SHATROV, P.

How to choose skis. Voen.znan. 32 no.11:22 N '56. (MIRA 10:10)
(Skis and skiing)

SHATROV, P., master sporta.

"Patrol ski racing." Voen.znan.32 no.12:23-24 D '56. (MLRA 10:2)
(Ski troops)

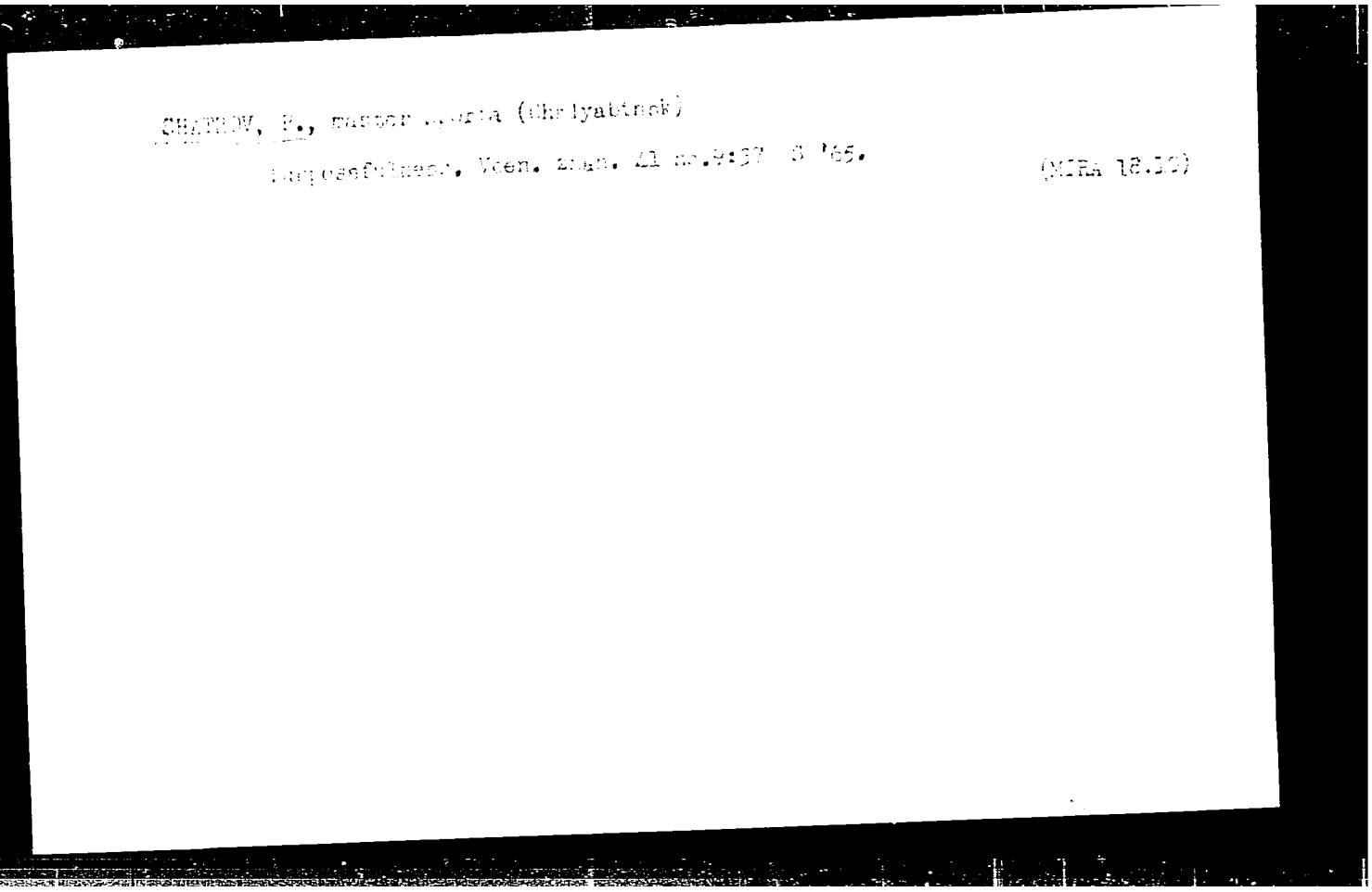
BUL'ON, N., polkovnik; SHATROV, P., polkovnik

Map orientation exercise. Voen. vest. 41 no.5:81-83 My '61.
(MIRA 14:8)

(Russia--Army--Physical training)
(Maps, Military)

SHATROV, P., polkovnik v zapase, master sporta SSSR

Generosity. Voen.znan. 40 no.11:42-43 N '64. (MIRA 18:1)



SHATROV, P., master ...orta (Chelyabinsk)

Rukovoditel. Voen. znan. 41 no.9:37 S '65. (MIRA 18.10)

SHATROV, R.F.

Improving the performance of defectoscope cars. Put' i put. khoz. 9 no.2:32 '65. (MIRA 18:7)

1. Nachal'nik vagona-defektoskopa Kazakhskoy dorogi, Alma-Ata.

KOZHANOV, M.N., inzh.; SHATROV, S.M., inzh.

The bunkerless loading of coal. Mekh. trud. rab. 11 no.10:28 O '57.
(Coal mines and mining) (MIRA 10:11)

SHATROV, S.M.; VIKENT'YEV, I.P.; VAR'YASH, I.G.; ZEMSKOV, M.D.

Efficient solution of a highway and railroad crossing. Avt. dor. 21 no.2:21-22 F '58. (MIRA 11:2)
(Underpasses) (Railroad bridges) (Road construction)

L 00897-67 EWT(d)/EWT(m)/EWP(f)/T-2

ACC NR: AP6009258 (N) SOURCE CODE: UR/0122/65/000/011/0023/0026

AUTHOR: Krutov, V. I. (Doctor of technical sciences, Professor); Shatrov, V. I. (Engineer)

ORG: None

33
B

TITLE: Dynamics of a diesel with turbosupercharger

SOURCE: Vestnik mashinostroyeniya, no. 11, 1965, 23-26

TOPIC TAGS: turbosupercharged engine, diesel engine, compressor rotor

ABSTRACT: The authors analyze the effect of a self-contained turbosupercharger on the dynamic characteristics of diesel engines. A formula is derived for transient processes in a diesel with a self-contained turbocompressor and curves are given comparing these processes in the 1D6N diesel engine with and without supercharging. The results show that the inertia of the compressor rotor extends the duration of the transition process. Comparison of transition processes assuming various moments of inertia in the compressor rotor shows an increase in the time of the transition process by a factor of 2.5 when the moment of inertia is increased by a factor of 3. This indicates that if other factors remain constant, the transition process is considerably shortened by reducing the moment of inertia in the turbocompressor. Orig. art. has: 2 figures, 35 formulas.

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

awm

Card 1/1 UDC: 621.436.621.515.5:531.3

ACC NR: AP6019895 (A) SOURCE CODE: UR/0145/65/000/012/0051/0056

AUTHOR: Krutov, V. I. (Doctor of technical sciences, Professor); Shatrov, V. I. (Graduate student)

ORG: MVTU imeni N. E. Bauman

TITLE: Experimental data on the transient processes of a diesel with turbine supercharging

SOURCE: IVUZ. Mashinostroyeniye, no. 12, 1965, 51-56

TOPIC TAGS: diesel engine, supercharged engine, gas turbine, engine crankshaft, strain gage, torque, hydraulic device / 1D6N diesel engine

ABSTRACT: The authors give the results of an experimental study of diesel engine operating conditions where the diesel engine is equipped with a gas turbine supercharger. The problems caused by introduction of the supercharger are discussed. One of these is the difference between the crankshaft speed of the engine and the speed of the turbine. Such a condition causes insufficient access of air for combustion. This is not true for mechanically connected engine and supercharger units. Transient processes of the engine and supercharger are experimentally studied in the 1D6N diesel engine with a TN-6 constant-pressure turbine compressor. The LE-4-53 loading unit used in the experiment was built by MAI. Standard measuring equipment is used which

UDC: 3221

ACC NR: AP6019895

fulfills the requirements of GOST 10448-63. Induction pickups p[illegible]ed inside the flywheel and compressor housings are used to register the rpm of the engine and the turbocompressor. The pickup signals are fed to an amplifier. Fuel measurement is recorded in a like manner. Strain gages are used for recording engine torque. These are placed on the cylindrical part of the input shaft of the hydraulic brake and connected according to a bridge circuit. A low-pressure pickup at the compressor output is used for measuring supercharging pressure. Engine control is set at maximum by setting the spring at its limit. Graphs are given for torque, rpm of the crankshaft and compressor turbine rotor, including supercharging pressure as a function of transient process time. The effect of individual factors on diesel operation are analyzed. The results show that increasing the load on gas turbine supercharging increases the duration of transient processes in the engine. Orig. art. has: 3 figures, 1 table, 1 formula.

SUB CODE: 13, 21/ SUBM DATE: 12Jul65/ ORIG REF: 003

Card 2/2

SVIRIDOV, Yu.B., kand.tekhn.nauk; SHATROV, Ye.B.; KORSI, Ye.K.

