Smolyakova 40

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(2)

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KRAYEVSKIY, N.A., red.; LEBEDINSKIY, A.V., red.; SMOLYAN, G.L., red.

[Restorative processes in radiation lesions; collection of articles] Vosstanovitel'nye protsessy pri radiatsionnykh porazheniiakh; sbornik statei. Moskva, Atomizdat, 1964. 243 p. (MIRA 17:5)

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SMOLYAN, Z. S.

E-2

USSR/ Organic Chemistry - Synthetic organic chemistry

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11632

Author : Zil'berman Ye. N., Suvorova S.N., Smolyan Z.S.
Title : On Preparation of Adipic Acid by Oxidation of Cyclohexanol with Nitric Acid

Orig Pub : Zh. prikl. khimii, 1956, 29, No 4, 621-627

Abstract : Studied was the effect upon the reaction of oxidation of cyclohexanol (I), by the action of nitric acid, to adipic acid (II), of catalysts (CT), duration of reaction, concentration of HNO_3 and the presence therein of organic acids. Maximum yield of II 81-83%; minimum yield of by-products: glutaric (III) (5.6%), succinic (IV) (3.9%), oxalic (V) (4.2%) acids, is obtained with HNO_3 concentration of 40-50%. With decreasing concentration of HNO_3 yield of II decreases and that of III and IV increases; with 5-10% HNO_3 the main reaction product is III. In presence of CT (NH_4VO_3, $CuCO_3$, $Bi(NO_3)_3.6H_2O$ and NH_4VO_3 + $CuCO_3$ (1:3) yield of II increases and that of IV decreases. NH_4VO_3 inhibites formation of V. In the presence of $CuCO_3$ formation of III

Card 1/2

Smolyan, Z. S.

Preparation of adipic acid by oxidation of cyclohexanol with nitric acid. E. N. Zil'berman, S. N. Suvorova, and Z. S. Smolyan. *Zhur. Prikl. Khim.* 29, 679–84 (1956) (Engl. translation).—See *C.A.* 50, 14646*b*. R M R

SOV/81-59-8-28430

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 8, p 406 (USSR)

AUTHORS: Smolyan, Z.S., Kurdyumova, N.A., Pyryalova, P.S.

TITLE: The Low-Temperature Chlorination of Ethane in the Presence of Initiators

PERIODICAL: Tr. po khimii i khim. tekhnol., 1958, Nr 1, pp 187 - 189

ABSTRACT: It has been shown that the chlorination of ethane at temperatures of 65 - 70°C in a medium of CCl_4 containing about 1 mol. % of dinitrile of the azoisobutyric acid (I), benzoyl peroxide (II) or dimethylpercarbonate (III), leads to the formation of C_2H_5Cl and polychlorosubstituted ethanes. I, II and III play the role of reaction initiators forming active radicals in the temperature range indicated which start the development of the chain process. The conversion of ethane in the presence of initiators at a ratio of $Cl_2 : C_2H_6 = 1 : 2.5$ is about 30%, and at a ratio of 1 : 1.7 it is about 60%. II is an initiator of more long-lasting action producing the largest quantity of C_2H_5Cl. The diagram of a laboratory installation for chlorination is presented.

Card 1/1

O. Chernitsov

The Physical and Chemical Investigation of Several Systems Containing Triethyl-Aluminum and Its Derivatives

complex $Al(C_2H_5)_2H.C_9H_7N$ and the complex $Al(C_2H_5)_2H.2C_2H_7N$ with considerable electric conducting power. Ethoxy-diethyl--aluminum does not form complexes with quinoline. In the course of the investigation also the complex compound $Al(C_2H_5)_2Br.C_9H_7N$ not described as yet was eliminated. The potentiometric titration confirmed the results obtained potentiometrically, the sudden modification of the electromotive force in the singular points being remarkably more distinctly marked here than the peaks of the electric conductivity. Two diagrams show the curves of the conductometric and potentiometric titration of a mixture of $Al(C_2H_5)_3$, $Al(C_2H_5)_2Br$, $Al(C_2H_5)_2H$ and $Al(C_2H_5)_2OC_2H_5$. The course of these curves is briefly explained. In the titration of the equimolecular mixture $Al(C_2H_5)_2Cl + AlC_2H_5Cl_2$ a conductometric investigation of this mixture was impossible. The present paper is also important from the point of view of an eventually possible quick and reliable determination of the active triethyl--aluminum for the estimation of the relation between catalyst and the second catalyst in the production of the polyalkanes.

SVOLYAN, Z.S., Cand Chem Sci -- (diss) "Initiated chlorination and dehydrochlorination as an industrial method for obtaining monomers." Gor'kiy, 1959, 14 pp (Min of Higher Education USSR. Gor'kiy State Univ im N.I. Lobachevskiy) 150 copies (KL, 28-59, 124)

5(3)

SOV/80-32-4-33/47

AUTHORS: Berezin, I.V., Denisov, Ye.T., Suvorova, S.N., Smolyan, Z.S. and Emanuel', N.M.

TITLE: The Oxidation of a Mixture of Cyclohexane and Cyclohexanol to Adipic Acid (Okisleniye smesi tsiklogeksana i tsiklogeksanola v adipinovuyu kislotu)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 888-892 (USSR)

ABSTRACT: Production of monomers for plastics and synthetic fibers is one of the important tasks of modern chemistry. The utilization of various waste materials can contribute to the solution of this task. One of these waste materials is the mixture of cyclohexane, 80 mol.%, and cyclohexanol, 20 mol.%. The authors studied the kinetics of the oxidation of this mixture, called "anol head", with an aim of obtaining cyclohexane and adipic acid. The oxidation was carried out in an autoclave at a pressure of 20 atm by molecular oxygen at temperatures of 130 and 150°C. Kinetic curves of accumulation of the reaction products were obtained and the possibility of producing adipic acid by oxidizing the "anol head" was proven. It was shown that some peculiarities in the oxidation kinetics were determined wholly by the concentration of cyclohexanol

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The Oxidation of a Mixture of Cyclohexane and Cyclohexanol Into Adipic Acid

in the "anol head". The process of oxidizing "anol head" is to be carried out with continuous removal of adipic acid obtained in order to prevent its burning into lower dicarboxylic acids, and the process thereby acquires a continuous character.
There are 3 sets of graphs and 7 Soviet references.

SUBMITTED: November 1, 1957

Card 2/2

5(3) SOV/80-32-4-35/47

AUTHORS: Freydlin, L.Kh., Sharf, V.Z. and Smolyan, Z.S.

TITLE: On the Composition of the Products of Dehydrogenation of Cyclohexanol on a Zinc Catalyst and on the Transformation of the Obtained Vat Residue Into Cyclohexanone (O sostave produktov degidrirovaniya tsiklogeksanola na tsinkovom katalizatore i o prevrashchenii poluchayushchegosya kubovogo ostatka v tsiklogeksanon)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 901-905 (USSR)

ABSTRACT: The authors studied the composition of the products obtained in the industrial process of dehydrogenation of cyclohexanol on a zinc catalyst and found out that the yield of the latter amounted to 80 or 85%. The amount of cyclohexanol which did not react was 10 to 15%. In addition to these, in the products of the reaction were discovered the following substances: cyclohexene in an amount of 0.3 to 0.5%, water - 0.1 to 0.2%, phenol - 0.1 to 0.15%, cyclohexyl ether - 0.02 to 0.03%, and cyclohexylidencyclohexanone-2 in an amount of 0.5 to 1%. The latter constitutes about 50% of the vat waste which can be transformed into

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S/595/60/000/000/001/014
E075/E435

AUTHORS: Topchiyev, A.V., Tolchinskiy, I.M., Krentsel', B.A., Smolyan, Z.S.

