

S/263/62/000/003/011/015
1004/1204

AUTHOR: Litvinov, A. M.

TITLE: Pulse temperature regulators

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. Izmeritel'naya tekhnika, no. 4, 1962, 43, abstract 32.3.270. "Tr. Konferentsii po avtomat. kontroly i metodam elektr. izmereniy, 1959". Novosibirsk, Sib. branch of the AS USSR, 1961, 315-322

TEXT: Some design formulas for pulse temperature regulators are given for the case when the measuring circuit is chosen as a differential one. To obtain a pulse load the following were chosen: 1) circuits with a direct, short-time connection of the measuring network to a direct current source through contacts, and 2) circuits employing the pulse charging current of a capacitor connected to a direct current source. As an unbalance indicator electromagnetic elements may be employed, whose identical windings are connected to the two arms of the differential circuit and create oppositely directed magnetic fluxes. In the simplest regulator circuits, the windings of the polarized relays (of the type ПП (RP) and ППС (RPS)) may be used. The design procedure for optimal parameters is given for the circuit (1) with a differential input containing amplifying and matching stages, in cases when the duration of the pulse greatly exceeds the time constant of the transients (the problem is reduced to the design of a circuit for d.c. operation). Practical schemes of pulse regulators with a differential measuring

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Pulse temperature regulators...

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circuit are described. In the first one, a self-opening thermal relay was used as a generator of pulses, employing a thermo-bimetal with magnetic acceleration. The heating-up time of the bimetal should be reduced to a minimum by increasing its cooling down time. This enables reduction of the supply voltage's influence upon the generator's frequency. In circuits of type (2), which are preferable in case of higher d.c. voltages, an ordinary relaxation generator consisting of an RC-network and a cold-cathode thyatron may be employed.

[Abstracter's note: Complete translation.]

Card 2/2

BLOKH, Grigoriy Semenovich; LITVINOV, Aleksandr Nikolayevich

[Asbestos cement materials and elements and their operational qualities] Asbestotsementnye materialy i konstruktsii i ikh ekspluatatsionnye kachestva. Moskva, Stroiizdat, 1964. 146 p. (MIRA 18:3)

LITVINOV, A.N. (g. Slayyansk); KHOMYAKOV, M.V.

Thermal indicators of the heat of contacts. *Energetik* 5 no. 4:37-39
Ap '57. (MIRA 10:6)

(Thermometry)

BLOKH, G.S., kand.tekhn.nauk; EL'KINSON, R.Z., kand.tekhn.nauk;
LITVINOV, A.N., inzh.

The service of corrugated asbestos-cement sheets in the lining
of the draw-off towers of cooling towers. Trudy NIIAsbesttsementa
no.13:79-87 '62. (MIRA 15:12)
(Asbestos cement) (Cooling towers)

BLOKH, G.S., kand.tekhn.nauk; LITVINOV, A.N., inzh.

The durability of "VO" corrugated asbestos-cement sheets of ordinary shape in roofs of public buildings. Trudy NIIsbestsementa no.13:3-28 '62. (MIRA 15:12)

(Roofing, Asbestos-cement)

LITVINOV, A.P. (Leningrad)

Equivalent structural representation of digital automatic control systems. Izv. AN SSSR. Otd. tekhn. nauk. Tekhn. kib. no.1:190-198 Ja-F '63. (MIRA 16:7)

(Automatic control) (Electric computers)

LITVINOV., A. P. : ZIL'BERDRUT, V.D.

Alloys

Replacement of stannous bronze with antifrictional alloys. A. P. Litvinov. V. D. Zil'berdrut. Vest. mash. 31, No. 10, 1951.

9. Monthly List of Russian Accessions, Library of Congress, September, 1952, ~~1953~~ Unclassified.

LITVINOV, A.P.

Taking lagging into consideration in the synthesis of an automatic system with a digital control computer. Izv.vys.ucheb.zav.; prib. 6 no.3:26-35 '63. (MIRA 16:9)

1. Leningradskaya krasnoznamennaya voyenno-vozdushnaya inzhenernaya akademiya imeni A.F. Mozhayskogo.

FEDOROV, Stepan Mikhaylovich; LITVINOV, Anatoliy Pavlovich;
STRAKHOV, V.P., red.

[Automatic systems with digital control computers; theory
and design] Avtomaticheskie sistemy s tsifrovymi uprav-
liaushchimi mashinami; teoriia i proektirovanie. Moskva,
Energiia, 1965. 222 p. (MIRA 18:8)

L 13111-63

BDS/EWT(d)/FCC(w)

APGC/ASD/ESD-3

Pg-4/Pk-4/Po-4/

Pq-4 IJP(c)/GG

S/146/63/006/002/005/010

73
72

AUTHOR: Litvinov, A. P.

TITLE: Synthesis of an automatic system employing a digital computer

PERIODICAL: Izv. Vuz., Priborostroyeniye, v. VI, no. 2, 1963, 37-46

TEXT: For an automatic system with a transfer function of the continuous part $W_c(p) = K/p$, in which a digital computer performs the function of a comparator,

it is shown that in analyzing the accuracy of the system under steady-state conditions the quantization with respect to time, introduced by the computer, can be neglected. It is established that the output of the system is completely determined by its values at points $t = nT_0$ on the time axis. An expression is obtained relating the oscillation index and the overshoot for unit stepwise action. Finally, the author investigates the dependence between the maximum permissible readout period for the computer, the stability margin of the closed system (estimated from the overshoot or the oscillation index), and the steady-state error in reproducing a linearly variable input signal. There are seven figures

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and 21 equations.

LITVINOV, B.A.
SUDAKOV, S.G.; ALEKSAIDROV, T.P.; BAGROV, M.A.; BULANOV, A.I.; KAMENSKAYA,
M.V.; KUZ'MIN, B.S.; *LITVINOV, B.A.*; SINYAGINA, M.I.; TIMOFEYEV, A.A.;
KMTIN, I.I.; pri uchastii Sinyaginoy, V.I.; BULANOV, A.I., red.;
ROMANOVA, V.V., tekhn.red.

[Instructions for first, second, third and fourth class leveling]
Instruktsiia po nivelirovaniu I, II, III i IV klassov. Izd. 2-oe,
ispr. i dop. Moskva, Izd-vo geodez. lit-ry, 1957. 106 p.
(MIRA 11:4)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i
kartografii.
(Leveling)

LITVINOV, B.A., kandidat tekhnicheskikh nauk.

Leveling of traverse nets. Geod.1 kart. no.2:18-24 P '57.
(MLRA 10:5)

(Leveling) (Traverses (Surveying))

LITVINOV, B.A., kandidat tekhnicheskikh nauk.

On equations for traversing networks, Geod. i kart. no. 5:8-12 My '57.
(Triangulation) (MLBA 10:6)

SUDAKOV, S.G.; ALEKSANDROV, T.F.; BAGROV, M.A.; BULANOV, A.I.; KAMENSKAYA, M.V.; KUZ'MIN, B.S.; LITVINOV, B.A.; SINYAGINA, M.I.; TIMOFEYEV, A.A.; ENTIN, I.I.. Primala uchastiye SINYAGINA, V.I.. ROMANOVA, V.V., tekhn.red.

[Instructions for first-, second-, third-, and fourth-order leveling]
Instruktaiia po nivelirovaniu I, II, III i IV klassov. Izd.3, ispr.
i dop. Moskva, Izd-vo geod.lit-ry, 1959. 111 p. (MIRA 13:3)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodesii i karto-
grafii.

(Leveling--Handbooks, manuals, etc.)

LEONTOVICH, Vladimir Grigor'yevich, prof.; LITVINOV, B.A., kand.tekhn.nauk,
red.; VASIL'YEVA, V.I., red.isd-va; ROMANOVA, V.V., tekhn.red.

[Leveling in engineering work] Nivelirovanie pri inzhenernykh
rabotakh. Moskva, Isd-vo geodez. lit-ry, 1959. 383 p.
(Leveling) (MIRA 12:7)

3(4)

SOV/154-59-4-1/17

AUTHOR:

Litvinov, B. A., Candidate of Technical Sciences, Docent

TITLE:

On the Investigation of Short-period Errors in the Diameters of Angle Measurement Circles (Ob issledovanii korotkoperiodicheskikh oshibok diametrov uglomernykh krugov)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aerofotos"yemka, 1959, Nr 4, pp 3 - 15 (USSR)

ABSTRACT:

The instructions laid down for the triangulation of the first, 2nd, 3rd, and fourth orders of 1955 provide that in all instruments used for the measurement of angles in the points of the first and second orders the total and short-period errors in the diameters of angle measurement be investigated. The investigation of short-period errors ordered in annex 16 of this instruction is carried out and displayed here so that the values obtained in this way, closely approach the admissible value. Therefore the methods recommended in this instruction do not guarantee the necessary accuracy. The author presents a method for an increase of accuracy in the determination of short-period errors. For this purpose additional measurements are made. Apart from the measurement of intervals

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between two adjacent lines, intervals of a double, threefold, fourfold etc spacing are measured with the same micrometer. For the sake of greater efficiency the evaluation of these measurements is carried out according to the method of the least squares; in which case for each measured interval an error equation of the (11) type formula, or (11') type formula is established. Formula (11') only changes with a change of the number of intervals and thus the solution of the problem holds for all instruments of the same type. The equation is solved and coefficients are obtained which are used for the determination of δ corrections. The author has made these calculations and has compiled tables for these coefficients which are mentioned in the annex. The process of calculation and the use of these tables is pointed out. This method may also be used for the investigation of errors of any circular or linear scales. There are 8 tables.

