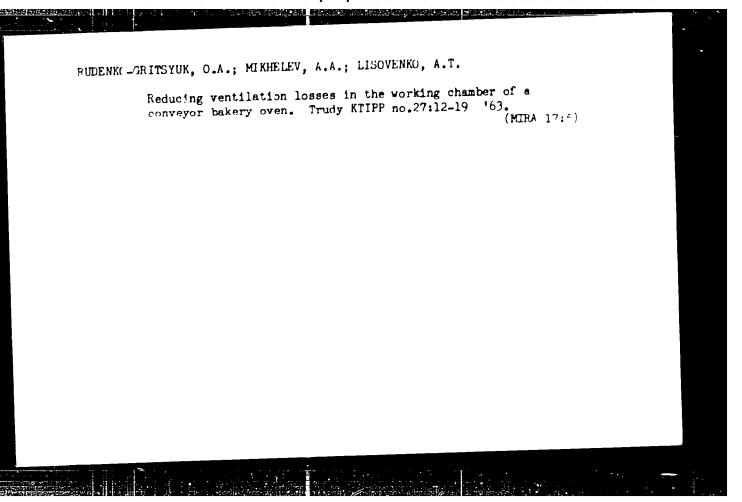
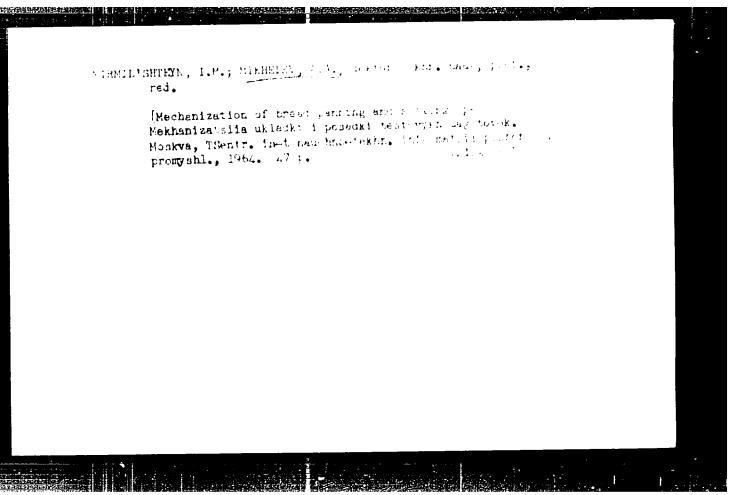
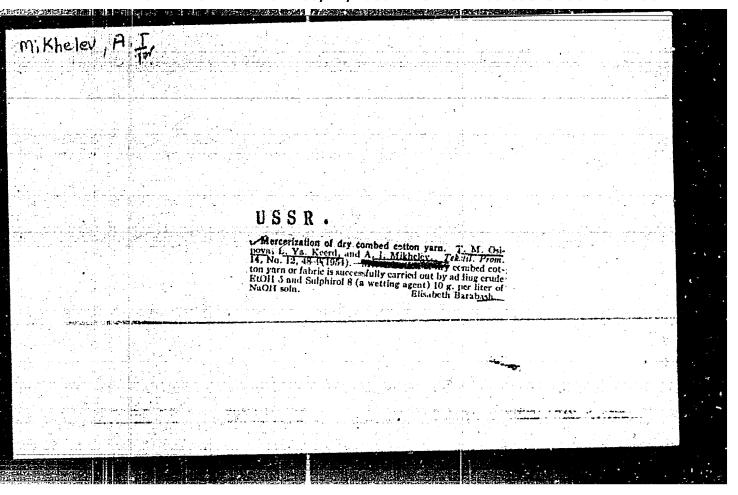
RUDENKO_GRITSYUK, O.A.; MIKHELEV, A.A. Heat and mass transfer in capillary bodies in the process of heating. Inzh.-fiz.zhur. 6 no.3195-98 Mr '63. (MIRA 16:4) 1. Tekhnologicheskiy institut pishchevoy promyshlennosti, Kiyev. (Heat—Transmission) (Mass transfer) (Capillarity)



ZCLOTOV, E.B., inch.; MIKERLY, A.A., doktor takin. mult

Determining the physiconsoranical characteristics of wheat flour dough by means of a capillary visconizater. Plabels, proce. no.2177-62 *65. (MIPA 18:11)





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25(5)

PHASE I BOOK EXPLOITATION

SOV/1317

Kirovskiy rayon Leningrada v bor'be za tekhnicheskiy progress; [sbornik statey] (The Kirov District of Leningrad Strives for Technological Progress; Collection of Articles) Leningrad, Sudpromgiz, 1957.

Resp. Ed.: Popilov, L.Ya.; Tech. Ed.: Kuznetsova, P.A.

STORES THE BUILDING STORES AND STORES CONTROL OF THE STORES OF THE STORES AND STORES AND

PURPOSE: This book may be useful to personnel of the shipbuilding, instrument-making, machinery, chemical and metallurgical industries, and to personnel of the maritime and river fleets.

COVERAGE: This collection of articles describes the progressive experience of the industrial plants of the Kirov district of the city of Leningrad in the fields of shipbuilding, machine building, instrument-making, casting, hydrolytic and other industries. New manufacturing methods are discussed in the articles by V.F. Kovyzhkin, V.P. Kuznetsov, A.Kh. Starostenko, I.A. Maslov, A.L. Labutin, and Ya.M. Shmekker. It is stated that the plant "Krasnyy khimik" has developed and is using a new improved method of making citric acid with the use of tagged atoms. This method has increased production by 48 percent. The plant also makes use

Card 1/4

The Kirov District of Leningrad (Cont.) SOV/1317	•		
of a new method of producing magnesium salt which assures a 20 percent increase in production. No personalities are mer There are no references.	tioned.		
TABLE OF CONTENTS:			
Chernyavskiy, K.S., Secretary of the Kirov District Committee of Communist Party of the Soviet Union. We Must Ceaselessly Strive for Technological Progress			
Kovryzhkin, V.F. New Methods in Shipbuilding	6		
Kuznetsov, V.P. New Technology for River Fleet Transport	38		
Mikhelev, D.I. Trends in Shipyard Engineering Development	48		
Sokolov, I.P. Primary Objectives in the Mechanization of Labor-consuming and Heavy Operations in Shipbuilding	54		
Smirnov, P.I. Outlook for Technological Developments and Organization of Ship Repair	69		
Card 2/4			

The Kirov District of Leningrad (Cont.) SOV/1	317
MACHINE-BUILDING, INSTRUMENT-MAKING, AND METALLURGY	
Starostenko, A.Kh. New Main Geared Turbine Unit for a 10,00 Capacity Freighter	ncT 0 88
Gutkin, S.T. Universal Quick-acting Pneumatic Fixtures for Metal-cutting Machine Tools	99
Maslov, I.A. New Technology and Progressive Manufacturing Methods at the Kirov Plant in Leningrad	111
Goryachev, A.D. Experience in Introducing Die Casting	118
Belov, A.D. Setting of Molds and Cores by Chemical Means	125
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Cleaning of Castings Yefimov, P.A. and Kh.Sh. Lipin. The TsEP-2M Automatic Color Pyrometer	136
Card 3/4	

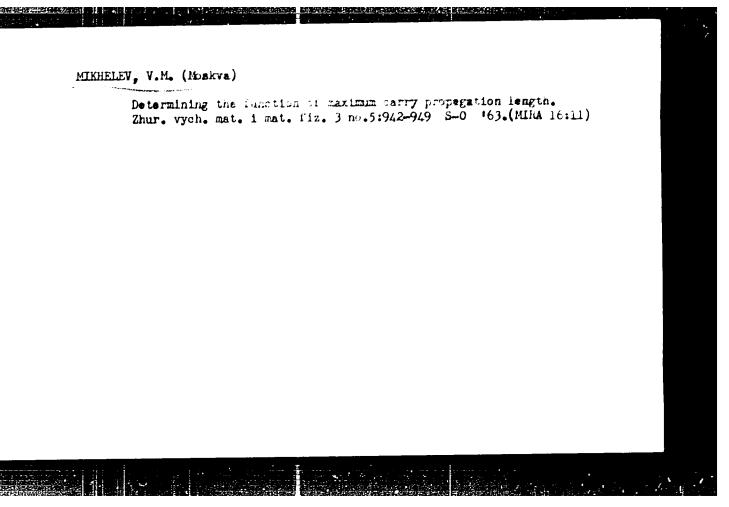
STEED SHOULD S SOURCE CODE: UR/0000/65/000/000/0100/0117 (N) ACC NR: AT6005058 AUTHOR: Mikhelev, I. P.; Nefedkina, T. V.; Trigubov, A. V. ORG: TITLE: Studying intrusives by the reflected-wave method in the Rudnyy none Altay region SOURCE: AN SSSR. Sibirskoye otdeleniye. Institut geologii i geofiziki. Metodika seysmorazvedki (Methods of seismic prospecting). Moscow, Izd-vo Nauka, 1965, 100-117 TOPIC TAGS: seismology, seismic prospecting, reflected wave, seismic wave, seismic profile, reflected wave, seismic array, STRATIGRAPHY, REFLECTED SHOCK WHVE ABSTRACT: This article deals with the results of seismic investigations of the Tushkanikh polymetallic ore deposits in the Zmeinogorsk region of the Rudnyy Altay carried out in 1961-1962 by the Institute of Geology and Geophysics of the Siberian Branch of the Academy of Sciences The possibilities of using the method of reflected waves (MOV) in studying the deep-seated (to a depth of 500 m) structure of metanorphic and intrusive rock complexes are discussed. The method of reflected waves was supplemented in the field by the regulated-direction method (RNP). The observation system was mainly a three-point set-up with shots at 400-m intervals. SS-24P sciemic stations and ARNP apparatus Card 1/2

ACC NR: AT6005058

were used. Working filtrations were 45—90 and 30—65. SPED-56 seismographs (9 on a 40-m base) were employed. Charges were exploded in holes 12—24 m deep. When the bedrock was close to the surface, the holes were drilled to the top of the bedrock (8—10 m). The sizes of charges varied, up to 15—20 kg for recording waves over long time periods. Charges of about 100 kg were detonated in water bodies. A profile was constructed on the basis of RNP data for depths down to profile was constructed on the basis of robserving and interpreting 10 km. Although the present procedures for observing and interpreting profiles are affected by lateral waves and noise, and the plotting of levels on the profile is not sufficiently accurate, the basic outlines of the depth profile are quite clear. Geological interpretation based on kinematic and dynamic (damping) wave parameters, as well as the use of data obtained by other geophysical methods, is attempted. Orig. [E0] art. has: 8 figures, 2 tables, and 4 formulas.

