"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

ACC NR: AM6025821

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SUB CODE: 18, 13/ SUBM DATE: 14Jun65/ ORIG REF: 118/ OTH REF: 035

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21(e)

Trudy... Radiotekhnika i ...
All-Union Conference on ... and Radiation in the ... Industry
Sponsoring Agencies: USSR. Glavnoye upravleniye po ispol'zovaniyu atomnoy energii, and Akademiya nauk SSSR.

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Ed. of Publishing House: P.M. Belyanin; Tech. Ed.: T.P. Polmera.

PURPOSE: This book is intended for specialists in the field of machine and instrument manufacture who use radioactive isotopes in the study of materials and processes.

COVERAGE: This collection of papers covers a very wide field of the utilization of tracer methods in industrial research and control in the machine- and instrument-manufacturing industry. The individual papers discuss the applications of radioisotopes in the study of metals and alloys, problems of friction and lubrication, metal cutting, engine performance, and defects in metals. Several papers are devoted to the use of radioisotopes in metallurgical processes, recording and measuring devices, quality control, flowmeters, level gauges, safety devices, radiation counters, etc. These papers represent contributions of various Soviet institutes and laboratories. They were published as Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science, April 4-12, 1957. No personalities are mentioned. References are given at the end of most of the papers.

Chernyakova, R.B. Method for Estimating the Degree of Degra-ing of Metals

Gulyayev, B.B., Yu.F. Borovskiy, L.N. Postnov, O.K. Kapitskiy. Study of the Processes of Cast Formation in Sand Molds 108

Vitkin, A.L. (Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii - Central Scientific Research Institute of Ferrous Metallurgy). Study of the Mechanism of the Basic Processes in Hot Tin Plating 112

Iordan, G.G., and K.S. Furman (Nauchno-issledovatel'skiy institut teploenergeticheskogo priborostroyeniya - Scientific Research Institute of Heat-Power Instruments). Use of Nuclear Radiation for the Measurement of Heat-Power Parameters 119

Verkhovskiy, B.I., V.A. Sotnikov, and V.V. Takushin (Fizicheskiy institut imeni P.N. Lebedeva - Institute of Physics imeni P.N. Lebedev, Academy of Sciences, USSR). Reduction of Errors in Measurements Performed With Scintillation Counters 124

Kornilova, V.A. (Fizicheskiy institut imeni P.N. Lebedeva - Institute of Physics, Academy of Sciences, USSR). Radiation in Analytical Methods 127

Kalichkin, V.G. Automation of Measurements and Recording of Radioactive Radiation Intensity 130

Kalichkin, V.G. Study of the Electrical Properties of Ionization Resistors 140

Kogalin, V.G., and A.A. Rudanovskiy (Vesesoyuznyy ugol'nyy nauchno-issledovatel'skiy institut - All-Union Coal Research Institute). Use of Radioactive Isotopes in the Automation of Excavating and Drifting Machines 146

Iordan, G.G., and K.S. Furman (Nauchno-issledovatel'skiy institut teploenergeticheskogo priborostroyeniya - Scientific Research Institute for Heat-Power Instrument Making). Measuring the Density of Liquids With Gamma Radiation 150

153

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

ACCESSION NR: AR4014751 S/0058/63/000/012/A042/A042

SOURCE: RZh. Fizika, Abs. 12A374

AUTHOR: Afans'yev, V. N.

TITLE: Count-time method for registration of the intensity of nuclear radiation

CITED SOURCE: Sb. Radioizotopn. metody* avtomat. kontrolya. T. 1. Frunze, AN KirgSSR, 1963, 175-182

TOPIC TAGS: count time method, nuclear radiation registration, radiometer, autoradiometer, nuclear instrumentation

TRANSLATION: The use of the count-time method for the development of autoradiometers is described. The count-time method is based on registering the time interval T during which a prescribed number of pulses N_0 is produced in the counter. The time interval can be con-

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ACCESSION NR: AR4014751

verted into a carriage travel length, a dial rotation angle, or a number of pulses of standard frequency. The information can be stored by a counting block consisting of electronic flipflops and a mechanical adder. It is much more convenient, however, to use new counting elements such as trochotrons, dekatrons, semiconductor flip-flops, parameters, or ferrodynamic information accumulators. The connection between the main parameters (the nuclear radiation intensity I, the measurement time T, the expected statistical error, etc.) is considered for the count-time method. Count-time autoradiometers have high accuracy and transmission reliability, permit registration of low and ultra low intensities, provide discrete measurements of arbitrary intensities, and permit multichannel radiometry of radiation intensity.

DATE ACQ: 24Jan64 SUB CODE: PH, SD ENCL: 00

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L 11037-63 EWT(d)/FCC(w)/BDS/EEC-2 ASD/AFMDC/ESD-3/APGC Pg-4/Pk-4/Po-4/
Pq-4

ACCESSION NR: AT3002146 S/2923/62/000/000/0032/0039 74

AUTHOR: Afanas'yev, V. N. 73

TITLE: Universal method of coding geometrical information obtained from a drawing and intended for introducing into digital computers

SOURCE: Vy*chislitel'naya matematika i tekhnika; trudy* aspirantov Instituta kibernetiki AN USSR. Izd-vo AN USSR, 32-39

TOPIC TAGS: coding geometrical information, computer machining

ABSTRACT: Several known methods of coding geometrical information are reviewed. In the new method suggested by the author, simple visible elements, such as a point, a straight line, a circle, a closed circuit, etc. are singled out. Relations between these elements can also be specified: crossing, registration, bordering, continuation, right angles, slope, parallelism, re-entrant angle, and the like. Types of machining, accuracies, etc. are also indicated. All such elements and relations are tabulated, and a distinct symbol is ascribed to each. A drawing in question is subdivided into closed circuits, symbols are written in, and by applying certain rules of describing the circuits, the necessary algorithms are compiled. An example of coding a drawing of a machine part illustrates the method. The author observes that "a similar idea but in a different form was suggested by

Card 1/2 1 Institute of Cybernetics, Academy of Sciences

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AFANAS'YEV, V. N.: Master Tech Sci (diss) -- "The development of automatic radiometers of the counter-time type". Moscow, 1958. 11 pp (Min Higher Educ USSR, Moscow Engineering Physics Inst), 120 copies (KL, No 6, 1959, 131)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, V.P.

Clinical diagnosis of syphilis of the lower respiratory tract.
Vest.oto-rin. 16 no.5:80-82 S-O '54. (MLRA 7:12)

1. Iz klinicheskoy bol'nitsy imeni Chudnovskogo (Leningrad).
(SYPHILIS,
resp. tract, diag.)
(RESPIRATORY TRACT, diseases,
syphilis, diag.)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

BUZIN, V.A.; SUSLIN, Yu.V.; AFANAS'YEV, V.P.

Ventilation of mine shaft bottoms. Sbor. trud. Inst. gor. dela AN URSR no.13:90-96 '63 (MIRA 17:7)

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SHISHKOV, V.P., dotsent; BABAK, I.M., aspirant; SOLOV'YEV, F.A., dotsent; DANILEVSKIY, V.M., dotsent; VISHNYAKOV, S.I., dotsent; TITOV, G.I.; OKUNTSOV, L.P.; AFANAS'YEV, V.P.; ZHAROV, A.V., assistent; SLUGIN, V.S.; KRYLOV, O.N., aspirant

Noninfectious diseases. Veterinariia 41 no.4:64-80 Ap '64.
(MIRA 17:8)

1. Moskovskaya veterinarnaya akademiya (for Shishkov, Zharov).
2. Belotserkovskiy sel'skokhozyaystvennyy institut (for Babak).
3. Velikolukskiy sel'skokhozyaystvennyy institut (for Solov'yev).
4. Kurskiy sel'skokhozyaystvennyy institut (for Vishnyakov).
5. Zaveduyushchiy otdelom nezaraznykh zabolevaniy Buryatskoy nauchno-proizvodstvennoy veterinarnoy laboratorii (for Titov).
6. Zaveduyushchiy Berezovskoy veterinarnoy laboratoriyey, Volgogradskaya obl. (for Okuntsov). 7. Nauchno-issledovatel'skiy institut sel'skogo khozyaystva Kraynego Severa (for Afanas'yev).
8. Pushkinskiy zverosovkhoz Moskovskoy oblasti (for Slugin).
9 Leningradskiy veterinarnyy institut (for Krylov).

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

SOV-120-58-1-14/43

AUTHOR: Afanas'yev, V. P.

TITLE: Current Stabilizer for the Magnet of a Precision Mass-Spectrometer (Stabilizator toka magnita pretsizionnogo mass-spektrometra)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 1, pp 59-62 (USSR)

ABSTRACT: In various devices used in experimental physics, it is necessary to maintain a constant current. Particularly high stability is required in the current supplying the magnet of a mass spectrometer. Here, the instability should not exceed 0.005% (Ref.1). The use of batteries of accumulators (Ref.2) is inconvenient and in many cases, impossible (Ref.3). It is much better to use electronic circuits in the stabilizer of the current. A number of such circuits have been developed (Ref.4). One of the examples of such a stabilizer is that described in Ref.5, in which the current supplying the magnet of a mass spectrometer is constant to within 5 x 10^{-3}% during one hour. In the latter

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Current Stabilizer for the Magnet of a Precision Mass-Spectrometer.

stabilizer, if the mains voltage changes by ±10%, the load current does not change by more than 10^{-3}% but can be varied between 11 and 130 mA. This stabilizer is suitable for mass spectrometers having a resolving power of about 200. In instruments with a higher resolving power, the stability of the current must be higher (Ref.6). In addition, if the mass range is large, it is necessary to vary the current within the range greater than that mentioned above. The latter requirements are fulfilled by the stabilizer described in the present paper. The circuit of the stabilizer is shown in Fig.1. A full wave rectifier consisting of 4 gas-filled VG-129 valves supplies a current of up to 1 amp. The valves are arranged in a bridge. The current which it is required to stabilize is controlled by 4 GK-71 ($Л_{12}$-$Л_{15}$) valves connected in parallel. These valves can be switched in or out as required so that as the current decreases, the number of valves can be cut down. The valves which are not working are cut off by a negative voltage of about 200 V applied to the control grids from a special rectifier. By means of this switching device, the valves work on the most linear part of their characteristics and hence one obtains good current control in a wide range of currents. The screen and

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Current Stabilizer for the Magnet of a Precision Mass-Spectrometer.

suppressor grids of these controlling valves are maintained at the appropriate potentials by means of a separate rectifier incorporating a voltage stabilizer which gives a stability of better than 0.1% ($Л_5$, $Л_6$, $Л_8$ - $Л_{11}$). Having passed through these control valves, the current flows through the windings of the electromagnet and then through a resistive load consisting of 5 resistors R_{60} - R_{65}. This current causes a potential difference of 75 - 132 V across the latter resistance, depending on the position of the slider of a potentiometer R_{57} by means of which a potential of 75 V is applied to the grid of the triode $Л_{32}$. Changes in the current flowing through the load produce corresponding changes in the potential difference across it. These changes in the potential difference are amplified by a 4-stage DC voltage amplifier having an amplification of about 2×10^6 and are applied in antiphase to the grids of the controlling valves. The amplifier is supplied by separate power supplies. The instrument has the following characteristics: range of currents.

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Current Stabilizer for the Magnet of a Precision Mass-Spectrometer.

50 mA to 1 A; a change in the mains voltage within the range 210-250 V produces a change of less than 10^{-4}% in the load current. After a warming-up period of about 1.5 hours the drift is less than 10^{-3}% per hour. M. I. Korsunskiy is thanked for his advice and interest. There are 4 figures, no tables and 6 references, of which 5 are Soviet and 1 is English.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut (Khar'kov Polytechnical Institute)

SUBMITTED: February 2, 1957.