Stereorecording used in investigating fuel consumption processes in engines. Avt.prom. no.4:14-16 Ap '60. (MIRA 13:6)

1. Laboratoriya dvigateley AN SSSR.
(Automobiles--Engines)
(Motion pictures in industry)

SVIRIDOV, Yu.B.; SHATROV, Ye.V.

Application of high-speed stereoscopic cinematographic recording in the analysis of combustion processes. Usp. nauch.fot 9:210-212 '64.

(MIRA 18:11)

SHATROV, Yevgeniy Vasil'yevich; KOSTIN, V., red.; DANILINA, A., tekhn.red.

[Lenin's order] Zakaz Il'icha. Moskva, Gos.izd-vo polit. lit-ry, 1957. 23 p. (MIRA 11:2)
(Electrification)

S/196/61/000/008/016/026
E194/E155

11.7109

AUTHORS: Sviridov, Yu.B., and Shatrov, Ye.V.

TITLE: The ignition of atomised fuels

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.8, 1961, 7-8, abstract 8G78 (Sb. "3-e Vses. soveshchaniye po teorii goreniya" (Third All-Union Conference on the Theory of Combustion) Vol.2, M., 1960, 65-75)

TEXT: The work was carried out because recently there have been very contradictory views on the nature of the process of ignition of atomised fuels. The tests were carried out in a bomb using cinephotographic recording of flame development. A study was made of preliminary vaporisation of fuel, of luminosity of cold and hot flames, of ignition mechanism, of the relationships of change of ignition parameters depending upon the temperature, and of the influence of the initial conditions of the medium on the ignition processes. On the basis of the results of 1000 tests, graphs are given of the individual processes. The main conclusions are: 1) Until the flame is formed the process of fuel oxidation may

Card 1/2

X

The ignition of atomised fuels

S/196/61/000/008/016/026
E194/E155

develop according to one of two kinetic mechanisms - two- and single-stage. The two-stage mechanism is characterised by the initial introduction of oxygen into the fuel molecule, with subsequent development of a chain oxidation process. This process is improbable at high temperatures. The single-stage mechanism is characterised by preliminary thermal decomposition of the fuel molecules by their collision with molecules of the medium and subsequent oxidation of the disintegrated particles. This process is improbable at low temperatures. 2) A steady supply of oxygen is necessary during the multi-stage oxidation mechanism. 3) The high-temperature oxidation mechanism apparently requires an almost complete and immediate supply of oxygen. 4) Three types of ignition exist: kinetic two-stage ignition in a relatively uniform medium at low temperatures; diffusion single-stage ignition, typical of a non-uniform medium; and diffusion-kinetic gradual (low-temperature) ignition in a layered charge.

[Abstractor's note: Complete translation.]

Card 2/2

23965
S/113/60/000/004/002/007
D249/D301

11.7000

AUTHORS: Sviridov, Yu. B., Candidate of Technical Sciences, Shatrov, Ye.B. and Korsi, Ye.K.

TITLE: Stereoscopic recording of fuel combustion processes in engines

PERIODICAL: Avtomobil'naya promyshlennost', no. 4, 1960, 14-16

TEXT: The authors mention the method of filming the combustion processes in engines by using high speed and ultra high speed cameras permitting 500,000 and more frames in a second to be produced. Experiments carried out in 1957-1959 disclosed that still better results were obtained when studying combustion processes when stereoscopic filming of the flame was applied. In this filming each frame appears in the form of a stereoscopic pair (two images) obtained from two different points of view (Ref. 2: B.T. Ivanov, Stereokinotekhnika, izd-vo "Iskusstvo", 1956) and (Ref. 3: V. Pitch, Stereophotographie, Halle (Saale), Photokinoverlag). Experiments with stereoscopic filming were carried out in the

Card 1/3

Stereoscopic recording...

Laboratoriya dvigateley (Laboratory for Engines) of the AS USSR. Combustion processes were observed in a cylinder having a constant volume. The filming was done by an AEG camera permitting 16-80000 frames to be performed in a second. The recording was carried out through an optically transparent glass ЛК-5 (LK-5), mounted in the rear cylinder cover, on a perforated film 35 mm wide, having a sensitivity of 200-250 units. In order to receive a double image on the film, the camera lens (F : 2; f = 75 mm) was provided with a special prismatic stereoscopic attachement, having a detachable basis of 65 mm. The distance between the camera and the object (rear plane of the glass) was 400 mm. The combustion chamber depth was 120 mm. The frame size for each stereoscopic pair was 18 x 12 mm. A diagram is given, showing how the place of the ignition nucleus formation is determined. As a rule, flat photographing gives an erroneous image of the volume of the burned out charge. When looking at only one frame, it may seem that 50% of the charge is burned out, while inspecting both images concurrently it becomes evident that only 20% of the volume have been seized by flame. The ignition nucleus are

Card 2/3

Stereoscopic recording...

actually located in different planes in the combustion chamber. Demonstrations of stereoscopic films on the screen are carried out with a tenfold magnification. The spectator is provided with two analyzers (spectacles); one of them (the left hand analyzer) absorbs the rays polarized in the horizontal plane, while the other absorbs the rays that are polarized in the vertical plane. Inspection of these films has shown that the stereoscopic method provides a picture demonstrating combustion processes, indicating the places of ignition nucleus appearance, showing the shape of flame and the volumetric development of combustion. Stereoscopic recording permits research of fuel dispersion, formation of mixtures and hydrodynamics. For such research an apparatus is necessary which would permit photographing in passing light. For this purpose a combustion chamber with two transparent glasses can be used. (Ref. 5: I.I. Gershman, and M.N. Kukharev, "Avtomobil'naya i traktornaya promyshlennost'", no. 2, 1956); (Ref. 7: B.S. Stechkin,M.D. Anashev, Trudy laboratoriyi dvigateley, AN SSSR, vyp. III, 1957. There are 5 figures and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Laboratoriya dvigateley AN SSSR (Engine laboratory, AS USSR).

L 19357-63 EPF(c)/EWT(m)/BDS AFFTC/APGC Pr-4 MN
ACCESSION NR: AR3005024 S/0273/63/000/006/0033/0033

SOURCE: RZh. Dvigateli vnutrennego sgoraniya, Abs. 6.39.272

AUTHOR: Shatrov, Ye. V.

TITLE: Experimental study of the processes of atomized fuel combustion in a diesel bomb of constant volume

CITED SOURCE: Tr. Odessk. un-ta. Ser. fiz. n.v., 152, no. 8, 1962, 25-29

TRANSLATION: Studies were carried out which consisted of the study of the nature of atomized fuel combustion processes in various temperature zones. The resulting experimental material enabled the author to use indicator diagrams, chemical analyses of the combustion products, and motion pictures to establish the existence of three essentially distinct mechanisms of atomized liquid fuel combustion: kinetic combustion where the process is subject to the laws of flame propagation over a homogeneous medium, diffusion combustion characterized by the diffusive type of combustion, and intermediate (diffusivo-kinetic) where during ignition a great part of the charge is "infected" by chemically active products, over which the flame travels at great (sound) speed.

DATE ACQ: 01Jul63 SUB CODE: FL ENCL: 00

Card 1/1

LIVANOVA, O.V.; SHATROVA, S.G.

Concerning the heating-up of the solid rotor of a synchronous motor during its starting. Elektrichestvo no.2:56-58 F '62. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektroenergetiki.

(Electric motors, Synchronous)

L 46196-66 EWT(1) RO

ACC NR: AR6008637 SOURCE CODE: UR/0397/65/000/019/0044/0044

AUTHOR: Ashbel', S. I.; Khil', R. G.; Shafrova, S. P.

35
B

TITLE: Treatment of occupational lead poisoning with a Ca Na_2 EDTA aerosol

SOURCE: Ref. zh. Farmakologiya. Toksikologiya, Abs. 19. 54.338

REF SOURCE: Gigiyena truda i prof. zabolevaniya, no. 3, 1965, 24-28

TOPIC TAGS: industrial medicine, poison effect, lead, chemotherapy, aerosol

ABSTRACT: 60 workers engaged for 1 to 13 yrs in welding and straightening of automobile bodies using a lead solder and suffering from light or moderate cases of lead poisoning were treated in a clinic with aerosol inhalation of Ca Na_2 EDTA. For a period of 7 to 10 days patients received daily two aerosol inhalation treatments of 5 ml of a 10% Ca Na_2 EDTA solution; 100 ml of a 10% Ca Na_2 EDTA solution (7 to 10 g) were used for a course of treatment. A therapeutic effect expressed in the form of a reduction or disappearance of intoxication symptoms was found in all patients. Ca Na_2 EDTA was well tolerated by patients, was quickly drawn into the respiratory passages, was found to

Card 1/2 UDC: 615.92

L 40196-66

ACC NR: AR6008637

circulate for a prolonged period in the blood, and was excreted with urine. Under the influence of Ca Na_2 EDTA, an increase of lead excreted by the kidneys was observed indicating mobilization of lead deposits. Ca Na_2 EDTA is recommended for treatment of lead poisoning. S. K. [Translation of abstract].

