KRAYZMER, Leonid Pavlovich; GITIS, E.I., retsenzent; CHIVILEV, A.F., red.

[High-speed ferromagnetic memory devices] Bystrodeistvuiushchie ferromagnitnye zapominaiushchie ustroistva. Moskva, Energiia, 1964. 370 p. (MIRA 17:12) GITIS, Emmanuil Isaakovich. Prinimali uchastiye: SAMOYLENKU, V.I., kand. tekhn. nauk; BALTRUSHEVICH, A.V., kand. tekhn. nauk; ZHDANOV, G.M., prof., retsenzent; K.AYZMER, L.P., kand. tekhn. nauk, retsenzent; FLID, Ya.I., kand. tekhn. nauk, red.

APPROVED FOR RELEASE

[Automatic control of radio systems; electric and automatic control of radio systems] Avtomatika radioustanovok; elektro-radioavtomatika. Moskva, Energiia, 1964. 631 p.

(MIRA 17:11)

ACCESSION NR: AP4037467

5/0146/64/007/002/0082/0089

AUTHOR: Gitis, E. I.; Pronin, Ye. G.

TITLE: Generalized characteristics of a multichannel semiconductor converter of voltage into a code with digit-order coding

SOURCE: IVUZ. Priborostroyeniye, v. 7, no. 2, 1964, 82-89

TOPIC TAGS: converter, voltage code converter, semiconductor voltage code converter, multichannel converter, automatic control

ABSTRACT: The method of generalized characteristics permits selecting the kind of converter for specific conditions of application. The characteristics are independent of the degree of perfection of a specified scheme or design. Any converter can be subdivided into two types of generalized units: (1) amplifier units (triggers, differential and pulsed amplifiers, switch controls, etc.), and (2) analog units (voltage switches, saw-tooth oscillators, comparison circuits,

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ACCESSION NR: AP4037467

etc.). The number of units of a multichannel converter is given by:  $N = N_{\alpha n} (m+n+2) + N_{\alpha m} (m+2n+4)$ , where  $N_{\alpha n}$  and  $N_{\alpha m}$  are the number of active and passive elements in an analog and amplifier unit, respectively, m is the number of input channels, and n is the number of digits in the output code. The time of the full cycle of conversion of all-channel voltages is given by:  $T = m \cdot \gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$  and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , where  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{\alpha m} \left[ k(3n+2) + (7n+2) \right]$ , and  $\gamma_{$ 

ASSOCIATION: Moskovskiy aviatsionny\*y institut (Moscow Aviation Institute)

SUBMITTED: 21Feb63

DATE ACQ: 05Jun64

ENGL: 00

SUB CODE: DP

NO REF SOV: 004

OTHER: 000

Card 2/2

- RDP86-00513R0005

\$/0103/64/025/007/1104/1113

ACCESSION NR: AP4042496

AUTHOR: Gitis, E. I. (Moscow)

TITLE: Gray code counters

SOURCE: Avtomatika i telemekhanika, v. 25, no. 7, 1964, 1104-1113

TOPIC TAGS: counter, binary counter, cyclic code, binary cyclic code counter, Gray code counter

ABSTRACT: The Gray code is analyzed, and the rules for converting a conventional binary code into the Gray code are established. This logical equation describes the trigger action in a Gray-code counter adding a pulse:

 $E_k = e_0 T_{k-1} \prod_{1 \le k-1} \overline{T}_1$ , where  $E_k = 1$  when a digit changes in the k-th digit place and

 $E_k = 0$  if the digit does not change in the k-th place;  $T_k * \alpha_k$  is the code element;  $e_o$  means the arrival of a pulse. A similar logical equation describes subtraction.

\*Card\* 1/2

ÁCCESSION NR: AP4042496

These equations are used to explain the structure of such known codes as those of A. Fischman, G. D. Hulst, and certain Russian authors, and the modifications suggested by the author. Orig. art. has: 5 figures, 20 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 28Feb63

ATD PRESS: 3082

ENCL: 00

SUB CODE: DP

NO REF SOV: 004

OTHER: 005

Card 7./2

ACC NR: AP6025654

SOURCE CODE: UR/0413/66/000/013/0107/0107

INVENTOR: Gitis, E. I.; Bergel'son, M. N.

ORG: None

TITLE: An arithmetic unit for performing the operations of addition and subtraction in self-checking cyclic code. Class 42, No. 183484

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 107

TOPIC TAGS: arithmetic unit, cyclic coding, flip flop circuit

ABSTRACT: This Author's Certificate introduces an arithmetic unit for performing the operations of addition and subtraction in self-checking cyclic code. The device contains flip-flop registers for the first and second numbers with recording and set circuits, a circuit for cyclic carry, determination of the resultant sign and digital network overflow check, and circuits for monitoring progress of the operations. To simplify the device and increase its speed, each i-th digital place except the flip-flops of the registers for the first and second numbers contains two modulo 2 adders, a circuit for carry to the following i+l-th digit and a diode. The direct (inverse) outputs of the flip-flops for the first and second numbers are connected to the first direct (inverse) inputs of the first and second adders respectively. Connected to the second direct (inverse) inputs of the first and second adders respectively are

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UDC: 681.142

ACC NR: AP6025654

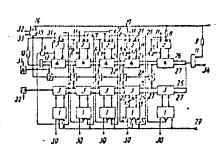
the direct (inverse) ouputs of the first and second adders for the preceding i-l-th digit. The inputs of the carry circuit are connected to the direct outputs of the adders for the given circuit and to the carry output of the preceding i-l-th digit which is also connected to the counter input of the flip-flop for the first number of the given i-th digit, and through the first delay line to the counter input of the flip-flop for the second number of the following i+l-th digit. The direct outputs of the adders for the most significant digit are connected to the first inputs of the first and second monitor circuits. The second inputs of these monitor circuits are connected to the sign digits of the first and second numbers respectively. These inputs are connected together with the carry output for the most significant digit to the circuit for determination of the resultant sign, overflow check and cyclic carry. The cyclic carry output of this circuit is connected through the second and third delay lines to the counter inputs of the flip-flops for the first and second digits of the second number and to the first input of the first collector circuit respectively. The second input of this collector circuit is connected to the control signal source, while the output is connected to the inverse inputs of the adders for the most significant digit. The outputs of the second adder are connected through the second collector circuit and the fourth delay line to the reset terminals of all flip-flops in the register for the second number and to the first inputs of the diodes for all digits. connected to the second inputs of these diodes are the direct outputs of the corresponding flip-flops in the register for the second number. The diode outputs are connected to the counter inputs of the corresponding flip-flops in

Card 2/3

ACC NR: AP6025654

the register for the first number.

l--flip-flops in the register for the first number; 2--flip-flops in the register for the second number; 3--first mod 2 adder; 4--second mod 2 adder; 5--carry circuit; 6--diode; 7-10--first, second, third and fourth delay lines respectively; 11 and 12--first and second collector circuits; 13 and 14--first and second monitor circuits; 15-circuit for sign determination, cyclic carry and digital network overflow check; 16--cyclic carry



output; 17 and 18-direct and inverse flip-flop outputs; 19-21-flip-flop set, reset and counter terminals respectively; 22 and 23-direct and inverse outputs of mod 2 adder; 24 and 25-first direct (inverse) adder input; 26 and 27-second direct (inverse) adder input; 28-carry circuit output; 29-reset terminal of flip-flops for the first number; 30-terminals for recording in the register for the first number; 31-terminals for recording in the register for the second number; 32 and 33-input terminals for the sign digits of the first and second numbers; 34-control input.

SUB CODE: 09/ SUBM DATE: 03Jul65

Card 3/3

"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000
APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000

L\_36536-66 SWT(1)/E-F(m)/T, F-M(t)/ETI/EM(k), 110-61 JD/W/JG ACC NR: AP6016823 SOMEON CORN, MP/COLONG

SOURCE CODE: UR/0046/66/012/002/0145/0159

AUTHOR: Gitis, M. B.; Mikhaylov, I. G.