1. Mass spectrum analyzers--Equipment 2. Electric currents--Stabilization 3. Electromagnets--Performance 4. Electronic circuits --Applications

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

21 (3), 21 (9)

AUTHOR: Afanas'yev, V. P. SOV/89-7-1-16/26

TITLE: The Radioactivity of Aerosols in the Building of the Synchrocyclotron of the Joint Institute of Nuclear Research (Radioaktivnost' aerozoley v zdanii sinkhrotsiklotrona Ob"yedinennogo instituta yadernykh issledovaniy)

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 1, pp 74-75 (USSR)

ABSTRACT: In the building of the synchrocyclotron, aerosol samples were collected by means of a device, which consisted of a vacuum cleaner with a special filter, and in which a counter measured the quantity of air sucked off per unit of time. The activity of the filter was measured 2 to 5 minutes after the termination of the above process. β-radiation was measured by means of an end window counter (thickness of the window ~5 mg/cm^2), which was placed with its measuring volume 15 mm from the filter (thickness of carrier substance 3 mg/cm^2). By means of a separate experiment it was shown that the filter used keeps back 90 % of all aerosols. The self-absorption coefficient of the filters is 0.98. 2 activities were found in the synchrocyclotron room. One of them is due to Na^{24}, the latter's concentration amounting to

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$(5.0 \pm 2.5) \cdot 10^{-13}$ c/l. Thus, only 0.001 of the permissible concentration is attained. The concentration of the natural active aerosol Pb^{212}(RaB) in air was measured as amounting to 10^{-13} c/l. M. M. Komochkov and V. N. Mekhedov took part in this work. There are 4 references, 3 of which are Soviet.

SUBMITTED: January 10, 1959

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, V.P.; GOLOVINA, V.A.; KOMOCHKOV, M.M.; MEKHEDOV, V.N.; OGANESYAN, K.O.; ROZHKOV, V.Ye. [deceased]; ROZANOVA, A.M.

Dosimetric check. Med. rad. 5 no.1:6-12 Ja '60. (MIRA 15:3)
(RADIATION--DOSAGE)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, V. P., KEYRIM-MARKUS, I. B., KUZNETSOVA, S. S., LITVINOVA, E. G., SOKOLOVA, I. K., STUKINA, L. E.,

"Production and investigation of dose fields for irradiation of experimental animals with protons of high energy"

report to be submitted for the Symposium on Biological Effects of Neutron Irradiations (IAEA), Upton Long Island, N. Y., 7-11 Oct 63.

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AFANAS'YEV, V.P.; KEIRIM-MARKUS, I.B.; KOVALEV, [illegible]; SMIRENNYY, L.N.; SYCHKOV, M.A.

Methodology of an experimental study of the shielding properties of certain materials under the action of a proton beam from the synchro-cyclotron at Dubna. Atom.energ. 16 no. 5:437-440 My '64. (MIRA 17:5)

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L 14342-65 FWG(j)/EWT(m) AFWL/SSD/AMD/APTC(b)/ESD(t) Pu-4
ACCESSION NR: AP4046446 S/0205/64/004/005/0771/0781

AUTHOR: Afanas'yev, V. P.; Keirim-Markus, I. B.; Kovalev, Ya. Ye.; Kuznetsova, S. S.; Sakovich, V. A.; Smirenny*y, L. N.; Sokolova, I. K.; Sy*chkov, M. A.

19

TITLE: Dose field for the irradiation of animals with high-energy protons

SOURCE: Radiobiologiya, v. 4, no. 5, 1964, 775-781

TOPIC TAGS: corpuscular radiation, high energy proton, radiation dosimetry, synchrocyclotron

ABSTRACT: The authors provide detailed specifications for the exposure of animals to high-energy corpuscular radiation. Using multiple diffusion of protons in absorbers, it is possible to create a sufficiently large field of proton radiation a few meters from the absorber which will meet the requirements of biological experiments. ILK luminiscent and ferrosulfate dosimeters are useful for measuring the tissue dose of protons in the 100—700-Mev range. By means of bilateral radiation it is possible to create uniform tissue doses in

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ACCESSION NR: AP4046446

a dog with an accuracy of ± 10%. When irradiating heavy animals with 500-Mev protons, secondary radiations compose 20—30% of the absorbed dose expressed in rads. The composition of radiation within the phantom should be investigated further. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 09Apr63 ENCL: 00

SUB CODE: LS, NP NO REF SOV: 012 OTHER: 006

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

BR

ACCESSION NR: AP4036528 S/0089/64/016/005/0437/0440

AUTHOR: Afanas'yev, V. P.; Kyeirim-Markus, I. B.; Kovalev, Ye. Ye.; Sakovich, V. A.; Smirenny*y, L. N.; Sy*chkov, M. A.

TITLE: Methods for experimental studies of the protecting properties of materials by using the proton beam of the Dubna synchrocyclotron

SOURCE: Atomnaya energiya, v. 16, no. 5, 1964, 437-440

TOPIC TAGS: space flight, irradiation protection, high energy proton, secondary neutron, proton absorption, cosmonaut protection

ABSTRACT: In connection with the problem of protecting cosmonauts from penetrating radiation during spaceflights the absorption of protons from the Dubna synchrocyclotron of 660 ± 3 Mev was investigated. In the space problem, one has to consider a wide beam of protons, whereas experimentally one deals with narrow beams. The authors show that by proper distribution of radiation detectors and by summation of their readings, the problem is equivalent to recording by a single detector of radiation produced by a wide proton beam. The proton energy

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L 1444-66 EWT(m)/EPF(c)/ETC/EPF(n)-2/EWG(m)/EWP(j)/EWA(h)/EWA(l) RM

ACCESSION NR: AT5023157 UR/2892/65/000/004/0102/0116

AUTHOR: Afanas'yev, V. P.; Biskupchuk, A. M.; Dudkin, V. Ye.; Kovalev, Ye. Ye.; Kuznetsov, V. G.; Litvinova, E. G.; Smirennyy, L. N.

TITLE: Experimental data on the shielding properties of materials with regard to high energy protons

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Voprosy dozimetrii i zashchity ot izlucheniy, no. 4, 1965, 102-116

TOPIC TAGS: radiation shielding, proton beam, polyethylene, lead, aluminum, radiation dosimetry

ABSTRACT: Experiments on shielding against high-energy protons were conducted on the OIYaI synchrocyclotron in Dubno. The total absorbed tissue dose $Q(\delta)$ was measured in a thin layer of a detector placed parallel to the shielding plane. The dose attenuation and accumulation factor was determined from measurements of $Q(\delta)$ beyond a shielding screen of thickness δ:

$$f(\delta, E_0) = \frac{Q(\delta)}{Q(0)}.$$

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In all cases, the values of $Q(\delta)$ were normalized in conformity with the monitor readings. The experimental set-up is shown in fig. 1 of the Enclosure. The proton beam from absorber *1* passes through collimator *2* and is deflected by magnet *3* to collimator *4*, thus producing a highly pure monochromatic beam of energy. The beam then passes through collimator *5* and ionization chamber *M*, and impinges directly (normal to the surface) on a layer of shielding material immediately adjacent to detector *D*. The detector was a flat ten-channel ionization chamber filled with a gas mixture (35% He + 65% Ar) which is capable of measuring the dose in tissue rads for energies of 1—660 Mev. The dimensions of the chamber were 500 × 300 mm. The characteristics of the materials used in the experiments are shown in table 1 of the Enclosure. Curves are given for the dose accumulation and attenuation factor for a wide beam of protons as a function of shield thickness for various materials at various beam energies. The curves show good agreement with theoretical calculations. Curves are also given for the mean tissue dose in a flat phantom as a function of the incident energy of protons in the absence of a shield. The curves agree quite well with theoretical calculations. The mean tissue dose $\overline{D}_t$ for a flat phantom with δ_{ph} = 30 g/cm^2 is found behind a polyethylene shield at proton incident energies of 126, 260, 415 and 660 Mev. The maximum mean tissue dose for a thickness of 20 g/cm^2 is at a proton energy of 260 Mev, while at greater

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thicknesses, the maximum comes at 415 Mev. The mean tissue dose for 415-Mev protons remains practically unchanged up to a thickness of 50–60 g/cm^2 of polyethylene. The 660-Mev proton dose is reduced beyond this thickness by a factor of only 2, while the dose is practically zero at a thickness of 15 g/cm^2 for 126 Mev, and the same is true at a thickness of ~40 g/cm^2 for 260-Mev protons. The attenuation curves for the various materials are practically identical. Thus an equivalent thickness of any of the materials studied may be substituted at proton energies of 126 and 260 Mev for a polyethylene shield. On this basis, curves are given for mean tissue dose as a function of shielding thickness for various materials at energies of 126 and 260 Mev. It is found that for a proton energy of 260 Mev, consideration must be given to beam attenuation through inelastic interaction in the shielding materials and in biological tissue. The method used in this investigation has not been verified for proton energies greater than 260 Mev and less than 126 Mev. Orig. art. has: 12 figures, 1 table. [14]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 02 SUB CODE: NP

NO REF SOV: 006 OTHER: 007 ATD PRESS: 4100

Card 3/5

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L 7444-66

ACCESSION NR: AT5023157

ENCLOSURE: 01

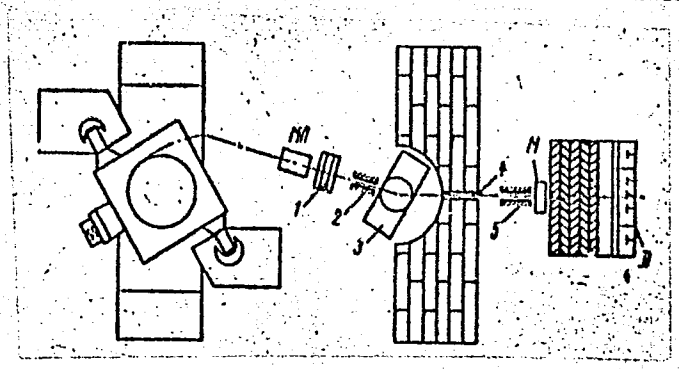

Fig. 1. Experimental setup

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, V. S.

Afanas'Yev, V.S. "Concerning Unification of the execution of diagrams in descriptive geometry," Trudy Novocherkas. politekhn. in-ta im. Ordzhonikidze, Vol. XX, 1948, p.59-66

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

SHCHEPETINA, L.M., prepodavatel'; TSYPIN, Yu.Ya., otv.red.; AFANAS'YEV, V.S., spets.red.

[Assignments and practical instructions for the course "Meteorology" for students of agricultural schools] Uchebnoe zadanie i metodicheskie ukazaniia po kursu "Meteorologiia" dlia uchashchikhsia sel'skokhoziaistvennykh tekhnikumov. 1958 11 p. (MIRA 12:3)

1. Vsesoyuznyy zaochnyy sel'skokhozyaystvennyy tekhnikum.
(Meteorology)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

FISHEVSKIY, Yuriy Konstantinovich; AFANAS'YEV, V.S., red.

[Monopolies of the Federal German Republic are a bulwark of the imperialistic reaction] Monopolii FRG - oplot imperialisticheskoi reaktsii. Moskva, Izd-vo VPSh i AON pri TsK KPSS, 1961. 182 p. (MIRA 14:10)

(Germany, West--Trusts, Industrial)
(Germany, West--Militarism)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

VYGODSKIY, S.L., prof., doktor ekon.nauk, glavnyy red.; FIGURNOV, P.K., prof., red.; AFANAS'YEV, V.S., kand.ekon.nauk, red.; PROKOP'YEV, S.P., red.; NAUMOV, K.M., tekhn.red.

[Present-day economic status of capitalist countries] Sovremennoe ekonomicheskoe polozhenie kapitalisticheskikh stran. Moskva, Izd-vo VPSh i AON pri TsK KPSS, 1959. 142 p. (MIRA 12:4)

1. Moscow. Akademiya obshchestvennykh nauk. Kafedra politicheskoy ekonomii.

(Economics)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

KOVALEVA, M.F., kand.ekon.nauk, glavnyy red.; KARAVAYEV, A.A., kand. ekon.nauk, red.; AFANAS'YEV, V.S., kand.ekon.nauk, red.; ZAYTSEV, V.P., red.; NAUMOV, K.M., tekhn.red.

[Problems in political economy] Voprosy politicheskoi ekonomii. Moskva, Izd-vo VPSh i AON pri TsK KPSS, 1959. 190 p. (MIRA 12:7)

1. Moscow. Akademiya obshchestvennykh nauk. Kafedra politicheskoy ekonomii.
(Economics)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

KOVALEVA, M.F., kand.ekonom.nauk, glavnyy red.; KARAVAYEV, A.A., kand. ekonom.nauk, red.; AFANAS'YEV, V.S., kand.ekonom.nauk, red.; ZAYTSEV, V.P., red.; NAUMOV, K.M., tekhn.red.

