PIK, I.Sh.; ROMEYKO, V.S.

Modernization of a high-frequency generator for heating molding compositions and for a further intensification of processes of the compression molding of phenoplasts. Plast.massy no.9:61-63 '61. (MIRA 14:11)

(Phenol condensation products) (Plastics--Molding)

PIK, I.Sh.; VOLKOVA, M.Ye.

Molding powder K-18-56 for thread parts of high water resistance.
Plast.massy no.2:71 '61. (MIRA 14:2)
(Karacharovo—Plastics—Molding)

PIK, I.Sh.; Prinimali uchastiye Skundina, F.I.; LYSENKOVA, R.I.

Quality of products from polytetrafluoroethylene as determined by the conditions of its treatment. Plast.massy no.6:30-32 '60. (MIRA 13:11)

(Ethylene) (Plastics)

PIK, I.Sh.

Intensification of the processes involving the compression molding of thermosetting plastics. Plast.massy no.6:75-76 '60. (MIRA 13:11)

(Plastics—Molding)

S/191/60/000/005/[illegible]
B004/B064

AUTHORS: Pik, I. Sh , Sindarovskaya, A S.

TITLE: Dependence of Shrinkage of Thermosetting Plastics on the Pressing Direction

PERIODICAL: Plasticheskiye massy, 1960, No. 5, pp 36-39

TEXT: In the introduction the authors state that the shrinkage of plastics, which is of particular importance for the production of high-precision units, has hitherto been too little studied. The work of T V Trofimova and N. P. Radikova (Ref. 2) on these problems was checked at the authors' laboratory in 1954. In this connection, anisotropic shrinkage was also found. The present paper reports on the shrinkage of samples consisting of a hollow parallelepiped 100 × 100 × 50 mm, and a cylinder of 50 mm in height and diameter on top of it. Three sides of the parallelepiped were 5 mm, the fourth 15 mm thick. The material used was plastic of the K-18-2 (K-18-2) type (produced by extrusion), of the K-214-2 (K-214-2) type, fiber plastic, and aminoplast. Samples were measured at different points in accordance

Card 1/2

Dependence of Shrinkage of Thermosetting Plastics on the Pressing Direction

S/191/60/000/005/011/027
B004/B064

with standard ГХП-1-43 (GKhP-1-43), 16 to 24 hours after pressing. The following results were obtained: Shrinkage of samples changes with changing direction. Shrinkage in the direction of stamp motion is considerably higher than in perpendicular direction. Shrinkage perpendicular to the direction of motion is the same on all four walls, and is 0.15% lower in the parallelepiped than in the cylinder. In the cylinder, shrinkage along the external diameter is higher than along the internal diameter. There are 2 figures, 1 table, and 2 Soviet references.

Card 2/2

S/191/60/000/004/007/015
B016/B058

AUTHORS: Pik, I. Sh., Sindarovskaya, A. S.

TITLE: Shrinkage of Plastics

PERIODICAL: Plasticheskiye massy, 1960, No. 4, pp. 30-34

TEXT: The authors report on their experiments aiming at the prevention of waste on account of excessive shrinkage of molded materials. They compare the results of their study from 1954 with those presented by A. D. Sokolov and A. N. Luknitskiy (Ref. 1); T. V. Trofimova and N. P. Radikova (Ref. 2); I. F. Kanavets and K. P. Sedova (Ref. 3). They state that the characteristic values obtained by these research workers for the effect of the molding temperature on shrinkage are in agreement. Contradictory results, however, were obtained for the influence of the specific pressure applied, its duration, and the heat treatment of the specimens. The purpose of the authors' study was: 1) to determine the actual and the calculated total shrinkage of voloknit, aminoplast, and of the initial molded materials, K-214-2 (K-214-2) and K-18-2 (K-18-2), which are widely used but have not been investigated so far; 2) to determine the influence of the most important conditions of molding (temperature, duration of pressure

Card 1/2

Shrinkage of Plastics

S/191/60/000/004/007/015
B016/B058

application, preheating by high-frequency current) on shrinkage. For this purpose the authors used three types of specimens: a) standard disc; b) standard block; c) a special bushing (height, 15 mm; outer diameter, 35 mm; inner diameter, 20 mm). Shrinkage was determined from the standards ГХП 1-43 (GKhP 1-43) and calculated from the formulas mentioned in this standard. The duration of pressure application was chosen from ГОСТ (GOST) or ТУ (TU). Shrinkage varies in the various directions. The authors recommend the following measures on the basis of their studies: 1) molding should be carried out at a minimum temperature in order to prevent waste owing to excessive shrinkage, but at a maximum preheating of this material in high-frequency current generators or electric heating chambers and at a predetermined maximum duration of pressure application. 2) For the design of products and molds the authors recommend to use the maximum and minimum values of actual shrinkage, which sets in with an increase of the molding temperature by 50°C for phenoplasts and by 35°C for aminoplasts, along with a reduction of the duration of pressure application to a minimum and with high-frequency preheating. O. I. Lebedeva participated in the experimental part of the study. There are 2 figures, 6 tables, and 3 Soviet references.

Card 2/2

PIK, I.Sh.; SINDAROVSKAYA, A.S.; Prinimala uchastiye O.I.LEBEDEVA

Shrinkage of plastics. Plast.massy no.4:30-34 '60.
(MIRA 13:7)

(Plastics)

PIK, I.Sh.; SINDAROVSKAYA, A.S.

Shrinkage of articles made of thermosetting plastics, as determined by the direction of the compression molding. Plast.massy no.5: 36-39 '60. (MIRA 13:7)
(Plastics)

S/191/60/000/006/009/015
B004/B054

AUTHOR: Pik, I. Sh

TITLE: The Dependence of the Quality of Ftoroplast-4 Products on Processing Conditions

PERIODICAL: Plasticheskiye massy, 1960, No. 6, pp. 30 - 32

TEXT: The author discusses some conditions for the processing of Ftoroplast-4 (polytetrafluoro ethylene) to avoid rejects. 1) Cracks often occur in sheets 20-30 mm thick. The author investigated a) the influence of the cooling time in the furnace, b) of preliminary drying or c) preheating of the molded material, and d) of the specific molding pressure Whereas b) and c) exerted no influence, a prolonged cooling in the furnace (4.5 h instead of only 2.5 h) reduced cracking to 40%. A molding pressure of 225 - 250 kg/cm^2 (instead of 320 kg/cm^2) yielded sheets without cracks. 2) Cracks in rods (35 X 215 mm) can be avoided by precise dosage. Table 1 shows the mechanical properties of products molded at a pressure of 110 - 350 kg/cm^2. The properties are constant within this

Card 1/2

The Dependence of the Quality of Ftoroplast-4 Products on Processing Conditions

S/191/60/000/006/009/015
B004/B054

pressure range so that the molding pressure suggested (200 - 250 kg/cm^2) is permissible. The shrinkage of sheets, rods, and packing rings was investigated (Table 2), and a molding pressure of 200 - 250 kg/cm^2 was again found to be an optimum. The author gives the calculation and data of shrinkage for various dimensions of the product. Table 3 shows that the shrinkage of sheets decreases with increasing thickness. F. I. Skundina and R. I. Lysenkova assisted in this work. There are 3 tables.

Card 2/2

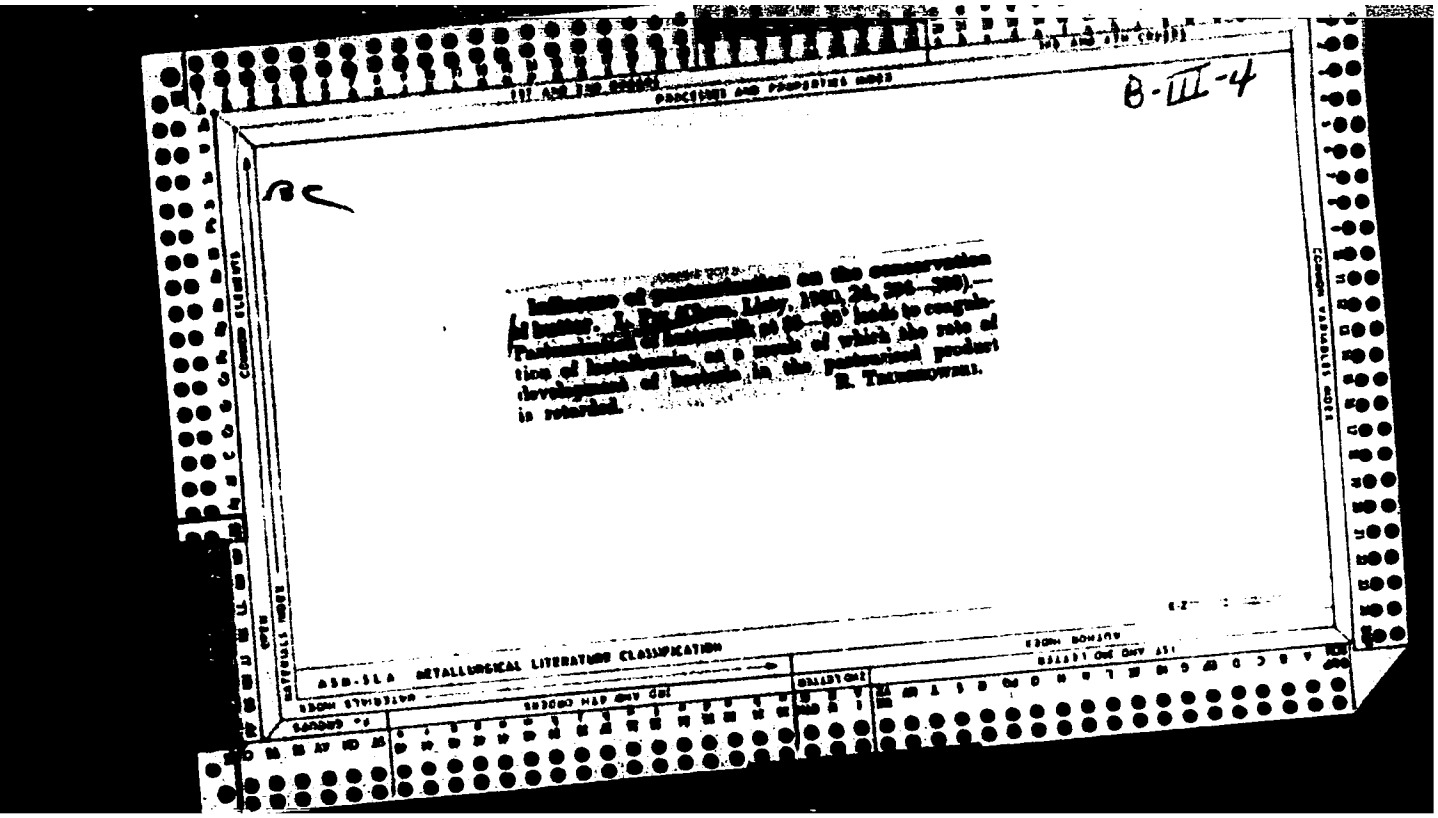
PIK, I.Sh.; NOTKIN, B.M.; PETROV, A.K., red.; ZHURAVSKIY, Ya.B., red.; LUR'YE, M.S., tekhn.red.; KOGAN, V.V., tekhn.red.

[Experience in molding articles made of aminoplasts] Opyt pressovaniia izdelii iz aminoplastov. Pod obshchei red. A.K. Petrova. Moskva, Gos.nauchno-tekhn.izd-vo khim.lit-ry, 1950. 139 p.

(Aminoplastics) (MIRA 13:9)

SITINA, N.V. [translator]; PIK, I.TS. [translator]; SIROTINA, N.Ye. [translator]; SERGOVANTSEV, B.V. [translator]; MOROZOV, I.I., red.; ALEKSANDROVA, A.A., red.; SVESHNIKOV, A.A., tekhn.red.

[Questions of the reliability of electronic equipment. Collection of articles translated from the English] Voprosy nadezhnosti radioelektronnoi apparatury; sbornik statei. Moskva, Izd-vo "Sovetskoe radio," 1959. 185 p. (MIRA 13:9)
(Electronic apparatus and appliances)



VORONIN, V.A.; PIK, L.I.; PLONSKIY, S.S.

