

On summation of multiple integrals 25001 S/044/61/000/003/002/014
C111/C333

$$\lim_{p, q \rightarrow +0} \int_0^{\infty} \int_0^{\infty} e^{-pt - q\tau} f(t, \tau) dt d\tau = S$$

It is shown that under certain additional conditions from the $C_{\alpha\beta}$ -integrability of $f(t, \tau)$ it follows its A-integrability. The number S is called W-integral of the function $f(t, \tau)$ over the domain R, if

$$\lim_{x, y \rightarrow \infty} \frac{1}{P(x)Q(y)} \int_0^x \int_0^y p(x-t)q(y-\tau) \phi(t, \tau) dt d\tau = S$$

where

$$\phi(t, \tau) = \int_0^t \int_0^{\tau} f(u, v) du dv,$$

$$P(x) = \int_0^x p(t) dt, \quad Q(y) = \int_0^y q(\tau) d\tau$$

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the $p(t)$ and $q(t)$ are given positive functions which are integrable on every finite interval from $[0, \infty)$. It is shown that under certain additional conditions from the integrability of $f(t, \tau)$ on R it follows its W -integrability on R . There are inaccuracies in the article. Thus, lemma 1 is wrong. Indeed, take as $\varphi(x, y, t, \tau)$ a function $\varphi(x, y)$ (which is constant relative to t and τ), which is finite in every point, however, not bounded on $Q = (0 < x < a, 0 < y < b)$ and which tends to zero for $x, y \rightarrow 0$. All the assumptions of lemma 1 are satisfied for such a function, however, the conclusion of the lemma is wrong, since the integral

$$\left| \iint_Q \varphi(x, y) dt d\tau \right| = |\varphi(x, y)| \text{mes } e$$

is arbitrarily large because of the nonboundedness of $\varphi(x, y)$. There are misprints. E. g. on page 83 in the relation $\lim_{x, y \rightarrow 0} F_{\alpha, \beta}(x, y) = S$

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it must stand: $x, y \rightarrow \infty$. In the formulation of theorem 4 the number of the relation (5.2), to which it is referred lateron, is not given.

[Abstracter's note: Complete translation.]

X

Card 5/5

CHELIDZE, V.G.

Absolute convergence of Fourier's series. Trudy Mat.inst.
AN Gruz.SSR 26:91-104 '59. (MIRA 13:6)
(Fourier's series)

CHELIDZE, V.G.

Second Conference of Professors and Teachers of Mathematics of
Institutes of Higher Education of the Georgian S.S.R. Usp. mat.
nauk 18 no.2:207-210 Mr-Apr '63. (MIRA 16:8)
(Georgia--Mathematics)

CHELIDZE, V.S., inzh.; SHANIDZE, M.I., inzh.

PS-1 shoot cutter. Trakt. i sel'khozmas. 30 no.11:34 N '60.
(MIRA 13:12)
(Sericulture--Equipment and supplies)

CHELIDZE, V.S.

Tensile stress of tea flush and leaves under static loads. Sel'-
khoz mashina no.12:7-9 D '57. (MIRA 11:2)
(Tea) (Strains and stresses)

CHELIDZE, V.S., inzh.

Instrument for determining the deformation of stems. Trakt. 1
sel'khozmasb. no.4:28-29 Ap '59. (MIRA 12:5)
(Tea) (Measuring instruments)

CHELIDZE, V.S., inzh.

Damages to tea flush in tea sorting and harvesting machinery.
Trakt. i sel'khoz mash. 31 no.10:23-24 0 '61. (MIRA 14:12)

1. Gosudarstvennoye seriyno-konstruktorakoye byuro Gruzinskogo
sovmarkhoza.

(Tea machinery)

CHELIDZE, Ye. F.

Dzhanashvili, A. G., Mebuke, Ye. M. and Chelidze, Ye. F. - "Notes on the habitat of chameleons within the boundaries of Georgia and on their maintenance in the Tbilisi zoological park," Trudy Tbilis. zooparka, Vol. I, 1948, p. 61-65, (In Georgian, resume in Russian), - Bibliog : 5 items

SO: U-4934, 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).

CHELIDSE, Ye. F., Cand Agr Sci -- (diss) "Concerning
perspectives of ^{the} development of ^{Yakshoy} animal husbandry of ~~the~~
~~collective farm~~ in ~~the~~ Mtskhetskiy Rayon of the Georgian
SSR." Tbilisi, Pub House of Georgian ~~SSR~~ Agr Inst,
1958, 28 pp; ² with ~~two~~ sheets of tables (Min of Agr
USSR. Georgian Order of Labor Red Banner Agr Inst)
100 copies (KL 21-58, 92)

- 55 -

MGEERYAN, O.I.; CHELIDZE, Z.A.

Pulse method for measuring internal friction. Soob.
AN Gruz. SSR 31 no. 3:565-568 S '63. (MIRA 17:7)

1. Tbilisskiy gosudarstvennyy universitet. Predstavleno
chlenom-korrespondentom AN GruzSSR M.M.Mirianashvili.

L 05249-67 EWT(1)/FUC GW

ACC NR: AP6018934

(N)

SOURCE CODE: UR/0203/66/006/003/0613/0614

AUTHOR: Nodia, M. Z.; Vekua, L. V.; Chelidze, Z. A.; Pavlenishvili, Ye. Sh.

32
30
B

ORG: Tbilisi State University (Tbilisskly gosudarstvennyy universitet)

TITLE: A method for studying the secular variations of the Earth's magnetic field before our era

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 3, 1966, 613-614

TOPIC TAGS: geomagnetic field, earth magnetic field, secular variation, paleontology

ABSTRACT: In order to obtain data on the secular variations of the Earth's magnetic field before our era, the authors collected more than 300 samples of 50 objects, for six of which the directions of the astronomic meridian were determined. Since these objects were only roughly dated, they could not be subjected to conventional research techniques and a new method for studying the secular variations of accumulation on the basis of these objects had to be devised. Recent theoretical work indicates that the absolute intensity value of the earth's magnetic field undergoes variations, the periodicity of which has yet to be established. On the basis of paleomagnetic data it may be assumed that this period is not less than 5,000 years, while the period of secular accumulation variations is in the order of 1,000 years. It one uses as a point of

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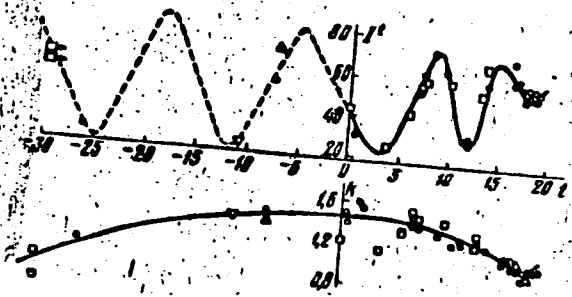


Fig. 1

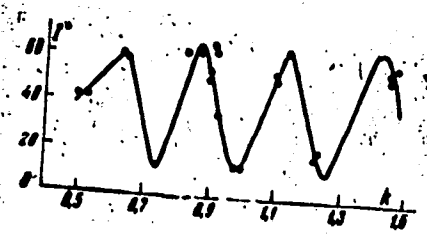


Fig. 2

departure the curve $k = f(t)$ before our era (Fig. 1) and if a curve $I = f(t)$ is plotted in conformity with measured values, such a curve will appear as shown in Fig. 2. It is clear from an analysis of this curve that the character of the cumulative change was sinusoidal even before our era for the territory of the Georgian SSR, while the double amplitude lies in a range of 10–60°. If these results are compared with S. P. Burlatskaya's curve (Sb. "Magnetizm gornykh porod i paleomagnetizm". Izd-vo SO AN SSSR, 1963, 245), all the points will be found to lie on Burlatskaya's hypothetical curve (Fig. 3). The points for samples ascribed to the earliest eras, for which $k = 0.5$, agree well with the logical extension of the $k = f(t)$ curve, by which they can be tentatively dated as belonging to the 35th century B. C. The

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L 05249-67

ACC NR: AP6018934

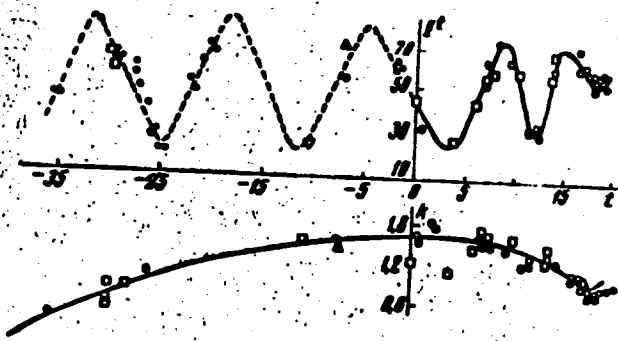


Fig. 3

2

cumulative value of these items, equal to $39-40^\circ$, falls quite satisfactorily on the descending branch of the sine curve $I = f(t)$ (Fig. 3). Thus, complete agreement is observed between the authors' results and those of Burlatskaya. In conclusion, the authors wish to express their gratitude to G. N. Petrova and S. P. Burlatskaya for their help. Orig. art. has: 3 figures.

SUB CODE: 08/ SUBM DATE: 08Jul65/ ORIG REF: 005

Card 3/3

CHELIKANOV, K.H.; YEMEL'YANOV, N.F.; ANAN'YEV, N.A.

Studying the incidence of diseases causing temporary disability in machine-tractor workers of Ryazan Province. Zdrav. Ros. Feder. 2 no.1:11-15 Ja '58.
(MIRA 11:2)

1. Iz kafedry obshchey gigiyeny (zav. - doktor meditsinskikh nauk prof. N.F.Yemel'yanov) i kafedry organizatsii zdavookhraneniya i istorii meditsiny (zav. - dotsent N.A.Anan'yev) Yazanskogo meditsinskogo instituta.

(RYAZAN PROVINCE--MEDICAL RECORDS)
(MACHINE-TRACTOR STATIONS--HYGIENIC ASPECTS)

CHELIKANOV, K.N. (Ryazan')

Some material on the hygienic rating of working conditions
in machine-tractor stations repair shops in Ryazan Province.
Gig. truda i prof. sab. 2 no.5:51-53 S-0 '58 (MIRA 11:11)

1. Meditsinskii institut kafedra obshchei gigieny.
(RYAZAN PROVINCE--MACHINE STATIONS--HYGIENIC ASPECTS)

CHELIKANOV, K. N., Candidate Med Sci (diss) -- "Sanitary working conditions and the disease rate of the mechanizers of agriculture in Ryazan' Oblast (Based on material from 45 MTS in Ryazan' Oblast)". Ryazan', 1959. 18 pp (Ryazan' Med Inst im Acad I. P. Pavlov, Chair of General Hygiene, Chair of the Organization of Health and the History of Medicine), 200 copies (KL, No 23, 1959, 173)

YEMEL'YANOV, N.F.; CHELIKANOV, K.N.

Reasons for disease incidence among stock raisers in Ryazan
Province. Zdrav. Ros. Feder. 5 no.8:17-20 Ag '61. (MIRA 14:10)

1. Iz kafedry gigiyeny (zav. - prof. N.F.Yemel'yanov) Ryazanskogo
meditsinskogo instituta.
(RYAZAN PROVINCE—AGRICULTURAL WORKERS—DISEASES AND HYGIENE)

YEMEL'YANOV, N.F., prof.; CHELIKANOV, K.N.

Toxicological characteristics of the accompanying generation
of gases in the production of artificial fibers. Nauch. trudy
Riaz.med.inst. 23:25-29 '63. (MIRA 18:12)

1. Kafedra gigiyeny (zav. kafedroy - professor N.F.Yemel'yanov)
Ryazanskogo meditsinskogo instituta imeni akademika I.P.Pavlova.

YEMEL'YANOV, N.F., prof.; CHELIKANOV, K.N.; LEUS, A.M.; VALIYEVA, S.S.

Ryazan Combine of Artificial Fibers in the light of sanitary
hygiene. Nauch.trudy Riaz.med.inst. 23:30-37 '63.

