ACCESSION NR: AP4041868

specifications. An essential point, mentioned by the authors, is that the material consumption factor for the test lot was lower than in the case of pipe production from square rolled stock. The final rejection rate for internal and external films, depending on the quality of the metal and to a considerable degree on the technological parameters of the process, was also found to be somewhat lower than in the case of the utilization of conventional rolled blanks, despite the presence in the central zones of the continuously-teemed stock of less strength in the bond between crystals of the core and of central friability. All these factors, in the opinion of the authors; support the effectiveness of the technological modifications made in the production of pipe at the "Jednosc" plant. "In addition to the authors, the Polish engineers I. My*dlyazh, Ye. Stashkevich, Yu. Fronchek, S. Grabovskiy (Jednosc Plant) and B. Pachula (Institut metallurgii zheleza (Institute of Ferrous Metallurgy)) took part in the work." Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

SUB CODE: MM,IE

NO REF SOV: 001

ENCL: 00

OTHER: 000

Card 13/3

VATKIN, Yakov Leybovich; PLYATSKOVSKIY, Oskar Aleksandrovich; VASHCHENKO, Yuriy Ignat'yevich; VLADIMIROV, Yu.V., red. izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Seamless tubes] Besshovnye truby; spravochnoe rukovodstvo dlia rabochikh. Moskva, Metallurgizdat, 1963. 179 p. (MIRA 16:10)

(Tubes) (Pipe)

PLYATSKOVSKIY, O.A.

Mechanism of tangential and axial slipping in helical and cross rolling. Izv. vys. ucheb. zav.; chern. met. 6 no.6:106-114. '63. (MIRA 16:8)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut.
(Rolling (Metalwork))

S/137/61/000/006/045/092
A006/A101

AUTHOR: Plyatskovskiy, O.A.

TITLE: An analysis of the effect of forces and conditions of grip in diagonal piercing and rolling mills

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 6, 1961, 35-36, abstract 6D288 ("Tr. Ukr. n.-i. trubn. in-ta", 1959, no. 1, 19 - 34)

TEXT: A critical analysis is presented on P.K. Teterin's publication who considered the direction of friction forces in the deformation seat of a piercing mill, determined the vector components of peripheral speed and normal pressure and analyzed conditions of gripping the blank in the axial direction. P.K. Teterin's conclusions and formulae are rejected. New formulae are derived determining grip conditions of the blank by the rolls in both the axial and tangential direction for mills with fungiform rolls and for conventional two-high piercing mills. An analysis of the formulae obtained shows that the gripping of the blank by the rolls is only possible in the presence of slip between the metal and the roll surface, since only in this case arise friction forces of slip which assure the forward motion of the metal. Normal grip conditions are possible either if

Card 1/2

S/137/61/000/006/045/092
A006/A101

An analysis of the effect of forces ...

the blank is immovable or if the metal is advanced by external forces at a lesser speed than that determined by the magnitude of the components of the peripheral speed vector of the rolls along the corresponding directions. After the grip, the piercing process can only take place in the presence of slip between the rolls and the metal. See RZhMet, 1956, no. 6, 5337.

Yu. Manegin

[Abstracter's note: Complete translation]

Card 2/2

LEVITSKIY, S.M.; PLYATSOK, Z.A.

Oscillographic method for measuring parameters of the plasma of a gas discharge. Prib. i tekh. eksp. 6 no.2:150-152 Mr-Ap '61. (MIRA 14:9)

1. Kiyevskiy gosudarstvennyy universitet.
(Plasma (Ionized gases)--Measurement)
(Electric discharges through gases)

BELIK, Yu.; PLYSHEVSKIY, B.

"Methodological problems of a planned balance of the national economy" by M.Z. Bor. Reviewed by IU. Belik, B. Plyshevskii. Vop. ekon. no.10:123-127 O '60. (MIRA 13:9)
(Russia--Economic policy)
(Bor, M.Z.)

PLYUSHCHEV, V.Ye.; KOVALEV, F.V.

Investigation of the reactions between chlorides of alkaline and alkaline earth elements in melts. Part 5: Liquidus of the ternary system sodium chloride - potassium chloride - calcium chloride. Izv.vys.ucheb.zav.;khim.i khim.tekh. 3 no.4:575-579 '60. (MIRA 13:9)

1.Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova, kafedra tekhnologii redkikh i rasseyannykh elementov.
(Salt) (Potassium chloride) (Calcium chloride)

83313

S/179/60/000/04/012/027
E081/E141

16,7300 also 2308

AUTHOR: Plyatsko, G.V. (L'vov)

TITLE: Stresses in a Hollow Cylinder Produced by Uneven Heating

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1960, No 4, pp 79-83

TEXT: The paper is a continuation of previous work (Ref 5). An infinite hollow cylinder is considered with axis z and internal and external radii respectively a and b. The temperature of the internal surface changes with velocity ω for $\xi > 0$, and the external surface is cooled according to Newton's law by a medium at zero temperature. The thermal conduction equations and the boundary conditions are written in the forms (1.1) and (1.2), where τ is time, λ, k^2, and α are the coefficients of thermal conductivity, thermal diffusivity (temperature conductivity) and heat emission respectively; and Δ, ξ, ρ, m and B are defined after Eq (1.2). If the solution of Eq (1.1) is written in the form (1.3) then T_0, T and T^* are determined from the equations (1.4) subject to the conditions (1.5)-(1.7). Using Fourier and Hankel transform methods, T_1 and T_0 are obtained in terms of Bessel functions.

Card 1/2

Stresses in a Hollow Cylinder Produced by Uneven Heating

as (1.13) and (1.14) for $\xi < 0$ and as (1.15) for $\xi > 0$; T^* is given by Eq (1.22). The stresses are written as Eq (2.1), the components of which are given by the equations on page 82. The formulae are illustrated by Figs 1 and 2, which refer to a cylinder with $a/b = 0.8$, and show the stresses in the cylinder as functions of $\rho = r/b$ and $\xi = z/b$. σ_z^*, σ_r^* and σ_{rz}^* are defined by the last equations on page 83. Since investigation of the stresses in the region of maximum temperature disturbance is of practical interest, the calculations were made for the region $\xi < 0.5$. Fig 1 shows that for $\xi = 0$ the maximum value of the shear stress occurs at $\rho \approx 0.89$ and amounts to 63% of the maximum value of σ_z at $\rho = 1$. Thus the shear stress σ_{rz} must be allowed for in strength calculations relating to a hollow cylinder unevenly heated along its axis. As shown by Fig 2, the stresses caused by disturbance of the temperature field at $\xi = 0$ are in practice negligible at distances $\xi = \pm 0.5$ from this plane.

There are 2 figures and 5 references: 4 Soviet and 1 English.

SUBMITTED: February 23, 1959

Card 2/2

PLYATSKO G. V.

PODSTRIGACH, Ya.S.; PLYATSKO, G.V.

Effect of heat emission on thermal tensions in the elastic zone at a nonstationary heat system. Nauch.zap.IMA AN URSR. Ser.mashinoved. 6 no.5:75-82 '57. (MLRA 10:7)
(Thermal analysis) (Elasticity)

S/170/59/002/10/011/020
B115/B007

AUTHOR: Plyatsko, G. V.

TITLE: The Temperature Field in a Hollow Cylinder at Variable Boundary Conditions

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Vol 2, Nr 10, pp 65-71 (USSR)

ABSTRACT: In the present paper the temperature field for the case of a variation of temperature with velocity and acceleration within and outside a hollow cylinder is calculated. It is assumed that no heat sources exist in the body itself, that the thermal conductivity coefficient is temperature-independent, and that heat transfer between the cylinder and the medium develops according to Newton's law. Using these boundary conditions, equations are obtained for the determination of the temperature field in a plate. It follows from a comparison of the results obtained that in the formula describing the temperature field, the series converges more rapidly to a certain boundary in the case of the cylinder than in the case of the plate. There is 1 Soviet reference.

ASSOCIATION: Institut mashinovedeniya i avtomatiki AN USSR, g. L'vov (Institute of Machine Construction and Automation of the AS UkrSSR, City of L'vov)

Card 1/1

SOV/124-58-3-3146

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 3, p 87 (USSR)

AUTHORS: Podstrigach, Ya. S., Plyatsko, G. V.

TITLE: The Effect of Heat Emission Upon Temperature Stresses in an Elastic Strip in Transient Thermal Conditions (Vliyaniye teplootdachi na temperaturnyye napryazheniya v uprugoy polose pri nestatsionarnom teplovom rezhime)

PERIODICAL: Nauchn. zap. In-ta mashinoved. i avtomatiki AN UkrSSR, 1957, Vol 6, pp 75-82

ABSTRACT: The authors present the solution of a problem on thermal conductivity for an infinite strip in which the temperature of the bottom surface varies at a constant rate, the side surfaces are thermally insulated, and the upper surface has a heat delivery into a constant-temperature medium; this solution contains a series of functions which depend upon the roots μ of the transcendental equation $\tan \mu l = -\mu/h$, where l is the thickness of the strip and h is the relative heat-exchange coefficient. For the above-indicated temperature field the problem is solved for the thermoelastic equilibrium of an infinite strip the surfaces of which are free of outside forces;

Card 1/2

The Effect of Heat Emission Upon Temperature Stresses (cont.)