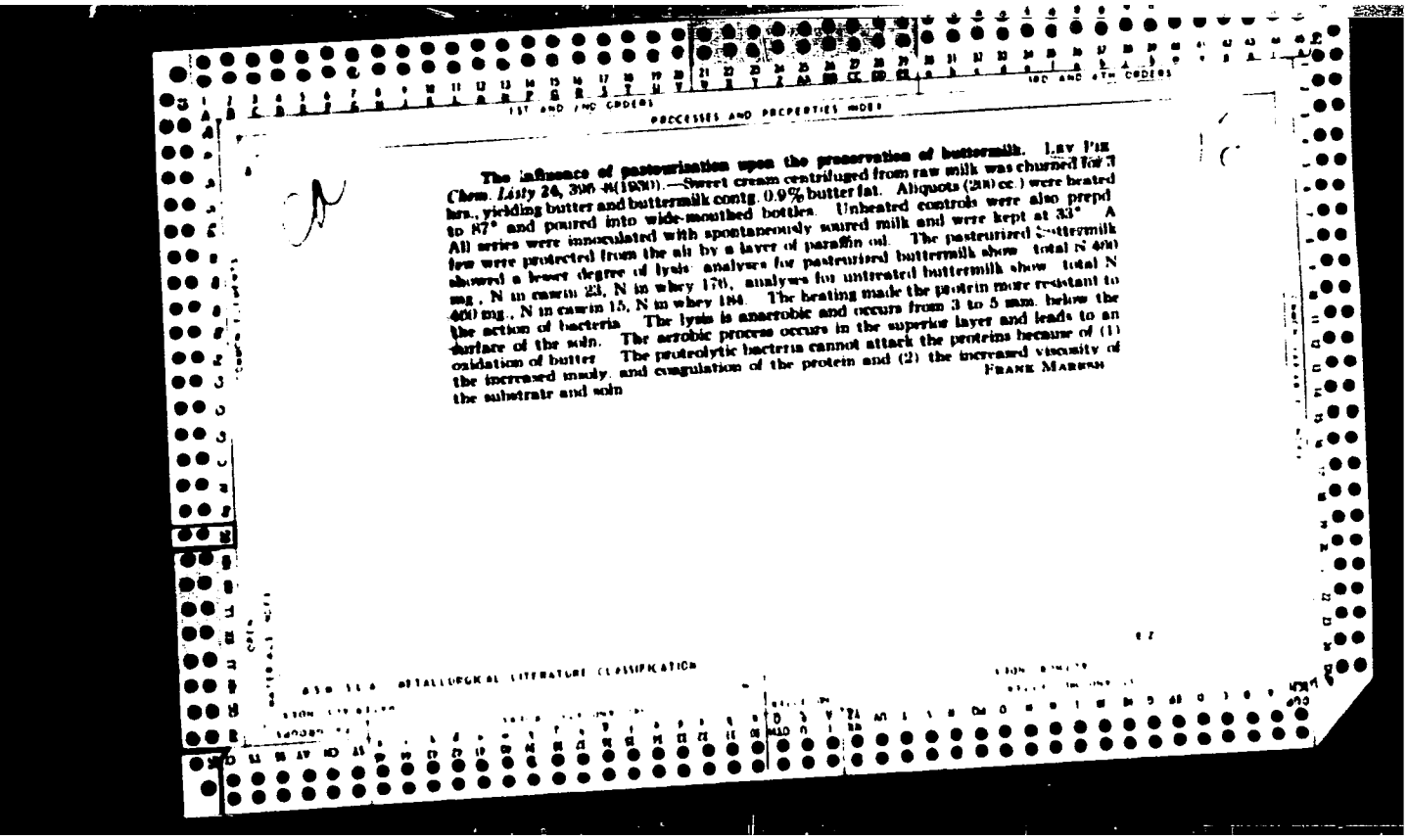
Practice of using the GD-300 geodimeter. Geod. i kart. no.9:
27-31 S'62. (MIRA 15:10)
(Geodimeter)

PIK, L.I.; PLONSKIY, S.S.

Practice of creating horizontal control by the trilateration method. Geod. i kart. no.7:15-18 Jl '63. (MIRA 16:8)
(Triangulation)

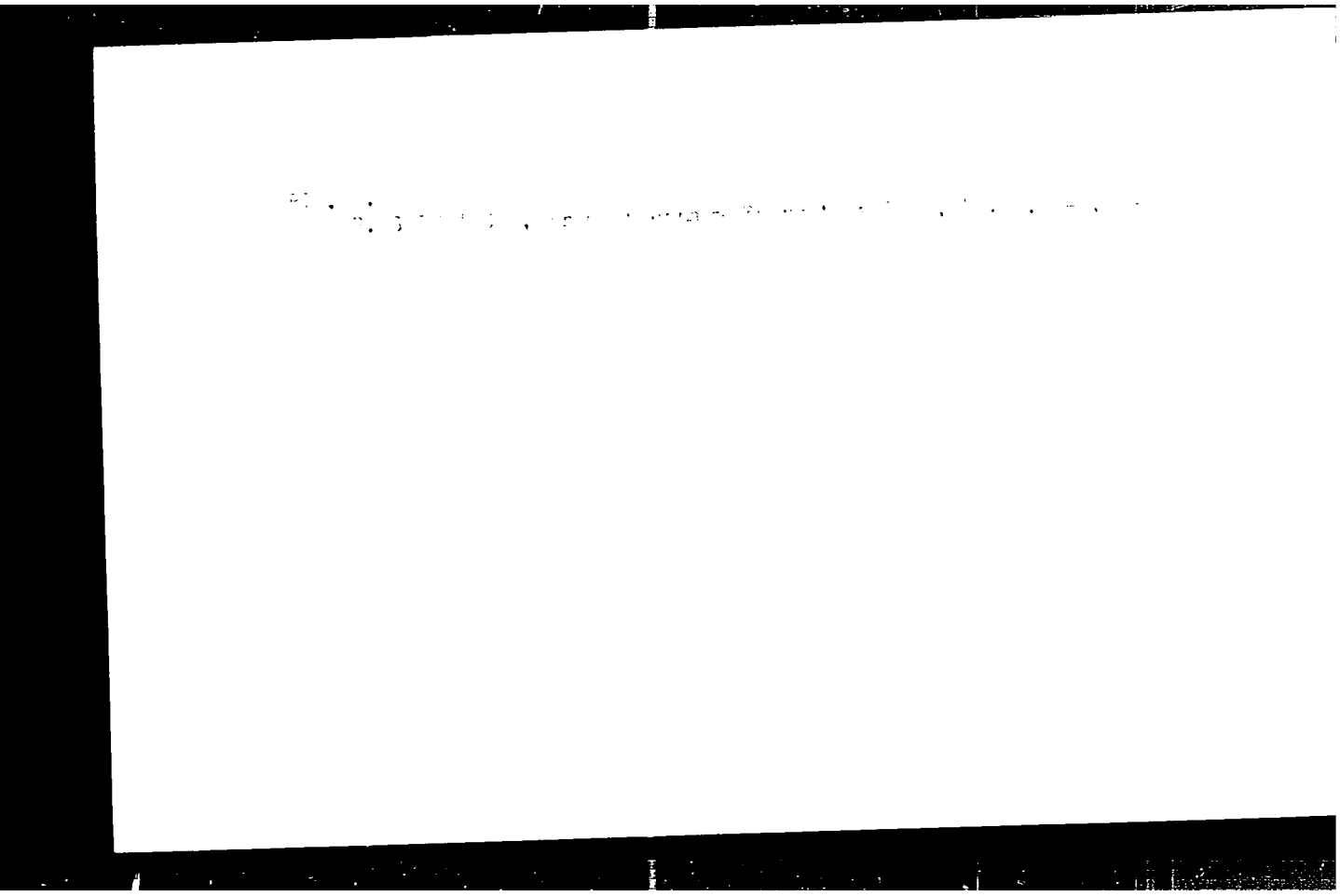
VORONIN, V.A.; PIK, L.I.; PLONSKIY, S.S.

Testing the GD-300 optical distance meter. Geod.i kart. no.6:14-23 Je '60. (MIRA 13:7)
(Range finders--Testing)



The influence of pasteurization upon the preservation of buttermilk. Lav Pik Chem. *Listy* 24, 300-4(1930).—Sweet cream centrifuged from raw milk was churned for 3 hrs., yielding butter and buttermilk contg. 0.9% butterfat. Aliquots (200 cc.) were heated to 87° and poured into wide-mouthed bottles. Unheated controls were also prepd. All series were inoculated with spontaneously soured milk and were kept at 33°. A few were protected from the air by a layer of paraffin oil. The pasteurized buttermilk showed a lesser degree of lysis: analyses for pasteurized buttermilk show total N 400 mg., N in casein 23, N in whey 170; analyses for untreated buttermilk show total N 400 mg., N in casein 15, N in whey 184. The heating made the protein more resistant to the action of bacteria. The lysis is anaerobic and occurs from 3 to 5 mm. below the surface of the soln. The aerobic process occurs in the superior layer and leads to an oxidation of butter. The proteolytic bacteria cannot attack the proteins because of (1) the increased acidity and coagulation of the protein and (2) the increased viscosity of the substratr and soln.

FRANK MARSHALL



PIK, M.M., red.; SHMIDT, I.L., red.; BORUNOV, N.I., tekhn.red.

[Regulations for operating electrical networks and power plants]Pravila tekhnicheskoi ekspluatatsii elektricheskikh stantsii i setei. Izd.9. zanovo perer. Moskva, Gosenergoizdat, 1962. 198 p. (MIRA 15:12)

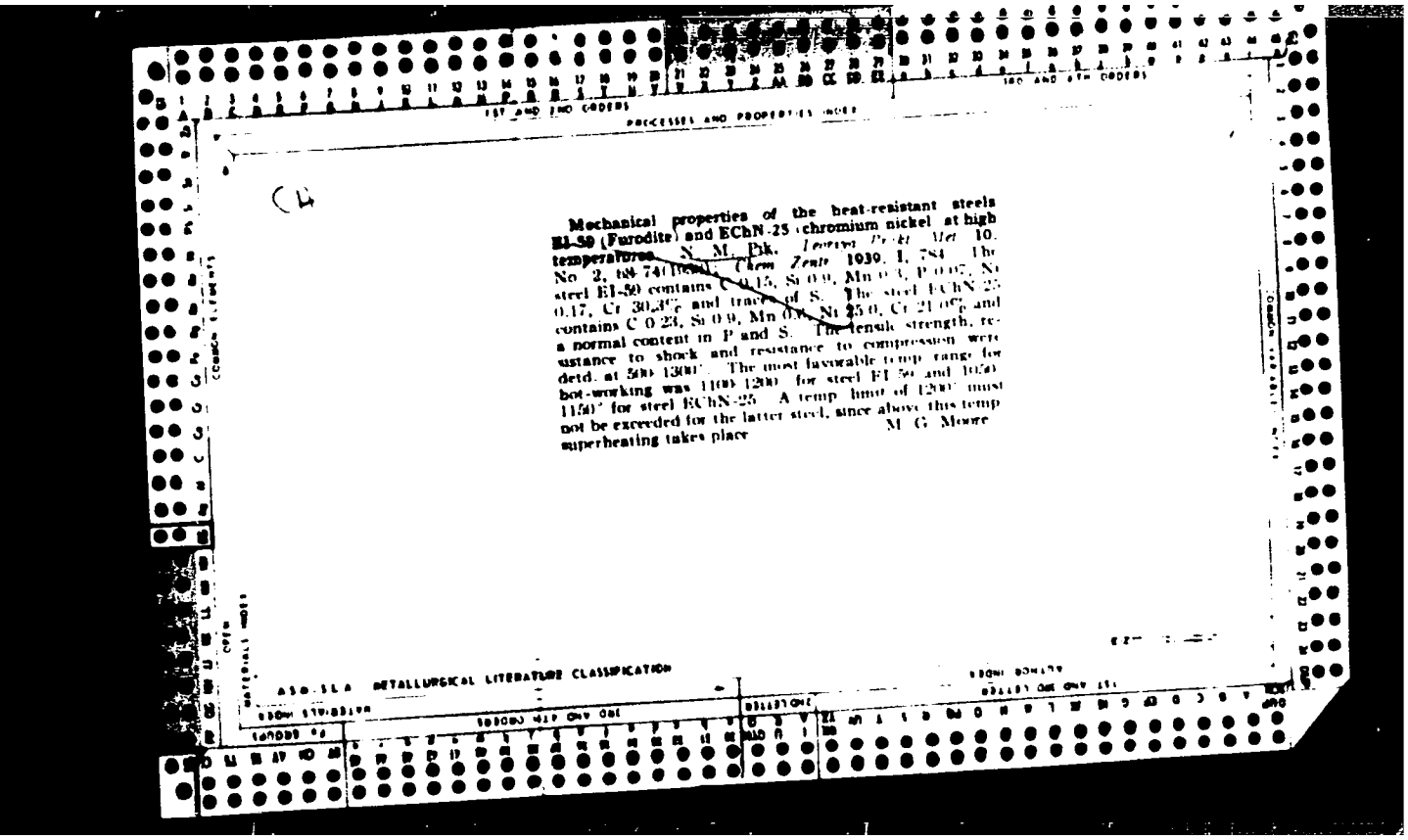
1. Russia (1923- U.S.S.R.)Glavnoye energeticheskoye upravleniye.
(Electric power plants) (Electric power distribution)

PIK, M. M.