TITLE: Polymerization of olefins for the production of intermediates for plastic masses and synthetic fibres

SOURCE: Vsesoyuznoye soveshchaniye po khimicheskoy pererabotke neftyanykh uglevodorodov v poluprodukty dlya sinteza volokon i plasticheskikh mass. Baku, 1957. Baku, Izd-vo AN Azerb. SSR, 1960. 37-49

TEXT: A description is given of a method for the polymerization of propylene using triethylaluminium in combination with titanium tetrachloride as catalyst. Purified propylene was passed into a 0.5 litre glass reactor containing a solution of the catalyst in pet.ether, b.pt. 85 to 115°C. The reactor was fitted with a thermostatic jacket and a fast stirrer. Experiments under low pressure (4 to 6 atm) were carried out in a stainless steel reactor fitted with a paddle stirrer. The optimum temperature for the polymerizations was found to be 50°C. Results of the polymerization at atmospheric pressure are listed in Table 4. Another catalyst - triisobutylaluminium - was also used

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Polymerization of olefins ...

successfully. Triethylaluminium is synthetized from Al turnings (99.5% purity) and ethylbromide with manganese chloride acting as a flux. The active ethyl groups in the product are determined by potentiometric titration with quinoline in dioxane solution (A.I.Grayevskiy's method). Quinoline forms a complex only with the active constituents, i.e. $Al(C_2H_5)_3$, $Al(C_2H_5)_2Br$ and $Al(C_2H_5)_2H$. This mixture can be used successfully as a catalyst. Approximate composition of the product is: Al 17 to 20% wt, Br 13 to 20% wt, active ethyl groups 55 to 65% wt. $TiCl_4$ used had a density of 1.70 to 1.72. Dried pet.ether and "white spirit" were used as catalyst solvents. The prepared polymer is washed with absolute alcohol, 0.5% aqueous HNO_3 and then with 30% aqueous alcohol solution. It is dried at 60 to 70°C. The high molecular weight components are separated by fractional precipitation (acetone added to toluene solution). Experiments with different batches of catalysts and different molar ratios of catalyst and cocatalyst have shown that the optimum ratio is of the order of 8 moles of $Al(C_2H_5)_3$ to 1 mole of $TiCl_4$. Analogous results are obtained for triisobutylaluminium and lithium hydride.
Investigation of catalyst consumption in relation to its

Polymerization of olefins ...

concentration in the solvent during reaction showed that the best concentration is approximately 4% wt. In conclusion, it is mentioned that the process for the production of polypropylene can be considerably simplified by polymerizing pure condensed propylene or the propane-propylene fraction of cracking gas. A.A.Korotkov is mentioned in the article in connection with his contibution in this field. There are 8 figures and 9 tables.

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Table 4.

	Feedstock	
	Propylene spirit	Tech. Propylene
$Al(C_2H_5)_3$, moles	5	5
$TiCl_4$, moles	1	1
Conc. catalyst in sol. % wt.	5	5
Solvent	pet.ether	pet.ether
Gas passed, litres	70	68
Unreacted propylene, litres	55	54
Conversion, %	21.4	20.5
Time of reaction, hours	3.0	3.0
Characteristic viscosity	0.90	0.86

Card 4/4

S/153/60/003/003/029/036/XX
B016/B058

AUTHOR: Smolyan, Z. S.

TITLE: Studying the Decomposition Process of Dichloroethane in the Presence of Initiators for the Purpose of Producing Vinyl Chloride

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Khimiya i khimicheskaya tekhnologiya, 1960. Vol. 3. No. 3, pp. 514 - 521

TEXT: The author reports on his study of the decomposition of dichloroethane (DCE) in the presence of initiators (R - R) for the purpose of producing vinyl chloride (VC). In the introduction he explains the kinetic rules governing the initiated dehydrochlorination of DCE on the basis of general theorems of the chain reaction theory. On the basis of the papers by N. N. Semenov (Refs. 14,15), the author mentions the following scheme of the process mentioned (see attached scheme). From the individual phases of this process he derives the kinetic equation:

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Studying the Decomposition Process of Dichloroethane in the Presence of Initiators for the Purpose of Producing Vinyl Chloride

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$W = K_{equ}^{1/2} \left[R - R\right]^{1/2} K_{ch} \left[DCE\right] \nu$ (1). W being the rate of the gross decomposition reaction of DCE; K_{equ} = the equilibrium constant of the decomposition of the initiators $\left[R - R\right]$ in mole/l; K_{ch} = the equilibrium constant of the chain reaction; $\left[DCE\right]$ = the concentration of DCE in mole/l; ν = the length of the chain. Assuming that the length of the reaction chain is little changed with temperature, the author derives, on the basis of equation (1), the following reaction:

$E = E_1 - \frac{1}{2} Q$ (2). E being the apparent energy of activation of the gross processes E_1 the energy of activation of the chain-continuation process, and Q the heat of dissociation of the initiator molecules. From the calculations on the basis of equation (2), the author concludes that the decomposition rate of DCE at 400°C with initiator is 6000 times faster than without initiator. He concludes from the Table on p. 515 that chlorine and bromine exert about the same initiating effect, while

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Studying the Decomposition Process of Dichloroethane in the Presence of Initiators for the Purpose of Producing Vinyl Chloride

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iodine must be practically inactive as an initiator. The author proved these calculations experimentally (Table 3). Fig.1 shows a scheme of the laboratory arrangement. The reaction vessel was made either from refractory glass or from steel of the type 1.1809 (1Kh18N9T). Fig.3 shows that the degree of DCE conversion is lower in the steel vessel than in the glass one. The author recommends this steel type for the manufacture of experimental reaction vessels. The author stated next that at 400°C and somewhat higher, the initiated DCE decomposition proceeds with industrially applicable rate. Up to 100 g/l VC are thereby produced from 1 l reaction volume. On the basis of Fig.2, the author recommends a contact duration of 20 sec. The quality of the initial DCE is decisive for the decomposition rate of DCE. The differences in the reaction rate decreased with increasing temperature and evened up at 400 to 425°C. The author finally proved that the VC from the initiated reaction is suitable for the manufacture of polyvinyl chloride without additional purification, and for the subsequent production of perchloro vinyl resin. This paper was presented at the All-Union Conference "Means of the Synthesis

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Studying the Decomposition Process of Dichloroethane in the Presence of Initiators for the Purpose of Producing Vinyl Chloride

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of Initial Products for the Manufacture of High Polymers" held at Yaroslavl' from September 29 to October 2, 1958. D. I. Mikhaylovskiy participated in the experiments. There are 9 figures, 1 table, and 16 references: 7 Soviet, 2 US, 5 British, 1 Italian, and 3 German.

CT 1960, №3
11.517

$$M+R{-}R \rightleftarrows 2R\cdot + M;\ R\cdot + CH_2Cl{-}CH_2Cl \rightarrow RH + CH_2Cl{-}\dot{C}HCl;$$
$$\dot{C}H_2Cl{-}\dot{C}HCl \rightarrow CH_2{=}CHCl + Cl;\ CH_2Cl{-}CH_2Cl + Cl \rightarrow HCl +$$
$$+ CH_2Cl{-}\dot{C}HCl;\ Cl + Cl + M \rightarrow Cl_2 + M;\quad CH_2Cl{-}\dot{C}HCl + Cl \rightarrow$$
$$CH_2Cl{-}CHCl_2;\ 2CH_2Cl{-}\dot{C}HCl \rightarrow CH_2Cl{-}CHCl{-}CHCl{-}CH_2Cl;$$
$$R\cdot + Cl + M \rightarrow RCl + M;\ R\cdot + CH_2Cl{-}\dot{C}HCl \rightarrow CH_2Cl{-}CHClR;$$
$$R\cdot + CHCl{=}CH_2 \rightarrow RCH_2{-}\dot{C}HCl;\ Cl + CH_2{=}CHCl \rightarrow \dot{C}H_2{-}CHCl_2.$$

Card 4/4

29041
S/081/61/000/018/021/027
B103/B101

53700

AUTHORS: Smolyan, Z. S., Kurdyumova, N. A., Pyryalova, P. S.

TITLE: Low-temperature chlorination of ethane in the presence of initiators

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 18, 1961, 340, abstract 18L10 (Sb. nauchn. rabot In-t Fiz.-organ. khimii AN BSSR, no. 8, 1960, 119-125)

TEXT: The possibility of a low-temperature chlorination of ethane in CCl_4 in the presence of initiators was pointed out. The reaction products are halogen derivatives of ethane with different degrees of substitution (27-35% C_2H_5Cl, 65-73% polychloro ethanes). Practical hints for determining the parameters of the process and its realization in an apparatus are given. [Abstracter's note: Complete translation.]

