RATAY, Karel [Rataj Karel]; UMNOV, M.P. [translator]; GUNAR, I.I., red.; KLIMENKO, S.V., tekhn. red.

[Chemical control of weeds in flax] [Translated from the Czech] Khimicheskaia bor'ba s sorniakami v posevakh l'na. Pod red. I.I. Gunara. Moskva, Izd-vo inostr. lit-ry, 1958. 122 p. (MIRA 11:10)
(Weed control) (Flax)

GUNAR, I. I.

(4) PHASE I BOOK EXPLOITATION SOV/2715

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; polucheniye i primeneniye izotopov (Reports of Soviet Scientists; Production and Application of Isotopes) Moscow, Atomizdat, 1959. 388 p. (Series: Its: Trudy, vol. 6) 8,000 copies printed.

Eds. (Title page): G.V. Kurdyumov, Academician, and I.I. Novikov, [illegible] ing Member, USSR Academy of Sciences; Ed. (Inside book): Z.D. A[illegible]; Tech. Ed.: Z.D. Andreyenko.

PURPOSE: This book is intended for scientists, engineers, physicians, and biologists engaged in the production and [illegible] of [illegible] to peaceful uses; for professors and [illegible] higher technical schools where nuclear [illegible] general public interested in atomic science and [illegible].

COVERAGE: This is volume 6 of a [illegible] set of reports [illegible] scientists at the Second International Conference [illegible] Atomic Energy held in Geneva from September 1 to 13, [illegible] tains 32 reports on: 1) [illegible] active isotopes and their [illegible] with the aid of isotopes in the field of [illegible] building, and agriculture, and 3) [illegible] 6 was edited by: S.V. [illegible] P[illegible], Candidate of Chemical [illegible]; and V.[illegible] Medical Sciences. See Card [illegible] for titles of volumes of the [illegible] [illegible] appear at the end of the [illegible].

YEMEL'YANOVA, N.A. [translator]; LISOVSKAYA, O.V. [translator]; GUNAR, I.I., red.

[Chemical control of weeds] Khimicheskaia bor'ba s sorniakami. Pod red. i s predisl. I.I.Gunara. Moskva, Izd-vo inostr. lit-ry, 1959. 226 p. (MIRA 14:10)

1. British Weed Control Council.
(Weed control) (Herbicides)

GUNAR, I.I.; SIMYUKHIN, A.M.

Electrophysiological characteristics of irritability in plants. Report 1: Principles, history and methods of research. Izv.TSKhA no.4:7-22 '59. (MIRA 12:11)
(Electrophysiology of plants)
(Plants--Irritability and movements)

GUNAR, I.I.; KRASTINA, Ye.Ye.; PETROV-SPIRIDONOV, A.Ye.

How the proportion between potassium and calcium in the nutrient solution and in the plant affects the cold resistance of corn. Izv. TSKhA no.5:19-28 '59 (MIRA 13:3)
(Corn(Maine)) (Plants, Effect of potassium on)
(Plants, Effect of calcium on)

GUNAR, I.I.; SINYUKHIN, A.M.

Effect of action current on the circular movement of protoplasma in the cells of nitella (Nitella flexilis Ag). Izv. TSKhA no.3:7-17 '60. (MIRA 14:4)
(Nitella) (Protoplasm)

GUNAR, I.I.; KRASTINA, Ye.Ye.; BRYUSHKOVA, K.A.; BELIKOVA, Ye.M.

Diurnal periodicity in the synthetic activity of roots. [with summary in English]. Izv. TSKhA no.5:18-34 '60. (MIRA 13:11)
(Roots (Botany))

GUNAR, I.I., prof.; KALINKEVICH, M.I., kand.biolog.nauk

Using chemicals for regulating the flowering and fruiting of apple trees. Izv. TSKhA no.1:22-41 '61. (MIRA 14:3)
(Apple) (Cresol) (Phenols)

GUNAR, I.I.; SHUKHIN, A.M.; SALNA, L.Ya.; TSAREVA, L.A.

Electrophysiological characteristics of irritability in plants [with summary in English]. Izv. TSKHA no.2:7-19 '61. (MIRA 14:8)

(Plants--Irritability and movements)
(Plants, Effect of electricity on)

GUNAR, I.I.; BOGACHEVA, I.I.

How the movement of kidney bean chloroplasts within a cycle of 24 hours is related to photosynthesis [with summary in English]. Izv. TSKhA no.2:215-220 '61. (MIRA 14:8)
(Chlorophyll) (Photosynthesis)

GUNAR, I.I.; KRASTINA, Ye.Ye.

Effect of light-darkness balance on the rhythm of movements in plant leaves. Izv. TSKhA no.5:55-70 '61. (MIRA 14:12)
(Plants, Effect of light on)

KRASTINA, Ye.Ye.; GUNAR, I.I.; KASPSHIK, M.

Role of external and internal factors in the daily dynamics of root feeding in tomatoes. Izv. TSKhA no.6:32-42 '61.
(MIRA 16:8)

(Tomatoes) (Plants—Nutrition)
(Plants, Effect of light on)

GUNAR, I.I., prof.; PETROV-SPIRIDONOV, A.Ye., starshiy nauchnyy sotrudnik.

Respiration and transformation of organic acids in the ontogenesis of soybeans [with summary in English]. Izv. TSKHA no.1:61-73 '62. (MIRA 15:6)

(Plants--Respiration) (Acids, Organic)

KRASTINA, Ye.Ye., kand.biolog.nauk; GUNAR, I.I., prof.

Specific characteristics of the photoperiodic reaction of organisms to short and long days. Izv.TSKHA no.4:53-63 '62.
(MIRA 15:12)

(Photoperiodism)

GUNAR, I., prof.

Life revolted against grassland farming. Nauka i zhizn' 29 no.5:2-10 My '62. (MIRA 15:11)

1. Zaveduyushchiy kafedroy fiziologii rasteniy Timiryazevskoy sel'skokhozyaystvennoy akademii.
(Agriculture)

GUNAR, I.I.; SINYUKHIN, A.M.

The propagating wave of excitation in higher plants. Dokl. AN SSSR 142 no.4:954-956 F '62. (MIRA 15:2)

1. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A.Timiryazeva. Predstavleno akademikom A.L.Kursanovym.
(Electrophysiology of plants)

KRASTINA, Ye.Ye.; KOVRIGO, N.M.; GUNAR, I.I.

Connection of the photoperiodical reaction of Perilla and spring wheat with chronometric characteristics. Izv. TSKHA no.6:32-48 '62. (MIRA 16:6)
(Photoperiodism)

GUNAR, I.I.; SINYUKHIN, A.M.

Functional significance of action currents affecting the gas exchange of higher plants. Fiziol. rast. 10 no.3:265-274 My-Je '63. (MIRA 16:6)

1. Kafedra fiziologii rasteniy i laboratoriya iskusstvennogo klimata Moskovskoy sel'skokhozyaystvennoy akademii imeni Timiryazeva.
(Electrophysiology of plants) (Plants--Respiration)

ZHURBITSKIY, Z.I., otv. red.; GENKEL', P.A., red.; GUNAR, I.I., red.; POTAPOV, N.G., red.; KRASIL'NIKOVA, G.V., red.izd-va; GUS'KOVA, O.M., tekhn. red.