SUB CODE: 06

ns

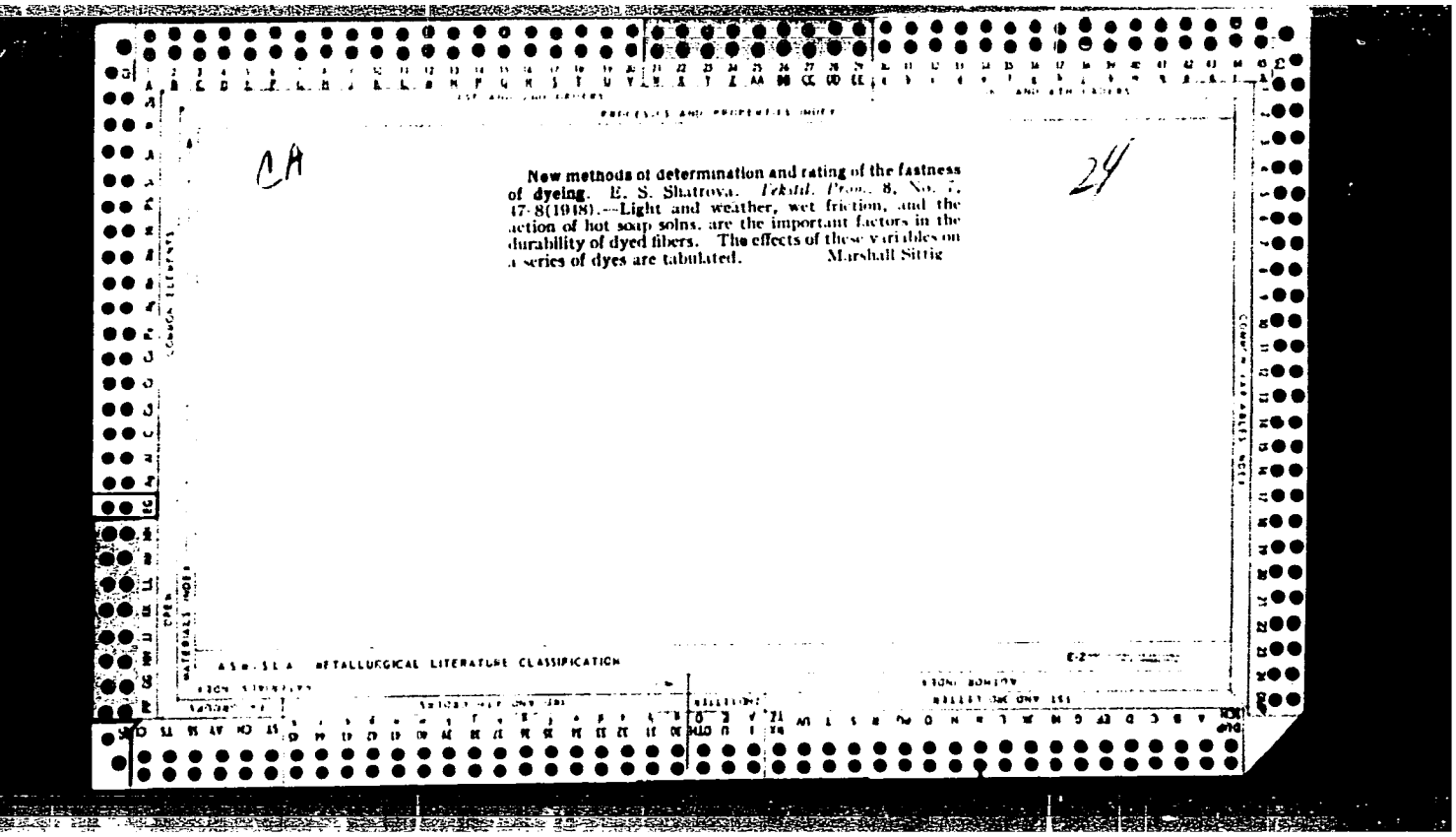
Card 2/2

MOLYAKOV, Dmitriy Stepanovich; SHATROVA, T., red.; TELEGINA, T., tekhn.red.

[Financing the industry of regional economic councils] Finansirovanie promyshlennosti sovnarkhozov. Moskva, Gosfinizdat, 1960. 86 p. (MIRA 13:11)
(Finance) (Russia--Industries)

ZHEVTYAK, Petr Naumovich; BASMANOV, V., otv.red.; SHATROVA, T., red.; LEBEDEV, A., tekhn.red.

[Financial planning in an industrial enterprise] Finansovoe planirovanie na promyshlennom predpriiatii. Moskva, Gosfinizdat, 1960. 133 p. (MIRA 13:7)
(Machinery industry--Finance)



CA

24

New methods of determination and rating of the fastness of dyeing. E. S. Shatrova. *Izkalid. Prom.* 8, No. 7, 47-8(1948).—Light and weather, wet friction, and the action of hot soap solns. are the important factors in the durability of dyed fibers. The effects of these variables on a series of dyes are tabulated. Marshall Sittig

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

POPOV, I.P., kandidat biologicheskikh nauk; RUBINSHTEYN, R.L., inzhener; SHATROVA, Ye.S., redaktor; GUROVA, O., tekhnicheskiy redaktor.

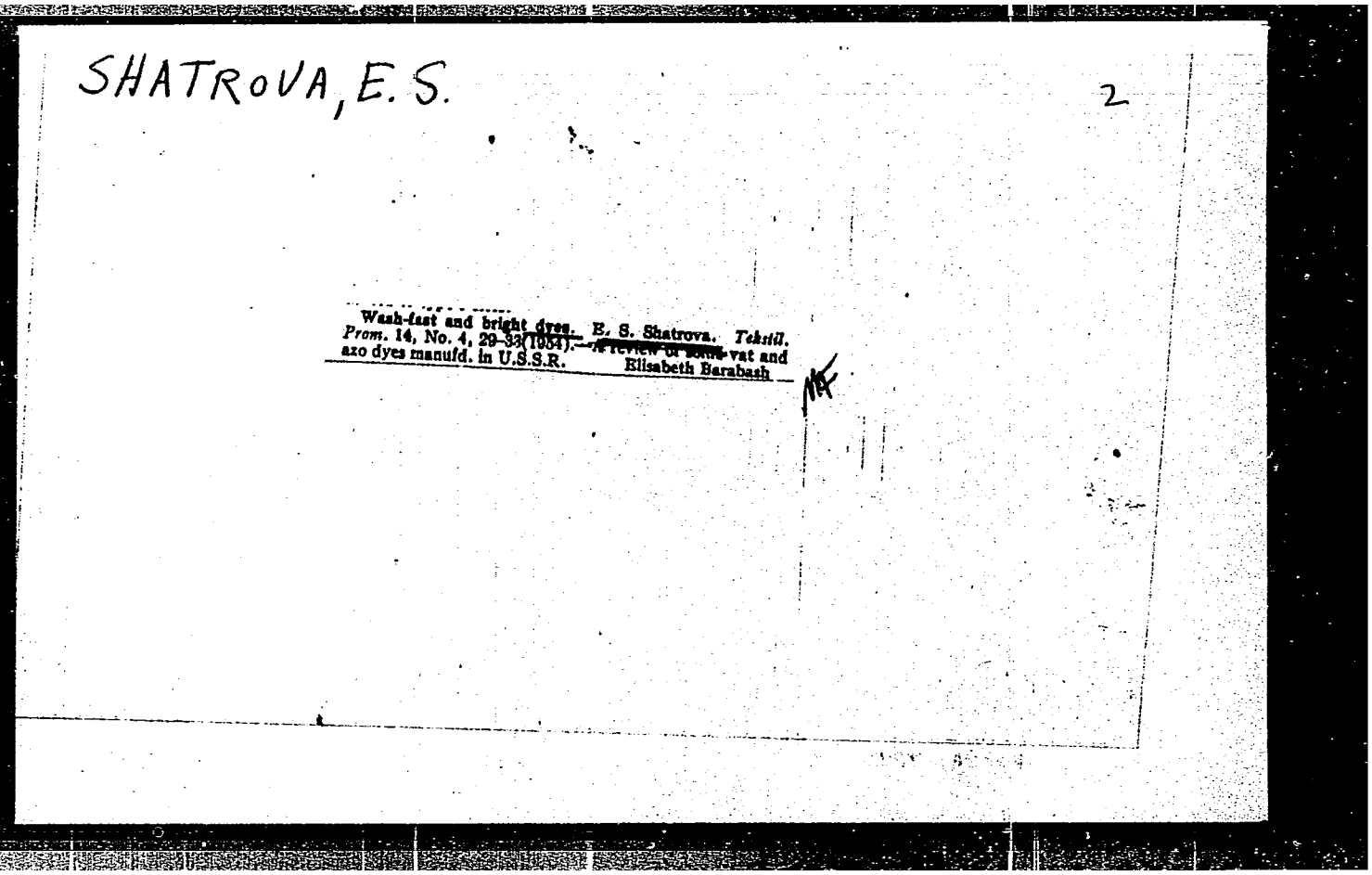
[Dyeing and redyeing] Okraska i perekraska odezhdy. Moskva, Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR, 1952. 84 p.
(Dyes and dyeing) (MLRA 8:1)

Shatkova, E. S.