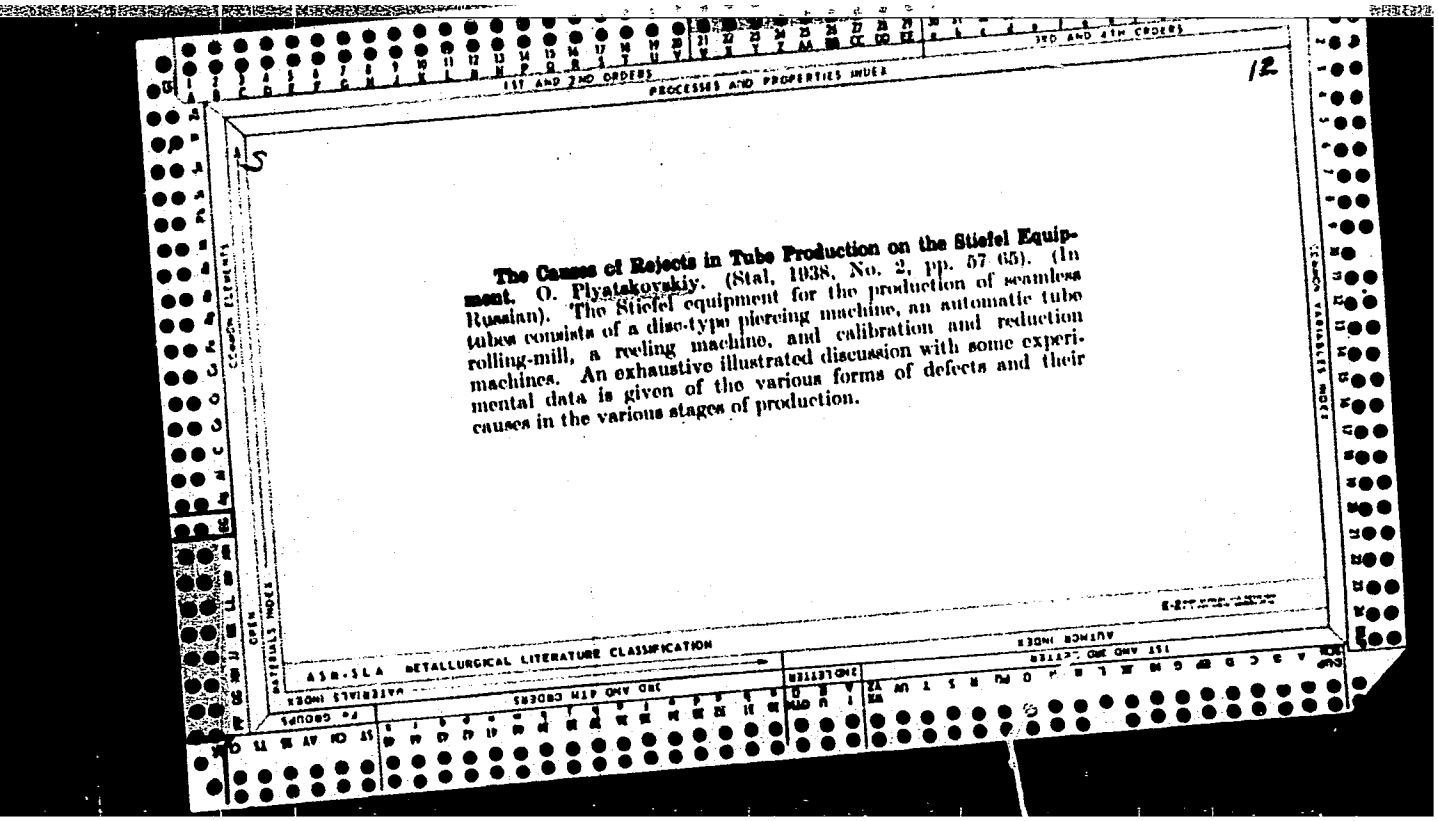
the boundary conditions on the top and bottom surfaces of the strip are fulfilled rigorously, while those on the lateral surfaces are fulfilled in the sense of de Saint-Venant's principle. Even though the temperature field is transient, the authors disregard the forces of inertia and discuss the problem as quasi-static. The stresses obtained (as well as the temperature) are in direct ratio to the heating rate. With ideal thermal insulation (h = 0) the stresses at a certain moment become practically constant. The stresses reach their greatest magnitude on the heated surface.

V. K. Prokopov

PLYATSKO, T.V.

Temperature field in a hollow cylinder under variable boundary conditions. Inzh.-fiz.zhur. no.10:65-71 O '59. (MIRA 13:2)

1. Institut mashinovedeniya i avtomatiki AN USSR, L'vov.
(Heat--Transmission)



The Causes of Rejects in Tube Production on the Stiefel Equipment. O. Plyatskovskiy. (Stal, 1938, No. 2, pp. 57-65). (In Russian). The Stiefel equipment for the production of seamless tubes consists of a disc-type piercing machine, an automatic tube rolling-mill, a reeling machine, and calibration and reduction machines. An exhaustive illustrated discussion with some experimental data is given of the various forms of defects and their causes in the various stages of production.

PLYATSKOVSKIY, O.A. kand. tekhn. nauk

Investigating the kinematics of processes taking place on inclined-roll piercing mills by means of motion pictures and other methods. Obr. met. davl. no.5:114-128 '59. (MIRA 13:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy trubnyy institut.
(Rolling mills) (Machinery, Kinematics of)

[illegible]

Grooving Pilgrim Mill rolls in a way ensuring a maximum output of the machinery. Izv.vys.ucheb.zav.; chern.met. 2 no.10:49-56 O' '59. (MIRA 13:3)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut i zavod imeni K.Libknekhta. Rekomendovano laboratoriyey tekhnologii goryachey obrabotki trub Ukrainskogo nauchno-issledovatel'skogo trubnogo instituta.
(Rolls (Iron mills))

SOV/137-59-1-1765

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 232 (USSR)

AUTHOR: Plyatskovskiy, O. A.

TITLE: A New Technology for the Manufacture of Pipes, 102-170 mm in Diameter, Made of Stainless Steel 1Kh18N9T (Novaya tekhnologiya proizvodstva trub diametrom 102-170 mm iz nerzhaveyushchey stali marki 1Kh18N9T)

steel 1Kh18N9T [illegible] the new technology involves a single heating and piercing operation In contrast with a commonly employed method involving small reduction-elongation which increase gradually as the billets pass through successive stages of a piercing mill, the employment of greater reduction-elongation during the rolling phase of the first operation of

Card 1/2

A New Technology for the Manufacture of Pipes (cont.)

piercing made it possible to increase the productivity of the pipe-rolling mill "220" during the manufacture of stainless P's by more than 2-3 times and resulted in a reduction of energy and fuel consumption, as well as in an improvement in the quality of the rolled P's.

Ye. T.

PLYATSKOVSKIY, O.A.

CHEKMAREV, Aleksandr Petrovich; VATKIN, Yakov Leybovich; KNYAZHINSKIY, Zakhar Osipovich; MANIZYUK, Valentin Alekseyevich; SAVKIN, Petr Vasil'yevich, inzhener; SINGARCHIK, Semen Dmitriyevich; FRIDLAND, Abram Iosifovich; PLYATSKOVSKIY, O.A., redaktor; VALOV, N.A., redaktor; [illegible], tekhnicheskiy redaktor

[illegible]

(Pipe, Steel) (Rolling (Metalwork)) (Welding)

SOV/133-59-5-16/31

AUTHORS: Plyatskovskiy, O.A., Candidate of Technical Sciences and Korobochkin, I.Yu, Kirvalidze, N.S., Engineers

TITLE: Some New Techniques in the Production of High-alloy Tubes (Novoye v tekhnologii proizvodstva vysokolegirovannykh trub)

PERIODICAL: Stal', 1959, Nr 5, pp 436 - 441 (USSR)

ABSTRACT: A considerable increase in the rate of production of medium- and large-diameter high-alloy tubes was obtained by increasing the degree of elongation to optimum values during the first and subsequent piercing operations. The new practice was based on the following considerations:
1) Cracks and other defects which are usually observed on the internal surface of pierced billets appear not only as a result of stresses acting on metal in the zone of the piercing point, but also due to stresses in the zone of rolling (in the zone of deformation of metal between the roller, mandrel and guides). 2) A decrease in the

(card 1/)

rolling section of rolls of the piercing mill. The optimum value of the degree of elongation should be determined for each type of steel and for each size of tube billets. 3) It is advantageous to concentrate the main deformation of the metal on a possibly smaller length of the zone contact of metal with rolls. 4) A decrease in the volume of the metal undergoing deformation with tensile stresses can be obtained by using a more closed pass by a maximum decrease in the ratio of the distance between guides to the distance between rolls, or by an appropriate shaping of the guides. 5) It is necessary to decrease the number of piercing operations and reheatings as these have a negative influence on the plastic properties of metal. The latter can be obtained by an increase in the degree of reduction (in comparison with that recommended in the literature) at the narrowing part of the rolls and in front of the mandrel. The influence of the degree of elongation on the quality of tubes from steel 1Kh18N9T is shown in Tables 1 and 2. The technology of production of high-alloy tubes on mills 140 and 400, based

on the above considerations was introduced at the Novotrubnyy Works. The comparative data on the old (nominator) and new (denominator) practices are given in Table 3. With the new rolling practice the output of the mill 140 on rolling high-alloy tubes was nearly doubled and of 400 increased by 10-20%.
There are 3 tables, 4 figures and 9 Soviet references.

ASSOCIATIONS: UkrNITI and Yuzhnotrubnyy zavod (Yuzhnotrubnyy Works)

OSTRENKO, Viktor Yakovlevich, VATUTIN, Petr Ivanovich, PLYATSKOVSKIY, O.A., otv.red.; SINYAVSKAYA, Ye.K. red.; ANDREYEV, S.P., tekhn.red.