(MIRA 18:12)

1. Kafedra gigiyeny (zav. - kafedroy - prof. N.F.Yemel'yanov)
Ryazanskogo meditsinskogo instituta imeni akademika I.P.
Pavlova i Ryazanskaya oblastnaya sanitarno-epidemiologicheskaya
stantsiya (glavnyy vrach - A.M.Leus).

CHELIKIDI, R.F.; GOLUBEV, I.S. (Moskva, I-327, g. Babushkin, Kalyayevskaya ulitsa, dom 25, kv.7); ZOL'NIKOV, S.M.

Effect of reserpine on the dynamics of the electrocardiogram during mitral commissurotomy. Grud. khir. 6 no.2:58-62 Mr-Ap '64. (MIRA 18:4)

1. Laboratoriya funktsional'noy diagnostiki (zav. - kand. med. nauk G.G.Gel'shteyn) i laboratoriya anesteziologii (ispolnyayushchiy obyazannosti zaveduyushchego - kand. med. nauk S.M.Zol'nikov) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSR, Moskva.

KOGAN, B.M.; MEYINA, R.A.; POKROVSKIY, A.V.; CHELIKID, R.F.

Changes in the functional state of the myocardium, bioelectrical activity of the brain and gas metabolism during surgery for aortic coarctation.

Vest. khir. no.7:97-102 J1 '64.

(MIRA 18:4)

1. Iz laboratorii funktsional'noy diagnostiki (zav. - kand. med. nauk G.G.Gel'shteyn) i otdeleniya khirurgii sosudov (zav. - doktor med. nauk Yu.Ye. Berezov) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR.

POKROVSKIY, A.V.; NADZHIMITDINOV, L.T.; CHELIKIDI, R.F.

Late evaluation of the effectiveness of surgery in coarctation of the aorta. Sov.med. 28 no.11:104-107 N '65.

(MIRA 18:12)

1. Otdeleniye khirurgii sosudov (zav. - prof. Yu.Ye.Perezov) i laboratoriya funktsional'noy diagnostiki (zav. - kand.med. nauk G.G.Gel'shteyn) Instituta serdechno-sosudistoy khirurgii (direktor - prof. S.A.Kolesnikov; nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR, Moskva.

ABROSKIN, B.; FERDMAN, M.; MALYSH, V.; ZAYTSEVA, Z., prepodavatel';
CHELIKIDI, V.; VOLKOV, I.; KLAPISHEVSKIY, L.

Expand payments by checks. Den.i kred. 21 no.2:60-66 F '63.
(MIRA 16:2)

1. Upravlyayushchiy Gukovskim trestom ugol'nykh predpriyatiy kombinata Shakhtantratsit Ministerstva ugol'noy promyshlennosti SSSR (for Abroskin). 2. Glavnyy bukhgalter Gukovskogo tresta ugol'nykh predpriyatiy kombinata Shakhtantratsit Ministerstva ugol'noy promyshlennosti SSSR (for Ferdman). 3. Upravlyayushchiy Gukovskim otdeleniyem Gosbanka (for Malysh). 4. Odesskiy kreditno-ekonomicheskiy institut (for Zaytseva). 5. Nachal'nik planovo-ekonomicheskogo otdela Sumskoy oblastnoy kontory Gosbanka (for Chelikidi). 6. Starshiy ekonomist planovo-ekonomicheskogo otdela Sumskoy oblastnoy kontory Gosbanka (for Volkov). 7. Glavnyy bukhgalter Kiyevskoy transportno-ekspeditsionnoy kontory (for Klapishevskiy).
(Checks)

KELIN VASILESKU, Adrian [Chelin Vasilescu, Adrian]

Improving the performance of the engine SR-101 by increasing the counterpressure at the exhaust. Rev electrotechn energet 5 no.1: 129-239 '60. (EEAI 10:4)

1. Comite de redaction, Revue d'electrotechnique et d'energetique, secretaire scientifique.
(Rumania--Automobiles)

CHELINSKA, M.

Elements of education and world out-look in the teaching
of geography in grade 5. p. 32. Warszawa
Vol. 9, no. 1, Jan./Feb. 1956
GEOGRAFIA W SZKOLE

SOURCE: East European Accession List (EEAL) Library of Congress
Vol. 5, no. 8, August 1956

CHELINSKA, M.

Spontaneous observations of some climatologic phenomena in the light of an inquiry in the 5th grade.

P. 261. (GEOGRAFIA W SZKOLE) (Warszawa, Poland) Vol. 10, no. 5, Sept./Oct. 1957.

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

CHELINSKAYA, T.E. and ROGINSKIY, S.Z.

Experimental Testing of the Supersaturation Theory. (III). Low-Temperature Oxidizing Reactions on Niskelous Oxide. Zhur. Fiz. Khim., 22 (1948), 11, 1360-1373.

SO: Translation-2524467, 30 Apr 1954.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

U A C D E F G H I J K L M N O P Q R S T U V W X Y Z AA BB CC DD EE FF GG HH II JJ KK LL MM NN OO PP QQ RR SS TT UU VV WW XX YY ZZ

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

U A C D E F G H I J K L M N O P Q R S T U V W X Y Z AA BB CC DD EE FF GG HH II JJ KK LL MM NN OO PP QQ RR SS TT UU VV WW XX YY ZZ

CHELINTSEV, G.V.

ca

3-Amino-5-diethylaminopentane. I. L. Knaunants, G. V. Chelintsev and E. D. Ostrova. Russ. 35,637, Apr. 30, 1934. γ -Acetylpropyl alc. is converted by HBr to γ -acetoxypropyl methyl ketone. This on treatment with H_2/Ni gives 1-diethylamino-4-pentanone. This ketone is converted to the oxime, and the oxime is reduced with Na in abs. alc. and upd. in the usual manner.

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ASS. SEA METALLURGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

U A C D E F G H I J K L M N O P Q R S T U V W X Y Z AA BB CC DD EE FF GG HH II JJ KK LL MM NN OO PP QQ RR SS TT UU VV WW XX YY ZZ

1ST AND 7TH ORDERS PROCESSES AND PROPERTIES INDEX 1ST AND 4TH ORDERS

CHEKINTSEV, G.V. 17

ca

The structure and synthesis of new anti-malarial substances. The structure of "atebrin." G. V. Chelintsev, I. L. Komyants and Z. V. Demochukhaya. *Chem. Acad. Sci. U. R. S. S. (N. S.), 1, 62-5 (in English 65-7) (1964).*—Com. "atebrin" was recrystd. from hot water, m. 248-50°. From this dihydrochloride the free base was isolated, dissolved in 120 cc. of 20% H₂SO₄ and 0 g. of K₂MnO₄ in acid. soln. added. Alkali was added, and then steam distn. gave the base, 5-diethylamino-2-quinazolinone. "Atebrin" was shown by synthesis to be 7-methoxy-3-chloro-5-(4-diethylamino-*n*-methylbutyl)-quinazolinone-*di*-HCl. F. H. Rathmann

ASD-51A METALLURGICAL LITERATURE CLASSIFICATION

AUTOMATIC INDEXING

1ST AND 7TH ORDERS 1ST AND 4TH ORDERS

CHCLINTSEY, G.V.

ca

NO. 2ND SERIES

PROCESSES AND PROCEDURES

✓ The mechanism of the condensation of carbonyl compounds under the influence of alkali metals. G. V. Chelintsev. *Chem. Acad. Sci. U. R. S. S. I.*, 383-5 (in German 285-7) (1935).—The mechanism previously postulated (cf. *C. A.* 28, 5046¹) is revised to include the intervention of a tautomeric organo-metallic compd., e. g., $\text{MeC}(:\text{O})\text{OEt} + \text{NaCH}_2\text{C}(:\text{O})\text{OEt} \rightleftharpoons \text{MeC}(\text{ONa})(\text{OEt})\text{CH}_2\text{C}(:\text{O})\text{OEt} \rightleftharpoons \text{MeCOCH}_2\text{C}(:\text{O})\text{OEt} + \text{EtONa} \rightleftharpoons \text{MeC}(\text{ONa})\text{CHC}(:\text{O})\text{OEt} + \text{EtOH}$. The position of the equl. depends on the relative acidities of the initial reactants, the final condensation product, and the alc. produced. A similar mechanism is postulated for the condensation of carbonyl compds. with ketones, esters, their halogen derivs., nitro compds., etc. L. W. R.

410-51A METALLURGICAL LITERATURE CLASSIFICATION

410-51A

410-51A

410-51A

CHEMISTRY, G.V.
 CR
 PROCESSES AND PROPERTIES INDEX
 10
 2-benzoylbutyrolactone, γ -benzoylpropyl alcohol and γ -benzoylpropyl bromide. G. V. Christov and E. D. Ostrova. *Chem. rev. acad. sci. C. R. S. S. R.* 251:2 (in German 253-4)(1954). To 24 g. $\text{BaCH}_3\text{CO}_2\text{Et}$ in 90 cc. abs. EtOH contg. 4.5 g. Na. 9 g. ethylac oxide in 10 cc. EtOH was added. The soln. was allowed to stand 6 days and the pot. filtered, washed with ether and dissolved in H_2O . AcOH was added and the prod. extd. with ether, washed with Na_2CO_3 and dried. The oil was distd., the fraction by 100-3° being 2-benzoylbutyrolactone (I). Yield 40%. Ten g. I was refluxed with 100 g. 10% KOH for 2-3 hrs. After adding K_2CO_3 benzoylpropyl alc. (II) was extd. with ether, b.p. 165-6° (yield 78%), m. 32-3°. Four g. II was dissolved in 15 cc. 40% HBr. Upon heating 30 min., benzoylpropyl bromide prod. as an oil. It was obtained by extg. with ether. Yield 80%, m. 30°. F. H. Moser

ASM-31A METALLURGICAL LITERATURE CLASSIFICATION
 4804 517-21178
 440385

PROCESSES AND PROPERTIES INDEX

10

The organosodium compounds and their role in organic synthesis. G. Christov. Compt. rend. acad. sci.

U. R. S. S. [N. S.], 2, 280-73(1936) (in French).—A review and theoretical discussion. John E. Miller.

Primary amines by reduction of oximes by means of aluminum amalgam. Chao-Lun Tseng and Chi Chang. Science Repts., Natl. Univ. Peking 1, No. 3, 10-33(1936).—One-half mole of the oxime of the following aldehydes and ketones, reduced with Al-Hg freshly prepd. from 18 g. Al foil (0.1 mm. thick) in aq.-alc. soln. at ordinary temp., given the following % yields: PhCHO, 39.9; heptaldehyde, 48.0; MeCOC₂H₅, 1.0; cyclohexanone, 60.1; BuH, 87.7; camphor, 85; furfural, 26.3. Acetone (0.68 mole) gives 17.3% yield under similar conditions. PhCN is not affected by this reduction, but PhNO is vigorously reduced to give 64.5% aniline, with azobenzene as by-product.