[Economics of socialism] Voprosy ekonomiki sotsializma. Moskva, Izd-vo VPSh i AON pri TsK KPSS, 1959. 286 p. (MIRA 12:7)

1. Moscow. Akademiya obshchestvennykh nauk. Kafedra politicheskoy ekonomii.
(Russia--Economic conditions)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

KARATAYEV, N.K., prof.; POLYANSKIY, F.Ya., prof.; REUEL', A.L., prof.; AFANAS'YEV, V.S., dotsent; BOBKOVA, K.I., dotsent; ZAMYATNINA, V.N., dotsent; RYNDINA, M.N., dotsent; BAKOVETSKIY, O., red.; CHEPKLEVA, O., tekhn.red.

[Curriculum for the course "History of economic theory"; for economic institutions of higher learning and faculties] Programma kursa "Istoriia ekonomicheskikh uchenii" dlia ekonomicheskikh vysshikh uchebnykh zavedenii i fakul'tetov. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1960. 48 p.
(MIRA 14:1)

1. Russia (1923- U.S.S.R.) Upravleniye prepodavaniya obshchestvennykh nauk. 2. Komissiya Upravleniya prepodavaniya obshchestvennykh nauk Ministerstva vysshego i srednego spetsial'nogo obrazovaniya SSSR (for all, except Bakovetskiy, Chigina).
(Economics--Study and teaching)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, V.S.; NOVIKOVA, I.Ye., red. izd-va; GARINA, T.D., tekhn. red.

[Crisis of bourgeois economics] Krizis burzhuaznoi politicheskoi ekonomii. Moskva, Gos.izd-vo "Vysshaia shkola," 1963. 60 p. (MIRA 16:10)
(Economics)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

VYGODSKIY, S.L., glav. red.; AFANAS'YEV, V.S., red.; GROMEK, V.I., red.; SHARKOV, A.M., red.; KOKOSHKO, A.G., red.; NAUMOV, K.M., tekhn. red.

[Economic problems of modern imperialism]Ekonomicheskie problemy sovremennogo imperializma. Pod red. S.L.Vygodskogo i dr. Moskva, VPSh pri TsK KPSS, 1963. 217 p. (MIRA 16:4)

1. Akademiya obshchestvennykh nauk, Moscow.
(Imperialism)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

VYGODSKIY, S.L., doktor ekon.nauk,prof.,red.; AFANAS'YEV,V.S., kand.ekon.nauk,dots.,red.; GROMEKA,V.I.,kand.ekon.nauk, red.; BOGDANOV, Ye.A.,red.; VORONINA,N.V., red.

[History of economic theories] Istoriia ekonomicheskikh uchenii. Moskva, Mysl', 1965. 479 p. (MIRA 18:3)

1. Moscow. Akademiya obshchestvennykh nauk. Kafedra ekonomicheskikh nauk.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, V.V.; BAYSH, L.G.

Using a segmental diaphragm in measuring pulp consumption at ore-dressing plants. Sbor.mat.po avtom.proizv.prots.i disp. no.5:27-33 '60. (MIRA 14:4)

1. Konstruktorskoye byuro "TSvetmetavtomatika."
(Measuring instruments) (Ore dressing--Equipment and supplies)
(Diaphragms (Mechanical devices))

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

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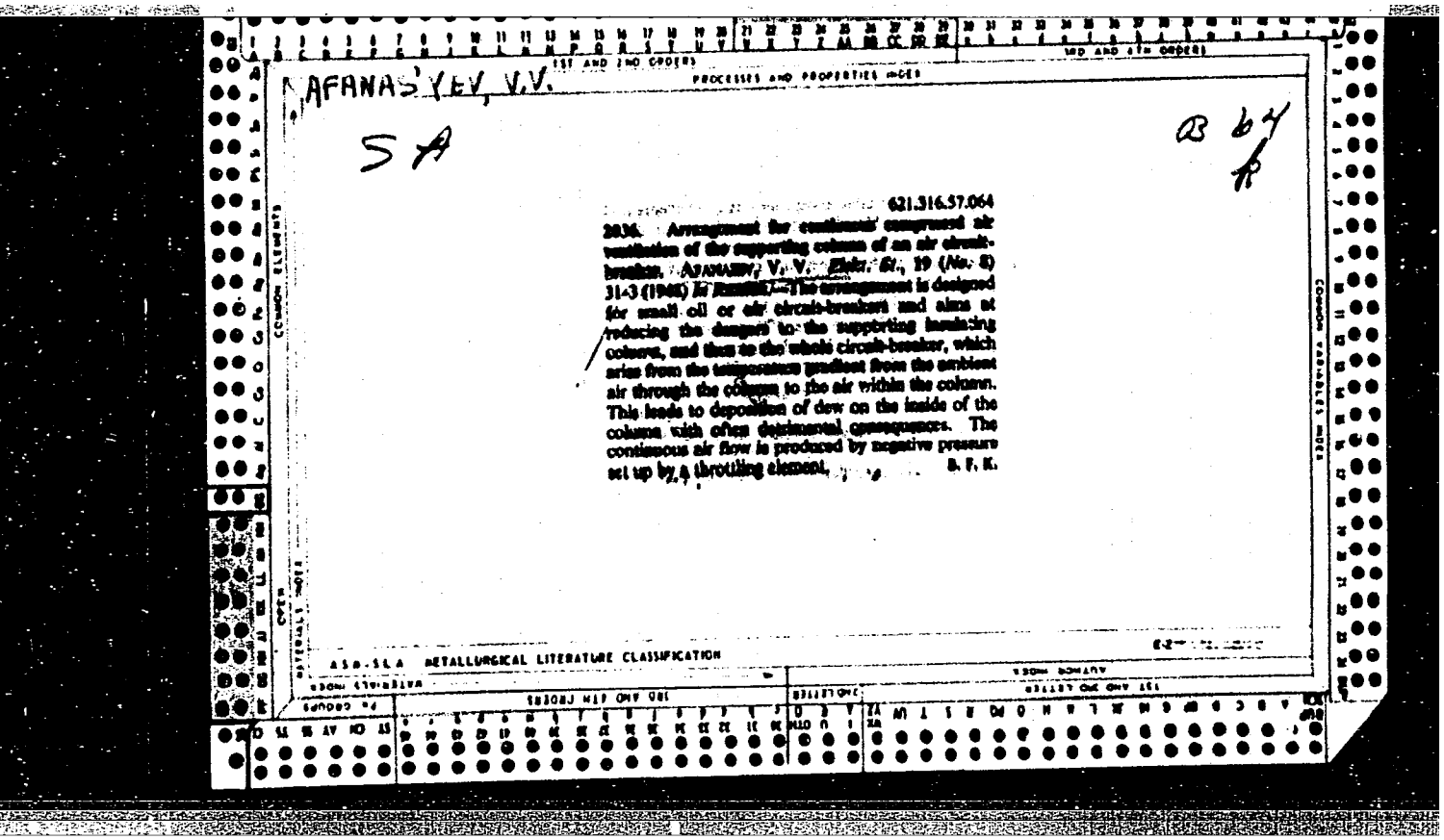

AFANAS'YEV, V.V.

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2836. Arrangement for continuous compressed air ventilation of the supporting column of an air circuit-breaker. AFANAS'EV, V. V. *Elektr. St.*, 19 (No. 8) 31-3 (1948) In Russian.—The arrangement is designed for small oil or air circuit-breakers and aims at reducing the danger to the supporting insulating column, and then to the whole circuit-breaker, which arises from the temperature gradient from the ambient air through the column to the air within the column. This leads to deposition of dew on the inside of the column with often detrimental consequences. The continuous air flow is produced by negative pressure set up by a throttling element. B. F. K.

A58-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

The construction of high tension circuitbreakers for alternation currents. Moskva, Gos. energ. izd-vo, 1951. 520 p. (51-37037)

TK3144.A35

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

Disconnecting Switches (Razъyedinitely), Gosenergoizdat, 1952, 153 pages.

This book discusses the designation and operating conditions of disconnecting switches; design of repeating, knife, roller, and rocker types; design of manual, electric, and pneumatic drivers; design of individual parts; methods of assembly; and checking, testing, and installation of disconnecting switches.

This book is intended for skilled workmen and others at apparatus building plants and for operating personnel of power establishments.

So: W-30262

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'IEV, V. V.

Dissertation: "Design of High-Voltage Disconnecting Apparatus (Work Published by the State Power Engineering Publishing House in 1951)." Cand Tech Sci, All-Union Order of Lenin Electrical Engineering Inst imeni V. I. Lenin, 11 May 54.
Vechernyaya Moskva, Moscow, 3 May 54.

SO: SUM 284, 26 Nov 1954

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

GURVICH, Veniamin Betsalelevich; ANANAS'YEV, V.V., redaktor; ZABRODINA, A.A., tekhnicheskiy redaktor

[Switches for high-tension loads and their drives] Vykliuchateli nagruzki vysokogo napriazheniia i privody k nim. Moskva, Gos. energ. izd-vo, 1956. 55 p. (MLRA 9:10)
(Electric switchgear)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

BARZILOVICH, Vladimir Mikhaylovich; AFANAS'YEV, V.V., redaktor;
ZABRODINA, A.A., tekhnicheskiy redaktor

[High voltage transformers] Vysokovol85nye transformatory toka.
Moskva, Gos. energ. izd-vo 1956. 167 p. (MLRA 9:9)
(Electric transformers)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, Vasiliy Vladimirovich; KRASNOGORODTSEV, S.A., redaktor; ZABRODINA, A.A., tekhnicheskiy redaktor

[High-voltage air circuit breakers] Vozdushnye vykliuchateli vysokogo napriazheniia. Moskva, Gos. energ. izd-vo 1956. 195 p. (MLRA 10:1)
(Electric circuit breakers)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

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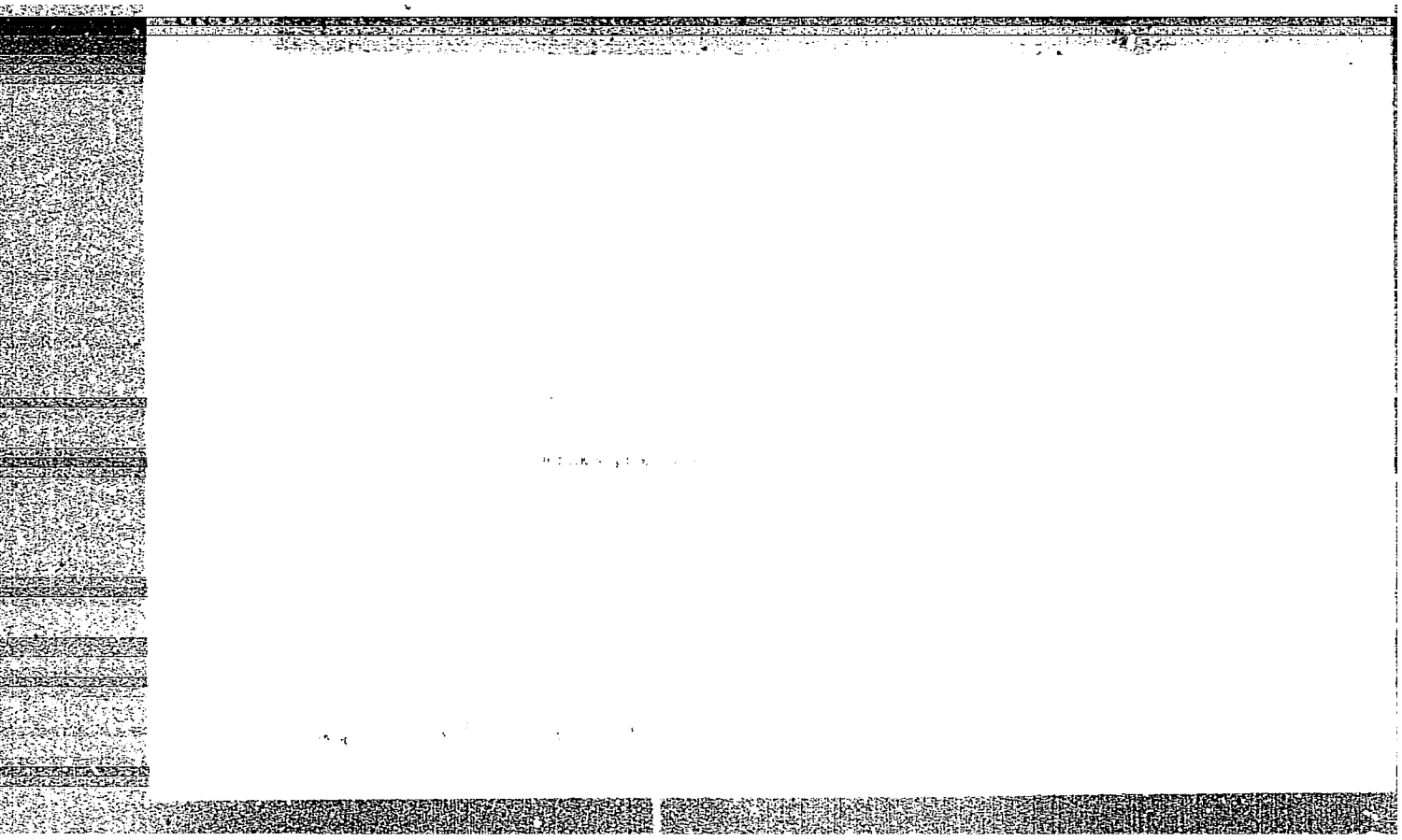

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, Vasiliy Vladimirovich; GREYNER, Leonid Karlovich, NOVIKOV, Solomon Mikhaylovich; MAKAROVA, Nina Arkad'yevna; STUKALOVA, Antonina Ivanovna, TARASOV, Viktor Konstantinovich, FILIPPOV, Yuriy Aleksandrovich; PETROVA, T.G.; AFANAS'YEV, V.V., red.; ZABRODINA, A.A., tekhn. red.