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

TITLE: Propagation of sound in liquid metals (feview)

SOURCE: Akusticheskiy zhurnal, v. 12, no. 2, 1966, 145-159

TOPIC TAGS: sound propagation, molten metal, ultrasound absorption, acoustic measurement, acoustic speed, temperature dependence, compressible fluid, viscous fluid

ABSTRACT: This is a review article dealing with methods of measuring the velocity and absorption of ultrasound in liquid metals, with the experimental results already obtained by these methods, and with the data that can be extracted from these results in order to obtain information on other physical properties of liquid metals over a wide range of temperatures. A summary table listing the speed of sound and its temperature coefficient for a large number of metals is presented. On the basis of the results a distinction can be made between normal metals, in which the radical realignment of structure terminates at the melting point, and metals in which the short-range order structure experiences changes in the liquid state. These include tin, bismuth, and gallium. It is concluded that in molten metals, in spite of the relative simplicity of the structure, the speed of sound behaves in a complicated manner with increasing temperature. The compressibility of the molten metal is a quantity sensitive to the structure. Inasmuch as liquid metals consist of spherical symmetrical

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UDC: 534.221: 669.017

"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000

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ACC NR: AP6016823

simple particles, a study of the compressibility and the speed of sound leads to information on the interatomic forces between them. The maximum speed of sound and consequently the minimum of compressibility can be due both to the formation of a second close-packed structure in the liquid metals, and to a temperature variation of the number of carriers. Measurement of the sound absorption in molten metals is the only source of data on the volume viscosity, but the determination of this quantity calls for comprehensive study of both acoustic and thermal characteristics of the same samples of molten metal. Measurement of sound absorption in a broad temperature interval may yield valuable information on the influence of different structural rearrangements on the kinetic coefficients of the liquid metal. Orig. art. has: 11 formulas and 2 tables.

SUB CODE: 20/ SUBM DATE: 19Nov65/ ORIG REF: 028/ OTH REF: 026

Card 2/2/1/1/

# APPROVED FOR RELEASE. Tutchin, C., i. 17.0000 GIA DODO

### GITIS, I.I. dotsent

Effect of climate and weather on the incidence of pneumonia and its course during the year. Gig. i san. 22 no.2:58-60 F '57

(MLRA 10:4)

1. Iz L'vovskogo instituta epidemiologii, mikrobiologii i gigiyeny. (PNEUMONIA, epidemiol.

in Russia, eff. of climate & weather on incidence & course)

(CLIMATE, eff.

on incidence & course of pneumonia)

(WEATHER, eff.

same)

CIA-RDP86-00518R0005

GITIS, I.I., dotsent, kand.med.nauk

Dynamics of the climate of Lvov over a period of many years. Gig. i san. 24 no.7:9-15 J1 59. (MIRA 12:9)

1. Iz L'vovskogo meditsinskogo instituta. (CLIMATE

eff. of urban develop. on climate of district in Russia (Rus))

GITIS, I.I., dotsent

Mobile observation crews in making hygienic study of the climate of a large city. Gig.i san. 25 no.1:87-89 Ja 160. (MIRA 13:5)

1. Iz L'vovskogo meditsinskogo instituta.
(AIR POLLUTION)

GITIS, I.I. (L'vov)

Prevention of bursitis among miners. Gig. truda i prof. zab. 4 no. 7:60-61 Jl :60 (MIRA 13:8)

1. Meditsinskiy institut.
(LVOV-VOLYN BASIN—COAL MINERS—DISEASES AND HYGIENE)
(BURSITIS)

**251**3R0005

GITIS, I.I. [Hitis, I.I.], dots.

Dynamics of catarrhal diseases of the respiratory organs among emildren in Lvov. Ped. akush. i gin. 22 no. 1:33-34 '60.

(MIRA 13:8)

1. L'vovskiy meditsinskiy institut (direktor - prof. L.N. Kuz'menko).

(LYOV—RESPIRATORY ORGANS—DISEASES)

KAZANSKIY, B.A.; DOROGOCHINSKIY, A.Z.; ROZENGART, M.I.; GITIS, K.M.; LYUTER, A.V.; MITROFANOV, M.G.

Effect of the length of an alumina-chromia-potassium catalyst layer on the aromatization of n-heptane.

Kin.i kat. 4 no.2:315-318 Mr.Ap 163. (MIRA 16:5)

1. Institut organicheskoy khimii AN SSSR imeni N.D.Zelinskogo i Groznenskiy neftyanoy nauchno-issledovatel'skiy institut.

(Heptane) (Aromatization) (Catalysts)

# "APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000

ROZENGART, M.I.; GITIS, K.M.; KAZANSKIY, B.A.

Development of an alumina-chrome-potassium catalyst for the dehydrocyclization of paraffin hydrocarbons. Nefteknimia 4 no.3:406-412 My-Je \*64. (MIRA 18:2)

## "APPROVED FOR RELEASE: Tuesday, September 17, 2002

CIA-RDP86-00513R000

ROZENGART, M.I.; KUZNETSOVA, Z.F.; GITIS, K.M.

Role of an alkali promoter in the development of an aluminum-chrome catalyst for the dehydrocyclization of paraffli hydrocarbons. Neftekhimida 5 no.1:17-23 Ja-F '65.

(MIRA 18:5)

l. Institut organicneskoy khimo: imedi Zelinskego Al Sibb.

ROZENGART, M.I.; POLKOVNIKOV, B.D.; POLININ, V.L.; TABER, A.M.; GITIS, K.M.

Aromatizing capacity of boride catalysts of platinum group metals. Izv. AN SSSR. Ser. khim. no.5:919-922 '65. (MIRA 18:5)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

1,3996

S/054/62/000/004/002/017 B101/B186

14.1700 11.3900 Authors:

Gitis, M. B., Mikhaylov, I. G., Khimunin, A. S.

TITLE:

Apparatus for measuring the sonic velocity in liquid metals

and melts

PERIODICAL:

Leningrad. Universitet. Vestnik. Seriya fiziki i khimii,

no. 4, 1962, 52-55 Mines MEPAS VOL 17 - NO 22

TEXT: An apparatus working on the principle of electroacoustic feedback, able to measure ultrasonic velocity with the transducers in fixed positions is described here. Instead of the ultrasonic propagation velocity, the pulse repetition frequency is measured, i.e. the ultra-sound which has passed the test medium, is amplified, shaped, and again starts up the master pulse generator. The ultrasonic velocity is determined by  $c=d/(1/f + \tau_{\Sigma})$ ,

where d is the distance between the vibrators, f the pulse repetition where d is the distance between the vibrators, f the pulse repetition over frequency,  $\tau_{\sum}$  the total electric and acoustic delay. To allow operation over

a wide range of temperature the measuring cell has two delay rods. To eliminate the effect of the temperature gradient occurring in the delay rods,

Card 1/2

S/054/62/000/004/002/017 B101/B186

Apparatus for measuring the ...

the ultrasonic propagation velocity is measured not only passing through the system but also in the reflection from the rod-fusion interfaces.  $c = 2dff_1f_2/(2f_1f_2 - ff_1 - ff_2)$ , where  $f_1$  and  $f_2$  is the pulse repetition frequency in the two rods. The distance d is calibrated by a liquid of known sound conductivity. The pulse generator delivers negative pulses of 3 µsec duration, 150 v amplitude, starting up a shock generator. Measurements are made with the precisely fixed frequency of 5 Mc/sec. The delay rods consist of fine-grained 1x18H9T (1kh18N9T) steel. A check of the ultrasonic velocity in mercury between -39.2 and +70°C showed good agreement with the data found by 0. J. Kleppa (Ultrasonic velocities of sound in some liquid metals. Adiabatic and isothermal compressibilities of liquid metals at their melting points. Journ. Chem. Phys., 18, 1331, 1950) and E. B. Freyer, J. C. Hubbard, D. W. Andrews (Sonic studies of the physical properties of liquids. Journ. Amer. Chem. Soc., 51, 759, 1929). There are 1 figure and 1 table.

SUBMITTED: May 22, 1962

Card 2/2

"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RD

CIA-RDP86-00513R000

APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00518R0005

L 7808-66 EWT(1)/EWT(m)/EPF(n)-2/EWP(t)/EWP(b)/EED(b)-3/ETC(m) IJP(c) JD/WW

ACC NR. AP5028046 SOURCE CODE: UR/0046/05/011/004/0434/0437

AUTHOR: Gitis, M.B.; Mikhaylov, I.G.

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

TITLE: The speed of sound and the compressibility of some liquid metals

SOURCE: Akusticheskiy zhurnal, v. 11, no. 4, 1965, 434-437

TOPIC TAGS: silver, lead, tin, antimony, bismuth, liquid metal, acoustic speed, electric conductivity, metal property

ABSTRACT: The article reports on the measurement of the speed of sound in the following liquid metals: silver? copper; head; tin; bismuth; and antimony in a broad temperature range. In liquid silver and copper, in the temperature range up to 1400C, the speed of sound depends linearly on the temperature. In lead, tin, bismuth, and antimony the temperature-dependence of the speed of sound and compressibility is more complicated. In lead, for example, starting with a temperature of 900C and above, the temperature coefficient increases smoothly. In antimony, on the other hand, the speed of sound attains a distinct maximum at \$50C. There is a correlation between the character of the temperature-dependence of the speed of sound and the electric conductivity of the metals investigated. Orig. art. has: 4 figures.