SUB CODE: 08/ SUBM DATE: 30Sep65/ ORIG REF: 009/ OTH REF: -002

Card 2/2



LEYSHMAN, M.B.; BALASHOV, M.Ye.; AFANAS'YEV, A.S.; MIKHELEV, V.M.;
TAKHVANOV, G.I.; SHKHALAKHOV, Yu.Sh.; SANNIKOV, Yu.I.; SLAVIN, A.A.;
BEYRAKH, Z.Ya.; KAPLINSKIY, B.I.; ORLOV, O.A.; PFVZNER, Y.V.;
VALOV, O.V.; KIREYEV, V.V.

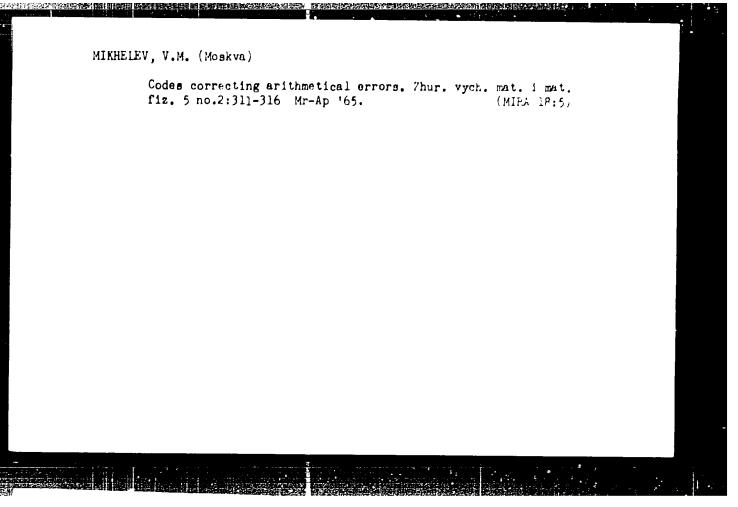
Inventions. Avtom. i prib. no.3:76-77 J1-5 '64.

(MIFA 18:7)

L 56468-65 EWP(d)/T/EED-2/EMP(1)	Pq-4/Pg-4/Pj-4/Pk-4	IJP(c) BB/GG		
ACCESSION NR: AP5009395		5/005/002/0311/0316		
AUTHOR: Mikhelev, V. M. (Moscow)		41 B		
TITIE: Codes to correct arithmetic er	rors			
SOURCE: Zhurnal vychislitel'noy mater 1965, 311-316	natiki i matematicheskoy	fiziki, v. 5, no. 2,		
TOPIC TAGS: error correcting code				
ABSTRACT: The adder is assumed to open the distance between codes is ordinary natural way to increase the distance dues modulus mi > m such that the initiation is shown how this may be done. It	lly greater than or equa- petween codes is to cons- lal ring may be imbedded	l to unity. The most truct a ring of resi- isomorphically in it		
$m = p_1^{\alpha_1} p_2^{\alpha_2} \dots p_k^{\alpha_k}$, each annihilating	Ideal $I_i = I(p_i^{\alpha_i})$ possess	es a unique idempoter	it	
element, e, and is generated by that	element. It follows fr	om this theorem that,		
Card 1/3				•

1 56468-65 ACCESSION NR: AP5009395 for an initial ring of residues modulus 2", one may take a ring of residues modulus 2"p as the derived ring into which the first may be imbedded isomorphically. The following theorem is proved in order to make it easier to find the idempotent for a ring of residues modulus $m=2^np_2^{\alpha_1}\dots p_k^{\alpha_k}$: For a ring of residues modulus $2^n p_2^{\alpha_1} \cdots p_n^{\alpha_n}$ the idempotent generating an ideal annihilating 2^n is equal to $1 + 2^l q$, where $l \ge n$ and q is odd. An example is given of a code with numerical values for which the code distance is a minimum of 2. In order to construct a code with code distances greater than a required value, it is proved that, for the code distance of length k to be strictly greater than two, it is sufficient that k be less than any number which satisfies the equation $2^{2(x-1)} - 1 = 0 \pmod{p_2^{\alpha_1} \dots p_k^{\alpha_k}}$. This theorem allows one to determine the redundancy of codes with detection and correction of arithmetical errors in a ring of residues modulus, $m=2^np_2^{\alpha_1}\dots p_k^{\alpha_k}$ The code constructed by the above method makes it possible to correct a single error whether the error results from the execution of an operation or is a storage error. The correction process itself requires no special equipment, but rather is

J. 56468~65					
ACCESSION NR: AP50(9395		gradining and ending Linguistics	0		***
a result of the performance has: 13 formulas.	of a series of arithmetical	operations. Orig.	art.		
ASSOCIATION: none					
SUBMITTED: 03Jun64	ENCL: 00	SUB CODE:	DP	116.2	
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L 07252-67 EWT(d)/EWP(1' LUPte' BB'GO ACC NR: AP6018634

SOURCE CODE: UR/0208/66/006/000/0546/0554

AUTHOR: Vershubskiy, V. Yu. (Moscow); Mikhelev, V. M. (Moscow)

: [S

ORG: none

TITLE: The use of special coding methods for the increase in capacity of accumulators using magnetic registration

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 6, no. 3, 1966, 548-554

TOPIC TAGS: coding, error correcting code, magnetic drum, computer memory

ABSTRACT: Usually the capacity of magnetic recording is incleased by augmenting the density of registration. However, in addition to two-level quantization, the magnetic recording allows the use of three natural levels (veroth and maximum + and - magnetic zation) and the present authors are guided by this fact in their search for special cooling methods which would increase the capacity of magnetic recording devices. The resulting triple-quintuple code allows a reliable registration with a large sign with the known devices for linear separation of signals (I. S. Makarov, Radiotekhnika, cording devices. Orig. art. has: 29 formulas and 1 figure.

SUB CODE: 09 12 / SUBM DATE: 040ct65 / ORIG REF: 005
Card 1/1 de UDC: 519.95

L 08703-67 EWT(1) ACC NR. AP6034113 SOURCE CODE: (N,N)UR/0358/66/035/005/0545/0550 17 AUTHOR: Shestakov, V. I.; Mikheyeva, A. I. \mathcal{B} ORG: Vladivostok Scientific Research Institute of Epidemiology, Microbiology, and Hygiene (Vladivostokskiy nauchno-issledovatel'skiy institut epidemiologii, mikrobiologii i gigiyeny); Primorskiy Kray Regional Sanitary-Epidemiological Station (Primorskaya krayevaya sanepidstantslya) Study of Japanese encephalitis V carriers in the Primorskiy Kray (Maritime Territory) SOURCE: Meditsinskaya parazitologiya i parazitarnyye bolezni, v. 35, no. 5, 1966, 545-550 TOPIC TAGS: disease vector, animal disease, mosquito, virus disease, encephalitis ABSTRACT: More than twenty mosquito species were identified in Japanese encephalitis foci in the Primorskiy Kray (both coastal and meadow regions) in 1957-1961. The potential vectors of Japanese encephalitis among the identified species were: Culex pipens (5% of mosquito collection), C. bitaeniorhynohue (1%), C. tritaeniorhynohue (0.5%), A. togoi UDC: 616.988.25-022.395.7+576.895.771] Card 1/2 (571.63)

L 08708-67 ACC NR: AP6034113

(782), A. korsicus (12), and A. esosnais (22). The population of C. tritasniorhynchus, the chief vector of Japanese encephalitis in meadow foci, has decreased 30—40 times in recent years due to elimination of rice fields. In the coastal area, the chief species attacking man was A. togoi, and in fishing villages, A. togoi and Culax pipens. In the meadow areas the following species commonly attacked man: A. dorsalis, A. vexans nipponi, A. esosnais, Anopheles hyroanus, and sometimes Culisata silvestris amurensis. Effective mosquito control consisted of treating ponds with insecticides (coastal regions) and serial spraying (meadow foci). Orig. art. has: 1 table and 2 figures.

SUB CODE: 06/ SUBM DATE: 10Aug65/ ORIG REF: 006

Cord 2/2 nat

g/020/60/135/004/030/037 B004/B056

AUTHORS:

Kargin, V. A., Academician, Mirlina, S. Ya., Kabanov, V. A.,

Mikheleva, G. A., and Vlasov, A. V.

TITLE:

Structure and Properties of Isotactic Polyacrylic Acid and

of Its Salts

PERIODICAL:

Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 4,

pp. 893 - 895

TEXT: The problem the authors discuss is the study of spatially regular synthetic polyelectrolytes which may be used as model substances of biological polymers. An electron-microscopic examination of the secondary structures of isotactic polyacrylic acid (PAA) and of its salts has been made by means of a JEM-5Y apparatus. PAA was obtained by alkaline hydromade by means of polyisopropyl acrylate. Thermogravimetric study showed lysis of isotactic polyisopropyl acrylate. Thermogravimetric study showed that PAA crystallizes as a hydrate, with two monomeric members sharing one water molecule. The salts were produced by potentiometric titration (glass electrodes, A.-5 (LP-5) tube potentiometer) with Ba(OH)₂, NaOH,

Card 1/4

Structure and Properties of Isotactic Polyacrylic Acid and of Its Salts

S/020/60/135/004/030/037 B004/B056

and $(CH_3)_A$ NOH. The following results are given: Isotactic PAA evaporated from 0.01 - 0.0001% aqueous solution upon a colloxylin film showed similar globuli as atactic PAA whose amorphous character was revealed by electron diffraction studies. Crystallization occurred after ECl addition to the dilute solution (0.00001 - 0.0001%). Crystal stacks, spiral bands, and single crystals were observed. Crystallization in the presence of HCl is explained by suppressed dissociation of the carboxyl groups. In acid media, PAA behaves like a spatially regular polymer. Barium salt produced from solutions with pH 4.2 - 10.7 exhibited globuli within the entire pH range. Intrinsic viscosity at pH = 5 was 0.07 for PABa, and 0.12 for PAA. Sodium salt obtained at pH 4.2 - 11.5 showed globuli in the case of low pH, which at pH = 6.75 unrolled as a consequence of increasing disacciation and intramolecular repulsion of the COO groups. Fibrils were forming. At pH = 7 dissociation was complete, single crystals formed, and intrinsic viscosity reached a maximum. At higher pH, the molecule chains entangled again, and globuli were observed. In the case of tetramethylammonium polyacrylate, fibrils were observed near the neutral point, which

Card 2/4

Structure and Properties of Isotactic Polyacrylic Acid and of Its Salts

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8/020/60/135/004/030/037 B004/B056

resembled the structures of biopolymers. Observation of a tetramethylammonium polyacrylate film in polarized light and dry air (40 - 60°C) showed that the film consisted of intergrown rhombic single crystals, 100µ in size, with a folded structure. Cooling down to 20°C initiated destruction of the crystals by air humidity. Birefringence vanished. Re-heating, however, re-established the old crystal structure. From these phenomena it is concluded that in the swelled film the mutual position of the structural elements remains unchanged. Hence, isotactic PAA showed the same structural types as atactic PAA. However, due to the regular succession of asymmetric atoms, isotactic PAA showed a greater variety in fibril forms approaching the regular structures of biopolymers. There are 4 figures and 2 references: 1 Soviet.