C. L. Tseng

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

REGION 111-112

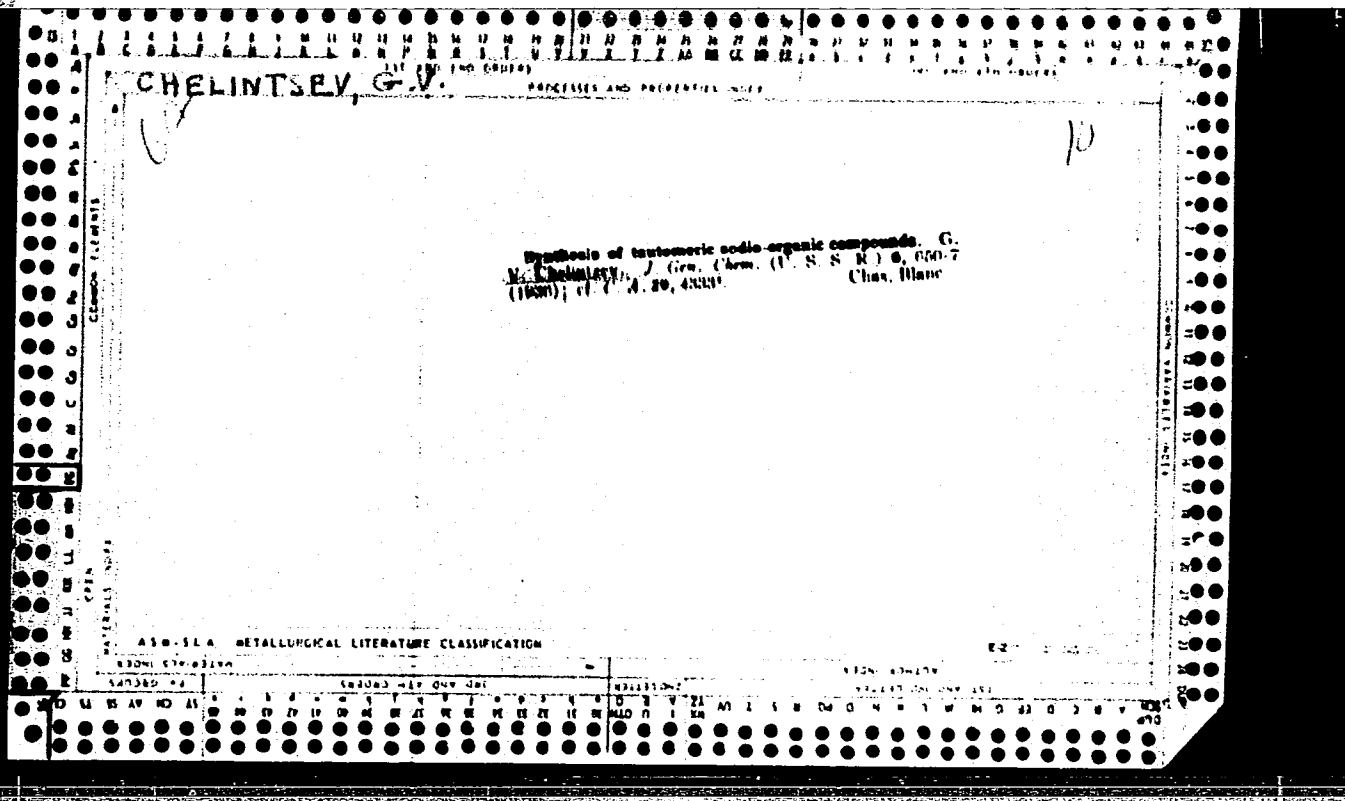
CA

CHELINTSEV, G.V.

10

Acid condensation. Synthesis of benzylacetone
 by the condensation of *N,N*-diphenylacetamide with
 acetophenone. G. V. Chelintsev and E. D. Ostrova.
Compt. rend. acad. sci. U. R. S. S. [N. S.], 4, 419-21
 (in French)(1956).—Although no condensation takes
 place between AcNHPh and PhCOMe (I) in the presence
 of Na in Et₂O, which involves the liberation of highly
 basic NHPh, similar condensation between I and AcNPh₂
 (II) gives a good yield of BrCH₂COMe (III) by virtue of
 the elimination of relatively neutral NHPh, which is
 analogous to the liberation of aze. in ester condensations.
 For this reason, the condensation of disubstituted acid
 anilides with organo-sodium (anionomers) is regarded in the
 same light as the ester condensations. Accordingly,
 the following mechanism is proposed: MeCONR₂ +
 CH₂:C(ONa)Ph ⇌ MeCONR₂ + NaCH₂COPh ⇌ MeC-
 (ONa)(NR₂)CH₂COPh ⇌ MeCOCH₂COPh + NaNR₂
 ⇌ MeCOCH₂:C(ONa)Ph + NHR₂. Addn. of 25 g. I
 and 44 g. II to 5 g. of Na in 200 cc. dry Et₂O gave 4.6 g.
 of III; addn. of 15 g. I and 31 g. II to 2.3 g. Na in 100 cc.
 dry Et₂O gave 6 g. (85% of theory) of III. J. F. L.

ASB 55A METALLURGICAL LITERATURE CLASSIFICATION



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

CHELINTSEV, G. V. 10

Ca

PROCESSES AND PREPARATION

NEW TYPE OF CONDENSATION OF ORGANIC COMPOUNDS WITH THE AID OF ALKALIC AMIDE CONDENSATIONS. G. V. CHELINTSEV AND E. D. OUSOVA. *J. Gen. Chem. (U. S. S. R.)* 6, 1267-77(1965); cf. *C. A.* 50, 8183; 81, 84^g.
Chem. Abstr.

ASB-518 METALLURGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

PROCESSES AND PROPERTIES

CHREHINTSEY, G. V.

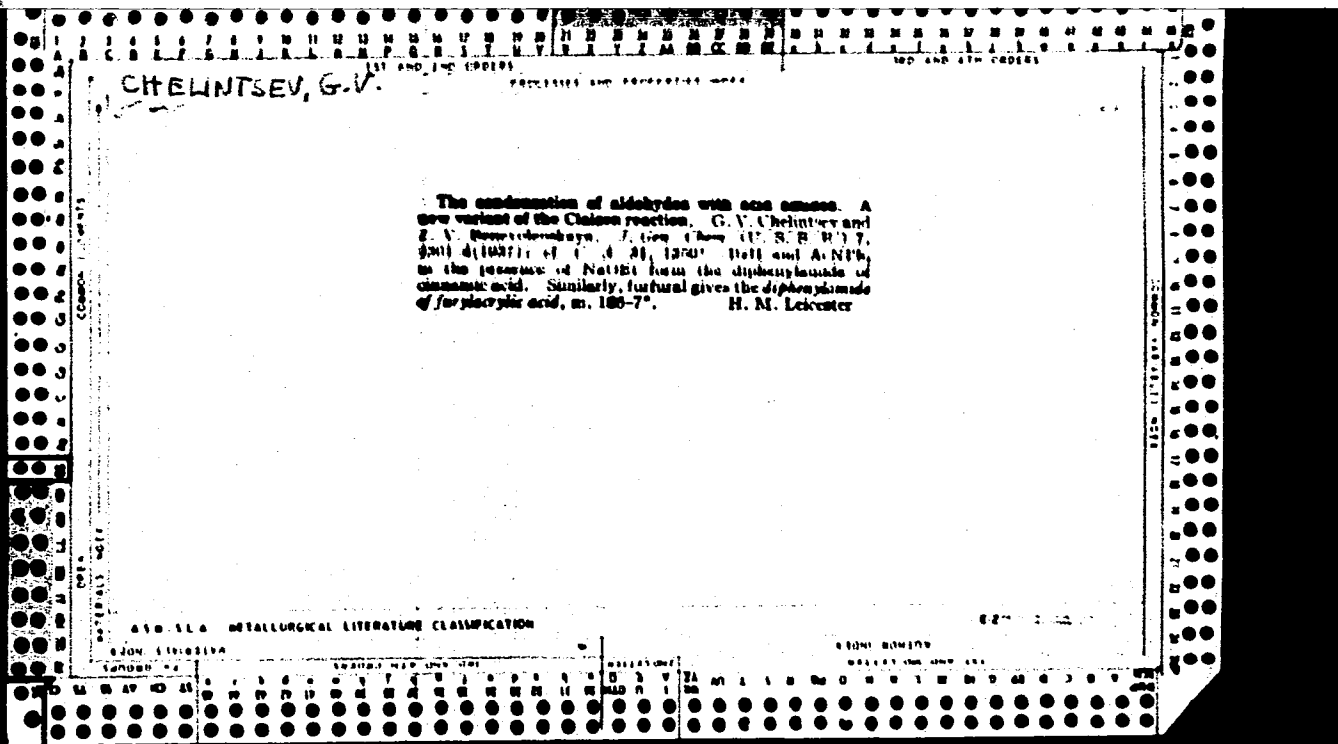
CA

10

Substitution of carbon-bound hydrogen by an acyl group. G. V. Chrehtsev, R. D. Jostova and B. M. Dubinin. Russ. 81,887, Sept. 20, 1937. Compto. contg. active H bound to C are treated with metallic Na and a diphenylamide of the proper acid.

ASB-35-A METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 1ST AND 4TH ORDERS

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COMMON ELEMENTS
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15

CHELINTSEV, G. V.
Ca

The addition of the formyl group to carbon by the method of amide condensation. G. V. Chelintsev and H. M. Dubinin. *J. Gen. Chem.* (U. S. S. R.) **7**: 2300-13 (1937); cf. C. A. **31**, 1339. HCONPh reacts with equiv. amts. of NaOH and Me_2CO or MeCOPh to give good yields of formylacetone or formylacetophenone. The yield of formylamphor by this method is lower.
H. M. Leicester

10

CHELINTSEV, G.V.
ca

The action of chloropyridine on anthranilic acid. O. A. Zeldic and G. V. Chelintsev. *J. Gen. Chem. (U. S. S. R.)* 7, 2314-17 (1937).—If the product of this reaction is oxidized with alk. $KMnO_4$, 2-aminopyridine-3-carboxylic acid is not formed, as R  th (*C. A.* 25, 3651) states. Instead, the product is 4-hydroxyquinazoline. The compound, which R. called the hydrasone of pyrazinone is actually the hydrasone of α -pyridylanthranilic acid, which is formed by action of alkali on the original reaction product. This substance is therefore 2,3-dihydro-benzoguaninol-4-one, as Z. originally stated (*C. A.* 19, 1282).
H. M. Leicester

ASS-31A METALLURGICAL LITERATURE CLASSIFICATION

193000 44

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CHELINTSEV, G.V.

PROPERTIES AND PHYSICAL DATA

The action of 2-chloroquinoline on anthranilic acid. Benzquinazolones (12-quin[2,1b]quinazolin-12-one) and its reactions. O. A. Zeide and G. V. Chelintsev. *J. Gen. Chem.* (U. S. S. R.) 7, 2318-23 (1937).—When 2-chloroquinoline and anthranilic acid are heated at 125-45°, benzquinazolones (I) m. 170°, and a small amt. of a dark yellow powder, m. 100°, are obtained. The HCl salt of I is easily hydrolyzed. I forms a picrate m. 333°, a chlorophthalate which darkens at 275° and decomps. at 327°, a chromate which decomps. above 170°, and a methiodide, m. 123° (decomps.). When the latter is heated at 250° in a vacuum, it loses MeI and regenerates I. When I is heated with NaOEt in EtOH, the ring is opened and *N*-quinolylanthranilic acid (II), m. 210-7° (decomps.) is formed. This can be dehydrated to I by treatment with POCl₃. When II is heated with PhI and Cu bromide, it forms *N,N*-phenyl-*N*-quinolylanthranilic acid, m. 221-2° (decomps.). Ring closure occurs when this compd. is heated with H₂SO₄ and *N*-quinolylcarbamate, m. 270°, is formed. Oxidation of I with alk. KMnO₄ gives 3-phenyl-4-carboxyl-(3,4-dihydroquinazolin-3')-1',2',3,2-(3,4-dihydroquinazolin-3')

H. M. L.

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

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CHELINTSEV, G. V.

PROCESSES AND PROPERTIES INDEX

70

Synthesis with the diphenylamide of acetoacetic acid. B. M. Dubinin and G. V. Chelintsev. *J. Gen. Chem.* (U. S. S. R.) 7, 2366-72 (1977).—AcCH₂C(ONPh)₂ (I) (C. and Petrova, C. A. 20, 3762) forms a Na deriv. with EtONa and this complex undergoes double deproton. with alkyl and acyl halides. In this way were prepd. the diphenylamides of the following acetoacetic acids: *n*-Me (II), m. 83°; *n*-Et (III), m. 70-1°; *n*-Bu (IV), m. 108-9°; and the diphenylamide of diacetylacetic acid (V), m. 129-8°. When the reaction is repeated with II and MeI, the diphenylamide of isobutyric acid, m. 63-4°, is formed. When I is treated with concd. H₂SO₄, it forms *N*-phenylpicidone (VI), m. 134-5°. By the same reaction, II gives *N*-phenyl- β -methylpicidone, m. 156-7°, III gives *N*-phenyl- β -ethylpicidone, m. 116-17°, and IV gives a quinoline which could not be purified. With H₂SO₄, V gives VI.