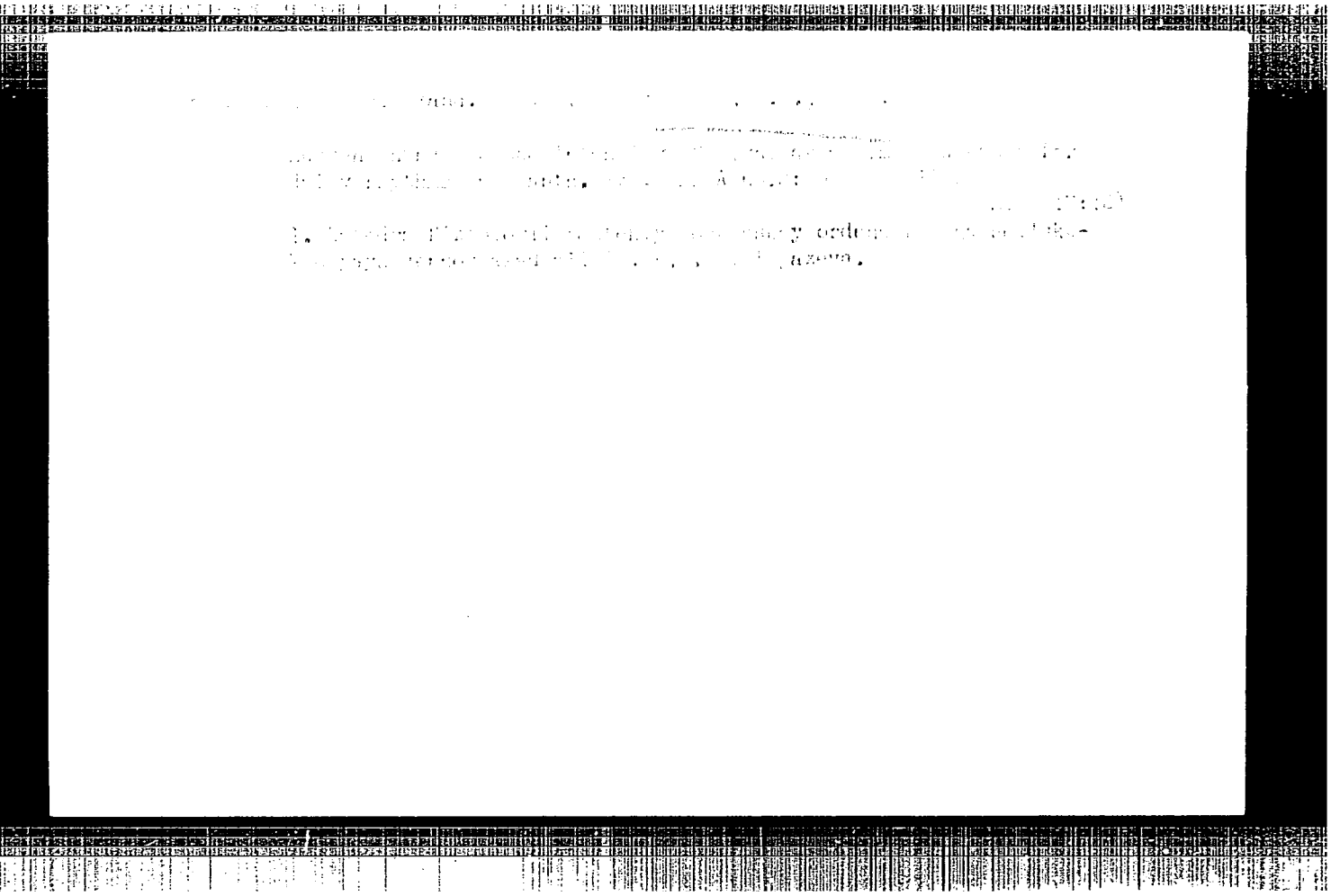
[Physiological basis for the plant nutrition system] Fiziologicheskoe obosnovanie sistemy pitaniia rastenii. Moskva, Izd-vo "Nauka," 1964. 339 p. (MIRA 17:3)

1. Akademiya nauk SSSR. Institut fiziologii rasteniy.

ZHURBITSKIY, Z.I., otv. red.; GENKEL', P.A., red.; GUNAR, I.I., red.; POTAPOV, N.G., red.; FOTEKHINA, N.A., red.

[Role of mineral elements in the metabolism and productivity of plants] Rol' mineral'nykh elementov v obmene veshchestv i produktivnosti rastenii. Moskva, Izd-vo "Nauka," 1964. 358 p. (MIRA 17:7)

1. Akademiya nauk SSSR. Institut fiziologii rastenii.



KRASTINA, Ye.Ye., starshiy nauchnyy sotrudnik, kand. biolog. nauk;
GUNAR, I.I., prof.

Effect of thermal stimulation on the exudation of sap by sunflower roots. Izv. TSKHA no.3:71-81 '64.
(MIRA 17:11)

1. Kafedra fiziologii rasteniy Moskovskoy sel'skokhozyaystvennoy akademii imeni Timiryazeva.

L 34555-65

ACCESSION NR: AR5003961 S/0299/64/000/023/R036/R036

SOURCE: Ref. zh. Biologiya. Sv. t., Abs. 12R270

AUTHOR: Gunar, I. I.; Sinyukhin, A. M.; Ozolina, I. A.

TITLE: Role of bivalent cations in excitation of a single plant cell

CITED SOURCE: Izv. Timiryazevsk. s.-kh. akad, no. 3, 1964, 82-86

TOPIC TAGS: nitella, plant, cell, ion concentration, excitation, protoplasm flow, calcium ion, magnesium ion, substitution reaction

TRANSLATION: The possibility of substituting Mg^{2+} for Ca^{2+} in a medium was investigated with action currents generated by single nitella cells. Change in Mg^{2+} concentration from 0 to 0.006 n. had little effect on the rest potential of the cells. With the substitution of Ca^{2+} by Mg^{2+} the cells were capable of generating action currents which were expanded in form and of long duration. The cation substitution affected the excitation threshold. Mg^{2+} also affected structural changes of the protoplasm: at the moment of action current passage, the circular flow of the protoplasm did

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L 34555-65

ACCESSION NR: AR5003961

not stop as under normal conditions, but only slowed down by 50% as compared to the movement rate for protoplasm at rest. With a tenfold reduction of K^+ in the medium and Mg^{2+} concentrations of 0 and 0.0002 n., the circular flow of protoplasm stopped in all cases when action currents were generated, but with a Mg^{2+} concentration of 0.0006 n. the flow stopped only in some of the cells. With high Mg^{2+} concentrations and a decreased K^+ level, no stoppage occurred. L. Tsofina.