SUB CODE: MM, GP / SUBM DATE: 30 Mar65 / ORIG REF: 008 / OTH REF: 004

Card 1/1

UDC: 534.22:546.3

87

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BR0005

I 31522-66 E/T(1)/E/T(m)/ETC(f)/T/E/P(t)/ETI IJP(c) RIM/JD/M/JG
ACC NR: AP6007993 SOURCE CODE: UR/0046/66/012/001/0017/0021

AUTHOR: Gitis, M.B.; Mikhaylov, I.G.

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

TITLE: The relationship between the velocity of sound and electrical conductivity in liquid metals 4

SOURCE: Akusticheskiy zhurnal, v. 12, no. 1, 1966, 17-21

TOPIC TAGS: liquid metal, ultrasonic velocity, electric conductivity, metal property

ABSTRACT: Elsewhere, the authors (Skorost' zvuka i szhimayemosti' nekotorykh zhidkikh metallov. Akustich. zh., 1965, 11, 4, 434—437) described experiments on the measurement of the velocity of propagation of ultrasound in liquid Ag, Cu, Ph, Sn, and Sb. In the present article, the authors present data on the investigation of ultrasonic velocities in several other molten metals, i.e., Tl, In, Ga, Zn, Cd, and Te, A correlation of the electrical and the acoustical data of the liquid metals is observed in the temperature range from the melting point to 950C. An explanation of this phenomenon is presented, based on the Mott theory. Orig. art. has: 4 figures, 1 table, and 3 formulas.

SUB CODE: 11,20 / SUBM DATE: 06Aug65 / ORIG REF: 008 / OTH REF: 003

Card 1/1 2C

UDC: 534,22

#### "APPROVED FOR RELEASE: Tuesday, September 17, 2002

CIA-RDP86-00513R000

ACC NR. AP6021473

SOURCE CODE: UR/0413/66/000/011/0094/0094

INVENTOR: Zhuravel', V. I.; Minakov, V. I.; Bobrov, V. T.; Dimitraki, P. N.; Miki-, forenko, Zh. G.; Budenkov, G. A.; Gitia, M. B.

ORG: None

CITUM: An ultrasonic pulse-shadow immersion flaw detector. Class 42, No. 182390 [amnounced by the All-Union Scientific Research Institute of Nondestructive Methods for Material Quality Control (Vsesoyuznyy nauchno-issledovatel'skiy institut neraz-rushayushchikh metodov kontrolya kachestva materialov)]

SCURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 94.

TOPIC TAGS: flaw detection, ultrasonic flaw detector, quality control

ASSTRACT: This Author's Certificate introduces: 1. An ultrasonic pulse-shadow immersion flaw detector which contains an ultrasonic probe unit, line scanning mechanism, oscillator and ultrasonic amplifier. The unit is designed for increased productivity in checking parts of complex shape. The installation incorporates an electronic unit which generates a control signal after the ultrasonic probe unit passes beyond the outline of the part being checked. This signal controls the line scanning beyond the outline of the part being checked. This signal controls the line scanning beyond the outline of the part being checked. This signal controls the line scanning beyond the outline of the part being checked. This signal controls the samplifier. 2. A mechanism and temporarily disconnects the receiving head from the amplifier.

Card 1/2

UDC: 620:179.16.08

"APPROVED FOR RELEASE: Tuesday, September 17, 2002

CIA-RDP86-00513R000

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ACC NR. AP6021473

way that when there is a single pair of ultrasonic probes in the installation the receiver head is disconnected from the amplifier during the period when the probe unit is returning to the article being checked. 3. A modification of this flav detector in which the electronic unit is made in such a way that when there are two pairs of ultrasonic probes located one behind the other along their line of motion in the installation, the receiver head disconnected from the amplifier is the one which first passes beyond the outline of the part being checked. This receiver head is connected when the second pair of probes passes beyond the outline of the part on the return travel of the probe unit.

SUB CODE: 69, 13/ SUBN DATE: 07Dec64

Cord 2/2

**■**R0005

GITIS, M.I., inzhener.

Float gauge for determining the volume of bitumen and tar in a cauldron. Rats.i izobr.predl.v stroi. no.57:9-10 '53. (MLRA 7:2) (Volumetric apparatus) (Bitumen)

GITIS, M.K., prof.; KASHKAREVA, A.P.

Arteries and veins of the sternum. Khirurgiia 34 no.12:55-60 D '58. (MI3A 12:1)

l. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - prof. M.K. Gitis) Omskogo meditsinskogo instituta imeni M.I. Kalinina. (STERNUM, blood supply arteries & veins (Rus))

CIA-RDP86-02518R0005

CITIS, S.

Expenses should be planned correctly. Sov. torg. 35 no.12:29 D '61. (MIRA 14:11)

1. Nachal'nik planovo-finansovogo otdela Gorodskogo upravleniya torgovli, g. Chelyabina. (Restaurants, lunchrooms, etc.—Accounting)

\*\*Photocoloquettis determination of Manual Manual City (1985) 1. T. L. Brown of Manual Manual City (1985) 1. T. L. Brown of Manual Manual City (1985) 1. T. L. Brown of Manual Manual City (1985) 1. T. L. Brown of Manual Manual City (1985) 1. T. L. Brown of Manual Manual City (1985) 1. T. Rapper (1985) 1. T

# "APPROVED FOR RELEASE: Tuesday, September 17, 2002 APPROVED FOR RELEASE: Tuesday, September 17, 2002

CIA-RDP86-00513R000 CIA-RDP86-00518R0005

GITIS, S.S.; GIAZ, A.I.

Reactions of aromatic nitro compounds. Part 2: Reaction of trinitroanisole and trinitrophenetole with alcoholates. Zhur. ob.khim. 27 no.7:1897-1900 Jl '57. (MIRA 10:10)

## "APPROVED FOR RELEASE: Tuesday, September 17, 2002 <del>, September 17, 2002</del>

CIA-RDP86-00513R000 CIA-RDP86-0 **≛**3R0005

:CHOETUA

Gitis, S. S., Glaz, A. I.

79-26-5-50/69

(P) 型流出:

Reactions of Aromatic Nitrocompounds (Reaktsii aromaticheskikh

III. New Synthesis Method of the Alkyl-Ethers of 2,4-Dinitrophenol (III Novyy sposob polucheniya alkilinykh

efirov 2,4-dimitrofenola)

PERFODICAL:

Zhurnal Obshchey Khimii, 1958, Vol., 28, Nr 5,

ppe 1334-1336 (USSR)

ABSTRACT:

Complementary to the syntheses elaborated in three different ways by foreign scientists with respect to the 2,4dinitrophenolether (refs 1-5), the authors recently showed (ref 6) that the methoxy group in 2,4,6-trinitrounisole can be easily replaced by other alkoxy groups. Starting from this a number of investigations were carried out also with 2,4-dinitroanisole in order to convert it into other ethers. This conversion takes place It is assumed that also in the case the reaction takes place according to the mechanism proposed by the authors (ref 6). This way the ethyl-n-propyl-, n-butyl-, primaryisobutyl- and primary iscamylethers of 2,4-limitrophenol

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Reactions of Aromatic Nitrocompounds. 79-26-3-50/69 III. New Synthesis Method of the Alkyl-Ethers of 2,4-Sinitrophenol

were obtained from 2,4-dimitroanisole in good yields. It is of interest that the isopropylether can not be obtained according to this method as the colored intermediate product is not decomposed by water. Apparently the ramified isopropyl group does not settle near the methoxy group and takes the orthoposition to the nitro group, which itself is in the position 4; this excludes the possibility of a displacement of the methoxy group (see scheme). This method given by the authors has its advantage compared to those mentioned in publications. The 2,4-dimitrophenolethers are obtained in pure crystall ne state and correspond almost completely to the constants from other publications. There are 1 table and 0 references, 1 of which is Soviet.

AMSOCIATION: Enepropetriwskiy posusaratvennyy universitet (Daspropetrovsk State University)

SHOWLFFRD: april 5, 1957

Card 2/2

SOV/79-28-8-55/66

AUTHORS:

Gitis, S. S., Malinovskiy, M. S., Glaz, A. I.