H. M. Leicester

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

62-7112-100

CHELINTSEV, G.V. 10

PROCESSES AND PROPERTIES INDEX

ca

The condensation of glycidic esters with malonic and acetoacetic esters. G. V. Chelintsev and R. D. Osetrova. *J. Gen. Chem.* (U. S. S. R.) 7, 2373-8(1937).--Dimethylglycidic ester condenses with $\text{AcCH}_2\text{CO}_2\text{Et}$ (I) in the presence of NaOHt to give *Et* α -acetyl- γ -dimethylbutyrolactone- β -carboxylate, b, 150-2°. Phenylglycidic ester (II) and malonic ester give *di-Et* γ -phenylbutyrolactone- α - β -dicarboxylate, b, 225-7°. I and II form *Et* γ -phenyl- α -acetylbutyrolactone- β -carboxylate, b, 102-5°.

H. M. Leicester

ASD-55A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND COPIES

1ST AND 4TH COPIES

Chemical Abstracts

Chemical Abstracts

1ST AND 2ND COPIES

1ST AND 4TH COPIES

10

CHELINTSEY, G. V.

CONDENSATION OF ORGANIC SUBSTANCES UNDER THE INFLUENCE OF ALKALI METALS. G. V. Chelintsey. *Sovetskii Khim.* 7, 5-78 (1938). -- A review covering the Wurtz-Fittig reaction and the Na and EtONa condensations of olefins according to Schlenk-Ziegler-Lebedev, of esters with diketones (acyl-in condensations), of alkyl and acyl halides with cyanohydrins and nitriles, of esters and ketones with esters, ketones, nitriles, azoethane and nitro compds., of aldehydes and ketones with α -halo carbonyl and ester compds. and of nitriles with each other. The various types of reactions are discussed as to primary and secondary transformations, the structures of metallic intermediates, the mechanism of sym. and unsym. condensations, similar reactions of Mg org. compds., the role of tautomerism, its energetics, and its interpretation in electronic concepts. F. H. Rathmann.

METALLURGICAL LITERATURE CLASSIFICATION

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CHELWITSEI, G.V.

10

Complex compounds of magnesium bromide with
terpene ketones and alcohols. G. V. Chelwitz. *J.
Gen. Chem.* (U. S. S. R.) 8, 598-61 (1938).— $MgBr_2 \cdot 2Et_2O$
(prepd. from Mg turnings with 2 mols. Br in Et_2O) reacts
with 2 and 4 mols. camphor (*d*- and *l*-) in Et_2O , forming
cryst. $MgBr_2 \cdot 2C_{15}H_{26}O$ (I) and $MgBr_2 \cdot 3C_{15}H_{26}O$, resp.
I with 2 mols. boraxol gave the complex $MgBr_2 \cdot 2C_{15}H_{26}O \cdot 2C_2H_5OH$ (II). II with $EtOH$ and *iso*- $AmOH$ formed
easily decompd. compds. and with $PrOH$ stable $MgBr_2 \cdot 2C_{15}H_{26}O \cdot PrOH$. II with $PhOH$ gave a product analyzing
closely for $MgBr_2 \cdot 2C_{15}H_{26}O \cdot PhOH$. Chas. Blanc

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

GROUP	CLASSIFICATION	INDEX	REMARKS
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CHELINTSEV, G. V.

"1-Phenyl-3-Methylpyrazalone," T.G.Aleksandrov, B. M. Dubinin, I. L. Knuryants,
and G. V. Chelintsev. Russ. 57,506, July 31, 1940. PhNHNH₂.HCl is treated with
the reaction product of AcOEt and Na.

137 AND 139 SERIES 138 AND 139 SERIES

PROCESSING AND PROPERTIES INDEX

10

CA
CHELINTSEV, G-V.

The synthesis of demethoxyated piperazine-8-[(*o*-methyl-*o*-diethylaminobutyl)amino]quinoline. G. V. Chelintsev and S. M. Dubinin. *J. Gen. Chem. (U. S. S. R.)* 10, 1264-6 (1940).—8-HOC₂H₄N was refluxed with H₂N-CH₂-CH₂-CH₂-CH₂-NEt₂ in H₂SO₄ soln. for 30 min., yielding 64.8% 8-[(*o*-methyl-*o*-diethylaminobutyl)amino]quinoline (I), b. 171-2°. The yield, based on reacted hydroxyquinoline, was 97%. An attempt to prep. a methoxyated analog by substituting 6-methoxy-8-hydroxyquinoline for hydroxyquinoline failed. Refluxing I with an excess of 5% Ac₂O at 150° for 1 hr. yielded 8-[(*o*-methyl-*o*-diethylaminobutyl)acetylamino]quinoline, b. 195-6°. I in glacial AcOH was treated with dry Cl₂, while cooling with ice water; after neutralizing with an alk. soln., it yielded the 3-Cl deriv. of I, b. 180-2°. I in glacial AcOH was treated (by drops) with Br in glacial AcOH; after neutralizing with K₂CO₃, it yielded the 3-Br deriv. of I, b. 198-201° (in vacuo). A. A. P.

Lab. Heterocyclic Compounds, Inst. Org. Chem. AS USSR

ASS-51A METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS COMMON VARIABLES INDEX

137 AND 139 SERIES 138 AND 139 SERIES

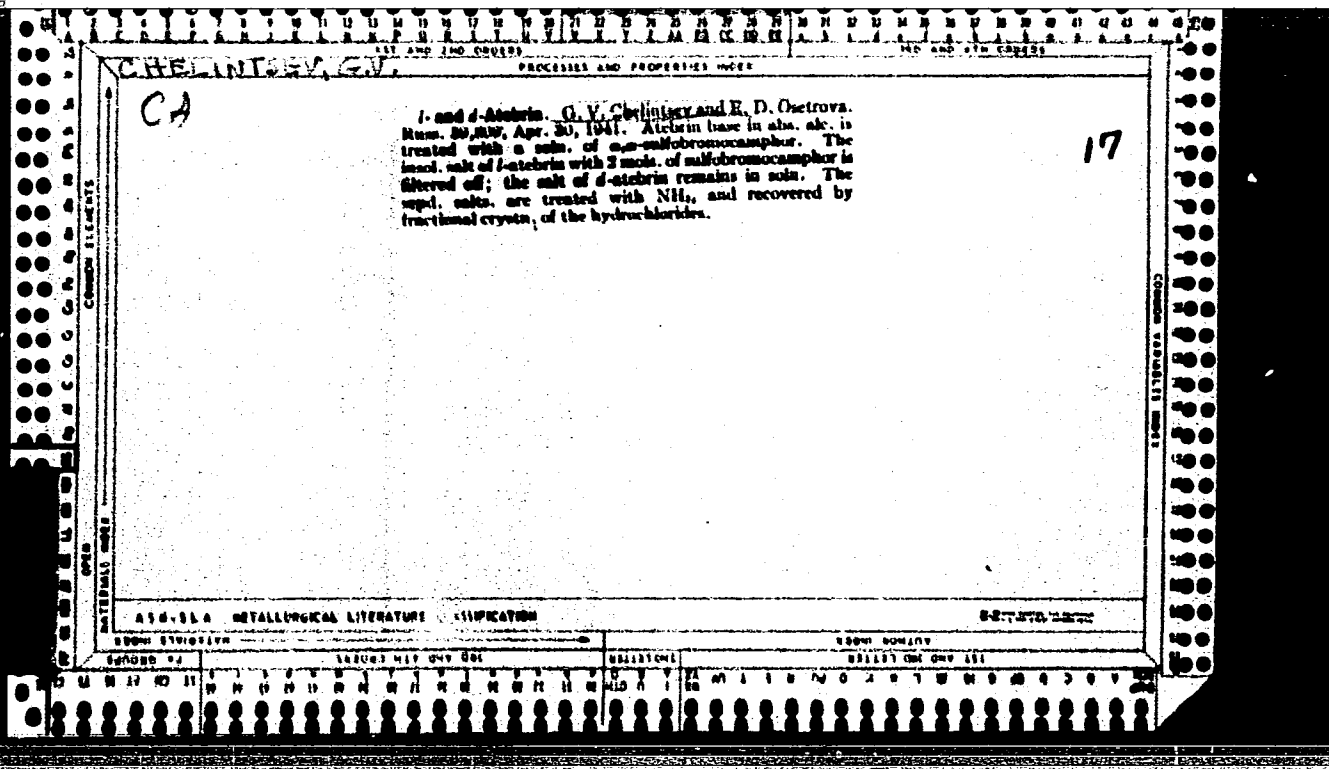
PROCESSES AND PROPERTIES INDEX

CHELINTSEV, G. V.
CA

Separation of atebria into optical isomers. G. V. Chelintsev and E. D. Ostrova. *J. Gen. Chem. (U. S. S. R.)* 30, 1978-80 (1960).—Dissolve 6 g. atebria base in 25 ml. abs. alc., mix with 9.6 g. sulfoxamphor in 25 ml. abs. alc., sep. the crystals after 24 hrs. and wash with a small amt. of abs. alc. Retain the filtrate. After 3 recrystns. from acetone there is obtained pure l-atebria with 2 moln. of sulfoxamphor. A more rapid method is to treat the crude salt with water and excess NH_3 , ext. the oil, dry the ether ext. with KOH and then with BaO , distil off the ether, dissolve in abs. alc., add 30% alc. HCl to give a pos. test with Congo and sep. the crystals after 2 days. The crystals consist of the HCl salt of the dl-compd. A 2nd fraction consisting of pure di-HCl salt of l-atebria was obtained in 48% yield by adding abs. ether to the filtrate and sep. the crystals after 2 hrs. The above filtrate from the crude salt was used to distil off the alc. in vacuo and the glassy-like mass was treated with NH_3 , extd. with ether, dried with KOH and the ether was distd. off to obtain d-atebria base. The purification was as above. The optical activity in clinical conditions is to be investigated. H. Z. Kamich

ASS-55A METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
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Handwritten: MELINTSEY, G.V.

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Synthesis of a structural analog of pilocarpine. G. V. Chebutsev and V. A. Fish. *J. Gen. Chem. (U. S. S. R.)* **11**, 450-50 (1941).—The synthesis is carried out by substituting the α -acetylbutyrolactone residue for Cl in 4(5)-chloromethylimidazole (I). α -Acetyl- α -[4(5)-imidazolylmethyl]butyrolactone (II) is obtained in 81.0% yield by heating a mixt. of 2 g. Na in 40 ml. abs. alc. and 0.5 g. I in 30 ml. abs. alc. After 2 hrs. boiling the alc. was removed *in vacuo* and the residue treated with 70 ml. 5% HCl, neutralized and extd. with $CHCl_3$. Admixts. were extd. with ether. Mp 157° (AuCl₃ compd. m. 184-0°). Boris L. Rodzianko

AS 5-10 4 METALLURGICAL LITERATURE CLASSIFICATION
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1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH ORDERS

ca 10

The synthesis of 6-sulfamylquinoline and 6-sulfamylquinoline from sulfamamide. G. V. Cheintsev and V. N. Zakotin. *J. Gen. Chem. (U. S. S. R.)* 11, 729-30 (1941).—A mixt. of 108 g. AcNHCH₂SO₂NH₂ (I), 130 g. glycerol, 304 g. PhNO₂ and 68 cc. concd. H₂SO₄ in the Sarup synthesis give 30% 6-sulfamylquinoline, m. 101-2°. When 21 g. I is converted to the HCl salt and treated with 13.5 g. paraaldehyde in portions, it gives 36% 6-sulfamylquinoline, m. 212-13°. H. M. Leicester

ASS-516 METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS 3RD AND 4TH ORDERS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44

PROCESSES AND PROPERTIES INDEX

10

ca

**Non-products of coupling of diazo comds. with aryl-
amides of acetoacetic acid. G. V. Chelintsev, J. Gen.
Chem. (U.S.S.R.) 14, 841-4(1944) [English summary].---**