SUB CODE: LS ENCL: 00

Card 2/2

SUMAR, I.I., SINYUKHIN, A.M.; OKOLINA, L.S.

Rest potential of cells of Nitella flexilis filled up with artificial salt solutions. Dokl. AN SSSR 158 no.6:1430-1433 O '64. (MIRA 17:12)

1. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A. Timiryazeva. Predstavlena akademikom A.L. Kursanovym.

GUNAR, I.I.; SINYUKHIN, A.M.; OZOLINA, I.A.

Action potential of Nitella flexilis cells filled with artificial salt solutions. Dokl. AN SSSR 160 no.4:956-959 F '65.
(MIRA 18:2)

1. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A. Timiryazeva.
Submitted March 21, 1964.

[illegible], [illegible] [illegible], [illegible], [illegible] nauchnyy sotrudnik, kand. [illegible] nauk; [illegible], [illegible], kand. biolog. nauk

[illegible] and structural changes in excited plant cells. Izv. [illegible] no.1:68-86 '65. (MIRA 18:9)

1. Kafedra fiziologii rasteniy Moskovskoy akademii sel'skokhozyaystvennykh nauk imeni Timiryazeva.

GUNAR, I.I., prof.; FANTALOV, O.S., inzh.

Laboratory of artificial climate of the Timiriazev Agricultural Academy. Izv. TSKHA no.4:220-240 '65.
(MIRA 18:11)

1. Submitted April 29, 1965.

[illegible], I.
"Problem of the stimulation of plants and further development of plant physiology" (p.12)
PRIRODA (Bulgarska Akademiia Na Naukite) Sofiya Vol 3 No 1 Jan/Feb 1954

SO: East European Accessions List Vol 2 No 7 Aug 1954

GUNAR, V. I.

USSR/Chemistry - Growth Stimulants

"Synthesis of Some Chlorophenoxy Derivatives," V. P. Mamayev, N. N. Suvorov, and V. I. Gunar, Moscow Chem-Tech Inst im D. I. Mendeleyev

Zhur Obshch Khim, Vol 23, No 7, pp 1206-1209 - 1953

Synthesized the following: A-(4-chlorophenoxy)-pheny-lacetic acid, A-(2,4-dichlorophenoxy) phenylacetic acid, A-(2,5-dichlorophenoxy)-phenylacetic acid, V-(4-chlorophenoxy)-crotonic acid, V-(2,4-dichlorophenoxy)-crotonic acid, V-(2,5-dichlorophenoxy)crotonic acid, and 2,4-dichlorophenoxyace-tone.

272T19

The synthesis of glutamic acid from α-ketoglutaric acid and ammonia in pea sprouts. V. L. Kretovich, A. A. Bundel, and V. I. Gunar (A. N. Bakh Inst. Biochem., Acad. Sci. U.S.S.R., Moscow). *Ukrain. Biokhim. Zhur.* 27, 339–47 (1955)(in Russian).—Exts. were performed with 10 g. of 4-day pea sprouts free from cotyledons. α-Ketoglutaric acid was synthesized according to Blaise and Gault (*C.A.* 5, 3239) and the cozymase was prepd. from bakers' yeast as described earlier (*Biochem. Preparations* 1, 28(1949)) and its purity confirmed spectrophotometrically. Glutamic acid was detd. chromatographically by the procedure of Kretovich and Bundel (*C.A.* 44, 10663a). Glutamic acid is formed in the growing plant as a result of the enzymic reduction-aminization of α-ketoglutaric acid by ammonia. The addn. of cozymase and of glucose intensify the reaction for which pH 7.7 seems to be the optimum. By fractional pptn. with $(NH_4)_2SO_4$ from pea sprout exts. was isolated an enzyme prepn. which catalyzed the α-ketoglutaric acid aminization process by NH_4OH. B. S. Levine

(2)

GUNAR, V.I.; ZAV'YALOV, S.I.

New method of synthesizing quinolizidine derivatives. Dokl. AN SSSR 139 no.2:367-368 Jl '61. (MIRA 14:7)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR. Predstavleno akademikom B.A. Kazanskim.
(Norlupinane)

GUMAR, V.I.

NAZAROV, I.N.; GUSEV, B.P.; GUMAR, V.I.

Complete synthesis of isopropenoid alcohols. Izv. AN SSSR Otd. khim. nauk no.10:1267-1270 O '57. (MIRA 11:3)

1.Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
(Alcohols)

GUNAR, V. I.

20-2-27/60

AUTHORS: Nazarov, I. N. , Member of the Academy, Yanovskaya, L. A. , Gusev, B. P. , Yufit, S. S. , Gunar, V. I., Smit, V. A.

TITLE: The Synthesis of Methylheptenone and Methylheptadienone (Sintez metilgeptenona i metilgeptadiyenona)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 2, pp. 331-334 (USSR)

ABSTRACT: The two substances mentioned in the title of the paper under review are of importance for the synthesis of the natural scenting substances of the isoprenoid type. The authors of the present paper investigated the production of the former on basis dimethylvinylcarbinol or isoprene with the aid of three different methods :(1) by condensation of prenylhalogenids by aceto-ethylacetate; (2) by interaction between dimethylvinylcarbinol and the same ether; and (3) by pyrolysis of the same ether of dimethylvinylcarbinol. As was shown in a previously published scientific paper originating in the same laboratory, there are produced at influence by hydrogen halides on dimethylvinylcarbinol corresponding prenylhalides

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The Synthesis of Methylheptanone and Methylheptadienone

with high yields. They can be easily condensed by sodium-aceto-ethylacetate and at a subsequent saponification they yield methylheptenone. The second method of synthesis takes place at a temperature of 160 - 170° and yields 60 - 70 % methylheptenone in addition to an almost theoretical amount of ethanol and CO_2. The reaction must be carried out under pressure or by using high-boiling Vaseline oil. The remainder after distillation is aceto-ethylacetate of dimethylvinylcarbinol. At 160 - 170° this is subjected to a pyrolysis, and here methylheptenone and CO_2 are produced. This supports the reactions mechanism as illustrated in the paper under review. The pyrolysis of pure dimethylvinylcarbinol-acetoacetate was investigated further. It is produced with a yield of 90 %, when diketone affects dimethylvinylcarbinol in presence of small amounts of pyridine, best at a temperature between 145 and 160°. During this process, methylheptenone is produced (65 - 70 %). The pyrolysis has also a lateral direction and leads to isoprene, acetone and CO_2. Sometimes this lateral direction predominates. The authors of the present paper studied in detail the production methods of methylheptadienone both by interaction between dimethylethinylcar-

The Synthesis of Methylheptenone and Methylheptadienone

binol and aceto-ethylacetate, and also by pyrolysis of pure dimethylethinylcarbinol-acetoacetate with a yield of 90 %by influence of diketone on pure dimethylethinyl in presence of triethylamine. The reaction takes place only at 170 - 180°. Below 160° the initial products are obtained again, because no interaction takes place. In the gaseous phase the reaction takes place only at 250-300°. There the yield is low (15-20 %). Inert diluting agents, acids, salts and metallic oxides do not favor the reaction, but rather frequently lead to a complete resinification of the substance. Here again lateral processes take place, with isopropenylacetylene and acetone being produced. The experimental part of the paper under review contains a detailed description of the production methods together with constants and yields. There are 5 references, 1 of which is Soviet.