X

Card 1/1

5(3)

AUTHORS: Smolyan, Z.S., Pyryalova, P.S., Kurdyumova, N.A. S/074/60/029/01/002/005 B008/B006

TITLE: Progress in the Field of Chlorination of Saturated Hydrocarbons

PERIODICAL: Uspekhi khimii, 1960, Vol 29, Nr 1, pp 23-54 (USSR)

ABSTRACT: This is a survey of papers published in the USSR and in foreign countries from 1947 to 1958 on the chlorination of saturated hydrocarbons. A marked growth of the chemical industry of the USSR is planned for the period between 1958 and 1965. The necessity of utilizing natural and industrial petroleum gases as raw materials is mentioned. At present, there is a noticeable tendency to increase the production of chlorine-substituted hydrocarbons. Chlorine derivatives of hydrocarbons can be prepared in various ways: The methods mainly applied are 1) hydrochlorination and chlorination of unsaturated hydrocarbons, and 2) chlorination of saturated hydrocarbons. Valuable work was done in this field by Butlerov and V.V. Markovnikov (Ref 6), D.V.Tishchenko (Ref 8), foreign (Refs 10-13), and Soviet scientists (Refs 14-29). N.N.Semenov and his school (Refs 14,15,16,29) are particularly noteworthy for

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their theoretical and experimental investigations of the mechanism of chain reactions. By reason of their argumentation, the chain mechanism of photochlorination may be regarded as an established fact. Further papers on this subject are given in references 10, 29-47. In industry, thermal chlorination of paraffins is carried out at 400 - 600°. These temperatures ensure a considerable reaction rate. Apart from chain reactions, homogeneous bimolecular reactions evidently take place in thermal chlorination. At sufficiently high temperatures, thermal chlorination is to a greater or less extent accompanied by pyrolysis of the initial and chlorinated products. Also, a certain amount of isomerisation of intermediates occurs. Thus, polychlorides are formed not only by chlorination of the monochloride, but also by chlorination of compounds formed by pyrolysis or isomerisation. Investigations of the chlorination of saturated hydrocarbons is mainly concentrated on the chlorination reactions of methane (Refs 10, 23,33,34,48-71). The thermal chlorination of methane, which has been realized on an industrial scale in the USSR, is described in detail in reference 72. The production of methylene

chloride in England and Eastern Germany is treated in references 73 and 74 respectively. Further chlorination methods applied in Germany are described in references 75-78. The usual preparation of carbon tetrachloride by reacting elemental chlorine with carbondisulfide (Refs 78-79) is replaced by the thermal or photochemical chlorination of methane (Ref 80). A new method developed in Romania is mentioned (Ref 81). The chlorination reactions of the other gaseous paraffins, (e.g., ethane, propane, butane) are less thoroughly investigated. The thermal chlorination of ethane is described in references 59, 82-86, and the thermal chlorination of propane and other hydrocarbons in references 6, 19,23,27,53,59,87-104. Comparatively little has been published on catalytic and photochemical chlorination processes. Of these, the reactions of methane and ethane were mainly investigated. A.V.Topchiyev and V.P.Alaniya (Ref 105) showed that the application of homogeneous catalysts in radical reactions yields very interesting results. It may be seen from publications (Refs 106-111) that various metal chlorides as well as adsorbing materials mixed with crushed calcium oxide have been used as catalysts. In paraffin chlorination, the

conditions required to obtain a certain reaction product depend not only on the type of catalyst but also on the initial paraffin. In photochlorination of paraffins, the substitution rate of primary and secondary hydrogen atoms is hardly influenced by the use of catalysts such as the chlorides of antimony, lead, aluminum, titanium, bismuth, or by iodine or sulfur. The catalytic chlorination of methane is discussed in references 24,25,48,109,112-138, and that of ethane and other saturated hydrocarbons in references 11, 21, 105, 109-111, 113, 139-147. The photochlorination reaction, which involves the splitting of a molecule into two atoms or radicals by a photon, is of great significance for the investigation of the theory of chain reactions. Both gaseous and liquid hydrocarbons can be chlorinated by the photochemical method (Refs 148-174). At present, great interest is taken in initiated chlorination. The introduction of materials into the reaction zone, which are able to form a great number of radicals, facilitates the dissociation of chlorine molecules into atoms, thus enabling chlorination at lower temperatures. In references 7,10,106, 107,110,176-180 low-temperature chlorination and the applica-

Progress in the Field of Chlorination of Saturated Hydrocarbons

tion of various types of initiators are described. The following Soviet scientists are mentioned: B.A.Krentsel', A.V. Topchiyev, D.Ye.Il'ina, V.A.Nekrasova, N.I.Shuykin, Ya.P. Choporov, O.A.Tishchenko, V.T.Vdovichenko, I.P.Galenko, I.G. Sarashvili, R.S.Galanina, A.S.Nekrasov, A.Trifonov, A.I. Kipriyanov, T.P.Kussner, N.A.Pokatilo, L.N.Andreyev, S.S. Nametkin, A.G.Serebrennikova, A. Dobryanskiy, Ye.Gurevich, A.Lemke, D.V.Tishchenko, N.I.Kursanov, R.S.Galanina, Yu.G. Mamedaliyev, M.Efendieyeva, M.M.Ketslakh, D.M.Rudkovskiy, I.F.Suknevich, L.N. Terenin, and V.N.Kondrat'yev. There are 13 figures, 5 tables, and 180 references, 53 of which are Soviet.

Card 5/5

S/190/61/003/001/011/020
B119/B216

AUTHORS: Smolyan, E. S., Grayevskiy, A. I., Demin, O. I., Fukin, V. K., Matveyeva, G. N.

TITLE: Certain rules on polymerization of ethylene on heterogeneous catalysts

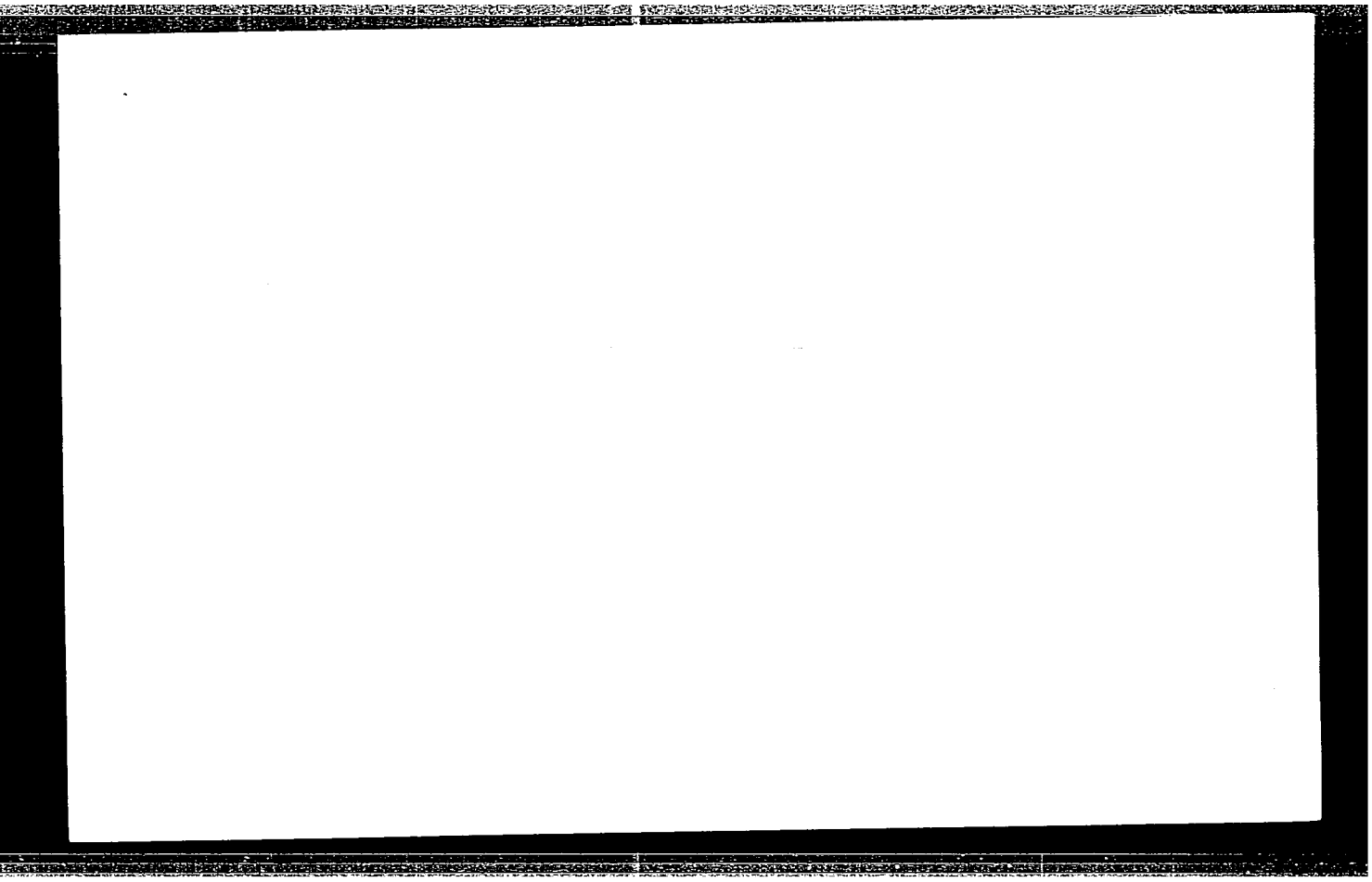
PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 1, 1961, 81-83