ASSOCIATION:

Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

Card 3/4

88733

5.3100 15.8105

\$/190/61/003/001/018/020 B119/B216

AUTHORS:

Kargin, V. A., Mirlina, S. Ya. Kabanov, V. A., Mikheleva, G. A.

TITLE:

Study on the structure of isotactic polyacrylic acid and its

salts

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 1, 1961, 139-143

The study presented is of scientific interest, since polyelectrolytes represent systems in which insignificant influences produce considerable structural and chemical changes, comparable to those met in living nature. The experiments were carried out on isotactic polyacrylic acid, (PAA) (prepared according to Ref. 2) and its Ba2+, Na and N(CH) salts (obtained by potentiometric titration with the corresponding bases). The electronmicroscopic studies were performed in a JEM-5Y electron microscope, and potentiometric titration in a MM-5 (LP-5) electronic potentiometer. The molecular weight (60,000) of the polymer was determined viscosimetrically (using 0.5 N NaCl as solvent). Preparations for electron-microscopy were prepared by evaporating drops of 0.01 - 0.00001% aqueous solutions of

Card 1/3

88733

Study on the structure of isotactic...

S/190/61/003/001/018/020 B119/B216

the substance on suitable carriers. The experimental results were compared with the results obtained on atactic PAA. Both isotactic PAA, and its salts, and atactic PAA were found to be of two basic structural types: globular (compact aggregates of molecules) and fibrilliform. Isotactic PAA and its Na⁺ and N(CH₃)₄ salts (in contrast to atactic PAA and its salts) are able to assume highly regular fibrilliform structures (bands, helixes, single crystals) corresponding morphologically to biological polymers. Complete dissociation of the ionizing groups or an entirely undissociated state were found to be prerequisite for the formation of secondary crystalline structures, even at completely regular arrangement of the asymmetric atoms in the polyelectrolyte chain. Titration of 1% aqueous solution of isotactic PAA with NaOH yields a pK = 0.64 and with N(CH₃)₄OH, pK = 1*44 (provided the dissociation constant of the isolated carboxyl group K₀ = 10^{-4.86}; pK = pKi - pK₀). There are 8 figures and 4 references: 2 Soviet-bloc and 1 non-Soviet-bloc.

Card 2/3

88733

Study on the structure of isotactic...

S/190/61/003/001/018/020 B119/B216

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova

(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 27, 1960

Card 3/3

IOVIEVA, M.M.; MIKHAYIOV, N.V.; MIKHELEVA, G.A.; SHABLIYGIY, W.V., FIERA V. S.H.

Properties of gel particles in spinning solutions. Chir. Volva.

10.041-44 '64.

1. Vaceoyuznyy nauchno-issledovatel'skiy institut iszasad sendenge volokna.

ISAKOV, A.A. (Kemerovskaya oblast'); LHURGARAYEV, Amangel'dy (Dzhambul'skaya obl., KazSSR); VLADIMIROV, A. (Asbest); FRIMAN, L.I.
(Yaroslav!); KILIMWIK, Ya.Ye. (Vinnitsa); TEREHOV, I.A.
(Skopin); AKDAULETOV, N.A. (pos.Mertuk. KazSSR); ZARHARKIN,
V.Ye. (pos.Rudtsev, Tul'skaya oblast'); SHESTOPAL, G.A.
(Moskva); KOTIY, O.A. (Yaroslav!'); GAURHMAN, V.A. (Moskva);
LOFSHITS, A.M. (Yaroslav!'); SERGUSHOV, S.A. (Yaroslav!');
COTMAN, E.G. (Pechora); VETROV, K.V. (Putintsevo, VostochnoKazskhatanskoy obl.); MIMELEVICH, Sh.Kh. (Daugavpile);
SKOPETS, Z.A. (Yaroslav!'); RYHRKOV, L.M. (Yaroslav!');
CHEGODAYEV, A.I. (Gavrilov-Yam)

Problems. Mat.v shkole no.6185-92 N-D '62. (MIRA 16:1)
(Mathematics—Problems, exercises, etc.)

KRATTSER, P.A. [Kratzer, P.A.],; MIKHELEVICH, Ye.Ye.[translator],; RETEIUM, Yu.Ya., red.; KLIMENKO, S.V., tekhn. red.

[Urban cluste] Klimat gorode. Moskva, Lyd-vo inostr. lit-ry, 1958. 238 p. [Translated from the German]. (MIRA 11:11)

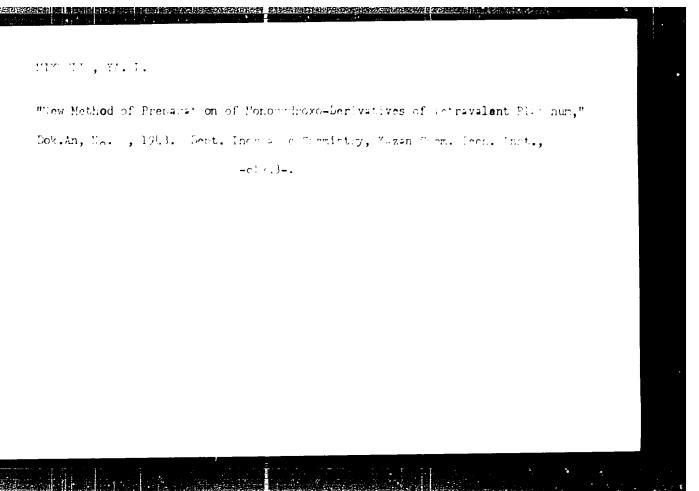
(Climatology)

MIKHELIS, K.

Reduction of internal cinders of tunnel furnaces as one of the basic ways of themselving efficiency of these aggregates.

P. 51 (Trudy) No. 2, 1956, Estonia

SO: MONTHLY INDEX OF EACH EMROFEAN ACCESSIONS (FEAT) LC. - VOL. 7, NO. 1, JAN. 1959



*Vacuum Chamber of the 10 GeV Synchrotron Electromagnet,"
paper presented at CERN Symposium, 1956, appearing in Nuclear
Instruments, No. 1, pp. 21-30, 1957

4371.1

S/120/62/000/004/007/047 E039/E420

AUTHORS: Malyshev, I.F., Popkovich, A.V., Mikhelis, Ya.L.,

Martyugov, G.M., Artemov, A.D., Karpenko, N.M.

TITLE: The vacuum system of the 7 Gev proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 46-51

The vacuum chamber of the synchrotron consists of 112 curved sections in the magnet gaps and 112 straight sections situated between the magnet blocks. The curved sections (except for 11 sections containing accelerating electrodes, situated in X-blocks) are constructed from corrugated tubes of 1×18+9T (1Kh18N9T) steel; thickness 0.3 mm, convolutions 3 mm deep and a pitch of 7 mm and of elliptical cross-section 114 and 84 mm On the straight sections are mounted the vacuum. along axes. manifolds and apparatus for observing the beam, e.g. measurement of intensity and position of beam and also lost particles. diffusion pumps type $\beta A = 05$ (VA=05) with semiconductor refrigerators and liquid nitrogen traps are used to evacuate the working space and there are 14 forevacuum pumps type BH-1 (VN-1). The vacuum chamber can be divided into 14 sections by means of Card 1/2

5/120/62/000/004/007/047 E039/E420

The vacuum system of ...

gate valves which can be operated manually or by remote control. A working pressure of about 2×10^{-6} mm is achieved. Detailed diagrams of the layout of the system and the main components are given. There are 7 figures.

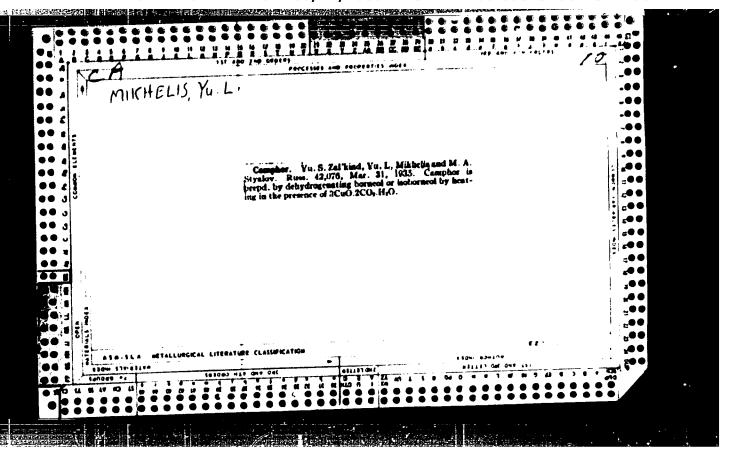
ASSOCIATION: Nauchno-issledovatel'skiy institut elektrofizicheskoy

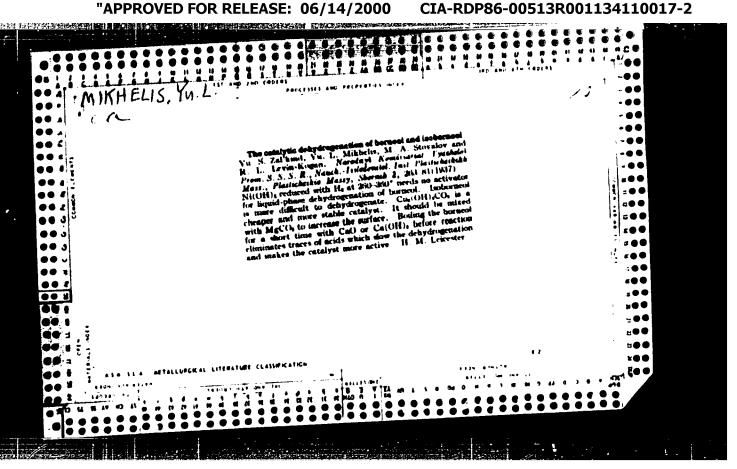
apparatury GKAE (Scientific Research Institute for