NOs. 9-10 *o*-, *m*-, and *p*- $O_2NC_6H_4N_2Cl$ (0.85 g. each) were mixed with alc. solns. contg. 1.58 g. (each) *N,N*-diphenylacetoacetamide and treated with NaOAc to yield 81-91% of the corresponding hydrazones: *p*-, m. 210-11°, yellow-brown; *m*-, m. 214-15°, light brown; *o*-, m. 241-1°, bright yellow. Analogous hydrazones were prepd. from *p*-acetoacetamido-benzene-sulfonamide: *p*-, m. 320° (decompn.), yellow, *m*-, m. 290° (decompn.), green, and *o*-, m. 240° (decompn.), yellow. Attempts to form hydrazones with PhN(NO)Me and *p*- $O_2NC_6H_4N(NO)Me$ failed. The mechanism of the coupling is thus: $RN_2OH + CH_2RR' \rightarrow RCHRR' \rightarrow RNHN:CRR'$.
G. M. Kosolapoff

Lab. Organic Chem., Red Army, All-Union Acad. Chem. Degree in Voroshilov

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND COPIES	PROCESS AND PROPERTIES INDEX	3RD AND 4TH COPIES
COMMON ELEMENTS	<p>CA</p> <p>Condensations of certain esters with methyl cyclopropyl ketone. (J. V. Chelintsev. J. Gen. Chem. U.S.S.R. 16, 1070 2 (1941).) THE CONDENSATION OF HCO₂Me (I) and of (CO₂R)₂ (II) with Me cyclopropyl ketone (III) in the presence of NaORt was studied. In 1 expt., 12.5 g. Na wire and 25 g. abs. alc. in 200 cc. dry ether were made to react to form a suspension of EtONa to which 30 g. I and 42 g. III were added. After 4 hrs., a cryst. ppt. was sucked off, washed with ether, and dried. On decomp. the Na deriv. so obtained with 18% HCl, pptg. by dilg. with water, boiling for 30 min. in alc., and again pptg. by dilg. with water, 15 g. of a product, m. 98° and thought to be 1,3,5-tris(cyclopropylcarbonyl)benzene, was isolated. In another expt., 75 g. of I and 42 g. of III were added dropwise to a suspension in ether of NaORt prepd. by reaction of 11.5 g. Na and 25 g. abs. alc. The condensation reaction proceeded with heat evolution. After 2 hrs., 100 cc. of benzene was added, the product sucked off, washed with ether, and dried in a desiccator. The Na deriv. so obtained was decompd. with 18% HCl, the product was extrd. with ether, dried with MgSO₄, and distd. at 115-26°/8 mm. The partially crystd. product probably was a mixt. of tautomers of the Et esters of β-cyclopropyl-β-carpropionic acid.</p> <p>J. W. Ferry</p>	COMMON TABLET INDEX
10	<p>000-556 METALLURGICAL LITERATURE CLASSIFICATION</p> <p>DATE: 1941</p>	
LONDON	LONDON	LONDON
LONDON	LONDON	LONDON

PROCESSES AND PROPERTIES INDEX

10

*Lab Heterocyclic Compounds,
Inst. Org. Chem., AS USSR*

New method for the vitamin B₁₂ synthesis. G. V. Chelintsey and Z. V. Benevolenskaya (Inst. Org. Chem. U.S.S.R. Acad. Sci. Moscow). *J. Gen. Chem. (U.S.S.R.)* 14, 1142 (1941) (English summary). - Na dust (5.1 g. in 75 cc. dry benzene) was treated with 12 g. abs. EtOH until the reaction was complete at 50°; after cooling, a soln. of 15 g. HOCH₂CH₂CN and 22.5 g. HCO₂Et was added over 2 hrs., the mixt. was heated to 50° for 2 hrs. with stirring, washed, and distd. to yield 80% *β*-ethoxypropionitrile, b. 170-3°. This (10.6 g.) and 18 g. HCO₂Et were added over 2 hrs. to EtONa (from 4.4 g. Na) in 120 cc. benzene as above, then heated to 40° for 2 hrs. to yield 18.8 g. of the Na enolate of *α*-hydroxymethylene-*β*-ethoxypropionitrile as a light powder which was filtered off. This was resuspended in 60 cc. benzene and treated with 17 g. AcCl at 40-5° to yield 65% *α*-acetyl-*β*-ethoxypropionitrile, b. 142-4°, d₄²⁰ 1.0680, n_D²⁰ 1.4900. This (3 g.) in 50 cc. benzene was mixed with acetamidine (from 3.34 g. acetamidine-HCl and EtONa in EtOH) and was allowed to stand for 24 hrs.; after removal of the solvents, the residue was dissolved in 20 cc. 10% KOH, refluxed for 2 hrs., and treated on cooling with 10 cc. 50% KOH to yield 57% 2-methyl-5-ethoxyethyl-6-aminopyrimidine, m. 82.5°, m. 80-90° (from Et₂O). This (1.68 g.) and 72 cc. 10% HBr in AcOH on heating gave 2-methyl-5-bromo-methyl-6-aminopyrimidine-HBr, decomp. 207-9° (96%). The vitamin B₁₂ was produced by the customary condensation with the thiazole component either by direct fusion or in CHBr₄. A recovery method for excess methyl-(hydroxyethyl)thiazole was worked out as follows: the CHBr₄ layer was extd. with 18% HCl and the acid ext. was mixed with the Me₂CO mother liquor, the mixt. was treated with dry NaOH and K₂CO₃ for sepn. of the Me₂CO layer, which on drying was distd. to yield the thiazole, b. 155-7°. G. M. Koslovoff

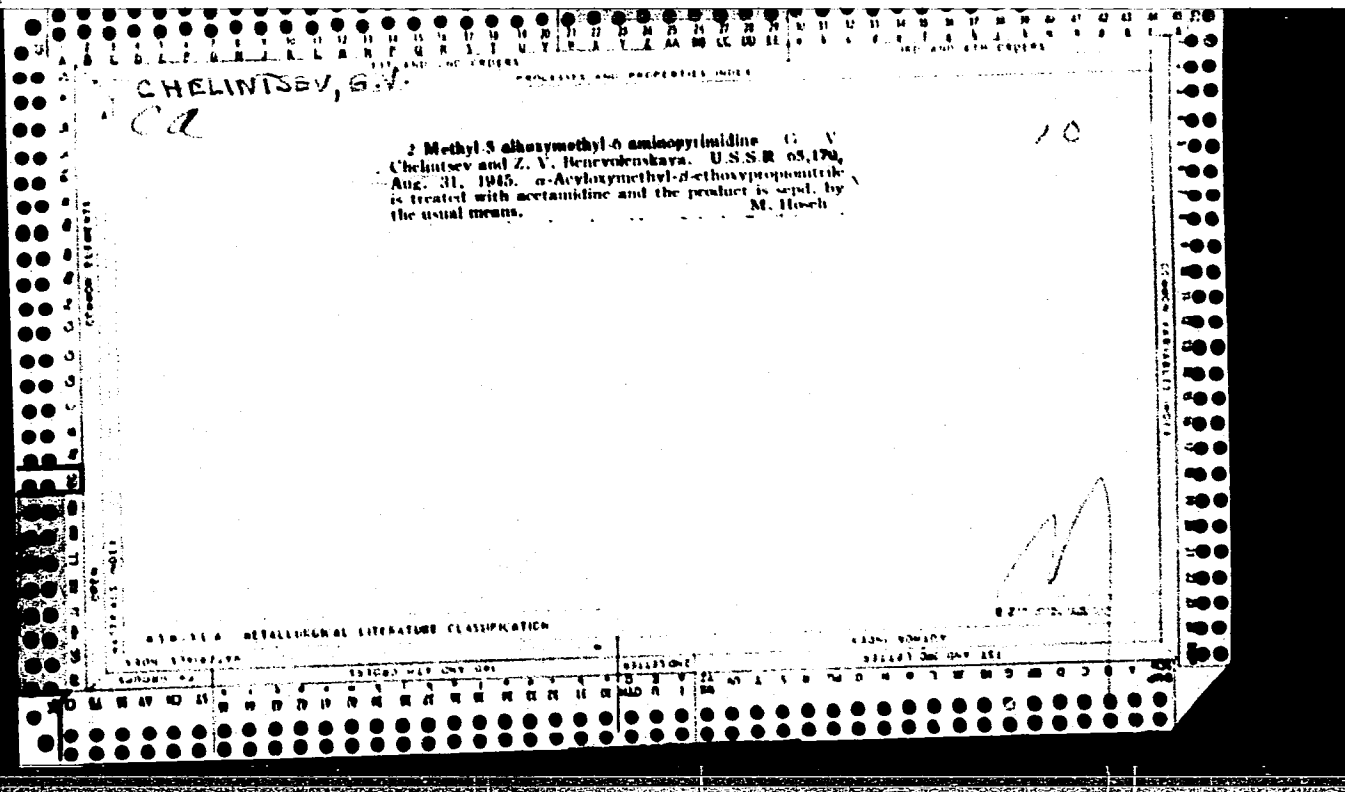
ASS-51A METALLURGICAL LITERATURE CLASSIFICATION

FROM SYNDICATE

FROM BOWLING

FROM SYNDICATE

FROM BOWLING



CHELINTSEV, G.V.

CA

10

Tautomerism. G. V. Chelintsev. *Russ. Acad. Sci. U.S.S.R., Chem. Rev.* 1966, 313-24; cf. C.A. 41, 5441b. An attempt is made on the basis of a comprehensive study of org. reactions and transformations to clarify current ideas on the concept of tautomerism. It is suggested that a tautomeric action may be considered to occur whenever the classic principle of conservation of residues during reactions fails to hold. Org. transformations are classifiable into 2 main groups: (a) transformations governed by the principle of conservation of residues, as in simple cases of substitution, addn., and decompn., where there are 2 ruptures and 2 recombinations, and (b) tautomeric transformations, involving transformations of residues, where in most cases there is one rupture and one recombination (dissecn.-molarization), giving isomers of the original molts. Tautomeric transformations may then be classified into 4 types: (1) "valency tautomerism" with (i) alteration of the nature of multiple (i.e., double, triple, etc.) bonds in residues, as in the formation of structurally anomalous alkylation products of cyanides, nitrites, and sulfitrs, in the combination of diamite with

aldehydes and ketones, in isomerization of carbamides to cyanides, etc., (ii) shift of multiple bonds, e.g. $CH_2=CHCH=CH_2 + Br_2 \rightarrow [CH_2Br]CH=CH_2 \rightarrow CH_2BrCH=CH_2$ or $CH_2=CHCH=CH_2 + Br_2 \rightarrow [CH_2Br]CH=CH_2$ or (iii) shift of multiple bonds in conjugated systems; (2) "cyclo-valency tautomerism" with multiple bonds, where a cycle is formed or disrupted; (3) "cyclo-tautomerism," where a cycle is enlarged or diminished; (4) "migration tautomerism" with migration of ions or radicals (i) along a chain, e.g. $n-C_4H_9 \rightarrow Pr \rightarrow iso-Pr \rightarrow CH_3Me$, or (ii) from one position to another on a single atom, e.g., cis-trans isomerism. Such transformations take place independently of whether the processes are isomeric or nonisomeric, reversible or irreversible, ionic or radical in character, and hence the act of transformation of residues can be taken as a general index of the whole variety of reactions which are not subject to the classical law of residues. Tautomeric reactions may be classified as "tautomeric isomerizations," "tautomeric substitutions," "tautomeric addns.," and "tautomeric decompns."