ASSOCIATION: Voenno-inzhenernaya akademiya im. V. V. Kuybysheva (Military Engineering Academy imeni V. V. Kuybyshev)

SUBMITTED: March 22, 1958
Card 2/2

AUTHOR: Litvinov, B. A., Candidate of Technical Sciences S/006/60/000/03/001/019
B007/B123

TITLE: On the Development of Federal [✓]Geodetic Nets of the Second and Third Order by Means of the Traverse Method

PERIODICAL: Geodeziya i kartografiya, 1960, Nr 3, pp 3 - 10 (USSR)

TEXT: In connection with the use of optical range finders it is advisable to apply in addition to the triangulation method also the traverse method for the development of geodetic nets. Calculations by S. G. Sudakov (Ref 1, footnote on p 3) and I. I. Entin (Ref 2, footnote on p 3) show that the same accuracy is achieved by either method, whereas the traverse method is more economical in some areas. There it proves to be more suitable to build up a traverse net consisting of quadrangles rather than triangles. The weakness of this method lies in the determination of the bearings. Calculations by I. V. Zubritskiy (Ref 3, footnote on p 3), A. I. Durnev and P. S. Zakatov (Ref 4, footnote on p 4), and K. L. Provorov (Ref 5, footnote on p 4), however, show that the resulting inaccuracies are negligible. Preliminary calculations showed that it is most suitable to build up polygon nets of the second order in the form of traverse lines 40 km apart from each other that are nearly parallel to the lines of the traverse net of the first order. Series of quadrangular second order

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Second and Third Order by Means of the Traverse
Method

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polygons are thus formed within the traverse net of the first order (Fig 1). The second order polygons are then filled with traverses of the third order. Based on the experience gained by using optical range finders of the type SVV-1,²⁸ it is suitable to assume the length of the second order traverse to be 10 km. (L. M. Avdeyev, V. A. Velichko, and K. A. Laping, Ref 6, footnote on p 5). For testing such a procedure a traverse net of the second order was built up within a first order polygon in the forest-steppe zone of the USSR (Fig 3). For this purpose maps of greatest scales were used. Based on this project a model was made. The net was adjusted three times in the following way: 1) according to the method of conditional equations with additional unknowns (Ref 7, footnote on p 6, B. A. Litvinov), 2) according to the closure method which is described here in detail, and 3) according to the approximation method usually applied in the adjustment of transit traverses. The results obtained showed that in this case the same degree of accuracy is attained as by using a triangulation net of the second order, and that this scheme for building up a net of the third order guarantees a sufficiently high precision. It is pointed out that in some cases it is more advisable to build up the traverse nets of the second order in the form of triangles or even pentagons. The data of tables 1 and 2 show



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that the results obtained by adjustment according to the method of least squares and to the closure method are practically equally precise. The steps necessary for adjustment according to the closure method are mentioned. This method is inaccurate because, after obtaining the coordinates at junctions, the single traverses are not adjusted, but only their orientation and scale are changed. As may be seen from tables 1 and 2, this leads, however, to no noticeable distortions. The approximation method, however, leads to noticeable distortions as may be seen from these tables. For the closure method the adjustment computations were programmed on an electronic computer of the type "Strela". Thus it is possible to adjust a traverse net of the second order within a polygon of the first order of 250 by 250 km. P. A. Gaydayev and B. M. Klenitskiy are mentioned (Ref 10, footnote on p 10), as well as D. S. Shein (Ref 9, footnote on p 8). There are 3 figures, 3 tables, and 10 Soviet references.

Card 3/3

LITVINOV, B.A., kand.tekhn.nauk

Adjustment of polygonometric networks by the method of conditional
equations with unknowns. Geod. i kart. no. 11:9-12 H '60.
(MIRA 13:12)

(Traverses (Surveying))

POLEVOY, Vyacheslav Alekseyevich; LOZINSKAYA, A.M., kand. tekhn. nauk,
retsenzent; LAPING, K.A., kand. tekhn. nauk, retsenzent; LITVINOV,
B.A., kand. tekhn. nauk, dotsent, red.; ZUBAKOV, A.G., red.izd-va;
VORONOVA, V.V., tekhn. red.

[Fundamentals of the mathematical processing of the results of
radiogeodetic measurements] Osnovy matematicheskoi obrabotki rezul'-
tatsv radiogeodezichskikh izmerenii. Moskva, Izd-vo geodez. lit-ry,
1961. 205 p. (MIRA 14:11)

(Radar in surveying)

LITVINOV, B.A.

Errors of polygonometric networks related to the construction
system. Geod. 1 kart. no.2:5-13 F '61. (MIRA 14:9)
(Traverses (Surveying))

SUDAKOV, S.G.; ALEKSANDROV, T.F.; BULANOV, A.I.; DURNEV, A.I.;
YELISEYEV, S.V.; ZAKATOV, P.S.; IZOTOV, A.A.; KARLOV, G.M.;
KUZ'MIN, B.S.; KUKUSHKIN, A.D.; KOLUPAYEV, A.P.; KUZLOVA, Ye.A.;
LARIN, B.A.; LARIN, D.A.; LARIN, B.A.; LITVINOV, B.A.; MAZAYEV,
A.V.; PELLINEN, L.P.; PETROV, A.I.; SOLOV'YEV, A.I.; TCMILIN, A.F.;
URALOV, S.S.; USPENSKIY, M.S.; FOMIN, M.P.; SHISHKIN, V.N.; SHCHEGLOV,
A.P.; SUDAKOV, S.G., otv. red.; KOMARKOVA, L.M., red. izd-va; SUNGUROV,
V.S., tekhn. red.

[Instruction concerning the building-up of a state geodetic network
in the U.S.S.R.] Instruktsiia o postroenii gosudarstvennoi geodezi-
cheskoi seti Soiuza SSR; obiazatel'na dlia vseh vedomstv i uch-
rezhdenii, proizvodiaschikh gosudarstvennye geodezicheskie seti.
Moskva, Izd-vo geodez. lit-ry, 1961. 459 p. (MIRA 15:6)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i karto-
grafii.

(Geodesy)

LITVINOV, Boris Alekseyevich; SUDAKOV, S.G., red.; KHROMCHENKO, F.I.,
red. izd-va; ROMANOVA, V.V., tekhn. red.

[Basic problems in constructing and adjusting traverse nets]
Osnovnye voprosy postroeniia i uravnivaniia poligonometriche-
skikh setei. Moskva, Geodezizdat, 1962. 227 p. (MIRA 15:12)
(Traverses (Surveying))

SUDAKOV, S.G.; ALEKSANDROV, T.F.; BAGROV, M.A.; BULANOV, A.I.;
KAMENSKAYA, M.V.; KUZ'MIN, B.S.; LITVINOV, B.A.; SINYAGINA,
M.I.; TIMOFEYEV, A.A.; ENTIN, I.I. ~~Prinimat' uchastiye~~
SINYAGINA, V.I.; KOMAR'KOVA, L.M., red.izd-va; ROMANOVA,
V.V., tekhn. red.

[Instructions for 1st, 2d, 3d, and 4th-class leveling] In-
struktsiia po nivelirovaniu I, II, III, i IV klassov. 4 izd.
dop. i ispr. Moskva, Gosgeoltekhizdat, 1963. 110 p.

(MIRA 16:6)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodesii i
kartografii.

(Leveling)

STARODUBOV, Vitaliy Leont'yevich; SUNDAKOV, Yakov Arnol'dovich;
LITVINOV, B.A., retsenzent; LEVCHUK, G.P., red.;
KHROMCHENKO, F.I., red.izd-wa; ROMANOVA, V.V., tekhn.red.

[Short-base parallactic traverse surveying] Korotkobazisnaia
parallakticheskaiia poligonometriia. Moskva, Gosgeoltekhiz-
dat, 1963. 307 p. (MIRA 16:8)
(Traverses (Surveying))

BURMISTROV, Georgiy Alekseyevich; KEMNITS, Yu.V., retsenzent; LITVINOV, B.A.,
retsenzent; GORDEYEV, A.V., red.; SHURYGINA, A.I., red. izd-va;
ROMANOVA, V.V., tekhn. red.