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20-2-27/60

The Synthesis of Methylheptenone and Methylheptadienone

ASSOCIATION: Institute of Organic Chemistry imeni N. D. Zelinskiy, AS USSR
(Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR)

SUBMITTED: January 7, 1957

AVAILABLE: Library of Congress

Card 4/4

5(3)

AUTHORS: Nazarov, I. N., Bergel'son, L. D., Gunar, V. I.

SOV/62-58-11-13/26

TITLE: Acetylene Derivatives (Proizvodnyye atsetilena) Communication 191. Preparation of Acids From Tertiary Acetylene Alcohols (Soobshcheniye 191. Polucheniye kislot iz tretichnykh atsetilenovykh spirtov)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 11, pp 1354-1360 (USSR)

ABSTRACT: Recently it was demonstrated that cis-dibromo-vinyl carbinols (I) easily cleave off dehydrates and hydrogen bromide while forming unstable 1-bromo-vinyl acetylenes (III). When boiled with alkali they produce α,β- or β,γ-unsaturated acids (Ref 1). In this paper a method of producing unsaturated acids is described which is based on the mentioned reactions. To increase the yield in substituted dibromo butadienes (II) dehydration of dibromo-vinyl carbinols (I) were investigated under the action of heat and various dehydrating agents. Optimum results were obtained in boiling with dibromo-vinyl carbinols in petroleum ether with phosphoric anhydride (in the case of cis-dibromo-vinyl dimethyl carbinol) or with

Acetylene Derivatives. Communication 191. Preparation of Acids From Tertiary Acetylene Alcohols

SOV/62-58-11-13/26

p-toluene sulfo acid (in the case of cis-dibromo-vinyl cyclohexanol). If bromination of acetylene alcohols is carried out in petroleum ether dehydration can take place without separation of brominated alcohols (I). Substituted dibromo butadienes (II) and especially vinyl acetylene bromides (III) are unstable. They partly decompose and saponify in the course of distillation. For this reason it is expedient to carry out further processes of dehydrobromination and of alkali hydrolysis in a single stage without separation of bromine derivatives (II) and (III). Under these conditions the transformation of acetylene alcohols into unsaturated acids can be carried out in a great number of cases in sufficient yield (Table 1). The constants of all known acids agree well with the data from publications. There are 1 table and 15 references, 1 of which is Soviet.

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Acetylene Derivatives. SOV/62-58-11-13/26
Communication 191. Preparation of Acids From Tertiary Acetylene Alcohols

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: March 27, 1957

Card 3/3

SOV/79-28-6-5/63

AUTHORS: Nazarov, I. N. (Deceased), Gusev, B. P., Gunar, V. I.

TITLE: Derivatives of Acetylene (Proizvodnyye atsetilena) 193. A Complete Synthesis of the Isoprenoid Alcohols of Linalool, Geraniol, Nerol, Nerolidol, Farnesol, Geranil-linalool, Geranilgeraniol and Phytol (193. Polnyy sintez izoprenoidnykh spirtov(linaloola, geraniola, nerola, nerolidola, farnezola, geranillinaloola, geranilgeraniola i fitola))

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 6, pp. 1444-1458 (USSR)

ABSTRACT: As dimethylvinylcarbinol has become completely accessible as technical product the authors decided to investigate the complete methods of synthesis of isoprenoid alcohols on its basis, as well as on that of isoprene; for this purpose they repeated the mentioned reaction cycle several times (scheme 1). Thus way the isoprenoid chain is built in the way of successive combination reactions of ethinylation, of selective hydration, isomerization and acetonylation, the

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Derivatives of Acetylene. 193. A Complete Synthesis of the Isoprenoid Alcohols of Linalool, Geraniol, Nerol, Nerolidol, Farnesol, Geranillinalool, Geranilgeraniol and Phythol

two latter reactions mostly being carried out in one stage without separation of the intermediate products. The whole course of this synthesis leading to the isoprenoid alcohols C_{20} (of geranilgeraniol and phytol) was investigated in detail and represented by the mentioned schemes (see schemes for the synthesis of geraniol (V), farnesol (IX), geranilgeraniol (XIII) and phytol (XXV)). The accessibility of the initial products, the simplicity of its performance as well as the good yields at all stages of development of the explicitly described synthesis make it perfectly suited for the industrial production of linalools, geraniol, nerol, nerolidol, farnesol, geranillinalool, and geranilgeraniol, as these compounds are of great interest for the perfume industry and for the synthesis of some important natural compounds (vitamins, A,E,K, carotenoids, terpenes, etc.). Thus the authors for the first time carried out in detail a complete synthesis of the above mentioned isoprenoid alcohols as well as of the intermediate products of the synthesis (the ketones, and acetylene alcohols) by successive repeating of

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Derivatives of Acetylene. 193. A Complete Synthesis of the Isoprenoid Alcohols of Linalool, Geraniol, Nerol, Nerolidol, Farnesol, Geranillinalool, Geranilgeraniol and Phytol

the condensations of the ketones with acetylene, the selective hydration of the acetylene alcohols and of the conversion of tertiary vinylalcohols to isomeric primary alcohols of the allyl type as well as to unsaturated ketones of the allylacetone type. There are 24 references, 6 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry, AS USSR)

SUBMITTED: June 28, 1957

1. Alcohols--Synthesis

Card 3/3

5(3) SOV/62-59-2-31/40

AUTHORS: Gunar, V. I., Zav'yalov, S. I., Krotov, A. I.

TITLE: Synthesis and Anthelmintic Effect of Dehydroresorcinol Derivatives With Branched Aliphatic Chains (Sintez i antigel'mintnoye deystviye proizvodnykh digidrorezortsina, soderzhashchikh razvetvlennyye alifaticheskiye tsepi)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1959, Nr 2, p 358 (USSR)

ABSTRACT: The authors found that dehydroresorcinol can be alkylated with branched allyl bromides described in reference 1 in an ~ 50% yield. In this way the following compounds were synthesized: 2-(3',7'-dimethyl-$\Delta^{2'}$-octenyl)-dehydroresorcinol, 2-(3',7'-dimethyl-$\Delta^{2',6'}$-octadienyl)-dehydroresorcinol and 2-(3',7',11'-trimethyl-$\Delta^{2'}$-dodecylenyl)-dehydroresorcinol. On boiling with acetic anhydride these ketones yielded corresponding enol acetates in large yield. All compounds are anthelmintics. The 2-(3',7',11'-trimethyl-$\Delta^{2'}$-dodecylenyl)-dehydroresorcinol proved to be the most active compound. There is 1 Soviet ref-

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SOV/62-59-2-31/40

Synthesis and Anthelmintic Effect of Dehydroresorcinol Derivatives With Branched Aliphatic Chains

erence.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR) Institut malyarii, meditsinskoy parazitologii i gel'minotologii Minzdrava SSSR (Institute for Malaria, Medical Parasitology and Helminthology of the Ministry of Public Health, USSR)

SUBMITTED: July 10, 1958

Card 2/2

GUNAR, V. I. Cand Chem Sci -- (diss) "Synthesis, rearrangement and biological activity of derivatives of dihydro-resorcin containing isoprene chains," Moscow, 1960, 15 pp, 180 cop. (Inst. of Organic Chemistry im N. D. Zelenskiy, AS USSR) (KL, 44-60,128)

GUNAR, V.I.; ZAV'YALOV, S.I.