TITLE:

Reactions of the Aromatic Nitro Compounds (Reaktsii aromati... cheskikh nitrosoyedineniy) IV. The Re-Alkylation Reaction of the 2,4-Dinitrophenol Ethers (IV. O reaktsii perealkilirovaniya

efirov 2,4-dinitrofenola)

PERIODICAL:

Zhurnal obshchey khimii, 1958, Vol. 28, Nr 8, pp. 2262-2264

(USSR)

ABSTRACT:

In this paper the re-alkylation of not only 2,4-dinitroanisole is reported, as was the case with an earlier paper by the authors (Ref 1), but also that of other alkyl ethers of 2,4dinitrophenol. In the substitution of one alkoxy group for another the authors found it to be a regular occurrence that the alkoxy group was displaced with a greater negative induction effect. It was found that by re-alkylation the following conpounds can be obtained in good yield: 2,4-dinitroanisole from the  $\beta$ -oxyethylether of 2,4-dinitrophenol; 2,4-dinitrophenetol from 2,4-dinitroanisole; the n-propyl ether of 2,4-dinitrophenol from 2,4-dinitrophenetol; the n-butyl ether of 2,4-dinitrophenol from the n-propyl ether of 2,4-dinitrophenol; the

Card 1/3

CIA-RDP86-00513R000 CIA-RDP86-BR0005

SOV/79-28-8-55/66 Reactions of the Aromatic Nitro Compounds. IV. The Re-Alkylation Reaction of the 2,4-Dinitrophenol Ethers

primary isobutyl ether of 2,4-dinitrophenol from the n-butyl ether of 2,4-dinitrophenol; the primary isoamyl ether of 2,4dinitrophenol from the primary isobutyl ether of 2,4-dinitrophenol. From 2,4-dinitrophenetol, however, 2,4-dinitroanisole could not be obtained, and so forth. The alkoxy groups can be arranged in the following order according to the strength of their substitution effect: primary iso-C5H110 > primary iso-

 $c_4H_90$  >  $n-c_4H_90$  >  $n-c_5H_70$  >  $c_2H_50$  >  $c_4H_90$  >  $n-c_4H_90$  >  $n-c_5H_70$  >  $n-c_5H_90$  >  $n-c_5H$ in complete agreement with the data on the strengths of alkoxyacetic acids (Ref 4). The reaction occurs at room temperature over the period of one hour. Upon warming the solution a complete saponification takes place with the formation of dimitrophenylate (Table 1). The constants of the solid and liquid ethers obtained are given in table 2. There are 2 tables and 6 references, 2 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

Card 2/3

SOV/79-29-8-41/81

BR0005

5(3) AUTHORS:

TITLE:

Gitis, S. S., Rapchinskaya, S. Ye.

Reactions of Aromatic Nitro Compounds. V. Re-etherification of

Alkyl- and Aryl Ethers of 2,4-Dinitrophenol

PERIODICAL: Zharnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2646-2646 (USSR)

ABSTRACT:

As Gitis and coworkers had previously stated (Ref 1), the substitution of one alkoxy-group for another in the alkyl ethers of 2,4-dinitrophenol takes place in such a way that the alkoxy group is displaced which exerts a higher negative inductive effect. It suggested itself to detect this phenomenon also in other composed alkyl- and aryl ethers, It was the purpose of the present paper to obtain, by re-etherification, the corresponding alkyl- and aryl ethers of 2,4-dinitrophenol, and to establish an order of the alkoxy- and aryloxy-groups in dependence on their electrodonor properties. The syntheses indicated that the glycol ether can only be obtained from the phenyl ether, the allyl ether from the phenyl- and glycol ether,

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the benzyl ether from the phenyl-, glycol- and alkyl ether. Dinitroanisole is formed from phenyl-, glycol-, allyl- and

Reactions of Aromatic Nitro Compounds. V. Re-etherification SOV/79-29-8-41/5 of Alkyl- and Aryl Ethers of 2,4-Dinitrophenol

benzyl ether. Furfuryl ether can be obtained from all these ethers and also from the primary isoamyl ether of 2,4-dinitrophenol. The following gradation order of the alkoxy- and aryloxy-groups can thus be established according to the intensity of the substituting effect:

From 2,4-dinitrothioanisole, neither 2,4-dinitroanisole nor glycol- or phenyl ether could be obtained, unexpectedly. In all cases, only the unchanged 2,4-dinitrothioaniscle resulted, which can be explained by the different relationship of cxygen and sulfur to the electron in the groups OCH<sub>3</sub> and SCH<sub>3</sub>. In this

way, the carbon atom (in 2,4-dinitroanisole), to which the methoxy group is bound, really becomes a positive atom owing to the electroacceptor effect of the nitro groups. There are

Card 2/3

Reactions of Aromatic Nitro Compounds. V. Re-etherification SOV/79-29-8-41/8: of Alkyl- and Aryl Ethers of 2,4-Dinitrophenol

1 table and 4 references, 2 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Lnepropetrovsk State University)

SUBMITTED: July 14, 1958

Card 3/3

**BR0005** 

5(3), 5(4)AUTHORS:

Gitis, S. S., Tranov-Krasovskiy, V. I.

507/79-29-8-42/81

TITLE:

Reactions of the Aromatic Nitro Compounds. VI. On the Mechanism of the Re-etherification Reaction of Ethers of 2,4-Dinitrophenol

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2648-2651 (USSR)

ABSTRACT:

In the papers available (Ref 1) it was assumed that the reetherification of the alkyl ethers of 2,4,6-trinitro- and 2,4-dinitrophenol takes place according to mechanism A. It can, however, also proceed according to scheme B which excludes the formation of the affiliation product (II). In order to investigate according to what mechanism this reaction would have to take place, such model molecules must be chosen which allow only one of the two alternatives. If mechanism A is taken into consideration, the 3-methoxy-4,6-dinitrotoluene would have to yield, on re-etherification, the 3-ethoxy-4,6-dinitrotoluere. since the methyl group causes the addition of the alkoxy group to the carbon atom of the benzene nucleus in which it is placed (Scheme 2). Mechanism B being under consideration, the initial product would have to separate out, since the meta-position to the methoxy group is occupied by the methyl group. On re-etheri-

Card 1/2

Reactions of the Aromatic Nitro Compounds. VI. On the SCT/79-29-8-42/81 Mechanism of the Re-etherification Reaction of Ethers of 2,4-Limitrophenol

fication of (V), however, compound (VII) was formed which confirms mechanism A. The reaction of 1,3-dimethoxy-4,6-dinitrobenzene can also take place according to mechanism A (Scheme 3). The re-etherification produced 1,3-diethoxy-, dipropoxy-, dibutoxy-, and diamoxy-4,6-dimitrobenzene. The readiness of this course of reaction in all cases indicates that the extension of the chain of the normal radical of the alkoxy group does not hinder the reaction. A new method of synthesizing the alkyl ether of 4,6-dimitroresorcinol was suggested. The re-etherification of ethers of 2,4-dimitro-, and 2,4,6-trinitrophenol was thus shown to proceed via the stage of formation of the intermediate product of the quinol type (Mechanism A). There are 1 table and 6 references, 3 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

SUBMITTED: July 14, 1958

Card 2/2

CIA-RDP86-00513R000 CIA-RDP86-00513R0005

5(3) AUTHORS: SOV/79-29-9-39/76
Gitis, S. S., Oksengendler, G. M. (Deceased), Kaminskiy, A. Yu.

TITLE:

Reactions of the Aromatic Witro Compounds. VII. The Absorption Spectra of the Products of Yanovskiy's Reaction

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, hr 9, pp 2983-2988 (USDR)

ABSTRACT:

In one of the previous papers the authors showed that acctone adds to the polynitro compounds in enol form and that the colored final products of Yanovskiy's reaction are in free state only separable from indifferent solvents. As a result of the instability of these compounds, it is extremely difficult to investigate their structure and mechanism of formation thoroughly by the usual methods. The evaluation of the absorption spectra in the visible range yields the best results. Thus, A. I. Shatenshteyn and co-workers (Tef 2) found that Yanovskiy's reaction has an acid-basic character. The absorption spectra of a number of compounds resulting from Yanovskiy's reaction were described by M. I. Newlands and F. Wild (Ref 3/. By means of absorption spectra the structure of the addition products of acetone to several polynitro compounds in alkaline medium was found in the present investigation. The authors synthesized all

Card 1/2

Reactions of the Aromatic Nitro Compounds. VII. The Absorption Spectra of the Products of Yanovskiy's Reaction

initial polynitro compounds and purified them by repeated recrystallization. It was shown that the color of the dinitro compounds according to Yanovskiy's reaction is due to the formation of monocomplexes (the constants of which are given by the table). The authors assume (Ref 1) that the reactions of m-dinitro-benzene and some of its derivatives with acetone yield two monosalts (I), (II), and one disalt (III) in the presence of caustic potash. The color of the trinitro compounds is due to the formation of mono- or disalt. It is only in trinitro-benzene that the trisalt plays a certain part with respect to color. There are 4 figures, 1 table, and 4 references, 2 of which are

ASSOCIATION:

Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

SUBMITTED:

July 14, 1958

Card 2/2

BR0005

GITIS SS

#### PHASE I BOOK EXPLOITATION

S07/4534

Hitis, Semen Semenovych (Gitis, Semen Semenovich), and Volodymyr Wasse Aleksyeyev (Vladimir Vasil'yevich Alekseyev)

Plastychni masy ta ikh zastosuvannya (Plastics and Their Uses) Kiyara. 1966. 58 p. (Series: Tovarystvo dlya poshyrennya politychnykh i made a ki iraki Ukrayins'koyi RSR, Seriya 7, no. 7) 18,000 copies printed.