[High-frequency switches; training tables] Kommutatsionnye apparaty vysokogo napriazheniia; uchebnye tablitsy. Moskva, Gos. energ. izd-vo, 1957. 43 p. and 15 plates (in portfolio) (MIRA 11:3)
(Electric switchgear)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

110-58-5-23/25

AUTHORS: Afanas'yev, V.V., Uspenskiy, Yu.M., Vigdergauz, R.V., Zil'bershteyn, B.A., Engineers; Lur'ye, V.M., Candidate of Technical Sciences

TITLE: Concerning the Article "The Principles of Construction of a New Series of Current-transformers for Voltages up to 10 kV" (Po povodu stat'i "O printsipakh postroyeniya novykh seriy transformatorov toka na napryazheniye do 10 kv") (and Authors' Reply)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Vol 29, Nr 5, pp 71-77 (USSR).

ABSTRACT: This is a discussion by two separate contributors on an article by Engineer B.A. Zil'bershteyn (Gosplan RSFSR) and Candidate of Technical Sciences V.M. Lur'ye (NII EP), published in Vestnik Elektropromyshlennosti, 1956, Nr 10. The authors' reply is also given.

Contribution by Afanas'ye[illegible]ngineer

This contributor considers that the author has made a serious error in not recognizing that the one-second thermal stability that he quotes is based on a guaranteed current that is limited by short-circuit stress considerations. Accordingly, his Figure 2 is misconceived. His considerations should have been based on a current below the limiting value and of longer duration.

Contribution by Uspenskiy, Yu.M., Engineer and Vigdergauz, R.V., Engineer

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110-58-5-23/25

Concerning the Article "The Principles of Construction of a New Series of Current-transformers for Voltages up to 10 kV"

These authors welcome certain features of the article, particularly those in which new constructions are described. However, they consider that the authors have formulated the question of class of accuracy and load incorrectly. They consider that the authors' fears about an unsuitable current transformer causing damage to measuring instruments during short-circuit conditions are less important than they think. They consider that the authors are not providing sufficiently high overload capacity and do not agree that different current transformers are needed for measurement and protection. The article is also thought to present the question of current-transformer stability during short-circuit incorrectly and to confuse the matter of low- and high-voltage current transformers.

Authors' Reply

The reply is spirited. The authors show that in his own book, Afanas'yev supported their method, which he is now criticising. They hold to their views. They consider that since the article itself was directed against the excessive demands that designers sometimes make on current-transformers, it is not surprising

Card 2/3

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110-58-5-23/25

Concerning the Article "The Principles of Construction of a New Series of Current-transformers for Voltages up to 10 kV"

that the article should have been attacked by two members of a large design organisation. The authors defend their position firmly on all the points under discussion.

ASSOCIATION: Zavod "Elektroapparat" , Lengiden, Gosplan RSFSR, NII EP .

Card 3/3

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AFANAS'YEV, V.V.

PHASE I BOOK EXPLOITATION SOV/2702

28(1)

Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.
Seminar po pnevmogidravlicheskoy avtomatike. 1st, Moscow, 1957

Sistemy, ustroystva i elementy pnevmo- i gidroavtomatiki; (Sbornik)
(Pneumatic and Hydraulic Circuits, and Elements in Automation; Collection of Papers) Moscow, Izd-vo AN SSSR, 1959. 233 p. Errata slip inserted. 2,700 copies printed.

Resp. Ed.: M. A. Ayzerman, Doctor of Technical Sciences, Professor;
Ed. of Publishing House: A. A. Tal'; Tech. Ed.: T. P. Polyakova.

PURPOSE: This collection of papers is intended for scientific research workers and engineers in the field of design and construction of pneumatic and hydraulic equipment and accessories for automation.

COVERAGE: This collection contains papers read at the Seminar on Pneumatic and Hydraulic Devices for Automation, May 28, 1957. The collection is divided into the following three groups: 1) newly developed pneumatic and hydraulic circuits 2) pneumatic and hydraulic devices, including regulating units, transmitters and transducers, actuating mechanisms, special-purpose devices, and auxiliary equipment and 3) elements of pneumatic and hydraulic devices for automation, such as controlled and permanent nozzles and diaphragms. No personalities are mentioned. References follow several of the papers.

Andriyeva, Ye. A. (Moscow). Calculating the Static Characteristics of Back-pressure Type Elements 172
This paper deals with a theoretical analysis of back-pressure type elements. Flow of fluid, pressure distribution on plates, and general characteristics are discussed.

Shumskiy, K.P. (Moscow). Results of Experimental and Theoretical Investigations of Back-pressure Type Control Devices 181

Bogachara, A.V. (Moscow). High-velocity Laminar Air Flow in Flat Capillary Channels 194
This paper discusses air flow in flat capillary channels at varying pressures. The flow rate is experimentally investigated and results shown graphically. Charts to be used for determining resistance coefficients and flow rates are presented.

Kichin, I. N. (Moscow). Nozzle Clogging and Methods of Combating It 205
The tendency of certain working fluids toward nozzle and slit clogging is examined. Minimum dimensions of nozzle and slit sections at which the fluid flow rate remain stable are determined. Some practical methods of combating clogging are presented.

Diaphragms

Afanas'yev, V.V. On Variation of Effective Areas of Fabric Diaphragms 216
Changes in the magnitude of effective areas of corrugated diaphragms during the stroke are analyzed and their significance in the design of a KSTsMA pneumatic regulator discussed.

Kach, Yu. I., and G. P. Stepanov (Moscow). Investigation of Characteristics of Diaphragms Used in Sensitive Elements of Regulators 224
Characteristics of rubberized-fabric diaphragms made from various materials are discussed. The amount of hysteresis in relation to the stroke and the influence of the temperature of the surrounding medium are investigated. Test results of beryllium-bronze diaphragms are presented.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

8(2) PHASE I BOOK EXPLOITATION SOV/1604

Afanas'yev, Vasiliy Vladimirovich

Konstruktsii vyklyuchayushchikh apparatov vysokogo napryazheniya (Design of High-Voltage Switchgear) Leningrad, Gosenergoizdat, 1959. 574 p. 8,500 copies printed.

Ed.: S.A. Krasnogorodtsev; Tech. Ed.: A.A. Zabrodina.

PURPOSE: This book is intended for engineers and technicians engaged in designing and developing h-v switchgear and for students specializing in h-v equipment construction. It is also intended for engineers and technicians operating h-v installations where h-v switchgear is employed.

COVERAGE: The author describes in detail the design of h-v a-c switchgear. Soviet industry has recently developed and manufactured 400-kv switchgear for the Volga GES imeni Lenin - Moscow transmission line. It is currently developing 500-600 kv a-c switchgear, equipment for 10,000 to 12,000 amperes, and 800-kv d-c switchgear for the Stalingrad-Donbass transmission line. The author states that this book should help in solving theoretical problems connected with

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Design of High-Voltage (Cont.) SOV/1604

the design of h-v switchgear. The 1st, 2nd and 3rd chapters cover problems in design and provide technical data on circuit-breakers, disconnects and short-circuiting switches. Further chapters deal with the design of separate units and components of switchgear equipment. The book also describes Soviet and foreign designs of this equipment and discusses their relative advantages and drawbacks. The author thanks Engineers I.S. Aronovich, L.K. Greyner, Ye.A. Ivanova, G.T. Messerman, G.B. Kholyavskiy and S.A. Krasnogorodtsev. There are 164 references, all Soviet. They appear separately after each chapter.

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Introduction 7

1. General information on switchgear 7
2. Basic parameters of switchgear equipment 15

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BARZILOV, Vladimir Mikhaylovich; AFANAS'YEV, N.V., red.; ZHITNIKOVA, O.S., tekhn. red.

[High-voltage power transformers] Vysokovol'tnye transformatory toka. Izd.2., perer. i dop. Moskva, Gosenergoizdat, 1962. 247 p. (MIRA 15:7)

(Electric transformers)

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, V.V.

Development of the electrical equipment industry within the Leningrad Economic Council. Vest.elektroprom. 33 no.4:1-2 Ap '62. (MIRA 15:4)

1. Nachal'nik upravleniya elektrotekhnicheskoy promyshlennosti Leningradskogo sovnarkhoza.
(Electric equipment industry)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, V.V., inzh.; ZAZNOBIN, M.G., inzh.

Load sensor for production units. Mekh.i avtom.proizv. 16 no.8:26-27 Ag '62. (MIRA 15:9)
(Electronic measurements)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

BACHURIN, Nikolay Ivanovich; AFANAS'YEV, V.V., red.; ZHITNIKOVA, O.S., tekhn. red.

[Cast-resin high-voltage insulation] Litaia izoliatsiia vysokogo napriazheniia. Moskva, Gosenergoizdat, 1963. 139 p. (MIRA 16:4)

(Electric insulators and insulation)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

PTICHKIN, Petr Nikolayevich. Prinimal uchastiye GUTMAN, Yu.M.; AFANAS'YEV, V.V., kand. tekhn.nauk, red.; ZHITNIKOVA, O.S., tekhn. red.

[Valve dischargers] Ventil'nye razriadniki. Moskva, Gosenergoizdat, 1963. 145 p. (MIRA 16:5)
(Electric protection) (Electric discharges)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, Vasiliy Vladimirovich; KRASNOGORODTSEV, S.A., inzh., red.; ZHITNIKOVA, O.S., tekhn. red.

[High-voltage a.c. disconnecting switches] Raz"ediniteli peremennogo toka vysokogo napriazheniia. Moskva, Gosenergoizdat, 1963. 222 p. (MIRA 16:12)

(Electric cutouts)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, Vasiliy Vladimirovich; KRASNOGORODTSEV, S.A., red.

[Air-blast switches; their construction and design] Vozdushnye vykliuchateli; raschet i konstruirovanie. Moskva, Energiia, 1964. 303 p. (MIRA 17:11)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

GURVICH, Veniamin Betsalelevich; KAPLAN, Veniamin Vul'fovich; AFANAS'YEV, V.V., red.

[Substation disconnecting switches with low-oil capacity and their drives] Malomaslianye podstantsionnye vykliuchateli i privody k nim. Izd.2., dop. Moskva, Energiia, 1964. 171 p. (MIRA 17:12)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, V. Ya.

46-3-2/15

AUTHORS: Arkhangel'skiy, M.Ye., Afanas'yev, V.Ya.