Syntheses based on 2-prenyldihydroresorcinol. Izv.AN SSSR Otd.khim. nauk no.5:937 My '60. (MIRA 13:6)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo Akademii nauk SSSR.

(Resorcinol)

ZAV'YALOV, S.I.; GUNAR, V.I.; VASIL'YEV, A.F.

Direct hydroxylation of 2-substituted dihydroresorcinols. Izv. AN SSSR Otd.khim.nauk no.5:938 My '60. (MIRA 13:6)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo Akademii nauk SSSR.
(Resorcinol) (Hydroxylation)

ZAV'YALOV, S.I.; GUNAR, V.I.; KUDRYAVTSEVA, L.F.

Chemistry of dihydroresorcinol. Report No. 6: New steps in the synthesis of phenanthrene derivatives based on dihydroresorcinol. Izv. AN SSSR.Otd. khim. nauk no.11:2009-2013 N '60. (MIRA 13:11)

1. Institut organicheskoy khimii im.N.D.Zelinskogo AN SSSR.
(Phenanthrene) (Resorcinol)

GUNAR, V.I.; ZAV'YALOV, S.I.

Chemistry of dihydroresorcinol. Part 8: Syntheses based on 2-prenyldihydroresorcinol. Zhur. ob. khim. 30 no.11: 3658-3663 N'60. (MIRA 13:11)

1. Institut organicheskoy khimii Akademii nauk SSSR.
(Resorcinol)

S/020/60/132/04/26/064
B011/B003

5.3400

AUTHORS: Gunar, V. I., Zav'yalov, S. I.

TITLE: A New Synthesis of Phytol 1

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 4, pp. 829-831

TEXT: In a previous paper (Ref. 1) the authors showed that the alkylation of dihydroresorcinol with prenyl bromides (II) leads to a series of cyclic β-diketones which contain isoprenoid chains. In the article under review the authors proved that these derivatives of dihydroresorcinol may be used, inter alia, for the synthesis of phytol (XIII). In the hydrolytic cleavage of 2-prenyl- and 2-geranyldihydroresorcinols (III) and (IV) large quantities of corresponding keto acids (V) and (VI) were formed. The latter reacted smoothly with an excess of lithium methyl, with the two functional groups participating. In the dehydration of the keto alcohols (VII) and (VIII) obtained by means of potassium bisulfate and in the subsequent complete hydrogenation

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Card 1/2

A New Synthesis of Phytol

S/020/60/132/04/26/064
B011/B003

of the unsaturated ketones (IX) and (X) on platinum oxide the following known ketones were obtained: tetrahydrogeranylacetone (XI) and hexahydrofarnesylacetone (XII) (Ref. 2). In accordance with Refs. 2 and 3 the ketone (XII) can be easily converted into phytol (XIII). Thus, a new method of synthesizing isoprenoid compounds was elaborated. It permits extension of the chain of vinyl alcohols (I) by eight atoms. Here, large yields of ketones (XI) and (XII) can be obtained. There are 3 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

PRESENTED: February 12, 1960, by B. A. Kazanskiy, Academician

SUBMITTED: January 19, 1960

Card 2/2

GUNAR, V.I.; ZAV'YALOV, S.I.; PERSHIN, G.N.; MILOVANOVA, S.N.; BOGDANOVA, N.S.; MAKEYEVA, O.O.; KROTOV, A.I.

β-Dicarbonyl compounds. Part 14: Synthesis, trsnformations, and biological activity of 2-prehnyldihydroresorcinol. Zhur. ob.khim. 31 no.12:3975-3984 D '61. (MIRA 15:2)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR; Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze i Institut malyarii, meditsinskoy parazitologii i gel'mintologii.
(Resorcinol)

GUNAR, V.I.; ZAV'YALOV, S.I.

New possibility of building-up a ring system of the CD steroid molecule. Izv.AN SSSR.Otd.khim.nauk no.3:527-529 Mr 62.
(MIRA 15:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Steroids) (Cyclization)

GUNAR, V.I.; KUDRYAVTSEVA, L.F.; ZAV'YALOV, S.I.

β-Dicarbonyl compounds. Report No.16: Alkylation of dipotassium derivatives of cyclic β-dicarbonyl compounds in liquid ammonia. Izv.AN SSSR.Otd.khim.nauk no.8:1431-1435 Ag '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Carbonyl compounds) (Alkylation)

GUNAR, V.I.; ZAV'YALOV, S.I.

Synthesis of trans-anti-trans-1-oxo-$\Delta^{4a,12a}$-hexadecahydrochrysene. Izv.AN SSSR.Otd.khim.nauk no.2:380-382 F '63. (MIRA 16:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Chrysene)

GUNAR, V.I.; OVECHKINA, L.F.; ZAV'YALOV, S.I.

Condensation of 1-morpholinecyclohexene with Mannich ketones. Izv. AN SSSR. Otd.khim.nauk no.6:1110-1111 Je '63. (MIRA 16:7)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR.
(Cyclohexene) (Morpholine) (Ketones)

L 35096-65

ACCESSION NR: AP5009867 UR/0062/64/000/010/1827/1831 12

AUTHOR: Gunar, V. I.; Ovechkina, L. F.; Zav'yalov, S. I.; Pershin, G. N.; Milovanova, S. N.

TITLE: Beta-dicarbonyl compounds. Communication 22. Synthesis and fungistatic activity of some of the simplest analogs of the antibiotic Griseofulvin

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1964, 1827-1831

TOPIC TAGS: antibiotic, pharmacology, ester, chlorinated organic compound, alkylation, cyclization, organic synthetic process

Abstract: A series of enol esters of dihydroresorcinol, imitating the six-membered hydroaromatic ring of griseofulvin, was studied in an effort to determine the significance of various structural elements of the antibiotic. Enol esters of 2-(3'-chlorobutene-2'-yl)-, 2-(p-chlorobenzyl)-, and 2-(p-bromobenzyl)-dihydroresorcinols were synthesized by alkylation of dihydroresorcinol with the corresponding alkyl chlorides, followed by treatment of the 2-substituted beta-diketones with diazomethane. Internal enol esters belonging to the tetrahydrochromanone series were prepared by cyclization of derivatives of 2-phenyldihydroresorcinol in the presence of phosphoric acid. 5,6,7,8-Tetrahydrochromanone-5 derivatives were produced by a new method of synthesis, based on condensation of

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L 35096-65

ACCESSION NR: AP5009867

dihydroresorcinol with Mannich ketones, selective reduction of the triketone enolates, followed by cyclization of the hydroxyketoneols. The greatest antifungal activity was detected in 2-methyl-2-(4'-methylpentene-3'-yl)-5-keto-5,6,7,8-tetrahydrochromanone.