TEXT: The authors point out the fact that the catalysts of the type $TiCl_4$ plus organometallic alkylating agent used for the preparation of low-pressure polyethylene rapidly lose their high activity in the course of the reaction, dropping to one sixth of the initial activity within 30 to 40 min. The present work attempts to find the causes for this drop in activity. Experiments were carried out on polymerization of polyethylene on catalysts of the systems $TiCl_4$ + AlR_3 ($Al(C_2H_5)_2Br$, $AlC_2H_5Cl_2$, $Al(C_2H_5)_2\ OC_2H_5$, $Al(C_2H_5)_3$, $AlC_2H_5Cl(OC_2H_5)$ and other compounds). Polymerization was performed in an autoclave at 60°C and a pressure of 4 atm. abs. Individual

Certain rules on polymerization of...

catalysts were prepared by mixing the components under argon in a special thermostat and kept there for use. Catalyst activity was determined from the initial polymerization rate and, with the same results, from the polyethylene yield. It was found that the activity of all the catalysts is low at the very outset but increases to a maximum within 4 to 5 min and then drops to practically zero within another 20 to 30 min. The same effect was observed on catalysts removed from the argon atmosphere and placed in the reaction vessel in the absence of ethylene for polymerization. The authors found that the activity of a catalyst of the type under study depends on the concentration ratio of Ti^{3+} and Ti^{4+} (low initial activity due to the sole presence of Ti^{4+}, maximum activity on reaching the optimum Ti^{3+} : Ti^{4+} ratio, followed by decrease with increasing Ti^{3+} content). Further experiments showed that the optimum Ti^{3+} : Ti^{4+} ratio and thus also the maximum activity may be maintained constant by careful addition of a corresponding quantity of oxidizing agent (to reoxidize excess Ti^{3+}). Air and O_2, respectively, were used as oxidizing agents. There are 3 figures and 3 non-Soviet-bloc references.

Card 2/3



APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651720014-4"

33438

S/064/62/000/001/001/008
B110/B138

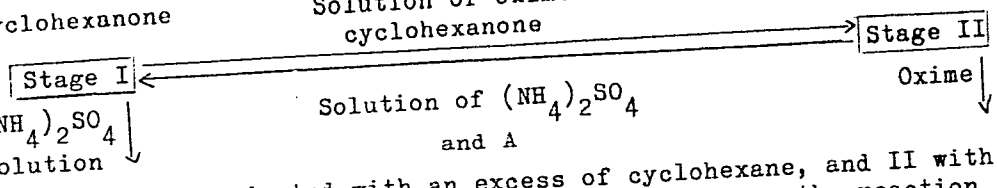
15.8080

AUTHORS: Kotlyar, I. B., Matveyeva, G. N., Smolyan, Z. S., Fogel', Ts. I., Gulyakov, V. M., Kudryavtsev, Ye. N.

TITLE: Continuous method of producing cyclohexanone oximes

PERIODICAL: Khimicheskaya promyshlennost', no. 1, 1962, 18 - 19

TEXT: A two-stage, continuous method of oxime production has been developed. Not only could it be automated, it also produces better quality oximes, and reduces losses of hydroxylamine hydrosulfate (A):



Reaction I is conducted with an excess of cyclohexane, and II with an excess of A. The formation of cyclohexanone oximes follows the reaction

Card 1/6

Continuous method of producing...

2  + $(NH_2OH)_2 \cdot H_2SO_4 \longrightarrow$ 2  + H_2SO_4 + H_2O, with H_2SO_4 being neutralized by NH_3. Thus, the acidity indicates the stage of oxime formation. Preliminary experiments were carried out to determine τ, the contact period which must elapse before the acidity of the reacting mass becomes constant, and the percentage extraction of A as dependent on its concentration in the initial sulfate solution. Results: τ = 15 - 20 min; optimum A concentration ~20 g/liter. B and the stage II sulfate solution containing 20 - 25 g/liter of A pass continuously into oximator 1 (Fig. 1) of stage I. The resulting mixture is passed into 2, where it is neutralized with gaseous NH_3. The bottom layer in separator 3, spent sulfate solution, is passed into an evaporator, the upper one (oxime solution and B) into collector 4, and thence into stage II oximator 5, where it is mixed with a new A solution. NH_3 is used in the stage II neutralizer 6. The upper oxime layer in separator 7 passes to the next stage, and the sulfate solution passes via collector 8 into oximator 1. A stoichiometric ratio must be preserved between the fresh amounts of B and A fed into 1 and 5. There are 1 figure and 2 tables.

Card 2/2

DEVYATYKH, G.G.; ZORIN, A.D.; DUDOROV, V.Ya.; YEZHELEVA, A.Ye.; SMOLYAN, Z.S.

Separation of bivinyl from the butane-butylene fraction by extractive rectification. Zhur.prikl.khim. 35 no.7:1597-1601 Jl '62. (MIRA 15:8)
(Butadiene) (Butane) (Extraction (Chemistry))

BODRIKOV, I.V.; SMOLYAN, Z.S.; KORCHAGINA, G.A.

Role of a solvent in the reactions of halogenation of olefins with a quaternary carbon atom at a double bond. Zhur. ob. khim. 35 no.5:933 My '65. (MIRA 18:6)

L 41395-66

ACC NR: AR6014598 SOURCE CODE: UR/0274/65/000/012/A011/A011

AUTHOR: Smolyanets, I. F.

30
B

TITLE: A simple method for suppressing the carrier

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 12A84

REF SOURCE: Tr. Uchebn. in-tov svyazi, vyp. 25, 1965, 33-42

TOPIC TAGS: carrier frequency, signal distortion

ABSTRACT: A method is given for suppressing the carrier frequency, in which the properties of the third current harmonic are used. It is shown that in the diode circuit with a constant amplitude of driving voltage the amplitude of the third harmonic is proportional to some coefficient $\beta_3(\theta)$ which depends only on the cutoff angle and is equal to $\beta_3(\theta) = 2/3\pi \sin^3(\theta) \cdot \cos\theta$. The third harmonic varies monotonically with some distortions in the interval $\cos\theta < \pm 0.5$ and is equal to zero for $\cos\theta = 0$. A simpler circuit selecting the third harmonic of the AM oscillations can then be used instead of balanced modulators. A block diagram of the device is presented, the output signal spectrum is analyzed, and the nonlinear distortions for various modulation indices are determined. The results of the experimental verification are given. 3 illustrations, 1 table, bibliography of 4 citations. L. S. [Translation of abstract]

SUB CODE: 17, 09

Card 1/1

UDC: 621.376.2.001

BERLOV, G. A. (L'vov); SMOL'YANIKOV, A. V., prof., nauchnyy rukovoditel';
PAL'CHEVSKIY, Ye. I., prof., nauchnyy rukovoditel'

Changes in the perivascular connective tissue of the hypertrophied heart. Arkh. pat. no.7:41-46 '61. (MIRA 15:4)

(HEART—DISEASES)

SMOL'YANINKOV, M.A., red.

[Materials of the scientific conference in 1962] Materialy nauchnoi konferentsii 1962 g. Voronezh. Vol.1. 1963. 411 p. (MIRA 18:3)

SMOL'YANINOV, A. V.

"Coronary Insufficiency at a Young Age".

Voyenno Meditsinskiy Zhurnal, No. 4, 1962

BARANNIKOV, A., uchastkovyy mekhanik; SMOL'YANINOV, A.

Device for the T-41 hoist to be used for feeding materials through windows. Na stroi. Mosk. 2 no.9:26 S '59. (MIRA 13:2)

1.Glavnyy mekhanik stroitel'nogo uchastka No.60 tresta "Stroitel'" (for Smol'yaninov). 2.Stroitel'nyy uchastok No.60 tresta "Stroitel'" (for Barannikov).
(Hoisting machinery--Equipment and supplies)

SMOL'YANINOV, A.A., kand. tekhn. nauk; KHROMETS, Yu. N., kand. tekhn. nauk; ANTONOV, Ye. A., inzh.

Centrifuged prestressed contact system poles reinforced by hardened steel. Transp. stroi. 8 no. 5:16-19 My '58. (MIRA 11:7)
(Electric lines--Poles)
(Prestressed concrete construction)

ALEKSEYEV, Aleksey Pavlovich, kand. tekhn. nauk; DISSON, Pavel Solomonovich, inzh.; SESSAREVSKIY, Aleksandr Nikolayevich, inzh.; SMOL'YANINOV, Aleksandr Andreyevich, kand. tekhn. nauk; SHUPYGIN, Vladimir Pavlovich, kand. tekhn. nauk; SHADRIN, N.A., prof., retsenzent; GOL'SHUKH, V.V., inzh.; ABRAGAM, S.R., inzh., red.; BOBROVA, Ye.N., tekhn. red.