[Principles of the method of least squares] Osnovy sposoba
naimen'shikh kvadratov. Moskva, Gosgeoltekhizdat, 1963.
391 p. (MIRA 16:6)

(Least squares)

LITVINOV, B.A., doktor tekhn. nauk

Leveling of free traverse networks. Izv. vys. ucheb. zav.; geod.
1 serof. no.685-14 '63 (MIRA 1787)

LITVINOV, B.A., doktor tekhn. nauk; IPATOV, I.I., kand. tekhn. nauk

Adjusting bearing angles in a traverse-triangulation network.
Izv. vys. ucheb. zav.; geod. i aerof. no.2:3-14 '64.
(MIRA 17:9)

LITVINOV, B.A., doktor tekhn. nauk

More about the distribution of errors in traverse nets. Izv. vys.
ucheb. zav.; geod. i aerof. no.5:119-121 '64. (MIRA 18:5)

FILONENKO, Aleksey Stepanovich, prof. [deceased]; SHCHIPITSYN,
Nikolay Grigor'yevich, dots.; LITVINOV, B.A., prof., red.;

[Laboratory work in surveying; study of precision survey-
ing instruments] Praktikum po vysshei geodezii; issledova-
nie vysokotekhnicheskikh geodezicheskikh instrumentov. Moskva,
Nedra, 1965. 199 p. (MIRA 18:8)

L 5071-66 EWT(m)/EWP(t)/EWP(b)/EWA(h) IJP(c) JD/DM
 ACC NR: AP5022636 UR/0089/65/019/002/0176/0177
 621.039.573

33
B

AUTHOR: Kiknadze, G. I.; Gambaryan, V. G.; Litvinov, H. I.;
Lyudvigov, R. B.; Razmadze, Z. G.; Feldman, L. I.; Chanturiya, V. M.

TITLE: Indium-gallium radiation loop¹⁹ for pool-type reactors

SOURCE: Atomnaya energiya, v. 19, no. 2, 1965, 176-177

TOPIC TAGS: nuclear research reactor, gamma radiation

ABSTRACT: An abbreviated description of a special indium-gallium loop used in the IRT-2000 research reactor is given. The reactor is operated by the Institute of Physics of the Gruzinskaya SSR Academy of Sciences. The loop does not require a special biological shielding and can be easily manipulated and adjusted to other pool-type reactors. The changes in gamma dose rates are obtained by a translational displacement of the loop frame. The radioactive In¹¹⁶ nuclei are generated by leakage neutrons. A radioactivity equivalent to 16 g of radium can be created at a 1000 kw capacity. Thus, a gamma dose rate of about

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ACC NR: AP5022636

0.85 x 10⁶ roentgen per hour can be produced in a 10.5 liter irradiated volume. By experimenting with a 5000-kw reactor of IRT-type, the authors proved that it is possible to obtain a source of gamma radiations equivalent to those obtained from 1 x 10⁶ to 1.5 x 10⁶ grams of radium. The immersion of the loop assembly in the reactor tank is shown in a photo.

ASSOCIATION: none

SUBMITTED: 14Apr65

ENCL: 00

SUB CODE: NP

NO REF SOV: 000

OTHER: 000

Card 2/2 *kd*

LITVINOV, B.M., kand. biolog. nauk; SAPALEV, G.B.

Controlling the codling moth on the "Ukrainka" State Farm.
Zashch. rast. ot vred. i bol. 7 no.12:8 D '62.
(MIRA 16:7)

1. Agronom po zashchite rasteniy sovkhoza "Ukrainka" Khar'-
kovskaya obl. (for Sapalev).
(Codling moth--Extermination)

MOSYAGINA, **Yelena Nikiforovna**, kand. med. nauk., starshiy nauchnyy
sotrudnik; **KLEYMENOV, Vladimir Vasil'yevich**; **VOL'VICH, Anatoliy**
Grigor'yevich, mladsh'y nauchnyy sotrudnik; **LITVINOV, Boris**
Nikolayevich, tehnik

Use of electronic analog computers for studying the dynamics of
the changes of the level of erythrocytes in a body.
Izv. vys. ucheb. zav.; elektromekh. 4 no.4:62-70 '61.

(MIR. 14:7)

1. Institut pediatrii AMN SSSR (for Mosyagina). 2. Nachal'nik
laboratorii vychislitel'nykh mashin Novocherkasskogo nauchno-
issledovatel'skogo instituta elektrovozostroyeniya (for Kleymenov).
3. Novocherkasskiy nauchno-issledovatel'skiy institut
elektrovozostroyeniya (for Vol'vich). 4. Laboratoriya
schetnykh mashin Novocherkasskogo politekhnicheskog instituta
(for Litvinov).

(MEDICAL ELECTRONICS)

(ELECTRONIC ANALOG COMPUTERS)

(ERYTHROCYTES)

LITVINOV, B. M., Cand Bio Sci -- (diss) "Chief blights of apple trees in the forest steppes of the Khar'kov oblast' and the fight against them. Example of the Kolkhoz im I. V. Michurin." Khar'kov, 1957, 19 pp (Khar'kov Agricultural Institute im V. V. Dokuchayev. Chair of Zoology and Entomology), 140 copies (KL, 36-57, 104)

LITVINOV, B.M.

USSR/General and Special Zoology. Insects. Injurious In-
sects and Ticks. Pests of Fruit and Berry Crops P

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 49545

Author : Litvinov B.M.
Inst : Khar'kov Agricultural Institute
Title : Damage to the Ovary of the Apple Tree by the
Western May Beetle.

Orig Pub : Zap. Khar'kovsk. s.-kh. in-ta, 1957, 13, (50),
175-177

Abstract : Observations during 1954-1955 in Kharkovskaya
Oblast demonstrated that the western May beetle
feeds on leaves, flowers and ovaries of fruit
trees. On the average, as a result of damage to
the ovaries, the apple crop of the summer varie-
ties decreases by 25% and of the fall varieties
by 10.6%. The plums in the fruit garden are
most frequented by the beetles. It is recommended
that in gardens situated near the forest, control

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USSR / General and Specialized Zoology. Insects. P
Pest Insects and Ticks.

Abs Jour : Ref Zhur - Biol., No 17, 1958, No 78312

Author : Litvinov, B. M.
Inst : Kharkov Agricultural Institute
Title : Lesser Apple Worm and Its Control

Orig Pub : Zap. Kharkovsk. s-kh. in-ta, 1957, 13 (50),
179-181

Abstract : For control of lesser apple-worm in Kharkov Oblast, there were tried dusting of vofotox and DDT (5.5%) and an emulsion of DDT (0.5, 1.0, 1.5 and 2.0%) and thiophos (0.1%). Concentration of emulsions are indicated on the preparation. On each tree there were used 10 l. of emulsion and 0.2 kg of dust. As a result of two-time treating, with a 16-day interval with a 1% mineral-

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USSR / General and Specialized Zoology. Insects. P
Pest Insects and Ticks.

Abs Jour : Ref Zhur - Biol., No 17, 1958, No 78312

oil emulsion of DDT on the summer varieties, and three-time treating (the 3d spray 7 days after the beginning of flying of the 2d generation of the moth) of a 1-2 and even a 2.5% emulsion of DDT for the late varieties, there were obtained undamaged fruit correspondingly 77.2 and 89%, for 55.3 and 18.4% in the control. Emulsion of DDT higher than 1% produced burning of leaves on the summer varieties. Two-time dusting of 5.5% DDT and "vofatox" was effective against the first generation of the moth. The crop of undamaged fruits for summer varieties was 92.5%; 55.3% in the control. One-time treating against the 2d generation was insufficient. The crop of undamaged fruits of the winter varieties was 68.8%, and 18.4% in the control. Two- and three-time spraying of a 1% emulsion of thiophos gave no positive results. -- V. G. Gubina.

Card 2/2

LITVINOV, B.M.

133-1-17/24

AUTHORS: Golikov, I.N., Candidate of Technical Sciences, and Litvinov, B.M., Engineer.

TITLE: Weldability of Flakes in Alloy Steels During Rolling (Zavarivayemost' flokenov v legirovannoy stali pri prokatke)

PERIODICAL: Stal', 1958, No.1, pp. 67 - 70 (USSR).

ABSTRACT: In order to prevent the formation of flakes, merchant blooms of structural and tool steels are usually either slow-cooled (during a few days in unfired soaking pits) or submitted to a prolonged thermal treatment. If, on the other hand, blooms are further rolled on the same works, their cooling may be simplified as the flakes formed can be welded in subsequent rolling. This investigation was carried out in order to determine the minimum degree of deformation necessary for the welding of flakes in structural steels. The experimental procedure was as follows: experimental ingots were charged hot into soaking pits, heated in the usual way and rolled on a mill 950 into semis of a cross-section 190-220. From these, one bloom was cut out from the top part of the ingot and without additional heating rolled on a mill 750 to square semis of 125 - 140 mm wide and 3 - 3.5 m long, which were then cooled in air. 20 - 30 days after rolling, a few longitudinal and

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133-1-17/24

Weldability of Flakes in Alloy Steels During Rolling

transverse plates were cut out from each of the experimental semis. The following steels were tested: 38XMM0A, 30X2H2A, XHM3, 40XHMA, 45XHM0A, 60X2M, 60XHM and 30XГCHA (flakes were absent in these steels), 50X0A, 45X12M, 60C2, 30XГCHA, 37XH3A (possessed longitudinal flakes), УХ15, 9XC and 30XГCHA (possessed transverse and longitudinal flakes, Fig.1). The influence of cooling semis with water on the orientation of flakes was also checked. In two semis of steels 30XГCA and 4XB2C cooled after rolling with water, flakes were not found; in steel 40XH, longitudinal flakes were found and in steel УХ15 and 60 XHM - both longitudinal and transverse flakes were found. Transverse flakes were also obtained artificially, stressing rolled warm semis, as shown in Fig.2. In order to investigate the conditions under which flakes are welded, the above semis were cut into 2-3 parts and after heating by an appropriate method for a given steel practice, rolled on mills 750 and 400 with rolls with rhomboidal passes into bars 83 x 83 and 60 x 60 mm (some into bars 120 x 120, 112 x 112 and 105 x 105) which were then slowly cooled and thermally treated in order to prevent the formation of new flakes. A large number of longitudinal and transverse macro-sections were prepared and examined. Examples of sections with open flakes

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Weldability of Flakes in Alloy Steels During Rolling

are shown in Figs. 4, 5 and 6. Conclusions: 1) Longitudinal flakes and longitudinal sectors of flakes are welded under a small deformation (coefficient of elongation 2-3). 2) Transverse flakes and transverse sectors of flakes open during rolling forming cavities. With further deformation of metal these cavities elongate and close. 3) Transverse flakes of up to 25 mm in size in square semis of the size, 125 - 140 mm weld on rolling into a bar, 40 x 40 mm, thus, the minimum coefficient of elongation necessary to weld such flakes is 10-12. K.N. Petukhova participated in the work. There are 6 figures and 6 Russian references.