Orig. art. has: 20 formulas, 1 table.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences SSSR); Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S. Ordzhonikidze (All-Union Scientific Research Chemicopharmaceutical Institute)

SUBMITTED: 15Jan63 ENCL: 00 SUB CODE: LS, OC

NO REF SOV: 004 OTHER: 003 JPRS

Card 2/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617330008-3"

ZAV'YALOV, S.I.; KONDRAT'YEVA, G.V.; GUNAR, V.I.

Synthesis of dibenzofuran derivatives. Izv. AN SSSR Ser. khim. no.11:2086-2087 N '64 (MIRA 18:1)

1. Institut organicheskoy khimii N.D. Zelinskogo AN SSSR.

[illegible]

[illegible] orientation of [illegible] reaction of ethylene [illegible] to monosubstituted arenes. Dokl. AN SSSR 158 no.6:1298-1301 O '64. (MIRA 17:12)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR. Predstavlena akademikom B.A. Kazanskim.

ZAV'YALOV, S.I.; GUNAR, V.I.; MIKHAYLOPULO, I.A.

Effect of mercury diacetate on the course of the reaction between diketene and ureas. Izv. AN SSSR khim. no.1:201 '65.
(MIRA 18:2)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

GUNAR, V.I.; ZAV'YALOV, S.I.

Case of γ-pyrone ring formation in the reaction of diketene with urea derivatives. Izv. AN SSSR. Ser. khim. no.4:747-748 '65. (MIRA 18:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

GUNAR, V.I.; OVECHKINA, L.F.; ZAV'YALOV, S.I.

Synthesis of 1,3-oxazine derivatives based on diketene. Izv. AN SSSR. Ser. khim. no.6:1076-1077 '65.

(MIRA 18:6)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR.

GUNAR, V.I., OVECHKINA, L.P.; ZAV'YALOV, S.I.; PERSHIN, G.N.; MILOVANOVA, S.N.

β-Dicarbonyl compounds. Report No.2: Synthesis and fungistatic activity of some simplest analogs of the antibiotic griseofulvin. Izv. AN SSSR. Ser. khim. no.10:1827-1831 O '64. (MIRA 17:12)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR i Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S. Ordzhonikidze.

MIKHAYLOPULO, I.A.; GUNAR, V.I.; ZAV'YALOV, S.I.

Selective methylation of simplest uracils. Izv. AN SSSR. Ser. khim. no.9:1715 '65. (MIRA 18:9)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

GUNAR, V.I.; OVECHKINA, L.F.; ZAV'YALOV, S.I.

Reaction of diketene with ammonia and amides of carboxylic acids. Izv. AN SSSR.Ser.khim. no.10:1885-1886 '65.

(MIRA 18:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

[illegible]AV'YALOV, Yu.I.; MIKHAYLENKO, L.I.; [illegible]

Synthesis of orotic acid from [illegible]. Zhur. obshch. khim. no.10:1887-1888 '65. (MIRA 18:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

L 48319-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) PF-4/
Pad IJP(c) MJW/JD/HW/JG
ACCESSION NR: AP5007011 S/0129/65/000/003/0057/0060

AUTHOR: Moshkevich, Ye. I.; Gunaza, K. P.; Zlatkina, B. I.

TITLE: Study of the properties of Kh21N5T steel

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 3, 1965, 57-60

TOPIC TAGS: phase composition, austenite, metal mechanical property, heat treatment

ABSTRACT: The phase composition of ten industrial batches of cast Kh21N5T steel was studied at room and high temperatures, and the mechanical properties of metal forged from these batches were studied after various heat treatments. Polished specimens were etched in a reagent made up of 10 g KOH, 10 g $K_3Fe(CN)_6$, and 60 g H_2O. It was found that in the cast alloys the amount of the austenite component changed from 10 to 70% at room temperature, and a definite relationship was observed between the phase composition and the ratio of equivalents of chromium and nickel (see Fig. 1 of the Enclosure). In hardened specimens, the tensile strength was found to increase with the austenite content. In order to obtain tensile strength $\sigma_b \geq 70$ kg/mm^2, no less than 15 to 20% austenite must be present in the metal struc-

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L 48319-65
ACCESSION NR: AP5007011

ture. In the hardened state, such a metal has an impact strength of 20 kgm/cm^2 and higher. Tempering at 550°C causes a substantial change in the mechanical properties: hardening of the metal is associated with a sharp decline in impact strength. Since such changes occur when the amount of the austenitic phase is below 20%, it is concluded that high mechanical properties of the steel require an austenite content of over 20%. The phase composition of the metal of the slabs was determined at the central laboratory of the "Zaporozhstal'" under the supervision of N. F. Cherkashina. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: Zavod "Dneprospetsstal'" (Dneprospetsstal' Plant)

SUBMITTED: 00 ENCL: 01 SUB CODE: MM

NO REF SOV: 000 OTHER: 000

Card 2/3

L 48319-65

ACCESSION NR: AP5007011

ENCLOSURE: 01

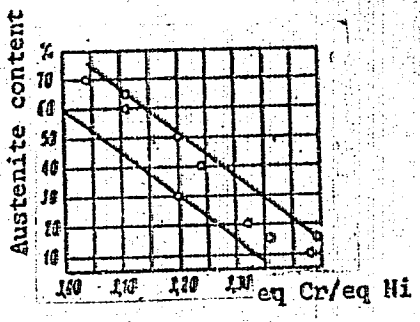

Fig. 1. Phase composition of cast Kh21N5T steel versus chemical composition of the metal

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L 18651-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3004789 S/0129/63/000/008/0055/0059 68

AUTHOR: Bobkov, T. M.; Moshkevich, Ye. M.; Gunaza, K. P.; Zlatkina, V. I. 62

TITLE: Effect of additions of rare-earth metals and their oxides on properties of some stainless steels

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 8, 1963, 55-59

TOPIC TAGS: stainless steel, Kh18N10T steel, AISI 321 steel, Kh23N18 steel, AISI 310 steel, Kh17N13M2T steel, AISI 316T steel, misch metal effect, ferrocerium effect, lanthanum effect, cerium dioxide effect, lanthanum oxide effect, praseodymium oxide effect, steel hot ductility, steel structure, nonmetallic-inclusion content, cast structure, ingot structure

ABSTRACT: The effect of addition of 0.05—0.35% misch metal [50% Ce, 25% La, and 25% various rare-earth metals] or 0.05—0.4% ferrocerium, lanthanum, cerium dioxide, lanthanum oxide, and praseodymium oxide on structure, phase composition, amount of nonmetallic inclusions, room-temperature mechanical properties, and hot ductility of Kh18N10T [AISI 321], Kh23N18 [AISI 310], and Kh17N13M2T [AISI 316] stainless steels has been investigated. None of