Ed.: A. S. Teplyakova; Resp. Ed.: Yu. A. Kokhno.

PERPOSE: This Ukrainian booklet is intended for the general meader.

COVERAGE: The author: liscuss in simple language the basic properties of plastics, the raw entertals and methods for their production, and their cases in the national economy. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

What Plastics Are

Card 1/2

CIA-RDP86-00513R000

PROVED FOR RELEASE. Turoday, September 17, 2002 CIA RDP06-1051

GITIS, S.S.; MALINOVSKIY, M.S.; PROKHODA, A.M.; SRIBMAYA, V.P.

Reactions of aromatic nitro compounds. Part 8: Interesterification of alkyl esters of nitro (methylsulfonyl)phenols. Zhur. ob. khim. 30 no.9:3072-3074 S '60. (MIRA 13:9)

1. Dnepropetrovskiy gosudarstvennyy universitet.
(Phenols) (Nitro compounds)

### "APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000 APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R0005

GITIS, S.S.; GLAZ, A.I.

Reactions of aromatic ntire compounds. Fart 9: Steric hindrance effects in nucleophilic substitution. Zhur. ob. khim. 30 no.11: 3807-3810 N'60. (MIRA 13:11)

 Dnepropetrovskiy gosudarstvennyy universitet. (Substitution (Chemistry)) (Steric hindrance) (Nitro compounds)

CIA-RDP86-00513R000

CIA-RDP86-00548R0005

GITIS, S.S.; KAMINSKIY, A.Ya.

Reactions of aromatic nitro compounds. Part 10: Structure of the products of the IAnovskii reaction as studied by their absorption spectra. Zhur. ob. khim. 30 no.11:3810-3817 N'60. (MIRA 13:11)

 Dnepropetrovskiy gosudarstvennyy universitet. (Nitro compounds)

.2

## "APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000

GITIS, S.S.; TERESHKEVICH, M.O.; GARUS, L.I.; GLAZ, A.I.; SKARRE, O.K.

Reactions of aromatic nitro compounds. Fart 11: Study of reesterification using the isotope method. Zhur.ob.khim. 31 no.9:2902-2904 S \*61. (Esterification) (Nitr) compounds)

CIA-RDP86-00513R000 CIA-RDP86-00518R0005

GITIS, S.S.; PISKUNOVA, Zh.P.

Reactions of aromatic nitro compounds. Part 12: New method of preparing alkyl ethers of 2, 4-dinitrothiophenol. Zhur.ob.khim. (MIRA 14:10) 31 no.10:3400-3401 0 '61.

1. Dnepropetrovskiy gosudarstvennyy universitet.
(Nitro compounds)

CIA-RDP86-00513R000 CIA-RDP86-00513R0005

GITIS, S.S.; GRAGEROV, I.P.; GLAZ, A.I.

Reactions of aromatic nitro compounds. Part 13: Isotopic method of studying addition products of alcoholates to trinitroanisole. Chur.ob.khim. 32 no.9:2803-2805 S 162. (MIRA 15:9)

1. Institut fizicheskoy khimii imeni D.V. Pisarzhevskogo AN UKrSSR.

(Alcoholates) (Anisole)

CIA-RDP86-CAELBR0005

GITIS, S.S.; KAMENSKIY, A.Ya.

Relationship between color and structure in Ianovskii reaction products. Dokl.AN SSSR 144 no.4:785-787 Je '62. (MIRA 15:5)

1. Novomoskovskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta azotnoy promyshlennosti i produktov organicheskogo sinteza. Predstavleno akademikom A.N.Tereninym.

(Nitro compounds—Spectra)

CIA-RDP86-00513R000

CIA-RDP86-20513R0005

GITIS, S.S.; GLAZ, A.I.

Reactions of aromatic nitro compounds. Part 15:
Re-esterification of alkyl esters of nitronaphthols.
Zhur.ob.khim. 33 no.3:902-904 Mr '63. (MIRA 16:3)
(Naphthol)
(Nitro compounds) (Esterification)

TA-RDP06-00518R0005

GITIS, S. S., GLAZ, A. I., YAGUPOL'SKTY, L. M.

Reactions of aromatic nitro compounds. Part 14: Effect of some electron acceptor groups on the reaction of re-esterification. Zhur. ob. khim. 33 no.1:138-141 163. (MIRA 16:1)

1. Institut organicheskoy khimii AN UkrSSR.

(Esterification) (Nitro compounds)

**BR0005** 

GITIS, S.S.; KAMINSKIY, A.Ya.

Reactions of aromatic nitro compounds. Part 16: Preparation of the Janovsky reaction products. Zhur.ob.khim. 33 nc.10: 3297-3300 0 '63. (MIRA 16:11)

<del>IA-RDP06-2251</del>8R0005

GITIS, S.S.; GIAZ, A.I.; KAMINGGIY, A.Ya.

Reactions of aromatic nitro compounds. Part 17: Products of addition of alcoholates to dimitroanisole. Zhur.ob.khim. 33 no.10: 3301-3303 0 163. (MIRA 16:11)

GITIS, S.S.; L'VOVICH, I.G.

Reactions of aromatic nitro compounds. Part 18:Mechanism of cleavage of a nitro group in symmetrical trinitrobenzene. Zhur. ob. khim. 34 no.7:2250-2254 Jl '64 (MIRA 17:8)

### "APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000 APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R0005

GITIS, S.S.; IVANOV, A.V.

Reactions of aromatic nitro compounds. Part 19: Effect of the substituents on the re-etherification of aryl ethers of 2,4-dinitrophenol. Zhur. ob. khim. 34 no.10:3390-3392 C 164. (MIRA 17:11)

1. Novomoskovskiy filial Gosudarstvennogo instituta azctnoy promyshlennosti.

**₩**R0005

KAMINSKIY, A. Ya.; GITIS, S.S.

Reactions of arometic nitro compounds. Part 21: Structure of products of the Janovsky reaction. Zhur. ob. khim. 34 no.11: 3743-3747 N \*64 (MIRA 18:1)

## "APPROVED FOR RELEASE: Tuesday, September 17, 2002 APPROVED FOR RELEASE: Tuesday, September 17, 2002

CIA-RDP86-00513R000 CIA-RDP86-00513R0005

ALEKSANDROV, V.N.; GITIS, S.S.; COLUBEV, G.S.; PANKOVA, N.A.

Studying the catalytic activity of the cobalt salts of aliphatic monobasic acids in the oxidation of p-xylene. Khim. nrom. 41 no.5:336-337 My '65. (MIRA 18:6)

BR0005

GITIS, S.S.; IVANOVA, V.M.

Reactions of aromatic nitro compounds. Part 23: Remeaterification of benzyl ethers of 2,4-dinitrophenol. Zhur. org. khim. 1 no.8:1437-1439 Ag '65. (MIRA 18:11)

1. Novomoskovskiy filial Gosudarstvennego instituta azetnoy promyshlennosti i preduktov organicheskogo sinteza.

CIA-RDP86-00513R000

CIA-RDP86-00518R0005

L 14202-66 EMT(n)/EMP(j) RM

ACC NR: AP6002861

SOURCE CODE: UR/0286/55/000/024/0018/0019

 $\eta = e^{-i \pi i}$ 

INVENTOR: Gitis, S. S.; Aleksandrov, V. N.; Pugacheva, S. A.; Glaz, A. I.; Golubev, G. S.; Rad'Ro, L. V.