[Construction operations in railroad electrification]Stroitel'nye raboty pri elektrifikatsii zheleznykh dorog. [By] A.P. Alekseev i dr. Moskva, Transzheldorizdat, 1962. 287 p. (MIRA 15:12)

(Railroads--Electrification)
(Railroads--Buildings and structures)

SMOL'YANINOV, A.A., kand.tekhn.nauk; KRYUKOV, Ye.P., kand.tekhn.nauk;
OREL, A.A., inzh.

Prefabricated elements of the reinforced concrete foundations of stationary contact-network poles with flexible cross pieces. Trudy TSNIIS no.47:83-104 '63. (MIRA 16:5)
(Precast concrete construction) (Electric lines--Poles and towers)

IVANOV, F.M., kand.tekhn.nauk; SMOL'YANINOV, A.A., kand.tekh.nauk; SOLN-TSEVA, V.L., kand.tekhn.nauk

Waterproofing the foundation of poles of contact networks. Transp. stroi. 13 no.9:51-54 S '63. (MIRA 16:12)

BERG, O.Ya., doktor tekhn.nauk, prof.; PISANKO, G.N., kand.tekhn.nauk; SMOL'YANINOV, A.A., kand.tekhn.nauk; SHCHERBAKOV, Ye.N., inzh.

Causes of the formation of longitudinal cracks in centrifuged supports of overhead contact systems. Transp.stroi. 15 no.10:42-46 O '65. (MIRA 18:12).

SHCL'YANINOV, A. F., Cand of Tech Sci -- (diss) "Investigation of the Process of Rolling in Rollers with Interchangeable Radii," Dnepropetrovsk, 1959, 16 pp (Dnepropetrovsk Metallurgical Institute im Stalin) (KL, 2-60, 114)

CHEKMAREV, A.P., akademik; SMOL'YANINOV, A.F., inzh.; KLIMENKO, P.L., inzh.

Investigating pressure during rolling with variable radius rolls.
Izv. vys. ucheb. zav.; chern. met. 2 no.4:65-72 Ap '59.
(MIRA 12:8)

1.Dnepropetrovskiy metallurgicheskiy institut. 2.AN USSR
(for Chekmarev).
(Rolling (Metalwork)) (Deformations (Mechanics))

S/148/60/000/006/003/010

AUTHORS: Chekmarev, A. P., Smol'yaninov, A. F.

TITLE: The Angle of Neutral Section in Rolling With Variable Roller Radius

PERIODICAL: Isvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgia, 1960, No. 6, pp. 77-87

TEXT: The authors investigated two cases of rolling, i. e., rolling with increasing and decreasing of the radius roller. The intermediate section of the roller is described by the equation of a logarithmic spiral. An analysis of equations derived is presented and the value of the maximum grip angle depending on the angle of roller tapering is given for rolling with increasing and decreasing roller radius. An analysis of equations is presented for the angles of neutral section in rolling with variable radius, depending on changes in the friction angle when ψ (tapering angle) is constant. The possible range of application of these equations is determined. The mean value of the coefficient of external friction can be experimentally determined by the method of intermediate sections in rolling with rollers of variable radius. There are 8 sets of graphs and 3 Soviet references.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)

SUBMITTED: June 25, 1959.

Card 1/1

CHEKMAREV, A. P., akademik; SMOL'YANINOV, A. F., kand. tekhn. nauk;
KLIMENKO, P. L., kand. tekhn. nauk; MALYY, Yu. G., inzh.

Pressure in rolling between rolls with a variable radius.
Nauch. trudy DMI no.48:167-173 '62. (MIRA 15:10)

1. Akademiya nauk Ukrainskoy SSR (for Chekmarev).

(Rolling(Metalwork))

S/148/63/000/001/007/019
E193/E383

AUTHORS: Chekmarev, A.P., Smol'yaninov, A.F., Klimenko, P.L. and Lebedik, G.L.

TITLE: Roll-pressure during rolling in rolls with varying radius

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no. 1, 1963, 78 - 88

TEXT: The investigation reported in the present paper was carried out on stand 330, equipped with rolls whose design is shown in Fig. 1 (roll with varying radius). A roll of this type comprised 4 segments with constant radii (R_{max} = 199.5 mm and R_{min} = = 184.75 mm), joined by 4 intermediate segments with varying radii, the tangent of the taper angle ($\tan\psi$) characterizing these segments being 0.1, 0.2, 0.3 and 0.4. The experiments were conducted on lead and steel specimens measuring, respectively, 43 x 40 and 45 x 40 mm. The roll-pressure was measured with the aid of dynamometers mounted in the rolls and measuring the forces normal to the roll surface. 3 dynamometers were mounted in each intermediate segment in sections I, II and III with one dynamometer

mounted in the neighbouring segments with constant radii (sections IV and V); the positioning of sections I-V in and near the segment with $\tan \psi = 0.1$ and 0.2 is shown in Fig. 2; the positioning of dynamometers in the other two segments was similar. Setting of the rolls was such that the reduction given to the rolled specimen in passing between sections of rolls with constant radii (R_{min} and R_{max}) remained constant in each series of experiments, the reduction in the segments with R_{min} being 5 mm for the lead and 6 mm for steel specimens. For comparison, the roll pressure was also determined during rolling on three stands with rolls of constant radii equal to the radii of the experimental rolls at points at which the dynamometers were mounted in segments with varying radii. Experiments on lead were conducted at room temperature and steel specimens were rolled at 1 050 °C. The results (all of which are reproduced graphically in the form of curves showing the distribution of roll-pressure in various segments of the rolls) can be summarized as follows: 1) in rolling under conditions of increasing reduction the roll pressure

Roll-pressure during rolling ....

P increases on passing from section I to section III in each of the intermediate segments. In the case of lead, the maximum roll pressure for sections I and II, the segment with tan Ψ = 0.1, is 4.5 and 7.8 kg/mm^2, respectively, the corresponding figures for the segment with tan Ψ = 0.2 being 3.8 and 7.2 kg/mm^2. This effect is caused by the fact that on passing from section I to section II, the absolute reductin in thickness increases (from 10-29 mm in thecase of lead) and so does the deformation rate; 2) the roll pressure in section I is practically the same for all values of tan Ψ; the value of P in section II of the segment with tan Ψ = 0.1 is higher than in the three remaining segments. P in section III decreases with increasing tan Ψ ; 3) the conditions during rolling of lead in segments with tan Ψ = 0.3 and 0.4 are such that the contact angle is smaller than the friction angle. The effect of tan Ψ on P during rolling of steel is less pronounced than in the case of lead because the condition in the former case are such that the contact angle is practically equal to the friction angle; 4) the effect of tan Ψ on P is also less pronounced during rolling under conditions of decreasing reduction. In this case,

Card 3/5

the pressure exerted on the rolls by lead in section I is the same for segments with tan ψ = 0.1 and 0.2; in segments with tan ψ = 0.3 and 0.4 slipping takes place in section I because the contact angle is then considerably larger than the friction angle. P in sections II and III decreases with increasing tan ψ ; 5) owing to the geometry of the intermediate segments P the repelling forces during rolling under conditions of decreasing reduction increase with increasing tan ψ ; since the tensile stresses also increase due to the fact that the contact angle exceeds the friction angle, the roll pressure under these conditions should decrease with increasing tan ψ . There are 6 figures.

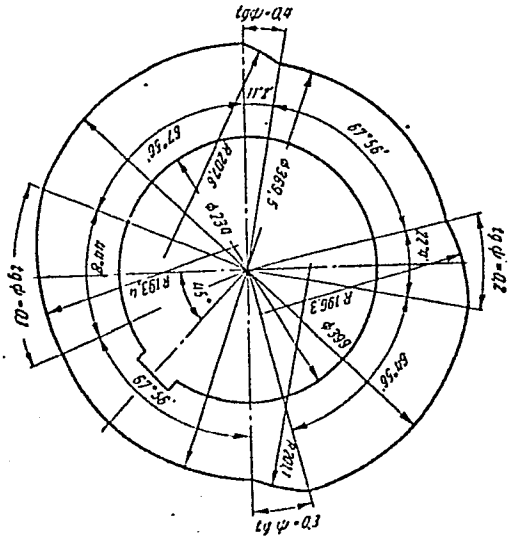
ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)

SUBMITTED: August 10, 1961

S/148/63/000/001/007/019
E193/E383

Roll-pressure during rolling ....