2

Fastness of dyes to light and weather. F. I. Sadov and E. S. Shatkova. *Nauch. Issledovatel. Trudy Moskov. Tekstil. Inst.* 13, 32–46(1954); *Referat. Zhur., Fiz.* 1955, No. 12545.—An exposure app., constructed in the Moscow textile institute in 1941, consists of a metal cylinder 600 mm. in internal diam. and 1100 mm. high, provided with quartz-mercury lamps, a water jacket for controlling temp., and means for moistening and circulating the air inside the app. The app. gives results for fastness and for hues produced with certain dyes that differ from the results obtained on exposure to sunlight because the light from the quartz-mercury lamps is 30% ultraviolet, and that of sunlight only 1% ultraviolet. Tests made by exposure to sunlight give uniform results only under standardized conditions, and require 20–100 times as long as do tests in the app. described.

Marjorie Ketner



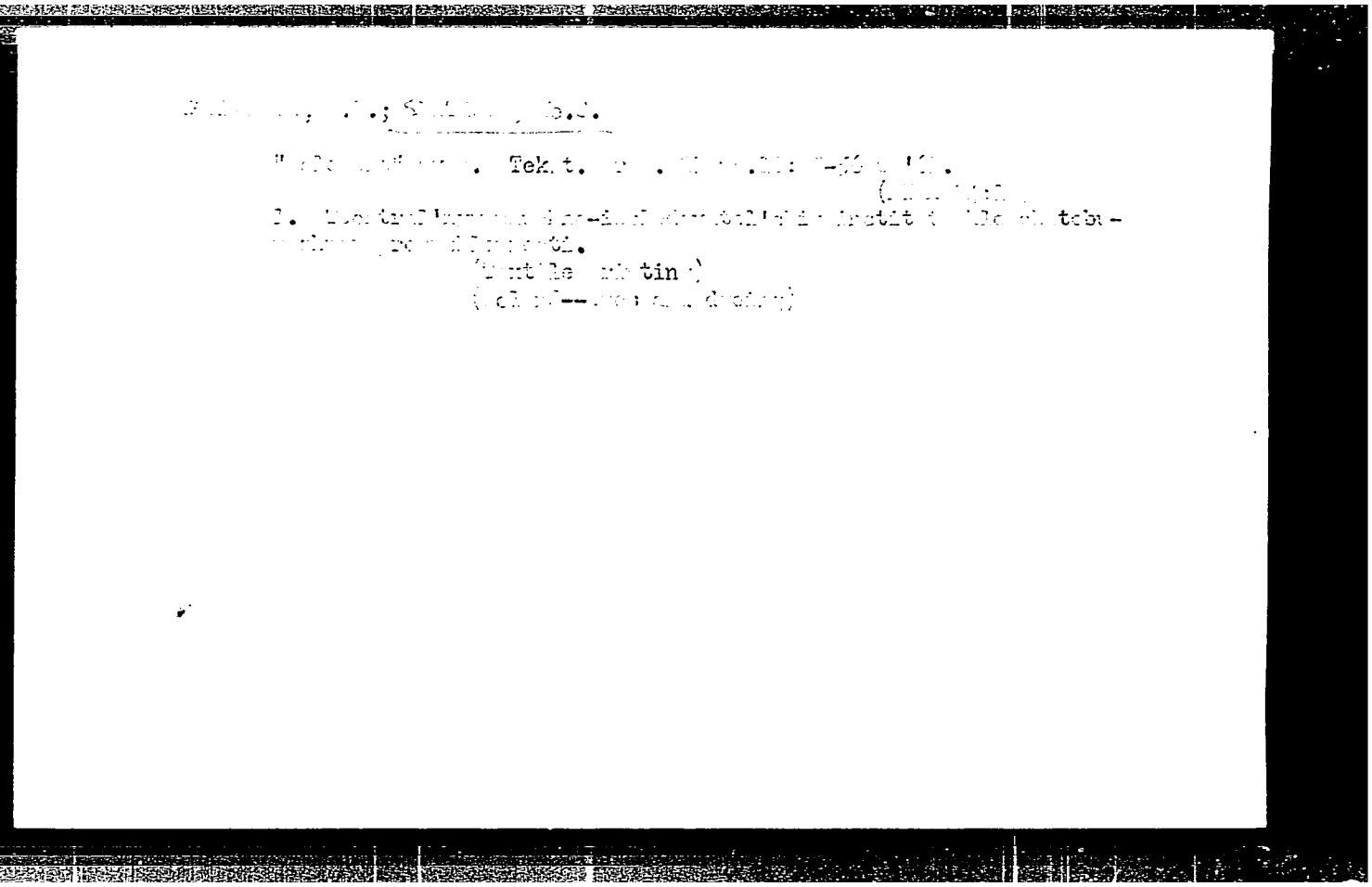
SHATROVA, E. S.

2

Wash-fast and bright dyes. E. S. Shatrova. *Tekstil. Prom.* 14, No. 4, 29-33(1954).—A review of some vat and azo dyes manufd. in U.S.S.R. Elisabeth Barabash

SOKOLOV, G.V., inzh.; LABUZOVA, Z.I.; GENKINA, M.L.; RAKHLINA, S.S., kand.tekhn. nauk; SHATROVA, Ye.S., kolorist 1-y kategorii; TALANINA, A.S., kolorist 1-y kategorii; TANVEL', A.Ya., kand.tekhn.nauk

"Processing of artificial fibers" Translation from the English by D.I.Venediktova, K.K.Lupandina. Book review by G.V.Sokolov and others. Tekst.prom. 19 no.2:71-73 F '59. (MIRA 12:5)
(United States--Textile fibers, Synthetic) (Technology--Translating)
(Venediktova, D.I.) (Lupandina, K.K.)



S/114/63/000/003/002/005
E191/E435

AUTHORS: Arkad'yev, B.A., Khlivnyak, G.G., Shatrovskaya, G.N., Engineers

TITLE: The solution of problems in nonstationary heat conduction with digital computer

PERIODICAL: Energomashinostroyeniye, no.3, 1963, 12-15

TEXT: The solutions of problems such as those arising from the equations of nonstationary heat conduction with the help of digital computers favors the method of "elementary balances", described by B.M.Kagan et al in their book (Resheniye inzhenernykh zadach na avtomaticheskikh tsifrovykh vychislitel'nykh mashinakh - The solution of engineering problems with automatic digital computers - Gosenergoizdat, 1958). The method permits the solution of the problem of transient heat conduction in homogeneous and non-homogeneous bodies with heat conduction coefficients and specific heats which depend on temperature and with any form of boundary conditions. The method is stated to possess a clearly expressed cyclic algorithm suitable for digital computers and is extended for use with more than one surrounding medium so as to include cooled designs. Some modifications are introduced to

Card 1/3

The solution of problems ...

increase the time interval without loss of the stability of the solution. The stability criterion is the progressive change of temperature at each computing point. This condition leads mathematically to a formula from which the time interval in each successive step of iteration is found from previous results. An example was computed with the help of the single address computer "Ural-1" with fixed decimal points which has a computing rate of 100 operations per second and an operative memory of 1024 bits. The low capacity memory imposed the following limitations: The body has no internal heat sources. The physical properties are linear functions of the temperature but independent of the coordinates. The boundary conditions are independent of time. The number of surrounding media does not exceed four. The shape of the body can be rendered by a system of equal cubic elements. Some problems of programming are discussed. The computation procedure was applied to the initial period of heating-up a turbine stator component. Symmetry considerations made it possible to compute an element which constitutes one twelfth of the complete component and so permitted the use of Cartesian coordinates. Under assumed heat transfer conditions the time

variation of temperature is illustrated in a graph giving a family of curves for a number of important points in the component. The loss of accuracy, compared with computations using a constant time interval, is shown to be small. The possibilities of improved computers are mentioned. There are 5 figures.

L 38783-66 EWT(1) WW

ACC NR: AP6024819 SOURCE CODE: UR/0096/66/000/008/0050/0052

54
B

AUTHOR: Arkad'yev, B. A. (Engineer); Shatrovskaya, G. N. (Engineer)

ORG: Kharkov turbine plant (Khar'kovskiy turbinnyy zavod)

TITLE: Calucaltion of natural convective heat transfer in turbine cavities using a digital computer

SOURCE: Teploenergetika, no. 8, 1966, 50-52

TOPIC TAGS: convective heat transfer, turbine, turbine rotor, turbine design, convection

ABSTRACT: A computer program based on finite difference equations was developed for calculating natural convection in turbine rotor cavities in which the convection is caused by centrifugal force and depends on the distance from the axis. As an example, convection was calculated of a cavity 1.23 m diameter with temperatures of 300 and 350C at the ends. The limitations of the method are discussed. Orig. art. has: 3 formulas. [PV]

SUB CODE: 13,20/ SUBM DATE: none/ ORIG REF: 006

Card 1/1

L 43004-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5000613 S/0021/64/000/011/1497/1503

AUTHOR: Hrytsan, D. M. (Gritsan, D. N.); Shatrovs'kyy, H. L. (Shatrovskiy, G. L.)