Feed Water Purification

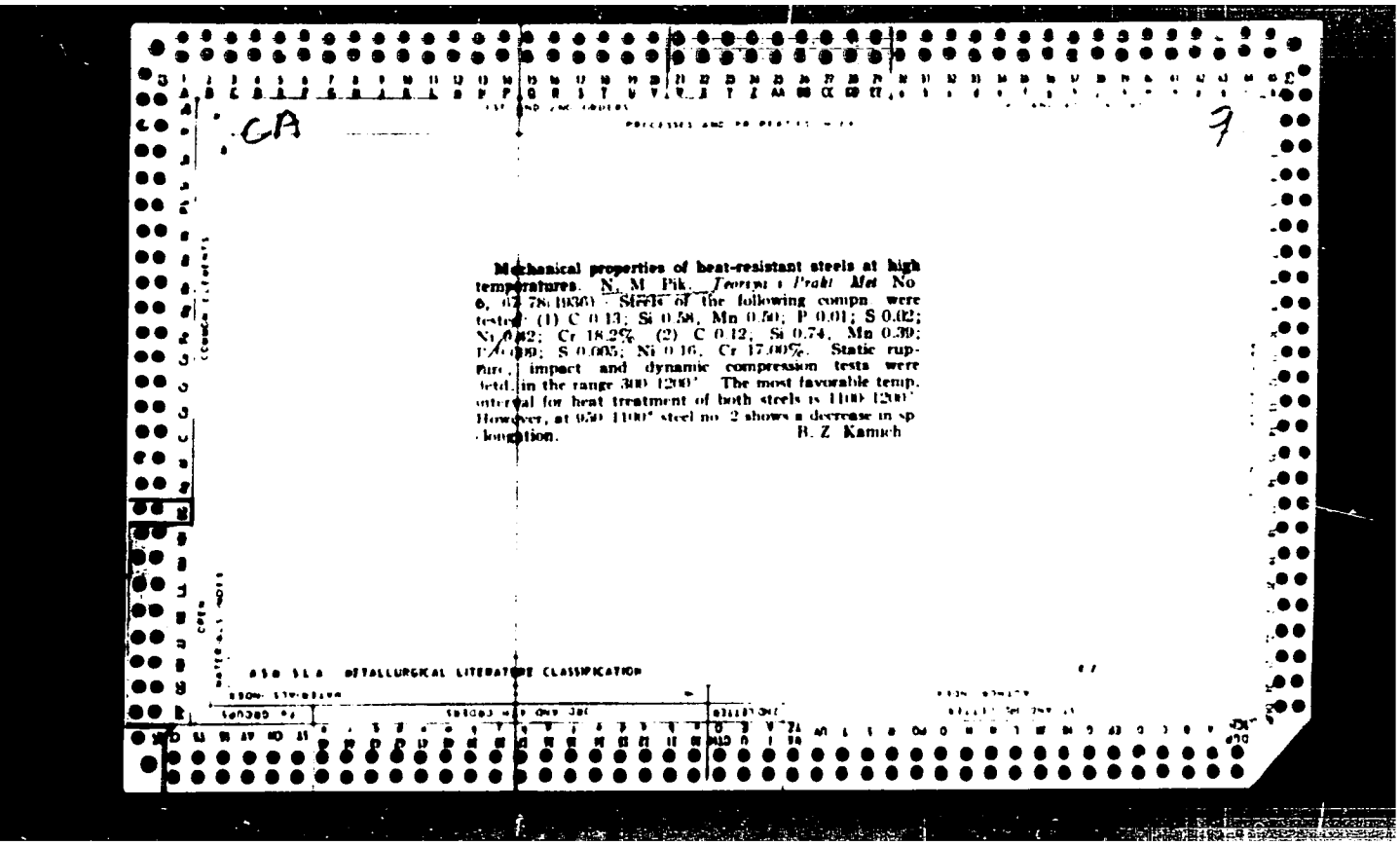
Bubbling in deaerators of feed water. Elek. Sta., 23, No. 4, 1952. Incl. [illegible]

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



Mechanical properties of the heat-resistant steels EI-50 (Furodite) and EChN-25 (chromium nickel) at high temperatures. N. M. Pik. *Zavod. Lab. Met.* 10, No. 2, 68-74 [1941]; *Chem. Zentr.* 1939, I, 784. The steel EI-50 contains C 0.15, Si 0.9, Mn 0.3, P 0.07, Ni 0.17, Cr 30.3%, and traces of S. The steel EChN-25 contains C 0.23, Si 0.9, Mn 0.9, Ni 25.0, Cr 21.0%, and a normal content in P and S. The tensile strength, resistance to shock and resistance to compression were detd. at 500-1300°. The most favorable temp. range for hot-working was 1100-1200° for steel EI-50 and 1050-1150° for steel EChN-25. A temp. limit of 1200° must not be exceeded for the latter steel, since above this temp. superheating takes place.

M. G. Mowre

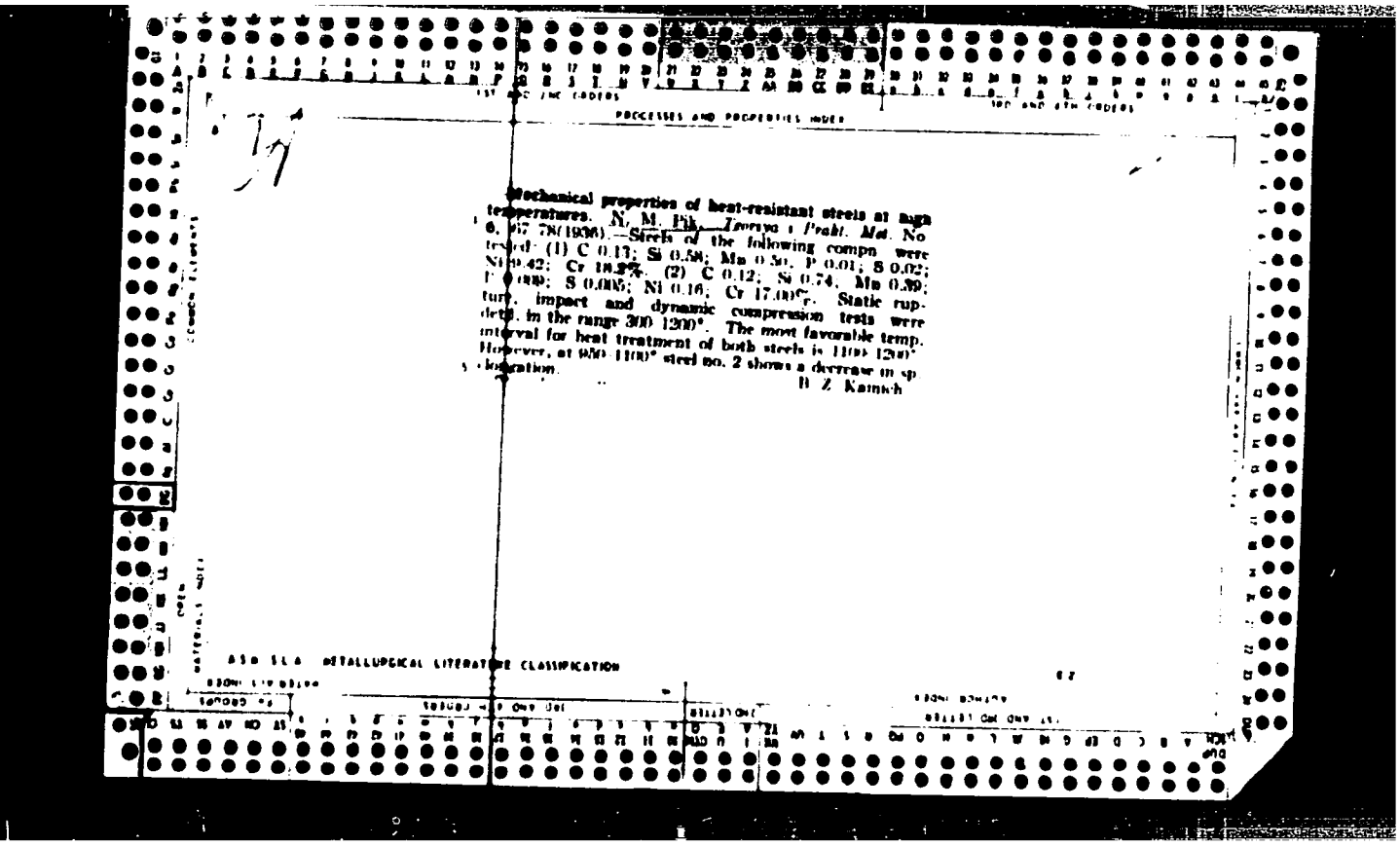


CA

Mechanical properties of heat-resistant steels at high temperatures. N. M. Pik. *Teoriya i Prakt. Met.* No 6, 62-78 (1936). Steels of the following compn were tested: (1) C 0.13; Si 0.58; Mn 0.50; P 0.01; S 0.02; Ni 0.02; Cr 18.2%. (2) C 0.12; Si 0.74; Mn 0.30; P 0.030; S 0.005; Ni 0.16; Cr 17.00%. Static rupture, impact and dynamic compression tests were tested in the range 300-1250°. The most favorable temp. interval for heat treatment of both steels is 1100-1250°. However, at 950-1100° steel no. 2 shows a decrease in sp. elongation.