[Manufacture of pipe with automatic equipment] Proizvodstvo trub na avtomaticheskikh ustanovkakh. Khar'kov, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1958. 133 p. (MIRA 11:9)

(Pipe, Steel)
(Rolling mills)

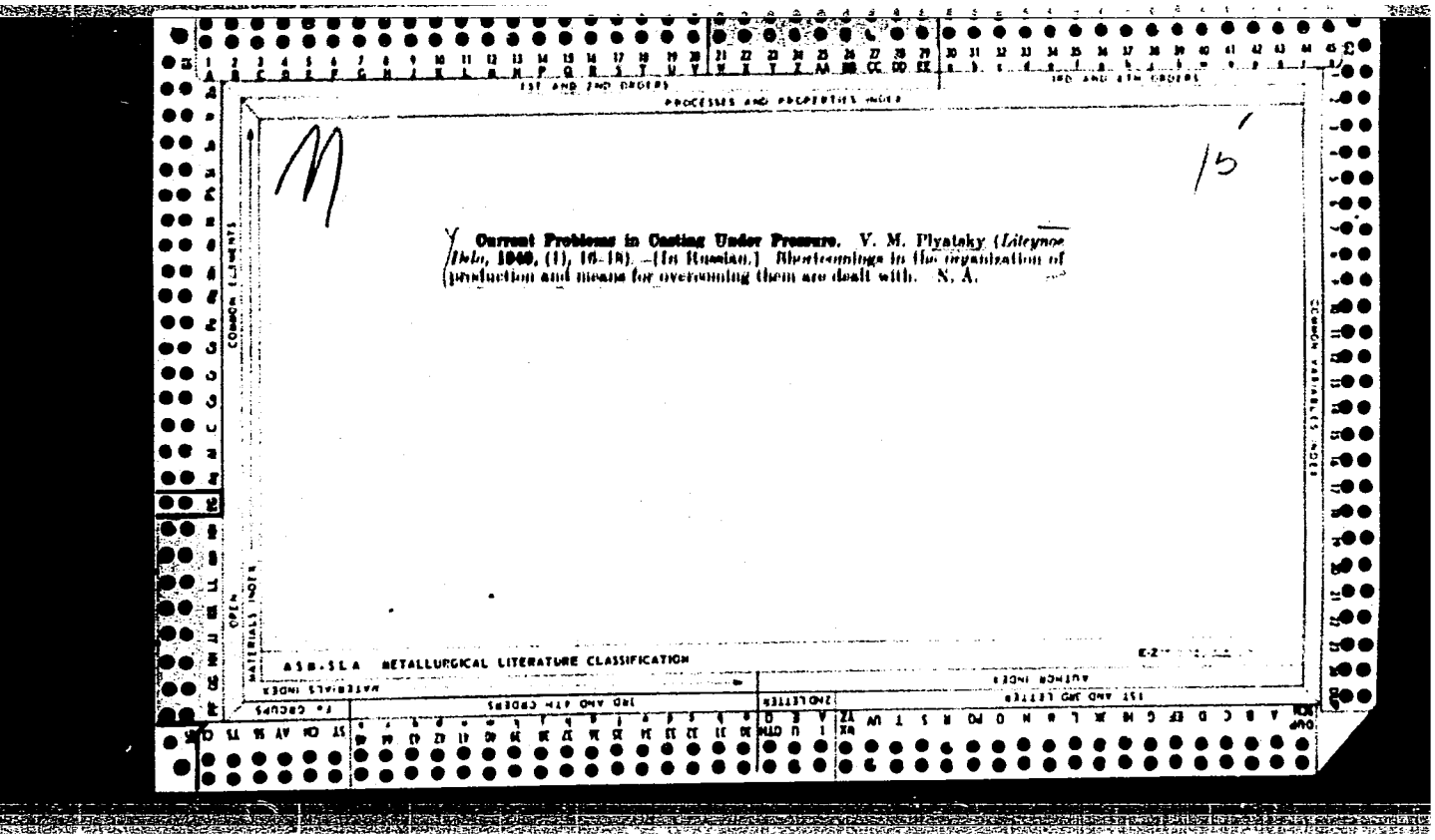
PLYATSKOVSKIY, O.A., kandidat tekhnicheskikh nauk; LIVSHITS, A.S., kandidat tekhnicheskikh nauk; SHCHEPAK, M.I., inzhener; LOZINSKIY, A.B., inzhener; KHYUKOV, I.I., inzhener.

Increasing the sturdiness of pilger mill rolls by means of weld seams. Vest. mash. 33 no.11:87-88 N '53. (MLRA 6:12)
(Rolling-mill machinery)

PLYATSKOVSKIY, O.A., kand.tekhn.nauk; PAVLOVSKIY, B.G., inzh.; KARPENKO, L.N., inzh.; STAROBINETS, Ya.S.

Investigating the reeling of thick-walled cylinders. Stal' 21 no.2:147-151 F '61. (MIRA 14:3)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut i Chelyabinskiy truboprokatnyy zavod.
(Rolling(Metalwork))



Current Problems in Casting Under Pressure. V. M. Plyatsky (*Liteynoe Delo*, 1940, (1), 16-18). —[In Russian.] Shortcomings in the organization of production and means for overcoming them are dealt with. S. A.

ACCESSION NR: AT4038177 S/2690/63/005/006/0291/0294

AUTHORS: Karp, Yu. S.; Plyatsok, Z. A.

TITLE: Electric breakdown of electron-hole junctions in the pulsed mode

SOURCE: AN LatSSR. Institut elektroniki i vy*chislitel'noy tekhniki. Trudy*, v. 5, 1963. Avtomatika i vy*chislitel'naya tekhnika (Automation and computer engineering), no. 6, 291-294

TOPIC TAGS: transistor, electron hole, emitter, dielectric strength, measurement method

ABSTRACT: The breakdown voltage of the emitter junction of a P416 transistor was determined as a function of the pulse duration. The research was stimulated by the fact that the breakdown voltage is one of the factors limiting the use of transistors in many circuits. The dependence of the breakdown voltage on the pulse repetition

Card 1/3

ACCESSION NR: AT4038177

period was also tested. The repetition period was made smaller than the carrier recovery time (10^{-3} sec). The results obtained are interpreted from the point of view of the carrier surface recombination and other factors. The most dangerous pulse durations turn out to be 10^{-6}--10^{-3} sec. Orig. art. has: 4 figures and 3 formulas.

ASSOCIATION: None

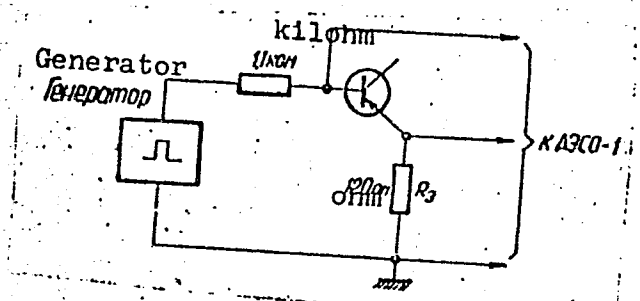
SUBMITTED: 00 DATE ACQ: 04Jun64 ENCL: 01

SUB CODE: EC, IE NR REF SOV: 002 OTHER: 001

Card 2/3

ACCESSION NR: AT4038177

ENCLOSURE: 01



Measurement circuit

Card 3/3

21414

9.3150 (1049, 1140, 1532, 2205)
26.2311

S/120/61/000/002/027/042
E032/E114

AUTHORS: Levitskiy, S.M., and Plyatsok, Z.A.

TITLE: An oscillographic method for measuring the plasma parameters of a gas discharge

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No.2, pp.150-152

TEXT: A description is given of a simple device for measuring the plasma parameters of a gas discharge. The device is said to be much simpler than those described by other workers (A.M. Bonch-Bruyevich, Ref.1; B.A. Mamyrin, Ref.2; P. Johnson, Ref.3; V.I. Drozdov, Ref.4). The basic circuit is shown in Fig.1. The current in the probe circuit is produced by the battery 6 and the oscillator Г. The electron current from the probe passes through the diode 1. The voltage drop across this diode depends linearly on the logarithm of the current. In the case of the diodes ДГ-Ц 21 (DG-Ts 21), ДГ-Ц 24 (DG-Ts 24) and ДГ-Ц 27 (DG-Ts 27) this linear dependence is found to occur between 0.1 and 100 ma. However, the slope of the straight line may differ from diode to diode and must be determined in a preliminary experiment. The temperature of the diode has an

An oscillographic method for .....

important effect and must be kept constant. The diode 2 is used to pass the probe ion current whenever it appears. The voltage drop across the diode 1 is applied to the Y-plates of the CRO amplifier, while the oscillator signal is applied to the X-plates. As a result, the volt-ampere characteristic of the probe is obtained on the screen on a semilogarithmic scale. A typical result is shown in Fig.2. The electron temperature can easily be found from the slope of the left-hand part of the curve. The charge concentration can be found by replacing the diode by the ohmic resistor. The above method has been checked with a DC discharge in mercury vapour. The oscillator [illegible] produced sinusoidal vibrations and the experiments were carried out between 30 and 300 cps. The plasma parameters were determined both by the oscillographic and the "usual" method. The table shows a comparison between the methods.

There are 2 figures, 1 table and 6 references: 5 Soviet and 1 English.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet
(Kiyev State University)

SUBMITTED: May 26 1960

An oscillographic method for .....

S/120/61/000/002/027/042
E032/E114

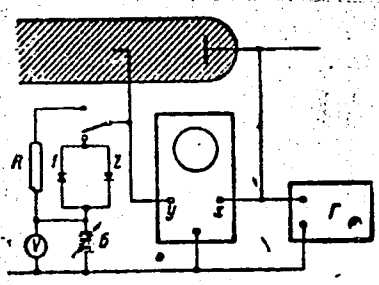


Fig.1

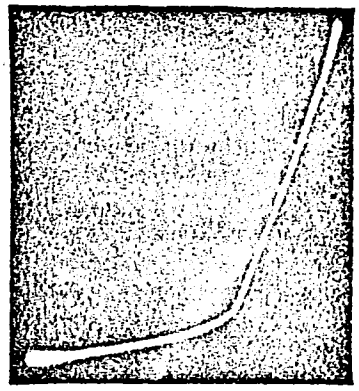


Fig.2

Card 3/4

An oscillographic method for .....