TITLE: Electrothermographic investigation of electrodeposition of cadmium

SOURCE: AN UkrRSR. Dopovidi, no. 11, 1964, 1497-1503

TOPIC TAGS: electrodeposition, cadmium electrodeposition, cathode, anode, temperature effect, secondary temperature effect, electrolysis, electrothermographic method

ABSTRACT: A new method of investigating electrode processes based on the thermographic principle is described. The principal circuit for measuring the temperature effects on the electrodes is shown in Fig. 1 of the Enclosure. The maximum local temperature effects on the cathode ΔT_{cm} and on the anode ΔT_{am} have been determined by this method in a $Cd/CdSO_4aq/Cd$ system in solutions of varied concentration during an electrolysis of 4 to 5 minutes. The empirical dependence of ΔT_{cm} and ΔT_{am} on the current density i and solution concentration c has been established with the aid of the electrothermograms and is formulated as follows:

Card 1/3

L 43004-65
ACCESSION NR: AP5000613

$$\Delta T_{cm} = 0.029(i - 0.28)c^{-0.44}$$

$$\Delta T_{am} = 0.029i^{1.33}c^{-0.40}$$

"Secondary" temperature effects on the electrodes during longer periods of electrolysis have been observed. The electrolysis time necessary for the appearance of the "secondary" effects depends on the solution concentration and the duration increases with decrease in solution concentration. The "secondary" effects are accompanied by changes on the electrode surfaces. The experimental results show that the electrothermographic method could be a valuable addition to existing methods for the investigation of electrode processes and that it can be used also to obtain the necessary data for calculating the heat balance of electrolytic cells. Orig. art. has: 2 formulas and 4 figures.

ASSOCIATION: Instytut Khimiyi Kharkivs'koho universytetu (Institute of Chemistry, Khar'kov University)

SUBMITTED: 27Nov63 ENCL: 01 SUB CODE: GC

NO REF SOV: 003 OTHER: 001

Card 2/3

L 43004-65
ACCESSION NR: AP5000613

ENCLOSURE: 01

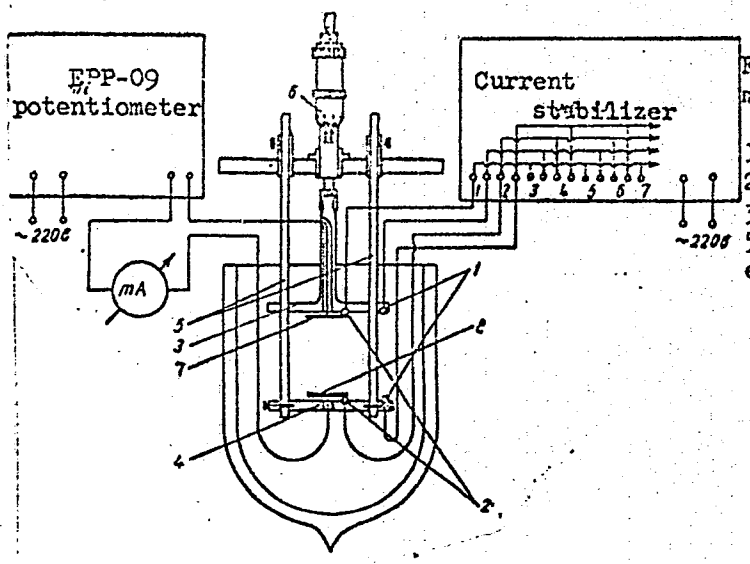


Fig. 1. Principal circuit for measuring the temperature effects

1 - "Cold" thermocouple junction; 2 - "hot" thermocouple junction; 3 - disk base; 4 - disk base; 5 - rod; 6 - micrometer; 7,8 - electrodes

Card 3/3

GAL[illegible], N.F.; [illegible], L.N.; PYATKOVSKIY, G.L.

Extension of the measuring range of a self-recording EPP-09 potentiometer. Zav. lab. 31 no.8:1027-1028 '65. (MIRA 18:9)

1. Khar'kovskiy gosudarstvennyy universitet imeni Gor'kogo.

GRITSAN, D.N.; SHAITROVSKIY, G.I.

Cell for the electrothermographic investigation of metal electrodeposition. Zhur.fiz.khim. 39 no.11:2840-2842 N '65. (MIRA 18:12)

1. Nauchno-issledovatel'skiy institut khimii Khar'kovskogo gosudarstvennogo universiteta imeni A.M.Gor'kogo.

SHATROVSKIY, L. I.

O minimal'nykh bazisakh natural'nogo ryada chisel. IAN, ser. matem., 4 (1940) 335-340.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.
Markushevich, A.I.
Rashevskiy, P.K.
Moscow-Leningrad, 1948

SHATROVSKIY, I.I.

K voprosu o posledovatel'nostyakk, Yavlyayushchikhsya bazisom natural'nogo ryada chisel. M., Uchen. zap. ped. in-ta im. Libknekhta. 7 (1940), 41-52.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.
Markushevich, A.I.
Rashevskiy, P.K.
Moscow-Leningrad, 1948

SHATROVSKIY, L. I.

K voprosu o dvukh teoremakh Erdesha dlya mnozhestv tselykh tochek p-mernogo prostranstva. I/N. ser. matem., 5 (1941), 411-422.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.
Markushevich, A.I.
Rashevskiy, P.K.
Moscow-Leningrad, 1948

SHATROVSKIY, L.I.

Novyye obobshcheniya teoremy Davenport'a Pillai o slozhenii klassov vychetov. DAN, 45 (1944), 335-337.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.
Markushevich, A.I.
Rashevskiy, P.K.
Moscow-Leningrad, 1948

SHATROVSKIY, I. I.

K teoreme Erdesha-Raykova. IAN, ser. matem., 9 (1945), 301-310.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.
Markushevich, A.I.
Rashevskiy, P.K.
Moscow-Leningrad, 1948

SHATROVSKIY, L.I.

Šatrovskiĭ, L. I. **Application of the method of Nešuler to the construction of tables for aerial gunnery.** Trav. Inst. Math. Stekloff 20, 109–112 (1947). (Russian)

The ideas of Nešuler [cf. the preceding review] are applied to the problem of condensing a ballistic table. A reduction to $\frac{1}{4}$ the size of an ordinary table of three independent variables is claimed. *D. H. Lehmer.*

Source: Mathematical Reviews, Vol 9 No. 8

40497

S/208/62/002/003/009/011
I040/I219

AUTHOR Shatrovskiy, L. I. (Moscow)

TITLE On a numerical method for solving a problem of optimal programming

PERIODICAL Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v 2, no. 3, 1962, 488–491

TEXT The problem is to find the m-dimensional real vector function $u(t)$ such that the functional $p(x)$ is minimized with the auxilliary condition that the functional $q(x)$ varying monotonically in (t', t'') has the value $q(x) = Q$ for some $t = T_Q \in (t', t'')$ The n-dimensional vector function x satisfies the equation $\dot{x} = f(t, x, u)$ with the initial condition $t = 0$, $x = x_0$. The method is suitable for fast digital computers and consists of the iterative process $u^{(i+1)}(t) = u^{(i)}(t) + \delta u^{(i)}(t)$ where $\delta u = KB'\lambda$, K is a diagonal matrix with non-positive elements, λ is the solution of $\dot{\lambda} = -A'\lambda$ and A, B are the matrices

$$A = \left\| \frac{\partial f_i}{\partial x_j} \right\|, \qquad B = \left\| \frac{\partial f_i}{\partial u_r} \right\|$$

The same iterative process can be used to verify the minimum condition The method can also be used when supplementary conditions are given of the form $\phi_i(t, x)\big|_{q=Q} \equiv \Phi_i$, $i = 1, \ldots, r$ and $\psi_j(t, x, u) \geq 0$, $j = 1, \ldots, s$ for the interval $(0, T_Q)$

SUBMITTED January 25, 1962

Card 1/1

SHATROVSKIY, L.I. (Moskva)

One numerical method for solving problems of optimal control.
Zhur.vych.mat.i mat.fiz. 2 no.3:488-491 My-Je '62. (MIRA 15:7)
(Programming (Electronic computers)) (Numerical computation)

KOZYREV, B.M.; YABLOKOV, Yu.V.; MATEVOSYAN, R.O.; IKRINA, M.A.;
IL'YASOV, A.V.; RYZHMANOV, Yu.M.; STASHKOV, L.I.; SHATRUKOV, L.F.

Electron paramagnetic resonance in substituted diphenylpicrylhydrazyls.
Opt. i spektr. 15 no.5:625-635 N '63. (MIRA 16:12)

ARBUZOV, B.A., akademik; NAUMOV, V.A.; SHATRUKOV, L.F.

Electron diffraction study of the structure of Δ^3-carene oxide molecules. Dokl. AN SSSR 163 no.2:355-358 Jl '65. (MIRA 18:7)

1. Institut organicheskoy khimii AN SSSR, Kazan'.

SHATS, A.S., inzh.; MYL'NIKOV, L.V., inzh.

Universal assembly beds used for section assembly and welding.
Sudostroenie 25 no.4:49-51 Ap '59. (MIRA 12:6)
(Ships--Welding)

SHATS, A.S.; BEREZOVSKIY, A.S.

Semiautomatic machine for centerless burnishing of parts for nickel plating. Mashinostroitel' no.1:7 Ja '60. (MIRA 13:4)

(Grinding machines)

SHATS, A.S., inzh.; BEREZOVSKIY, A.S.