B. Z. Kamich

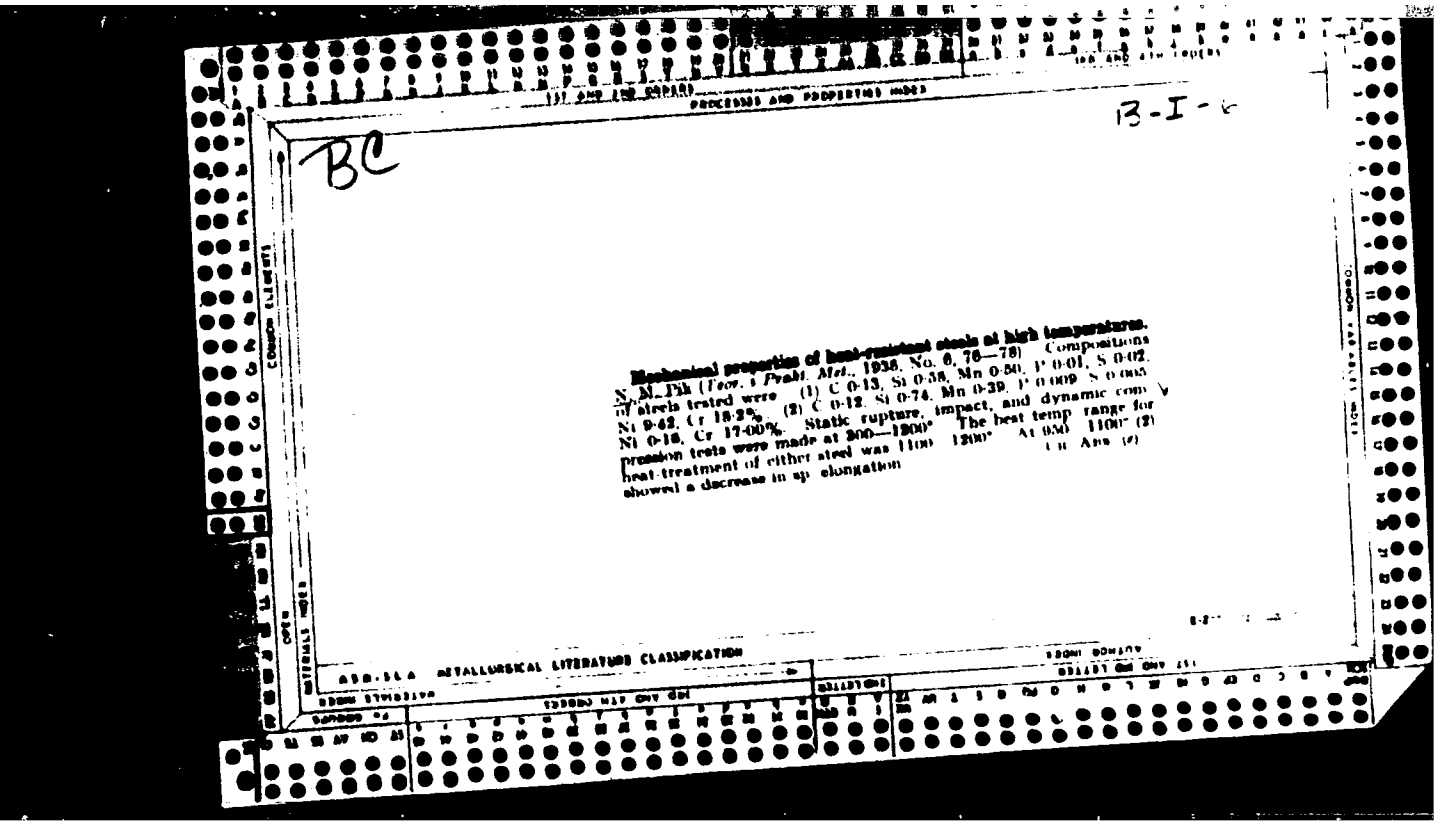
ASD SLA METALLURGICAL LITERATURE CLASSIFICATION



Mechanical properties of heat-resistant steels at high temperatures. N. M. Pik. *Tsvetn. i Prakt. Met.* No 6, 97-78(1936).—Steels of the following compn were tested: (1) C 0.13; Si 0.58; Mn 0.50; P 0.01; S 0.02; Ni 0.42; Cr 18.2%. (2) C 0.12; Si 0.74; Mn 0.39; P 0.020; S 0.035; Ni 0.16; Cr 17.0%. Static rupture, impact and dynamic compression tests were carried in the range 300-1200°. The most favorable temp. interval for heat treatment of both steels is 1100-1250°. However, at 950-1100° steel no. 2 shows a decrease in sp. elongation.

B. Z. Kamish

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION



ACC NR: AR6020711 SOURCE CODE: UR/0273/66/000/002

AUTHOR: Gershman, I. I., Pik, G. K.

TITLE: Study on the formation and evaporation of fuel films

SOURCE: Ref zh. Dvig vnutr sgor, no. 2, Abs. 2.39.231

REF SOURCE: Tr. Tsentr. n.-i. avtomob. i avtomotorn. in-ta, sb. [illegible] 1965, 3-29

TOPIC TAGS: fuel, fuel evaporation

ABSTRACT: An experimental study of processes leading to the development and evaporation of a fuel film from a hot surface in an incoming airflow is described. [Translation of abstract] [KP]

SUB CODE: 21/ SUBM DATE: none/

Card 1/1

UDC: 621.436.019.6.001.5

PIK, TS.B.

37534 Silikoz i ego Profilaktika v svete sovremennykh dannykh. V sb:XII vsesoyuz
s'yezd gigienistov, epidemiologov, mikrobiologov i infektsionistov 1.1.M.1949
s 139-42

So: Letopis'Zhurnal'nykh Statey, Vol. 37,1949

PIK, Ts.D.; VORONTSOVA, Ye.I.; GORODENSKAYA, Ye.N.; MISHCHENKO, B.B.; GORLIN, B.M.

Prevention and pathogenesis of silicosis. Gig. sanit., Moskva No.12: 20-27 Dec 51. (CIML 21:4)

1. Report presented at the Scientific Session of the Institute of Labor Hygiene and Occupational Diseases of the Academy of Medical Sciences held in February 1951.

KHROMOV, S. I.: PIK, YE. I.: AKISHIN, P.A.: NIKITINA, L.M.

Ethylcycloheptane

Contact transformation of ethylcycloheptane in the presence of platinized carbon.
Vest. Mosk. un 7 No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October, 1952 [illegible]. Unclassified.

L 51370-65

ACCESSION NR: AT5011627 UR/0000/64/000/000/0542/0548

10

AUTHOR: Afanas'yev, V. A.; Pikalevskiy, L. V. 671

TITLE: Decoder circuits based on ferrite-transistor elements

SOURCE: Vsesoyuznoye soveshchaniye po magnitnym elementam avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki. Lvov, 1962. Magnitnyye elementy avtomatiki, telemekhaniki, izmeritel'noy i vychislitel'noy tekhniki (Magnetic elements of automatic control, remote control, measurement and computer engineering); trudy soveshchaniya. Kiev, Naukova dumka, 1964, 542-548

TOPIC TAGS: decoder circuit, ferrite transistor decoder, matrix decoder

ABSTRACT: Matrix decoders following the pattern of selective switching given by

$$\begin{aligned} f_0 &= \bar{e}_{n-1} \wedge \bar{e}_{n-2} \wedge \ldots \wedge \bar{e}_1 \wedge \bar{e}_0, \\ f_1 &= \bar{e}_{n-1} \wedge \bar{e}_{n-2} \wedge \ldots \wedge \bar{e}_1 \wedge e_0, \\ &\ldots\ldots\ldots\ldots\ldots \\ f_{2^n-2} &= e_{n-1} \wedge e_{n-2} \wedge \ldots \wedge e_1 \wedge \bar{e}_0, \\ f_{2^n-1} &= e_{n-1} \wedge e_{n-2} \wedge \ldots \wedge e_1 \wedge e_0 \end{aligned} \qquad (1)$$

Card 1/3

(where $e_0, e_1, \ldots, e_{n-2}, e_{n-1}$ are consecutive - from zero on - orders of the decoded binary code, and $\bar{e}_0, \bar{e}_1, \ldots, \bar{e}_{n-2}, \bar{e}_{n-1}$ is the inversion of the respective orders) usually require a large number of diodes and are often assembled according to multistage pyramidal or rectangular schemes (see, Synthesis of computer and control circuits, Translation from English edited by V. I. Shestakov, IIL, 1954). Ferrite cores can be conveniently used for coincidence circuits with two inputs only. Consequently, they cannot be used for the design of decoders described by (1) and covering more than two orders. However, if one transforms these equations somewhat and obtains

$$\begin{aligned} I_0 &= e_{n-1} \wedge \overline{(e_{n-2} \vee \ldots \vee e_1 \vee e_0)}; \\ I_1 &= e_{n-1} \wedge \overline{(e_{n-2} \vee \ldots \vee e_1 \vee \bar{e}_0)}; \\ &\cdots\cdots\cdots\cdots\cdots \\ I_{2^{n-2}} &= e_{n-1} \wedge \overline{(\bar{e}_{n-2} \vee \ldots \vee \bar{e}_1 \vee e_0)}; \\ I_{2^{n-1}} &= e_{n-1} \wedge \overline{(\bar{e}_{n-2} \vee \ldots \vee \bar{e}_1 \vee \bar{e}_0)}. \end{aligned} \qquad (2)$$

L 51370-65

ACCESSION NR: AT5011627

one can then associate to each f_k an element which should trigger only in the presence of a pulse not entering into the bracket and in the absence of all the pulses contained within the bracket (the cell is blocked by a single open and (n-1) closed inputs). It is easy to materialize such elements using ferrite toroids. The article presents the theory, design, and operation of such a decoder carrying out the switching logic of a four-order binary code containing 16 rectangular hysteresis loop cores. Other more complex decoders are also discussed. Orig. art. has: 6 formulas and 6 figures.

ASSOCIATION: none

SUBMITTED: 29Sep64 ENCL: 00 SUB CODE: DP

NO REF SOV: 004 OTHER: 002

Card 3/3

PIKALOV, A.P.

Generator of sawtooth voltages with a period [illegible] sec.
Prib. i tekh. eksp. 9 no.5:130-132 S-O '64. (MIRA [illegible])

1. TSentral'naya nauchno-issledovatel'skiy laboratoriya
AN ArmSSR.

L 41591-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL WW/ZM
ACCESSION NR: AP5008831 S/0252/65/060/001/0025/0029

AUTHORS: Kocharyan, N. M. (Corresponding member AN ArmSSR); Pikalov, A. P.; Kagramanyan, A. V.; Markosyan, E. A. 37 35 B

TITLE: Effect of the degree of elongation of polymethylmethacrylate on the magnitude of the second moment of the nuclear magnetic resonance spectrum

SOURCE: AN ArmSSR. Doklady, v. 40, no. 1, 1965, 25-29

TOPIC TAGS: nuclear magnetic resonance, polymethylmethacrylate, polymer rheology

ABSTRACT: The effect of the degree of elongation of polymethylmethacrylate (PMMA) on the magnitude of the second moment of the nuclear magnetic resonance (NMR) spectrum was measured using an autodyne NMR spectrometer with quartz frequency stabilization. The specimens of PMMA were prepared by heating in a thermostat at 160C for 3 hours, stretched on a dynamometer to a particular value of elongation, and cooled. They were then machined with continuous cooling with soapy water. The magnitude of the second moment was found to increase with increasing elongation (up to 135%). This is explained by ordering of the molecular chains of the polymer which hinders the motion of the hydrogen atoms and, hence, of the nuclear magnetic moments. This leads to the increases of local magnetic fields, causing a

Card 1/2

L 41591-65

ACCESSION NR: AP5008831

2

broadening of the NMR absorption spectrum. The reason for an anomalous decrease of the second moment at elongations in the region of 215% is not clear; perhaps there is some change in the molecular interaction causing the retarding bond motions to be disturbed. The magnitude of the second moment continues to increase with increasing elongation, reaches a maximum at an elongation of 250%, and then decreases for elongations in the range 250-340%. The decrease is attributed to a decrease in the energy of the interchain bonds as a result of the straightening of the chains. Consequently, with increasing elongation rupture of some of the intermolecular bonds occurs, increasing the average intergroup distance. Since the effect of the nuclear magnetic dipoles falls off as $1/r^6$, there is a sharp decrease of the second moment for large elongations. A block diagram and description of the NMR spectrometer are also presented. The authors thank Kh. B. Pachadzhyana for the prepared specimens of oriented PMMA. Orig. art. has: 3 equations and 4 diagrams.

ASSOCIATION: TsNI fiziko-tekhnicheskaya laboratoriya, Akademii nauk Armyanskoy SSR (Central Scientific Research Laboratory of Physics and Technology, Academy of Sciences, Armenian SSR)

SUBMITTED: 30Mar64 ENCL: 00 SUB CODE: OD, EP

NO REF SOV: 005 OTHER: 005

Card 2/2 mL

LAPAKHA, A.A., kand.med.nauk; PIK-LEVONTIN, E.M., kand.biolog.nauk; SHEKHINA, N.I., kand.med.nauk

Salmonella infection in children, mainly in infants. Pediatriia no.2:16-21 '62. (MIRA 15:3)

1. Iz kafedry infektsionnykh bolezney u detey (zav. - prof. A.T. Kuz'micheva) Leningradskogo pediatricheskogo meditsinskogo instituta (dir. Ye.P. Semenova) i Detskoy infektsionnoy bol'nitsy (glavnyy vrach K.A. Dudkina) Leninskogo rayona.
(SALMONELLA) (INFANTS--DISEASES)

GUSARSKAYA, I.L., kand.med.nauk; PIK-LEVONTIN, E.M., kand.biologicheskikh nauk; KOMAKHINA, L.D.; PETROVSKAYA, Z.N.