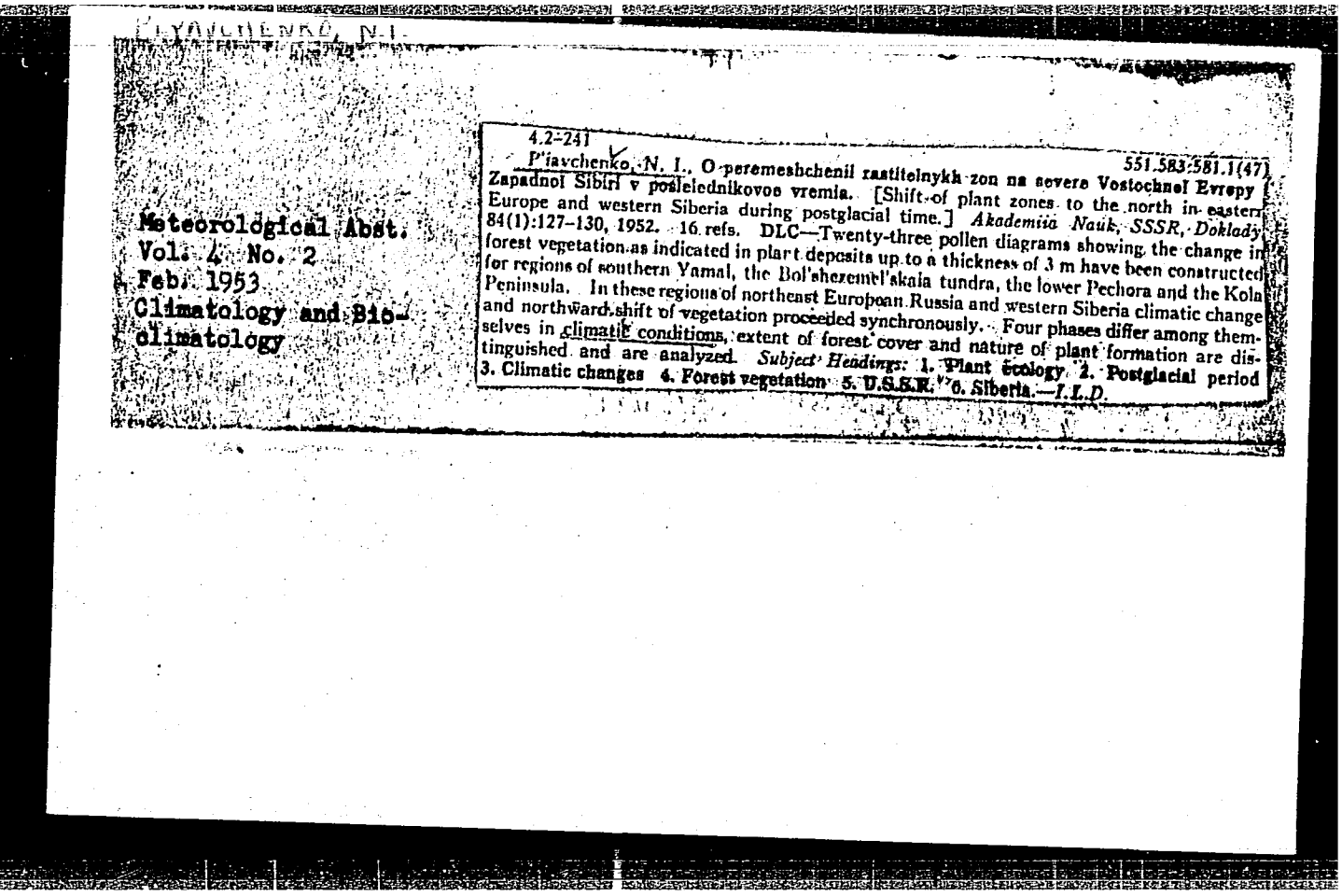
Table

Discharge current, amp	"usual" method			Oscillographic method		
	T_e^o, K	n_e, cm^{-3}	V_{br} volt	T_e^o, K	n_e, cm^{-3}	V_{br} volt
1.2	21400	$2.7 \cdot 10^{10}$	-4.7	22500	$2.4 \cdot 10^{10}$	-4.9
2.0	19700	$6.2 \cdot 10^{10}$	-5.2	20500	$6.4 \cdot 10^{10}$	-5.6
2.5	19000	$8.8 \cdot 10^{10}$	-5.4	19800	$8.4 \cdot 10^{10}$	-5.7
3.0	18400	$1.1 \cdot 10^{11}$	-5.7	19500	$1.2 \cdot 10^{11}$	-6.0
3.5	15600	$1.6 \cdot 10^{11}$	-5.8	17200	$1.7 \cdot 10^{11}$	-6.2

Card 4/4

ZGONNIK, N.P.; PLYATT, Sh.N.

Heat conductivity in comundum products. Ogneupory 18 no.6:265-273 Je '53. (MIRA 11:10)
(Heat--Conduction) (Corundum--Thermal properties)



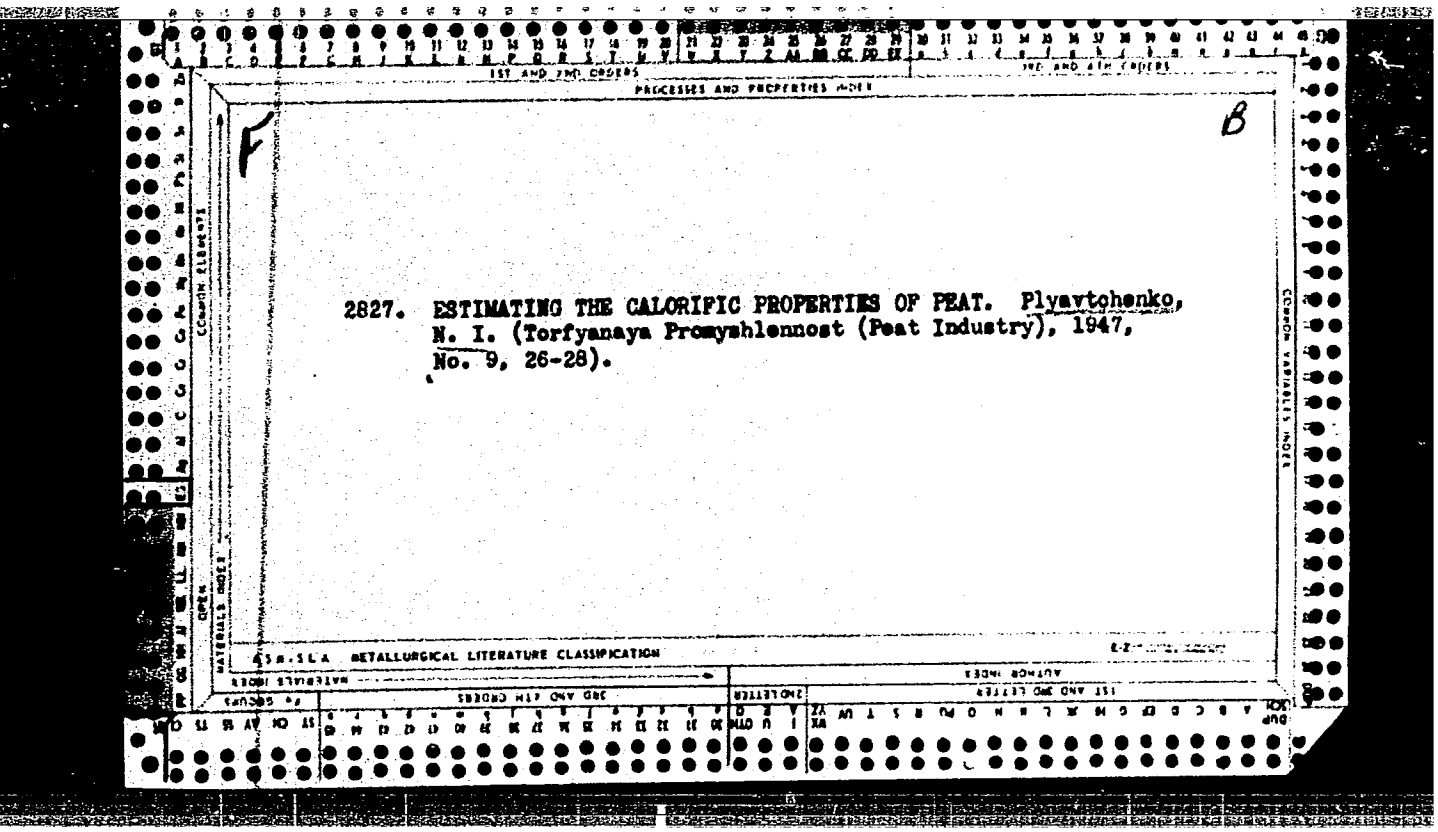
PYAVCHENKO, N.I.