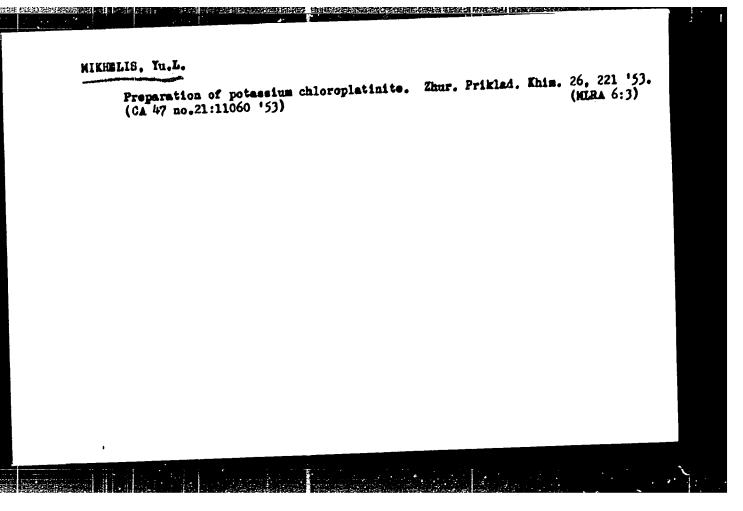
Electrophysical Apparatus GKAE)

SUBMITTED: April 6, 1962

Card 2/2







ACCESSION NR: AT3012129

8/2967/63/000/000/0136/0112

AUTHORS: Myamlin, A. N.; Mikholev, V. H.; Kuzin, Ye. P.

TITLE: Arithmetic device for universal electronic computers with controls and integrated operations

SOURCE: Voprosy* vy*chislitel'noy matematiki i vy*chislitel'noy tekhniki. Moscow, 1963, 136-142

TOPIC TAGS: electronic computer, integrated operation, summator, pulse device, paraphase output, logical control, 62h2P lamp, 6M6P lamp

ABSTRACT: A special logical scheme arithmetic device using tube elements for highspeed operations at 1 megacycle frequency has been discussed. The secretor in the arithmetic computer is a potential machine and the remaining circultry, a pulse device. The summator uses type 6Zh?P and GMCP lamps and records with synchronized input. The device has three operating recorders, with one recorder or meeted to a paraphase output. One paraphase output is considered sufficient for any arithmetic operation. The arithmetic device operator with 39 discharge codes: o magnitude order discharges, 30 mantissas including signs, and 3 control discharges. To

Card 1/2

ACCESSION NR: AT3012129

ensure execution of an operation, the logical control method mod (q^m-1) is used where q - fundamental calculation system and m - quantity of control discharges. The control recorder is connected by means of a summator through an electron tube and a phase shifter. The control itself consists of a counter, deceder operation, and a deceder with a central control operation. Each arithmetic operation consists of an aggregate of micro-operations transmitting numbers from the register through the shifter and summator. This arithmetic device multiplies in 18 msec, does logical operations in 8 msec, divides in 10 msec, and takes square root in 90 msec. Orig. art. has: 5 figures.

ASSOCIATION: none

SUBMITTED: 00

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ENCL: 00

SUB CODE: EC

NO REF SOV: 000

OTHER: 000

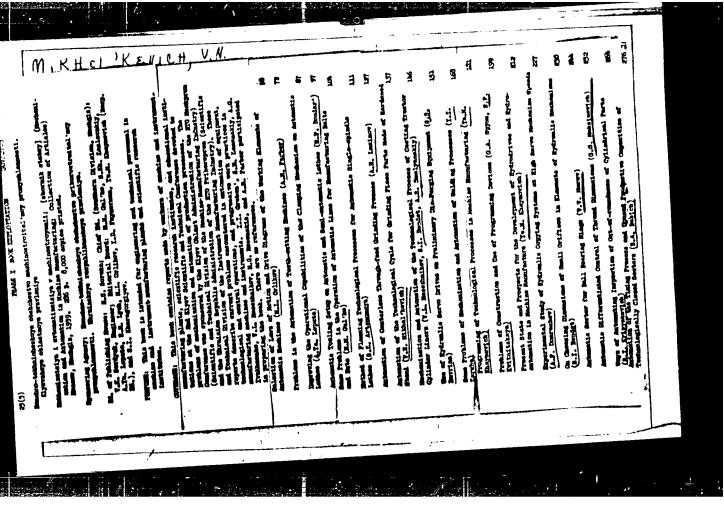
Card 2/2

KULAGIN, A.Ta., assistant: MIKHEL'KEVICH, V.N., assistant

"Electric equipment for oil well drilling" by K.M. Kulizade. Reviewed
by A. IA. Kulagin, V.M. Mikhel'kevich. Izv.vys.ucheb.zav.; elektronekh.
1 no.9:127-129 '58.

1. Kuybyshevskiy industrial'myy institut.
(011 well drilling...Equipment and supplies)
(Kulizade, K.N.)

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134110017-2



3/121/60/000/006/004/008

18.5200 AUTHORS:

Zheleznov, Ye. S., Mikhel kevich, V. N.

TITLE:

Automatic Cross-Feed Control of Internal Grinders

PERIODICAL: Stanki i Instrument, 1960, No. 6, pp. 18-20

TEXT: The authors describe an automatic control of the cross-feed during internal grinding operations, the principle of which consists in the fact that, corresponding to the previously set program, the removal speed of the allowance as a function of allowance itself is maintained during the grinding process with a definite degree of accuracy. The automatic control of the speed of allowance removal during the grinding process excludes negative effects of the grinding disk wear and of elastic deformations in the system machine tool - grinding disk machined part on the steadiness of the operation cycle. Owing to this it is possible to increase the speed of allowance removal considerably (by 4-8 times in comparison with the technology exsisting at present), which would result in a reduction of machining time without running the risk of burning the machined surface. The authors establish the maximum speed of allowance removal v_{max} at which the surface of the machined part remains free from burns and the final speed v_{fin} of allowance removal at the end of the machining process, i. e. at

Card 1/2

Automatic Cross-Feed Control of Internal Grinders 3/121/60/000/006/004/008

that instant when the grinding disk is removed from the machined part. The required degree of surface finish of the machined part has to be considered. The automation of the cross-feed is rendered possibly by the use of a special electric tracer drive which represents a closed system of automatic regulation. If the actual feed deviates from the given one, the system of automatic regulation aims at reducing this disagreement to a minimum. The automatic control device has been developed by the Kafedra Elektrifikatsii Predpriyatiy Kuybyshevskogo Industrial'nogo Instituta (Department of Plant Electrification of the Kuybyshev Industrial Institute) together with the Kuybyshevskiy Ordena Lenina Podshipnikovyy Zavod (Kuybyshev Order of Lenin Bearing Plant). The investigations and tests carried out with an internal grinding machine with program-controlled icross-feed showed that in this case the machining time pan be reduced by 1.9-2.5 times in comparison with machining without automatic control, if all the technological demands are observed. Machine tool efficiency increases by 35-50% depending on the type of dimension of the machined part, while the specific power consumption is lowered. There are 2 graphs, 1 photo, 1 circuit diagram and 1 block-diagram.

Card 2/2

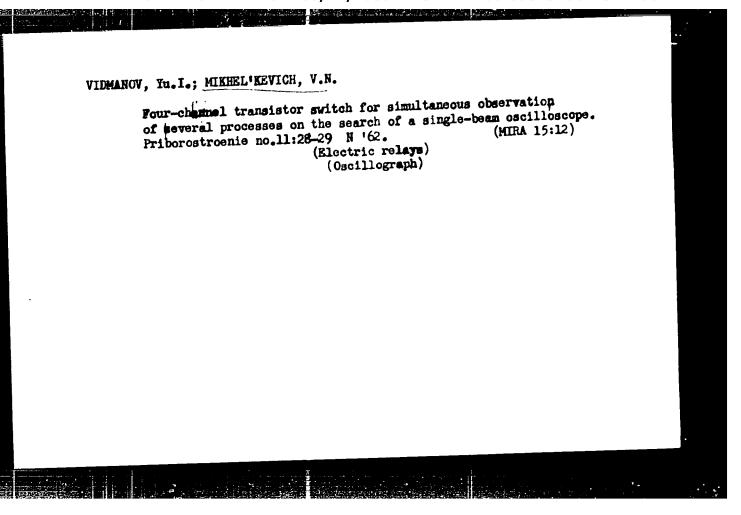
ZHELEZNOV, Ye. S., kand. tekhn. nauk; MIKHEL'KEVICH, V. N., aspirant

Effect of gaps in lateral feed mechanisms on the precision
of the regulation of allowance yield speed. Isv. vys. ucheb.

zav.; mashimostr. no.7:192-199 '62. (MIRA 16:1)

1. Kuybyshevskiy industrial'nyy institut.

(Grinding and polishing)
(Automatic control)



EWP(k)/EWT(d)/EWT(m)/EWP(h)/EWP(1)/EWP(v)/EWP(t)/ETIRH/ IJP(c) L 06322-67 SOURCE CODE: UR/0276/65/000/009/B148/B148 AR6004303 ACC NR: DJ/JD AUTHOR: Mikhel'kevich, V. N. TITLE: New system of automatic cross-feed control for a spherical grinder according to a specified program of excess material removal as a function of time SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 9B1101 r3 REF SOURCE: Tr. Seminara po vopr. progressivn. metodov shlifov, i dovodki detaley, obespech. vysok. i stabil'n. tochnost' i dogovechn. podshipnikov kacheniya. M., 1964, 168-182 TOPIC TAGS: grinding machine, automatic control system, ball bearing ABSTRACT: It is noted that, due to several factors, it is impossible to obtain a high productivity cycle with the required grinding accuracy on ball bearing " race grinders without equipping these machines with automatic control of the cross feed. Power- or torque-based control systems do not provide such a cycle because of its machining time Anstability. It is only possible to provide such a cycle if, during the grinding process, no regulation of the support speed is attempted, but rather the speed of excess material removal is controlled. A UDC: 621.924.6.012.4-436-529 Card 1/2

L 06322-67

ACC NR: AR6004303

closed-loop automatic feed control system is described. It regulates the speed as a function of tolerance and thus allows a machining speed several times greater than during normal operating cycles. Consequently, the machining time for a part can be sharply decreased (by a factor of 2--2.5). The factors which influence the periodic machining speed oscillations, grinding power, radial forces, and other parameters during an established machining regime are considered. Ways of decreasing the effects of technological distrubances on control system operation are indicated. Theoretical equations are presented which permit evaluation of the actual tolerance decrease as a function of time and which allow calculation of the optimum system gain coefficient for a given control accuracy.

