and of many others are fully described.

The book is provided with illustrations, drafts, tables and diagrams.

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Ispytaniya metallov pri povyshennykh temperaturakh AID 444 - I

Purpose: The book is intended for engineers in industrial laboratories and scientific workers in research institutes
Facilities: None
No. of Russian and Slavic References: 89 Russian
Available: Library of Congress

CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

USSR/Metallurgy

Card 1/1

Author : Gintsburg, Ya. S., Cand. in Tech. Sciences, Docent

Title : Some instances of conformity to law in the second period in the testing of austenite steel for relaxation

Periodical : Vest. mash. 34/3, 46-49, Mar/1954

Abstract : The process of relaxation goes on under conditions of uninterrupted softening of the material with a gradual slowing down of speed in accordance with a definite formula. The materials involved in the experiments are principally austenite steel but also carbide type like perlitic, austenitic and austenitic-ferrite compounds. The processes of aging are studied in experiments. Two Russian references, latest 1950. Tables; graphs.

Institution : .....

Submitted : .....

Evaluation B-8147, 16 Dec 54

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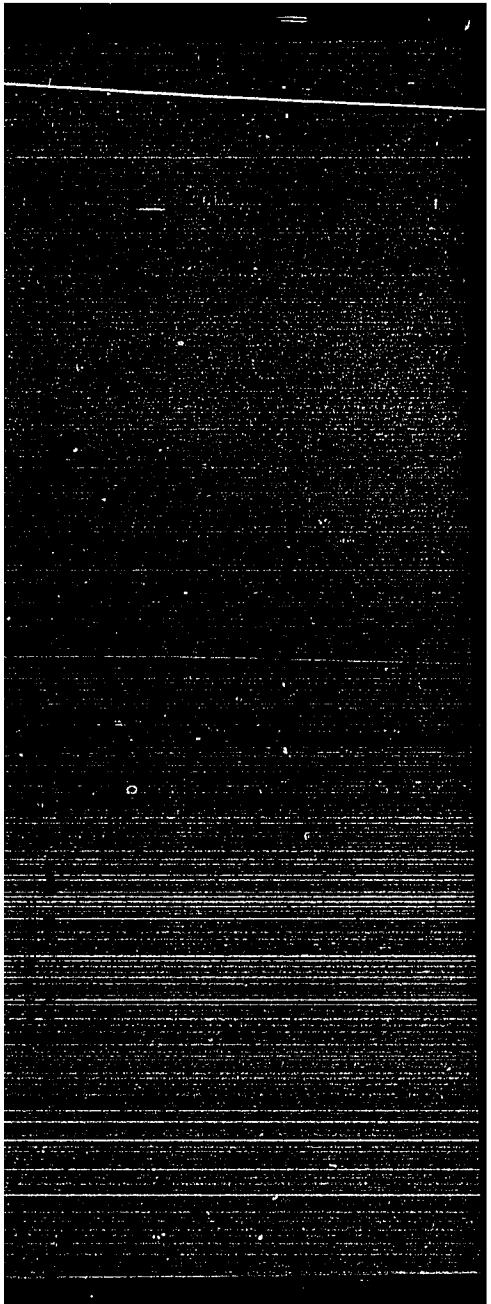
GINTSBURG, Ya.S., dotsent; DANOVICH, D.M., inzhener; BELYATSKAYA, R.G., inzhener

"Hot zinc coating." A.V. Smirnov. Reviewed by IA.S. Gintsburg, D.M. Danovich, R.G. Beliatskaia. Stal' 15 no.6:572-574 Je '55. (MLRA 8:8)

1. Zavod "Metallokombinat". (Galvanizing) (Smirnov, A.V.)



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BELYATSKAYA, R.G.; GINTSBURG, Ya.S.; DAWOVICH, D.M.; GORODSKOY, K.P., red.; YUZHNAYA, Ye.A., red.izdatel'stva; SOSNIN, A.P., tekhn.red.

[Hot zinc plating of light sheet steel and utensils] Goriachee otsinkovanie krovel'noi stali i posudy. Moskva, Gos.izd-vo mestnoi promyshl. RSFSR, 1956. 179 p. (MIRA 10:12)
(Zinc plating)

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GINTSBURG, Ya.S.

Relaxation testing of models of bolted couplings. Zav.lab. 22 no.5: 584-585 '56. (MLRA 9:8)
(Bolts and nuts--Testing)

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GINTSBURG, Ya.S.

E-10

USSR/Solid State Physics - Mechanical Properties of Crystals and Polycrystalline Compounds.

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 11909

Author : Gintsburg, Ya.S.
Inst :
Title : Simplification of Relaxation Tests of Metals and Alloys.

Orig Pub : Zavod. laboratoriya, 1956, 22, No 7, 840-845

Abstract : Within the limits of the second period up to the critical relaxation temperature, the stress-relaxation curves at constant temperature, plotted in coordinates of the initial stress (σ_0) and the stress after prolonged relaxation t (σ_t), is in the shape of a straightline passing through the origin; the slope of the curve depends on t. When plotted in coordinates log σ_0 -- log σ_t, the above dependence is also linear (subject to the same limitations). Expressing these relations analytically, the author obtains linear equations with empirical coefficients,

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USSR/Solid State Physics - Mechanical Properties of Crystals and Polycrystalline Compounds. E-10

Abs Jour : Ref Zhur - Fizika, No 5, 1957, 11909

which can be determined from two experimental points. Knowing the coefficients, it is possible to use the derived relationship to calculate data on stressed relaxation, corresponding to other initial stresses.

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USSR / Solid State Physics / Phase Trans! mations in Solid Bodies E-6

Abs Jour : Ref Zhur - Fizika, No. 5, 1957 No. 11696

Author : Gintsburg, Ya. S., Margolin, Yu. M., Sachavskiy, A.F.

Inst :

Title : Physical Methods of the Study of Fast Transformations in Highly-Alloyed Steel.

Orig Pub : Zavos. laboratoriya, 1956, 22, No. 9, 1046 - 1052

Abstract : Description of the application of magnetic and X-ray structural methods in combination with chemical phase analysis for an all-out investigation of the processes of aging of high-alloyed steel at increased temperature. A study of non-magnetic steel of the austenite class and of the ferromagnetic austenite-ferrite alloys was made. The specimens were subjected to quenching from 1150° and soaking

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USSR / Solid State Physics / Phase Transformations in Solid Bodies E-6

Abs Jour : Ref Zhur - Fizika, No. 5, 1957 No. 11696

Abstract : at 650 -- 800° up to 4000 hours. An investigation was made of the change in the magnetic susceptibility of the steels during soaking, the change of the lattice period of austenite, and of the special carbides. It was found that in the study of the processes that take place in paramagnetic steels (aging with decomposition of the austenite and formation of ferromagnetic phases), the magnetic method is more sensitive than the X-ray structural method. In the investigation of ferromagnetic steels, the X-ray structural analysis is more sensitive than the magnetic one.

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GINTSBURG, Ya.S., kandidat tekhnicheskikh nauk, dotsent.

On the critical notes by T.I. Volkova, candidate of technical sciences. (MIRA 10:1)
Vest.mash. 36 no.11:88-89 N '56.
(Steel--Testing) (Austenite)

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PHASE I BOOK EXPLOITATION 458

Gintsburg, Yakov Solomonovich, Candidate of Technical Sciences

Relaksatsiya napryazheniy v metallakh (Relaxation of Stresses in Metals)
Moscow, Mashgiz, 1957. 169 p. 5,000 copies printed.

Reviewer: Oding, A., Corresponding Member of the Academy of Sciences, USSR;
Ed.: Pogodin-Alekseyev, G.I., Doctor of Technical Sciences, Professor;
Ed. of Publishing House: Leykina, T.L.; Tech. Ed.: Sokolova, L.V.;
Chief Ed. of the Leningrad Branch of Mashgiz: Bol'shakov, S.A., Engineer

PURPOSE: This book is intended for engineers in plant laboratories, designers, and scientific personnel in research institutes.

COVERAGE: This book deals with relaxation of stresses in metals. The author discusses the formal and physical theories of stress relaxation and the basic factors of this phenomenon. A description is given of the methods of investigation, the processing and utilization of the results of testing metals for stress relaxation. Methods for increasing relaxation stability of metals are also described. The interrelation between creep and stress relaxation in metals is treated briefly.

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Relaxation of Stresses in Metals(cont.)

The author cites recent contributions to the study of stress relaxation and creep made by the following Soviet researchers(1)N.N. Davidenkov, P.I. Yuzvinskaya, I.A. Oding, L.M. Kachanov, Yu.N. Rabotnov, and V.I. Rozenblyum (interrelation of stress relaxation and creep phenomena) and 2) N.N. Davidenkov, G.V. Kurdyumov, S.T. Konobeyevskiy, B.V. Rovinskiy, M.A. Bol'shanina (problems of crystal lattice deformation). There are 205 references, of which 131 are Russian (126 Soviet and 5 pre-1917), 65 English, 7 German, and 2 French.