TITLE: An Investigation of the Photodiffusion Method of Visualisation of Ultrasonic Fields (Issledovaniye fotodiffuzionnogo metoda vizualizatsii ul'trazvukovykh poley)

PERIODICAL: Akusticheskiy Zhurnal, 1957, Vol.III, Nr 3, pp.214-219 (and 1 plate) (USSR)

ABSTRACT: The photographic method of visualising ultrasonic fields was first proposed by Torikai and Negishi in 1955 (Ref.2). The present paper gives a description of the experiments which were carried out in an attempt to photograph the "cross-section" of the field of a radiator. The film was placed in a special cassette, having thin rubber walls and containing a Kodak D-19 developer. The film was placed with its plane perpendicular to the direction of propagation of the sound and was exposed for up to about 120 sec. The blackening of the film D(t) was plotted as a function of exposure, t^2, at a frequency of 2 Mc/s and an intensity of 0.23 W/cm^2 and a distance of 4 cm from the radiator. The temperature of the developer was about 21°C. The blackening of the film was measured on a densitometer and a microphotometer. The quantity ΔD which is defined as the

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46-3-2/15

An Investigation of the Photodiffusion Method of Visualisation of Ultrasonic Fields.

power of the photodiffusion method is determined by two factors: the transverse diffusion of the developer into the photo-layer and the presence of constant flow due to sonic wind. The second factor is the more important and can only be determined experimentally. L.D.Rozenberg is thanked for his help and advice. There are 8 figures, no tables and 2 references, 1 Russian and 1 English.

ASSOCIATION: Institute of Acoustics, Academy of Sciences USSR, Moscow (Akusticheskiy Institut AN SSSR, Moskva)

SUBMITTED: February 19, 1957.

AVAILABLE: Library of Congress.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

S/887/61/000/000/002/069
E073/E155

AUTHOR: Afanas'yev, V.Ya.

TITLE: Ionic inertialess radiator.
(A.c. no. 131150, cl. 42s (no. 634862 of July 25, 1959))

SOURCE: Sbornik izobreteniy; ul'trazvuk i yego primeneniye. Kom. po delam izobr. i otkrytiy. Moscow, Tsentr. byuro tekhn. inform., 1961, 7-8

TEXT: The ionic inertialess radiator is designed to produce ultrasonic oscillations in air by pulsations of a high-frequency thread discharge in an inert gas at atmospheric pressure. With this equipment intense ultrasonic waves with a uniform front can be obtained. The radiator proposed (Fig.4) consists of a quartz tube with a discharge electrode mounted on its axis. Argon is blown through the tube and flows through a slot between the discharge electrode and the wall of the tube into the discharge space. As a result of applying a high-frequency voltage from the oscillator to the discharge electrode, a high-frequency thread discharge forms. The ultrasonic oscillations occur as a result of pulsations in the diameter of the high-frequency thread discharge

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Ionic inertialess radiator

S/887/61/000/000/002/069
E073/E155

caused by amplitude modulation of the high-frequency voltage at an ultrasonic frequency. Since this discharge in argon is in the form of a needle with a constant thread diameter along the length, cylindrical ultrasonic waves are generated which are transformed into plane waves by means of a cylindrical paraboloid. To achieve this, the tube with discharge electrode is mounted in the focal axis of the paraboloid. Compared with the existing ultrasonic and sonic wave radiator of Z. Kleyn, "Ionofonom", the radiator here proposed produces ultrasonics of a higher intensity and more uniform front. There is 1 figure.

[Abstractor's note: Complete translation.]

Fig.4. Block diagram of the ultrasonic radiator.

1 - discharge electrode; 2 - quartz tube; 3 - high-frequency voltage generator; 4 - modulator; 5 - ultrasonic oscillator; 6 - thread discharge; 7 - cylindrical paraboloid.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

S/019/62/000/009/019/125
A154/A126

AUTHOR: Afanas'yev, V. Ya.

TITLE: Electrodes placed on the surface of a thin-walled sphere of barium titanite with tangential polarization

PERIODICAL: Byulleten' izobreteniy, no. 9, 1962, 23

TEXT: Class $21a^2$, 16_{01}. No. 146778 (677314/26 of August 25, 1960)
Electrodes placed on the surface of a thin-walled sphere of barium titanite with tangential polarization are distinguished by the fact that, to preserve the acoustic homogeneity of the sphere, to attain more regular polarization and to simplify the design, the electrodes are made in the form of a double zigzag. This has an angle of about 120^0, branches, covers the entire surface of the sphere and has two wire taps.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, Ya.I., assistent

Is false hellebore poisonous? Zhivotnovodstva 23 no.7:57 Jl '61. (MIRA 16:2)

1. Yakutskiy universitet.
(False hellebore as feed)

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KAS'YANOV, A.N.; KRAPIVNER, L.M.; LUZYANIN, D.; SHARABRIN, I.; KHAVCHENKO, D.; AFANAS'YEV, Ya.I.; ABUSHAYEV, I.Sh.; IMANOV, E.D.

Information and brief news. Veterinariia 40 no.4:87-93 Ap '63. (MIRA 17:1)

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PHASE I BOOK EXPLOITATION 1202

Afanas'yev, Yakov Vasil'yevich; Zakharchenko, Zoya Ivanovna; Ostapenko, Nikolay Nikolayevich

Metodicheskoye posobiye po obshchey tekhnologii metallov (Manual of Methodology for the [teaching of] General Technology of Metals) Moscow, Trudrezervizdat, 1958. 209 p. 10,000 copies printed.

Ed.: Bilinskiy, M. Ya.; Tech. Ed.: Sushkevich, V. I.

PURPOSE: This book is intended for teachers giving a course of instruction in the technology of metals.

COVERAGE: The book systematically outlines material to be covered. The suggested manner of presentation is intended only as a guide, the instructor being encouraged to make changes wherever they seem desirable. Topics covered include: properties of metals, production of iron and steel, heat treatment, nonferrous metals, nonmetallic materials, casting, forming, welding, soldering, machining, and bench work. No personalities are mentioned. There are 22 references, all Soviet.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, Ya. (g.L'vov); TKACH, M., instruktor; KACHAN, L.; SHMYGANOVSKIY, V.; VOLKOV, A.; FRID, L. (g.Minsk); PODLUZHNYY, A. (g.Kiyev); YEVSTYUGIN, N.

Letters and correspondence. Sov. profsoiuzy 17 no.24:42-43 D '61. (MIRA 14:12)

1. Krivorozhskiy gorodskoy komitet Kommunisticheskoy partii Ukrainy (for Tkach). 2. Nestatnyy korrespondent zhurnala "Sovetskiye profsoyuzy" g. Vitebsk (for Kachan). 3. Predsedatel' rabochego komiteta sovkhoza "Cherevkovskiy" Krasnoborskogo rayona, Arkhangel'skoy obl. (for Volkov). 4. Neshtatnyy korrespondent zhurnala "Sovetskiye profsoyuzy", Sverdlovskaya obl. (for Yevstyugin).

(Community centers)
(Evening and continuation schools)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, Yakov Vasil'yevich, prepodavatel'; ZAKHARCHENKO, Zoya Ivanovna, prepodavatel'; OSTAPENKO, Nikolay Nikolayevich, zasluzhennyy uchitel' professional'no-tekhnicheskogo obrazovaniya RSFSR; BILINSKIY, M.Ya., red.; SUSHKEVICH, V.I., tekhn.red.

[Manual on the general technology of metals] Metodicheskoe posobie po obshchei tekhnologii metallov. Moskva, Vses.uchebno-pedagog.izd-vo Trudrezervizdat, 1958. 209 p.
(MIRA 14:1)

(Metals) (Metalwork)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'EV, IA.

Standartizatsiia v vozdushnom flote. [Standardization in the air fleet]. Moskva, Gos. aviatsionnoe i avtotraktornoe izd-vo, 1932. 110 p. illus. Bibliography: p.98
DLC: TL526.R9A55

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

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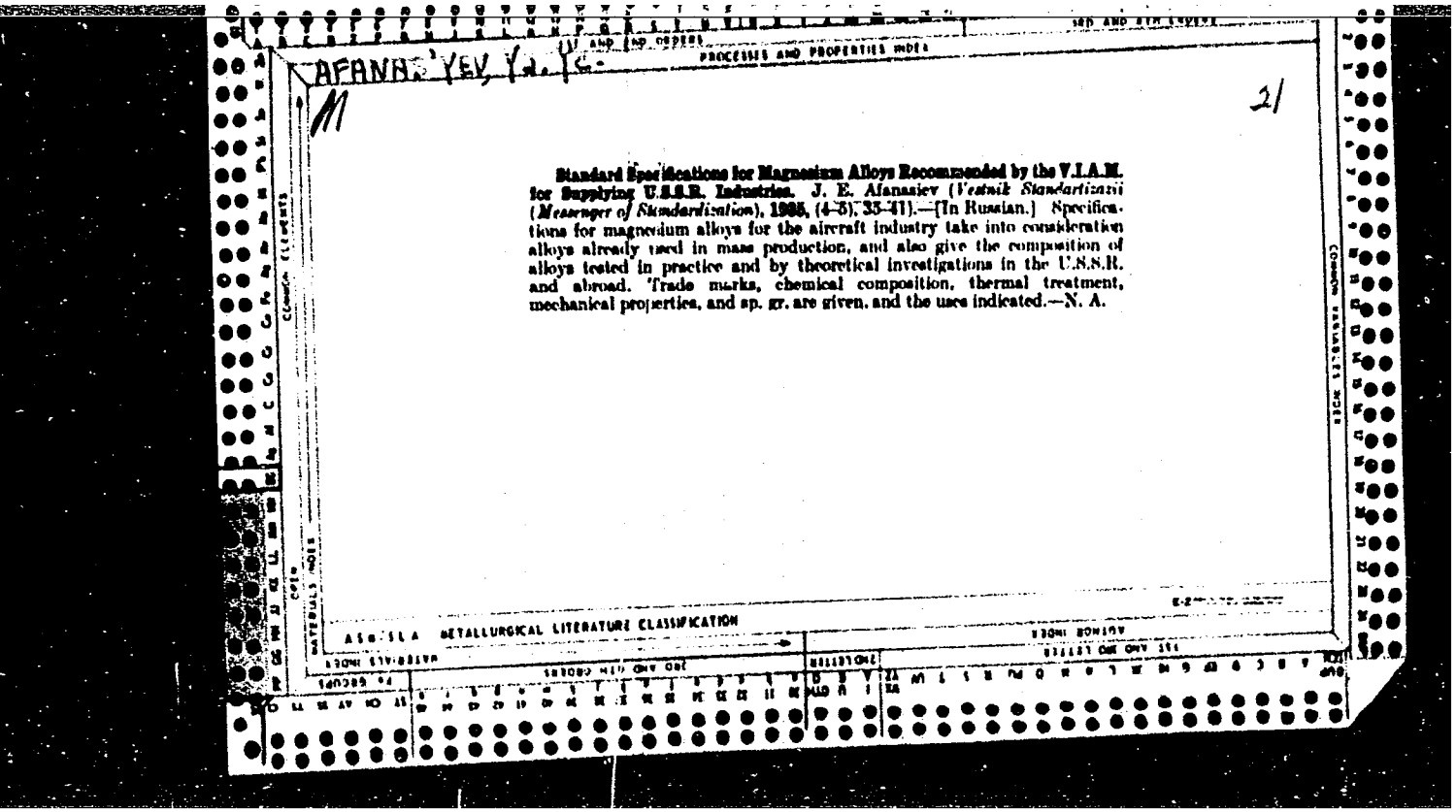

AFANAS'YEV, Ya. Ye.

21

Standard Specifications for Magnesium Alloys Recommended by the V.I.A.M. for Supplying U.S.S.R. Industries. J. E. Afanasiev (*Vestnik Standartizatsii* (*Messenger of Standardization*), 1935, (4–5), 33–41).—[In Russian.] Specifications for magnesium alloys for the aircraft industry take into consideration alloys already used in mass production, and also give the composition of alloys tested in practice and by theoretical investigations in the U.S.S.R. and abroad. Trade marks, chemical composition, thermal treatment, mechanical properties, and sp. gr. are given, and the uses indicated.—N. A.