Meteorological Abst.
Vol. 4 No. 2
Feb. 1953
Climatology and Bio-climatology

4.2-241

P'iavchenko, N. I., O peremeshchenii rastitelnykh zon na severe Vostochnoi Evropy i Zapadnoi Sibiri v poslelednikovoe vremia. [Shift of plant zones to the north in eastern Europe and western Siberia during postglacial time.] *Akademiia Nauk, SSSR, Doklady* 84(1):127–130, 1952. 16 refs. DLC—Twenty-three pollen diagrams showing the change in forest vegetation as indicated in plant deposits up to a thickness of 3 m have been constructed for regions of southern Yamal, the Bol'shezemel'skaia tundra, the lower Pechora and the Kola Peninsula. In these regions of northeast European Russia and western Siberia climatic change and northward shift of vegetation proceeded synchronously. Four phases differ among themselves in climatic conditions, extent of forest cover and nature of plant formation are distinguished and are analyzed. *Subject Headings:* 1. Plant ecology 2. Postglacial period 3. Climatic changes 4. Forest vegetation 5. U.S.S.R. 6. Siberia.—*I. L. D.*

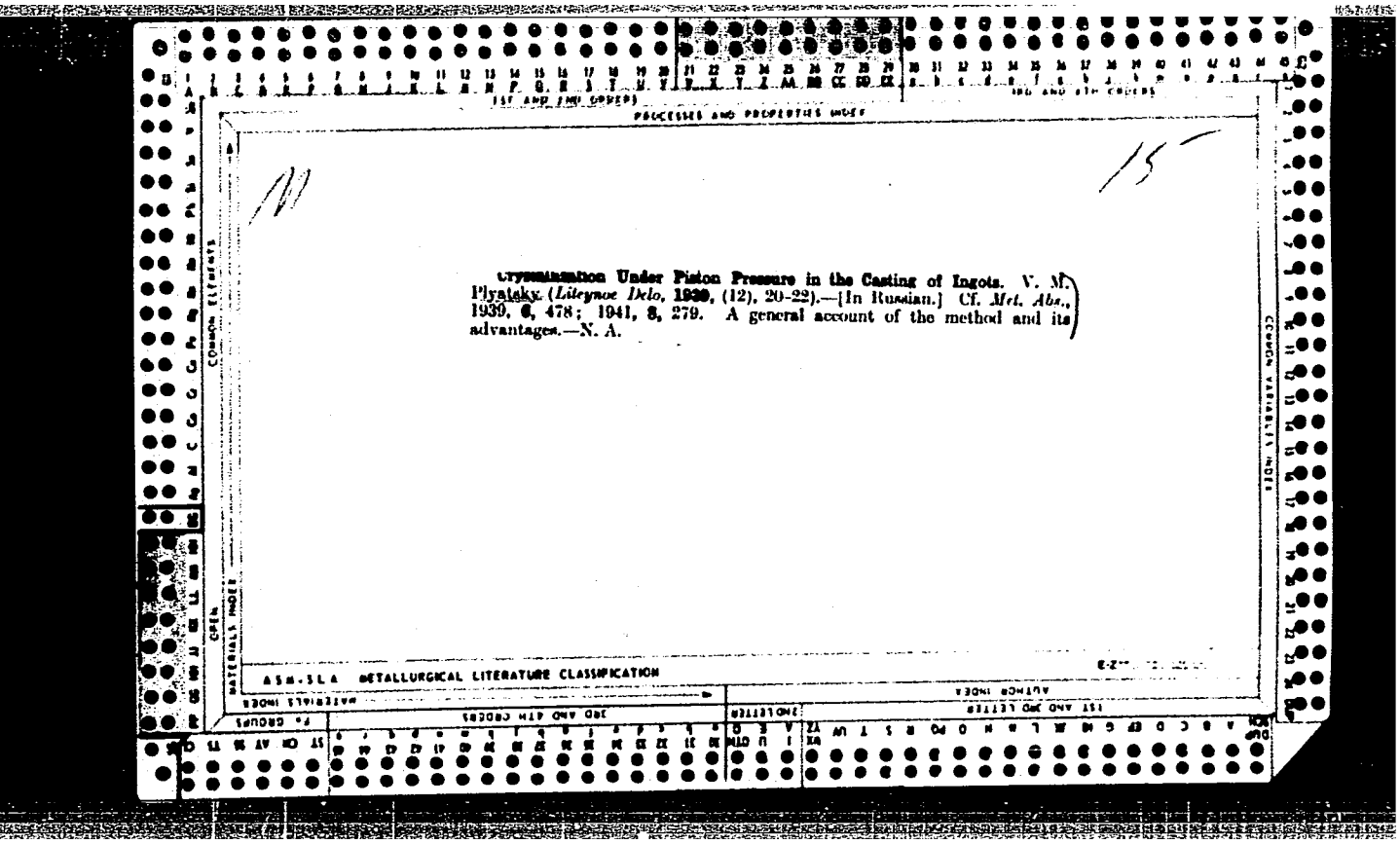
551.583:581.1(47)



F

B

2827. ESTIMATING THE CALORIFIC PROPERTIES OF PEAT. Plyavtchenko, N. I. (Torfyanaya Promyshlennost (Peat Industry), 1947, No. 9, 26-28).



Crystallization Under Piston Pressure in the Casting of Ingots. V. M. Plyatsky. (*Liteynoe Delo*, 1939, (12), 20-22).—[In Russian.] Cf. *Met. Abs.*, 1939, **6**, 478; 1941, **8**, 279. A general account of the method and its advantages.—N. A.

PLYAVIN, I.K.

USSR/Physical Chemistry - Crystals. B-5

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 7055.

Author : I.K. Plyavin'.
Inst :
Title : γ-Scintillation Kinetics in Sodium Iodide Crystals Activated with Thallium.

Orig Pub: Optika i spektroskopiya, 1957, 2, No 3, 384-386.

Abstract: The form of individual light pulses at the excitation of a NaI-Tl monocrystal with γ-rays in the range from -150 to +80° was studied with an oscillograph. The scintillation rise duration at 20° is on the border of the instrument resolving power and equals about $6 \cdot 10^{-8}$ sec. The scintillation damping at 20° follows an exponential law with τ = from $3.0 \cdot 10^{-7}$ to $3.5 \cdot 10^{-7}$ sec. τ rises with the temperature decrease, a second component appears below 0°, which also becomes longer with the temperature drop, and a 3rd component of short duration with

Card : 1/3- -16-

USSR/Physical Chemistry - Crystals.

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 7055.

τ of about 10^{-7} sec appears at temperatures from -120 to -130°. Activation energies ε were found for the first two components from the inclination of the lines $\ln \tau - f(1/T)$, they correspond to the equation $1/T = p_0 \exp(\varepsilon/kT)$: $\varepsilon_1 = 0.15$ ev, $\varepsilon_2 = 0.05$ ev, i.e., the scintillation duration is determined by lower levels in proportion to the temperature drop. Assuming that absorption and radiation depend on the transition $^1S_0 - {}^3P_1$, it was computed from the size of the 1st absorption band area of Tl (at 295 mμ), that $\tau = 4.5 \pm 0.51 \cdot 10^{-8}$ sec in accordance with the scintillation growth duration, but not with the scintillation damping duration. It was concluded that the growth duration is connected with the radiating transition in the Tl^+ ion and the damping is connected with electron (or hole) liberation from metastable or capture levels. At the excitation by a spark, the damping duration in the Tl band (295 mμ) is the

USSR/Physical Chemistry - Crystals. B-5

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 7055.

same as that of γ-scintillations, which was attributed to intermediate processes between the excitation and radiation of the preionization type (RZhKhim, 1956, 71002).

Card : 3/3

AUTHOR: Plyavin', I. K. 51-4-2-21/28

TITLE: Duration of Photoluminescence of Alkali-Halide Crystals, Activated with Tl or In. (Dlitel'nost' foto-lyuminestsentsii shchelochno-galoidnykh kristallov, aktivirovannykh Tl ili In,)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol.IV, Nr.2, pp.266-268 (USSR)

ABSTRACT: An electric spark of about 10^{-8} sec duration was used as the source of excitation. The decay constants of photoluminescence were measured by oscillography of single pulses of luminescence. The spark occurred between two platinum wires, 0.5 mm apart at 3500 V. In the 240-300 mμ spectral region, where the long-wavelength absorption bands of activated alkali-halide crystals occur, the spark spectrum was sufficiently intense. The ultraviolet end of the spark emission was cut off by a filter. This prevented excitation of the alkali-halide crystals themselves so that only the activator centres were excited. The crystal temperature was varied between -170°C to +100°C. Luminescence was collected at a photomultiplier. The photomultiplier signals were fed into an iscillograph. For calibration

Card 1/3

Duration of Photoluminescence of Alkali-Halide Crystals, Activated With Tl or In.

of time a sinusoidal voltage was also applied to the oscillograph. A figure on p.267 gives, by way of example, oscillograms of photo-scintillations of five crystals (KCl-Tl, NaI-Tl, KI-Tl, CsI-In, and NaBr-In); curve 6 represents the exciting spark. Decay of luminescence in all the crystals studied was exponential. The decay time constants (in microseconds) are given in the upper table on p.268. The decay time constant of luminescence of crystals activated with Tl depends strongly on temperature; this dependence is exponential if the time constant is plotted as a function of the reciprocal of absolute temperature. This shows that the measured time constants are not really the decay times of the emission transitions but they correspond to thermal liberation of electrons or holes from shallow metastable levels or capture levels. The author thanks M.D. Galanin who directed this work, and L.M. Shamovskiy for supply of the crystals. There are 2 tables, 1 figure and 3 references of which 2 are Soviet and 1 American.

51-4-2-21/2

Duration of Photoluminescence of Alkali-Halide Crystals, Activated With Tl or In.

ASSOCIATION: Physics Institute imeni P.N. Lebedev, Academy of Sciences of the USSR. (Fizicheskiy institut im. P.N. Lebedeva, AN SSSR.)

SUBMITTED: May 11, 1957.