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Relaxation of Stresses in Metals (cont.)

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Relaxation of Stresses in Metals (cont.)

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QINTSBURG, Ya.S.

Third period of creep and stress relaxation. Zav.lab. 23 no.7: 838-842 '57. (MLRA 10:8)
(Creep of metals)

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GINTSBURG, Ya.S., [redacted] oci -- (diss) "Certain problems of the relaxation of stresses in metals." Len, 1956, 25 pp with graphs (Min of Higher Education USSR. All-Union Correspondence Forestry Inst) 150 copies (KL, 29-58, 131)

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AUTHOR: Gintsburg, Ya. S. SOV/32-24-7-36 65

TITLE: An Apparatus for the Investigation of the Relaxation of the Torsion Stress in Metals (Mashina dlya issledovaniya relaksatsii napryazheniy v metallakh pri kruchenii)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 7, pp. 865 - 867 (USSR)

ABSTRACT: The compensation method for the investigation of the relaxation of the stretching stress in metals has hitherto not been employed often as it is difficult to carry out a precise reduction of the load in order to obtain the true relaxation curve. In order to achieve this another sort of the stress state of the sample must be chosen; then a greater deformation takes place, which may be obtained with torsion. In connection with this problem torsion tests were carried out with one of the first Soviet machines for creep tests, with cylindrical springs being used in the place of the cylindrical or tubular samples. A.A. Finashkin and B.S.Zhits took part in the assembly of the machine and in the tests. The author gives a schematic representation of the loading principle and the electric circuit of the model plant (Fig 1). From it may be seen that

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An Apparatus for the Investigation of the Relaxation of the Torsion Stress in Metals

SOV/32-24-7-36/65

a dialbalance was used as dynamometer which made possible a measuring accuracy of up to 0,2%. An extensometer of the usual type was used for the determination of the deformation. A graph of the relaxation curves of carbon steel 20 at 400° is given, with the equation according to which the stress was calculated being given. There are 2 figures and 3 references, which are Soviet.

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GINZBURG, L.A.

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PHASE I BOOK EXPLOITATION SOV/3559

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

Issledovaniya po tharoprochnym splavam, t. 5 (Investigations of Heat-Resistant Alloys, Vol 5) Moscow, Izd-vo AN SSSR, 1959. 423 p. Errata slip inserted. 2,000 copies printed.

Ed. of Publishing House: V.A. Klimov; Tech. Ed.: I.F. Kuz'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.N. Pavlov, and I.F. Ludin, 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 V 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.

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GINTSBURG, Ya.S.

Evaluation of the long-period relaxation strength at elevated temperatures. Zav.lab. no.11:1405-1406 '59. (MIRA 13:4)
(Strains and stresses)

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GINTSBURG, Ya.S.

Parametric methods for the evaluation of the long-period strength of metals (survey). Zav.lab. 26 no.7:863-866 '60. (MIRA 13:7)

(Metals--Testing)

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20279
S/148/60/000/009/016/025
A161/A030

10 9200 cl.o 2808, 1418, 1413

AUTHOR: Gintsburg, Ya.S.

TITLE: On the third stress relaxation period in metals

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 9, 1960, 116-119

TEXT: The total deformation in the creep of metals with phase transformations at constant stress (σt = const) is unlimited and may be expressed by the relation:

$$\varepsilon_{total} = \varepsilon_0 + \varepsilon_n + \varepsilon_B = \varepsilon_0 + \varepsilon_{creep} + \varepsilon_{phas} = \text{const}, \qquad (2)$$

where $\varepsilon_0 \neq$ const, $\varepsilon_{creep} \neq$ const, and $\varepsilon_{phas} \neq$ const,

and the creep presented graphically (Fig1) in three periods of "unlimited" creep with stress relaxation, "invariant" ($B\delta$) stress, and "accumulation".

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On the third stress relaxation period ...

All three kinds are observed in real alloys. The two first portions of the relaxation curve had been described for the first time by I.A.Oding (Ref.2), and the third revealed recently (Ref.3) (Ya.S.Ginzburg, "Zavodskaya laboratoriya", XIX, 1953, No.5) and met critically at first (Ref.4-9). This 3rd period is observed with a drastic decrease of volume, as may be seen from relaxation and dilatometeric curves (Fig.2) of several chrome-nickel-manganese heat-resistant alloys (The figures in alloy designations mean - the first Cr%, the second Ni%, and the third Mn%; H - niobium, B - tungsten; apart from these, all alloys contained about 1% Mo, 0.8-1.2% V, and 0.1 - 0.2% C). According to the equation (2), the result of the phase transformation $\alpha \rightarrow \gamma$ is not an increase but a decrease of the irreversible deformation component, and hence an increase of the reversible (elastic) component, and not a decrease but growth of creep stress $\sigma_t = \varepsilon_o \cdot E_t$, which is plainly contrary to the conceptions of some authors (Ref.4, 5, 6, 8, 9). However up to now, the phenomenon of the 3rd period had been discovered by the author and in most of the Soviet laboratories in tests of heat-resistant alloys only. It is difficult to detect in alloys with faintly developed phase transformations and very small volume of inter-

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On the third stress relaxation period ...

crystalline matters. For instance, the thickness of boundaries visible in a light microscope in heat-resistant alloys in $\alpha \rightarrow \sigma$ transformation was from 5,000 to 40,000 Å or 1,500 - 11,500 interatomic spaces (at the relation of boundary thickness to mean grain thickness 0.001 - 0.008), and in armco iron the grain boundary thickness is only 10 Å, or 4 interatomic spaces. Nevertheless, the phenomenon had been obeserved in carbon steel "20" and "40" and in armco iron at 550°C, but so faintly that the author did not detect it (Ref.11). A machine has been built at the author's laboratory for relaxation tests of springs (Ref.12) (Ya.S.Ginzburg, "Zavodskaya laboratoriya", XXIV, 1958, No.7), amplifying residual deformation and having a high sensitivity. It made possible the maintaining of deformation of the order of $\pm 5 \cdot 10^{-9}$ mm/mm, compared with only $\pm 1 \cdot 10^{-6}$ mm/mm possible in the best foreign test machines (Ref.13) (W.E.Trumpler, J.appl.Phys., v.12, 1941, No.3). As it can be seen (Fig.3), the 3rd period appeared at 550°C; in (Fig.4) it is also clearly expressed. Its intensity increased with the decreasing carbon content. The observations prove that the 3rd period on the relaxation curve occurs in facilitated boundary creep conditions, and its intensity may depend on temperature as well as the condition of bound-

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On the third stress relaxation period ...

ary regions (facilitated boundary creep). It is proven that the 3rd period phenomenon exists in heat-resistant as well as in carbon steel and in armco iron, regardless of the nature of the phase transformations. There are 4 figures and 13 references: 11 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Vsesoyuznyy zaochnyy lesotekhnicheskiy institut (All-Union Correspondence Institute of Forestry)

SUBMITTED: 25 January 1960

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S/148/60/000/011/009/015
A161/A030

AUTHOR: Ginzburg, Ya. S.

TITLE: The reversibility of the 3rd stage relaxation period

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no. 11, 1960, 9. - 6p

TEXT: As is known, the stress relaxed in metal can be decreased for some time in strained connections by means of heating or of reloading. The author determined earlier the proper treating regime for metals destined for service in temperature below the III relaxation range (Ref. 1, Ya.S. Ginzburg, Zavodskaya laboratoriya, 1956, No. 2, 223 - 226), and found that in temperatures above this range treating and reloading are of little effect (Ref. 2, Ya. S. Ginzburg, Stress relaxation in metals, Mashgiz, 1957). Other authors supposed that reheating may reverse the III length of the relaxation curve. This has been investigated in the subject work on steel in which the III length [illegible] clearly in tests in 650°C (i.e., above the critical relaxation range).

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The reversibility of the ...

Steel grade	C	Cr	Mn	Ni	M...	V	W	Nb	(%)
13-8-11-3B (13-8-11-3V)	0.34	13.5	11.5	7.6	1....	0....	3.75	-	
18-10-10 2B (18-10-10-2V)	0.11	18.7	10.6	10.4	1....	0....	1.93	-	
20-20-5 2B (20-20-5 2V)	0.12	20.9	21.1	5....	1....	0....	2.30	-	
15.9-8-1.5B (15.9-8-1.5N)	0.30	14.3	8.6	8.1	1....	0.80		1.56	

Specimens were preliminarily austenitized at 1150°, oil cooled in water, and aged at 750° for 4 hours. With the exception of 18-10-10-2V, steel was normagnetic and in the γ solid solution state; 18-10-10-2V had 30 % ferrite; all specimens had carbides in the structure. Polarization was tested on

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The reversibility of the ...