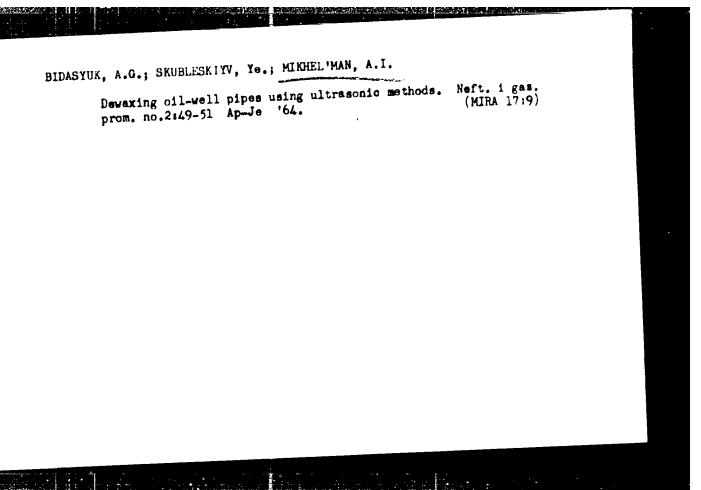
Translation of abstract

SUB CODE: 13

Card 2/2 h /

Use of ultrasonic waves in the manufacture of cil-base lacquers for leather. Leh.prom. no.1:34-35 Ja-Mr 163. (MIRA 16:4)

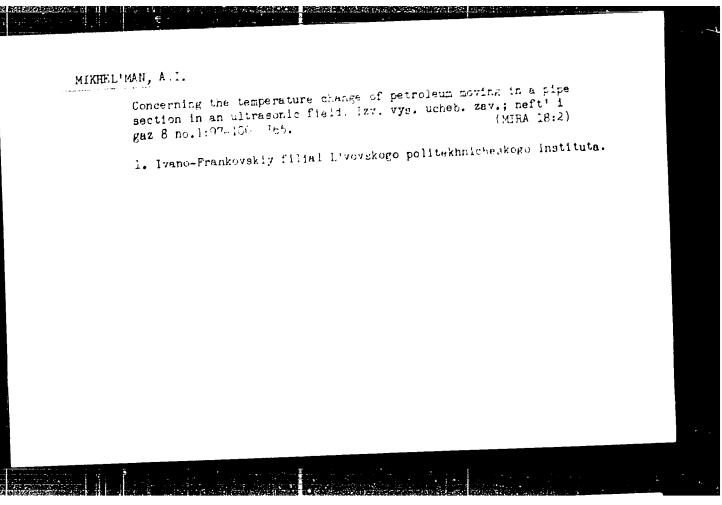
1. TSentral'maya nauchno-issledovatel'skaya laboratoriya Ivano-Frankovskogo soveta narodnogo khozyaystva (for Lutsuk). 2. lvano-Frankovskiy fakul'tet obshchey tekhnologii L'vovskogo politekhnicheskogo instituta (for Mikhel man).

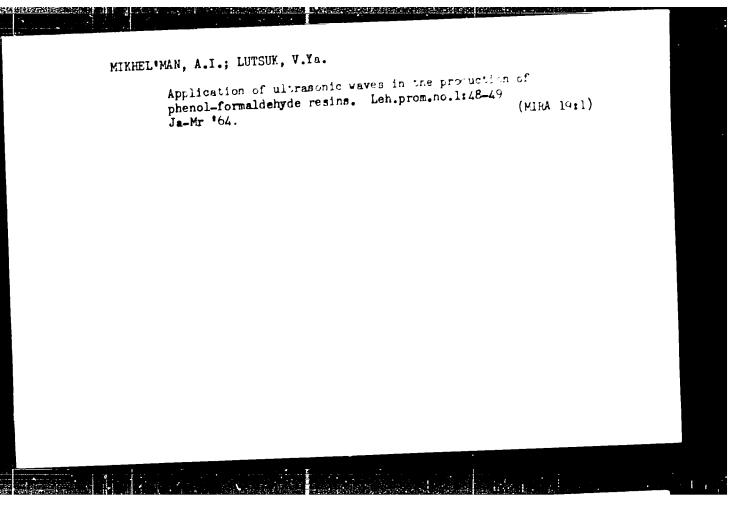


SKUBLEVSKIY, Ye.M.; MIKHEL'MAN, A.I.

Plastic-dynamic theory of the motion of solidifying petroleim in a round pipe in a ultrasonic field. Izv. vys. ucheb. zav.; neft! i gaz 6 no.10:79-81 463. (MIRA 17:3)

1. Ivano-Frankovskiy filial L'vovskogo politekhnicheskogo instituta.





SOV / 124 - 58 - 5 - 5250

Translation from Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 43 (USSR)

Mikhel'man, I.D. AUTHOR

The Importance of Turbines With Series-parallel Steam Flow and Special Methods for Their Thermal Analysis (Znacheniye TITLE turbin's parallel'no-posledovatel'nym potokom para i osoben-

nosti metodiki ikh teplovogo rascheta)

Tr. Tallinsk. politekhn. in-ta, 1957, Vol A, Nr 105, 15 pp. PERIODICAL

A study is made of the operating principle of a series-paral-ABSTRACT:

lel steam-flow marine turbine in which, when the ship travels at full speed, a group of high-pressure stages operates in parallel while, when the ship travels at reduced speed, it operates in series. This principle of operation is compared with other methods for increasing turbine efficiency at cruising speeds and on economy runs, including methods involving installation of special stages for cruising speeds and economy runs and the use of gas-turbine accelerators and of sliding

steam parameters. N.A. Kolokol'tsov

Card 1/1

1 Ship turbines--Performance

Minne James M.D.

AID P - 3508

Subject

: USSR/Power Eng

Card 1/1

Pub. 26 - 2/30

Author

: Berson, S. Ya., I. P. Ivanov, I. M. Makhnovetskiy, S. P. Korsak, and M. D. Mikhel'man, Engs.

Title

: Two stage hot air combustion of pulverized coal

Periodical

: Elek.sta., 9, 5-8, S 1955

Abstract

: The authors discuss in detail certain changes made on boilers of the PK-9-200/35 type, which use hard coal and are installed at one of the thermal power plants. The article describes the results of 4 years work in designing, testing and improving of the boiler design. Further research and tests are recommended.

Three diagrams.

Institution : None

Submitted

No date

MIKHEL'MAN, M.D.

Surgical reduction of congenital dislocation of the hip in adolescents and adults. Khirurgiia 36 no.6:55-60 Je '60.

(HIP JOINT—DISLOCATION)

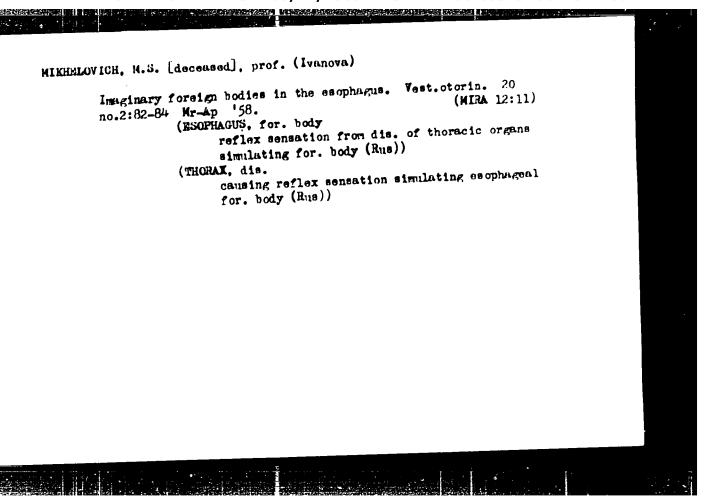
(MIRA 13:12)

MIKHEL!MAN, M.D., doktor med. nau'; MIKHAYLOVA, N.M., kand. med.

HENEN SERVICE IN THE

Biochemical study of the protein-carbohydrate complexes of the blood serum in patients with arthrosis deformans of the hip joint; preliminary report. Ortop., travm. i protez. 26 no. 10:3-9 0 165. (MIRA 18:12)

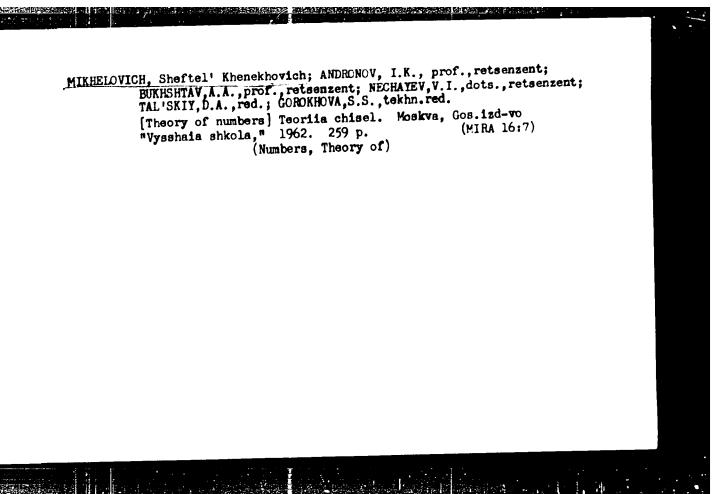
l. Iz TSentral'nogo instituta travmatologii i ortopedii (dir. - chlen-korrespondent AMN SSSR prof. M.V. Volkov). Adress avtorov: Moskva A-299, ul. priorova d. 10 TSentral'nyy institut travmatologii i ortopedii. Submitted May 23, 1964.