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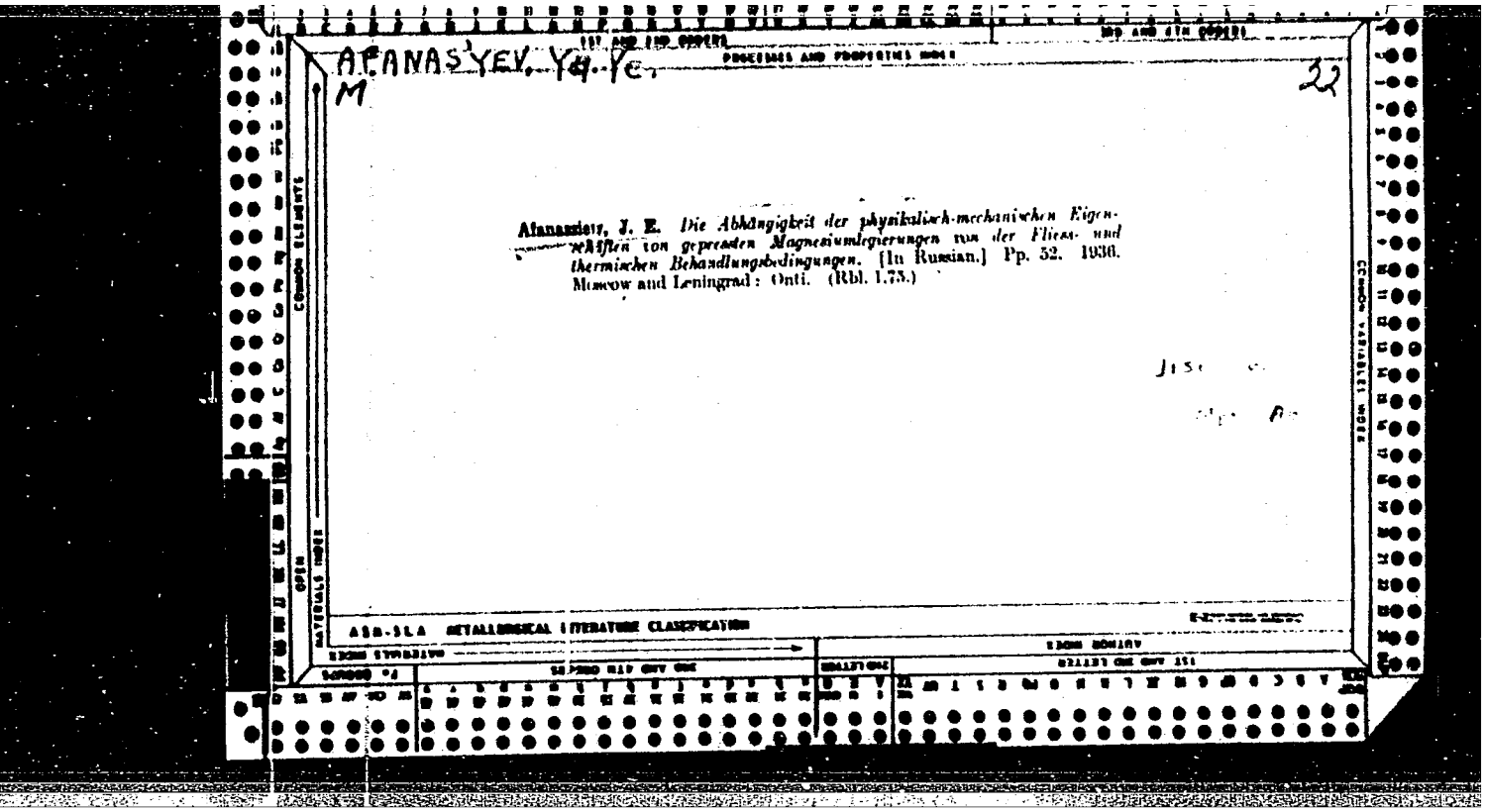

AFANAS'YEV, Ya. Ye.

M

22

Afanas'ev, Ya. E. *Die Abhängigkeit der physikalisch-mechanischen Eigenschaften von gepressten Magnesiumlegierungen von der Fliess- und thermischen Behandlungsbedingungen.* [In Russian.] Pp. 52. 1936. Moscow and Leningrad: Onti. (Rbl. 1.75.)

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

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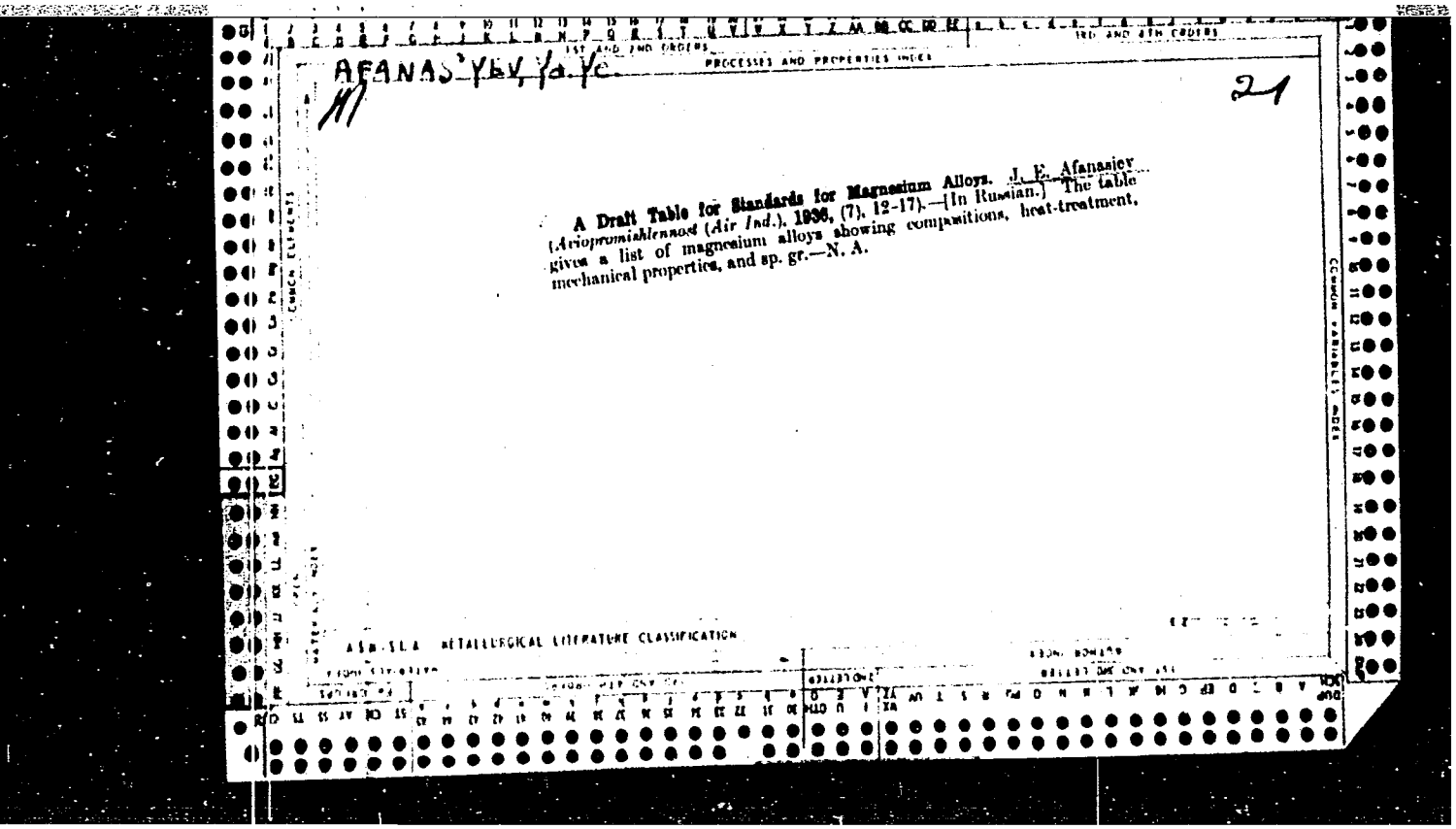

AFANAS'YEV, Ya. Ye.

21

A Draft Table for Standards for Magnesium Alloys. J. E. Afanasiev. (*Aviopromishlennost* (*Air Ind.*), **1936**, (7), 12-17).—[In Russian.] The table gives a list of magnesium alloys showing compositions, heat-treatment, mechanical properties, and sp. gr.—N. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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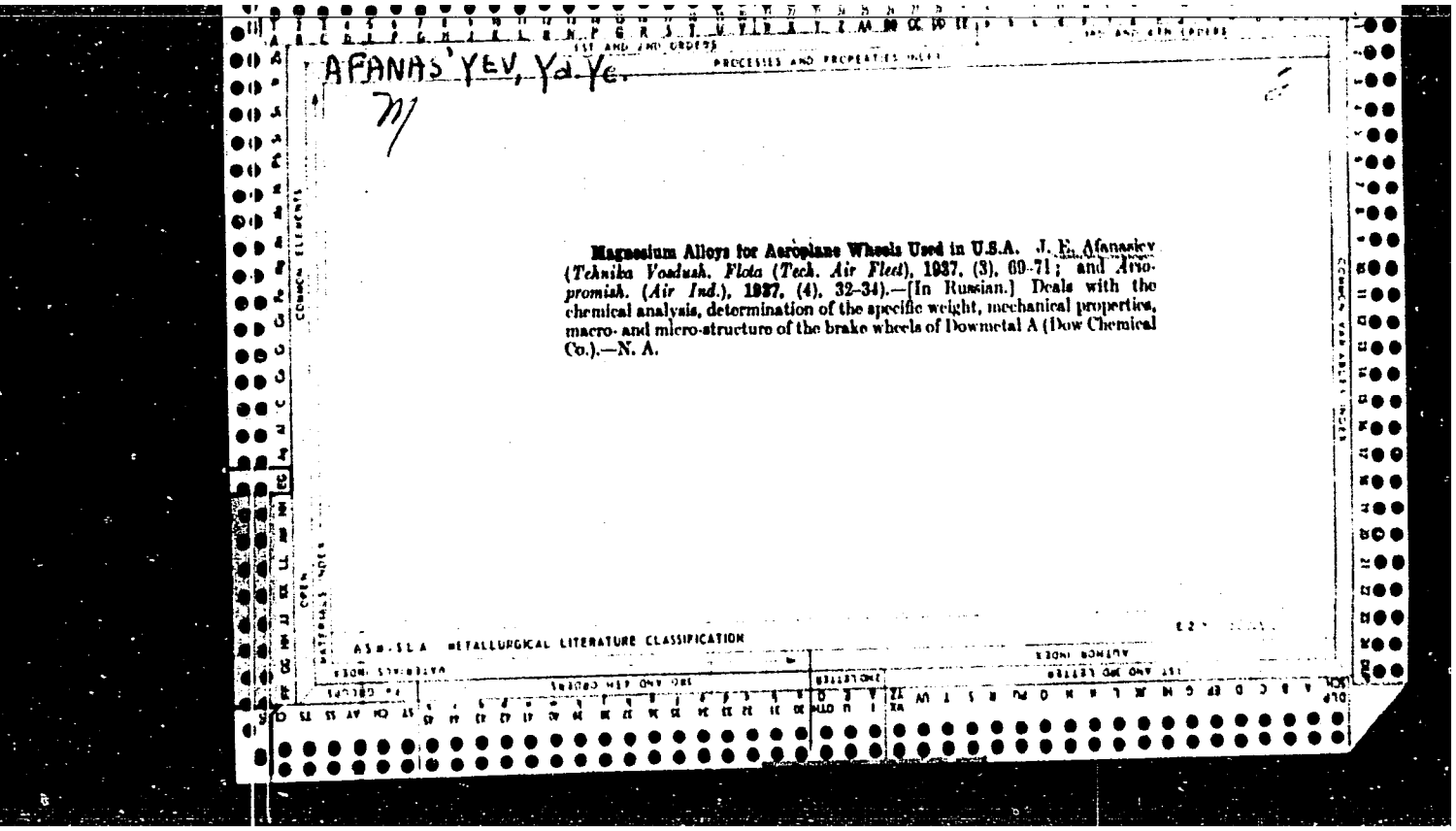

AFANAS'YEV, Ya. Ye.

Magnesium Alloys for Aeroplane Wheels Used in U.S.A. J. E. Afanasiev (*Tekhnika Vozdush. Flota* (*Tech. Air Fleet*), 1937, (3), 69–71; and *Aviapromish.* (*Air Ind.*), 1937, (4), 32–34).—[In Russian.] Deals with the chemical analysis, determination of the specific weight, mechanical properties, macro- and micro-structure of the brake wheels of Dowmetal A (Dow Chemical Co.).—N. A.