Relaxation was tested on rings with an equal loading resistance. Reloading was applied in two ways: a) After a time interval for the development of the III relaxation crack length, and b) After the III length was developed clearly enough. A specimen of [illegible] steel (Figure 1) was reloaded 2500 hours after the start of the test (at the relaxation curve was yet within the II length and before the [illegible] with the irreversible deformation curve. Figure 1b), 900 hours after the second loading moment and 3400 hours after the start of the test the crack passed into the length III. In the I length range at the first [illegible] during the grain of the specimen structure was covered with fine disperse phase segregations (carbides and sigma in different forms, stages), with thick lamellar (0.5 - 1.0 micron) carbides and sigma phase on the solid solution gamma grain boundaries, as well as joint segregations of sigma which had not completely formed at this stage. In the III range, the number of the fine point segregations in the grain body increased. The sigma formation on the boundaries became more intense and lamellar. Later on (2500 - 5000 hours), the coagulation of sigma continued, and solid segregations were formed in spots on the boundaries (Figure 1). The three other steels were reloaded in the III relaxation range, and the I and II ranges developed

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The reversibility of the ....

again, for a shorter time than at the first [illegible]. The [illegible] steel structure is shown in the drawings and is a [illegible] transformation patterns (black - sigma, grey - [illegible], in the grey background - solid gamma solution, Figure). The [illegible] connected with the formation of solid sigma films on grain boundaries. In [illegible] steels, in the gamma-stage, either completely or with 0% ferrite, the transition of the relaxation curve into the range III was stated to be caused by the formation of spheroids, lamel chains, and solid sigma precipitations on the boundaries. In some steels not included in the author's investigation, the sigma lamels in the range II had serrated edges disappearing in the coagulation processes in transition into the range III forming the phase of facilitated viscous flow (boundary shearing). It is characteristic that the serrations or separate twisted sigma lamels working as traps present obstacles for viscous boundary shear, and the relaxation rate remains in limits permitting the process of the curve range II. As soon as the coagulation evens out the serrations and "traps", the relaxation rate passes into the range III, i.e., intense relaxation softening. The different processes leading to coagulation and spheroidization of sigma [illegible] the way to dislocations and stress softening. Releasing crystal temporary obstacles for dislocations

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in the form of a "cloud" of dissolved atoms. The "diffusion" of the "cloud" at high temperatures is speedy, and the obstacles disappear. Repeated loading only slightly postpones the moment of the repeated start of range III, and the phenomena in range III are practically irreversible. Microscopic studies were carried out by Candidate of Technical Sciences YE. M. Pivnik. There are 5 figures and 4 Soviet references.

ASSOCIATION: Vsesoyuznyy zaochnyy lesotekhnicheskiy institut (All-Union Correspondence Wood Industry Institute)

SUBMITTED: January 25, 1960

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

BOBROV, Anatoliy Grigor'yevich; GINTSBURG, Ya.S., kand. tekhn. nauk, red.; VARKOVETSKAYA, A.I., red. izd-va; PETERSON, M.M., tekhn. red.

[Instruments and devices for mechanical testing] Pribory i prisposobleniia dlia mekhanicheskikh ispytanii. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 79 p. (MIRA 14:9)
(Testing machines)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

GINTSBERG, Ya.S.

Evaluating the durable plasticity of metals. Izv. vys. ucheb. zav.; chern. met. no. 1:112-117 '61. (MIRA 14:2)

1. Vsesoyuznyy zaochnyy lesotekhnicheskiy institut.
(Metals--Testing) (Plasticity)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

GINTSBURG, Ya. S.

Hardening and softening during stress relaxation in austenite steels. Izv.vys. ucheb. zav.; chern. met. no.3:126-133 '61. (MIRA 14:3)

1. Vsesoyuznyy zaochnyy lesotekhnicheskiy institut.
(Steel—Hardening)
(Creep of metals)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

GINTSBURG, Ya.S.

Concept of "pure" stress relaxation in metals. Izv.vys.ucheb.zav.; chern.met. 4 no.9:121-123 '61. (MIRA 14:10)

1. Vsesoyuznyy zaochnyy lesotekhnicheskiy institut.
(Strains and stresses) (Creep of metals)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

S/143/61/000/005/008/015
E073/E535

Author: [illegible]

Title: [illegible] Extrapolating Results of Relaxation Tests

Periodical: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya 1961, No.5, pp.132-135

Text: For ensuring reliable long-term operation of bolt and nut joints and springs in steam and gas turbines, it is essential to have available a simple and relatively accurate method of determination of the relaxation stability of materials. The complexity of the task of extrapolating stress relaxation curves increases with increasing operating temperatures reaching phase transformation temperatures in the respective alloys as a result of which the structure and the properties of heat-resistant steels and alloys change considerably with time. The author proposes extrapolation [illegible] earlier published [illegible] Shnik Mashinostroyeniya 1958, No.9, 40-49) results of long-run tests in the coordinates stress-time. Long-term relaxation tests of refractory alloys with differing intensities of the phase transformations (intensively ageing ЭИ437 (EI437) and other

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

Methods of E.tr .haring ... S/146/61/000/005/008/015
E075/E535

Fe-Cr-Ni-Mn steels with alloying additions of Mo, W, V and Nb, medium ageing [illegible] (EI595) and low ageing [illegible] (EI572) steels have shown that after the main part of the st.. se has been exhausted and t.. tre.re (structural and volume changes) has practicall. stabilized the σ-τ graph shows a stable rectilinea. section which is suitable for reliable extrapolation of the results. Fig.1 shows the main graphs in σ-τ and in σ-τ coordinates obtai.. d on the basis of 20 to 30 tests on each of the steels. The t.. until the s.ction of curves in both systems becomes rectilin.ar can be determined from the intensity of the phase transformation.. For steels which age intensively, the rectilinear sect.on [illegible] representing a relatively uniform speed of decrease in th.. stress, sets in earlier for the curve in σ-τ coordinates (plot [illegible]) than for the curve in ln σ-τ coordinates (plot [illegible]). In steels with medium ageing (plots [illegible] and [illegible]) the rectilinear section is practically the same in both plots. For steels with slow ageing (plots [illegible] and [illegible]), the section o. the curve expres.ing a uniform speed of decrease in the stress sets in earlier in the semilogarithmic plot. Fig.1 shows result.

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

of long-run relaxation tests on ring specimens of the steel EI572 with equal bending strength as proposed by M.A. Oding. The tests were started by the author jointly with A.V. Boyeva and were terminated by Candidate of Technical Sciences I.Ya. Liberman. The test conditions are given in the table. The test temperature (Exp. 1) was below the critical (600 °C) so as to prevent appreciable relaxation softening caused by intensification of the processes of coagulation and spheroidization of finely dispersed types and also to prevent rejection of the σ phase. The initial stresses σ_0 were chosen so as to obtain relaxation curves of differing configurations and with differing length of the first section of the curve. The plots Fig. 1 show the results of the longest investigations; the arrows in the graphs indicate the points of bending of the curves, i.e. the transition from curvilinear to rectilinear sections. Preliminary ageing at 800°C enabled shortening considerably the length of the initial curvilinear section in natural coordinates, the length of which was 1000 hours (curve 2). After ageing at 700°C (curve 1) this time amounted to 13500 hours. Curve 3 did not reach a rectilinear section even after 20200 hours. The duration of the curvilinear

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section for the curves 1 and 2 in the system ln σ - τ is about half that in the system σ - τ. Under the loading conditions III the duration of section 1 in the coordinates ln σ - τ is considerably smaller than for the coordinates σ - τ. Thus, for all the investigated loading conditions and stresses the curves pertaining to steel EI572 had a considerably longer curvilinear section in the coordinates σ - t than in the coordinates ln σ - t. In the same way as for creep, the presence of a section of a relatively uniform speed of decrease in the stresses enables determining the average relaxation speed for the given section of the curve by means of the formula:

$$v_{rel} = \frac{\sigma_1 - \sigma_2}{\tau_2 - \tau_1} \text{ kg/mm}^2 \cdot \text{hour}$$

The possibility of determining the average relaxation speed enables considering the earlier proposed term of "conventional limit relaxation stress" (see Ref. 8) as a real and justified quantity. If the curve has a sufficiently long section with a

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

stable uniform speed of decrease of the stress, the extrapolation can be carried out using the average value of the relaxation speed v_{rel} during the given period of time. If the curve does not have a sufficiently long rectilinear section in natural coordinates, the curve has to be drawn in the coordinates ln σ - τ and the extrapolation carried out on the basis of the exponential law of decreasing stress. In the case of tests of relatively short durations and at relatively high speeds of relaxation, the extrapolation method proposed by I. A. Oding (Ref. 5: DAN SSSR, Vol. 71, 1950, No. 5, 883-886) is the only possible and fully satisfactory method. There are 4 figures, 1 table and 11 references: 9 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Vsesoyuznyy zaochnyy lesotekhnicheskiy institut (All-Union Correspondence Forestry Technology Institute)

SUBMITTED: April 5, 1960

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

4059

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S/148/62/000/007/005/005
E193/E383

AUTHOR: Gintsburg, Ya.S.