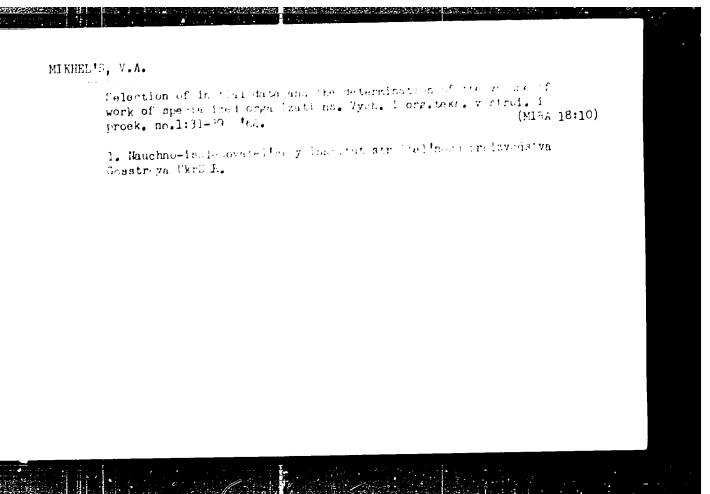


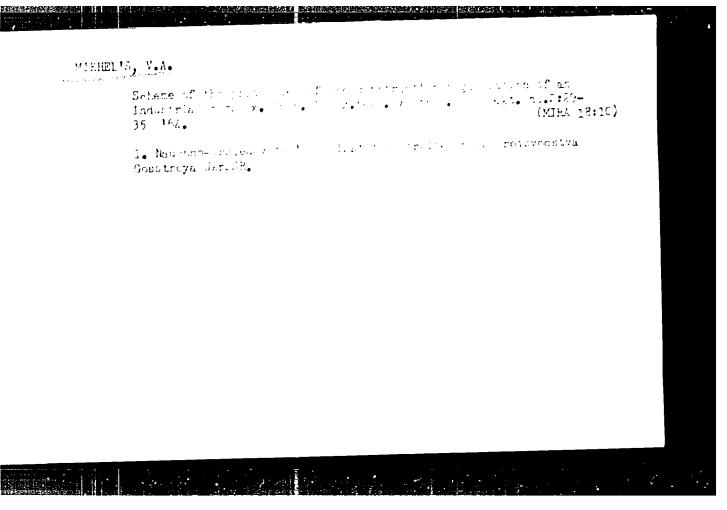
MIKHELOVICH, Sh. Kh. (Daugavpils, Latviyskaya SSR).

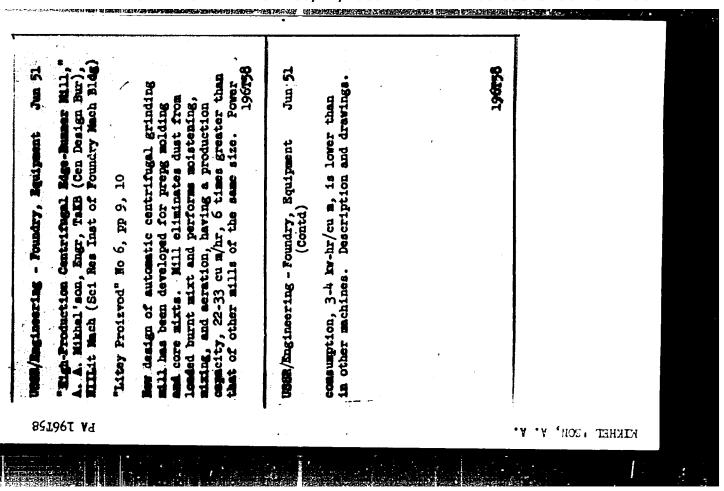
10800H en the tepic "Parallel lines." Mat. v shkele ne.6:39-47
(MIRA 11:12)

(Geometry, Plane-Study and teaching)









THE RESIDENCE OF STREET STREET, STREET

MIKHEL'SON, A. A.

UESR/Engineering - Foundry, Equipment

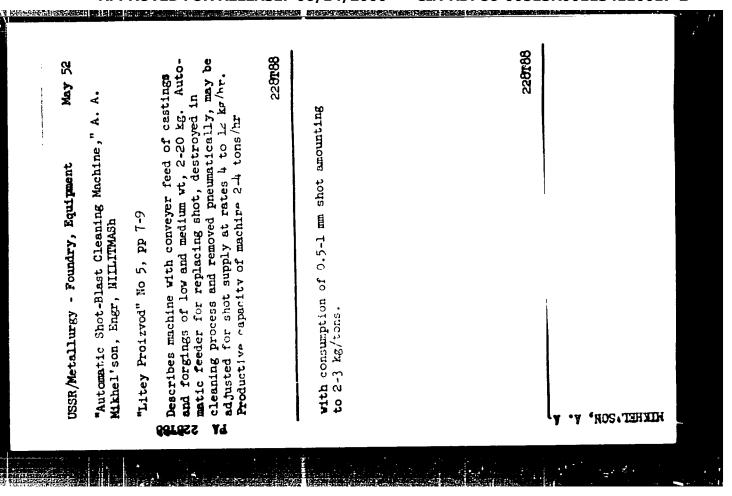
Jan 52

"Machine for Centrifugal Casting of Cast-Iron Water Pipes," A. A. Mikhel'son, Engr

"Litey Proizvod" No 1, pp 8-13

Describes semiautomatic machine, designed by TeRB NIILITMASh and constructed at "Krasnaya Presnya" Plant, for casting water pipes of 200, 250 and 300 mm diams. Gives drawings and discusses functions of machine parts in detail.

204T14



THE PROPERTY OF THE PROPERTY O

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, 112-1-1393

Nr 1, p. 214 (USSR)

AUTHOR: Mikhel'son, A.A.

MINHEC SON A

TITLE: Examples of Automation of Foundry Machinery Performance

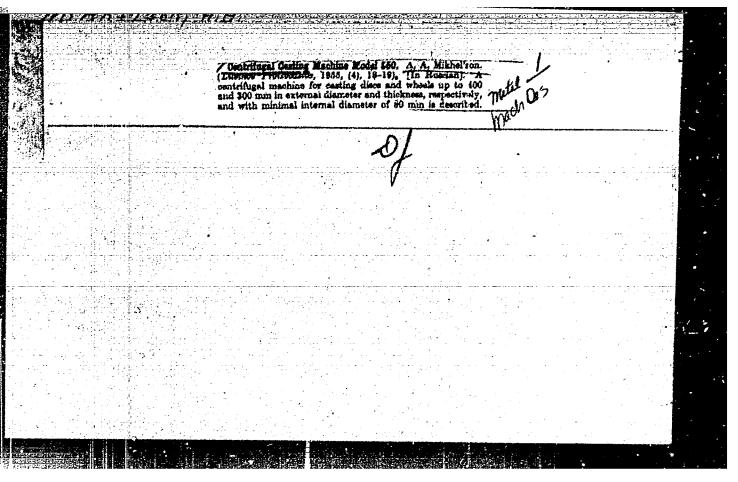
(Primery avtomatizatsii raboty liteynykh mashin)

PERIODICAL: From Sbornik: Avtomatizatsiya tekhnol. protsessov v

mashinostr. Goryachaya obrabotka metallov. Moscow, AN SSSR, 1955, pp.386-400.

ABSTRACT: Bibliographic entry

Card 1/1



Mikhel SON, A.F.

LATVIA / Chemical Technology. Varnishes, Paints, Dyes Lacquer-Paint Coatings.

H-30

Abs Jour : Ref Zhur - Khim., No 12, 1958, No 41576

Author ! Mikhelson, A.E., Titin, I.A. Inst

: Ins-tut Fiziki Title

! An Induction Drying of Varnish-Paint Coatings.

Orig Pub ! Tr. In-ta Biziki. AN Latv. SSR, 1954, 7, 91-103

Abstract ! No abstract.

Card 1/1

Wedicine - Echinococcus, Diagnosis Jul 46 Medicine - Tumors, Eticlogy and Pathogenesis Pathogenesis There Forms of Localized Echinococcus (Echinococcus of Bones and the Prostrate Gland)," Docent A. I. Hithel'son, Faculty Surg Clinic, Bashkir Med Inst, Z pp	Marov publishe in Marov publishe in observed du 'Ura First Sur	localized in liver (80%); lung, spleen, and kidnoys odme next. Infection of other organs is rare and Alegnosis is apt to be inaccurate. Describes two rare localized forms.	34/49135	
SETQUIAL AS	February of Ur	THEO 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	MIKHERATCH, A. I. DOC	
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MIKERISCH, A. I. Sivertik S. Semakey Mentry, Chierabacachiy . Rechevyal Karnya.

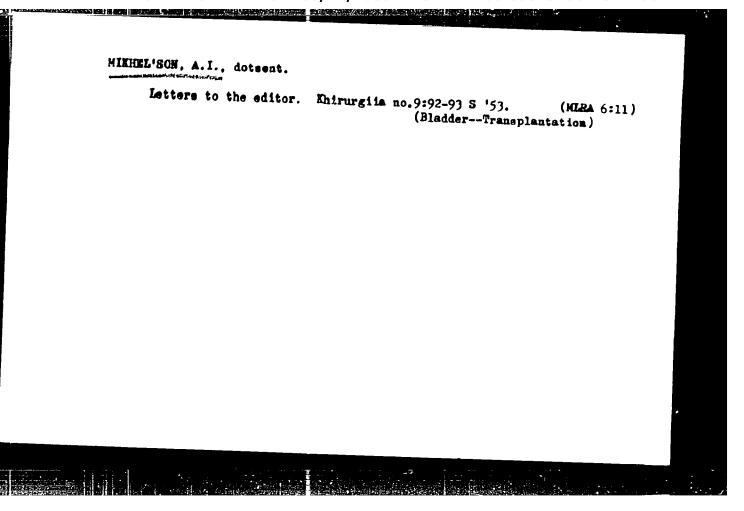
Vrucheb. Delo, 1948, No. 11. SIV. 10.5-10

SC: Letopis' Shurnal hyd. Statey, Vol. 7. 1949

MIKHEL'SON, A.I.