ORG: none

TITLE: Preparative method for iso- and tere-phthaloyl chlorides. Class 12, No. 176884 [announced by Novomoskovskiy Branch of the State Scientific Research and Design Institute of the Nitrogen Industry and Products of Organic Synthesis (Novomoskovskiy filial gosudarstvennogo nauchno-issledovatel skogo i proyektnogo institut azotnoy promyshlennosti i produktov organicheskogo sinteza)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965,18-19

TOPIC TAGS: isophthaloyl chloride, terephthaloyl chloride

ABSTRACT: An Author Certificate has been issued for a preparative method for isoand tere-phthaloyl chlorides. The method involves treatment of methyl m- or p-toluate, respectively, with dry chlorine at 190-2000 under UV light, followed by treatment of the chloride product with water. [SH]

SUB CODE: 07/ SUBM DATE: 06Feb65/ ATD PRESS:4/93

Card 1/1 9

○ UDC: 547.5841582.2.07

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"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000 BR0005

CIA-RDP86-09 PAT (III) PAP (J) JW/RM ACC NR: AP6035826 UR/0413/66/000/020/0035/0035 SOURCE CODE: INVENTOR: Gitis, S. S.; Ivanova, V. M.; Nemleva, S. A.; Seina, Z. N.; Ivanov, A. V. ORG: none TITLE: Preparative method for pyromellitimide. B Class 12, No. 187006 SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 35 TOPIC TAGS: pyromellitimide, pyromellitic anhydride, urea, chemical synthesis ABSTRACT: An Author Certificate has been issued for a method of preparing pyromellitimide from pyromellitic anhydride. To ensure an increased yield, the method provides for treatment of pyromellitic anhydride with urea in a boiling solvent (e.g., acetic acid), followed by the separation of the precipitate. SUB CODE: 07/ SUBM DATE: 080ct65/ ATD PRESS: 5104

Card 1/1 LS

547.557.1' 1585.07

CIA-RDP86-00513R000

ACC NR. AP6029051 (A) SOUTHE CODE: UR/0413/66/000/014/0060/0080

INVENTORS: Kudryayevtsev, G. I.; Tokarev, A. V.; Gitis, S. S.; Ivanova, V. M.; Seina, Z. N.; Lyubova, T. A.; Nemleva, S. A.

ORG: none

TITLE: A method for obtaining modified polyethyleneterephthalate. Class 39, No. 183936 Amounced by All-Union Scientific Research Institute of Synthetic Fibers (Vsesoyuznyy nauchno-issledovateliskiy institut iskusstvennogo volokna)

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 80

TOPIC TAGS: polyethyleno plantic, chemical synthesis

ABSTRACT: This Author Certificate presents a method for obtaining a modified polyethylene terephthalate by introducing modifying ingredients in the course of its synthesis. To increase the heat resistance of the polymor and of its products, the bifunctional derivatives of pyromallitimide (for instance,  $N_1N^2$ —(bis-ethoxy)pyromallitimide or  $N_1N^2$ —bis-acetylpyromallitimide is used as the modifying addendum.

SUB CODE: 11/ SUBN DATE: 02Jul65

Card 1/1

HIDC . 478 471, POL 1100 0

BR0005

VINOKUROVA, M.D., rabotnik pavil'ona,; GALKINA, A.G., rabotnik pavil'ona,;
-GITIS, Ya, Ye., rabotnik pavil'ona,; DERGACHEVA, V.I., rabotnik pavil'ona;
ZAK, R.G., rabotnik pavil'ona,; RAKSHA, N.A., rabotnik pavil'ona,;
SALEY, Ye.A., rabotnik pavil'ona,; TARAKAHOV, G.N., rabotnik pavil'ona,;
TOMASHUK, F.A., otv. red.; DMITRIYEVA, L.A., red.; LUKINA, L Ye.,
tekhn, red.

[Far East] Dal'nii Vostok. Moskva, Izd-vo "Sovetskaia Equatia,"
1958. 109 p. (MIRA 11:12)
(Soviet Far East--Agriculture)

CIA-RDP86-00513R000

1. SPASOKUKOTS'KYY, YU.O., Prof.; GITIE, YE.I.

- 2. USSR (600)
- 4. Connective Tissues
- 7. Functional state of the physiological system of connective times in grippe, Frof. YU. O. Spasokutots'kyy; YE.1. Sitis, Pedych.whur. 22 no. 1, 1962.

9. Monthly List of Russian Accessions, Library of Congress, AFRIL 1953, Uncl.

BR0005

SPASOKUKOTSKIY, Yu.A.; QITIS, Yo.I.

Indexes of the reactivity of the organism in animals of different age groups and changes during transfusions of isogenous blood. Fiziol. shur. [Ukr.] 2 no.1:58-66 Ja-F 156. (MIRE 10:1)

GITIS, Ye. I.: Master Med Sci (diss) -- "The effect of transfusing isogenous blood and BK-8 protein blood substitute on the functional state of the cerebral cortex (Experimental investigation)". Kiev, 1958. 12 pp (Acad Sci USSR, Inst of Higher Nervous Activity, Kiev Sci Rec Inst of Blood Transfusion and Emergency Surgery), 150 comies (KL, No 1, 1959, 127)

**BR0005** 

#### GITIS, Ye.I.

Effect of transfusing blood and protein plasma substitute BK-8 on the higher nervous activity in white rats [with summary in English].

Zhur.vys.nerv.deint. 8 no.3:418-430 My-Je 158 (MIRA 11:8)

1. Laboratoriya patofiziologii Kiyevskogo instituta perelivaniya krovi.

(CENTRAL NERVOUS SYSTEM, physiology,
higher nerv, activity, eff. of blood transfusion &
protein hydrolysate BK-8 in rats (Hus))
(BLOOD TRANSFUSION, effects,
on higher nerv, activity in rats (Hus))
(AMINO ACID MIXTUR'3S, effects,
protein hydrolysate BK-8, on higher nerv, activity
in rats (Hus))

### "APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000 APPROVED FOR RELEASE. Tuesday, September 17, 2002 CIA-RDP86-00513R0005

SPASOKUKOTSKIY, Yu.A.; CHERNOGOROVA, Z.L.; GRINCHENKO, A.N.: YEL'YASHKEVICH, E.S.; GITIS, Ya.I.; SHMUSHKO, R.Ya.; SARNITSKIY, I.P.

Effect of the BK-8 protein blood substitute on the process of blood coagulation in dogs during a stomach resection. Trudy Kiev. nauch.-issl. inst. perel. krovi i neotlozh. khir. 3:120-128 \*61.

(MIRA 17:10)

CIA-RDP86-00513R000

P06-20518R0005

GITIS, Italy CANBURG, D.Ye.

Immunology cal reactivity of the body of burn patients f. lowing said supportantly. Commat. a perel- knowl > 28 115 850.

(MIRA 18 10)

1. Rijevskiy institut peresissasya know's

GITKIN, S.

Order of the fixing of pensions for meritoricus service for medical and pharmaceutical personnel employed in medical establishments and durgstores. Zdrav.Belor. 6 no.2:79 F 160.

(MIRA 13:6)

l. Zamestitel' nachal'nika Planovo-finansovogo upravleniya Minzdrava BSSR.

(MEDICAL PERSONNEL--PENSIONS)

CIA-RDP86-00513R000 CIA-RDP86-00513R0005

GITKIN, S.

Legal consultation. Zdrav. Belor. 6 no.4:72 Ap '60. (MIRA 14:5)

1. Zamestitel' nachal'rika Planovo-finansovogo Upravleniya Minzdra va BSSR. (EMPLOYEES, DISMISSAL OF)

**2051**3R0005

GITKIN, S.

Legal consultation. Zdrav. Bel. 6 no.12:68 D '60. (MIRA 14:1)

1. Zamestitel' nachal'nika Planove-finansovogo upravleniya. Ministerstra zaravookhraneniya BSSR. (MEDICAL PERSONNEL)

BR0005

CITKIN, S.

Legal consultation. Zdrav. Bel. 7 no.3:79 Mr '61. (MIRA 14:3)

1. Zamestitel' nachal'nika Planovo-finansovogo upravlemiya Minzdrava BSSR.

(MEDICAL PERSONNEL)

BR0005

SKLYUT, I.; GITKINA, L.

Second United Conference of Young Neurosurgeons. 2drav.Belor. 5
no.12:64-65 D '59. (MIRA 13:4)
(NERYOUS SYSTEM--SURGERY)

**■**3R0005

GITKINA, L.S.; POLESSKAYA, L.P.

Recurrent paralysis with involvement principally of the oculomotor area. Zdrav.Belor. 3 no.10:27-29 0 57. (MIRA 13:6)

1. Belorusskiy nauchno-issledovatel'skiy institut nevrologii, neyrokhirurgii i fizioterapii (direktor - Ye.F. Kalitovskiy, nauchnyy rukovoditel' - professor D.A. Markov).