TITLE: Evaluation of the time-to-rupture characteristics of fastening and reinforcing parts of stationary power-generating plant

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no. 7, 1962, 181 - 187

TEXT: Bolts and other fastening devices, used in the construction of stationary power plant and operating under conditions of stress relaxation, require periodical tightening-up, which is bound to affect the process of their deformation and fracture. This problem is discussed in the present paper with particular reference to the work of Ye.A. Kheyn (Energomashinostroyeniye, no. 11, 1959) who, in attempting to derive an expression for the time-to-rupture of parts operating at high temperatures under conditions of stress relaxation, made the following assumptions: 1) each re-loading (tightening-up) operation considerably increases the permanent deformation of

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Evaluation of ....

the part; 2) fracture of parts operating under these conditions takes place without entering into the third stage of creep and without localized deformation (necking); 3) fracture takes place after a large number of tightening-up operations, the time intervals between the consecutive operations as well as the initial and final stress levels at each step remaining constant; 4) the process under consideration can be regarded as creep under a changing stress. Using the results of his earlier investigations as well as those obtained by other workers, the present author arrives at several conclusions. A) Periodical re-loading (tightening-up) of bolts causes not an increase but a decrease in the rate of irreversible strain and does not significantly affect its final magnitude. This is demonstrated in Fig. 2, showing the stress relaxation of steel ЭИ572 (EI572) tested at 560 °C under an initial stress of σ_o = 30 kg/mm^2, which was increased twice (after 675 and after 24 200 hours) to the initial level; the upper curve shows the variation of stress (kg/mm^2, lefthand scale), the lower curve representing the variation in permanent deformation (ε, %, righthand scale).

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Evaluation of ....

For this particular state of experimental conditions the rate of relaxation will continue to decrease up to the fourth tightening-up operation, remaining constant after each subsequent re-loading. B) Although it is true that some creep-resistant alloys (e.g. nimonics) fail in creep without formation of a neck, localized deformation is often observed in high-strength steel creep-test pieces, apart from the fact that the third stage of creep need not be accompanied by the formation of a neck. C) In practice, the time interval between the tightening-up operations is of the order of 10^4 hours and fracture under these conditions cannot be regarded as being caused by creep under a changing stress. D) Work carried out by Kheyn included the determination of "effective stress", i.e. the stress which under conditions of stress relaxation and repeated re-loading should lead to fracture of metal and cause creep at a rate equal to the average creep rate in the time interval under consideration. Since the concept of "effective stress" and the appropriate equations postulated by G. Vidal (Revue de Métallurgie, no. 7, 1956) relate to creep under alternating stress or to fatigue,

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they have no physical meaning when applied to stress relaxation with re-loading operations spaced at intervals of 10^4 hours.
E) For all the above reasons an analytical method of determining time-to-rupture of fastening and reinforcing parts of power-generating plant, proposed by Kheyn, cannot be regarded as based on valid physical foundations. There are 4 figures and 4 tables.

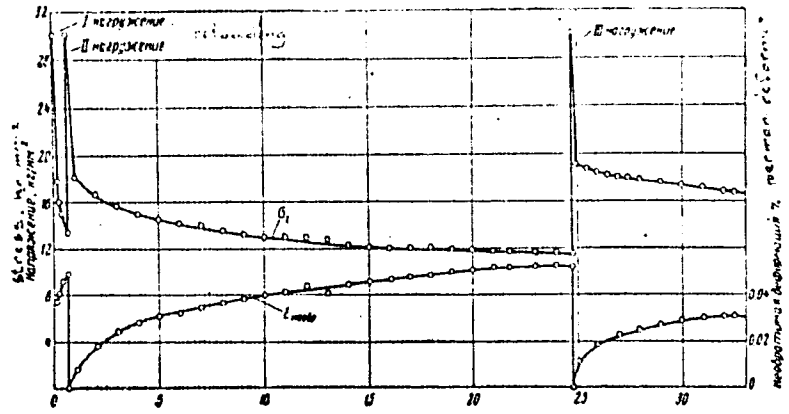
ASSOCIATION: Vsesoyuznyy zaochnyy lesotekhnicheskiy institut (All-Union Correspondence Lumber-engineering Institute)
SUBMITTED: January 28, 1961

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

S/148/62/000/007/005/005
E193/E383

Evaluation of ....

Fig. 2:



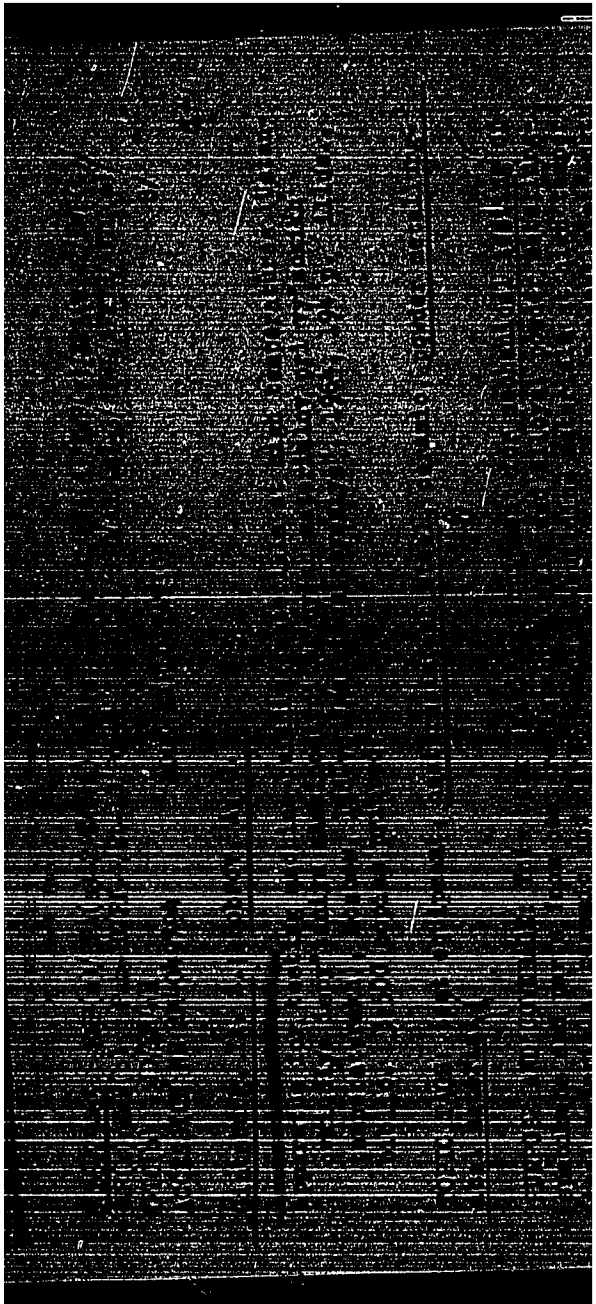
Card 5/5

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

GINTSBURG, Ya.S.

Evaluating the stress-rupture strength of fasteners on fixed equipment of electric power plants. Izv. vys. ucheb. zav.; chern. met. 5 no.7:181-187 '62. (MIRA 15:8)

1. Vsesoyuznyy zaochnyy lesotekhnicheskiy institut.
(Fastenings) (Electric power plants—Equipment and supplies)



BATYAYKIN, V.G.; BORNOV, A.G.; GINTSBURG, Ya.S.

Uniform and concentrated deformations in hardened and tempered steel. Izv. vys. ucheb. zav.; chern. met. 7 no.7:153-158 '64
(MIRA 17:8)

1. Vsesoyuznyy zaochnyy lesotekhnicheskiy institut.

GINTSBURG, Ye.L.

[Repair and use of bearings in electrical machinery] Remont i ekspluatatsiia podshipnikov elektricheskikh mashin. Moskva, Gos. energ. izd-vo, 1953. 109 p. (MLRA 7:6)
(Bearings (Machinery))

GINTSBURG, Ye. L., [illegible], N. G.

"Fundamental Principles of Combined Vaccination," ZhMiI, [illegible]

GINTSCHEFF P. Z.

EXCERPTA MEDICA Sec 4 Vol 12/11 Med. Micro. Nov 59

3479 NEW MEDIA FOR THE DIFFERENTIATION OF BACTERIA IN ROUTINE EXAMINATION - Neue Differentialnährboden für die laufenden Untersuchungen - Gintscheff P. Z. Sanit.-Epidemiol. Stat., Sofia, Bulgarien - ZBL. BAKT., 1. ABT. ORIG. 1958, 173 1-2 (124-128)

A sensitive indicator changing its colour within narrow margins is described. This indicator was composed from 2 stock solutions, one 2% water blue and the other one 1% phenol red. Both solutions were mixed immediately before the preparation of the media. A lactose medium for the detection of pathogenic enterobacteria contained per l. 20 ml. of the first and 10 ml. of the 2nd solution, while a saccharose-urea medium for differentiation of corynebacteria and a stock solution for fermentation tests each contained 4 ml. of the first and 4 ml. of the 2nd solution per l. The indicator was brown at pH 7.2, red at alkaline and green at acid reaction. On the lactose colour medium E. coli produces dark green colonies; other bacteria including the pathogens are greenish, yellow, orange, pink or red. Proteus does not swarm. On the corynebacteria medium C. xerosis produces a green colour 6 hr. after inoculation. C. pseudodiphtheriae is red while C. diphtheriae did not produce any change in colour.