Clinical and bacteriological characteristics of coli enteritis in children. Sov.med. 24 no.11:20-24 N '60. (MIRA 14:3)

1. Iz Leningradskogo nauchno-issledovatel'skogo pediatricheskogo instituta (dir. - L.S.Kutina) i Detskoy infektsionnoy bol'nitsy (glavnyy vrach A.M.Belyayeva) Leninskogo rayona Leningrada.
(INTESTINES--DISEASES)

PIK-PICHAK, G.A.

Fission barrier of a rotating nucleus. Zhur. eksp. i teor. fiz. 42 no.5:1294-1302 My '62. (MIRA 15:9)
(Nuclear fission)

SOV/110-59-6-9/24

AUTHOR: Pik-Pichak, A.A., Engineer

TITLE: The Design of a Solid-Poled Rotor (K raschetu massivnogo rotora)

PERIODICAL: Vestnik elektropromyshlennosti, 1959, Nr 6, pp 36-44 (USSR)

ABSTRACT: Difficulties with damper windings in salient-pole synchronous machines has led to the idea of replacing them by solid poles. This raises the problem of determining the parameters of the equivalent damping circuits existing in these solid poles. The present article offers a solution for the case of a machine without connections between the poles. The process of pole magnetisation by a.c. from the stator side with open field windings is considered. In this case the stator winding may be considered as a source of electromagnetic waves of long wave length and the rotor poles as receivers of energy therefrom. Problems of the propagation of these waves and transmission of energy from stator to rotor can be treated by Maxwell's equations. To determine the rotor parameters it is first necessary to find the equivalent pole resistance relative to the eddy-currents flowing in

Card 1/6

The Design of a Solid-Poled Rotor

it and then to refer this resistance to the stator windings. The equivalent pole resistance may be found by means of Poynting's theory written in the form of expression (1). In this formula the expression for the complex magnetic field intensity of the waves on the pole surface is of fundamental importance. In the present article its determination assumes, firstly, that the B/H relationship for the pole steel is given by formula (2) and, secondly, that the hysteresis loops are replaced by the equivalent sine curves and hysteresis losses in the steel are allowed for by Eq (2a). Other simplifying assumptions are also stated; they involve the use of formulae (4) to (8). The validity of formula (4) in this case is discussed. All the electromagnetic processes are considered separately on the direct and quadrature axes on the assumption that the armature reaction flux that penetrates the solid pole is known. The case of magnetisation on the direct axis is then considered at length. Electromagnetic waves radiate from the stator winding: they meet the surface

The Design of a Solid-Poled Rotor

bounded by the rotor configuration between two successive pole centre-lines and are then propagated to more remote surfaces located on the end surfaces of the pole. As a result, all the surfaces of the pole are filled with lines of force which for a half-period are directed from one half of the pole to the other. As the wave penetrates into the solid pole the magnetic field intensity is rapidly damped and so only the surface layer of the pole conducts the armature reaction flux. Consequently, the magnitude of the magnetic flux is governed not by the section of the rotor steel but mainly by its perimeter. Investigations show that the field intensity along the pole-arc varies according to curve (2) of Fig 1, to which Eq (9) corresponds. An approximate expression is thereby derived for the perimeter and finally expression (10) for the magnetising force H. This expression makes no allowance for hysteresis; when the appropriate correction is made expression (11) is obtained. Then expression (15) is

The Design of a Solid-Poled Rotor

derived for the active power absorbed by the pole. Expressions (17) and (18) are next derived for the amplitude of the currents flowing in the surface layers of the pole piece and the side surface of the pole respectively. The complex expression for the impedance of the pole derived from Eq (1), (14), (18) and (5) is given by expression (19). Magnetisation on the quadrature axis is then considered. As will be seen from Fig 2, flux entering the side surfaces of the solid pole cannot return through the pole and evidently closes through the surface layer of its end surfaces. Therefore, all surfaces of the pole participate in conducting the flux, all the lines of which necessarily pass through the section of the surface layer lying in the plane of symmetry of the pole. The distribution of magnetic field intensity on the surface of the rotor pole is shown by curve (1) of Fig 2, to which Eq (20) corresponds. Expression (21) is then derived for the total length of the surface layer conducting the given flux in the plane of symmetry of the pole. Methods similar to those used

The Design of a Solid-Poled Rotor

in the direct axis determinations then serve to derive Eq (22) to (25) for H, the active power absorbed, the amplitude of eddy-currents in the pole and the complex impedance to eddy-currents respectively. The method of referring the rotor characteristics to the stator winding is then considered. The damping action of the solid poles is considered as equivalent to that of two short-circuited windings, one on the direct axis and linked with the direct flux and the other on the quadrature axis and linked with the quadrature flux of the machine. Reference to the stator winding is based on the well-known formula (26). For direct-axis magnetisation the current distribution along the pole-arc is given by formula (27); then formula (27a) is derived for the total current in a turn that would create the same rectangular mmf wave as the pole. Expression (28) is then derived for the equivalent electrical resistance of the pole and expression (29) for the reactance. The vector diagram of a machine with solid-poled rotor is

given in Fig 3 and is explained. This diagram is used to derive the expressions for the current resistance and reactance on the quadrature axis. The formulae given in the article were found to be in good agreement with test results. A numerical example of a calculation is given as an appendix. There are 6 figures and 4 Soviet references.

SUBMITTED: 10th January 1958

43366
S/056/62/043/005/022/058
B102/B104

24 (3)

AUTHOR: Pik-Pichak, G. A.

TITLE: Equilibrium shapes and fission of a rotating nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 5(11), 1962, 1701-1708

TEXT: The equilibrium shape and the stability of a rotating nucleus whose shape can be approximated by a triaxial ellipsoid are studied on the basis of the liquid-drop model. It is found that the zeroth ellipsoidal approximation can be applied in investigating the stability of the nuclear equilibrium shape throughout the variation interval of the fission parameter $x = (3Z^2e^2/10R_0)/(4\pi R_0^2 O)$. R_0 is the radius of a sphere of equal volume and O is the surface tension parameter. At $x = x_0 = 0.81$ the type of instability, and therefore the relief of the total-energy surface, changes considerably. For $x < x_0$ and $y > y_{cr}$ the instability does not lead to fission but to the formation of a new equilibrium position, in which

Card 1/2

Equilibrium shapes and fission of a ... S/056/62/043/005/022/058
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the nucleus has the shape of a triaxial ellipsoid. $y = (M^2/2I_0)/(4\pi h_0^2)$, M is the nuclear angular momentum, I_0 the moment of inertia of a spherical nucleus, and y_{cr} is the critical energy of rotation above which the ellipsoid becomes unstable. The expression for the fission barrier as derived in a previous paper (ZhETF, 42, 1294, 1962), which is valid for $y \sim y_{cr}$, can be applied only to a very narrow range of x. For the flattened ellipsoid considered $y_{cr} = 0.2831$; this value being not far from the energy of rotation of a spherical nucleus at which the equilibrium shape becomes unstable $y_{cr} = 0.2784$. For nuclei with $x \approx 1$ and $x = 0$, for which the true shape and the exact value of the potential energy are known, the zeroth ellipsoidal approximation is proved to be applicable. There are 3 figures and 4 tables. The most important English-language reference is: R. Beringer, W. J. Knox, Phys. Rev., 121, 1195, 1961.

SUBMITTED: April 14, 1962

Card 2/2

PIK-PICHAK, G.A.

Nucleon emission by a rotating nucleus. Zhur.eksp.i teor. fiz. 38 no.3:768-772 Mr '60. (MIRA 13:7)
(Nucleons) (Nuclei, Atomic)

PIK-PICHAK, G.A.

Anisotropy of the angular distribution of fission products of a rotating nucleus. Zhur.eksp. i teor.fiz. 36 no.3:961-962 Mr '59. (MIRA 12:5)

(Nuclear fission)

21(7)

AUTHOR: Pik-Pichak, G. A. SOV/56-36-3-67/7

TITLE: The Anisotropy of the Angular Distribution of the Fission Fragments of a Rotating Nucleus (Anizotropiya uglovogo raspredeleniya oskolkov deleniya vrashchayushchegosya yadra)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 3, pp 961 - 962 (USSR)

ABSTRACT: The present paper ("Letter to the Editor") intends to carry out a theoretical investigation of fission probability and fragment distribution. If fission probability depends on the angular momentum of the nucleus, it is necessary, in order to be able to determine the dependence of the anisotropy on x, to take also other participating processes into account, i.e. in the present case, neutron evaporation ($x = (Z^2/A)/(Z^2/A)_{cr}$; Z = charge, A = mass of the fissioned nucleus). First, the fission probability $w_f(j,K,\vartheta)$ is investigated, where j denotes the momentum, K - the projection of j on to the symmetry axis of the nucleus in the direction $d\omega$, and ϑ - the angle between the incident particle beam and

Card 1/3

the flying-off direction of the fragments. For the angular distribution $w_f(\vartheta)d\omega$, $\omega = \sin\vartheta d\vartheta$ a formula is in the following derived, and for anisotropy

$$\sigma_f(0)/\sigma_f(\pi/2) = \sum_{i=0}^{N} w_{fi}(0) \Big/ \sum_{i=0}^{N} w_{fi}(\pi/2);$$

$$w_{fi} = \int_0^{i_{max}} j\,dj\,\varphi_i(j) \prod_{S=0}^{i} \Gamma_{ns}/(\Gamma_{ns} + \Gamma_{fs}(j)) \text{ is obtained, where } i$$

denotes the number of the cascade step, Γ_n the neutron width, and Γ_f the fission width with a given momentum. The ratios for $\Gamma_f \gg \Gamma_n$ (fission without neutron evaporation) and $\Gamma_f \ll \Gamma_n$ are discussed. The author finally thanks D. P. Grechukhin for discussions and I.Halpern for placing experimental material at his disposal. The author received the paper for correction on January 27, 1959 on which occasion he, together