R. A

Inst. Org. Chem., AS USSR

ASR-SEA METALLURGICAL LITERATURE CLASSIFICATION

CHELINTSEV, G.V. 10

ca

Valence and bonds. G. V. Chelintsev (Inst. Org. Chem., Acad. Sci. USSR, 1966, 100, 26). The resonance theory of org. compns. is considered inconsistent with the classic electronic-structure theory and stereochemistry, in particular in the field of tautomerism, as it blurs the basic concept of well-defined, real, and individually distinct structural forms. A consistent structure theory calls for abandonment of the extraneous resonance-theory concepts and further development along strictly classic lines. In this direction, orbital and "contact" bonds are distinguished; "simplex" particles are assemblies of atoms linked by orbital bonds, "complex" particles by contact bonds, the latter resulting from interaction of polar points. The aromatic ring is characterized by sextets and by a tautomerism (not mesomerism) of its tetrahedral, Kekulé and quinonoid structures. Structural particularities which are commonly explained by resonance are seen as the result of formation of contact bonds between neighboring atoms of opposed polarity, within the limits of the given orbital structures. A complete "new structure theory" can be built on the old classic foundations of valence, coordination, electrostatics, and space considerations, without appealing to resonance. N. Thon

050-554 METALLOGICAL LITERATURE CLASSIFICATION

82001 804194

RECENTS V SV

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ca

Pyrolysis of anabasine in the presence of charcoal. H. M. Dubinin and G. V. Chelintsev. *J. Gen. Chem. (U.S.S.R.)* 16, 105-110 (1946) (English summary). -Pyrolysis of anabasine by dropping it into a charcoal-filled tube heated to 500-650° resulted in formation of pyridine, 2-picoline, 2-ethylpyridine, 2,3'-bipyridine, 5-methylisoquinoline, HCN, and NH₃. The products were identified by known phys. consts. and by their picrates. G. M. Kosolapoff

ASS-514 METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

COMMON LITERATURE

COMMON SYMBOLS

COMMON ABBREVIATIONS

COMMON UNITS

COMMON NUMBERS

COMMON LETTERS

COMMON CHARACTERS

COMMON PUNCTUATION

COMMON SPACES

COMMON LINES

COMMON CURVES

COMMON TABLES

COMMON FIGURES

COMMON DIAGRAMS

COMMON SCHEMATIC

COMMON EQUATIONS

COMMON FORMULAS

COMMON REACTIONS

COMMON PROCESSES

COMMON METHODS

COMMON APPARATUS

COMMON MATERIALS

COMMON SPECIES

COMMON PHENOMENA

COMMON PROPERTIES

COMMON BEHAVIOR

COMMON TRENDS

COMMON CORRELATIONS

COMMON MODELS

COMMON THEORIES

COMMON CONCEPTS

COMMON DEFINITIONS

COMMON NOMENCLATURE

COMMON TERMINOLOGY

COMMON SYNTAX

COMMON SEMANTICS

COMMON PRAGMATICS

COMMON SOCIOLOGICS

COMMON ESTHETICS

COMMON AESTHETICS

COMMON ETHICS

COMMON MORALS

COMMON LAWS

COMMON PRINCIPLES

COMMON DOCTRINES

COMMON IDEOLOGIES

COMMON BELIEFS

COMMON OPINIONS

COMMON ATTITUDES

COMMON VALUES

COMMON BELONGINGS

COMMON POSSESSIONS

COMMON RELATIONS

COMMON CONNECTIONS

COMMON LINKS

COMMON TIES

COMMON BONDINGS

COMMON UNIONS

COMMON ASSOCIATIONS

COMMON GROUPINGS

COMMON CLASSES

COMMON CATEGORIES

COMMON DIVISIONS

COMMON PARTITIONS

COMMON SEGMENTATIONS

COMMON SUBDIVISIONS

COMMON SUBCATEGORIES

COMMON SUBTYPES

COMMON SUBVARIETIES

COMMON SUBSPECIES

COMMON SUBFORMS

COMMON SUBSTRUCTURES

COMMON SUBFUNCTIONS

COMMON SUBROLES

COMMON SUBTASKS

COMMON SUBSTEPS

COMMON SUBPHASES

COMMON SUBSTAGES

COMMON SUBPERIODS

COMMON SUBERAS

COMMON SUBCENTS

COMMON SUBDECADES

COMMON SUBMILLENNIA

COMMON SUBEONS

COMMON SUBERAS

COMMON SUBCENTS

COMMON SUBDECADES

COMMON SUBMILLENNIA

COMMON SUBEONS

10

PROCESSES AND PROPERTIES INDEX

Ditonic tautomerism. G. V. Chelpanov and V. K. Kunkov. *J. Gen. Chem. (U.S.S.R.)* 18, 1481-4 (1946) (in Russian).—The mechanism of "anomalous" alkylation of salts of a no. of inorg. acids (H_2AsO_4 , H_2PO_4 , HNO_3) may be explained on the basis of a tautomeric change of the acid ion involved, i.e., in the case of As the mechanism may be postulated as: $NaOAs(ONa)_2 \rightleftharpoons (-O-As(ONa)_2-O-$
 Me^-
 $As(ONa)_2) \rightleftharpoons MeAs(O)(ONa)_2$. This is supported by the following 3 examples of reactions of ethylene oxide (1). (1) $Mg(NO_3)_2$ (33.3 g.) and 200 cc. H_2O were treated with 1 at below 40° until the wt. gain was 10 g.; after standing for 20 hrs. the mixt. was dissd. with 2 vols. H_2O and treated at 0° with a slight excess of PhN_2Cl in slightly alk. soln.; the resulting dye from $EtNO_2$, 6 g., filtered off and crystd. from ligroin as red needles, was identical with the product of Demuth and V. Meyer (*Ann.* 236, 28 (1880)). (2) AsO_3 (20 g.) and 34 g. KOH in 100 cc. water were treated with 1 2 hrs. until the wt. gain was 10 g.; after standing for 20 hrs., the mixt. was dissd. with 200 cc. water, acidified by 10% H_2SO_4 , filtered, and concd. at 80° to a drup (inorg. matter filtered off); extra. with $EtOH$ gave 2-hydroxy-ethanesulfonic acid as a clear oil (10 g.) which was converted to (2-chloroethyl) dichloroarsine, bp $79-80^\circ$, by the conventional treatment with SO_2 in the presence of KI . It fails to react with $NaHSO_4$ and gives but meager yields of the hydroxyethyl compd. with Na_2HAsO_4 . (3) $(EtO)_2PONA$ (from 2.3 g. Na and 13.9 g. $(EtO)_2POH$ in Et_2O) was treated with 1 until the wt. gain was 4.5 g.; after stirring for 1 hr. the soln. was treated with 6.1 g. $AcOH$, the $NaOAc$ ppt. was filtered off, and the concd. filtrate gave 7.8 g. oily 2-hydroxyethanephosphonic acid (?), which distd. only with much decompu., b. $120-30^\circ$. G. M. K.

COMMON VARIANTS INDEX

METALLURGICAL LITERATURE CLASSIFICATION

SOLITIONS

SPECIAL USE ONLY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1ST AND 2ND CROSS

3RD AND 6TH CROSS

10

ca

PROCESSES AND PROPERTIES INDEX

Mechanism of the Kolbe reaction. G. V. Chelintsev and L. M. Smorgonskii. *J. Gen. Chem. (U.S.S.R.)* 16: 1485-8(1946) (in Russian).—Ph carbanilate (5 g.) and 14.63 g. powd. Na in 20 cc. dry xylene were refluxed with stirring for 1 hr. On cooling, 1.7 g. glacial AcOH was added slowly (dild. with an equal vol. of C₆H₆) and the mixt. was stirred for 90 min. at 50-60°. On cooling, 1.1 g. CO(NHPh)₂ was filtered off; further cooling of the filtrate gave 0.26 g. *tri-Ph isocyanurate* (I), m. 272-4° (from EtOH). PhNCO (1.6 g.) and PhONa (from 0.2 g. Na and 1.4 g. PhOH in 15 cc. xylene) heated in a sealed tube to 200° 2 hrs. gave I (after treatment with 2% NaOH) and *salicylamide*, m. 124-5° (from AcOH). Similar heating of CO(NHPh)₂ with NaOPh gave *salicylamide*. Ph carbanilate (4.63 g.), 3 g. AcCH₂CO₂Et, and 0.5 g. Na in 100 cc. MePh were stirred at room temp. 2 hrs., then 5 hrs. on a steam bath; a portion of the ppt. which sepd. on cooling was treated with 1% NaOH; acidification of the aq. soln. gave *Et α-aminoacrylate*, m. 57°, verified by an authentic sample; the remainder of the ppt. was crystd. from aq. EtOH, taken up in water, and acidified with HCl to give the *monamide*, m. 120°, of maleic acid. The Kolbe reaction involves competitive reaction of CO₂ with O of the PhO ion or with the C of its isomer (i.e. ortho-C), so that an argument as to its being an intermol. or intramol. reaction is meaningless. The work of Gershon (C.A. 36, 1219) is in error due to his assumption of a wrong structure for the starting material, and of absence of PhNCO in his reaction mixts.; hence, his scheme of the Kolbe reaction is without basis. G. M. Kosolapoff

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

3RD AND 6TH CROSS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

2

CHELINTSEV, G.V.

The aromatic bond. G. V. Chelintsev. Bull. acad. sci. U.R.S.S., Classe sci. chim. 1967, 81-84 (in Russian). — None of the heretofore-used formulas for the benzene ring is adequate in describing the multiplicity of aromatic bond systems. A new contact formula is proposed, in which the ring is composed of 6 alternately pos. and neg. charged C atoms, forming a closed orbitally contacted cycle. The formula can be used to explain the observed facts in orientation, rearrangements of substituents, and replacement reactions. It can also be applied to polycyclic and heterocyclic systems. The principal feature of an aromatic bond in this concept is the existence of a closed system of bonds between alternately charged members in a ring structure, which consists of the most symmetric arrangement of a sextet of electrons supplied by the 6 unshared electron pairs. The nonexistence of aromatic bond in small or large rings is explained by the fact that energy expenditure for changing the valence angles exceeds the energy gain represented by the aromatic bond. This concept removes the need for the indefinite electron-cloud idea of the quantum treatment of such systems and preserves the individuality of the electrons. G. M. K.

Inst. Org. Chem., AS USSR

ASB-3.6 METALLURGICAL LITERATURE CLASSIFICATION

ASB-3.6 METALLURGICAL LITERATURE CLASSIFICATION

CHELINTZEV, G. V.

PA 874

USSR/Chemistry-Reactions

Feb 1947

"Reactions," G. V. Chelintzev, 6 pp

"Izv Ak Nauk Khim" No 2

The author rejects the resonance theory of reactions as an expression of the tendency to reduce chemical phenomena to mechanical ones, and a "mechanistical blunder."

Inst. Org. Chem. AS USSR

874

CHELINTSEV, G. V.

PA 15T42

USSR/Chemistry - Alkylation
Chemistry - Ethylene

Feb 1947

"The Phenomenon of Alkylation of Ethylencyanhydrine
with Carbonium Ethers," G. V. Chelintsev, Z. V.
Benevolenskaya, B. M. Dubinin, 4 pp

"Zhur Obshch Khim" Vol XVII, No 2

Ability of ethylencyanhydrine to alkylate to
oxygen in the presence of alcoholates.

15T42

CHELINTSEV, G. V.