Eccentric tail-stock clamp. Mashinostroitel' no.3:17 Mr '60. (MIRA 13:6)
(Lathes)

Minchin, Samariy Naumovich, and Shats, Adol'f Yevelevich

Izmeritel'nyy instrument i tekhnika izmereniy (Measuring Instruments and Measuring Technique) Moscow, Oborongiz, 1957. 198 p. 20,000 copies printed.

Reviewer: Kochenov, M.I.; Ed.: Beyzel'man, R.D., Engineer; Ed. of Publishing House: Bogomolova, M.F.; Tech. Ed.: Zudakin, I.M.; Managing Ed.: Sokolov, A.I.

PURPOSE: The book is intended to help teach workers and inspectors in machinebuilding plants, in individual and group training. It describes existing inspection instruments and devices, their design, the scope of their application, basic factors in selecting means and methods of measurement, and also rules for use and maintenance of inspecting instruments. The material presented is within the qualification criteria for workers of the 4 to the 7th grades.

Card 1/5

COVERAGE: The introduction gives a brief historical outline of the development of inspection methods and of their control. At present the verification and control of measures and measuring devices are handled by the Committee of Standards, Measures, and Measuring devices at the Council of USSR Ministers. There are 12 Soviet references.

TABLE OF CONTENTS:

SHATS, A.Ye., inzhener.

Some remarks concerning "Norms and technical specifications for planning automobile highways." Avt. dor. 20 no.5:30-31 My '57.
(Road construction--Standards) (MLRA 10:8)

SHATS, A.Ye., inzh.

Provide more precise specifications for gravel roadbeds in "Norms and technical specification in highway planning." Avt. dor. 22 no.7:28 Jl '59. (MIRA 12:9)
(Road construction)

LEN'KOV, Sergey Sergeyevich; ORLOV, Sergey Timofeyevich; BEKIN, S.S., inzh., retsenzent; SHATS, A.Ye., inzh., red.; BOGOMOLOVA, M.F., red. izd-va; ORESHKINA, V.I., tekhn. red.

[Patterns and three-dimensional rigging used in the manufacture of airplanes] Shablony i ob"emnaia osnastka v samoletostroenii. Moskva, Oborongiz, 1963. 399 p. (MIRA 16:5)

(Airplane industry)

SHATS, F. I.

"Influence of the temperature foctor on the purification nd virulence of variolar detritus," Zhurnal Mikrobiologiy. Nos 1/2, pp 131-135, 1942.

Form the Molotov Institute of Epidemiology and Microbiology A.M. Glebova-director, E.I. Karnaukhova - scientific consultant.

SO: Trans. by L. Lülich.

SHATS, ISAAK MARKOVICH

Vnutrizavodskii khozraschet: pod red. M. Kh. Zhebraka, Moskva, Gosplanizdat, 1947. 54 p.

Factory management.

DLC: TS155.S42

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

ABRAMSON, Yakov Petrovich; GRACHEVA, Nina Nikolayevna; SHATS, Iosif Samoylovich; ZHERMUNSKAYA, L.B., inzh., red.; SHILLING, V.A., red. izdva; GVIRTS, V.L., tekhn. red.

[Gas carbonitriding of steel parts with triaminoethanol] Gazovaia nitrotsementatsiia stal'nykh detalei trietanolaminom. Leningrad, 1961. 15 p. (Leningradskii Dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Metallovedenie i termicheskaia obrabotka, no.2) (MIRA 14:7)

(Cementation (Metallurgy))

RUBANOVICH, Yakov Grigor'yevich, inzh.; SHATS, Iosif Samoylovich, inzh.; ZHEMCHUZHNAYA, L.B., inzh., red.; FREGER, D.P., red. izd-va; BOL'SHAKOV, V.A., tekhn. red.

[Increasing the strength and wear resistance of machine parts; experience of the "Pneumatic" Factory in Leningrad] Povyshenie prochnosti i iznosostoikosti detalei mashin; opyt leningradskogo zavoda "Pnevmatika." Leningrad, 1962. 20 p. (Leningradskii Dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Metallovedenie i termicheskaia obrabotka, no.1). (MIRA 15:3)
(Machinery—Maintenance and repair)

SHATS, M.F.

Parasitic diseases of geese in the Sol'tsy District of Leningrad Province. Trudy Len.ob-va est 69 no.4:202-222 '47. (MLRA 9:3)

1. Laboratoriya zoologii bespozvonochnykh Leningradskogo gosudarstvennogo universiteta, zaveduyushchiy professor V.A. Dogel'.
(Sol'tsy District--Parasites) (Parasites--Geese)

SHATS, M. M.: Master Chem Sci (diss) -- "The distribution of uranium in meteorites". Leningrad, 1958. 15 pp (Radium Inst im V. G. Khlopin Acad Sci USSR), 150 copies (KL, no 2, 1959, 118)

PHASE I BOOK EXPLOITATION SOV/4277
SOV/57-5-98

Akademiya nauk SSSR, Komitet po meteoritam

Meteoritika; sbornik statey, vyp. 18 (Meteorites; Collection of Articles, No. 18) Moscow, AN SSSR, 1960. 1,200 copies printed.

Ed.: V.G. Fesenkov, Academician; Deputy Resp. Ed.: Ye.L. Krinov; Ed. of Publishing House: I.Ye. Rabkina; Tech. Ed.: A.P. Gusarova.

PURPOSE: This publication is intended for astrophysicists, astronomers, and geologists, particularly those interested in the study of meteorites.

COVERAGE: This collection of 26 articles on problems in meteoritics includes the Transactions of the Eighth Meteoritic Conference which took place in Moscow, June 3 - 5, 1958. An introductory article reviews recent progress in the field, particularly in the matter of determining the age of meteorites. Individual articles discuss the fall, physical and chemical properties, and age of meteorites. The danger presented by meteors to artificial earth satellites is discussed. V.G. Fesenkov describes the theory and methods computations for determining the distribution of ozone in the atmosphere during lunar eclipses. References accompany individual articles.

Card 4/5

KRYLOV, A.Ya.; SHATS, M.M.

Certain regularities in the migration of uranium in waters of northwestern U.S.S.R. Trudy Radiev.inst.AN SSSR. 8:262-273 '58. (MIRA 12:2)
(Uranium)

STARIK, I.Ye.; PETRZHAK, K.A.; SHATS, M.M.; SEMENYUSHKIN, I.N.; RAK, M.A.

Isotopic composition and abundance of uranium in meteorites.
Meteoritika no.16:126-130 '58. (MIRA 11:8)
(Meteorites) (Uranium)

3(1)

AUTHORS: Starik, I. Ye., Corresponding Member, Academy of Sciences, USSR, Shats, M. M., Sobotovich, E. V.

SOV/20-123-3-11/54

TITLE: On the Age of Meteorites (O vozraste meteoritov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 3, pp 424-426 (USSR)

ABSTRACT: The data on the content of uranium, lead and on the isotopic composition of lead in the meteorites permit a successful investigation of some cosmogonic problems, especially the determination of the age of the meteoric bodies and of the Earth. From the data on the amount of Pb^{207} and Pb^{206} in meteorites, C. Patterson found the value of $4.5.10^9$ years for their age. This value is now considered to be the most reliable one. The determination of meteorite age from the data on other lead-uranium isotopes is also of considerable interest. The results of some special investigations of the amount of uranium in meteorites are given in a table. The concentration of uranium in stony meteorites and in pallasite olivine amounts to 2.10^{-7} g/g, but in iron meteorites it is

Card 1/4

1.10^{-8} g/g. According to the authors' results, the content of uranium in the majority of the troilite, schreibersite, and silicate inclusions in iron meteorites is higher than their concentration in the iron-nickel mass of the meteorite. The content of uranium in the iron-nickel mass of the meteorites Sikhote-Alin' and Chinge is lower than $n.10^{-9}$g/g (n is not defined, it seems to be a number $1 \leq n < 10$). All the hitherto available stone meteorites have approximately the same lead content and the lead content of iron meteorites is by 1-2 orders higher than that of stony meteorites. A diagram gives the ratio Pb^{207}/Pb^{204} as a function of the ratio Pb^{206}/Pb^{204}. All the hitherto available data on meteorite lead (with the exception of Norton County (Norton Kaunty)) are on one straight line (isochrone) the inclination of which corresponds to an age of 4.45 ± 0.05 billion years. The anomalous isotopic composition of the meteorite Nuovo Laredo requires additional investigations. The second table gives the values for the age of stony meteorites which were deduced from the ratios Pb^{206}/U^{238}, Pb^{207}/U^{235}, and

Pb^{207}/Pb^{206} . For the chondrites Forest City (Forest Siti) and Modok anomalous high values ($> 20.10^9$ years) were found, which are probably due to too low values of the uranium content in these chondrites. The authors determined the contents of these elements and carried out a mass-isotopic analysis of the lead taken from the same meteorites. The lower values of the age, which were due to the ratios Pb^{207}/U^{235} and especially Pb^{206}/U^{238}, are within the error limits of the determination of U and Pb(± 30%). The above discussions lead to the following conclusion: for the investigated meteorites, the isotopic composition of lead does not display any noticeable anomalies and also the content of uranium and lead in them is approximately constant. The age of the meteorites deduced from these experimental data agrees with the modern hypotheses about their age. The authors thank the Komitet po meteoritam (Committee for meteorites) which put the samples at their disposal, and

also B. B. Piotrovskiy and S. I. Rudenko for their help. There are 1 figure, 2 tables, and 11 references, 3 of which are Soviet.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences, USSR)

SUBMITTED: July 26, 1958

STARIK, I.Ye.; SOBOTOVICH, E.V.; LOVTSYUS, G.P.; LOVTSYUS, A.V.; SHATS, M.M.