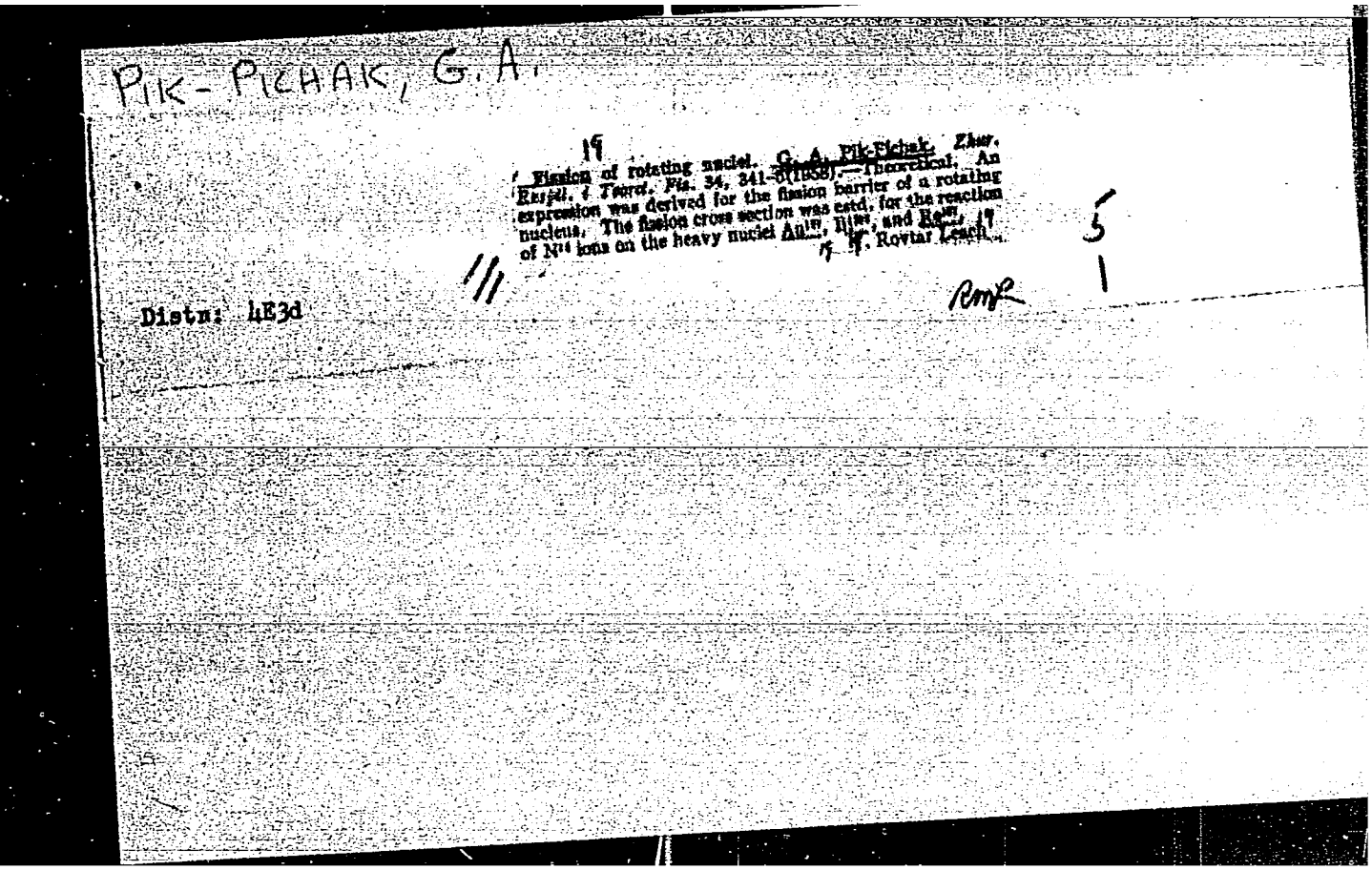
Card 2/3

The Anisotropy of the Angular Distribution of the Fission Fragments of a Rotating Nucleus SOV/56-36-3-67/71

with V. M. Strutinskiy, made several supplementary comments on the subject, which concerned the comparison between experimental data and numerical computations. There are 3 references, 2 of which are Soviet.

SUBMITTED: November 18, 1959

Card 3/3



PIK-PICHAK, G.A.

19

Fission of rotating nuclei. G. A. Pik-Pichak. Zhur. Eksptl. i Teoret. Fiz. 34, 341-6(1958).—Theoretical. An expression was derived for the fission barrier of a rotating nucleus. The fission cross section was estd. for the reaction of N^{14} ions on the heavy nuclei Au^{197}, Bi^{209}, and Ra^{226}. 17 ref. Rovtar Leach

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Distn: 4E3d

PIK-PICHAK, G. A.

(USSR Acad. Sc .)

"Fission Barrier of Rotating Nuclei,"

Paper submitted at the A-E Conf. on Nuclear Reacti ns in Medium and Low Energy Physics, Moscow, 19-27 Nov 57.

[illegible] 79
S/[illegible]/62/042/003/[illegible]/[illegible]
B[illegible]

AUTHOR: [illegible]-[illegible], [illegible]

TITLE: Fission barrier of a rotating nucleus

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. [illegible], no. [illegible], 1962, [illegible]-[illegible]

TEXT: The fission barrier of rotating nuclei has often been examined already ([illegible] 34, [illegible], 1958; 36, 7[illegible], 1959; J. [illegible] Hiskes, Thesis Univ. of Calif., [illegible]-[illegible], 19[illegible]), but not the range of application for the expressions [illegible]. The first object of the present work was to determine these. It was further sought to establish which characteristics of the rotating nucleus are amenable to an experimental and theoretical comparison. The nucleus is regarded as a drop of homogeneously charged incompressible fluid in which the Coulomb and surface energies are calculated on the assumption that the shape of the nucleus may, if necessary, vary slightly from the spherical. The fission barrier E_f is found to be the difference between the nuclear energy at the saddle point

$$\beta_{20} = - [illegible], \quad \beta_{22} = [illegible]$$ [illegible]

Card 1/3

Fission barrier of a rotating ...

and the energy at the equilibrium point

speaking off the expansion after the term in z^4 the required expression becomes:

$$E_I = \Delta u_{sep} - \Delta u_{min} = \frac{49}{135} z^3 - \frac{1}{6} zy - \frac{1018}{34425} z^4 -$$
$$- \left(\frac{49}{135} z^3 + \frac{1}{6} y\right) \sqrt{z^2 + \frac{15}{7} y} - \frac{1021}{3000} z^2 y - \frac{1}{12} y^2 -$$
$$- \frac{3084}{34425} z^3 \sqrt{z^2 + \frac{15}{7} y} + \frac{227}{2295} zy \sqrt{z^2 + \frac{15}{7} y}. \quad (17)$$

The range of application of this development is $0 \leq z \leq 1$, $0 \leq y \leq 1$, which for the case of a non-rotating nucleus ($x = 0$) ... Since y is small range of application (17) is useful for the majority of nuclei ... deformed by reaction with heavy ions. If $(1 - x)$ is resolved linearly in relation to y it results in:

$$E_I = \frac{98}{135} z^3 - \frac{11.968}{34425} z^4 + \left(-\frac{1}{6} z - \frac{1021}{3000} z^2\right) y - \left(\frac{1}{8} \frac{1}{z} - \frac{5}{204}\right) y^2. \quad (18)$$

Card 3/3

If ω_0 is independent of y one obtains:

$$E_f = 0{,}726z^3 - 0{,}330z^4 - 1{,}92z^5 + \ldots + y^2(1{,}17z - 5{,}03z^3 - 0{,}87z^4 - 18{,}8z^5 + \ldots) + y^4(-0{,}625z - 4{,}21). \quad (5).$$

An expression for the critical rotational energy at which the nucleus becomes unstable is also given.

SUBMITTED: December 9, 1961

Card 3/3

Pika, L

3211. Thiocyanate estimation of phosphate in boiler water. L. Pika (Jiradec Trálové CSR). *Chem. Tech., Berlin*, 1956, 8 (1), 45.—The new volumetric method described is based on the pptn. of the PO_4''' as Ag_3PO_4 by $AgNO_3$ in presence of chlorides (NaCl) in weak acetic acid solution, selectively dissolving the Ag_3PO_4 from the ppt. with dilute H_2SO_4, and titrating the Ag^+ in the resulting solution with KSCN solution, with a Fe^{III} indicator. The presence of chlorides enables complete pptn. of the PO_4''' as Ag_3PO_4 to be effected and produces a readily filterable ppt. *Procedure*—The sample (200 ml) is neutralised with 0·1 *N* H_2SO_4 (methyl red indicator), then ≃ 1·5 g of powdered Na acetate, 10 ml of 0·2 *N* NaCl and 10 ml of 0·1 *N* $AgNO_3$ are added and the mixture is warmed till the ppt. of AgCl and Ag_3PO_4 packs together. The ppt. is washed successively with water, dil. H_2SO_4 and water. The resulting Ag_2SO_4 solution is collected and, after adding 1 ml of $Fe_2(SO_4)_3$ solution, is titrated to a red end-point with 0·02 *N* KSCN solution from a micro-burette. The results are markedly different from those of the usual gravimetric and photometric (Mo colorimetric) methods, but are more accurate, since there is less interference by foreign ions.

H. L. WHITEHEAD

SOV/96-58-5-17/

AUTHOR: Pika, L., Engineer, Doctor

TITLE: The Conversion of Iron Oxides in Boiler Water (Prevrashcheniye okislov zheleza v kotlovoy vode)

PERIODICAL: Teploenergetika, 1958, Nr 5, pp 71 - 72 (USSR)

ABSTRACT: The article discusses the formation of alpha and gamma iron oxides in feed-water.
Tests were made to ascertain the behaviour of oxides in boiler water. Pure samples of iron hydroxide were prepared and samples of steel of 10 x 2 x 200 mm were placed in a tube 25 mm diameter and 250 mm long made of steel RSN-12C2 (0.15% C, 0.3% Mn, and not more than 0.3% Si, 0.05% P and 0.05% S). Solutions of various composition were then put in the tubes and air was expelled by boiling, after which the tubes were sealed. The tubes and steel samples were of the analyses, including ordinary low-carbon steel and stainless steel.
The tubes with specimens and solutions were heated for 3 hr at 305 °C so that the internal pressure was about 90 atm. After the tubes and samples had cooled, they were examined. The results given in Tables 1, 2 and 3. For the conversion of the hydrated iron oxide was reduced more or less completely to Fe_3O_4. It will be seen that the presence of alkali

Card1/2

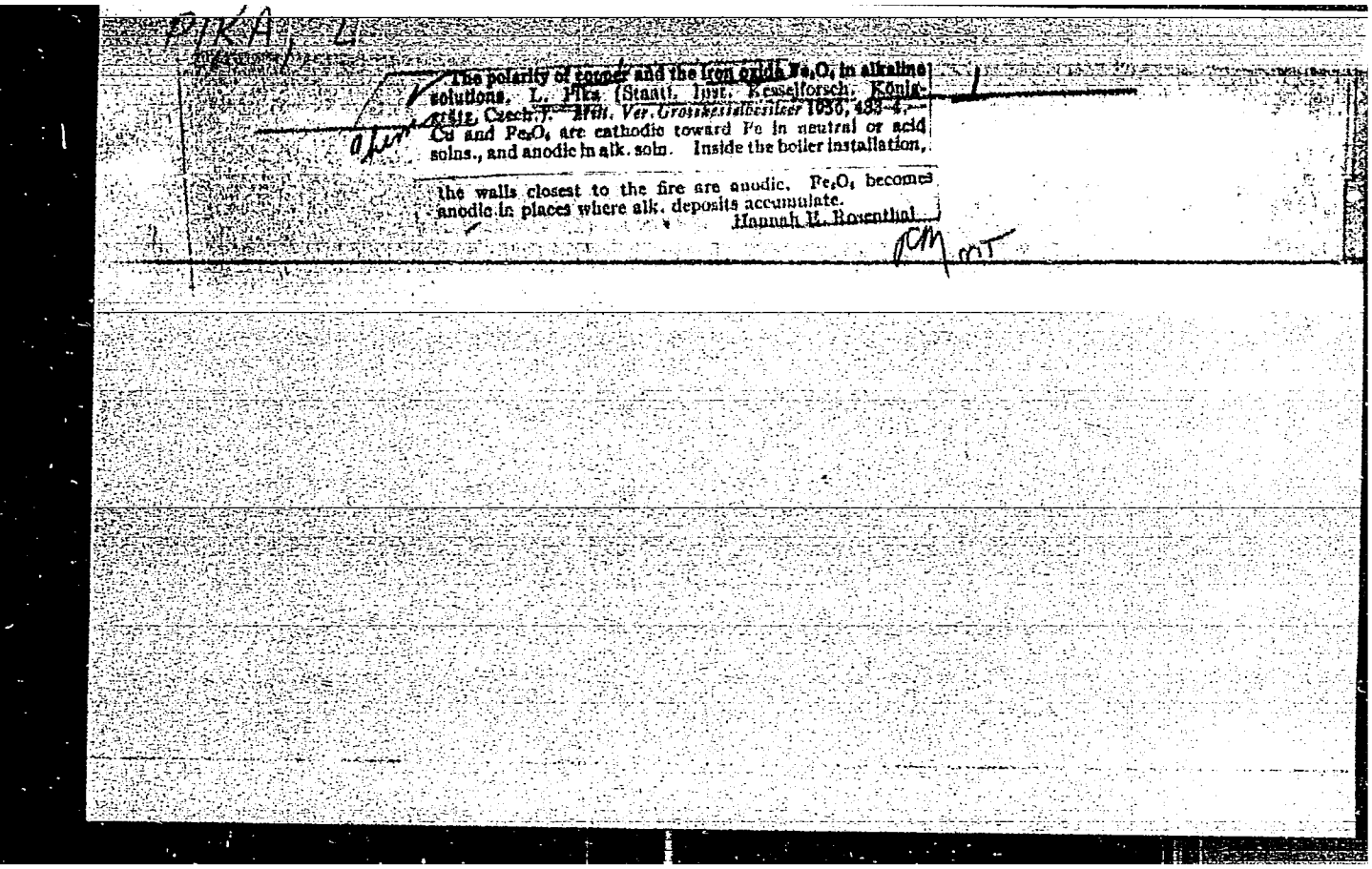
The Conversion of Iron Oxides in Boiler Water

iron oxide promotes the corrosion of tubes. At [illegible] and temperatures, the non-magnetic iron oxide is converted into magnetic; this should be taken into account [illegible] causes of corrosion.