Olitzki - Rome

GANTSEV K.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

GINTSE, I. K.

USSR/Chemistry - Dyes

Card 1/1 Pub. 151 - 31/36

Authors : Grigoryeva, N. E., and Gintse, I. K.

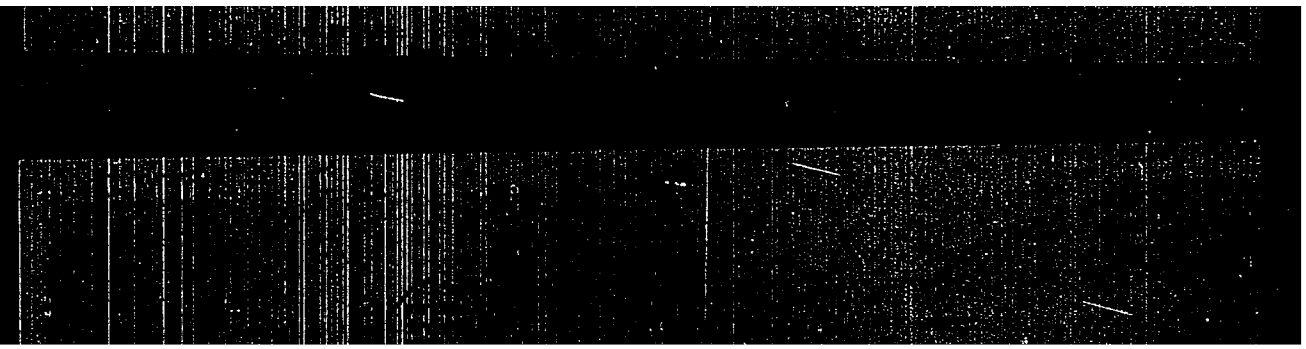
Title : Pyridine dyes derivatives of diphenyl

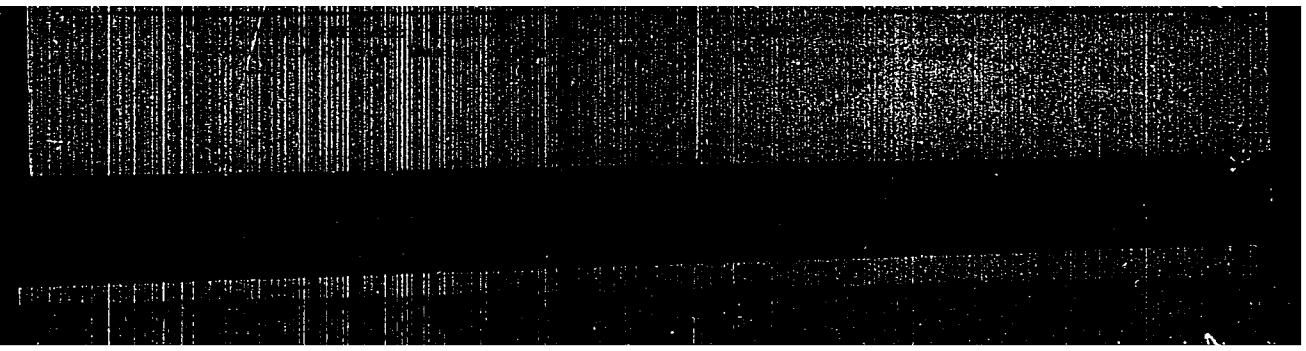
Periodical : Zhur. ob. khim. 24/1, 169-174, Jan 1954

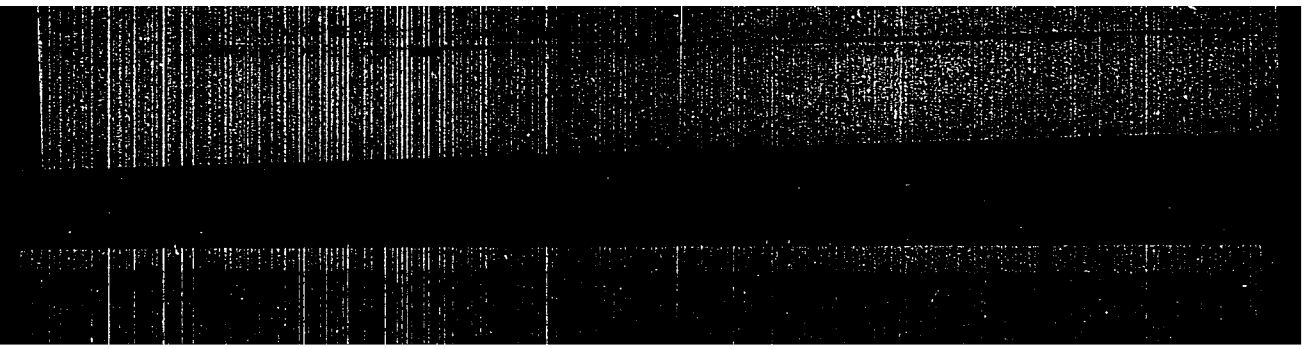
Abstract : The synthesis of three hitherto unknown pyridine dyes : 1,5-bis-(4-amino diphenyl)-pentadiene-1,3-ylidene-5;chloride; 1,5-bis-(4-nitro-4'-aminodiphenyl)-pentadiene-1,3-ylidene-5 chloride and 1,5-bis-(p-aminochlorodipheny-late pyridine)-pentadiene-1,3-ylidene-5 chloride is announced. It is shown that the heating of dyes of benzidine and 4-aminodiphenyl derivatives is followed by an isomeric conversion of the molecule without cleavage of the amine. The derivation of four hitherto unknown quaternary pyridine salts is described. Three references: 1-USSR and 2-German (1904-1952). Table.

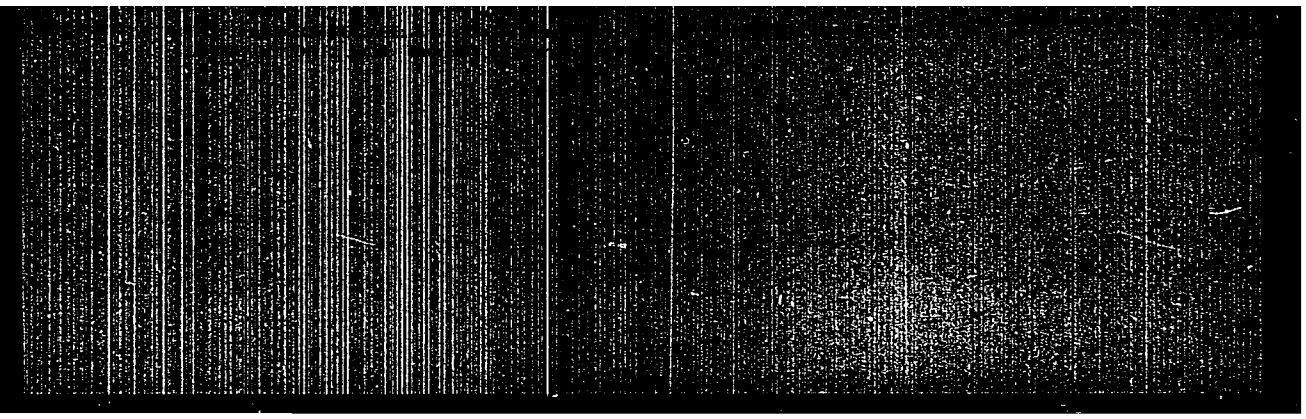
Institution : The A. M. Gorkiy State University, Kharkov

Submitted : July 6, 1953









"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

AUTHORS: Grigor'yeva, N. Ye., Gintse, I. K. SOV/79-28-6-55/63

TITLE: Monoanils of Glutacone Aldehyde (Monoanily glutakonovogo dial'degida) II. The Influence of the Medium on the Color of the Derivatives of Primary Aromatic Amines (II. Vliyaniye sredy na okrasku proizvodnykh pervichnykh aromaticheskikh aminov)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 6, pp. 1682 - 1689 (USSR)

ABSTRACT: The problem concerning the influence of the medium on the color of the organic compounds has interested scientists already since long. The unsalty intraionoic dyes are especially sensitive to changes of the medium. Many hypotheses have already been suggested for this problem (Refs 1-5). That by Kiprianov and his collaborators is widely acknowledged (Ref 6) as are those by other authors (Ref 7) who deal with the dependence of the color change of the intraionoic dyes on the polarity of the solvent. According to this conception the dyes are divided into three types: Some deepen the color with the decrease of the dielectric constant of the solvent (1st type), the others increase it on the same conditions (2nd type), and the rest have an intermediate position (3rd type). The monoanils of glutacone aldehyde as derivatives

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Monoanils of Glutacone Aldehyde. II. The Influence of SOV/79-28-6-55/63
the Medium on the Color of the Derivatives of Primary Aromatic Amines

of the primary aromatic amines are tautomeric compounds the structure of which can be represented by the mentioned formulae of scheme 1. They belong to the intraionoic compounds. Each of the mentioned formulae can be represented in form of a dipolar ion. They easily react on changes of the medium by changing their own color in various "neutral" solvents and in the presence of acids and alkali liquors. However, different from the earlier investigated intraionoic compounds (Refs 6,7) no fixed dependence of the color change on the polarity of the solvent was noticed. Therefore the authors had to investigate this problem more in detail: The relatively good solubility of the monoanils made it possible to determine their absorption spectra in many organic solvents. Thus eight monoanils of glutacone aldehyde were investigated this way. It was shown that the absorption change of these monoanilines in various solvents is connected with the structure of the complexes of the monoanil as well as with the solvent as such in the case of an equivalent possibility of conversion. Thus some considerations on the causes of the color change of the monoanils of glutacone aldehyde in various solvents, in the presence of acids and alkali liquors are mentioned.