Card 1/2

L 18651-63
ACCESSION NR: AP3004789

the additions was found to have a significant effect on the crystal structure of ingots of any steel tested. The forged metal had a fine-grained structure with a low content of oxide and sulfide inclusions. A 0.15—0.25% addition of misch metal reduced the amount of carbonitride inclusions in all steels tested. Kh18N10T steel containing 0.1% misch metal had improved hot ductility. In the Kh23N18 steel addition of 0.3 and 0.05% misch metal improved the ductility at 1100—1250 and 1000C, respectively. Addition of 0.05—0.15% misch metal or 0.15—0.30% La improved ductility of Kh17N13M2T steel at 1000C. Addition of ferrocerium, lanthanum, cerium dioxide, lanthanum or praseodymium oxides brought about no improvement in hot ductility or room-temperature mechanical properties of Kh17N13M2T steel. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Zavod Dneprospetsstal' (Dneprospetsstal' Plant)

SUBMITTED: 00 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: ML NO REF SOV: 000 OTHER: 000

Card 2/2

MOSHKEVICH, Ye.I.; GUNAZA, K.P.; ZLATKINA, B.I.

Studying the properties of Kh21N5T steel. Metalloved. i term. obr. met. no.3:57-60 Mr '65. (MIRA 18:10)

1. Zavod "Dneprospetsstal'".

GUNAZA, L.

My experience in the maintenance of a jigging machine. Mast.ugl. 3 no.2:16 F '54. (MLRA 7:3)

1. Moyshchik Dobropol'skoy TsOF tresta Stalinugleobogashcheniye. (Coal-handling machinery)

ACC NR: AP6029618 (N) SOURCE CODE: UR/0114/66/000/008/0008/0011

AUTHOR: Gunbin, B. L. (Candidate of technical sciences)

ORG: none

TITLE: The structure of the relative flow at the exit from a centrifugal compressor impeller

SOURCE: Energomashinostroyeniye, no. 8, 1966, 8-11

TOPIC TAGS: centrifugal compressor, compressor, compressor impeller, FLOW SEPARATION, FLOW STRUCTURE

ABSTRACT: The results are presented of an investigation of relative flow parameters at the exit from the centrifugal compressor impeller. The measurements were made using a single stage unit with three-channel cylindrical probes, rigidly fixed on the outer diameter of the impeller. Tested were three impellers with relative thickness $\beta_2/D_2 = 0.055$ with inlet and exit angles of $\beta_1 = 32°$ and $\beta_2 = 45°$, respectively, and blade numbers of z_2 -18.24, and 28, at 7800 rpm, which corresponds to a peripheral speed at the outer diameter of the impeller of ~140 m/sec. The following conclusions were reached: a) Flow separation from the trailing surface of the blade was observed in the exit cross section of the flow passage during low-capacity operation. b) The discharge component of the relative velocity vector in the peripheral area of the impeller is transformed in such a way that at rated and low operating regimes, an

Card 1/2 UDC: 621.515:533.6.01.001.24

ACC NR: AP6029618

increase in the velocity from the training surface of the blade toward the leading surface is observed. Orig. art. has: 5 figures.

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 003/

Card 2/2

GUNBIN, B.L.

Controlling the operation of centrifugal forcing pumps.
Gaz. prom. 4 no.11:46-48 '59. (MIRA 13:2)
(Gas, Natural--Pipelines)

GUNBIN, B.L.

Changes in the effective capacity of gas-turbine units. Gaz. prom. 5 no.3:46-48 Mr '60. (MIRA 13:6)
(Gas turbines)

GUNBIN, B.L., inzh.

Pressure coefficient of the runners of centrifugal compressors. Izv. vys. ucheb. zav.; energ. 6 no.6:99-105 Je '63. (MIRA 16:11)

1. Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti. Predstavlena kafedroy glubokogo okhlazhdeniya.

S/115/62/000/004/003/007
E194/E154

AUTHOR: Gunbin, B.L.

TITLE: An instrument for remote temperature measurements of a moving medium

PERIODICAL: Izmeritel'naya tekhnika, no.4, 1962, 16-17

TEXT: In investigations on turbines, heat exchangers and various aerodynamic equipment it is necessary to measure the temperature distribution and average temperature in a fluid medium moving with high speed. This is difficult to do with ordinary thermometers because their time-constant coefficients depend on the Reynolds and Mach numbers of the flow. The present article describes an instrument for making measurements of this kind with high subsonic flow speeds. The schematic diagram of the instrument is an unbalanced bridge with a thermistor in one arm. Any one of four sensing elements may be connected to the measuring circuit in turn by means of a selector switch. The temperature range covered is 0 to 100 °C and besides the full-range scale for coarse measurements there

Card 1/2

are five subsidiary ranges covering a spread of 24° each. Thermistors vary in their properties, and so that a single calibration curve can be used for all the sensing elements, resistances are connected in series and parallel with the thermistors to give them standard characteristics. The error of measurement depends mainly on the accuracy of the galvanometer. Using a microammeter type M91 (M91) with a full-scale deflection of 10 microamps, the error is 0.2 °C. The instrument is easily arranged to take an average of four readings and if these differ from one another by 2 to 4° the difference between the instrument reading and the arithmetic mean temperature is not more than 0.1 °C. The instrument is powered by dry batteries.
There are 2 figures and 2 tables.

L 19554-65 EPA/EWT(1)/EWG(v)/EWP(f)/T-2/EPA(bb)-2/EWP(t)/EWP(b)-4 AEDC(a)/ASD(a)/ASD(p)-3/AFETR/AFTC(a) WW

ACCESSION NR: AP4048335 S/0114/64/000/010/0043/0044

AUTHOR: Gunbin, B. L. (Engineer)

TITLE: Structure of the relatively-moving flow at the entrance of a centrifugal compressor impeller

SOURCE: Energomashinostroyeniye, no. 10, 1964, 43-44

TOPIC TAGS: centrifugal compressor, compressor inlet flow

ABSTRACT: Tests on a model of an axial-inlet centrifugal compressor were performed at 8,700 rpm which corresponded to a peripheral velocity of 140 m/sec; three impellers, with 18, 24, and 28 blades, were studied; impeller outside diameter, D_2 = 305 mm; relative width, b_2/D_2 = 0.055; D_1/D_2 = 0.554; inlet and outlet angles, 32° and 45°, respectively. It was found that: (1) The angle of attack varies differently in different sections of the blade and has a maximum variation at the cover disk; (2) Under optimum-efficiency conditions, angles of

Card 1/2

L 19554-65
ACCESSION NR: AP4048335

attack in all blade sections coincide; (3) Reaction of the blading upon the flow swirl is practically nil, the swirl being caused only by the impeller web and cover disk. Orig. art. has: 3 figures.