ASSOCIATION: Zlatoust Metallurgical Works (Zlatoustovskiy metallurgicheskiy zavod)

AVAILABLE: Library of Congress
Card 3/3

SOV/133-59-2-14/26

AUTHORS: Gololobov, D.I.,
Litvinov, B.M.

TITLE: Oxy-Acetylene Scarfing of Stainless and Heat Resistant
Steels (Ognevaya zachistka nerzhavayushchikh i
zharoprochnykh staley)

PERIODICAL: Stal', 1959, Nr 2, pp 145-147 (USSR)

ABSTRACT: The possibility of scarfing of various steels with increased content of chromium and silicon was investigated. Stainless and heat resistant steels can be divided into two groups: steels in which structural transformations are taking place on heating and cooling (e.g. 1Kh13-4Kh13, Kh9C2) and practically single phase steels (e.g. 1Kh18N9T, Kh28). There were some fears as to the possibility of formation of cracks in steels of the first group, however, it was found that cracks were not formed. These results were confirmed by subsequent results of scarfing of a large quantity of metal. When aluminium-magnesium powder is used with oxy-acetylene flame the surface of blooms of high chromium steels is covered with a layer of slag which for checking on the quality of dressing is removed by a

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SOV/133-59-2-14/26

Oxy-Acetylene Scarfing of Stainless and Heat Resistant Steels

special scraper. At present not less than one bloom per heat is cleaned with an abrasive wheel to check on the quality of scarfing. Scarfing of ingots was also tested. For this purpose half of the ingots from 3 heats were scarfed while the remaining half was mechanically dressed. It was found that the quality of the metal in rolled products from scarfed ingots and blooms was not in any way inferior to that from mechanically dressed ingots. In order to study the influence of scarfing on the structure of high chromium steels specimens cut from scarfed blooms of 1Kh13, 3Kh13, Kh9C2, Kh12M, Kh18, 1Kh18N9T, Kh18N25C2, 4Kh14N14V2M and Kh23N18 steels were submitted to micro-analysis. It was found that cast and hardened structures are formed in the surface layers as well as some decarburisation. An increase in the grain size and annealing of hardened layer to a depth of 1 - 1.2 mm takes place. However, as blooms are reheated and rolled into various products with a considerable deformation, the surface zone becomes so thin that changes in the surface layer of the blooms caused by scarfing can be neglected. As on scarfing with aluminium magnesium powder, a lot of

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Oxy-Acetylene Scarfing of Stainless and Heat Resistant Steels

smoke and polluting gases are evolved. A special camera with an exhaust system was designed (shown in fig.). At present practically all blooms of high chromium steel are dressed by scarfing. There is 1 figure and 2 references, both of which are Soviet.

ASSOCIATION: Zlatoustovskiy Metallurgicheskiy Zavod (Zlatoust Metallurgical Works)

Card 3/3

PINSKIY, A.Ye. [Pins'kyi, O.IU.]; LITVINOV, B.V. [Lytvynov, B.V.]

Use of synthetic fibers in condenser spinning. Leh. prom. no.1:
10-13 Ja-Mr '65. (MIRA 18:4)

LITVINOV, D. A.

20.

M. A.

The Welding of Pressure Vessels made from Sheet Aluminum Alloy AMTs
D. A. Litvinov and D. A. Kochergin (Avtog. Delo, 1949, (3), 6-8).--
(In Russian). L. and K. carried out an extensive investigation of welding
articles from the aluminum alloy AMTs of thickness 18-25 mm. and obtained
the necessary data for fabricating welded thick-walled pressure vessels.
Tables are given of the mechanical properties of the welded metal, showing
comparisons between gas-and arc-welding, between two different types of
welding-rod material (AK and AMTs), and also between the longitudinal and
transverse properties of the weld seam. X-ray and hydraulic testing of the
vessels after welding showed the results being entirely satisfactory.--W.J.K.

USHAKOV, Pavel Nikolayevich; LYSYAKOV, Anatoliy Grigor'yevich;;
LITVINOV, D.A., kand.tekhn.nauk,retsensent; TSYGANOV, M.A.,
inzh., retsensent; OKOROKOV, A.A., inzh., red.; SMIRNOVA,
G.V., tekhn. red.

[Safety regulations in designing and operating hoisting cranes]
Tekhnika bezopasnosti pri ustroistve i ekspluatatsii gruzopod"-
emnykh kranov. Moskva, Mashgiz, 1962. 217 p. (MIRA 15:9)
(Cranes, derricks, etc.--Safety regulations)

MOROZOV, M.P., red.; GUTOROV, V.G., red.; GRINBOYM, S.M., red.;
ZHILYAYEV, A.V., red.; KONDRASHOV, A.M., red.; LITVINOV,
D.A., red.; TATARENKO, V.A., red.; VOLKOV, V.A., red.
~~izd-va; MINSKER, L.I., tekhn. red.~~

[Regulations for the manufacture and safe operation of high-
pressure vessels; mandatory for all ministries and departments]
Pravila ustroistva i bezopasnoi ekspluatatsii sosudov, rabo-
taiushchikh pod davleniem; obiazatel'ny dlia vseh ministerstv
i vedomstv. Izd.4. Moskv., Gosgortekhzdat, 1961. 79 p.
(MIRA 15:10)

1. Russia (1923- U.S.S.R.)Komitet po nadzoru za bezopasnym ve-
deniem rabot v promyshlennosti i gornomu nadzoru.
(Pressure vessels)

KARASINA, E.S.; KROPP, L.I.; MINTS, M.S.; KNYAZ'KOV, B.N.; LITVINOV, D.D.;
GRINBLAT, Ye.I.; KAZAKOV, V.Ya.; VOLKOV, B.V.; BARDIN, V.V.

Exchange of experience. Zav.lab. 28 no.5:633-635 '62.
(MIRA 15:6)

1. Vsesoyuznyy teplotekhnicheskii institut imeni F.E.Dzerzhinskogo
(for Karasina, Kropp, Mints). 2. Institut radiofiziki i
elektroniki AN USSR (for Knyaz'kov, Litvinov). 3. Ural'skiy
politekhnicheskii institut imeni S.M.Kirova (for Grinblat,
Kazakov). 4. Opytnokonstruktorskoye byuro sinteticheskikh pro-
duktov (for Volkov). 5. Leningradskiy tekhnologicheskii
institut imeni Lensoвета (for Bardin).
(Chemical apparatus)

ZAKOPAYLO, V. D., LITVINOV, D. I. ENG.

MARKING DEVICES

Machine for marking standard shapes and other profiles. Vest. mash. 32 no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1953², Uncl.

ACC NR: AP6021795

(N)

SOURCE CODE: UR/0413/66/000/012/0060/0060

INVENTORS: Demenitskaya, R. M.; Trubyatchinskiy, N. N.; Litvinov, E. M.;
Gorodnitskiy, A. M.

ORG: none

TITLE: A method for geophysical investigation of ocean water. Class 21, No. 182802
[announced by Scientific Research Institute of Arctic Geology (Nauchno-
issledovatel'skiy institut geologii Arktiki)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 60

TOPIC TAGS: geophysic instrument, oceanographic equipment, oceanography, sea water,
electric field, salinometer, temperature measurement, automatic control

ABSTRACT: This Author Certificate presents a method for investigating ocean water.
For the sake of automation, increasing the accuracy of measurements, and lowering
the cost of the process, the measuring of the temperature and of the salinity (accord-
ing to the specific resistance and to the natural electric field) is accomplished by
deep sounding of ocean water with a continuous recording of the measured parameters
by automatic geophysical logging equipment.

SUB CODE: O8, 13/ SUBM DATE: 13Apr64

Card 1/1

UDC: 551.465.62

10-11-77 K0641-A

2.

4500. Device with folding iris for killing
stable ingredients (Sverlovsk Rubber Technol
Articles Works. M.S. Sverdlovsk
Byull po Khimii Opyem i Pribykhovaniyu Resina
Tekhnicheskaya Intell. 1966, No. 3, 19-23 Kaucuk
& Resina, 1967, 16, No. 3, 40.

M

LITVINOV, F. P.