PA 15T43

USSR/Chemistry - Acylenols
Chemistry - Pyrimidine

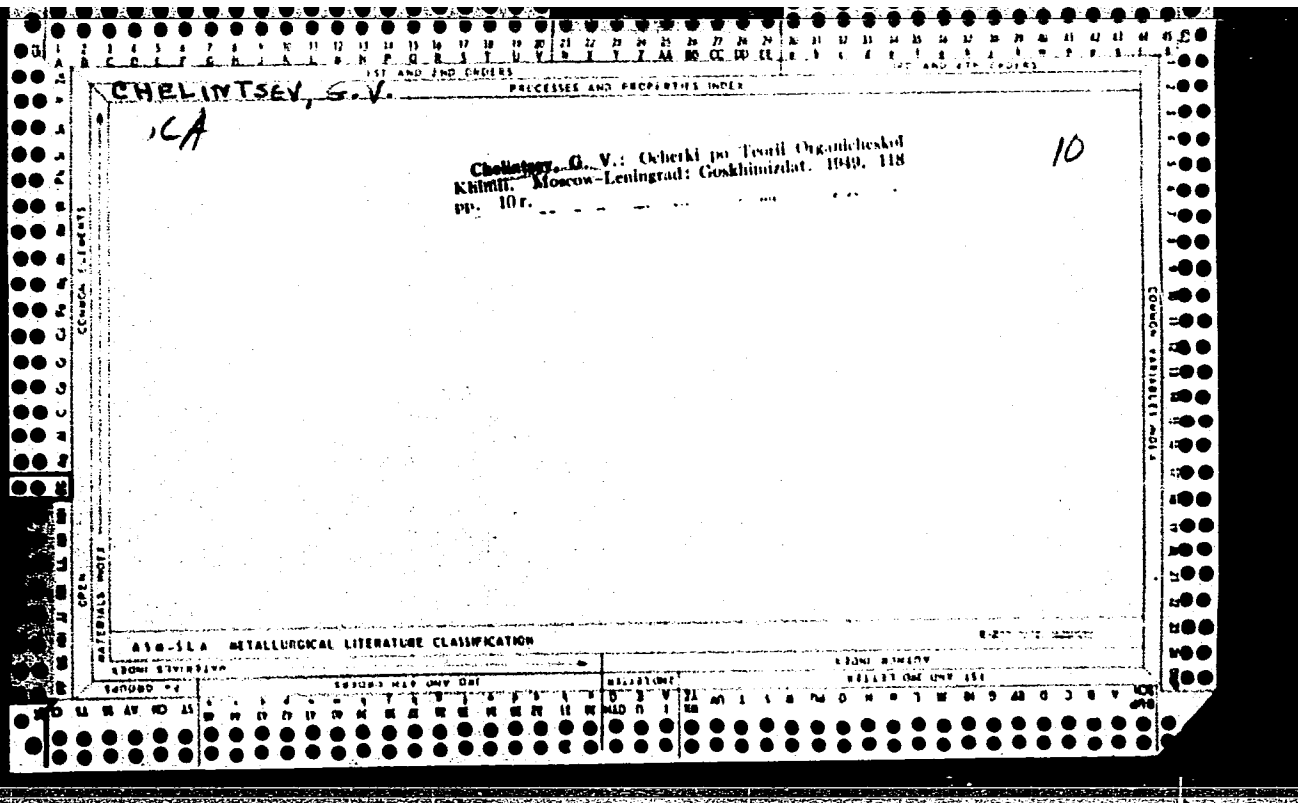
Feb 1947

"Some 'Acylenols'," G. V. Chelintsev, B. M. Dubinin,
Z. V. Benevolenskaya, 5 pp

"Zhur Obshch Khim" Vol XVII, No 2

Methods of obtaining 'acylenols' (stable substances
derived in pure form, readily obtainable and useful
for various syntheses) and their use in the synthesis
of pyrimidine compounds.

15T43



CHEREMISHEV, G.V.

CA

10

Quasicoordinate compounds and hyperconjugation G. V. Chermishev, *Izvest. Akad. Nauk S.S.S.R., Otdel Khim. Nauk* 1969, 410-21.—Theoretical and polemical discussion of Nesmeyanov's formulations (C.I. 60, 3451; 63, 74124) of org. halomercury derivs. The ready cleavage of the org. radicals from these substances is explainable by self-induced bond polarization and does not involve the hyperconjugation concept. The meaning of the resonance theory is discussed, with the conclusion that it is not only useless but actually may hinder future chem. progress. G. M. Kosolapoff

CHELINTSEV, G.V.

The structure of benzene (discussion). G. V. Chelintsev. *Zhur. Fiz. Khim.* 24, 1273-8(1950).—Ch. presents views on mol. structure, with C_6H_6 as a convenient example. The theory of resonance and mesomerism is attacked. "(it) is no more than a refraction into chemistry of meta-physico-idealistic representations 'supplementing' quantum mechanics and involving the affirmation of 'the free will of the electron.'" Delocalization of electronic orbitals is also attacked on the ground that "apart from scholastic artifices" it leads directly to the formula of Thiele. Ch.'s formula for C_6H_6 (I) is given below.



Michel Roudart

CHELINTSEV, G. V.

USSR/Chemistry - Resonance Theory

Feb 51

"Letter to the Editor Regarding V. M. Tatevskiy's Article 'On the Theory of Resonance,'" G. V. Chelintsev, Moscow

"Zhur Fiz Khim" Vol XXV, No 2, pp 239, 240/51

Criticizes V. M. Tatevskiy for (1) usurpation of Chelintsev's priority in criticism of theory of resonance, giving Chelintsev no credit; (2) incomplete criticism of theory based on quantum mechanical aspects only; (3) acceptance of postulates of dislocation and diffusion of electrons, which in effect retained resonance theory; (4) acceptance

184T36

USSR/Chemistry - Resonance Theory (Contd)

Feb 51

of mesomerism; (5) nonacceptance of Chelintsev's orbital theory.

184T36

CHELINTSEV, G. V.

USSR/Chemistry - Structural Theory Jan/Feb 52

"Response to Criticisms of the New Structural Theory,"
G. V. Chelintsev

"Is Ak Nauk SSSR, Otdel Khim Nauk, No 1, pp 190-195

Takes issue with the criticisms of his theory (O. A. Reutor; N. D. Kurnanov, B. M. Dubinin, M. I. Kabachnik, Ye. D. Kaverina, et al; M. V. Vol'kenshteyn; A. N. Resmeyanov). Reasserts the principles of the orbital contact theory which assumes localization of electronic orbits,

206715

USSR/Chemistry - Structural Theory Jan/Feb 52
(Contd)

6 electrovalent bonds in the benzene nucleus, and alternating charges at the carbon atoms of benzene. Refers to Vol'kenshteyn as one of the chief propagandists of Pauling's resonance theory in the USSR.

206715

USSR/Chemistry - Structural Theory Feb 52

"A. M. Butlerov's Theory of Chemical Structure and Its Recent Successes," G. V. Chelintsev

"Zhur Obshch Khim" Vol-XXII, No 2, pp 350-360

The present confusion in the field of chem theory forms a serious obstacle to scientific, practical, and ideological work of chemists as well as to instruction. The soln to the difficulties is given by G. V. Chelintsev's theory expounded in "Outlines of the Theory of Organic Chemistry," Goskhimizdat, 1949. B. A. Kazanskiy and G. V. Bykov wrongly interpret Butlerov's theory in their introduction to

209T33

USSR/Chemistry - Structural Theory (Contd 1) Feb 52

to his collected works (Acad Sci USSR Press, 1951) by emphasizing a purely mechanistic viewpoint which Butlerov did not share. The report of the Commission of the Dept of Chem Sci, Acad Sci USSR, rejects Ingold and Pauling's concepts of resonance and perturbation, but is at a loss to explain displacement of nuclei and changes in electron density from a purely mechanistic standpoint. The necessity of using supermech (purely chem) ideas is particularly apparent in the theory of conjugation. Resonance formulas of benzene should be rejected unequivocally, but the change of covalent into electrovalent bonds (6 double bonds and alternating

209T33

G. V. USSR/Chemistry - Structural Theory (Contd 2) Feb 52

charges of opposite sign at corners) must be assumed in order to explain the gain of energy.

CHELINTSEV, G. V.

CHELINTSEV, G.V.

On the second edition of the Report of the Committee of the
Section of Chemical Sciences of the Academy of Sciences of the
U.S.S.R.: "Status of the theory of chemical structure in organic
chemistry." Zhur. ob. khim. 27 no.8:2308-2310 Ag '57. (MLRA 10:9)
(Stereochemistry)

~~CHELIKINSEV, G.V.~~

~~CHELIKINSEV, G.V.~~

On J.M.Hensberger's paper "Theoretical chemistry in Russia."
Zhur.fiz.khim. 31 no.3:726-731 Mr '57. (MLRA 10:7)
(Chemistry, Physical and theoretical)

ACC NR: AP7000792

(A,N)

SOURCE CODE: UR/0089/66/021/005/0383/0383

AUTHOR: Chelintsev, N. G.

ORG: none

TITLE: Approximate solution of the equations of dynamics of a nuclear reactor

SOURCE: Atomnaya energiya, v. 21, no. 5, 1966, 383

TOPIC TAGS: nuclear reactor characteristic, approximate solution, kinetic equation, approximation error

ABSTRACT: This is a summary of article no. 109/3665 submitted to the editor and filed but not published in full. The article describes a method of solving the system of reactor differential equations for the number of neutrons and the reactor dynamics for a known reactivity. For small time intervals, formulas are derived using the particular form of the perturbation and making it possible to obtain in relatively simple manner their approximate solution. For large time intervals, a method of successive approximation of the equivalent decay constant is used. A formula is derived for the determination of the error. It is shown that the method is applicable in those cases when the solution is close to the exact solution. For the case when the reactivity increases monotonically and the power n increases by a factor of many times, an approximate solution method is employed, using the reciprocal period as the variable. A method is described also for numerically integrating the equation and thus reducing the volume of computation. Orig. art. has: 1 formula.

SUB CODE: 18/ SUBM DATE: 22Mar66

Card 1/1

UDC: 621.039.512

I 45590-65 EWT(m)/EPF(c)/EPF(n)-2/EWG(m)/EPR Pr-4/Ps-4/Pu-4

ACCESSION NR: AP5009127

8/0089/65/018/003/0292/0294

AUTHOR: Chelnitsev, N. G.

TITLE: Representation of the equations of reactor dynamics in terms of the reciprocal period

SOURCE: Atomnaya energiya, v. 18, no. 3, 1965, 292-294

TOPIC TAGS: nuclear reactor, reactor dynamics, reactor period, low power reactor

ABSTRACT: The dynamic equations of a reactor operating at low power (M. Schultz, Nuclear Reactor Control, Russ. Transl. III, 1957)

$$\frac{dn}{dt} = \frac{\rho - \beta}{l} n + \sum_{i=1}^6 \lambda_i C_i + S; \quad (1)$$

$$\frac{dC_i}{dt} = \frac{\beta_i}{l} n - \lambda_i C_i. \quad (2)$$

are rewritten in terms of the reciprocal reactor period $\alpha = dn/n dt$ in the form

Card 1/3

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ACCESSION NR: AP5009127

$$\frac{da}{dt} + a^2 = \frac{1}{T} \cdot \frac{dQ}{dt} + \frac{Q - \beta}{T} a + \frac{1}{T} \sum_{i=1}^6 \lambda_i \beta_i - \sum_{i=1}^6 \lambda_i \frac{C_i}{n}, \quad (3)$$

$$\frac{d}{dt} \left(\frac{C_i}{n} \right) + \frac{C_i}{n} (a + \lambda_i) = \frac{\beta_i}{T}. \quad (4)$$

$$a = \frac{Q - \beta}{T} \sum_{i=1}^6 \lambda_i \frac{C_i}{n}.$$

and it is shown that in some cases the use of Eqs. (3)--(5) in lieu of (1) and (2) simplifies the reactor calculations. Simple examples are presented, including a determination of the reactor transfer function. Orig. art. has: 10 formulas.

Card 2/3

L 45590-65

ACCESSION NR: AP5009127

ASSOCIATION: None

SUBMITTED: 02Apr64

ENCL: 00

SUB CODE: NP

RR KEY SOV: 001

OTHER: 002

am
Card 3/3

L 07270-67 EWF(m) JR/GD

ACC NR: AT6025310

SOURCE CODE: UR/0000/66/000/001/0092/0095

AUTHOR: Chelintsev, N. G.

ORG: none

39
BT/

TITLE: Numerical integration of the equations of reactor dynamics

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Upravleniye yadernymi energeticheskimi ustanovkami (Control of nuclear power plants), no. 1. Moscow, Atomizdat, 1966, 92-95

TOPIC TAGS: nuclear reactor technology, numeric integration, finite difference, reactor neutron flux

ABSTRACT: The equations integrated are of the form

$$\frac{dn}{dt} = \frac{\delta k - \beta}{l} n + \sum_{i=1}^6 \lambda_i C_i + S,$$

$$\frac{dC_i}{dt} = \frac{\beta_i}{l} n - \lambda_i C_i.$$

(n -- neutron density, δk -- reactivity, l -- effective lifetime of prompt neutrons,

Card 1/2

L 07270-67

ACC NR: AT6025310

β_i -- fraction of delayed neutrons of group i ; β -- total fraction of delayed neutrons; c_i -- concentration of i -th group delayed-neutron emitters, λ_i -- decay constant of these emitters; S -- source power per unit volume. The integration is based on a finite difference method and it is shown that under suitable simplifying assumptions, corresponding to the steady state, the method makes it possible to use finite differences which are 100 -- 1,000 times larger than in the Adams method, at the same accuracy. An example is presented, in which the solution was obtained by 28 steps with accuracy of 1%, as against several thousand steps in the usual method. Orig. art. has: 8 formulas

SUB CODE: 20/ SUBM DATE: 27Dec65/ ORIG REF: 001/ OTH. REF: 001

Card 2/2 *pla*

ACC NR: AP7002554

(A, N)

SOURCE CODE: UR/0413/66/000/023/0033/0034

INVENTOR: Chelintsov, N. N.