ASSOCIATION: Nevskiy mashinostroitel'ny*y zavod (Neva Machine-Building Plant)

SUBMITTED: 00 ENCL: 00

SUB CODE: PR NO REF SOV: 002 OTHER: 000

Card 2/2

ACC NR: AP7002607 (A, N) SOURCE CODE: UR/0413/66/000/023/0115/0116

INVENTORS: Gunbin, B. L.; Shabashov, S. Z.

ORG: none

TITLE: An automatic device for disconnecting a damaged gas pipe. Class 47, No. 189271

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 115-116

TOPIC TAGS: gas engineering, gas conduction, gas flow

ABSTRACT: This Author Certificate presents an automatic device for disconnecting a damaged gas pipe. The device includes a distributing assembly (which activates the drive mechanism of the shut-off organ) and a gauge which controls the change of gas flow in a gas pipe when the latter is damaged (see Fig. 1). To prevent the automatic device from being activated by the changing operational conditions and to activate it when the velocity head exceeds the allowable limit, the gauge (fixed to the automatic device and made in the form of a cylinder) is oriented at right angles to the longitudinal axis of the gas stream. The lateral walls of the cylinder contain four openings. Two of these are placed centrally in respect to the stream during its forward and backward flow. The other two are placed at some angle to the central ones. These openings are connected by pipes (located within the casing of the gauge) to the rigid elements of the distributing assembly which motivates the drive mechanism

Card 1/2 UDC: 621.646.83-522

ACC NR: AP7002607

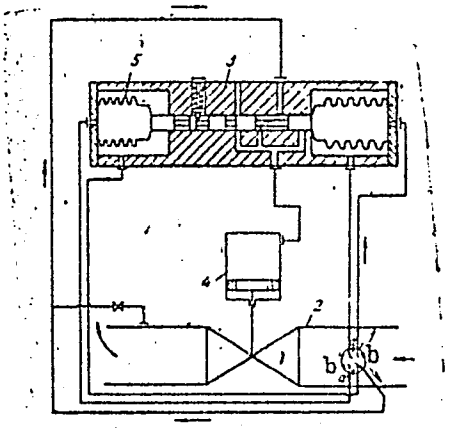

Fig. 1. 1 - gauge; 2 - gas pipe; 3 - distributing assembly; 4 - drive mechanism for the shut-off organ of gas pipe; 5 - rigid elements (a, a^1, b, b^1 are the openings in the cylindrical walls of the gauge)

activating the shut-off organ of the pipe. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 03Aug61

Card 2/2

L 10908-67 EWT(d)/EWT(m)/EWP(h) TCH

ACC NR: AP6006523 SOURCE CODE: UR/0375/65/000/011/0045/0047

AUTHOR: Gunbin, N. A. (Colonel, Candidate of Military Sciences, Hero of the Soviet Union, Military Navigator 1st class) 32

ORG: None

TITLE: Maintaining formation with aircraft

SOURCE: Morskoy sbornik, no. 11, 1965, 45-47

TOPIC TAGS: navigation aid, navigation system, air force training, air force tactic

ABSTRACT: Naval aircraft engaged in long overland or offshore flights, and not equipped with interaircraft navigation instruments, use a method to maintain station in the formation, referred to as the time interval method, but it has inherent difficulties making it inconvenient since it requires giving commands and signals via radio, a situation which may not be tolerated because of the specific tactical situation controlling the flight in question. Nor is it accurate enough. Too, formulas used to derive information required for station keeping must take into consideration several human errors such as the error resulting from the impossibility of making a timely signal of passage through the control point, and the error involved in start- and stopping the stopwatch. The result is an overall error which can be exceedingly large. This may have as its end result the unacceptability of the system for night

Card 1/2

L 10908-67

ACC NR: AP6006523 O

flights or daytime flights in bad weather. The use of linear values, such as kilometers, etc., should be preferred to the use of time values in such system since the use of the former will permit the crews to graphically represent the position of own and other aircraft. The use of linear values also lend itself to ready computation, with resultant values tabulated prior to takeoff and thus are available in flight. Orig. art. has: 5 formulas, 1 table, and 1 figure.

SUB CODE: 01, 15/SUBM DATE: None

Card 2/2 blp

GUNBIN, N.A., Geroy Sovetskogo Soyuza, kand. voyennykh nauk, polkovnik, voyennyy shturman 1-go klassa

Interaircraft navigation. Mor. sbor. 48 no.2:54-59 F '65. (MIRA 18:11)

GUNBIN, N.A., Geroy Sovetskogo Soyuza, kand. voyennykh nauk, polkovnik, voyennyy shturman 1-go klassa

Maintenance of combat formation by airplanes.
Mor. sbor. 49 no.11:45-47 N '65.
(MIRA 18:12)

LIAKUMOVICH, A.G.; GUNBIN, N.S., RUTMAN, G.I.; MAYTSEVA, G.A.; [illegible]

Improved process of butylene dehydrogenation in the synthetic rubber plant in Sterlitamak. Khim.prom. 41 no.7:538-539 Jl '65. (MIRA 18:8)

1. GUNBIN, N. Ya.: BOCHKOVSKAYA, L. V.: RING, V. M.

2. USSR (600)

4. Krivoi Rog - Mining Engineering

7. Experience with the work of all-around brigades in the mines of the Krivoi Rog Basin. Gor. zhur. No. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

GUNBIN, N.Ya.; GORBATOV, V.S., gornyy inzh.; MAKEYEV, A.A.

Industrial test results of multibucket folding scrapers and prospects for using them. Gor. zhur. no.11:48-50 N '61. (MIRA 15:2)

1. Glavnyy inzh. rudnika im. Kirova Krivorozhskogo basseyna (for Gunbin). 2. Nauchno-issledovatel'skiy gornorudnyy institut (for Gorbatov). 3. Glavnyy inzh. shakhty im. Ordzhonikidze Krivorozhskogo basseyna (for Makeyev).

(Scrapers)

GUNBIN, N.Ya., inzh.; VEKSEL'MAN, V.M., inzh.

Increasing labor productivity at the Kirov mine. Met. i gornorud. prom. no.3:43-46 My-Je '62. (MIRA 15:9)
(Krivoy Rog Basin--Iron mines and mining--Labor productivity)

GUNBIN, N.Ya., inzh.; VEKSEL'MAN, V.M., inzh.; MIKHAYLENKO, F.K., inzh.

Rapid upraise mining at the "Severnaia" Mine of the Kirov Mining Administration. Met.i gornorud.prom. no.5:80-82 S-O '62. (MIRA 16:1)

(Krivoy Rog Basin--Iron mines and mining)

GUNBIN, N.Ya., gornyy inzh.; KOSHELENKO, V.M., gornyy inzh.

Growth of labor productivity at the Kirov Mine. Gor. zhur. no.5:12-14 My '64. (MIRA 17:6)

1. Rudnik im. Kirova, Rog.

GUNBIN, Yu.; DEMIDOV, P.; KAZAKOV, M.

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