Determination of the lead content and of its isotope composition in iron meteorites. Radiokhimiia 1 no.5:596-602 '59.
(MIRA 13:2)

(Lead--Analysis) (Meteorites)

3(5) SOV/11-59-9-9/18

AUTHORS: Starik, I.Ye., Sobotovich, E.V. and Shats, M.M.

TITLE: On the Problem of the Age of Tektites

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, Nr 9, pp 90-91 (USSR)

ABSTRACT: The origin of tektites has not yet been determined. Some geologists suppose that the tektites are of cosmic origin. Their absolute age, determined by the K-Ar method by E.K. Gerling and M.L. Yashchenko, is between 1.7×10^7 and 7.3×10^6 years, that is considerably less than the absolute age of stone meteorites. The authors determined the age of a tektite by the lead method. Presuming that the tektite is of cosmic origin, the authors fixed its age between 4.7×10^9 and 3.7×10^9 years. On the other hand, presuming that it is of terrestrial origin and is a product of remelting of some sedimentary rocks, and taking the isotope composition of Tertiary or Quaternary

Card 1/2

SOV/11-59-9-3/18

On the Problem of the Age of Tektites

lead, the authors fixed the age of the tektite at 3 billion years, instead of a few million as was to be expected. Thus, say the authors, the substance from which tektites originated must be of cosmic origin, although further research is necessary. There is 1 Soviet and 1 English reference.

ASSOCIATION: Radiyevyy institut imeni V.G. Khlopina (The Radium Institute imeni V.G. Khlopin), Leningrad

SUBMITTED: 9 September 1958

Card 2/2

3(1)

AUTHORS: Starik, I. Ye., Corresponding Member, AS USSR, Sobotovich, E. V., Lovtsyus, G. P., Shats, M. M., Lovtsyus, A. V. SOV/20-128-4-14/65

TITLE: Isotopic Composition of Lead in Iron Meteorites

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 4, pp 688-690 USSR

ABSTRACT: C. Patterson et al. (Refs 1,3) found the same composition with respect to lead isotopes in 3 different meteorites, i.e. Pb^{204} 1; Pb^{206} 9.5; Pb^{207} 10.4; Pb^{208} 29.5. His data are in good accordance with the theoretically predicted isotopic composition of lead in iron meteorites. Several authors theoretically computed the isotopic composition of the original lead, extrapolating back into the past (4.5 billion years) the change in the isotopic composition of the lead of varying age found in ore. The values obtained in this way are close to those established experimentally by Patterson. The authors intended to carry out a close investigation of the problem mentioned in the title. They first examined the lead content of the Sikhote-Alin' and Chinge meteorites (I. Ye. Starik,

Card 1/4

E. V. Sobotovich, G. P. Lovtsyus, Ref 2). The lead content of these meteorites in the metallic phase is less by at least one order of magnitude than that published by Patterson for the Cañon Diavolo meteorite ($3.7.10^{-7}$ g/g). The isotopic composition of the troilite and of the metallic phase of the Sikhote-Alin' meteorite are entirely different from the Patterson data. Because of this discrepancy the authors analyzed the meteorites examined by Patterson. The meteorite samples were chemically separated and the lead was pyrochemically removed (E. V. Sobotovich, Ref 4). Table 1: degree of impurity of the meteorite caused by foreign lead. This impurity caused by foreign lead is only 10-24%. Assuming that iron meteorites contain original lead, the impurity by ordinary lead must be at least 1000% of its cosmic content. These experiments confirmed the results obtained on content and isotopic composition of the lead in the analyzed iron meteorites and they made possible to introduce a correction for the foreign-lead impurity. Table 2 contains data on the isotopic composition of the lead in 3 iron meteorites and the troilites contained in them. According to it the composition

of the Sikhote-Alin' and Hanbury meteorites is the usual and the isotopic composition of the lead in the ore is analoguous to an age of several hundreds of millions of years. The results obtained by the authors are factually valid for the lead contained in the iron meteorite and they cannot be explained by impurities caused by ordinary lead during the analysis. According to the results of the present paper the meteorites have no common genesis in spite of the generally accepted theory. Possibly some of them do not belong to our solar system or they were formed under conditions when lead originating from radioactive processes was already present. These meteorites therefore cannot be as old as was previously assumed. If these meteorites do not originate from our solar system, nothing precise can be said about them. If they come from our solar system they have developed 400-500 millions of years ago. The authors express their acknowledgements to the Komitet po meteoritam AN SSSR (Committee for Meteorites of the AS USSR) and the Estonskiy geologicheskiy institut (Estonian Geological Institute) for putting at their disposal the meteorite samples.

 There are 2 tables and 4 references, 2 of which are Soviet.

Isotopic Composition of Lead in Iron Meteorites SOV/20-128-4-14/65

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR)

SUBMITTED: July 6, 1959.

Card 4/4

STARIK, I.Ye.; SHATS, M.M.

New data on the determination of uranium content in meteorites.
Meteoritika no.18:83-87 '60. (MIRA 13:5)
(Meteorites--Analysis) (Uranium)

STARIK, I.Ye.; SOBOTOVICH, E.V.; SHATS, M.M.

Using the lead-isotope method in determining the age of meteorites. Meteoritika no.18:88-91 '60.
(MIRA 13:5)
(Meteorites--Age) (Lead--Isotopes)

S/020/60/134/003/006/020
B019/B060

AUTHORS: Starik, I. Ye., Corresponding Member of the AS USSR, Sobotovich, E. V., Lovtsyus, G. P., Shats, M. M., Lovtsyus, A. V.

TITLE: Lead and Its Isotopic Composition in Iron Meteorites

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 3, pp. 555 - 558

TEXT: By way of introduction the authors refer to their discovery (Ref. 1) that meteorites contain lead with various isotopic compositions. The present article deals with the investigation of all main groups of iron meteorites (octahedrites of various structure, hexahedrites, and ataxites). From two to three quantitative analyses were made on all of the 12 meteorites investigated, and the isotopic composition of lead was determined at the same time. The results tabulated in Table 1 show that in the majority of these meteorites the isotopic composition of lead corresponds to that of terrestrial lead. No intermediate isotopic composition of lead was discovered. Judging from their composition, the

Lead and Its Isotopic Composition in Iron Meteorites

S/020/60/134/003/006/020
B019/B060

12 meteorites can be classified into two groups. The first comprises four meteorites of the same isotopic composition of lead as was first ascertained by Patterson (Ref. 2) and later by the authors themselves. These meteorites are octahedrites of various structures and contain $1 - 2 \cdot 10^{-7}$ g Pb per gram. The second group comprises the remaining eight meteorites containing lead with an isotopic composition corresponding to terrestrial lead of various ages. All principal meteoritic groups are represented here. All hexahedrites and ataxites thus belong to that group which contains lead in terrestrial isotopic composition. In them, the lead concentration lies at the lower distribution limit of $2 - 4 \cdot 10^{-8}$ g Pb per gram. The same lead content was established for coarsely structured octahedrites. A lead content of $2 \cdot 10^{-7}$ g Pb per gram was found for medium-structured octahedrites. The first group did not exhibit any marked inhomogeneity in the lead distribution, while the inhomogeneous lead distribution in the second group accounted for difficulties encountered in the determination of the lead content. There are cases in which meteoritic surface zones contain more or less lead

Card 2/4

than the core. Closer studies are required to explain this. No relationship was established between the lead content and the isotopic composition on the one hand, and the type and structure of iron meteorites on the other. Reference is made to the one to two times larger lead content in troilite inclusions as compared with the content in the iron-nickel phase. Indications regarding the formation of iron meteorites were inferred from the existence of the two groups. The conclusion is drawn from the existence of two analogous groups in stony meteorites that the analogous groups originate from a parental body. The authors thank L. G. Kvash and A. A. Yavnel' for their valuable advice. They further thank the komitet po meteoritam AN SSSR (Committee on Meteorites of the AS USSR), the komitet po meteoritam AN BSSR (Committee on Meteorites of the AS BSSR), the Tartusskiy geologicheskiy muzey (Tartu Geological Museum), and the Leningradskiy gornyy muzey (Leningrad Mining Museum). There are 1 table and 5 references: 3 Soviet and 2 British.

Lead and Its Isotopic Composition in Iron Meteorites

S/020/60/134/003/006/020
B019/B060

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences USSR)

SUBMITTED: June 4, 1960

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Card 4/4

STARIK, I.Ye.; SOBOTOVICH, E.V.; LOVTSYUS, G.P.; SHATS, M.M.; LOVTSYUS, A.V.