(EYE-DISHASES AND DEFECTS)

"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000 - Tuesday, September 17, 2002 EXCERPTA MEDICA Sec.8 Vol.11/5 Neuro-Psychiat.May 58 2436. EARLY (INFANTILE) FORMS OF DISSEMINATED SCLEROSIS (Russian text) - Gitkina L.S. - ZDRAV. BELORUSSII 1956, 10 (23-25)

The history is cited of 3 rare cases of disseminated sclerosis in children aged 7 and 15. They were diagnosed on the following symptoms: staccato speech, intention tremor, temporal pallor of optic discs, concentric contraction of the visual fields for colour, weakness of abdominal reflexes and increased tendor reflexes in the upper limbs. The disease ran a progressive course with remissions. (S)

BR0005

CIA-RDP86-00513R000 CIA-RDP86-00518R0005

GITKINA, L.S.

Comparative evaluation of various methods for studying thyroid function in diseases of the nervous system. Dokl. AN BSSE 4 no. 5:226-228 My '60. (MIRA 13:10)

1. Belorusskiy gosudarstvennyy institut usovershenstvovaniya vrachey. Predstavleno akademikom AH BSSR D.A.Markovym. (THYROID GIAND) (NERVOUS SYSTEM—DISEASES)

**BR0005** 

GITKINA, L.S., assistent

Characteristic changes in the function of the thyroid gland in patients Characteristic changes in the lunction with brain tumors. Zdrav. Belov. 6 no.6:46-50 Je \*60. (MIRA 13:8)

l. Iz kafedry nervnykh bolemney Belorusskogo gosudarstvennogo institute usevershenstvovaniya vrachey (zav. - akad. AN BSSR D.A. Markov) i Belorusskogo nauchno-issledovatel'skogo instituta nevrologii, neyro kh!rurgii i fizioterapii.

(THYROID GLAND)

(BRAIN-TUMORS)

"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000

GITKINA, L. S., CAND MED SCI, "FUNCTIONAL CONDITION

OF THE THYROID TEAMS IN CERTAIN DISEASES OF THE NERYOUS

SYSTEM." MINSK, 1961. (MINSK MED INST). (KL, 3-61,231).

# "APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000 CIA-RDP86-00513R000 CIA-RDP86-00513R0005

ZLOTNIK, E.I.; GITKINA, L.S. (Minsk)

Syndrome of transitory vertebral-basilar insufficiency in lateral displacement of the vertebral artery orifice. Vop. neirokhir. 27 no.1:44-46 Ja-F '63.

1. Neyrokhirurgicheskoye otdeleniye Belorusskogo nauchno-issledovatel'skogo instituta nevrologii, neyrokhirurgii i fizioterapii i kafedra nervnych bolezney Belorusskogo instituta usovershenstvovaniya vrachey. (VERTEERAL ARTERY-DISEASES) (BASILAR ARTERY-DISEASES)

BR0005

ZLOTNIK, E.I.; GITKINA, L.S.

Clinical aspects and diagnosis of lesions of the extracranial portion of the vertebral artery. Thur. nevr. i psikh. 65 no.5:662-666 165. (MIRA 18:5)

1. Neyrokhirurgicheskoye otdelenive (zaveduyushchiy E.I.Zlotnik) Belorusskogo nauchno-issledovatel'skogo instituta nevrologii, neyrokhirurgii i fizioterapii (direktor I.P.Antonov) i kafedra nervnykh bolezney (zaveduyushchiy - prof. D.A.Markow) Belorusskogo instituta usovershenstvovaniya vrachey (direktor - dotsent N. Ye. Savchenko), Minsk.

CIA-RDP86-00513R000

DIA RDP06-20518R0005

GITKIS, R.G., inzh.

Problems concerning the design of electric drives with synchronous electric meters. Prem. energ. 18 no.7:25-28 J1 '63. (MIRA 16:9) (Electric driving) (Electric meters, Synchronous)

<del>r Tuesday, September 17, 2002</del>

CIA-RDP86-00513R000 CIA-RDP86-00513R0005

SIZYKH, Glafira Ivanovna; GAVRILOVA, Yuliya Pavlovna; LEONT'YEV,
Andrey Pavlovich; CHERNICHKOV, Viktor Stepanovich; KHANDROS,
Gersh Moshkovich; PODTSUTEVA, Lidiya Mikhaylovna; YANKIK,
Sergey Mikhaylovich; GITKOVICH, V.K., inzh., red.;
MEDVEDEVA, M.A., tekhn. red.

[Advanced work methods for workers engaged in freight operations] Peredovye metody truda rabotnikov gruzovogo khoziaistva.

Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va mutei soobshcheniia, 1961. 91 p.

(MIRA 15:3)

(Materials handling)

(Railroads--Freight)

CIA-RDP86-00513R000 CIA-RDP86-00513R0005

TSAMENKO, Anatoliy Petrovich; AKSENOV, I.Ya., kand. tekhn. nauk, retsenzent; BERNGARD, K.A., prof., doktor tekhn.nauk, retsenzont; GITKOVICH, V.K., red.; USENKO, L.A., tekhn.

[A train takes off]Poezd otpravliaetsia v put'. Moskva, Transzheldorizdet, 1962. 141 p. (MIFA 15:10) (Railroads)

CIA-RDP86-00513R000 CIA-RDP86-00518R0005

FRANZ, Maksymilian; ERTYZANIAS, Car blaw; SITIER, Paward

Experiment in separating germanium from flue dist, coal, and pyrite ashes. Chemia stosow 2 no. 1:39-43 '64.

l. Department of Apolloi Chumistry, A.Kiekiewich University, Fourant

CIA-RDP86-00513R000

- CIA-RDP06-00E18R0005

GITLEVICH, A.D.

[Technical standardisation of arc velding processes in machinery construction] Tekhnicheskoe normirovanie protessati dugovoi elektrosvarki v mashinostroenii. Moskva, Mashgiz, 1954. 212 p. (MLRA 8:1D)

**≝**R0005

LEKANOV, A.G., inzhener; GITLEVICH, A.D., inzhener

APPROVED FOR RELEASER TAXISA

Mechanized welding of spherical petroleum storage tank bottoms. Svar. proizv. no.3:23-24 Mr '55. (MLRA 8:9)

1. Vsesoyuznyy proyektno-tekhnologicheskiy institut Ministerstva tyazhelogo mashinostroyeniya
(Tanks--Welding)

CIA-RDP86-00513R000

APPROVED FOR RELEASE. Tuesday, September 17, 2002 CIA RDP06 00518R0005

ZHIVOTINSKIY, L.A., inzhener; LEKANOV, A.G., inzhener; GITEVICH, A.D., inzhener

Mechanizing welding operations in shell construction. Svar. proizv. no.7:24-25 J1 155. (HIRA 8:9)

1. Vsesoyuznyy proyektno-tekhnologicheskiy institut. (Boilers--Welding)

## "APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000

Girrerien, A.D

135-4.5/15

SUBJECT:

USSR/Welding.

AUTHORS:

Siniteyn, A.M., Engineer, Belov, V.Ya, Engineer, and Gitlevich,

A.D., Engineer.

TITLE:

Production-Line Manufacturing of Overhead Traveling Crane End Beams. (Potochnaya liniga proizvodstva kontsevykh balok

mostovykh kranov).

PERIODICAL:

"Svarochnoye Proizvodstvo", 1957, # 4, pp 18-21 (USSR)

ABSTRACT:

The article describes the first production line in the USSR for assembling by welding major component parts of overhead traveling cranes. The All-Union Designing-Technological Institute (BNTM) presently works on mechanizing the entire assembling process of these cranes. The authors emphasize the fact that there are presently - as a rule - no specialized work stands and fixtures for assembling available, and the semi-automatic and automatic welding methods are not being sufficiently applied.

The described production line consists of 8 work stands, all of which are described and shown in illustrations.

Card 1/2

"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000
APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R0005

OF TLEVEN N A D

SUBJECT:

USSR/Welding

135-5-5/14

AUTHORS:

Tamarin, A.M., Engineer, Gitlevich, A.D., Engineer, and

Krivenko, N.M., Engineer.

TITLE:

Automatic Butt-Welding of Beams for Overhead Traveling Cranes (Avtomaticheskaya svarka stykov poyasov i stenok glavnykh balok

mostovykh kranov).