Fig. 1:



Card 5/5

CHERMAYEV, A.P., SMOL'YANINOV, A.F., LEBEDIK, G.L.

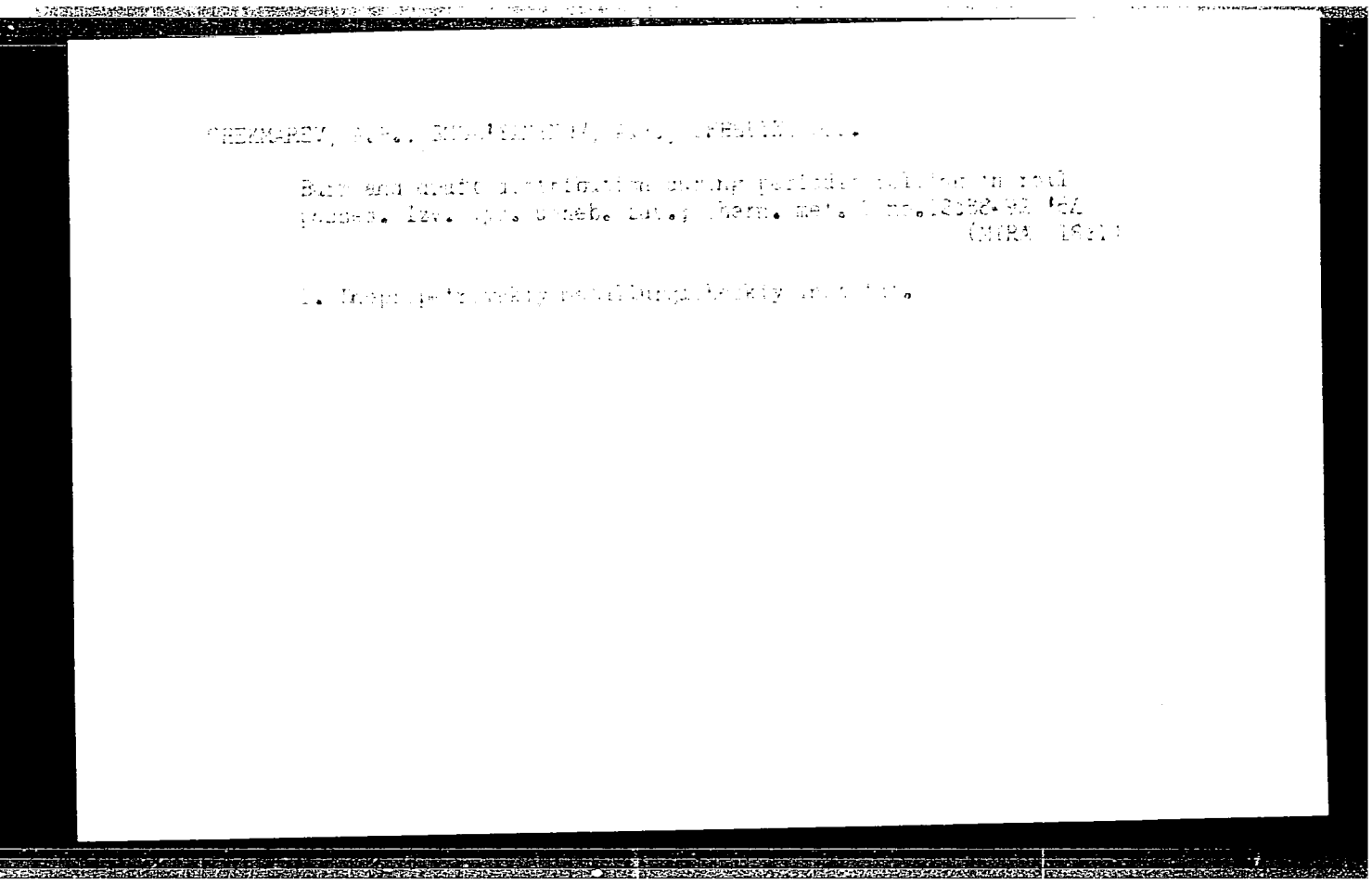
Distribution of the increase in width and length during longitudinal periodic rolling. Izv. vys. ucheb. zav.; chern. met. 6 no.5 113-117 '63. (MIRA 16:7)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Rolling (Metalwork))

CHERNYSHOV, [illegible], SMOL'YANINOV, [illegible]; [illegible]

Experimental investigation of forward flow during periodic rolling. Izv. vys. ucheb. zav.; chern. met. no.5 '64.

1. Dnepropetrovskiy metallurgicheskiy [illegible].



CHERNAVSKIY, [illegible] A.F.; KLIMENKO, I.L.; LEBEDIK, G.L.

Experimental determination of instantaneous forward slip and the cross section of the metal leaving the rolls in rolling with variable radii rolls. Izv.vys.ucheb.zav.; chern.met. 8 no.6:97-100 '65. (MIRA 18:8)

1. Dnepropetrovskiy metallurgicheskiy institut.

88721

18.1200

S/137/60/000/011/027/043
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 11, pp. 199-200, # 26863

AUTHOR: Smolyaninov, A.I.

TITLE: The Structure and Properties of Copper-Lead Antifriction Pseudo-Alloys

PERIODICAL: Tr. Rostovsk.-n./D. in-ta s.-kh. mashinostr., 1959, No. 12, pp. 52 - 57

TEXT: The structure of the Cu-Pb pseudo-alloy, applied to a surface by electric metallizing, represents a conglomerate of Cu and Pb particles separated by oxides and pores. Cu_2O is observed in fine-dispersed diffusion-dissipated state and in the form of eutectic formations as well; PbO is absent. The pores are bordered with oxide films and are, as a rule, located along the particle boundaries. Porosity decreases with a higher Pb content. The nature of the inter-particle bond, the structure and the phase composition, predetermine the possibility of chemico-thermal treatment. Annealing for sintering is made in a 10%

Card 1/2

88721

S/137/60/000/011/027/043
A006/A001

The Structure and Properties of Copper-Lead Antifriction Pseudo-Alloys

mixture of charcoal and Al_2O_3 in closed steel containers at 900 - 930°C for 3 hours. A gray substance is not formed after annealing. Annealing improves the physico-mechanical properties of Cu-Pb pseudo-alloys and increases the adhesion strength with steel when using a Cu-underlayer. Wear resistance and fatigue strength of annealed Cu-Pb pseudo-alloy with 30% Pb exceed those of Б 83 (B83) babbitt and approach those of БрС30 (BrS30) Pb-bronze. Therefore it can be employed for heavy loaded bearings operating under impact load.

I.A.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

S/136/60/000/009/006/006/XX
E071/E433

AUTHOR: Smolyaninov, A.I.

TITLE: On the Structure of Lead Coatings Obtained by Spraying

PERIODICAL: Tsvetnyye metally, 1960, No.9, pp.46-48

TEXT: Some results of an investigation of the structure and properties of sprayed lead are reported. X-ray analysis (Fig.1) of the sprayed lead coating did not show the presence of lead oxide (PbO); the latter was determined by the acetate method (Ref.3) and was found to be 1.47% corresponding to 0.11% of oxygen. The saturation of lead by oxygen apparently takes place by the formation of lead oxide film on the surface of lead particles, suspended in the air stream, which prevent further oxidation. On impact of particles with the base, the oxide film is broken and its splinters are mixed with the liquid mass on crystallization of which they remain inside the particles in the form of fine yellow inclusions (Fig.2). This was shown by heating sprayed lead at 350 to 370°C for 60 minutes in nitrogen whereupon oxide particles floated on to the surface, forming on solidification a powdery bright yellow film. X-ray analysis

Card 1/2

On the Structure of Lead Coatings Obtained by Spraying

indicated that the oxide is present in the rhombic modification. A characteristic feature of the structure of metallized lead is its porosity. The volume of communicating pores was determined by the oil absorption method and was found to be 6.5% of the volume of the specimen. The degree of adhesion of the coating was determined by measuring the strength of the sprayed layer in the direction perpendicular to the plane of fall of lead particles. Specimens were prepared by continuous and intermittent spraying. In the latter case, the sprayed surface was treated either with ethyl alcohol or with 1% suspension of spindle oil in alcohol and dried in a stream of compressed air before resuming spraying. The strength of continuously sprayed coatings was 42 to 52 kg/cm^2, with an intermediate alcohol treatment 8 to 12 kg/cm^2 and with oil treatment 6 to 9 kg/cm^2. The other properties determined were: modulus of normal elasticity - 1000 kg/mm^2 and heat conductivity - 0.06 cal/cm degree sec. The ratio of these two properties of cast and sprayed lead are 1.6 and 1.53 respectively. In comparison with other metals these ratios for lead are small. There are 2 figures and 3 Soviet references.