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"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

Monoanils of Glutaconе Aldehyde. II. The Influence of the Medium on the Color of the Derivatives of Primary Aromatic Amines

SOV/79-28-6-55/63

It is shown that there is no principal difference between solvatochromism and halochromism. There are 4 figures, 3 tables and 13 references, 4 of which are Soviet.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet (Khar'kov State University)

SUBMITTED: April 12, 1957

1. Organic compounds--Chemical properties

Card 3/3

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

5 (3) SOV/79-29-3-24/61

AUTHORS: Grigor'yeva, N. Ye., Gintse, I K., Afanas'yeva, Z. M.

TITLE: Pyridine Dyes, Derivatives of the Secondary Amines (Piridinovyye krasiteli-proizvodnyye vtorichnykh aminov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 865-869 (USSR)

ABSTRACT: There are only little data available on these dyes (Refs 1,2). As to color and chemical properties they are considerably differing from the corresponding derivatives of the primary amines. It can be seen from a comparison of the data presented in table 1 that the unsubstituted dye is colored more intensely than the corresponding N-alkyl-substituted dyes and that the substitution of the phenyl radicals for the hydrogens of the amino groups is without any effect on the shift of the absorption maximum. The aniline derivative is readily hydrolyzed; the acid suppresses hydrolysis; in acid solution the extinction coefficient increases by more than two times whereas the absorption intensity of the secondary amine derivatives is hardly changed by the addition of acid. It could be concluded from a comparison of the data given in table 1 that the derivatives of the secondary amines are not hydrolyzable.

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Pyridine Dyes, Derivatives of the Secondary Amines

Table 1 illustrates the results of the optical changes of the freshly prepared solutions; on the determination of the variation in the color intensity of the dyes in the time course, in dependence on the concentration, it can be seen that the derivatives of the secondary amines hydrolyze as well, the more rapidly the less the basicity of the cation and the concentration of the dye is. As can further be seen the N-methyl-substituted dye hydrolyzes least, considerably, however, the diphenylamine derivative. These facts show that the hydrolysis of derivatives of the secondary amines is also related to the basicity of the cation the degree of which is determined not only by the nature of the radical but also by its volume. Figures 1 and 2 present the absorption spectra of the dyes of the diphenylamine and methylaniline derivatives in neutral, alkaline and acidified alkaline medium. Figures 3 and 4 give the spectra of the corresponding monoanils of the glutaconic aldehyde. Four N-substituted pyridine dyes and two monoanils of the glutaconic aldehyde were synthesized. Four preparations are new. It is assumed that the peculiarities in the dyeing of the N-alkyl-substituted dyes and their cleavage

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Pyridine Dyes, Derivatives of the Secondary Amines

under the influence of alkali liquor are due to difficulties of the spatial arrangement which is indicated by their absorption spectra. There are 4 figures, 3 tables, and 9 references, 2 of which are Soviet.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet (Khar'kov State University)

SUBMITTED: January 2[illegible], 1958

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

5.3610

78305
SOV/79-30-3-59/69

AUTHORS: Grigor'yeva, N. Ye., Gintse, I. K., Lyubitskaya, T. A.

TITLE: Products of Hydrogenation of N-phenylpyridinium Chloride. Condensation of N-phenylpiperidinium Hydrochloride With p-Dimethylaminobenzaldehyde

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 3, pp 1031-1037 (USSR)

ABSTRACT: This is a continuation of previous work (N. Ye. Grigor'yeva, A. B. Organes'yan, I. A. Mysh, ZhOKh, 27, 1565, 1957) on hydrogenation of N-phenylpyridinium chloride (I) over a platinum catalyst under different conditions. The method used was described previously (see above reference). Condensation of N-phenyl-piperidinium hydrochloride (II) with p-dimethyl-aminobenzaldehyde (III) was also studied. It was found that an hydrogenation of (I) over a platinum catalyst, a mixture of N-phenyl- and N-cyclo-hexylpiperidinium hydrochlorides is formed. The

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hexylpiperidinium hydrochlorides is formed. The ratio of the two hydrochlorides in the mixture depends on the conditions of hydrogenation. Condensation of (II) with (III) in acetic anhydride first forms a blue dye. The latter is unstable and on heating decomposes with formation of a red dye. The blue dye was not isolated. Its color is very close to that of Michler's benzhydrol, and it is possible that they are analogs. The red dye is slightly soluble in water, more soluble in alcohol and dichloroethane. It does not crystallize, and has the following absorption maxima: in alcohol 496, in water 504, and in dichloroethane 504 mμ. It is suggested that the red dye is a salt with structure a:

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Products of Hydrogenation of N-phenyl-pyridinium Chloride

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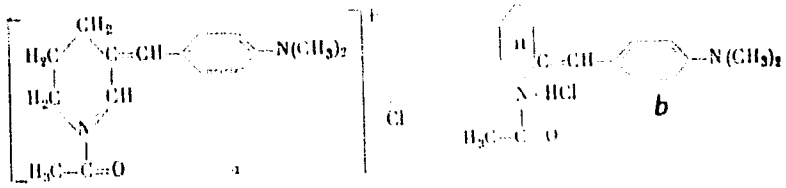
SOV/79-30-3-59/69



b

There are 2 figures; 2 tables; and 5 references, 1 U.S., 2 German, 2 Soviet. The U.S. reference is: C. F. Winans, H. Adkins, J. Am. Chem. Soc., 54, 306 (1932).

ASSOCIATION: Kharkov State University (Kharkovskiy gosudarstvennyy universitet)

SUBMITTED: September 1, 1958

Card 3/3

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
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GRIGOR'YEVA, N.Ye.; SHCHERBAKOVA, L.I.; GINTSE, I.K.

Catalytic hydrogenation of dianils of glutaconaldehyde and their salts (pyridine dyes). Ukr.khim.zhur. 28 no.7:848-851 '62. (MIRA 15:10)

1. Khar'kovskiy gosudarstvennyy universitet im. A.M.Gor'kogo.
(Dyes and dyeing) (Glutaconaldehyde) (Aniline)

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TSUKERMAN, S.V.; GINTSE, I.K.; LAVRUSHIN, V.F.

Synthesis of unsaturated ketones containing furan and thiophene rings. Zhur.ob.khim. 33 no.7:2382-2387 Jl '63. (MIRA 16:8)

1. Khar'kovskiy gosudarstvennyy universitet imeni A.M.Gor'kogo.
(Ketones) (Thiophene) (Furan)

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

TSUKERMAN, S.V.; GINTSE, I.K.; LAVRUSHIN, V.F.

Spectra and halochromism of α,β-unsaturated ketones containing furan and thiophene rings. Zhur. ob. khim. 34 no.7: 2317-2321 Jl '64 (MIRA 17:8)

1. Khar'kovskiy gosudarstvennyy universitet imeni A.M.Gor'kogo.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
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GINTSE, L. A.

USSR/Medicine - Typhoid Mar 53

"Investigation of the Dependence of the Immunogenic Activity of Typhoid Vaccine on the Number of Strains Which Enter Into It," L. A. Gintse, Control Inst of Sera and Vaccines imeni L. A. Tarasevich

"Zhur Mikrobiol, Epidemiol, i Immunobiol" No 3, p 79

If strains of typhoid bacteria with a high immunogenic activity are used, one may obtain /from a single strain/ a vaccine which is no less effective than that prepared from several strains. and which may even be superior to the latter in immunogenic activity.

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USSR/Microbiology - Microbes Pathogenic for Man and Animals. F
Bacteria. Bacteria of the Intestinal Group.

Abs Jour : Ref Zhur Biol., No 22, 1958, 99391

Author : Gintse, L.A.
Inst : [illegible]
Title : Significance of the Experimental Determination of Toxicity of Typhoid and Paratyphoid Cultures in the Evaluation of Their Immunological Activity.

Orig Pub : Zh. mikrobiol., epidemiol. i immunobiologii, 1958, No 4, 27-31

Abstract : No abstract.