PERIODICAL:

"Svarochnoye Proizvodstvo", 1957, # 5, pp 16-18 (USSR)

ABSTRACT:

The article mentions that presently most crane-building plants manufacture the main beam elements by manual welding which considerably delays work. In order to speed up crane production and to improve production quality, the All-Union Institute for Projecting and Technology (BNTM MTM), in co-operation with the Leningrad Hoisting and Transport Equipment plant imeni Kirov, developed a mechanized technology of producing main beam elements. The new installation (shown in illustrations) for automatic welding under flux consists of four major components: a bed, a movable pneumatic flux pad, a carriage, and a welding tractor of the "AAC-1000-2" type. It accommodates beam elements for cranes of 30 to 100 t capacity and a span of 10 to 32 m. The

Card 1/2

135-5-5/14

TITLE:

Automatic Butt-Welding of Beams for Overhead Traveling Cranes (Avtomaticheskaya svarka atykov poyasov i stenok glavnykh balok mostovykh kranov).

The flux pad is placed under the butt joint to be welded, and the flux thrust upward to the butt by feeding air into a hose placed under the flux. The flux pad travels on a pair of rails under the bed. A cross beam is used for moving the workpiece

The new technology reduces to one half the amount of required work as compared to the old technique.

The article contains 2 drawings, 2 photographs, and 1 table.

ASSOCIATION: BITTH MTM(VPTI MTM) and Zavod podyemno-transportnego

oborudovaniya imeni Kirova (Leningrad Hoisting and Transport

Equipment Plant imeni Kirov).

PRESENTED BY:

SUBMITTED:

At the Library of Congress. AVAILABLE:

Card 2/2

"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000
APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R0005

GITLEVICH, A.D.

AUTHORS: Gitlevich, A.D., Tamarin, A.M., and Krivenko, N.M. Engineers

TITLE: Edger for Welding Large Overhead Traveling Crane Frolley

Frames (Kantovatel' dlya svarki krupnogabaritnykh ram telezhek

mostovykh kranov)

FER10DICAL: Svarochnoye Proizvodstvo, 1958, Nr 5, pp 41 - 45 (USSR)

ABSTRACT: The described edger - designed by Vsesoyuznyy proyektnotekhnicheskiy institut tyazhelogo mashinostroyeniya (All-

Union Technologic-Design Institute of Heavy Machine-Building) and produced at the Leningrad Materials-Handling-Machine Flant imeni Kirov - edges a frame 90° and 180° into positions handy for welding in 45 to 50 seconds (compared with 20-30 min needed with old technology) and is provided with sets of hinged clamps for frames of different sizes. Coming into new position after a 90° or 180° tilt, the frame automatically actuates electric limit switches which switch off the drive and actuate the brake. Detailed design and operation description is illustrated by

drawings and photographs. The edger was tested in shop con-

ditions and accepted for use.

Card 1/2 There are 5 figures.

"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000 APPROVED FOR RELEASE. Tuesday, September 17, 2002 BR0005 CIA RDPCC

135-58-5-14/17

Edger for Welding Large Overhead Traveling Crane Frolley Frames

ASSOCIATION: VPTI tyazhelogo mashinostroyeniya (All-Union Technological-

Design Institute of Heavy Machine Building), Zsvoc pod"yëmno-transportnogo oborudovaniya imeni Kirova (Lifting

and Transportation Equipment Plant imeni Kirov)

AVAILABLE: Library of Congress

Card 2/2

"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000 APPROVED FOR RELEASE. Tuesday, September 17, 2002 CIA-RDP86 BR0005

SOV/122-58-7-26/31

AUTHORS: Krivenko, N.M., Tamarin, A.M. and Gitlevich, A.D.,

Engineers

TITLE:

The Adoption of Standardised Production Procedures in the Welding Shops for Small Batch and Single Unit Manufacture (Vnedreniye tipovoy tekhnologii v svarochnykh tsekhakh

melkoseriynogo i gedinichnogo proizvodstva)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 7, pp 75-79 (USSR)

ABSTRACT: A system of classification for typical manufacturing sequences in making the fabricated components for bridge cranes has been developed by the VPTI (All-Union Design and Production Institute() in co-operation with the Leningrad-

skiy zaved ped'yemno-transportnege obcrudovaniya (Leningrad Works for Lifting and Conveying Equipment) imena Kircva. The planning department issues to the shops rate-fixing information or operations cards compiled

on the basis of standardised manufacturing processes. This information is stated on a classification card accompanied by an operations card. The former states the class of components as "sheet-metal components" the group as "flat, rectangular-shaped" and the sub-group as "without holes or cut-cuts". Each component is listed

with its drawing number designation, material, weight Cardl/2

307/122-58-9-26/31

The Adoption of Standardised Production Procedures in the Welding Shops for Small Batch and Single Unit Manufacture

and overall size. The row for each component is continued into the operations card where each operation occupies a group of columns. The main column is the rated time albitted to the operation. In each operation, reference is made to a special table in the classification system. The complete system consists of 3 classes, 17 groups, 50 sub-groups, 124 species and 2 017 components and is listed in 180 classification cards. The work on component standardisation succeeded in eliminating 433 separate components. The system covers 88 different types and sizes of tranes. Each typical production procedure contains the basic manufacturing scheme for sub-assemblies (example shown in Table 2), a representative sketch, an operations card without rates (Table 3), a rate-fixing card (Table 4), a labour charge sheet by trades, a materials schedule and a welded seam length schedule. It is claimed that substantial savings in labour have been achieved. There are 1 figure and 5 tables.

Card 2/2

"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000 OR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-BR0005

135-58-8-10/20

AUTHORS:

Zhivotinskiy, L. A., Gitlevich, A.D. and Belov, V. Ya.,

Engineers

TITLE:

The Mechanization of Channeled Metal Structure Assembly (Mekhanizatsiya sborki korobchatykh metallokonstruktsiy)

PERICDICAL:

Svarochnoye proizvodstvo, 1958, Nr 8, pp 33 - 35 (USSR)

ABSTRACT:

Information is given on mechanized welding technology and devices for the production of channeled beams of overhead travelling cranes. Movable -shape welding "gantries", especially for welding channeled beams, are described and illustrated. The gantries were devised by designers V. Ya. Belov, I. A. Brovko, F. P. Feniksov and technologists A. D. Gitlevich, N. Ye. Gusev and A. M. Sinitsyn. There are 3

Card 1/2

photos and 4 diagrams.

CIA-RDP86-00513R000

**BR0005** 

The Mechanization of Channeled Metal Structure Assembly

135-58-8-10/20

ASSOCIATION: Vsesoyuznyy proyektno tekhnologicheskiy institut tyazhelogo mashinostroyeniya (VPTI) (All-Union Institute for Plan-ning and Designing of Heavy Machinebuilding)

1. Beams--Welding--Automation

Card 2/2

"APPROVED FOR RELEASE: Tuesday, September 17, 2002 CIA-RDP86-00513R000

507-135-58-10-12/19

AUTHORS:

Zhivotinskiy, L.A., Gitlevich, A.D., and Belov, Y.Ya.,

Engineers

TITLE:

Installation for Assembling and Welding Overhead Travelling Cranes (Ustanovka dlya sborki i svarki kranovykh mostov)

PERIODICAL:

Svarochnoye proizvodstvo, 1958, Nr 10, pp 33-35 (USSR)

ABSTRACT:

In order to improve the technology of assembling overhead travelling cranes, the VPTI of Heavy Machinebuilding, together with several other plants, designed and put into practical use specialized universal installations, eliminating deficiencies which occurred in previous methods. Illustrated descriptions are presented on an installation for assembling and welding overhead cranes with a span of 10 - 32 m and bases of 3,500; 4,400; 4,900; 5,000 and 5,100 mm. In order to increase precision in adjusting the undercarriage of face beams, the Institute together with the Mogilevskiy kranovyy institut (Mogilev Cranebuilding Plant), designed a special stand, shown in fig. 3; the use

Card 1/2

**BR0005** 

SOV-135-58-10-12/19

Installation for Assembling and Welding Overhead Travelling Cranes

of bolt joints to improve the connection of main and face beams is recommended. There are 2 photos and 5 diagrams.

ASSOCIATION:

VPTI tyazhelogo mashinostroyeniya (All-Union Institute of Designing and Technology for Heavy Machinebuilding)

1. Industrial plants--USSR 2. Cranes--Installation 3. Welding --Applications

Card 2/2

"APPROVED FOR RELEASE: Tuesday, September 17, 2002

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CIA-RDP86-00513R000

P.a

CIA-RDP06\_00518R0005

GITLEVICH, A.D., inzh.

"Time-norms established in the general machinery industry on automatic, semiautomatic and and manual arc welding"; book review. Svar. proizv. no.2:43-45 F 60. (MTRA 13:6) (Welding-Standards)