There are 3 tables and [illegible] German references.

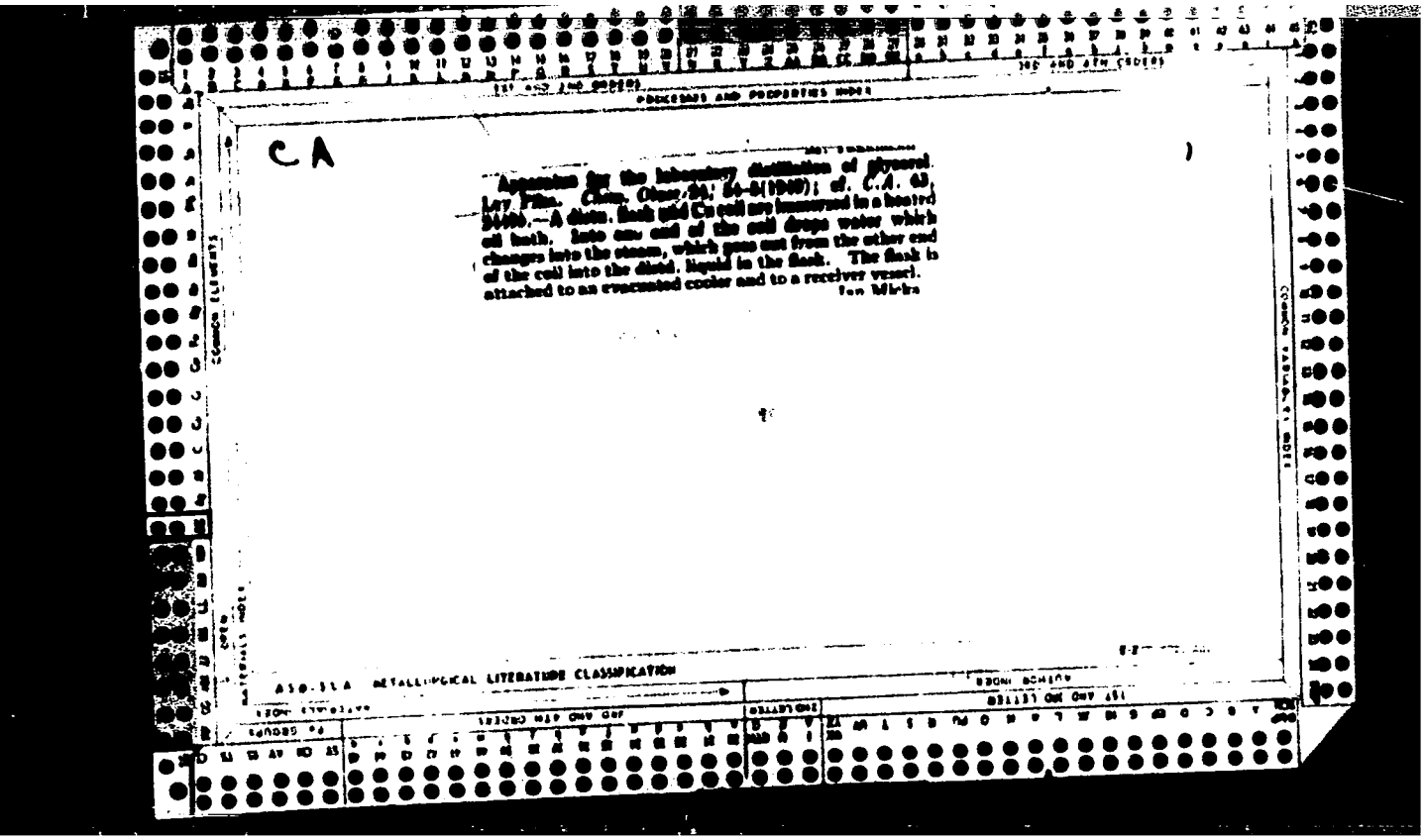
ASSOCIATION: Chekhoslovatskiy [illegible]
(Czechoslovakian Research Institute)

Card 2/2 1. Feed water--Impurities 2. Boiler tubes--Corrosion
3. Iron oxides--Test results



The polarity of copper and the iron oxide Fe_3O_4 in alkaline solutions. L. Pleš (Staatl. Inst. Kesselforsch. Königgrätz, Czech.). *Brüh. Ver. Grosskesselbesitzer* 1930, 433-4.—Cu and Fe_3O_4 are cathodic toward Fe in neutral or acid solns., and anodic in alk. soln. Inside the boiler installation, the walls closest to the fire are anodic. Fe_3O_4 becomes anodic in places where alk. deposits accumulate.

Hannah E. Rosenthal



NOSKOVA, M.; PIKA, L., ins., dr.

Photometric determining of small quantities of SiO_2. Energetika Cz 11 no.10:503 O '61.

PIKA, Lev, inz., dr.

Examination of oxygen corrosion in an aqueous medium.
Energetika Cz 12 no.7:368-369, 392 Jl '62.

PIKA, Lev, dr., ins.

Sampling feed water and other liquids. Energetika Cs 12 no.12: 669-670 D '62.

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PIKA, Lev.

Oxidation of ammonia aqueous solutions with oxygen at 320°. Zhur. prikl.khim. 34 no.7:1621-1622 Jl '61. (MIRA 14:7)

1. Institut energeticheskogo oborudovaniya, Gradets Kralove, Chekhoslovakiya.
(Ammonia) (Oxygen)

PIKA, L.

"Pneumatic Indication of the Specific Gravity of Pulverized Coal and Other Substances," p. 91.
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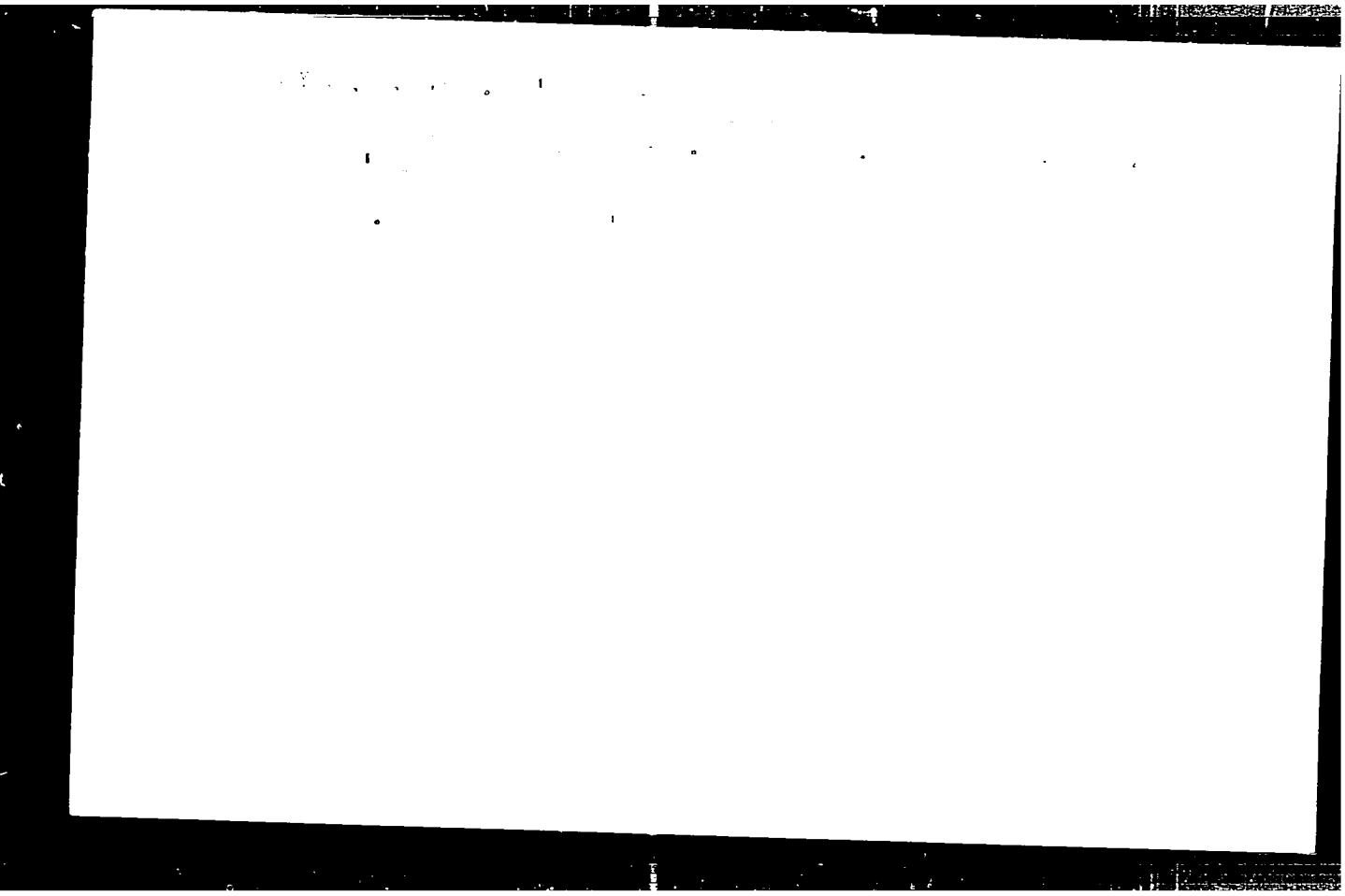

BALON, I.D., kand.tekhn.nauk; ROMANENKO, N.T., inzh.; YUPKO, I.D., inzh.; BOLKUNOV, Ye.P., inzh., TULUYEVSKAYA, T.A., inzh., ASTAFUROV, P.I., inzh.; VOLOVIK, A.V., inzh. Prinimali uchastiye: BAKAYEV, A.., YOKHNIK, A.R.; KOLOS, V.D.; KAYSTRO N.P. [deceased]; LITVINENKO, V.I.; MAKARCHENKO, N.M.; ONOPRIYENKO, V.P.; PALAGUTA, V.P.; PIKA, V.S.; RAGIN, B.I.; ROMANCHENKO, Ye.I.; SAYENKO, S.D.; STOLYAR, V.V.; SKORIK, N.M.; TOROPENKO, P.D.

Characteristics of making ferromanganese in large capacity blast furnaces and the effect of slag conditions on basic technical and economic indices. Stal' 23 no.12:1069-1073 D '63. (MIRA 17:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov i zavod "Zaporozhstal'".

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Report on the meeting of the 7th Commission of the Organization for Collaboration of Railways in Warsaw, September 17-27, 1962. Zel dop tech 11 no.2:57-58 '63.

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1. Vyskumny ustav bezpecnosti prace, Bratislava.