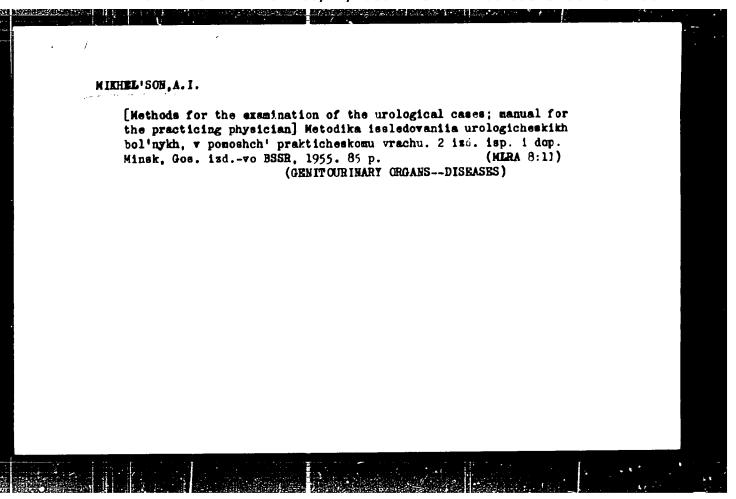
Technic of fixation of a catheter a demeure. Vest.khir.Grekova 70 no.6:66-67 1950. (CIML 20:5)

1. Of the Hospital Surgical Clinic of Minsk Medical Institute (Director-Ye.V.Korchits), Minsk.



MIKHEL'SCN, A. I.: "Surgical treatment of congenital fissures of the bladder". Minsk, 1955. Minsk State Medical Inst. (Dissertation for the Degree of Candidate of MEDICAL Sciences)

So: Knizhnaya Letopis! No. 51, 10 December 1955



MIRHEL'SCH. A.I.. dotsent Case of ureterocele descended from the bladder. Urologiia no.4:58-59 O-D'55. (MIRA 9:12) 1. Is gospital'noy khirurgicheskoy kliniki Minskogo meditsinskogo instituta (dir. kliniki i instituta - dots. I.M.Stel'mashonok) (URITERS, diseases, ureterocele prolapsed from bladder)

Same : MIREL SON, Abram Ice ifovion

Dissertation: Surgical Treatment of Congenital Clofts of

the Bladder

Degree: Doc Med Sci

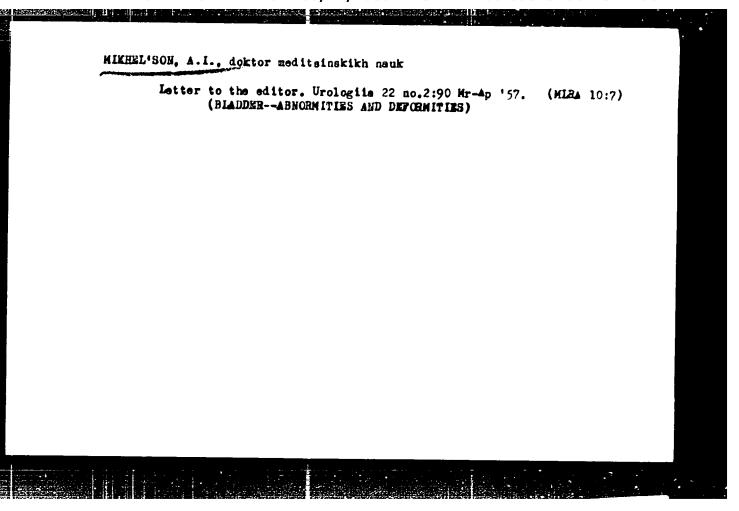
Affiliation: Inot indicated 7

Defense Date, Place: 8 Dec 55, Council of the Minsk State Med

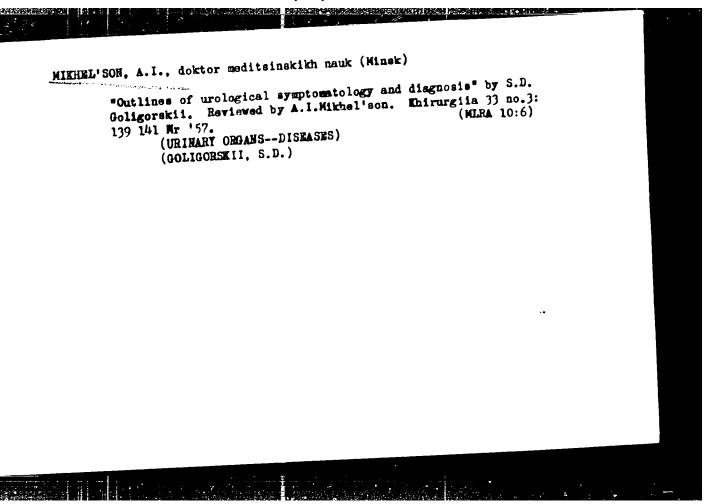
Certification Date: 19 May 56

Source: BMV0 4/57

Experience with surgical treatment of congenital fissures of the bladder. Urologiis 21 no.2:45-49 Ap-Je '56. (MIRA 9:12) 1. Is gospital'noy khirurgicheakoy kliniki Minakogo gosudarstvennogo meditainakogo instituta (dir. kliniki i instituta - dotanet I.M. (ADMORMALITIES. exetrophy of bladder, surg. (Rus)) (BIADDER, abnormalities, exetrophy, surg. (Rus))



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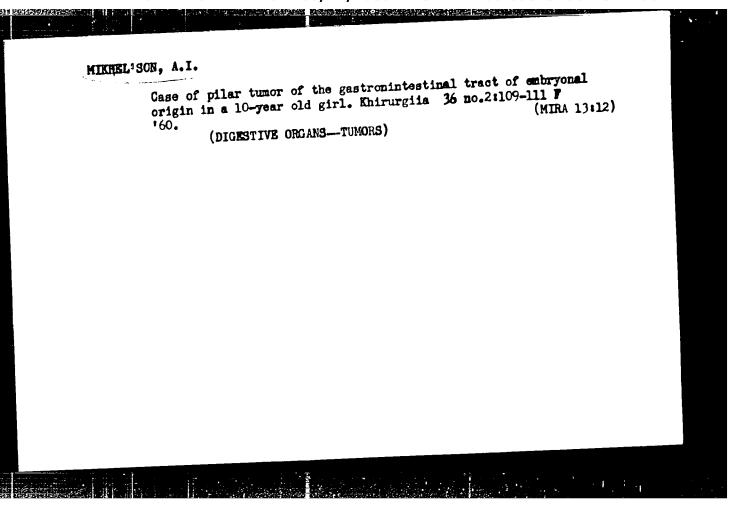
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Umusual anomaly and pathology of the upper urinary tract in situs inversus totalis. Urologiia 24 no.3:52-53 My-Je '59. (MIRA 12:12)

1. Iz gospital noy khirurgicheskoy kliniki Minekogo meditainskogo instituta.

(URINARY TRACT, abnormalities, in situs inversus (Rus))

(SITUS INVERSUS, compl.

urinary abnorm. (Rus))
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"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134110017-2

KUZNETSOV, Cleg Andreyevich; @ HUB*, noris Ivanovich;

RECKHOVEKIKE, Vacim Fodoseyevich; MIKHEL*.Ch, f.1., red.

[Automatic temperature control in industry; survey of
foreign engineering] 'wtomaticheckii kontrol* temperatury v
promyshlennosti; obzor zarabezhnot tekhriki. Morkva,

GOSINTI, 1962. **2 p.*

(Elda 17:7)

MIKHEL'SOE, A.I., prof.; MOKHORT, V.A.

Actinomycosis of the grachus. Urologita no.1:84-85 '62.

1. Iz urologicheskoy kliniki (zav. - prof. A.I. Mikhel'son)

Belorusekogo instituta usovershenstvovaniya vrachey.

(ACTINOMICOSIS) (URINARY ORGANS—TUMORS)

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134110017-2

MIKHEL*SON, A.I., prof. (Minsk)

Review of L.P. Kraizel*burd's book *Clinicorosntgenological diagnosis of urological diseases.* Urologiia 28 no.5182-83 (MIRA 17:4)
S-0*63

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134110017-2

MIKHELISON, A.I., prof.; Zhiankisevi H. I.A.

Efficient survival treatment of entrying of interest function.

Urcl. 1 netr. 30 no.1: 5-be | Chef. 1.5. | (VIEA 18:11)

1. Urologi meskaya kiinika (zav. | prof. A.I.Mikhelison
Belorusukogo instituta asoverstmenstvovaniya vrantey, Miros.

YAGDYYEV, N., otv. red.; MIKHEL'SON, A.O., red.; MYAGKOV, N.Ya., red.; NOVIKOV, G.S., red.; MAYOROVA, Yu.M., red. 1zd-va; IVONT'YEVA, G.A., tekhn. red.

[Work results of the Repetek Station for the Study of Sandy Desert Lands] Opyt raboty Repetekskoi peschano-pustynnoi stantsii. Ashkhabad, Izd-vo AN Turkm.SSR, 1963. 148 p. (MIRA 16:7)

1. Akademiya nauk Turkmenskoy SSR, Ashkhabad. Institut pustyn'.
(Turkmenistan-Deserts)

MIRHEL'SON, A.V.

Using salt additives in concrete and earth work conducted in the winter. Stroi. truboprov. 8 no.9:5 S *63.

(MIRA 16:11)

1. Trest Shchekingazstroy, Shchekino Tul'skoy obl.

MIRHELISON, A.V.

Using salt additives in concrete and each in the winter. Stroi. truboprov. 8 no.9:5 S *63.

(MIRA 16:11) Using salt additives in concrete and earth work conducted

1. Trest Shchekingasstroy, Shchekino Tul'skoy obl.

CIA-RDP86-00513R001134110017-2 "APPROVED FOR RELEASE: 06/14/2000

MIKHEL'SON A. YA. (Engr.), KREYN, S. Ye. BROMBERG, M. Z. (Engr.)

Oils and Pats - Analysis

Properties of oils at low temperatures for the electric power industry. Elek. sta. 23 no. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. Unclassified.

MITKhelin A A YA

Ivanov, K.I. and Mikhel'son, A.Ya. AUTHORS:

65-10-7/13

TITLE:

The Influence of the Degree of Purification of Power Oils on Their Ability to Form Water Soluble Acids in the Initial Stages of Ageing (Vliyaniye glubiny ochistki energeticheskikh masel na sposobnost' ikh obrazovyvat' vodorastvorimyye

kisloty v nachale stareniya)

PERIODICAL: Khimiya i Tekhnologiya Topliva i Masel, 1957, No.10, pp. 34 - 41 (USSR)

ABSTRACT: An investigation of the dependence of the ability of transformer and turbine oils to form water soluble acids in the initial stages of ageing on the degree of their refining with sulphuric acid was carried out. Properties of oils taken from the investigation are given in Table 1. Oils were successively treated with 93.5% sulphuric acid in 3% portions neutralised with 3% NaOH, and washed and dried. Thus from each distillate, samples were obtained of a different degree of purification. All samples were tested for stability according to FOCT 981-55 (results: Figs. 1-4, Table 2). It was established that all investigated distillates and oils prepared from them form, in the initial stages of ageing, volatile and non-volatile water-soluble acids in amounts decreasing with Card 1/2

The Influence of the Degree of Purification of Power Oils on Their Ability to Form Water Soluble Acids in the Initial Stages of Ageing

increasing degree of refining up to attainment of a certain optimum of purification which, in the case of Embenskiy oils, corresponds with the optimum degree of purification in respect of their general stability. On further increase of the degree of purification, the character of the change of the yield of water soluble acids depends on the nature of the initial raw material. While in oils on a naphthenic base (from Archedinsk crude) it continues to decrease, in oils from Embenskoy crude it increases with over-purification. The latter phenomenon is due to an increased content of maraffinic hydrocarbons in the Embenskoy oils. There are 2 tables, 4 figures and 14 references, 12 of which are Russian and 2 German.