Card 1/1

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

GINTSE, L.A.

Vi-antigen as a criterion in the selection of Salmonella typhosa for production of vaccines and its role in virulence and immunogenesis of typhoid cultures, author's abstract. Zhur.mikrobiol.epid. i immun. 29 no.2:109-110 F '58. (MIRA 11:4)

1. Iz Gosudarstvennogo kontrol'nogo instituta imeni Tarasevicha.
(SALMONELLA TYPHOSA, culture,
vaccinal strains, Vi-antigen in selection & in virulence & immunogenesis in cultures (Rus)

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GINTSE, L.A.

Significance of the experimental determination of the toxicity of typhoid and paratyphoid cultures in determining their immunological activity. Zhur.mikrobiol.epid. i immun. 29 no.4:27-31 Ap '58.
(MIRA 11:4)

1. Iz Gosudarstvennogo kontrol'nogo instituta vaktsin i syvorotok im. Tarasevicha.

(SALMONELLA TYPHOSA,
virulence, determ. in evaluation of immunol. properties (Rus)
(SALMONELLA PARATYPHI,
same)

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

GINTSE, L.A.

Preventive properties of immune sera as a criterium in the determination of immunogenic properties of typhoid cultures in vaccinal preparations. Zhur. mikrobiol. epid. i immun. 29 no.10:93-98 O '58. (MIRA 11:12)

1. Iz Gosudarstvennogo kontrol'nogo instituta syvorotok i vaktsin imeni Tarasevicha.

(TYPHOID FEVER, immunol.
prev. properties of immune sera in determ. immunogenic properties of typhoid culture in vaccinal prep. (Rus))

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

GINTSE, L.A.

Relationship between the preventive properties of immune typhoid sera and certain antibodies. Zhur.mikrobiol.epid. i immun. 30 no.4:61-66 Ap '59. (MIRA 12:6)

1. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh i biologicheskikh preparatov imeni Tarasevicha.
(TYPHOID FEVER, immunol.
immune sera, relation to certain antibodies (Rus))

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
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GINTSE, L.A.

Dependence of the immunological effectiveness of complete antigens on the biological properties of typhoid strains used for their preparation. Zhur.mikrobiol.epid.i immun. 31 no.1:55-60 Ja '60. (MIRA 13:5)

1. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni Tarasevicha.
(SALMONELLA TYPHOSA immunol.)

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PODLEVSKIY, A.V.; KOGAN, V.Ya.; GORCHAKOVA, Yu.P.; YELIZAROVSKIY, G.I.; RYABOSHAPKA, A.P.; REZNIK, S.R.; GOLUBEV, T.I.; GINTSE, L.A.; RASKIN, M.M.; ZUYENKO, P.G.; KHOMIK, S.R.; KATSNEL'SON, I.A.; ZHILIN, S.I.; LYSENKOV, M.N.; ROMANOV, B.G.; SAVENKOV, D.A.; GIL', L.T.; LEVINA, Ye.S.; VOVKI, A.S.; POSLEDOV, F.F.

Annotations. Zhur.mikrobiol.,epid.i immun. 32 no.12:120-125 D '61. (MIRA 15:11)

1. Iz Leningradskogo instituta usovershenstvovaniya vrachey imeni Kirova (for Podlevskiy). 2. Iz Ukrainskogo nauchno-issledovatel'skogo instituta kommunal'noy gigiyeny (for Kogan). 3. Iz Voronezhskogo meditsinskogo instituta (for Gorchakova). 4. Iz Arkhangel'skogo meditsinskogo instituta (for Yelizarovskiy). 5. Iz Kiyevskogo instituta epidemiologii i mikrobiologii (for Ryaboshapka, Reznik). 6. Iz zavoda meditsinskikh preparatov Leningradskogo myasokombinata imeni S.M.Kirova (for Golubev). 7. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni Tarasevicha (for Gintse). 8. Iz Chitinskogo instituta epidemiologii, mikrobiologii i gigiyeny (for Raskin). 9. Iz Ternopol'skogo meditsinskogo instituta (for Zuyenko). 10. Iz Rostovskogo instituta epidemiologii, mikrobiologii i gigiyeny (for Khomik). 11. Iz Chelyabinskogo meditsinskogo instituta (for Gil', Levina, Vovki, Posledov).

(IMMUNOLOGY--ABSTRACTS) (EPIDEMIOLOGY--ABSTRACTS)

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GINTSE, N. E.

CA

23

Coagulating and chemical action of precipitating baths on the formation of viscose filaments. S. N. Danilov and N. F. Gintse. *Org. Chem. Ind.* (U. S. S. R.) 5, 736-42 (1938); *cf. C. A.* 30, 8125⁹. Study of the physicochem. characteristics of pptg. baths and the coagulating and chem. action on the formation of viscose filaments are studied chiefly by the methods described in the earlier paper. The effect of the chief components of pptg. baths (sulfates of Na, NH_4, Mg and Zn) was studied by comparing the action of baths of various compns. by successive substitution of equiv. amts. of one component for another. In a study of Mg and Zn baths the previous method of iodometric titration could not be used and was replaced by the conversion of unaltered xanthate into insol. Zn xanthate and the analysis of the latter by the Bernhardt method. The same procedure was used for the characterization of Na and NH_4 baths when their action was compared with that of Mg and Zn baths. In their increasing retardation action on the velocity of decompn. of viscose and increasing coagulation power the components can be arranged in the following order: Na_2SO_4, $MgSO_4$, $(NH_4)_2SO_4$ and $ZnSO_4$. The process of decompn. and coagulation of viscose solns. in Mg and Zn baths is accompanied by chem. interaction of viscose with the salts of bivalent metals. The equiv. coeffs. in relation to Na_2SO_4 for the retardation of the decompn. action are: $(NH_4)_2SO_4$ 1.2, $MgSO_4$ 1 and $ZnSO_4$ 4.5-5, and for the coagulation action: $(NH_4)_2SO_4$ 1.9, $MgSO_4$ 1.1 and $ZnSO_4$ 21-2. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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APPROVED FOR RELEASE: Thursday, September 26, 2001 CIA-RDP86-00513R000515120009-8"

GINTSE, N.F.

Chem

23

Coagulating and chemical action of precipitating baths in the formation of viscose filaments. S. N. Danilov, N. F. Gintse, O. F. Plyushch and I. S. Samarskii. *Org. Chem. Ind.* (U. S. S. R.) 7, 511-17(1939); cf. *C. A.* 26, 1325; 33, 6179.—The results of previous investigation are reviewed and some addnl. expts. data are given.
Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
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GINTSE, N.F.

CA

PROCESSES AND PREPARATIONS

Thermal insulator S. S. Dandov and N. F. Gintse. **U S S R 66,331**, May 31, 1946. Cellulose or substances containing it are swollen in H_3PO_4 without heating, and a gas-evolving substance such as $NaHCO_3$ is added. The mass is molded, washed, and dried. The product may be water-proofed and fireproofed. M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

DANILOV, S.N.; GINTSB, N.F.

Role of phosphoric acid in the study and processing of cellulose. Part 1. Swelling and dissolution of cellulose in phosphoric acid. Zhur.ob.khim.26 no.11:3014-3020 N '56. (MLRA 10:1)

1. Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR.
(Cellulose) (Phosphoric acid)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

AUTHORS: Danilov, S. N., Gintse, N.F. 79-12-24/43

TITLE: The Chemistry of Xanthogenates and Viscose (Khimiya ksantogenatov i viskozy).
VI. The Interdependence of Viscose Components (VI. Vzaimootnoshenlya komponentov viskozy).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 12, pp. 3290-3301 (USSR).

ABSTRACT: In the present experiments the effect of the concentration of sodalye as well as of some salt components of viscose (NaS, Na_2CS_3, Na_2CO_3, Na_2SO_3, $Na_2S_2O_3$) in aqueous and alkaline solutions on the velocity of decomposition of cellulose-xanthogenate are investigated. In order to determine the transformation of viscose xanthogenate and the sulfur products forming on this occasion various chemical methods and also potentiometric titration were used. In aqueous solutions xanthogenate decomposes quicker than in alkaline solutions, where with the increase of the alkaline character of the solutions of xanthogenate also the steadiness with regard to the formation of gelatine increases. The decomposition of xanthogenate in weak salt solutions takes place with a velocity which is close to that in water. The more concentrated the salt solution is, the less intensive is the decomposition.

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The Chemistry of Xanthogenates and Viscose. 79-12-24/43
VI. The Interdependence of Viscose Components.

The addition of sodiumhydroxide to the salt solution stops it as is the case in pure alkaline solutions. The nature of the salt additions plays a certain part in the formation of gelatine of aqueous salt solutions. A strange influence on the decomposition of xanthogenate exercizes sodiumsulfite by slowing down its own aging in dependence on the decomposition products being formed. With the decomposition of cellulose xanthogenate in aqueous and aqueous electrolytic solutions, as well as of ordinary viscose considerable quantities of sodium sulfite are formed primarily, which then reacts with carbon disulfide and forms trithiocarbonate. The latter can, however, produce again sodium sulfite by means of hydrolysis. The content of sodium sulfite decreases with the storing (maturing-vozrevaniye) of the solutions of purified xanthogenate whereas the content of trithiocarbonate increases.
There are 10 figures, 1 table, and 17 references, 6 of which are Slavic.