86-9-6/36

AUTHOR: Litvinov, F.P. Guards Col., Hero of the Soviet Union

TITLE: Problem of Education of Trainees During Flight Training Course (Vospitaniye kursantov v protsesse letnogo obucheniya)

PERIODICAL: Vestnik Vozdushnogo Flota, 1957, Nr 9, pp.18-24 (USSR)

ABSTRACT: The author stresses the great importance for the flight training instructor of thorough study of personal characteristics of his students. Even before the first personal contact is established, the instructor must be acquainted with such personal details of his students as: state of health and physical fitness, disciplined behaviour, political skill and the age. For the first personal contact with his student, the instructor must be thoroughly prepared, because this contact will have important influence in the process of training and in the attitude of students toward the instructor. The instructor must avoid cheap popularity and also exaggerated severity; however, he should not tolerate even small irregularities. The first meeting with the students should be organized according to a plan prepared beforehand and should supply the instructor with the most essential information about his training group.

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86-9-6/36

Problem of Education of Trainees During Flight Training Course (Cont.)

This will help the instructor in further selection of the most able and disciplined students who will form his "active training group". According to the author, the instructor may win the confidence of the student if he is at the same time exacting and modest, well pondered and observant and constantly exigent to himself. It would be wrong if the instructor were to rely too much on the data of the students which may be supplied by aeroclubs and organizations where the students previously had undergone their flying education. Also it would be wrong to form an opinion about the student's flying ability only on the basis of his first flights. The author stated that on the basis of thorough checking of some students' flying capacities it was revealed that the flight documents and characteristics sent from aeroclubs appeared to be inaccurate. The instructor should avoid making hasty conclusions about the flying ability of the students. In order to form a proper opinion, it would be necessary to complete with the students 5-10 circular flights and 1-2 flights in the piloting zone, in accordance with the program of training flights with the instructor. But even that may be insufficient and the instructor should request

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86-9-6/36

Problem of Education of Trainees During Flight Training Course (Cont.)

his superior for a special checking on the basis of which he may determine further methods of individual training. In order to inculcate the high moral and combat qualities in the students, the instructor should constantly perfect the methods of training and education and check the achieved results. His approach to the student should be based on good psychological analysis of the student's character while in the air, as well as during the training on the ground and in off duty friendly conversations. The education and training of each student should be treated individually, according to his ability and character. A skillful instructor should from the first flight, inculcate in the students the habit of analyzing their errors and reactions during the flight. It is important to know whether the student while in the air has the feeling of satisfaction or of fear. On this fact may depend the course of his further education. Flight into the piloting zone, which should be observed by the instructor very carefully, may supply much useful data about the student behavior, while in the air. For instance, the behaviour of a student in a spin or steeply banked turn

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86-9-6/36

Problem of Education of Trainees During Flight Training; Course (Cont.)

may indicate to the instructor the attitude of the student toward the flight. In case of lack of self-control or necessary attention, the instructor must adopt appropriate methods of further individual training. The author points out that insufficient physical fitness of students in many cases was the cause of irregularities in flight. This factor should be taken into consideration by the instructor in order to know the degree of endurance of student during strenuous flight. In the program of the flight training course is determined the minimum of "G" for each flying day of student. However, the instructor knowing the capacity of his students should order such number of flights which will give the best results in training and at the same time will not jeopardize the safety of flying. Physical fitness of the instructor plays an important role in training, because by his own experience he will know what kind of physical exercise will be most effective for developing of flying endurance among the students. The author cited an example of effective sport training which in a comparatively short time improved the students' skill in handling of the airplane controls. Also asserting the necessity of individualizing the program, the author

Card 4/5

SUKACH, A.D., inzh.; RASPOPOV, V.I., inzh.; LITVINOV, G.A., inzh.

UKR1 cutter-loader unit. Ugol' Ukr. 4 no. 11:32-34 N '60.
(MIRA 13:12)

1. Dongiprouglemash.
(Donets Basin--Coal mining machinery)

RASPOPOV, V.I., konstruktor; SUKACH, A.D., konstruktor; D'YACHENKO, K.I., konstruktor; ~~LITVINOV, G.A.~~, konstruktor; GOL'DSHTEYN, M.Ya., konstruktor; MCGILEVSKIY, L.G., konstruktor; ZAYTSEV, G.I., konstruktor; BURLYGA, F.I., red.; SAMOLETOVA, A.V., tekhn. red.

[New equipment unit on pitching seams] Novyi kompleks na krutopadaiushchikh plastakh. Stalino, Knizhnoe izd-vo Stalino-Donbas, 1961. 56 p. (MIRA 16:6)
(Coal mining machinery)

BRODSKIY, Vladimir Isakovich; LITVINOV, Gleb Andreyevich; BRONSHTEYN,
L. A. redaktor; MAL'KOVA, N.V., tekhnicheskiiy redaktor

[Work organization of a motor transport system; the practice of
the No.1 Riga Motor Transport Office of the Ministry of Automot-
ive Transportation and Highways of the Latvian SSR.] Organizatsiia
raboty avtotransportnogo khoziaistva; Opyt Rizhskoi avtotran-
sportnoi kontory no.1. Ministerstva avtomobil'nogo transporta i
shosseinykh dorog Latviiskoi SSR, Izd.2-e. Moskva, Nauchno-tekhn.
izd-vo avtotransportnoi lit-ry, 1955. 67 p. (MLRA 8:8)
(Riga--Transportation, Automotive)

LITVINOV, G. A.

5791. Organizatsiya roboty na avtomobil'nom transporte. Opyt avtotransp. kontory No. 1. M-Va avtomob transporta i shoaseynykh dorog Latv. SSR. Riga, Lat gosizdat, 1954. 116s. s Ill, 21 form, 22sm. 5.000 ekz. 2 r 65k (55-1011) p 655.23:658.5

SO: Knizhnaya, Letopis, Vol. 1, 1955

9.3140

77203

SOV/109-5-1-16/20

AUTHORS: Babkin, N. I., Litvinov, G. D.

TITLE: Installation for Continuous Observation of the Angle of Rotation of the Polarization Plane by Ferrite, as Function of the Magnetizing Current and on Frequency of SHF Oscillations. Brief Communication

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 1, pp 169-170 (USSR)

ABSTRACT: During the development of ferrite devices it is often necessary to determine the relation of the angle of rotation of the polarization plane with respect to the magnetization current (I) or to the SHF frequency.

$$\alpha = \psi_1(I), \quad \alpha = \psi_2(f). \quad (1)$$

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Installation for Continuous Observation
of the Angle of Rotation of the Polariza-
tion Plane by Ferrite, as Function of the
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The determination of these characteristics is done point-by-point and requires considerable time; therefore, the scheme as shown on Fig. 1 is used for a continuous measurement of these characteristics. The signal from the SHF oscillator enters through the intermediate components of the set into the auxiliary ferrite device (7) with the full magnetic field, and after being subjected to the influence of the coil current having a frequency $\Omega = 400$ cps, the polarization plane of the cutput wave $TE_{1,1}$ fluctuates within a certain angle. The SHF signal further passes through the other components and from the wave transformer $TE_{1,1} - TE_{1,0}$ at the end of the rotary transition (9) enters the detector head (11). Since the polarization plane oscillates the whole time with frequency Ω , at the output of the detector appear variable components of the signal with frequencies Ω and 2Ω . Figure 2 shows the oscillations. The signal with

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Installation for Continuous Observation of the Angle of Rotation of the Polarization Plane by Ferrite, as Function of the Magnetizing Current and on Frequency of SHF Oscillations. Brief Communication

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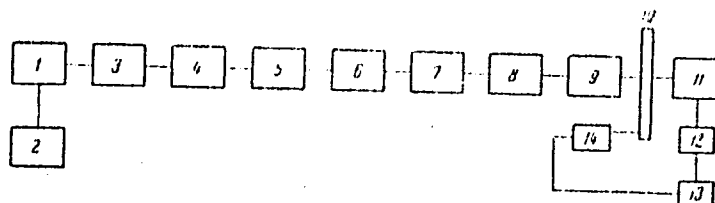


Fig. 1. (1) h-f generator; (2) power supply; (3) ferrite decoupler; (4) alternating attenuator; (5) ferrite decoupler; (6) wave transformer $TE_{1,0} - TE_{1,1}$; (7) auxiliary ferrite device; (8) element to be tested; (9) rotary transition; (10) limb with degree scale; (11) detector section; (12) type 28-I voltage amplifier; (13) power amplifier; (14) asynchronous motor.

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Installation for Continuous Observation
of the Angle of Rotation of the Polariza-
tion Plane by Ferrite, as Function of the
Magnetizing Current and on Frequency of
SHF Oscillations. Brief Communication

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SOV/109-5-1-16/20

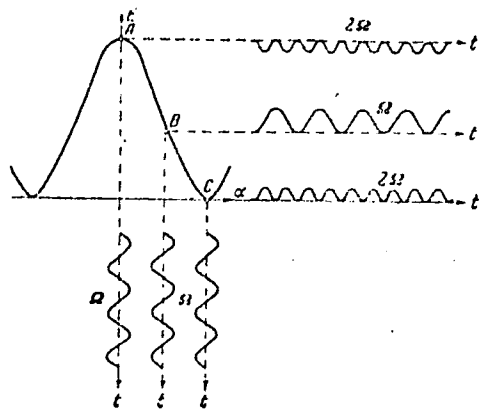


Fig. 2.