Card 2/2

SMOLYANINOV, A. I., Cand Tech Sci -- "Structure and properties of copper-lead pseudoalloys, obtained by means of electrometallization." Novocherkassk, 1961. (Min of Higher and Sec Spec Ed RSFSR. Novocherkassk Order of Labor Red Banner Polytech Inst im S. Ordzhonikidze) (KL, 8-61, 249)

RUSIN, P.I.; GOFMAN, L.A.; SMOLYANINOV, A.I.; SHAPKIN, V.M.

Device for the control of the hardness of malleable cast iron parts. Lit. proizv. no.8:38-39 Ag '62. (MIRA 15:11)
(Cast iron--Testing) (Hardness—Testing)

SMOL'YANINOV, A.S.

Sarcoma of the appendix of the testicle. Khirurgiia no.9:67-68 S '53. (MLRA 6:11)

1. Iz TSentral'noy poliklinniki No.1. (Testicle--Tumors)

USSR/Human and Animal Physiology - Excretion. V-6

Abs Jour : Ref Zhur - Biol., No 2, 1958, 8736

Author : A.S. Smol'yaninov
Inst :
Title : The State of the White Blood Cells during Renal Colic

Orig Pub : Sovetskaya Meditsina, 1957, No 3, 61-63

Abstract : A study was made of the state of the white blood cells in 50 patients with renal colic without injection of the urinary tracts. Leukocytosis was within normal limits in only 6 patients. Among the remaining patients leukocytosis increased in varying degrees including hyperleukocytosis. After the remission of the attack of pain leukocytosis decreased rapidly. In the presence of renal colic leukocytosis can result from a pain factor as well as from renal pelvic reflex with the entry of urinary substances into the blood. Leukocytosis cannot serve as a criterion in the differential diagnosis of appendicitis and renal colic.

Card 1/1

SMOL'YANINOV, A.Ye.

The TE-7 passenger diesel locomotive. Zhel.dor.transp.39 no.1:15-19 Ja '57. (MLRA 10:2)

1.Zamestitel' glavnogo konstruktora Khar'kovskogo zavoda transportnogo mashinostroyeniya.
(Diesel locomotives)

KIRNARSKIY, A.A.; SMOL'YANINOV, A.Ye.

New TE10 freight diesel locomotive. Zhel.dor.transp. 41 no.3:50-54 Mr '59. (MIRA 12:6)

1. Glavnyy konstruktor Khar'kovskogo zavoda transportnogo mashinostroyeniya (for Kirnarskiy). 2. Zamestitel' glavnogo konstruktora Khar'kovskogo zavoda transportnogo mashinostroyeniya (for Smol'yaninov).
(Diesel locomotives)

ARTIZANOV, Ye.A., inzh.; DORFMAN, Yu.I., inzh.; ZASLAVSKIY, Ye.G., inzh.; KUSHNER, B.I., inzh.; PLUTSNER-SARNO, Yu.N., inzh.; SMOL'YANINOV, A.Ye., inzh.; SPIVAK, Ya.L., inzh.; STRUNGE, B.N., inzh.; EPSHTEYN, A.S., inzh.; SAZONOV, A.G., inzh., red.; USENKO, L.A., tekhn. red.

[The TE10 diesel freight locomotive] Gruzovoi teplovoz TE10. Moskva, Transzheldorizdat, 1962. 171 p. (MIRA 15:10)
(Diesel locomotives)

SMOLYANINOV, A.Ye.

The TE12 freight diesel locomotive. Biul tekh.-ekon.inform. no.1:68-70 '62. (MIRA 15:2)
(Diesel locomotives)

SMOL'YANINOV, I.I., starshiy nauchnyy sotrudnik, kand.sel'skokhoz.nauk

Characteristics of the influence of the Siberian pine on the principal properties of taiga soils (Western Sayan Mountains). Trudy VSNIPILesdrev no.5:62-70 '62. (MIRA 16:5)

1. Institut lesa i drevesiny Sibirskogo otdeleniya AN SSSR.
(Sayan Mountains--Forest influences)
(Sayan Mountains--Pine)

SMOL'YANINOV, I.I.

Republic-wide seminar of the Ukrainian Scientific Research Institute of Forestry, Lumbering, and Land Improvement through Afforestation. Pochvovedenie no.1:110 Ja '64.
(MIRA 17:3)

SMOL'YANINOV, Ivan Ivanovich; [illegible], T., red.; [illegible], I.G., doktor sel'khoz. nauk, nauchn. red.

[Agricultural chemistry on guard for fertility] Agrokhimiia na strazhe plodorodiia. Moskva, Izd-vo "Znanie," 1964. 39 p. (Novoe v zhizni, nauke, tekhnike. V Seriia: Sel'skoe khoziaistvo, no.18) (MIRA 17:10)

[illegible], [illegible], [illegible];
[illegible], Alek[illegible] [illegible]vich, kand. g[illegible]l.-min.
nauk; Prinimali [illegible]: GLADKIY, A.S., kand.
sel'khoz. nauk; [illegible], I.I., kand. sel'khoz.
nauk; PLASHCHEV, A.V., kand. geogr. nauk; MOLCHANOV,
A.A., red.

[Velik[illegible] forest and [illegible] water] Veliko-Anado[illegible]
les i [illegible] vody. Moskva, Lesnaia promyshl., [illegible].
[illegible] p. (MIRA 18:2)

S/020/60/133/04/28/031
B004/B056

AUTHORS: Khitrov, V. A., Shatalova, V. I., Smol'yaninov, I. S., Sadovskaya, Yu. I.

TITLE: The Problem of the Influence of Temperature on the Rate of Corrosion of Metals in Acid Media

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 4, pp. 886 - 888

TEXT: The authors investigated the influence exerted by temperature on the rate of corrosion of Armco iron, nickel, zinc, and cadmium in 1 N H_2SO_4 and 1 N HCl, and found a linear course for the function $\log K = f(1/T)$ according to the Arrhenius equation (Fig. 1). For the corrosion of aluminum in 1 N HCl, this function is, however, no longer linear; corrosion increases with rising temperature more quickly than would correspond to the Arrhenius equation (Fig. 2). This is explained by the destruction of the oxide layer of Al. In the case of commercial aluminum of the type Al 2, it was observed in 35 N H_2SO_4 that the

corrosion rate obeys the Arrhenius equation up to 50 - 60°C, attains a maximum value at 70°C, after which it decreases (Fig. 3). This is explained by increasing passivation of the Al. A similar behavior is shown by copper in 1 N HCl and 1 N H_2SO_4 (Fig. 3). Slight deviations from linearity are found in zinc and lead in both acids (Fig. 4). This is assumed to be caused by the fact that the rate of the diffusion processes increases more slowly with rising temperature than the rate of chemical processes. The authors mention a paper by N. D. Tomashov and T. V. Matveyeva (Ref. 7). There are 4 figures and 8 references : 7 Soviet and 1 British.

ASSOCIATION: Voronezhskiy gosudarstvennyy pedagogicheskiy institut (Voronezh State Pedagogical Institute)

PRESENTED: March 10, 1960 by V. I. Spitsyn, Academician

SUBMITTED: March 9, 1960

SMOL'YANINOV, I.S.; KHITROV, V.A.

Effect of the temperature on the corrosion resistance and electrode potentials of metals in acidic media. Part 7: Lead in a hydrochloric acid solution. Izv.vys.ucheb.zav.;khim. i khim.tekh. 5 no.3:413-417 '62. (MIRA 15:7)

1. Voronezhskiy gosudarstvennyy pedagogicheskiy institut, kafedra khimii.
(Lead--Corrosion) (Electromotive force)

KHITROV, V.A.; SMOL'YANINOV, I.S.; SHATALOVA, V.I.; SADOVSKAYA, Yu.I.

Effect of temperature on the corrosion resistance of some metals in sulfuric and hydrochloric acid solutions of various concentrations. Zhur.fiz.khim. 36 no.5:1058-1060 My '62. (MIRA 15:8)

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(Metals--Corrosion)

SMOL'YANINOV, I.S.; KHITROV, V.A.

Effect of temperature on the corrosion resistance and on the electrode potentials of metals in acid media. Part 4: Copper in sulfuric acid solutions. Izv.vys.ucheb.zav.,khim.i khim.tekh. 6 no.1:63-67 '63. (MIRA 16:6)

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(Copper--Corrosion) (Electromotive force)

KHITROV, V.A.; SMOL'YANINOV, I.S.