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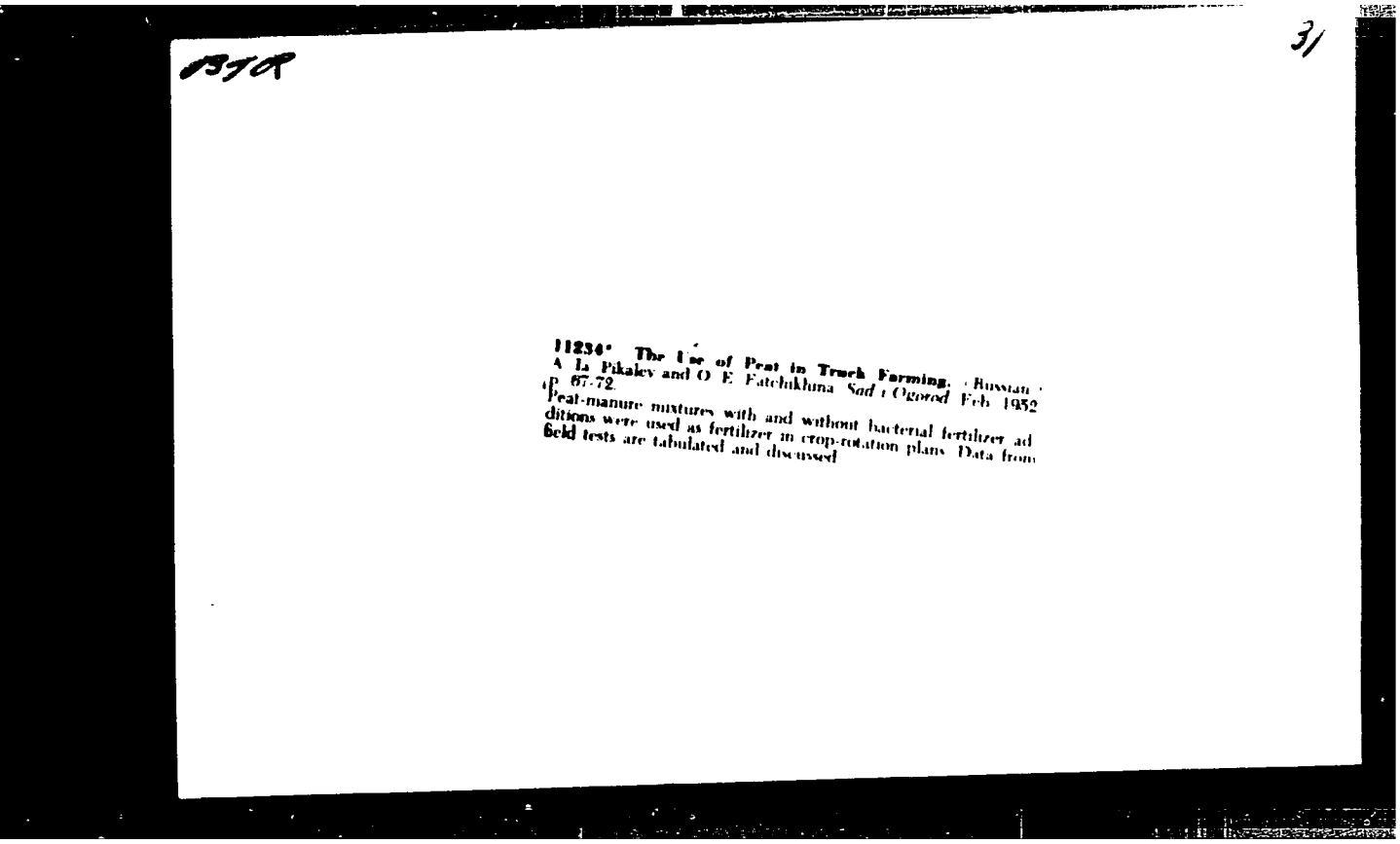
9. Monthly List of Russian Accessions, Library of Congress, November 1952 /1953, Uncl.



BTA

31

11234* **The Use of Peat in Truck Farming.** (Russian) A. L. Pikalev and O. E. Fatchikhina. *Sad i Ogorod* Feb. 1952 (P. 67-72).

Peat-manure mixtures with and without bacterial fertilizer additions were used as fertilizer in crop-rotation plans. Data from field tests are tabulated and discussed.

peat--a valuable

PIKAlEV, A. Ya.

Fertilizers

Peat--a valuable [illegible] fertilizer. [illegible]

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Peat

Utilization of peat in vegetable gardening., Sad i og., no. 2, 1952.

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PIKALEVA, V.Ya.; KOTOMINA, G.L.

Use of gas anesthesia in the analgesic stage for the treatment of massive postoperative pulmonary atelectasis. Khirurgiia 39 no.7:82-85 Jl '63 (MIRA 16:12)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. V.I. Kolesov) I Leningradskogo meditsinskogo instituta imeni akademika I.P.Pavlova.

BABENKO, Valeriy Sergeyevich; BYALIK, G.I., retsenzent;
KOSSOV, G.Ya. nauchn. red.; PIKALEYEVA, Ye.D., red.

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[Industrial forest valuation and principles of forestry] Promyshlennaia taksatsiia lesa i osnovy lesnogo khoziaistva. Moskva, Izd-vo "Sovetskaia nauka," 1957. 260 p. (MIRA 11:6)
(Forests and forestry)

VASIL'YEVA, L.I.; PIKALO, G.I.

Significance of zonal correlation for solving problems of planning and developing the oil and gas condensate fields of Krasnodar Territory. Trudy KF VNII no.11:71-77 '63. (MIRA 17:3)

M[illegible], M.P.; [illegible], N.M.

Separating cyclohexane from narrow gasoline fractions of [illegible]-Dmitryevka oil of Krasnodar Territory. Trudy [illegible] no.8:96-101 '62. (MIRA [illegible])

YUKHTUYEVA, M., telyatnitsa; PIKALOV, A.M., red.; TEKHTIYEKOV, M.I., tekhn. red.

[Let us raise calves by the group sucking method] Vyrashchivaem teliat metodom gruppovogo podsosa. Gorno-Altaisk, Gorno-Altaiskoe knizhnoe izd-vo, 1960. 20 p. (MIRA 14:12)

1. Kumalyrskaya ferma Shebalinskogo olenesovkhoza (for Yukhtuyeva).
(Calves)

PIKALOV, A.P.

A nuclear magnetic resonance spectrometer. Izv. AN Arm. SSR, Ser.fiz.-mat. nauk 18 no.2:140-145 '65. (MIRA 18:4)

1. TSentral'naya nauchno-issledovatel'skaya fiziko-tekhnicheskaya laboratoriya AN Armyanskoy SSR.

L 16676-65 EWT(l)/EWA(h) Peb RAEM(i)/ESD(t)/RAEM(c)/SSD/AFWL/AS(mp)-2

ACCESSION NR: AP4047474 S/0120/64/000/005/0130/0132

AUTHOR: Pikalov, A. P. 15 B

TITLE: Sawtooth oscillator with a 1—3,600-sec period

SOURCE: Pribory* i tekhnika eksperimenta, no. 5, 1964, 130-132

TOPIC TAGS: sawtooth oscillator, magnetic spectrometer, nuclear magnetic resonance

ABSTRACT: A special sawtooth oscillator used for modulating the magnetic field in a nuclear-magnetic-resonance spectrometer is described. A linear discharge of a capacitor in a d-c amplifier with a gain of 2×10^4 or higher is used. A simplified connection diagram is shown. The oscillator can develop triangular, forward-sawtooth and reverse-sawtooth voltage shapes, and its period can be adjusted within 1—3,600 sec. The current amplitude in the magnet modulating 880-ohm coils can be varied within 1 microamp to 100 ma; max voltage, 80 v.

Card 1/2

L 16676-65
ACCESSION NR: AP4047474

Sawtooth-voltage nonlinearity, 0.5% for a 5-min interval or 1% for a 50-min interval. "In conclusion, the author wishes to thank N. M. Kocharyan, L. L. Dekabrun, and Yu. Ya. Shamonin." Orig. art. has: 1 figure and 1 formula.

ASSOCIATION: TsNI fiziko-tekhnicheskaya laboratoriya AN ArmSSR (Central Scientific Research Physico-Technical Laboratory, AN ArmSSR)

SUBMITTED: 24Oct63 ENCL: 00

SUB CODE: EC, NP NO REF SOV: 002 OTHER: 000

Card 2/2

PIKALOV, A.P.

Autodyne for a nuclear magnetic resonance spectrometer with quartz-resonator frequency stabilization. Dokl. AN Arm. SSR 35 no.4:167-171 '62. (MIRA 17:1)

1. Fiziko-tekhnicheskaya laboratoriya AN Armyanskoy SSR.

KOCHARYAN, N.M.; KIRAKOSYAN, Z.A.; SHAROYAN, E.G.; PIKALOV, A.P.

Polarization of μ^+-mesons of cosmic radiation under the earth. Dokl. AN Arm.SSR 29 no.1:17-21 '59. (MIRA 12:11)

1. Fizicheskiy institut Akademii nauk Armyanskoy SSR. 2. Chlen-korrespondent AN Armyanskoy SSR (for Kocharyan).
(Mesons)

KOCHARYAN, N.M.; PIKALOV, A.P.; KAGRAMANYAN, A.V.; MARKOSYAN, E.A.

Effect of the degree of stretch of polymethyl methacrylate on the magnitude of the second moment of nuclear magnetic resonance. Dokl. AN Arm. SSR 40 no.1:25-29 '65. (MIRA 18:7)

1. TSentral'naya fiziko-tekhnicheskaya laboratoriya AN ArmSSR. 2. Chlen-korrespondent AN ArmSSR (for Kocharyan). Submitted March 30, 1964.

KOCHARYAN, N.M.; KIRAKOSYAN, Z.A.; SHAROYAN, E.G.; PIKALOV, A.P.

Polarization of μ^+-mesons in cosmic rays in the region of high energies. Zhur. eksp. i teor. fiz. 38 no.1:18-21 Jan '60. (MIRA 14:9)

1. Fizicheskiy institut Akademii nauk Armyanskoy SSR.
(Mesons) (Cosmic rays)

PINHACK B I

28-56-1-29/41

AUTHORS: Gurevich, A.Ya., and Bradley, B.I., Engineers

TITLE: **Towards the Revision of Standards for Tight Screw** Thread (K peresmotry normaley na tugiye rez'by)

PERIODICAL: Standartizatsiya, 1956, Nr 1, pp 70-73 (USSR)

ABSTRACT: The article treats the parameters and tolerances of high-precision tight metric screw thread extensively used for "steel-to-steel" and "steel-to-aluminum" screw connections in modern engines. The purpose of the discussion is to contribute to the development of new "normals" the projects for which are already prepared. The authors point out that the International Standard organization recommendations for standard profile of threaded holes must be accepted. The "UTS" threads now used by plants must be revised and included into 'normal' standards. The institutes are now working on technical data for cutting the "UTS" thread. There are 3 figures and 1 charts.

AVAILABLE: Library of Congress

Card 1/1 1. Screw threads-Standards 2. Standardization-USSR

PIKALOV, B.I.; GUREVICH, N.Ya.

Tight "steel-in-steel" threaded joints for hole systems. Standartizatsiia 26 no.4:9-13 Ap '62. (MIRA 15:3)
(Screw threads)

8(6) SOV/[illegible]

AUTHORS: Pikalov, B.I., and Petrosov, V.V.

TITLE: The Checking of Blade Blanks of Gas Turbine Engines (Kontrol' zagotovok lopatok gazoturbinnykh dvigateley)

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr [illegible], pp [illegible] (USSR)

ABSTRACT: The application of new cast and forged materials for the blades of modern gas turbine engines leads to residue deformations in the blade blanks. Therefore it is necessary to determine the actual residue deformations in blade blanks and to adjust the dies and press molds. The authors mention briefly three methods which might be used for checking blade blanks and point out their disadvantages. One consists of cutting the blade blank into sections which are inspected by an optical projector method, another method consists in applying an optical dividing head while the third method, using rigid profile patterns may be used only when the tolerance exceeds more than 2 mm. At the authors' plant a new method was devised

Card 1/2

The Checking of Blade Blanks of Gas Turbine Engines

and introduced for checking blade blanks. The blade blanks are controlled by universal-sectional needle patterns (universal'no-sbornyy shablon - USSh) which are used instead of rigid profile gages. The needle patterns are installed in the universal sectional control device developed by B.I Pikalov according to the system USP (universal'no-sbornyye prisposobleniya - universal sectional devices) [Ref 1]. Figure 3 shows such a device with a needle pattern. The authors explain in some more detail the performance of this method in combinations with a projector. They state that it might be applied also for checking other parts of a complicated configuration. There are 2 diagrams, 1 photograph and 1 Soviet reference.

Card 2/2

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Transition from free to submerged overflow can be defined by comparison with the equivalent depth of hydraulic jump. Coefficient of discharge is determined in terms of the coefficient of velocity. S. Kolupaila, USA

AGROSKIN, Iosif Il'ich, professor, d-r tekhn. nauk, redaktor; DMITRIYEV, Georgiy Timofeyevich, dotsent; PIKALOV, Fedor Illarionovich, professor; FRENKEL', N.Z., redaktor; SKVORTSOV, I.M., tekhn. redaktor

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