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frequency Ω is used for the tracking system, consisting of components 12, 13, 14 and reducer, which rotates (10,11). The system will be in equilibrium when the output signal with frequency Ω is zero. Whether this will correspond to point A or C on Fig. 2 depends on the phase of the feeding voltage on one of the motor windings. If the polarization plane of the wave shifts under the influence of change in signal frequency of the magnetization current of the ferrite device being tested, an error signal with frequency Ω will appear (point B on Fig. 2), and the motor will turn the detector section to the new equilibrium location. A klystron of type K-29 is used as oscillator. The operating range is approximately 10%, and the frequency change is made by turning a handle which completes the retuning of the klystron resonator and simultaneously establishes the optimum voltage on the reflex-electrode. The oscillator is equipped with a scale for approximate readings of

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Installation for Continuous Observation of the Angle of Rotation of the Polarization Plane by Ferrite, as Function of the Magnetizing Current and on Frequency of SHF Oscillations. Brief Communication

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SOV/109-5-1-16/20

frequencies. The results of experiments conducted with this installation are as follows: (1) Time of determining the above characteristics is of the order of 1 min. (2) The maximum difference between the readings on this set and determining angles by previous methods is 3°. (3) The installation works for a variation of the power of the SHF oscillator up to 3-4 times. (4) The installation is simple and consists basically of the same components which are used for the previous method of determining the characteristics by points.

SUBMITTED:

August 17, 1959

Card 6/6

42468

S/785/61/000/010/002/002

AUTHORS: Litvinov, G. I., Svarchevskiy, V. N., Yaryshev, B. P.

TITLE: The use of photorecorders with visible trace for the registration of geophysical and meteorological quantities.

SOURCE: USSR. Ministerstvo geologii i okhrany neдр. Osoboye konstruktorskoye byuro. Geofizicheskoye priborostroyeniye. no. 10. Leningrad, 1961, 45-49.

TEXT: The paper describes a recorder which combines the inertialess and multichannel capabilities of the magnetolectric oscillograph with the continuously observable record of a pen-type recorder. The Φ PB-1 (FRV-1) recorder, developed by the Osoboye konstruktorskoye byuro (Special Design Bureau) of the Ministry of Geology and Mineral-Resources Conservation, USSR, employs a "daylight" photographic paper which is fairly insensitive to ordinary visible light, but highly sensitive to the UV light produced by a standard Hg-vapor ДРШ-100 (DRSh-100) lamp; the 26-v d. c. power consumed is 100-130 w. The recorder has 6 galvanometers with a common magnet. All traces can be viewed directly on a screen at a displacement speed of up to 3 m/sec. Upon the secondary exposure of the 200-mm wide paper to the light of an incandescent lamp, which occurs during its passage under the visual-observation window, the recording becomes sufficiently distinct. Further exposure to scattered daylight does not affect the paper, and its shelf-life is indefinite. Flight and field tests were performed to investigate the suitability of the equipment for
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The use of photorecorders with visible trace...

S/785/61/000/010/002/002

geophysical and meteorological recordings. The FRV-1 photorecorder was installed on a spring support on one of the desks of a "flying-lab" aircraft. The air temperature and humidity and the aircraft g-loads were recorded via sensor-controlled bridge circuits fed from storage batteries. All recordings were backed up by a standard K4-51 oscillograph. The photorecorder operated well with circuits having a resistance of tens to thousands of ohm. The high proper frequency of the FRV-1 galvanometers rendered the recordings practically inertialess. The aircraft vibrations did not produce any appreciable improvement of the records. Close balancing of the galvanometer mechanism and the spring support of the recorder minimized any unfavorable effect of the vibrations. The field tests were performed at the Mirgorod base of the "Ukrneftegeofizika" trust. The FRV-1 recorder was attached to the various sensors during well-logging operations, and all recordings were repeated by a ПАСК(PASK) selfrecorder and a (latent-image) ФР-5 (FR-5) photorecorder. The FRV-1 was found to be fully dependable; the simplicity of the device permits registration of 6 curves, zero lines, and depth and time ticks, all with a single light source, and requires minimal tuning and makeready time, even in the hands of an average operator; the elimination of post-recording darkroom time increases the productivity of the equipment. The traces have sufficient contrast to yield good contact prints when exposed through a yellow light filter. There are 1 figure and 2 Soviet (only) references.

ASSOCIATION: None given.

Card 2/2

LITVINOV, G.I.; SVARCHEVSKIY, V.N.; YARYSHEV, B.P.

Use of photographic recorders with a visible graph for recording
geophysical and meteorological values. Geofiz. prib., no.10:
45-49 '61. (MIRA 15:8)

(Geophysical instruments)

ACC NO: AP7001401

(A)

SOURCE CODE: UR/0413/56/000/021/0077/5077

INVENTORS: Alekseyenko, A. W.; Berlin, V. M.; Krasov, P. A.; Litvinov, G. I.;
Shelkov, V. V.; Oparin, W. L.; Remasnikov, A. I.; Stepanov, S. N.

ORG: none

TITLE: An assembly for welding internal joints of boiler shells. Class 21, No.
187906 [announced by All-Union Scientific Research and Design Engineering Institute
of Chemical and Petroleum Apparatus Construction (Vsesoyuznyy nauchno-issledovatel'skiy
i projektnyy institut tekhnologii khimicheskogo i neftyanogo apparatostroyeniya)]

SOURCE: Izobretaniya, promyshlennyye obraztzy, tovernyye znaki, no. 21, 1966, 77

TOPIC TAGS: welding, welding equipment, welding technology, seam welding

ABSTRACT: This Author Certificate presents an assembly for welding internal joints
of boiler shells. The assembly consists of a column with a frame mounted upon it.
The frame carries an arm with a welding head placed on supporting rollers. To
maintain a constant position of the electrode in respect to the seam surface, the
welding head and arm are connected to one another by a hinge and a spring (see Fig. 1).
The latter assures a constant contact between the rollers and the boiler shell. The
welding head is hinged to the bearing rollers which are rigidly connected to one
another.

Card 1/2

UDC: 621.791.037-477

ACC NR: AP7001401

TOR:

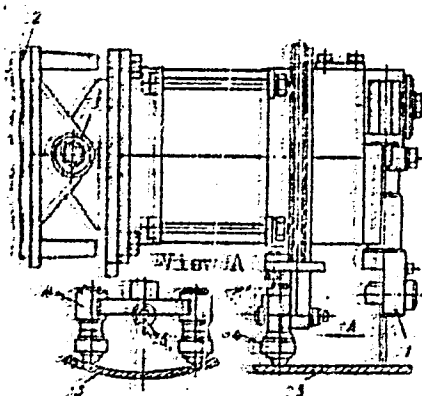


Fig. 1. 1 -- welding head; 2 -- arm; 3 -- arm hinges; 4 -- bearing rollers; 5 -- boiler shell; 6 -- hinge

Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 1110ct65

Card 2/2

KOROTEYEV, I.M., kandidat tekhnicheskikh nauk, dotsent; LITVINOV, G.T.,
kandidat tekhnicheskikh nauk, dotsent.

Kinematic analysis of automatic couplers in operation. Trudy DIIT
no.25:219-233 '56. (MIRA 10:1)
(Car couplings)

L 21116-65 EMT(d)/EMT(m)/EMF(w) ASD(a)-5/AFWL/SSD/ASD(f)-3/AFEMR/ESD(dp)/ESD(gs)/
ESD(t) SM
ACCESSION NR: AP5002597 S/0179/64/000/005/0108/0111

AUTHOR: Litvinov, O. V. (Khar'kov)

TITLE: Propagation and interaction of elastic plastic load waves in a finite length B

SOURCE: AN SSSR. Izvestiya. Mekhanika i mashinostroyeniye, no. 5, 1964, 108-111

TOPIC TAGS: elastic wave, plasticity, wave propagation, motion equation, differential equation

ABSTRACT: The author studies:

$$\frac{\partial h}{\partial \eta} = a \frac{\partial t}{\partial \eta}, \quad \frac{\partial h}{\partial \xi} = -a \frac{\partial t}{\partial \xi}, \quad \left(a^2 = \frac{1}{\rho} \frac{d\sigma}{d\epsilon}, \quad v = \int a(\epsilon) d\epsilon, \quad \xi = \frac{1}{2}(\tau - u), \quad \eta = \frac{1}{2}(\tau + u) \right) \quad (1)$$

which are the equations of motion in the characteristic variables ξ, η , where t is time, u is velocity, ϵ is relative deformation, σ (dependent on ϵ) is technical conditional stress and ρ is the initial density of the rod material. The general solution of (1) can be written in terms of arbitrary functions $f_1(\xi), f_2(\eta)$, and their derivatives as follows:

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$$h = n \left\{ -m [f_1(\xi) + f_1(\eta)] + \frac{ig m (\xi + \eta)}{2} \left[\frac{df_1}{d\xi} + \frac{df_1}{d\eta} \right] \right\} \quad (2)$$

$$c = \frac{1}{n} \left\{ -m [f_1(\xi) - f_1(\eta)] - \frac{ctg m (\xi + \eta)}{2} \left[\frac{df_1}{d\xi} - \frac{df_1}{d\eta} \right] \right\} + \sigma \quad (3)$$

if one makes the simplifying assumption

$$\sigma(\nu) = n^2 (g^2 m \nu) \quad (4)$$

Here m , n , and G are arbitrary constants. From the above the author obtains

$$\sigma = \frac{1}{n^2} \left[c_1 - \frac{ctg m \nu}{m} - \nu \right], \quad \sigma = p n^2 \left[c_2 + \frac{ig m \nu}{m} - \nu \right] \quad (5)$$

In all cases except those in which the relation $\sigma(\xi)$ is of the form (5) the solution obtained is only approximate. However, the presence of four arbitrary constants m , n , c_1 , c_2 in (5) makes a rather accurate, yet simply constructed, approximation possible. "The author thanks G. A. Dombroskiy for his indications and remarks during the completion of this work." Orig. art. has 3 figures and 24 formulas.