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

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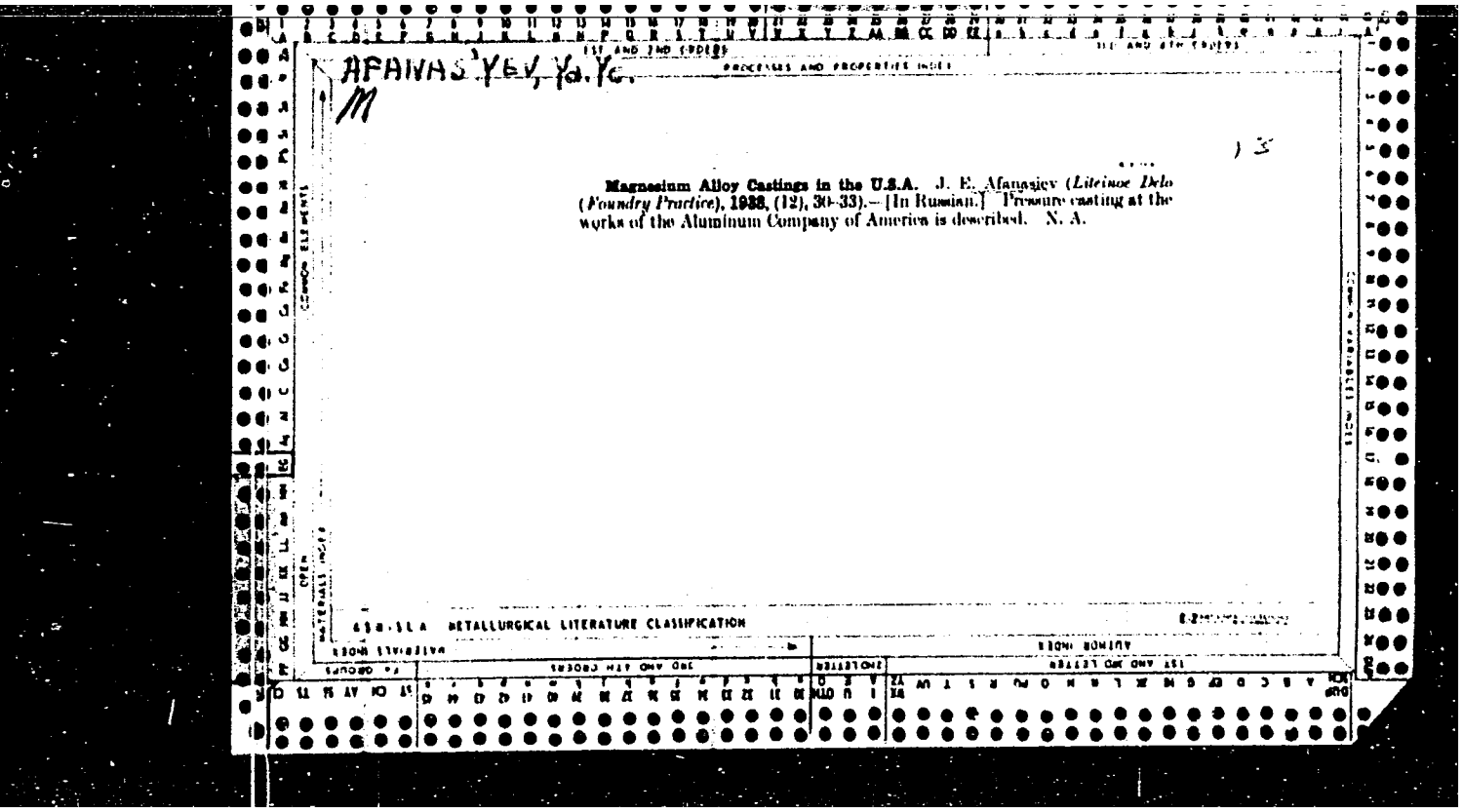

AFANAS'YEV, Ya. Ye.

M

Magnesium Alloy Castings in the U.S.A. J. E. Afanasiev (*Liteinoe Delo* (*Foundry Practice*), 1938, (12), 30-33).– [In Russian.] Pressure casting at the works of the Aluminum Company of America is described. N. A.

669.5.11.A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

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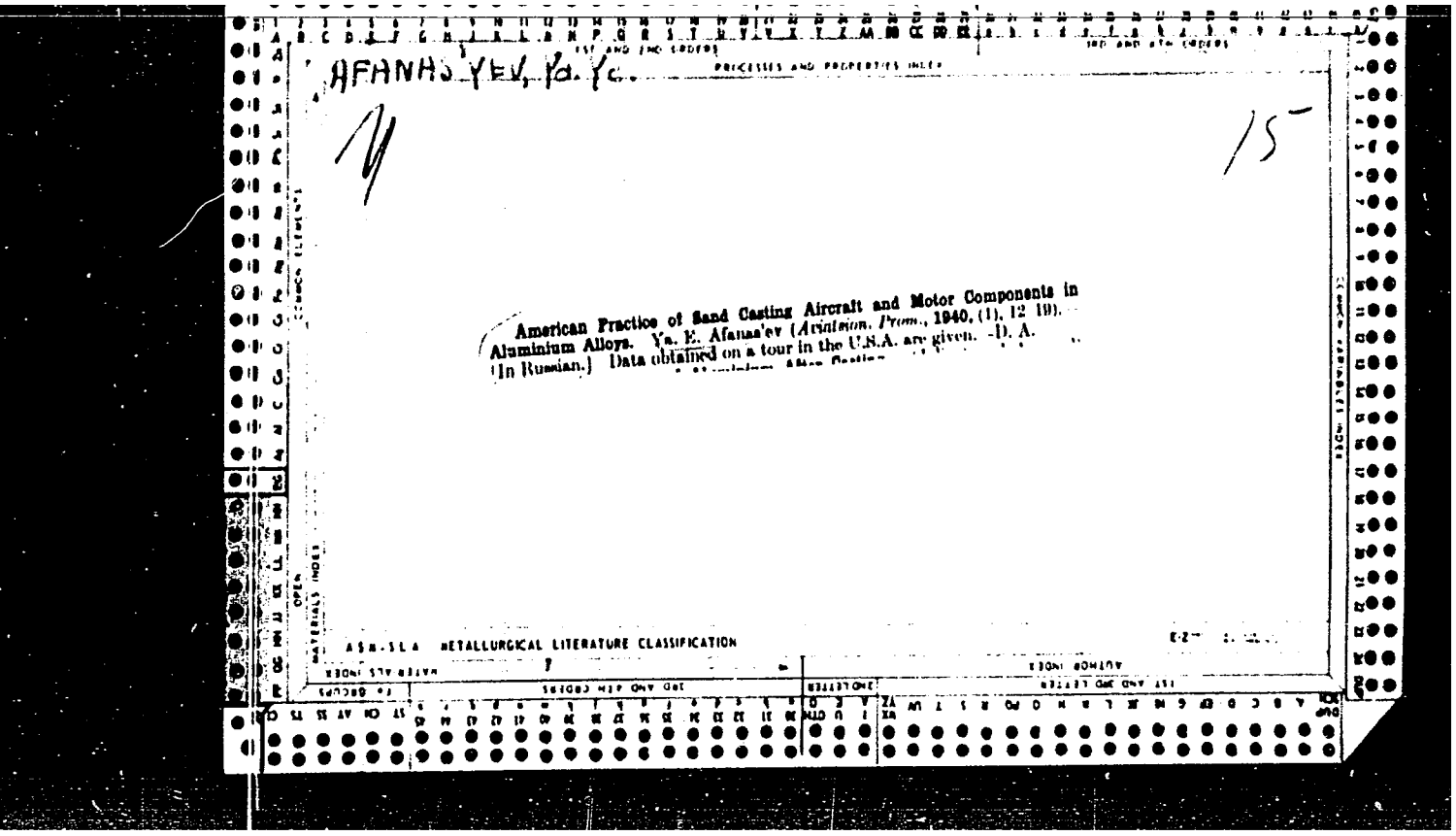

AFANAS'YEV, Ya. Ye.

American Practice of Sand Casting Aircraft and Motor Components in Aluminium Alloys. Ya. E. Afanas'ev (*Aviation. Prom.*, 1940, (1), 12-19). (In Russian.) Data obtained on a tour in the U.S.A. are given. -D. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, Ya. Ye.

Properties of magnesium-rich pressed alloys of the system magnesium-aluminum-zinc. Ya. E. Afanas'ev and N. N. Bakhmetov (All-Union Sci. Research Inst. Aviation Materials, Moscow). *Invest. Sektora Fiz.-Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R.* 16, No. 2, 307–30(1946).—The mech. properties (tensile strength, relative elongation, elastic limit, etc.) of a no. of Mg-Al, Mg-Zn, and Mg-Al-Zn stamped alloys were studied. On this basis a no. of alloys are recommended for industrial use. M. Hosch

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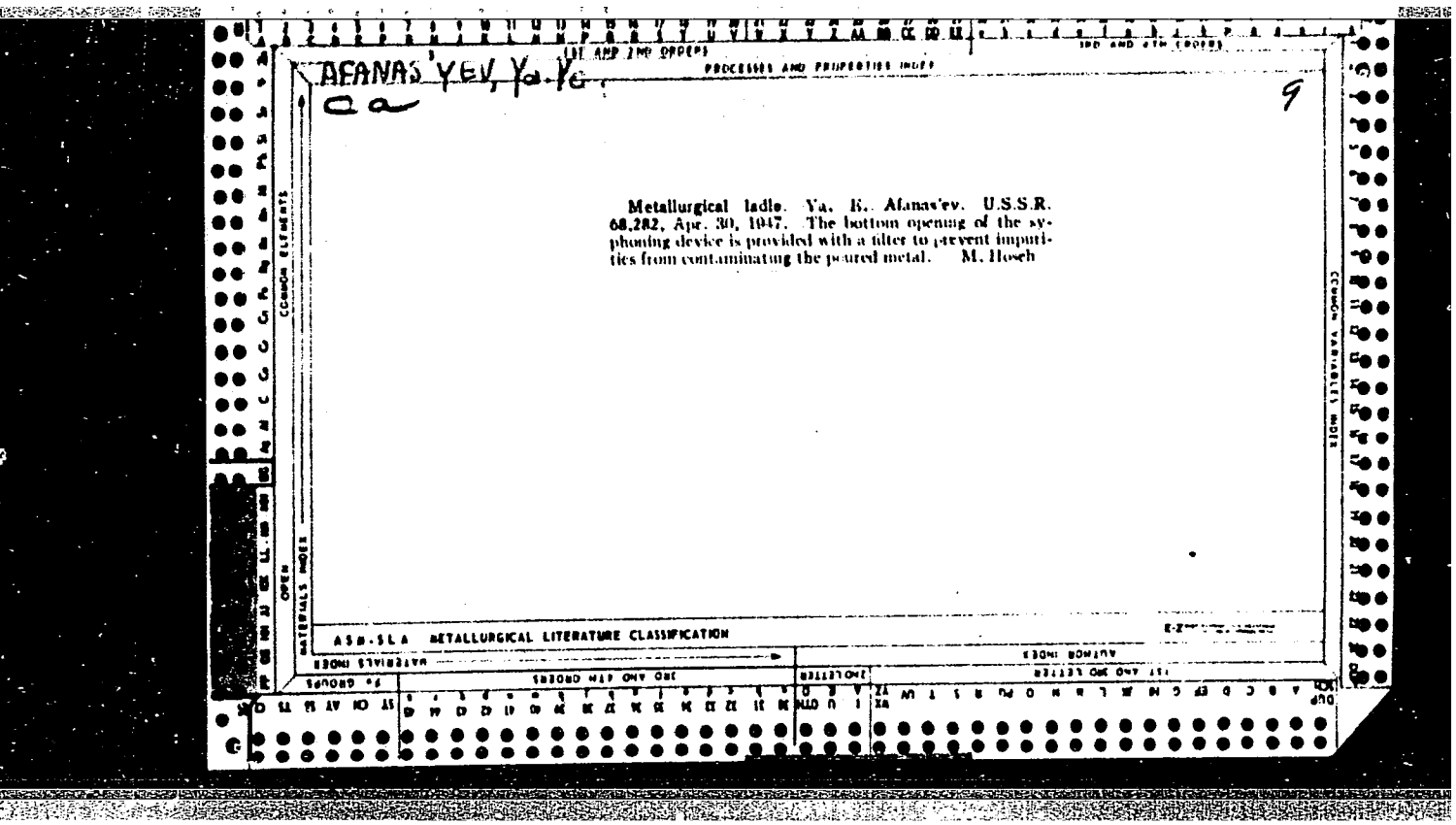

AFANAS'YEV, Ya. Ye.