1. **Alkali-Halide crystals-Luminescence-Decay** 2. Ocillographs-**Applications**

Card 3/3

PLYAVIN', I. K.: Master Phys-Math Sci (diss) -- "On the kinetics of photo- and gamma-luminescence in certain activated alkali-haloid crystals". Riga, 1959. 7 pp (Phys Inst im P. N. Lebedev of the Acad Sci USSR), 150 copies (KL, No 14, 1959, 117)

-24(4), 24(2) SOV/51-7-1-10/27

AUTHOR: Plyavin', I.K.

TITLE: On the Kinetics of Photo- and γ-Luminescence in Certain Tl-Activated Alkali-Halide Crystals (O kinetike foto- i γ-lyuminestsentsii v nekotorykh shchelochno-galoidnykh kristallakh, aktivirovannykh Tl)

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 1, pp 71-77 (USSR)

ABSTRACT: The paper was presented at the VII-th Conference on Luminescence in Moscow, June 1958. Co^{60} was used as the γ-ray source and a 3500 V spark of $\sim 10^{-8}$ sec duration was used to excite photoluminescence (the spectrum of the spark is shown in Fig 1). Duration of luminescence was measured by means of apparatus shown schematically in Fig 3. It consisted of an excitation source, a chamber for cooling or heating of the crystals studied, a photomultiplier (FEU-S or FEU-29), a preamplifier and an amplifier, a delay line in the form of a coaxial cable RK-3 of 700 m length and a high-frequency oscillograph OK-17M. The resolution time of the apparatus was 2×10^{-8} sec. This apparatus was used to study the decay of scintillations of photo-excited NaI-Tl, KI-Tl, CsI-Tl and KCl-Tl crystals and γ-excited NaI-Tl, KI-Tl and CsI-Tl. Both photo- and γ-scintillations decayed exponentially; in the case of γ-excitation

Card 1/3

On the Kinetics of Photo- and γ-Luminescence in Certain Tl-Activated Alkali-Halide Crystals

the decay curve could be represented as a sum of several exponentials. It was found that the decay time τ of photo-scintillations excited in the long-wavelength absorption band of the Tl activator depends exponentially on the reciprocal of absolute temperature. To explain this dependence it was assumed that the activator ion in the excited state has two closely spaced levels. During the excited-state lifetime the activator ions are distributed between the two levels by thermal motion. Under such conditions true fluorescence (i.e. spontaneous transition from the excited to the ground level) does not occur; before the emission act thermal transitions occur between the two closely spaced excited levels. The author discusses also the mechanism of short-duration γ-luminescence. Free electrons produced by scattering of a γ-quantum in a crystal are captured by the activator ions. This is followed by capture of holes by these ions with consequent formation of excited ions which are in a metastable state similar to that observed on photo-excitation in the activator absorption band. Subsequently the excited ions are

liberated thermally from their metastable state and the duration of their emission is determined by their lifetimes in the metastable state. The results obtained could be also explained using an exciton mechanism of energy transfer suggested by Ch.B. Lushchik et al. (Ref 10) for a univalent activator. Acknowledgment is made to M.D. Galanin who directed this work, to A.M. Leontovich and I.K. Vitol for their advice and to N.V. Kostin for his help in measurements. There are 7 figures and 10 references, 6 of which are Soviet, 2 English, 1 Swiss and 1 German.

SUBMITTED: October 11, 1958

L 11999-66 EWT(l)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG

ACC NR: AP5022861 SOURCE CODE: UR/0051/65/019/003/0378/0386

63

AUTHOR: Trinkler, M. F.; Plyavin', I. K.; Berzin', B. Ya.; Everte, A. K.

44,55 44,55 44,55 44,55

ORG: none

TITLE: Spectroscopy of some activated alkali-halide crystals

SOURCE: Optika i spektroskopiya, v. 19, no. 3, 1965, 378-386

TOPIC TAGS: alkali halide, luminescence, activated crystal, absorption band, band spectrum, transition probability

ABSTRACT: The material of this paper was presented at the Twelfth Luminescence Conference at L'vov in 1964. The authors report results of an investigation of the kinetics of intracenter luminescence in alkali-halide crystals activated with Tl^{+} and Pb^{++} (KCl-Tl, KBr-Tl, KI-Tl, KCl-Pb, KBr-Pb). The study was made by oscillographic observation of individual scintillations excited by brief exposure to the light of a spark (Fig. 1). The luminescence was excited in the long-wave absorption band of the activator, corresponding to the $^1S_0 \rightarrow {}^3P_1$ transition in free Tl^{+} and Pb^{++} ions. The measurements showed that the effect of temperature on the kinetics of luminescence was the same for all crystals except KBr-Pb. All of the crystals activated by thallium have two emission bands excited in the $^1S_0 \rightarrow {}^3P_1$ absorption band. The energy spacing between the bands increases from one host to another in the order KCl, KBr, and KI. The crystals activated by Pb^{++} differed sharply from the thallium phosphors. In KCl-Pb the 340 mm band was found to be elementary, and no strong temperature dependence of the photoscintillation decay time was observed for KBr-Pb. The possible

Card 1/2

L 11999-66
ACC NR: AP5022861

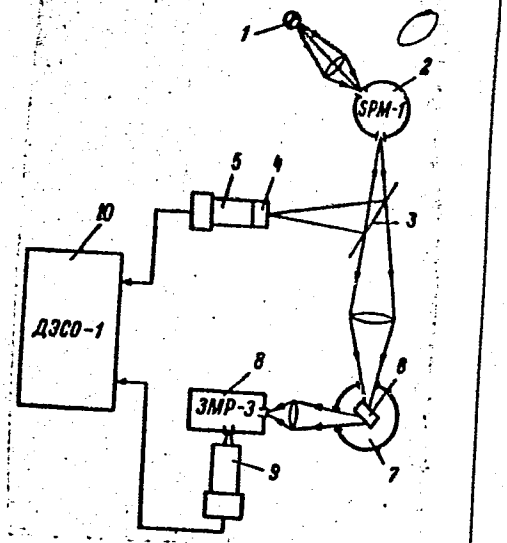


Fig. 1. Diagram of experimental setup. 1 - Spark gap, 2 - monochromator, 3 - semitransparent quartz plate, 4 - light-transforming crystal, 5 - photomultiplier, 6 - investigated crystal, 7 - cryostat, 8 - monochromator, 9 - photomultiplier, 10 - oscilloscope.

causes of the splitting of $^3P_1$ level of the activator are discussed. Data were obtained on the energy structure, radiative transition probabilities, and other parameters of the luminescence centers. Orig. art. has: 4 figures, 5 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 07Aug64/ ORIG REF: 016/ OTH REF: 003

Card 2/2

L 26663-66 EWT(m) DIAAP JD/JG

ACC NR: AT6010458 SOURCE CODE: UR/3119/65/000/003/0075/0082

AUTHORS: Berzin', B. Ya.; Plyavin', I. K.

ORG: None

TITLE: Gamma scintillations of CsI-Tl

SOURCE: AN LatSSR. Institut fiziki. Radiatsionnaya fizika, no. 3, 1965. Ionyye kristally (Ionic crystals), 75-82

TOPIC TAGS: cesium compound, iodide, activated crystal, scintillator, gamma detector, exciton, temperature dependence, scintillation, crystal growth

ABSTRACT: The authors present data on the damping of γ scintillations as compared with the damping of the intracenter and exciton scintillations of the CsI-Tl crystal with a definite activator concentration. The duration of the γ scintillation was measured as a function of the crystal temperature. The crystals were grown by the Stockbarger method and exposed to γ rays from Co^{60}. The experimental conditions were such that the scintillations were produced by Compton electrons. The measurements were made in a cryostat in which the temperature could be varied from room temperature to 130K. The γ scintillations produced in the crystal were recorded with a photomultiplier. Analysis of the γ scintil-

Card 1/2

L 26663-66

ACC NR: AT6010458

lation waveform showed it to consist of several components with different damping times. A two-stage attenuation, with damping times 1.1 and 2.5 μsec, was observed at room temperature. The durations of the γ scintillations are compared with those of previously investigated intracenter and exciton scintillations, and certain hypotheses are advanced regarding the mechanism transferring the energy from the main substance to the activator and causing the different components of the γ scintillations. It is assumed that each of the γ components is due to a different energy-transfer mechanism. It is pointed out that the conclusions are still tentative and further research is necessary. Orig. art. has: 1 figure and 2 formulas.

SUB CODE: 20/ ORIG REF: 010/ OTH REF: 011/ SUBM. DATE: 00

Card 2/2 BLG

L 19817-65 EWT(l)/EEC(b)-2 IJP(c)/APWL/AS(mp)-2/AFETR/ESD(gs)

ACCESSION NR: AT5000406 S/3119/64/000/001/0149/0162

AUTHOR: Plyavin', I.K.

TITLE: Kinetics of intracenter luminescence of KBr-Tl

SOURCE: AN LatSSR. Institut fiziki. Radiatsionnaya fizika, no. 1, 1964. Ionny*ye kristally* (Ionic crystals), 149-162

TOPIC TAGS: luminescence, intracenter luminescence, thallium impurity, potassium bromide crystal, quenching time, quantum yield, photoluminescence

ABSTRACT: The authors studied and quenching time, relative quantum yield, and emission spectra of the activator luminescence of KBr-Tl single crystals with a thallium concentration of 0.5 - 2 mole % in the melt. The quenching time of photoluminescence was determined by oscillography of single photoscintillations caused in the crystal by excitation with short light pulses. A comparison of the experimental data obtained with the theoretical calculations of B.I. Stepanov was used to determine certain characteristics of the thallium center. It is postulated that at relatively high temperatures (up to 123K), an "equilibrium" emission due to a thermally equilibrated distribution of ions over the emitting $^3P_1$ and $^3P_0$ levels predominates in the luminescence of KBr-Tl. Below 123K, the equilibrium emission in KBr-Tl is associated with direct transitions from excited levels whose

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L 19817-65

ACCESSION NR: AT5000406

contribution increases as the temperature decreases. A mechanism of the intracenter luminescence of KBr-Tl is proposed which does not contradict the experimental data. "The authors thank A. P. Laurent for assistance in the work, and A. F. Lyushin for preparing the crystals." Orig. art. has: 10 figures and 7 formulas.