ASSOCIATION: none

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L 21116-65

ACCESSION NR: AP5002597

SUBMITTED: 29May64

SUB CODE: AS

NO REF SOV: 006

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ENCL: 00

OTHER: 002

Card 3/3

GORIN, L.; LITVINOV, I.

The motherland is taking care of them. Okhr.truda i sots.strakh.
no.6:49-51 D '58. (MIRA 12:1)
(Physically handicapped--Rehabilitation)
(Voronesh--Old-age homes)

LITVINOV, I.; RUMYANTSEV, V.; DEMIDOV, P.

Fire prevention in the Polish People's Republic. Pozh.delo 3
no.9:29-30 S '57. (MIRA 10:9)
(Poland--Fire prevention)

AUTHOR: ~~Litvinov, I.~~

SOV/130-58-7-32/35

TITLE: They Have Become Metallurgists (Oni stali metallurgami)

PERIODICAL: Metallurg, 1958, nr.7, p 44 (USSR).

ABSTRACT: The author gives brief sketches of some new workers at the Voroshilov Metallurgical Works: Yevgeniy Kosyak, Anatoliy Khristyuk and Vitaliy Rozhkov at the blast-furnace plant; Leonid Yanulis, Nikolay Bykov and Aleksandr Mal'ko in the melting shop; Vladimir Lobachev and Konstantin Yevsyukov in the sheet mills; Maya Konvisar in the cogging mill. There is 1 illustration.

ASSOCIATION: Zavod imeni Voroshilova (imeni voroshilov Works)

Card 1/1

1. Labor--USSR 2. Metals--Production 3. Metallurgy--USSR

LITVINOV, I.

Means of increasing electric locomotive runs between repairs.
Zhel.dor.transp. 36 no.6:28-32 Je '55. (MIRA 12:4)

1. Glavnyy inzhener sluzhby lokomotivnogo khozyaystva Tomskoy
dorogi.

(Electric locomotives)

LITVINOV, I.

Pride of our country. Grazhd.av. 18 no.11:18 N '61. (MIRA 15:2)
(Lomonosov, Mikhail Vasil'evich, 1711-1765)

LITVINOV, I.

Most constructions have been suggested by workers. Izobr. i
rats. no.11:2-3 N '61. (MIRA 14:11)

1. Rukovoditel' Obshchestvennogo byuro fasonnoliteynogo tsekha
Uralmashzavoda, Sverdlovsk.
(Sverdlovsk--Founding)

LITVINOV, I.

Mechanized swine-fattening barn. Sel'.stroi. 15 no.4:10-12 Ap
'60.. (MIRA 16:1)

1. Glavnyy inzh. sovkhoza "Uchebno-Opytnyy" Rostovskoy oblasti.
(Swine houses and equipment) (Feeding)

LITVINOV, I.

Speed plus distance. Grazhd. av. 22 no.3:29 Mr '65.

(MIRA 18:7)

ACC NR: AP6032088

(A)

SOURCE CODE: UR/0317/66/000/009/0068/0073

AUTHOR: Koryshv, B. (Director of "computer technology" pavilion); Litvinov, I.
(Chief engineer of "computer technology" pavilion)

ORG: Computer Technology Pavilion, VDNKh SSSR (Pavil'on "Vychislitel'naya tekhnika"
VDNKh SSSR)

TITLE: Electronic computer technology 166

SOURCE: Tekhnika i vooruzheniye, no. 9, 1966, 68-73

TOPIC TAGS: computer technology, computer application, computer design, electronic computer, memory core, magnetic tape

ABSTRACT: The author describes new Soviet computer hardware. He notes that the new transistorized series of general-purpose "Ural" computers is capable of performing one million operations per second. Another completely transistorized computer "Minsk-22" operates with a speed of five to six thousand operations/sec. Its internal core storage capacity is 8192 words. It also has a 1.6 million word external magnetic tape memory and a number of I/O units (see table). The alphanumeric printing mechanism has 128 character positions per line. Any one of 64 different characters may be printed in any one position. Power consumption is 10 kw. Other special-purpose computers and I/O systems are described: 1) The small-size "Mir" computer developed at the Institute of Cybernetics AN SSSR is intended for solution of scientific and engineering problems. No special programming capability is required to operate this machine. The input unit (an electric typewriter) accepts instructions

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I/O	Input speed	Output speed
Punched card	250 lines/min	100 cards/min
Perforated tape	800 characters/sec	20 lines/sec
Typewriter	7 ch/sec	7 ch./sec
Alphanumeric printing Mechanism		400 lines/min
BPM-20 printed		20 words/sec

in formula format. The output is a wide carriage typewriter whose printing speed is 5-7 characters/sec. The computer arithmetic unit is based on 5 digit described number representation; its speed is 200-300 op./sec. The computer has a 12-bit 4096 word core memory. Its power consumption is 1 kw. 2) The digital x-y plotter designed at the Riga Central Design and Planning Bureau of Mechanics and Automation is capable of plotting 1100 points/hr on the board 1.1 m long and 0.8 m wide (see Fig. 1). The plotter accepts input from a keyboard (separate unit), punched cards, perforated tape, or directly from a computer. 3) The "Siluet" system developed at the Independent Design and Planning Bureau in Vil'nius. The system reads graphically

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ACC NR: AP6032088

represented data, converts it into the 3 digit decimal CCIT-2 telegraph code, and issues it on perforated tape (see Fig. 2). Four ordinates may be processed per second. 4) The Vil'nus Bureau also features the BIP-1 system which reacts data from 5, 6, or 7 unit paper tape and converts into corresponding information on 80-column punched cards (see Fig. 3). The system has an error checking feature. 5) The new electro-

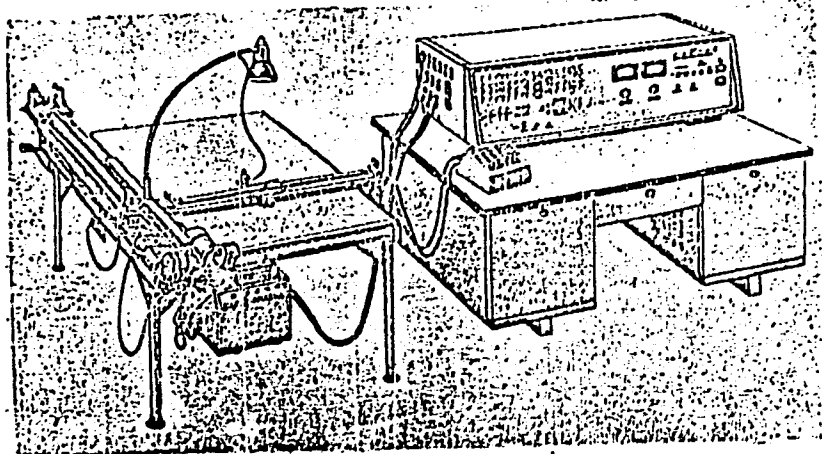


Fig. 1. Automatic digital x-y plotter

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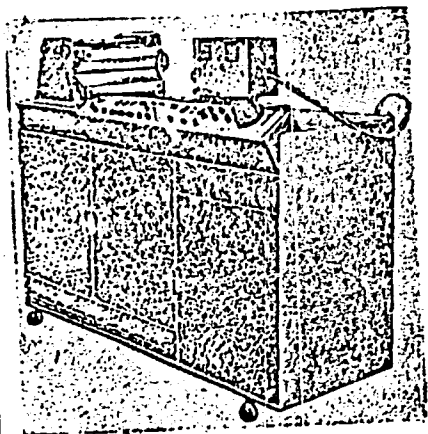


Fig. 2. "Siluet" - automatic graph reader

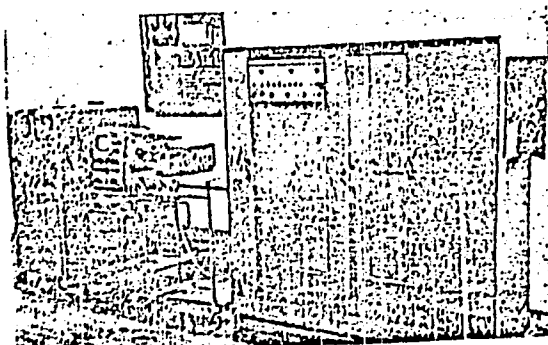


Fig. 3. BLP-1 tape reader/card punch system

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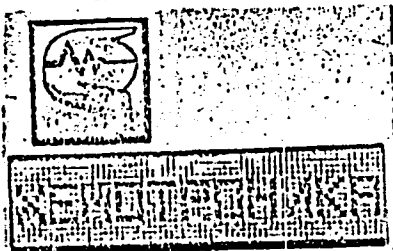