9

Metallurgical ladle. Ya. E. Afanas'ev. U.S.S.R. 68,282, Apr. 30, 1947. The bottom opening of the syphoning device is provided with a filter to prevent impurities from contaminating the poured metal. M. Hosch

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AFANAS'YEV, Ya. E.

USSR/ Engineering - Metallurgy

Card 1/1 Pub. 128 - 8/26

Authors : Afanas'ev, Ya. E.

Title : Magnesium alloys

Periodical : Vest. mash. 2, 39-42, Feb 1954

Abstract : The wide application of magnesium alloys in the Machine Construction Industry is emphasized. A short description of various magnesium alloys is presented, together with technical data and specifications. Five USSR references (1937-1950). Tables.

Institution : .....

Submitted : .....

Evaluation B-78539, 8 Sep 54

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

SOV/137-58-9-20062

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 280 (USSR)

AUTHOR: Afanas'yev, Ya.Ye.

TITLE: Modern Magnesium Alloys (Sovremennyye magniyevyye splavy)

PERIODICAL: V sb: Legkiye splavy, Nr 1. Moscow, 1958. pp 133-146

ABSTRACT: The use of Mg castings instead of cast Al sections of equal strength saves 25-30% in weight, whereas the unit strength of the deformed magnesium alloys (MA) is only a little less than that index for the best Al alloys such as V95 and Nr 30KhGSA steel. New high-strength foundry MA based on the Mg-Zn-Zr-Mn system, with a $\sigma_{0.2}$ of 18 kg/mm^2 are being sought. Addition of a number of rare metals (Mischmetal, Ce, Nd, Th, and others) to Mg has made it possible to develop new heat-resistant foundry MA. For an alloy of the Mg-Zn-Zr-Mn system, $\sigma_{\text{stress-rupture}}$ at 200°C is 7.5 kg/mm^2, while at 250° it is 3.5 kg/mm^2. Data are adduced on deformable MA used in the aircraft industry. New MA have been developed for sheet, such as MA8-1, having a $\sigma_b > 29$ kg/mm^2, and others. A

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

Modern Magnesium Alloys

heat-treatable MA of the Mg-Al-Zn-Mn system, designated MA6, for which $\sigma_b > 34$ kg/mm^2, has been developed for extruded rods and sections. Comparative data are adduced on the mechanical properties of mass-produced and experimental MA in accordance with the test temperature and the engineering parameters. The problem is posed of developing MA having σ_b of >34 kg/mm^2 (δ 5%) in the case of sheet, and $\geq$ 40 kg/mm^2 (δ 5%) for extruded products.

G.E.

1. Magnesium alloys--Effectiveness 2. Magnesium alloys--Properties
3. Magnesium castings--Applications

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANAS'YEV, Ya.Ye.; KOLPASHNIKOV, A.I.

Method for measuring long-time hardness on a Rockwell tester for the purpose of determining creep of materials. Zav. lab. 24 no.5: 627-629 '58. (MIRA 11:6)

(Creep of metals) (Metals—Testing)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

PA 28/49T51

AFANAS'YEV, YE.

Sep 48

USSR/Engineering
Tank Ships
Welding

"Welded Tankers Without Cofferdams," Ye. Afanas'yev, 2 pp

"Morskoy Flot" No 9

Cofferdams are built to prevent fuel gases from seeping into adjoining compartments. Today with improved welding techniques, Maritime Registry USSR has issued new regulations which dispense with the need for intracompartmental cofferdams. This is advantageous as it also tends to increase tankers' cargo capacity.

28/49T51

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AFANAS'YEV, Ye. (Sverdlovskaya obl., Poroshino)

Nomogram for designing power transformers with ratings up to 1 kw. Radio no.4:48 Ap '63. (MIRA 16:3)
(Electric transformers)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3"

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KUDRYASHOV, P., inzh.; AFANAS'YEV, Ye., inzh.

Improve the use of equipment in ship repair enterprises of the Ministry of the River Fleet. Rech. transp. 22 no.2:22-24 F '63. (MIRA 16:5)

(Shipyards—Equipment and supplies)

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84326
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C111/C222

11.7300

AUTHOR: Afanas'yev, Ye.F. (Moscow)

TITLE: On the Reflection of Sound Waves at a Plane With a Movable Part in the Form of a Cylindric Piston

PERIODICAL: Prikladnaya matematika i mekhanika, 1960, Vol.24, No.4, pp.726-731.

TEXT: Let the sound wave with the pressure profile $p = p_0(t+\frac{z}{c})$, $p_0(t)=0$ for $t \leq 0$ meet the plane $z = 0$ in the moment $t = 0$ and let it be reflected. Let the velocity of the deformed part of the plane after the reflection be $V_z = V(r,t)$, where $V(r,0) = 0$. The pressure for $t > 0$ satisfies the wave equation

$$\frac{\partial^2 p}{\partial t^2} = c^2 \Delta p \tag{1.1}$$

with the boundary conditions $\frac{\partial p}{\partial z} = -\rho_0 \frac{\partial V}{\partial t}$ for $z = 0$ and $p = p_0(2t)$ for $z = ct$, where c is the sound velocity in the fluid, $\rho_0 = \text{const}$ is the density of the fluid. Putting $p = p_1(t,z) + p_2(r,t,z)$, where (cf.(Ref.1))

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On the Reflection of Sound Waves at a Plane With a Movable Part in the Form of a Cylindric Piston

$p_1(t,z) = p_0(t+\frac{z}{c}) + p_0(t-\frac{z}{c})$, then p_2 must be determined from (1.1) with the conditions

(1.2) $$\frac{\partial p_2}{\partial z} = -\rho_0 \frac{\partial v}{\partial t}$$

for $z = 0$, $p_2 = 0$ for $z = ct$ (first condition on the deformable part of the plane). The solution of (1.1)-(1.2) is given in (Ref.2).
Let the deformable part be a movable rigid piston adjusted in an opening of the plane. Then $V = V(t)$ and $p_2(r,t,0) = \frac{c\rho_0}{2\pi} \iint_S V'(t-\tau)\,d\varphi\,d\tau$.

For a fixed r and t the limits of integration for τ and φ depend on the mutual situation of the circle with the radius R (radius of the piston) and the circle with the radius ct the center of which is displaced by r against the center of the first circle.
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84326

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On the Reflection of Sound Waves at a Plane With a Movable Part in the Form of a Cylindric Piston

Case 1: $0 \leq ct \leq R-r$, then $p_2(r,t,0) = c\rho_0 V(t)$ and the total pressure is $p(r,t,0) = 2p_0(t)+c\rho_0 V(t)$. Case 2: $R-r \leq ct \leq R+r$, then $p_2(r,t,0) =$

$$c\rho_0 V(t) - \frac{c\rho_0}{\pi}\int_0^{\varphi_0} V(t-T)d\varphi.$$ Case 3: $R+r \leq ct < \infty$, then $p_2(r,t,0) =$

$$c\rho_0 V(t) - \frac{c\rho_0}{\pi}\int_0^{\pi} V(t-T)d\varphi.$$ Here $\varphi_0 = \arccos \frac{R^2-r^2-c^2t^2}{2rct}$;

$T = \sqrt{R^2-r^2\sin^2\varphi} - r\cos\varphi$. The compressive force performed by the fluid onto the piston is

$$F(t) = \iint_{r\leq R} p(r,t,0)d\sigma = 2\pi\int_0^R p(r,t,0)rdr.$$

For the time $0 \leq t \leq \frac{2R}{c}$ it is

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On the Reflection of Sound Waves at a Plane With a Movable Part in the Form of a Cylindric Piston

(2.5) $F(t) = \pi R^2 \left[2p_0(t)+c\rho_0 V(t)\right] - 2c^2\rho_0 R \int_0^t \sqrt{1-\left[\frac{c(t-\tau)}{2R}\right]^2}\, V(\tau)\,d\tau;$

For $\frac{2R}{c} \leq t < \infty$ it is:

(2.6) $F(t) = \pi R^2 \left[2p_0(t)+c\rho_0 V(t)\right] - 2c^2\rho_0 R \int_{t-2\frac{R}{c}}^t \sqrt{1-\left[\frac{c(t-\tau)}{2R}\right]^2}\, V(\tau)\,d\tau.$

The motion equation of the piston in dimensionless coordinates ($\frac{ct}{2R} \to t$, $\frac{u}{2R} \to u$, $4\frac{RF_0}{h\rho c^2} \to p$, where h is the thickness of the piston) reads (α, β - certain constants):

(3.1) $u''(t)+2\alpha u'(t)+\beta u(t) = p(t)+\varepsilon \int_0^t \sqrt{1-(t-\tau)^2}\, u'(\tau)\,d\tau \quad (0 \leq t \leq 1)$

(3.2) $u''(t)+2\alpha u'(t)+\beta u(t) = p(t)+\varepsilon \int_{t-1}^t \sqrt{1-(t-\tau)^2}\, u'(\tau)\,d\tau \quad (1 \leq t < \infty).$

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24,1200

AUTHOR: Afanas'yev, Ye.F. (Moscow)

TITLE: Diffraction of non-stationary pressure waves on a moving plate

PERIODICAL: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk. Prikladnaya matematika i mekhanika, v. 26, no. 1, 1962, 190-195

TEXT: The plane problem of the diffraction of a sound pressure wave on an infinite strip was solved by E.N. Fox (Ref. 1: Phil. Trans. Roy. Soc., London A, 1948, 241, no. 828, 71-103). In general, the plate acquires some velocity $v_z = v(t)$ under the action of incident pressure wave, and that complicates the problem. Here, the author uses the method of V.A. Fok (Ref. 2: Matem. sbor. 1944, v. 14(56) no. 1-2) and using Laplace transformations and complex methods, obtains the exact solution in which velocity distribution is given as a recurrent formula. The equation of motion of the plate is formulated and its solution for any instant of time

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AFANAS'YEV, Ye.F. (Moskva)

Pressure wave reflection from a plane having a membrane-like deformed part. Inzh.zhur. 1 no.2:158-163 '61. (MIRA 14:12)

1. Institut mekhaniki AN SSSR.
(Wave mechanics)

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AFANAS'YEV, Ye. F. (Moskva)

Diffraction of a nonstationary wave on a semiplane. Inzh. zhur. 2 no.4:337-340 '62. (MIRA 16:1)

1. Institut mekhaniki AN SSSR.

(Diffraction)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410020-3

AFANASYEV, Ye.F. (Moscow)

"The action of a wave with arbitrary front on obstacles"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 Febraury 1964

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AFANAS'YEV, Ye.F. (Moskva)

Unsteady wave diffraction about a slot. Inzh.zhur. 3 no.4: 638-644 '63. (MIRA 16:12)

1. Institut mekhaniki AN SSSR.

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S/0258/64/004/003/0451/0460

ACCESSION NR: AP4043519

BR

AUTHOR: Afanas'yev, Ye. F. (Moscow)

TITLE: The action of a weak shock wave on an obstacle

SOURCE: Inzhenerny*y zhurnal, v. 4, no. 3, 1964, 451-460

TOPIC TAGS: shock wave, diffraction, Neumann problem, Helmholtz vortex equation, Fredholm equation, Laplace transformation

ABSTRACT: The author examined the diffraction problem of a weak shock wave on a massive rigid surface. The motion of a plane situated in a linear elastic medium under the action of a shock wave of arbitrary profile was considered. The problem was formulated as a Neumann problem for the Helmholtz equation for the Laplace transformed pressure variable. The pressure on the surface opposite to that of the wave was found to be given by

$$p_+^*(x, 0, \lambda) = \frac{\lambda}{\pi}\int_0^1 K_0(\lambda|x-\xi|)\left[v(\lambda)+\omega(\lambda)\left(\xi-\frac{1}{2}\right)\right]d\xi +$$

$$+\frac{\lambda}{\pi}\int_0^\infty [K_0(\lambda|x+\xi|)\varphi_1(\xi,\lambda)+K_0(\lambda|x-1-\xi|)\varphi_2(\xi,\lambda)]\,d\xi,$$

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