Effect of temperature on the corrosion resistance and electrode potentials of metals in acid media. Part 3. Zhur. fiz. khim. 37 no.11:2391-2396 N '63. (MIRA 17:2)

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Effect of temperature on the corrosion resistance and electrode potentials of metals in acid media. Part 5: Copper in hydrochloric acid solutions. Izv.vys.ucheb.zav.;khim. i khim. tekh. 7 no. 1:51-55 '64. (MIRA 17:5)

1. Voronezhskiy pedagogicheskiy institut, kafedra khimii.

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AUTHOR: Khitrov, V. A.; Zadorozhny*y, V. P.; Smol'yaninov, I. S.; Zhukova, G. P.; Dugin, N. A.; Konyayev, B. Ya.

TITLE: Use of bottoms from SK production as acid corrosion inhibitors.

SOURCE: Khimicheskaya promy*shlennost', no. 4, 1964, 307-310

TOPIC TAGS: corrosion inhibitor, rubber production byproduct, still bottom, SK rubber production, saturated alcohol, unsaturated alcohol, saturated hydrocarbon, unsaturated hydrocarbon, unpolymerisable hydrocarbon, acid corrosion inhibitor, inhibition mechanism, chemosorption

ABSTRACT: The effectiveness of various cuts of still bottoms from rubber production as acid corrosion inhibitors for steels and copper was investigated. Three mixtures were examined: (1) foam reagents (PR) obtained from still bottoms remaining after distillation of technical butanol and comprising 25-35% saturated and unsaturated C_6 and C_8 alcohols, 3-5% butanol, 25-30% hydrocarbons, 30-35% heavy ends and traces of phenols and aldehydes; (2) still bottoms (KO) comprising low boiling saturated and unsaturated hydrocarbons separated from divinyl (35-45C

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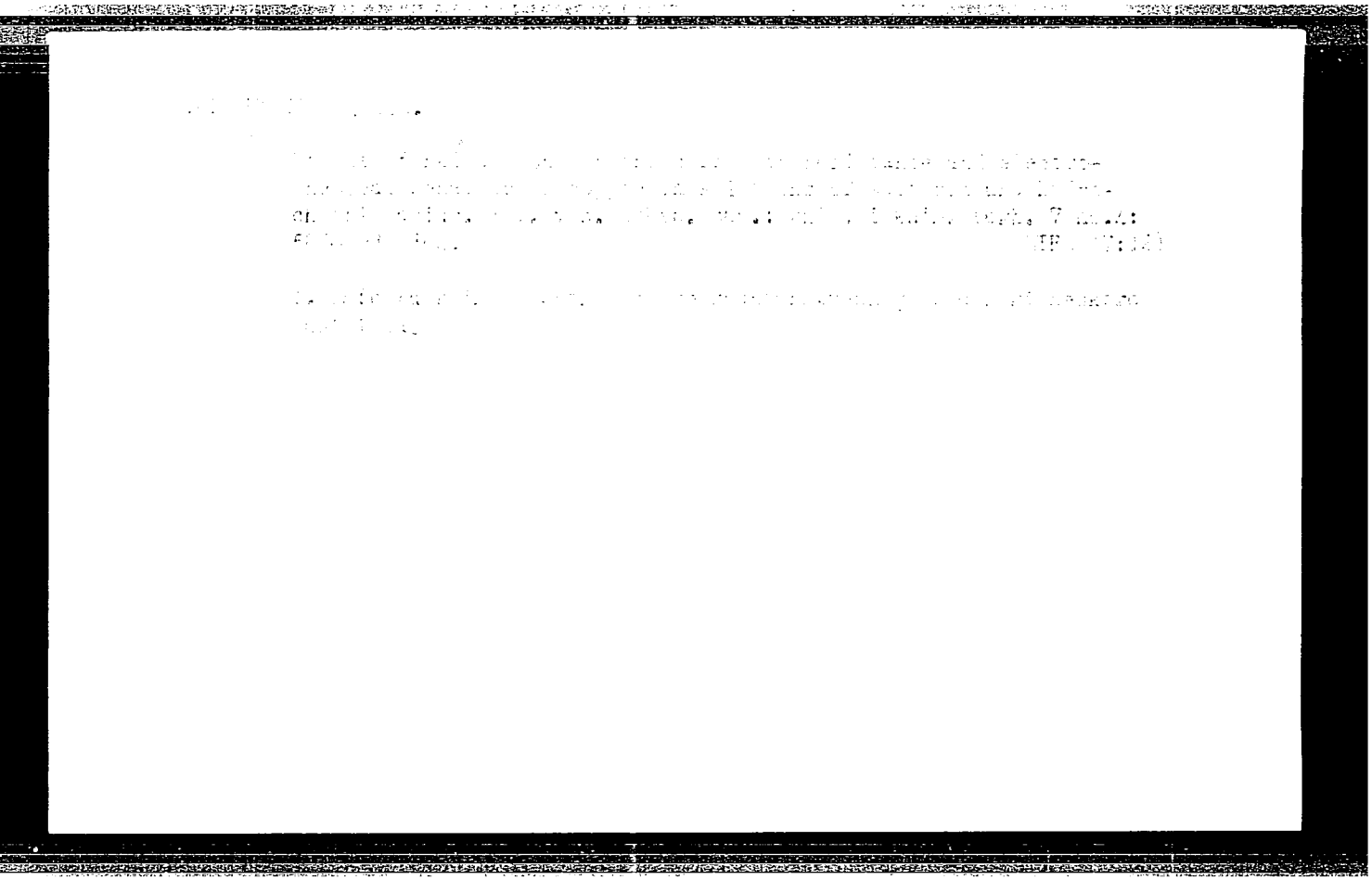
Card 3/3



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(MIRA 18:11)

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Effect of temperature on the corrosion resistance and electrode potentials of metals in acid media. Part 9: Cadmium. Izv.Vor.gos.ped.inst. 47:57-66 '64. (MIRA 18:11)

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EXCERPTA MEDICA Sec 6 Vol 13/1 Internal Med. Jan 59

431. THE WHITE BLOOD PICTURE IN RENAL COLIC (Russian text) - Smolyaninov K. S. Moscow - SOVETSK. MED. 1957, 3 (61-63)

The blood picture was studied in 50 patients with renal colic, due in 38 cases to non-impacted calculi, in 11 to excretion of salts, and in one to a renal tumour. The leucocyte count was normal in 1, moderately increased (8,500-10,000 per cu. mm.) in 14, more markedly increased (10,100-11,800) in 11, and greatly increased (12,000-19,800) in 19 patients. An increase in WBC with segmented and staff nuclei, the appearance of toxic granulations in the neutrophils, lymphopenia, and sometimes complete disappearance of eosinophils were observed at the same time. No importance is attached to leucocytosis in the differential diagnosis between acute appendicitis and renal colic. Leucocytosis in renal colic is based on 2 factors - pain and the development of a urethral-renal reflex.

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SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

S[illegible]'YE[illegible], [illegible], red.

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(Fluoroplast)

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1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut geologii i geofiziki. 2. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR (for Belous, Kazanskiy, Vdovin, Klyarovskiy, Kuznetsov, Nikolayeva, Novozhilov, Senderzon). 3. Institut gornogo dela (for Akayev). 4. Novosibirskoye geologicheskoye upravleniye Ministerstva geologii i okhrany nedr SSSR (for Babin, Berdnikov, Goryukhin, Nagorskiy, Piven').

(Continued on next card)

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BELOUS, N Kh.---(continued) Card 2.

Tomskiy politekhnicheskiy institut (for Bakerov, Gabbasov, Smolyaninov, Smolyaninova). 5. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya(for Yuchin, Dyukonova, Rozanov, Kasantanov, Gol'bert). 6. Institut ekonomiki sel'skogo khozyaystva (for Gamash). 7. Sibirskiy metallurgicheskiy institut (for Bykov, Borodin, Rybakov). 8. Tomskiy inzhenerno-stroitel'nyy institut (for Kuchin). 9. Chlen-korrespondent AN SSSR (for Shakhov).

SERYAKOV, Ivan Maksimovich. Prinimali uchastiye: BEDAREV, G.; VETSRUMB, N.; DOBROVOL'SKIY, V.; KAPLAN, S.; KOMZA, G.; KOROLEV, L.; KUZGINOV, K.; PETROV, V.; SUMAKOV, M.; SMOLYANINOV, N.; USHAKOV, I.; USHAKOV, G.; ZAYCHIK, M.I., prof., doktor tekhn.nauk, nauchnyy red.; KOLOMIYTSEVA, O.I., red.; ROZEN, E.A., tekhn.red.

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