Fig. 4. Electrochemical indicator

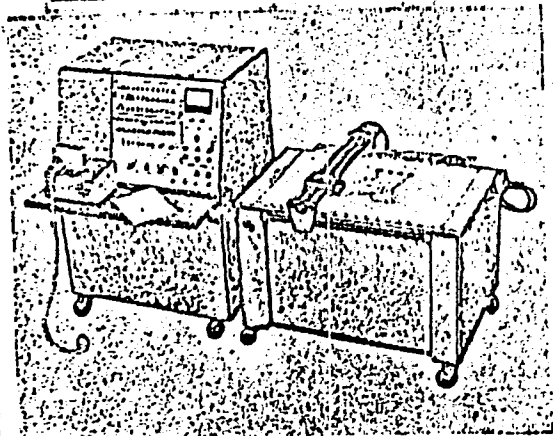


Fig. 5. Programmed drafting system

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ACC NR: AP6032088

chemical indicator device developed at the Khar'kov Central Design and Planning Bureau of Automation and Chemicoelectro-plating (see Fig. 4). It is impervious to shock and vibration and it operates in a wide temperature range. Its response speed is 10—1000 msec. Three million write/erase cycles are guaranteed. 6) The automatic drafting system operates in discrete mode which controlled from the programming unit (see Fig. 5). Orig. art. has: 5 figures and 1 table.

SUB CODE: 09/ SUBM DATE: none

Card 6/6

KARGIN, V.A.; LITVINOV, I.A.

Processes of structure formation of polyacrylonitrile from
solutions. Vysokom. soed. 6 no.7:1193-1194 J1 '64

(MIRA 18:2)

1. Institut neftekhimicheskogo sinteza imeni Tomchiyeva AN
SSSR.

KARGIN, V.A.; LITVINOV, I.A.

Structural transformations during thermal treatment of
polyacrylonitrile. Vysokom. soed. 7 no.2:226-228 P 155.
(MIRA 18:3)

1. Institut neftekhimicheskogo sinteza AN SSSR.

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S/190/61/003/007/016/021
B:01/B226

AUTHORS: Kargin, V. V., Plate, N. A., Litvinov, I. A., Shibayev, V. P., Lur'ye, Ye. G.

TITLE: Processes of polymerization and grafting on newly formed surfaces of inorganic substances

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 7, 1961, 1091 - 1099

TEXT: In previous papers (Vysokomolek. soyed., 1, 339, 1959; ibid., 1, 1713, 1959), the authors had shown that polymerization of vinyl monomers can be initiated by an intensive mechanical dispersion of solid inorganic substances. The present paper studies this effect when dispersing metals, metal oxides, and ionic salts. Because in the hitherto used vibration mill grindings of iron balls had a disturbing effect upon the polymerization processes, three new grinding devices have been constructed. (1) The monomer, the substance to be dispersed, and glass balls were filled into an ampul being fastened to the vibration mill. (2) The ampuls were fastened to the armature of an electromagnet which was fed

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by a. c. (3) The ampuls were fastened to the coil of an electromagnetic 10-w loudspeaker. The use of vacuum and different temperatures was made possible by working with ampuls. Frequency was varied between 50 and 120 cps, the amplitude being 2-5 mm. Duration of dispersion amounted to 30 - 90 min. (A) Polymerization by means of Al_2O_3 (corundum, energy of crystal lattice 3610 kcal/mole) or Cr_2O_3 ($E_{\text{Cr}_2\text{O}_3} = 4668$ kcal/mole) was

studied with styrene, methyl methacrylate, acrylonitrile, vinyl acetate, and some organic substances of the acetaldehyde type. Intensive dispersion of these oxides in the presence of styrene or methyl methacrylate led to rapid polymerization. In the case of methyl methacrylate, a polymer having a molecular weight of 25,000 was obtained. Vinyl acetate was not polymerizable. When dispersing corundum, acetaldehyde yielded, after 2 hr, 3 - 5 % polyacetaldehyde. Also in this case, the results were not different from those obtained by J. Furukawa et al. (see below) by means of Al_2O_3 annealed at 600°C. Dispersion of corundum in acetone under exclusion of air resulted, at room temperature, in small quantities of mesityl oxide and phorone. No high yields could be obtained, since the resultant H_2O is adsorbed on the surfaces of Al_2O_3

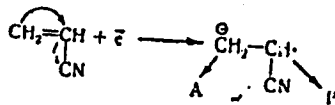
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and the active centers are blocked. (B) Polymerization in the presence of Fe, Al, and Mg easily succeeded in acrylonitrile and methyl methacrylate between -30 and +50°C. The results did not differ from the data obtained earlier for styrene - SiO₂ and styrene - NaCl. Considering the polymerization mechanism of acrylonitrile, assumption is made that in the metal surface electrons are excited, which, at low work function ($W_{Fe} = 4.31$ ev, $W_{Al} = 4.2$ ev, $W_{Mg} = 2.74$ ev) pass over to the monomer adsorbed on the metal surface, and release the reaction according to the following scheme:



A denotes the possibility of chain growth according to anionic mechanism, P according to radical mechanism. Besides, in the presence of Fe, complex formation of Fe with nitrile groups and formation of cyclic groups is assumed for acrylonitrile. Furthermore, account has to be taken of that the metals are covered by an oxide film. On the oxide film, a grafting of the resulting polymer could appear, and separation of the Me-O bonds during

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dispersion also could have an initiating effect. In the system Mg-methyl methacrylate, a highly swelling polymer was obtained, a metal-polymer gel, the lattice points of which consist of metal particles being bound to the polymethyl methacrylate by means of Me-O-C bonds. When treating these polymers with HCl, the molecular weight decreased (from 74,000 to 30,000 in the system with Al; from 250,000 to 160,000 in the system with Mg). Therefrom, conclusion is drawn that a hydrolysis of Me-O-C bonds had taken place. Attempts to polymerize styrene or methyl methacrylate by dispersing metallic Cr or W were unsuccessful. The too high work function of these metals is considered to be the cause of this fact. The capability of initiating polymerization thus does not depend on the absolute strength of interatomic bonds in the crystal, but on the capability of forming active centers of the electron donor- or radical type. (C) Polymerization by dispersion of salts (NaCl, KCl, CaF₂) already took place at room temperature in methyl methacrylate, acrylonitrile, styrene, and α -methyl styrene. Assumption is made that also in this case initiation takes place by transferring an electron to the monomer. The electron might be set free by ionization- or crystal defects of the F-center type. Dispersion of TiCl₃ or BeCl₂ in the presence of styrene led to its rapid

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polymerization, even at -80°C . These salts had no effect upon methyl methacrylate. In this case, the initiation of the polarizing effect of Ti^{3+} or Be^{2+} is reduced to the double bond of styrene tending toward cationic polymerization. In agreement with the experiment, monomers with electronegative substituents (methyl methacrylate) could not be polymerized. S. D. Levina, K. P. Lobanova, P. Yu. Butyagin, A. A. Berlin, K. S. Minsker and V. K. Bykhovskiy are mentioned. There are 3 figures and 21 references: 10 Soviet-bior and 11 non-Soviet-bior. The three most important references to English-language publications read as follows: J. Furukawa, T. Saegusa, T. Tsuruta, H. Fujii, T. Tataka, J. Polymer Sci., 36, 546, 1959; H. Adkins, A. Krause, J. Amer. Chem. Soc., 44, 389, 1922; M. Ueta, W. Kanzig, Phys. Rev., 91, 1390, 1954; 97, 1590, 1955.

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

SUBMITTED: November 19, 1960

Card 5/5

L 27190-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL WII/RIA

ACCESSION NR: AP5005587

S/0190/65/007/002/0226/0228

AUTHOR: Kargin, V. A.; Litvinov, I. A.

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B

TITLE: Structural changes during the heat treatment of polyacrylonitrile

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 2, 1965, 226-228

TOPIC TAGS: polyacrylonitrile, pyrolyzed polyacrylonitrile, organic semiconductor, semiconducting polymer, pyrolysis, heat treatment, morphology, chemical structure

ABSTRACT: For the first time, structural changes in the course of pyrolysis (up to 800C) have been followed in a polymer, namely polyacrylonitrile. Pyrolysis was carried out in vacuum for oriented and non-oriented films and fibers of the polymer. Electron microscopy showed that the initial morphology of crystalline polyacrylonitrile can be preserved in pyrolysis. X-ray structural analysis showed that in the pyrolysis of oriented and nonoriented polyacrylonitrile, the initial degree of orientation is preserved while the chemical structure of

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ACCESSION NR: AP5005589

the polymer is converted to cyclic. Pyrolysis conditions were selected so that the temperature at any particular time would be below the temperature at which marked changes in the morphology of the newly formed polymer could take place. Orig. art. has: 3 figures. [SM]

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 31Mar64

ENCL: 00

SUB CODE: OC, GC

NO REF SOV: 004

OTHER: 000

ATD PRESS: 3191

Card 2/2