ASSOCIATION: None

SUBMITTED: 18Mar64 ENCL: 00 SUB CODE: SS, OP

NO REF SOV: 011 OTHER: 005

Card 2/2

PLYAVIN', I.K.; TRINKLER, M.F.

Kinetics of intracenter luminescence in the temperature quenching region of an activator. Opt.i spektr. 12 no.5:654-656 My '62. (MIRA 15:5)

(Luminescence) (Quantum theory)

24,3500

83367
S/051/60/009/003/003/011
E201/E691

AUTHORS: Vitol, I.K. and Plyavin', I.K.

TITLE: Kinetics of Short-Lived Photoluminescence of Some Activated Alkali-Halide Crystals

PERIODICAL: Optika i spektroskopiya, 1960, Vol. 9, No. 3, pp. 365-368

TEXT: The paper was presented at the Conference on Physics of Alkali-Halide Crystals held in July, 1959, in Tartu. It deals with the effect of two lower excited levels of Ga^+, In^+, Tl^+ activator ions on the kinetics of short-lived photoluminescence of KI-Ga, KI-In and KI-Tl crystals. The temperature dependences of the decay time constants are given in Figs. 1-3. The results obtained agreed well with theoretical calculations confirming the correctness of the latter and permitting determination of some luminescence-centre parameters. There are 3 figures and 10 references: 8 Soviet, 1 English and 1 translation into Russian.

SUBMITTED: December 28, 1959

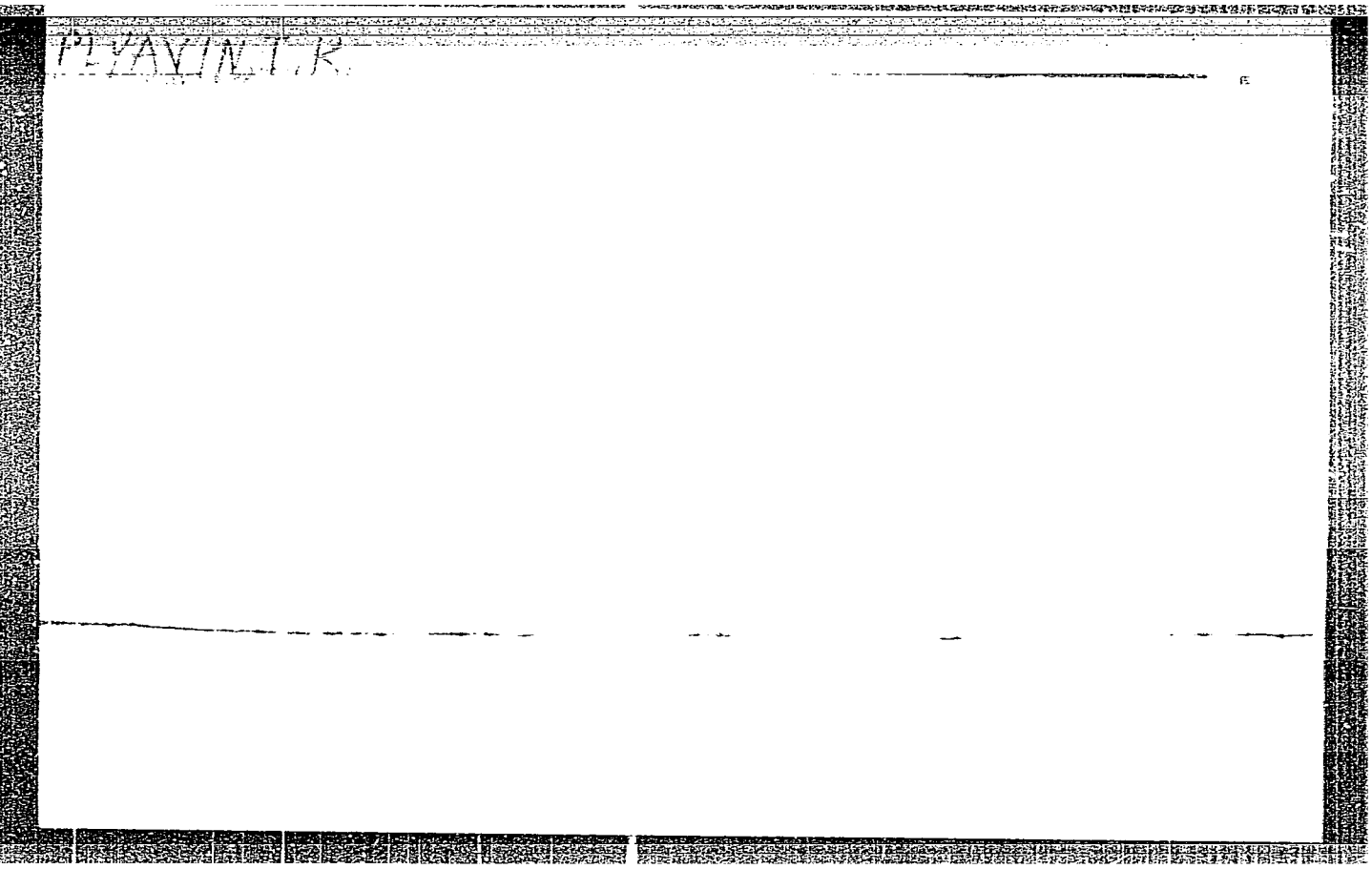
Card 1/1

PLYAVIN, N.

PLYAVIN, N.

Tanker "Stanislav" has joined the fleet. Mor. flot 18 no.2:10 F '58. (MIRA 11:2)

1. Kapitan tankera "Stanislav."
(Stanislav (Ship))



PLYAVIN', I.K.

Kinetics of gamma-scintillation in sodium iodide crystals activated by thallium. Izv. AN SSSR. Ser. fiz. 21 no.4:549 Ap '57. (MLRA 10:8)

1. Fizicheskiy institut imeni P.N. Lebedeva Akademii nauk SSSR.
(Luminescence) (Phosphors)

PLYAVIN, I.K

AUTHOR: Plyavin', I. K. 51-3-17/24

TITLE: Kinetics of gamma-scintillation in crystals of thallium-activated sodium iodide. (Kinetika γ-stsintillyatsiy v kristallakh iodistogo natriya, aktivirovannogo talliyem).

PERIODICAL: "Optika i Spektroskopiya" (Optics and Spectroscopy), 1957, Vol.2, No.3, pp.384-386 (U.S.S.R.)

ABSTRACT: This paper was read at the 5th Conference on Luminescence in Tartu in June 1955. The mechanism of transfer of energy from the sodium iodide lattice to the thallium activator is of great physical interest. To study this question the form of the light pulses produced by gamma-rays in NaI:Tl was recorded at various temperatures. NaI had 0.01 mol.% of thallium. Gamma-rays from Co^{60} were used to excite the crystal. The scintillations were amplified by a photo-multiplier and recorded by a cathode-ray oscillograph. The experiment was carried out with the crystal at temperatures from +80 C to -150 C. Oscillograms of scintillations at +20 C, -10 C and -150 C are reproduced in a figure. The scintillation decay was found to have a time constant t_1 of 3.0×10^{-7} sec at room temperature. With lowering of temperature t_1 increased and below 0 C further component with its own time constant t_2 appeared in the decay curves.

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Kinetics of gamma-scintillation in crystals of thallium-activated sodium iodide. (Cont.) 51-3-17/24

This t_2 also increased the lowering of temperature. At about -120 C a third component was found in the scintillation decay. The activation energies corresponding to t_1 and t_2 were found to be E_1 = 0.15 eV and E_2 = 0.05 eV, respectively. The scintillation amplitude was found to change discontinuously around -20 and also at -110 C. From the absorption band of thallium at 295 mμ, assuming $^1S_0 - {}^3P_1$ transition, a value of t of 4.5×10^{-8} sec was found at room temperature. This value is one order of magnitude higher than the decay constant t_1 but it agrees well with the time constant of the scintillation growth. It is concluded that the scintillation growth is related to radiative transitions of the thallium ion. The decay is more complex and it involves radiationless transitions with freeing of electrons (or holes) from metastable levels or from capture levels (trapping levels). Photoluminescence decay, due to 10^{-7} sec sparks whose light was absorbed by thallium mainly at 295 mμ, was found to be similar to the gamma-scintillation decay. There are 3 figures (one half-tone with scintillation

Card 2/3

Kinetics of gamma-scintillation in crystals of thallium-activated sodium iodide. (Cont.) 51-3-17/24

oscillograms) and 3 references, none of which is Slavic.

SUBMITTED: August 30, 1956.

ASSOCIATION: Institute of Physics, Ac.Sc. U.S.S.R. (Fizicheskiy Institut AN SSSR).

AVAILABLE:

Card 3/3

Plyavin', I.K.

SUBJECT: USSR/Luminescence 48-4-29/48

AUTHOR: Plyavin' I.K.

TITLE: Kinetics of Gamma-Scintillations in Sodium Iodid Crystals Activated by Tallium (Kinetika gamma-stsintillyatsiy v kristallakh iodistogo natriya, aktivirovannykh talliyem)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #4, p 549, (USSR)

ABSTRACT: Individual gamma-scientillations in NaJ-Tl crystals were investigated with an oscillograph, and it was found that they have very fast rise ($\tau \lesssim 6 \times 10^{-8}$ sec) and a longer decay ($\tau \approx 3 \times 10^{-7}$ sec).