Lead and its isotopic composition in iron meteorites. Dokl. AN SSSR 134 no.3:555-558 S '60. (MIRA 13:9)

1. Radiyevyy institut im. V.G. Khlopina Akademii nauk SSSR. 2. Chlen-korrespondent AN SSSR (for Starik).
(Lead--Isotopes) (Meteorites)

STARIK, I.Ye.; SOBOTOVICH, E.V.; LOVTSYUS, G.P.; SHATS, M.M.; LOVTSYUS, A.V.

Isotopic constitution of lead in iron meteorites. Meteoritika no.20: 103-113 '61. (MIRA 14:5)
(Meteorites) (Lead—Isotopes)

STARIK, I.Ye.; SOBOTOVICH, E.V.; SHATS, M.M.; LOVTSYUS, G.P.

Uranium and lead in tektites. Meteoritika no.20:204-207 '61. (MIRA 14:5)

(Tektite) (Lead) (Uranium)

S/534/62/000/022/001/002
I033/I240

AUTHORS: Starik, I.Ye., Sobotovich, E., Shats, M.M. and Crashenko, S.F.

TITLE: The origin of tektites

SOURCE: Akademiya nauk SSSR, Komitet po meteoritam. Meteoritika. no. 22. Moscow, 1962, 97-103

TEXT: The data on concentration of U and Pb, and the isotopic composition of the latter, for 7 samples of tektites, were treated mathematically in order to determine their age and possible origin. A few different methods show that the age of tektites is practically equal to zero. The isochrone equations calculated by the least squares method

Card 1/2

S/534/62/000/022/001/002
I033/I240

The origin of tektites

$$Pb^{206}/Pb^{204} = 19.397 - 0.00759\ U^{238}/Pb^{204}$$

$$Pb^{207}/Pb^{204} = 16.12 - 0.00343\ U^{238}/Pb^{204}$$

lead to this conclusion. The same conclusion was reached by another method in which the age is found from the lower intersection of correlated theoretical and experimental curves of Pb^{206}/U^{238} vs Pb^{207}/U^{235}. These results contradict the theory of formation of tektites from igneous or terrigneous sedimentary rocks. However they do not contradict either the possibility of lunar origin of the tektites or the Taylor-Cherry theory on their mixed origin. There are 4 figures and 1 table.

Card 2/2

STARIK, I.Ye.; VOROB'YEV, G.G.; SOBOTOVICH, E.V.; SHATS, M.M.; GRASHCHENKO, S.M.

Origin and age of tektites. Biul.Kom.po opr.abs.vozr.geol.form. no.5:26-34 '62. (MIRA 15:11)
(Tektite) (Lead--Isotopes)

STARIK, I.Ye.; LOVTSYUS, G.P.; SOBOTOVICH, E.V.; GRASHCHENKO, S.M.; SHATS, M.M.; LOVTSYUS, A.V.

Isotopic composition of lead in meteorites in connection with their origin. Biul.Kom.po opr.abs.vozr.geol.form. no.5:12-25 '62. (MIRA 15:11)

(Meteorites) (Lead--Isotopes)

STARIK, I.Ye.; SOBOTOVICH, E.V.; SHATS, M.M.; GRAZHCHENKO, S.M.

Problem of the origin of tektites. Meteoritika no.22:97-103 '62. (MIRA 15:8)

(Tektite)

S/007/63/000/003/001/003

AUTHOR: Starik, I. Ye., Sobotovich, E. V., Shats, M. M.

TITLE: On the problem of origin of meteorites and tectites

PERIODICAL: Geokhimiya, no. 3, 1963, 245-253

TEXT: Article considers experiments in determining the time of formation of various stages of meteoritic bodies by use of the isotope of lead content. Differences in amounts of lead isotopes detected in two groups of meteorites allowed construction of isochrones with coordinates of Pb^{207}/Pb^{204}, Pb^{206} Pb^{204}. The tangent of isochrone angle of inclination permitted estimation of the time required to consolidate the meteoritic body depending upon differentiation time of the silicate and metallic phases. Equations for the isochrones are: Group I (containing primary lead):

$$Pb^{207}/Pb^{204} = 3.32 + 0.75\ Pb^{206}/Pb^{204} \quad (a)$$

Group II: (containing more radioactive lead)

$$Pb^{207}/Pb^{204} = 9.31 + 0.36\ Pb^{206}/Pb^{204} \quad (b)$$

In spite of this, the considerable error of equation (a) and present state of

Card 1 of 2

On the problem of origin.... S/007/63/000/003/001/003

knowledge of the composition and structure of meteorites do not allow firmly establishing genetic connections between stone and iron meteorites.

Concluded that in spite of further studies showing the abundance of uranium, thorium, lead, and lead isotopes in tectites, their relatively young age does not contradict the cosmic or mixed theory of tectite origin.

Card 2 of 2

SOBOTOVICH, E.V.; GRASHCHENKO, S.M.; ALEKSANDRUK, V.M.; SHATS, M.M.

Determining the age of ancient rocks by the lead-isochronous and isotope-spectrum strontium methods. Izv. AN SSSR. Ser. geol. 28 no.10:3-14 O '63. (MIRA 16:11)

1. Radiyevyy institut imeni V.T. Khlopina, Leningrad.

SHATS, M.V., prof. (Perm', ul.Sovetskaya, d.83,kv.4)

Use of plaster mixed with streptomycin and penicillin for filling bone cavities after removing isolated tuberculous foci. Nov. khir. arkh. no.4:35-42 Jl-Ag '60. (MIRA 15:2)

1. Khirurgicheskoye otdeleniye (zav. - prof. M.V.Shats) Permskogo oblastnogo protivotuberkuleznogo dispansera (zav. - R.I.Emdina).
(BONES--TUBERCULOSIS) (STREPTOMYCIN)
(PENICILLIN)

ITSKHOKI, Yakov Semenovich; Prinimali uchastiye: SHATS, S.Ya.; GRIGORIN-RYABOV, V.V.; VIGLIN, S.I.; OVCHINNIKOV, [redacted], I.A.; ZABOLOTSKIY, N.G., red.; KORUZEV, N.N., tekhn.red.

[Pulse machines] Impul'snye ustroistva. Moskva, Izd-vo "Sovetskoe radio," 1959. 727 p. (MIRA 12:7)
(Pulse techniques (Electronics))

9.2586

AUTHORS: Mel'nikov, Yu.P., Shats, S.Ya., Members of the Society

TITLE: A millimicrosecond blocking oscillator with a small relaxation capacitor

PERIODICAL: Radiotekhnika, v. 15, no. 11, 1960, 34 - 38

TEXT: A small value of the relaxation capacitor C of the blocking oscillator results in a small value of the anode current and in a shorter duration of the top of pulses in the millimicrosec. region. In the present article, the authors show how for a given ratio of the total strays C_0 to the working (relaxation) capacitance C, for a given inductance L of the transformer and a given rate of increase of the triggering voltage V_g, it is possible to decrease the total length of the pulse down to the value 2 to 3 times greater than T_0 instead of 8 to 9 times as shown earlier by the authors (Ref. 1: Radiotekhnika, v. 15, no. 6, 1960) preserving at the same

Card 1/12

A millimicrosecond blocking.....

time its amplitude. Here $T_o = \frac{C_n}{S}$ is the time constant of the circuit, S being the working pulse slope of the tube. Considering the cct o Fig. 1

Fig.

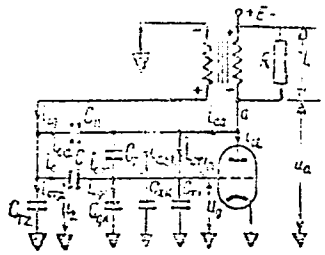

Fig. 1

Card 2/12

and assuming the leakage inductance to be zero [Abstractor's note: It does not affect the pulse forming action as shown in Ref. 1 (Op. cit.)_7 and writing the voltage equations

$$U_g = (E_a - U_a)n - U_c;\quad n = \frac{U_2}{U};\quad U_{2a} = U_2 - U_a;\quad U_{ga} = U_g - U_a, \quad (1) \qquad (1)$$

the expressions for capacitive anode and grid currents are obtained

$$i_{ca} = C_{ak}\frac{dU_a}{dt} + C_{T1}\frac{dU_a}{dt} - C_{12}\frac{dU_{2a}}{dt} - C_{ag}\frac{dU_{ga}}{dt} =$$

$$= [C_{ak} + C_{T1} + C_{12}(n-1) + C_{ag}(n-1)]\frac{dU_a}{dt} + C_{ag}\frac{dU_c}{dt};$$

$$i_{cg} = C_{T2}\frac{dU_2}{dt} + C_{12}\frac{dU_{2a}}{dt} + C_{gk}\frac{dU_g}{dt} + C_{ag}\frac{dU_{ga}}{dt} \quad \left[C_{T2} + C_{12}\left(1 + \frac{1}{n}\right) + \right.$$

$$\left. + C_{gk} + C_{ag}\left(1 + \frac{1}{n}\right)\right]\frac{dU_2}{dt} - (C_{gk} + C_{ag})\frac{dU_c}{dt}.$$

Card 3/12