ASSOCIATION: Institute for High-Molecular Compounds AN USSR (Institut vysokomolekulyarnykh soyedineniy Akademii nauk - SSSR).

SUBMITTED: February 8, 1956.

Card 2/2 1. Xanthogenates-Deterioration 2. Cellulose-Deterioration
3. Xanthogenates-Titration 4. Cellulose-Titration

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

AUTHORS: Danilov,S.N., Gintse,N.F., Levitskaya,K.V. SOV/79-28-11-10/55

TITLE: Chemistry of Xanthates and Viscose (Khimiya ksantogenatov i viskozy) VIII. Investigation of the Polysulfur Compounds and of the Composition of Viscose Using Tracer Atoms (VIII. Izucheniye polisernistykh soyedineniy i sostava viskozy s primeneniyem mechenykh atomov)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11, pp 2948-2958 (USSR)

ABSTRACT: In the present experiments the separation of the sulfur atom from dixanthogenides of cellulose, and of ethyl alcohol from sodium disulfide and sodium perthiocarbonate containing the radioactive sulfur isotope S^{35} in their molecules is dealt with. The results of these experiments are compared to those of the usual chemical analysis. This radioactive method makes it possible to determine the composition of viscose, i.e. the amount of polysulfur compounds, the distribution of carbon disulfide for the formation of its components. This determination was carried out much more rapidly than by the usual analytical methods. The danger of the mutual exchange of radioactive and normal sulfur atoms within the molecule and between the molecules is best removed by sodium cyanide as sulfur acceptor. The dixanthogenides form thioacid anhydrides on the

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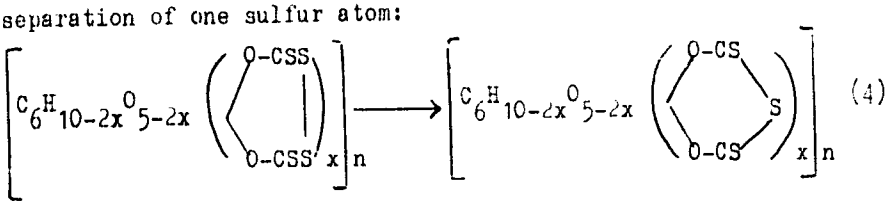
Chemistry of Xanthates and Viscose. VIII. Investigation of the Polysulfur Compounds and of the Composition of Viscose Using Tracer Atoms

separation of one sulfur atom:



(4)

Compared with the calculated values the dixanthogenide of cellulose in these experiments separates more sulfur which is probably due to the unstable behaviour of the thioacid anhydrides in alkaline media. Thus, the separation of sulfur from the dixanthogenides of cellulose and of ethyl alcohol from sodium disulfide and sodium perthiocarbonate was investigated by means of radioactive atoms and according to the usual analytical method. The radioactive method of separation makes it possible to carry out rather exactly the separation of sulfur from sodium disulfide and sodium perthiocarbonate by means of sodium sulfite and sodium cyanide.- There are 9 tables and 13 references, 7 of which are Soviet.

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SOV/79-28-11-10/55

Chemistry of Xanthates and Viscose. VIII. Investigation of the Polysulfur Compounds and of the Composition of Viscose Using Tracer Atoms

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk (Institute of High-Molecular Compounds of the Academy of Sciences, USSR)

SUBMITTED: September 24, 1957

Card 3/3

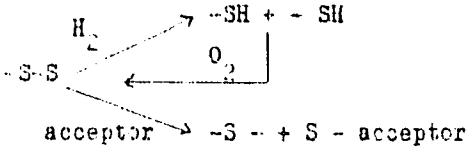
"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

AUTHORS: Danilov, S.N., Gintse, N.F., Okun', [illegible] SOV/79-28-12-6/41

TITLE: Chemistry of Xanthates and Viscose (Khimiya ksantogenatov i viskozy) IX. The Detection of Polysulfur Compounds in Viscose and the Part Played by Them (IX. Obnaruzheniye polisernistykh soyedineniy v viskoze i ikh rol')

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 12, pp 3192-3202 (USSR)

ABSTRACT: Viscose, alkali cellulose, and the cuprammonium solutions of cellulose differ from many other products and technical mixtures in their complex character and the strange processes occurring in them. These processes are not only of technical but also of purely scientific interest. In a certain sense they can be regarded as models of important biological systems in which the oxidizing and redox processes, as well as the the occurring transport of sulfur and the transitions between disulfide and mercaptan groupings are of great importance (the transformation of cysteine, cystine, glutathione).



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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

Chemistry of Xanthates and Viscose. IX. The Detection of Polysulfur Compounds in Viscose and the Part Played by Them

The chemical transformations which are important in the course of ripening of viscose take place with the xanthate of cellulose, sodium sulfite, sodium thiocarbonate etc. Whereas the entire content of polysulfur compounds in viscose is determined by means of sodium cyanide and sodium sulfite, the separate determination of their content by means of the potentiometric method is very difficult, especially in the presence of alkali. The xanthate can be liberated from side compounds by activated carbon and anionites. The course of the curve of optical density of the viscose solutions and alcoholic solutions of trithiocarbonate are the same; in the aqueous solutions of trithiocarbonate sodium disulfide was found by the hydrolysis and oxidation of the former. In the viscose solution there is a large quantity of trithiocarbonate and a small amount of perthiocarbonate. Figures 1,2,3 present the comparative potentiometric titrations of the salt solutions with silver nitrate considered in the investigation (solutions of sodium sulfite, sodium thiosulfate, trithiocarbonate, perthiocarbonate, sulfide, disulfide, etc.) The spectrographic investigations aimed at detecting the polysulfur compounds of sodium disulfide and perthiocarbonate to

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Chemistry of Xanthates and Viscose. IX. The Detection of Polysulfur Compounds in Viscose and the Part Played by Them

find these compounds in viscose. In figure 4 the dependence of the optical density of the solutions on the wave length is given.- There are 4 figures and 20 references, 12 of which are Soviet.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR i Leningradskiy khimiko-tekhnologicheskiy institut imeni Lensoveta (Institute of High-Molecular Compounds, Academy of Sciences USSR, and Leningrad Chemotechnological Institute imeni Lensovet)

SUBMITTED: January 23, 1958

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515120009-8"

AUTHORS: Flisko, Ye. A., Okun', M. G., Grad, N. M., Gintse, N. F. SOV/79-28-12-3/41

TITLE: On S. N. Danilov's Work in the Field of Cellulose and Its Ethers (O rabotakh S. N. Danilova v oblasti tsellyulozy i yeye efirov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 28, Nr 12, pp 3174-3184 (USSR)

ABSTRACT: The manifold scientific activity of Danilov was closely connected with the chemistry of cellulose and its derivatives, as well as with alginic acid and chitin. It led to new findings on the behavior of cellulose to its solvents, on nitrocellulose, acetyl cellulose, nitro-acetyl cellulose, cellulose ether, the hydrolysis of alginic acid and chitin. Together with Gintse, N.F. Danilov investigated the solution conditions of cellulose in phosphoric acid (Ref 104), and it was found that the hydrates play an important role in their dissolution in concentrated solutions of the electrolytes. A new method for the determination of the copper numbers required for important outstanding properties of cellulose (Ref 67) was devised. The investigation of the cellulose molecules with one oxygen less,

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their desoxy, anhydride and unsaturated derivatives raised great interest. The use of acetyl cellulose membranes as a substitute of glass in hotbeds was worked out. Danilov's excellent investigation of the nitration of cellulose was proof of the nitration theory devised by Mendeleyev-Sapozhnikov (Ref 68). The oxy-butyl ethers of cellulose (Ref 51) and the carboxy-methyl cellulose (Ref 35) were synthesized for the first time. The work carried out by Danilov and his cooperators on chitin considerably widened the knowledge of natural polymers. His work in the field of cellulose ether and cellulose ester is directly continued by his work on cuprammonia solutions of cellulose, xanthates, and viscose. The cuprammonia solution of cellulose consists, according to Danilov, of the high-molecular compound: $\left\{(C_6H_{10}O_5)_x \cdot \left[Cu(NH_3)_m(OH)_2\right]_y \cdot (H_2O)_z\right\}_n$, where the cellulose and the cuprammonia base form a molecular compound of variable compositon at the expense of the hydrogen

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bonds. The viscose research was widened by new knowledge and was put on a new basis (its compositon during the process of maturation). In Danilov's laboratory synthesis methods were devised which are closely connected with the technology of viscose processing. There are 141 references, 130 of which are Soviet.

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(Altai Mountains--Rocks, Igneous) (Rocks, Igneous--Altai Mountains)