ASSOCIATION: All-Union Power Engineering Institute (Vsesoyuznyy

teplotekhnicheskiy institut)

AVAILABLE:

Library of Congress

Card 2/2

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134110017-2

SOV-91-58-11-9/20

AUTHORS: Gerasimov, P.H., Luzhetskiy, A.A., Kikhel'son, A.Ya. Engi-

neers

TITLE: A Comment on an Article by Ya.G. Yemel'yanov and Ye.I.

Kabanov, "The Use of the New Antioxidants Pyramidon and Antipyrine" ("Energetik", 1957, Nr 7) (Po povodu stat'i Ya. G. Yemel'yanova i Ye. I.Kabanova "Primeneniye novykh antiokisliteley piramidona i antipirina" ("Energetik",

1957, Nr 7)

PERIODICAL: Energetik, 1958, Nr 11, pp 20-21 (USSR)

ABSTRACT: On the basis of operational tests of VTI-1 additive, carr-

ied out on two transformers of the high-voltage network of Mosenergo, the authors of the afore-mentioned article came to the conclusion that this additive is useless and that most power systems refuse to use it. At the same time they recommended the additives pyramidon and antipyrine on the basis of their general stability in laboratory

Card 1/2 tests. All of this is disputed by the authors of the

ACCOUNT OF THE PARTY OF THE PAR

SOV-91-58-11-9/20 SOV-91-58-11-9/20 Use of the New Antioxidants Pyramidon and Antipyrine"

present article, who give examples where VTI-1 is being successfully used, and state that it has the most marked ability to prevent the formation of low-molecular acids in the initial period of the aging of the bil. They also state, that due to its selective action, the few cases where it has proved ineffective are due to it being used with unsuitable bils. A table is given showing laboratory tests which prove these points. The authors conclude by saying, that laboratory tests, in regard to pyramidon and antipyrine, are usually optimistic. There is one table.

Card 2/2

1. Antioxidants--Test results

SOV/65-58-12-10/16

AUTHORS: Ivanov, K. I., Lipshteyn, R.A. and Mikhel'son, A. Ya.

TITLE: New Method for Evaluating the Behaviour of Transformer

Oil During Normal Operation (Novyy metod otsenki povedeniya transformatornykh masel v ekspluatatsii)

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr 12,

pp 46-48 (USSR)

ABSTRACT: A method has been developed in the VTI Laboratory for

determining more reliably the behaviour in operation of transformer oil, i.e. the behaviour after ageing. The method consists in ageing the oil in a specially equipped small power transformer with a tank capacity of 12 litres operating at 95°C under no-load conditions

at a 100% over-voltage, i.e. with a maximum of 100% increase in the field strength with simultaneous blowing of oxygen onto the oil at a rate of 25 ml/min per 10 kg

of oxygen onto the oil at a rate of 25 m1/min per 10 kg of oil. During the tests the oil was heated by the losses of the transformer itself and also by an additional

140 W immersion heater and a 1800 W hot-plate placed

under the transformer. Due to the fitting of an additional

Card 1/3 tank and circulation of the oil in the zone of the field

SOV/65-58-12-10/16

J

New Method for Evaluating the Behaviour of Transformer Oil During Normal Operation

at a relatively high test temperature of 95 ± 0.5°C and saturation of the oil with oxygen, the ageing process is accelerated and lasts 750 hours, i.e. the ageing is considerably slower than in various "express" methods. The testing of the oil was effected simultaneously in two transformers in two stages. The first stage, lasting 100 hours, enables determination of the tendency of the oil to form water soluble acids during the initial stage of ageing; the second stage lasting 650 hours permits evaluating the ability of the oil to resist ageing over long periods. During the first stage, the oxygen is fed in continuously, during the second stage, the oxygen is fed in solely during the time when the transformer is actually in operation, i.e. 7 hours per day. At certain intervals samples are taken and the total acidity, the content of water soluble and volatile acids, the saponification number, the content of active oxygen and hydrogen, surface tension etc. are determined and also the loss factor and the break-down voltage.

At the end of the tests the quantity of precipitate is Card 2/3

SOV/65-58-12-10/16

New Method for Evaluating the Behaviour of Transformer Oil During Normal Operation

also determined. Between the individual tests, the transformers are carefully cleaned by heating them twice over a long period, each time with a new portion of fresh oil. The here described method permits evaluating of the behaviour of transformer oils under conditions closely resembling normal operating conditions. During the first 100 test hours, it is possible to evaluate the ability of transformer oils to form low-molecular water soluble acids at the beginning of the ageing process and during a subsequent 650 hours it is possible to determine the behaviour of the oil under conditions of operation over long periods. Test results are given which were obtained for some Soviet oils, one of them containing 0.3% of the anti-oxidant 2,6-di-tert.butyl-4-methylphenol. There are 3 figures.

ASSOCIATION: Vsesoyuznyy teplo-tekhnicheskiy institut
(All-Union Thermo-technical Institute)

Card 3/3

S/081/62/000/007/027/033 B168/B101

AUTHORS:

Ivanov, K. I., Lipshteyn, R. A., Mikhel'son, A. Ya.,

Luzhetskiy, A. A.

TITLE:

A method of evaluating the operational characteristics of

inhibited insulating oils

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 7, 1962, 550-551, abstract 7M197 (Sb. "Prisadki k maslam i toplivam". M.,

Gostoptekhizdat, 1961, 290-297)

TEXT: A test-bench method of evaluating the operational characteristics of transformer oils has been devised (a diagram of the apparatus is given). Essentially this method consists of testing the oil for aging over a period of 750 hours in a low-power transformer running without load at twice the maximum field intensity. In order to reduce the time taken by the test the aging process of the transformer oil is speeded up by using special devices for heating the oil to 95°C, for saturating it with oxygen and for circulating the oil in the field zone. The quality of the transformer oil is determined, while the oil is in use, from changes in a

CIA-RDP86-00513R001134110017-2" **APPROVED FOR RELEASE: 06/14/2000**

S/081/62/000/007/027/033 B168/B101

A method of evaluating the ...

group of characteristics - namely, tendency to form low-molecular watersoluble acids in the initial stages of aging (after 100 hours), general
acidity, quantity of sediment, tangent of angle of dielectric losses
(tan \(\delta\)), condition of the solid insulation, corrosive attack on copper,
etc. With this method it is possible to make a more objective and
broader evaluation of the operational characteristics of a transformer
broader evaluation of the operational characteristics of a carried out
oil than by other, familiar, methods. A number of tests were carried out
by this method on home-produced commercial and experimental oils and also
on imported commercial oils. [Abstracter's note: Complete translation.]

Card 2/2

s/065/61/000/007/005/005 E194/E435

Lipshteyn, R.A., Ivanov, K.I. and Mikhel'son, A.Ya. AUTHORS:

Assessment of the service properties of transformer oils

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1961, No.7,

Existing laboratory methods of testing transformer oils do not assess them fully. Accordingly, the Laboratoriya nefti (Petroleum Laboratory) of the VTI has developed a method of assessing transformer oil in small transformers. transformers operate at twice the rated voltage and, to reduce the test time, ageing of the oil is intensified by heating it to a temperature of 95°C, saturating it with oxygen and by circulation The oil is assessed by measuring the contents of low and high molecular weight acids, the amount of sludge, the dielectric loss angle, the condition of the solid insulation, These rig tests give corrosivity to copper and other tests. results that are in agreement with VTI experience of the service performance of the oils in question and data obtained by Test results on a considerable number of oils are A.A.Luzhetskiy. Card 1/3

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Assessment of the service ...

In general, Soviet oils from low sulphur crudes were unsatisfactory usually because of excessive formation of low Even the best of the Baku oils molecular weight acids or sludge. did not give such good rig test results as imported British and French oils. Oils produced from high sulphur crudes were also generally unsatisfactory. Di-terbutylparacresol (DBPC) effectively improved the oxidation stability of many of the oils, However, the results of rig tests on inhibited oils are sometimes not so favourable as might be expected from laboratory bench tests. The usual relationship between depth of refining and inhibitor response is reported. With base oil of satisfactory quality, the content of DBPC may be reduced from 0.3 to 0.2%, but further The All-Union reduction to 0.1% gives poor performance. Scientific Research Institute of the Petroleum Industry (VNII NP) and the Novo-Kuybyshev Refinery developed a method of manufacturing hydrofined transformer oil from high sulphur crudes without solvent Although bench test results are satisfactory, heavy sludge formation was experienced in laboratory transformers and, accordingly, stricter requirements were applied to this oil in Card 2/3

Assessment of the service ... S/065/61/000/007/005/005 E194/E435

respect of sludge formation in the fourteen hour oxidation test of the standard FOCT 981-55 (GOST 981-55). The second production batch of hydrofined oil was also refined by percolation and gave much better rig test results. On the basis of the work, it is recommended that if transformer oils are made from new crudes by new refinery processes, or with new additives, they should be admitted to general use only after being subjected to a 750 hour rig test on experimental transformers using the procedure of the VTI. The existing standard for transformer oils FOCT 982-56 (GOST 982-56) should be tightened up in respect of dielectric loss angle, and for aromatic oils in respect of sludge formation after oxidation. Some tightening up in neutralization value after oxidation is also to be recommended. When further experience has been accumulated the standard should be extended to include such characteristics as colour, interfacial tension, stability of electrical properties on laboratory ageing, copper strip test and gassing properties in hydrogen atmosphere. There are 2 figures, 4 tables and 5 Soviet

ASSOCIATION: VTI im. Dzerzhinskogo (VTI im Dzerzhinskiy)

IVANOV, K.I., doktor khimicheskikh nauk; MIKHEL'SON, A.Ya., inzh.

International method of testing insulating oils for artificial aging. Vest.elektroprom. 33 no.1:5-9 Ja '62. (MIRA 14:12)

(Insulating oils—Testing)