ORG: none

TITLE: Semiconductor amplifier. Class 21, No. 189022

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 33-34

TOPIC TAGS: transistorized amplifier, telephone equipment

ABSTRACT: This Author Certificate presents a semiconductor amplifier for terminal and intermediate stations of simplex dispatcher high-frequency telephone communications, particularly telephone communications along transmission channels for photocommunications of packed color circuits. To insure transmission of high-frequency communications alternately in opposite directions, the collectors of two transistors are connected to the windings of separate isolation transformers, and their bases are connected to separate windings of an additional transformer. Their emitters are connected through semiconductor diodes and variable resistors to the bias sources so that with remote switching on and off of these sources by the dispatcher the alternate cycle of the transistors from the normal mode of amplification to the mode of four-terminal network with controlled attenuation is accomplished (see Fig. 1). The intermediate transformer is provided with a third winding for connecting to it at

Card 1/2

UDC: 621.375.4.621.305

ACC NR: AP7002554

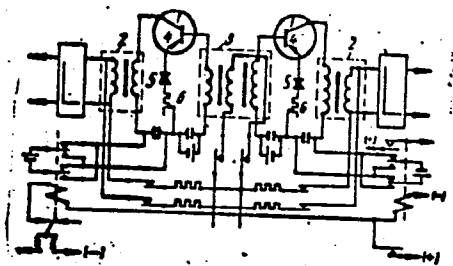


Fig. 1. 1 - collectors; 2 - isolation transformers;
3 - additional transformer; 4 - emitters; 5 - semi-
conductor diodes; 6 - variable resistors

intermediate stations an additional dispatcher attachment containing an internal
modulator-demodulator. Orig. art. has: 1 diagram.

SUB CODE: 09, 17/ SUBM DATE: 30Jan64

Card 2/2

CHELISHCHEV, B. A.

1952 "Pneumatic Hoist with Ball-Bearing Locking Device," Avt. Trakt. Prom., 27, No. 8,

CHELISHCHEV, B.A.

Automatic assembly line for water radiators. Avt.trakt.prom. no.11:11-14 W
'53. (NIRA 6:11)

1. Gor'kovskiy avtosavod im. Molotova.

(Automobiles--Radiators)

CHELISHCHEV, B.A.

Certain special features in the construction of rolling feeders for stamping presses. Vest.mash. 33 no.11:62-65 N '53.

(MIRA 6:12)

(Power presses)

CHELISHCHEV, B. A.

USSR/ Miscellaneous - Industrial processes

Card 1/1 : Pub. 12 - 3/14

Authors : Chelishchev, B. A.

Title : Automatization of technological processes at the Molotov Automobile Plant in Gorkiy

Periodical : Avt. trakt. prom. 3, 5-6, March 1954

Abstract : The automatization of technological processes at the V. M. Molotov Automobile Plant in Gorkiy by installing automatic control devices is described. Complete automatization of plant processes was carried out under the supervision of the Office of Automatization at the Ministry of Heavy Industry USSR. The production increases and safety advantages derived by this automatization are listed.

Institution : The V. M. Molotov Automobile Plant, Gorkiy

Submitted : ...

CHELISHCHEV, B.A., inzhener; SOKOLOV, V.A., inzhener.

Selection of automatic-cycle control circuits. Vest.mash. 35
no.10:3-9 0 '55. (MIRA 9:1)
(Machinery, Automatic) (Automatic control)

CHELISHCHV, B.A.

Rotary device for grinding lathes and presses. Avt.1 trakt. prom.
no.4:43-45 Ap '56. (MIRA 9:8)

1. Gor'kovskiy avtozavod imeni Molotova.
(Metalworking machinery)

AUTHOR: Chelishchev, B.A., Engineer

SOV/122-58-6-1/37

TITLE: ~~Modern Trends in the~~ Development of Automatic Conveying Installations (Sovremennyye tendentsii v razvitii avtomaticheskikh transportnykh ustroystv)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 6, pp 3 - 5 (USSR)

ABSTRACT: The advantages of overhead monorail pushing conveyors with automatic control are stated. The facilities of selective stoppage and accumulation of components in a chosen section, the lowering of the component to the loading level for a machine tool and the joining of different branches are illustrated. A mechanism for carriage control is shown (Figure 2). Another mechanism with a C-hook suspension is shown in Figure 3. The lay-out of a production shop with storage capacity and automatic job card processing is indicated. A diagrammatic illustration of a machine-tool loading carriage is given. There are 5 figures.

1. Industrial plants--Equipment
2. Hoists--Applications
3. Conveyors--Design

Card 1/1

AUTHOR: Chelishchev, B.A., Engineer SOV/122-59-4-8/28
TITLE: Analysis of Deformations in Wedged Roller Mechanisms
(Raschet deformatsiy klino-rolikovykh mekhanizmov)
PERIODICAL: Vestnik Mashinostroyeniya, 1959, ³⁹Nr 4, pp 35-38 (USSR)
ABSTRACT: The deformations in wedged roller free wheel mechanisms have not previously received sufficient attention. A free wheel clutch in a stock feeding mechanism for a press should have the minimum of deformation and no slip. The conditions in a wedged roller clutch were simulated by a model wherein a plane wedge is pressed between two rollers restrained between two parallel walls. The rollers were supported by soft rubber and thus free to roll along the walls. The wedge displacement is divided into one component due to deformations of the interacting bodies, and is equivalent to a virtual decrease in the roller diameter and another component due to rolling along the walls. Analysis and experiment show that the second component is about equal to twice the first which is evaluated by analysis on the basis of experiments in which the compression of rollers under lateral pressure was

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SOV/122-59-4-8/28

Analysis of Deformations in Wedged Roller Mechanisms

measured (Fig 3) showing a nearly linear relationship. It is shown that the deformation of a free wheel clutch is proportional to the applied torque and the inverse product of the tangent and the sine of the wedge angle, a function which rises rapidly with diminishing angle. Calculated and measured displacements of the model are in good agreement (Fig 4). Under static loads, a wedge angle of 12° still shows no slip but ensures acceptable deformations. An experimental free-wheel clutch is shown (Fig 5) embodying 10 mm diameter rollers on a pitch diameter of 100 mm (14 mm long). Deflection angles are plotted against the wedge angle (Fig 6) showing little gain beyond a wedge angle of 10° . At this angle, a torque of 2000 kg cm produces a twist of about $30'$

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SOV/122-59-4-8/28
Analysis of Deformations in Wedged Roller Mechanisms

(Fig 7). The plot of twist against torque is nearly linear.

There are 7 figures and 5 references, of which 4 are Soviet and 1 English.

Card 3/3

CHELISHCHEV, B.A.; DAVYDOV, V.I.

Rotor lines. Kuz.-shtam. proizv. 3 no.6:43-45 Je '61.

(MIRA 14:6)

(Rotors)

S/118/62/000/001/005/005
D221/D301

AUTHORS: Chelishchev, B.A. and Fuks, I.I., Engineers
TITLE: Pneumatic and electric drives with straight line displacement for the automation of production
PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 1, 1962, 35-40

TEXT: The author gives a comparison table of drives which shows that pneumatic and electric units are the most frequently adaptable for straight line actuation. The pneumatic drive is used for strokes up to 1 m, when there are no special requirements for speed stability and the force of resistance is low and constant. The speed attains 3-4 m/sec. The electromechanical drive may be used for lengths up to 10 m at a slow but constant speed, and where intermediate stops are necessary. Pneumatic cylinders developed by ENIKMASH are described. Nomograms for determining main characteristics under given operating conditions were plotted as a result of numerous experiments. The authors give the nomogram for a

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Pneumatic and electric drives ...

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D221/D301

100 mm \varnothing cylinder. It was impossible to plot a similar one for 50 mm \varnothing cylinders, and the authors state that these can be used as controlling servodrives only. The nomograms allow computation of the actuation time for a distance L and a given load by $T = t_n + t_y + t_m$, where t_n is the preparatory time obtained by interpolation; t_y is the duration of the steady motion; t_m is the time of braking due to air cushioning which is assumed as 0.1-0.3 sec. The graphs of motion of the piston show non-oscillatory behavior when there is an air cushion at the end of the stroke. The stability of speed when the piston meets the air cushion is due to physical properties of air. Its volumetric outflow through small apertures in super critical conditions depends on the area of the hole and does not depend on pressure drop. This can be exploited in feeding cutting tools or when it is necessary to obtain a controlled speed of 5-0.5 mm/sec within a short distance. The air cushion design has many advantages. An example of application of the electromechanical drive is given for unit heads made by the Minskiy zavod avtomaticheskikh linii (Minsk Factory

Card 2/4

Pneumatic and electric drives ...

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of Automatic Lines). An explosion-proof design was used in the mining equipment manufactured by the Konotopskiy elektromekhanicheskiy zavod (Konotop Electromechanical Plant). The electromechanical units are reliable, simple, have stable speed and permit large displacements with intermediate stops to be realized. The author points out the shortcomings of the Konotop units which lack brakes and require high speed switching. ENIKMASH developed a unit based on a normal electric motor which is illustrated. It is provided with a friction clutch and rubber buffers. The condition of limiting the wedge action of the screw is then

$M_t \leq M_o \frac{\tan(\lambda + \rho)}{\lambda - \rho} k$, where M_t is the threading torque; M_o is the unlocking torque; ρ is the friction angle of the thread; λ is the helix angle of the thread and k is the safety coefficient, which is equal 0.6-0.8. The electric brake ensures greater accuracy of stops. It contains an a.c. solenoid, type ЭС1-6121К (ES1-6121K) and a set of discs from a standard clutch made by the Elektrostanok factory. The coefficient of motor loading is small which permits frequent reversals. Applications of ball screws can greatly enhance the performance of these units. The

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Pneumatic and electric drives ...

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D221/D301

number of cycles with AOC-32-4 (AOS-32-4) motor is 20 per minute. There are 7 figures and 1 table.

Card 4/4

CHELISHCHEV, B.A., inzh.; ZHILENKOV, N.N., inzh.

Technological process and the rotor line in the production
of sleeve nuts. [Nauch. trudy] ENIKMASHa 8:100-118 '64.
(MIRA 18:3)

L 52093-65 EWT(d)/EWT(1)/FA/T-2/EWP(1) Pg-4/Pk-4/P1-4/Pc-4/Pq-4/ IJP(c)
ACCESSION NR: AP5015356 BC UR/0286/65/000/009/0100/0100
621-576

AUTHOR: Chelishchev, B. A.; Shramko, V. D.; Kokorev, V. I.

49
48
B

TITLE: A pneumohydraulic servomechanism. Class 42, No. 170779

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 100

TOPIC TAGS: automatic control, pneumatic control, pneumatic device

ABSTRACT: This Author's Certificate introduces a pneumohydraulic servomechanism. The device contains a piston-type pneumatic servomechanism and a piston-type hydraulic damper. The damper rod is rigidly connected to the rod of the pneumatic servo. High speed operation is provided by mounting two check valves, two fixed chokes and a single-aperture symmetric slide valve in the line which connects the hydraulic damper chambers. The symmetric slide valve is rigidly connected with two diaphragms. The chambers above these diaphragms are connected by pneumatic lines with the slide valve of the pneumatic servomechanism. This valve has two auxiliary collars which are offset with respect to the valve apertures with negative exhaust overlap and positive intake overlap.

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L 52093-65

ACCESSION NR: AP5015356

ASSOCIATION: Eksperimental'nyy nauchno-issledocatel'skiy institut kuznechno-pressovogo mashinostroyeniya (Experimental Scientific Research Institute of Forging Machine Building)

SUBMITTED: 12Aug63

ENCL: 00

SUB CODE: DP, IE

NO REF SOV: 000

OTHER: 000

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Card 2/2