Decay of gamma-scintillations proceeds according to an exponential law, and the τ-value depends on temperature. This time apparently characterizes the levels of capturing electrons or holes in NaJ-Tl. The dependence of $\ln\tau$ on inverse temperature in the range of temperatures from +80° to -175°C is expressed by two straight lines corresponding to activation energies of 0.15 and 0.05 ev. At the room temperature the decay is determined by the 0.15 levels, at the lower

Card 1/2

48-4-29/48

TITLE: Kinetics of Gamma-Scintillations in Sodium Iodid Crystals Activated by Tallium (Kinetika gamma-stsintillyatsiy v kristallakh iodistogo natriya, aktivirovannykh talliyem)

temperatures lower levels begin to play a role.

Experimental data confirm an assumption that the scintillation includes a two-stage process consisting of a non-radiation transition (Liberation from the capture levels) and a radiation transition in the activator. The report was followed by a short discussion. No references are cited.

INSTITUTION: Physical Institute im. Lebedev of the USSR Academy of Sciences

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 2/2

PLYAVIN, N.

Union of South Africa - Description and Travel

At the Cape of Good Hope. Vokrug Sveta no. 5, 1952

Monthly List of Russian Accessions, Library of Congress, July 1952. UNCLASSIFIED.

PLYAVIN, N.

The prevention of sea water pollution by petroleum waste products. Mor. flot 15 no.7:27-28 Jl '55. (MIRA 8:9)

1. Kapitan teplokhoda "Iosif Stalin."
(Water--Pollution)

PLYAVIN, N. I., Cand Tech Sci -- "Operating a ~~marine~~ tanker."
Odessa, 1961. (Min of ~~Marine~~ Fleet USSR. Odessa Inst of
Engineers of the ~~Marine~~ Fleet) (KL, 8-61, 247)

FLYAVIN, NIKOLAY IVANOVICH

M/5
756.53
.P7

Ekspluatatsiya Morskogo Tankera (Operation of a Maritime Tanker) Moskva, "Morskoy Transport", 1956.
274 P. Illus., Diagrs., Maps, Tables.

PLYAVIN, Nikolay Ivanovich, kapitan dal'nego plavaniya; YAROVA, L.V., red.; TIKHONOVA, Ye.A., tekhn.red.

[Operation of seagoing tankers] Ekspluatatsiia morskogo tankera. Izd.2., dop. i ispr. Moskva, Izd-vo "Morskoi transport," 1960. 362 p. (MIRA 14:3)
(Tank vessels)

4

L 52098-65 EPF(c)/EWT(m)/T Pr-4 DJ

ACCESSION NR: AP5015267 UR/0286/65/000/009/0049/0049

AUTHORS: Stengrevits, O. Ya.; Balodis, V. N.; Iyevin'sh, Ya. K.; Vanag, Ya. P.; Plyavin'sh, A. A.; Zaks, L. B.; Zaltsmanis, O. E.; Rozlia, G. I.; Slyshans, A. V.

TITLE: A rotary vacuum pump. Class 27, No. 170604

B

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 49

TOPIC TAGS: vacuum pump, pressure, suction, lubricant

ABSTRACT: This Author Certificate presents a rotary vacuum pump consisting of a cylindrical case with end covers, an eccentrically positioned rotor with plates, a suction nipple mounted on the cylindrical surface of the case, and pressure nipples (see Fig. 1. on the Enclosure). To distribute the lubricant uniformly along the length of the plates by changing the direction of motion of the gases being exhausted in the case, the pressure nipples are mounted in the end covers of the case. Orig. art. has: 1 figure.

ASSOCIATION: Glavnoye konstruktorskoye byuro severo-zapada pri zavode Rigasel'mash (Main Construction Bureau of the Northwest at the Rigel'mash Plant)

SUBMITTED: 22Feb64 ENCL: 01 SUB CODE: IE

NO REF SOV: 000 OTHER: 000

Card 1/2 /

ACC NR: AP7001327 SOURCE CODE: UR/0371/66/000/005/0015/0019

AUTHOR: Chernyak, V. G. — Cernaks, V.; Dunina, A. A. — Dunina, A.; Larionov, M. G. — Larionovs, M.; Plyavinya, I. K. — Plavina, I.; Shamovskiy, L. M. — Samovskis, L.; Tale, A. K. — Tale, A.

ORG: Physics Institute AN LatSSR (Institut fiziki AN Latv. SSR)

TITLE: Photoscintillations of KCl-Tl excited in the F-band

SOURCE: AN LatSSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk, no. 5, 1966, 15-19

TOPIC TAGS: scintillation, light excitation, excitation spectrum, f band

ABSTRACT: An investigation was made of the rapid transfer of energy from F-centers to activator centers and of the time necessary for such transfer when the crystals are subjected to pulsed excitation. The investigation was based on the comparison of the kinetics of activator luminescence excited directly in the center of luminescence (Tl-scintillation) and in the F-absorption band (F-scintillation). KCl-Tl-F crystals (0.2 or 0.5 mol% Tl in melt) were irradiated with x- or gamma rays. The concentration of F-centers did not exceed 5×10^{17} cm^{-3}. The crystals were placed in a metallic cryostat and excited with light pulses ($\sim 10^{-7}$ sec) from a spark. The excitation was applied alternately in the 247 and 560 nm bands. A coincidence was found between F-scintillation and Tl-scintillation with regard to their time

Card 1/2

ACC NR: AP7001327

characteristics in the range from room temperature to the temperature of liquid nitrogen. The time characterizing the slow exponential decay τ_{LC} (LC-long component) in F-scintillations changed from 2.5×10^{-7} sec to 5×10^{-5} sec with a change in temperature from 300 to 80K. At low temperatures, a sharp emission (short component-SC) of luminescence occurs which describes the form of the exciting spark pulse, as in the case of Tl-scintillation. The ratio of quantum yield of SC and LC of F-scintillation is the same as for Tl-scintillation in the entire range of measured temperatures, which shows that the overpopulation of the $^3P_1$ level with respect to the $^3P_0$ level at F-scintillation is the same as in the case of Tl-scintillation. The SC and LC of luminescence in F-scintillations relate to the activator luminescence of KCl-Tl, i.e., to the 305 nm band, but not to the 335 nm band, which corresponds to the hole centers. The maxima of the excitation spectra of F-scintillation and absorption spectra coincide and are in the region of 560 ± 5 nm. From the experimental results, it follows that the mechanism of F-scintillation formation is of the electron type. This means that during short-time crystal excitation in the F-absorption band, free electrons, which are generated in the conductivity zone, recombine with holes, which are localized due to x- or gamma-irradiation on the activator ion or close to it. This process is accompanied by the excitation of the activator. Orig. art. has: 2 figures. [JA]

SUB CODE: 20/ SUBM DATE: 06Dec65/ ORIG REF: 007/ ATD PRESS: 5109

Card 2/2

PLYASKIN, Ivan Ivanovich, kand. tekhn. nauk; MOSKAL'KOV, Ye.F., gorn. inzh., retsenzent; KADYRBAYEV, R.A., gor. inzh., retsenzent;

[Organization of stripping operations at the Sokolovka-Sarbay open pit mines] Organizatsiia vskryshnykh rabot na Sokolovskom i Sarbaiskom kar'erakh. Moskva, Izd-vo "Nedra," 1964. 134 p. (MIRA 17:7)

PLYAVIN, Nikolay Ivanovich, kapitan dal'nego plavaniya; LENNIKOV, A.I., redaktor; ALEKSANDROV, L.A., redaktor izdatel'stva; TROFIMOV, A.V., tekhnicheskiy redaktor

[Operation of a seagoing tanker] Ekspluatatsiia morskogo tankera. Moskva, Izd-vo "Morskoi transport," 1956. 274 p. (MLRA 10:3)
(Tank vessels)

L 16862-63 EWT(l)/BDS/EEC(b)-2 AFFTC/ASD/ESD-3/SSD Pi-4

ACCESSION NR: AR3006312 S/0058/63/000/007/D086/D086

SOURCE: RZh. Fizika, Abs. 7D623

63

AUTHOR: Zunde, B. Ya.; Trinkler, M. F.; Plyavinya, I. K.

TITLE: On the kinetics of intra-center luminescence 21

CITED SOURCE: Sb. Fiz. shchelochno-galoidn. kristallov. Riga, 1962, 116-122. Diskus., 122

TOPIC TAGS: phosphor, alkali-halide crystal, luminescence attenuation time, luminescence quantum yield, intracenter luminescence

TRANSLATION: Using CsI-Tl and KI-In as examples, a comparison is made between experiment and the theoretical expressions for the luminescence attenuation time τ and the luminescence quantum yield B. τ was measured for different wavelangths within the limits of the broad non-elementary emission band of CsI-Tl, ascribed to the

Card 1/2

L 16862-63
ACCESSION NR: AR3006312

transition from levels corresponding to the levels $^3P_0$ and $^3P_1$ of the free ion Tl^+. The results of the calculation, namely that τ remains constant for different wavelengths, are confirmed, thus indicating a thermal connection between the electron-vibrational levels participating in the radiation. The temperature dependences of τ and of the ratio of the value of B at a certain temperature to B_0 -- the quantum yield at T_0 -- are obtained. The agreement obtained between the theoretical and experimental values indicates that the probabilities of the radiative transitions of these activators are independent of the temperature.

DATE ACQ: 15Aug63 SUB CODE: PH ENCL: 00

Card 2/2

Plyetsityy, D. F.

ALYMOV, A. YA. I PLYETSITYY, D. F.

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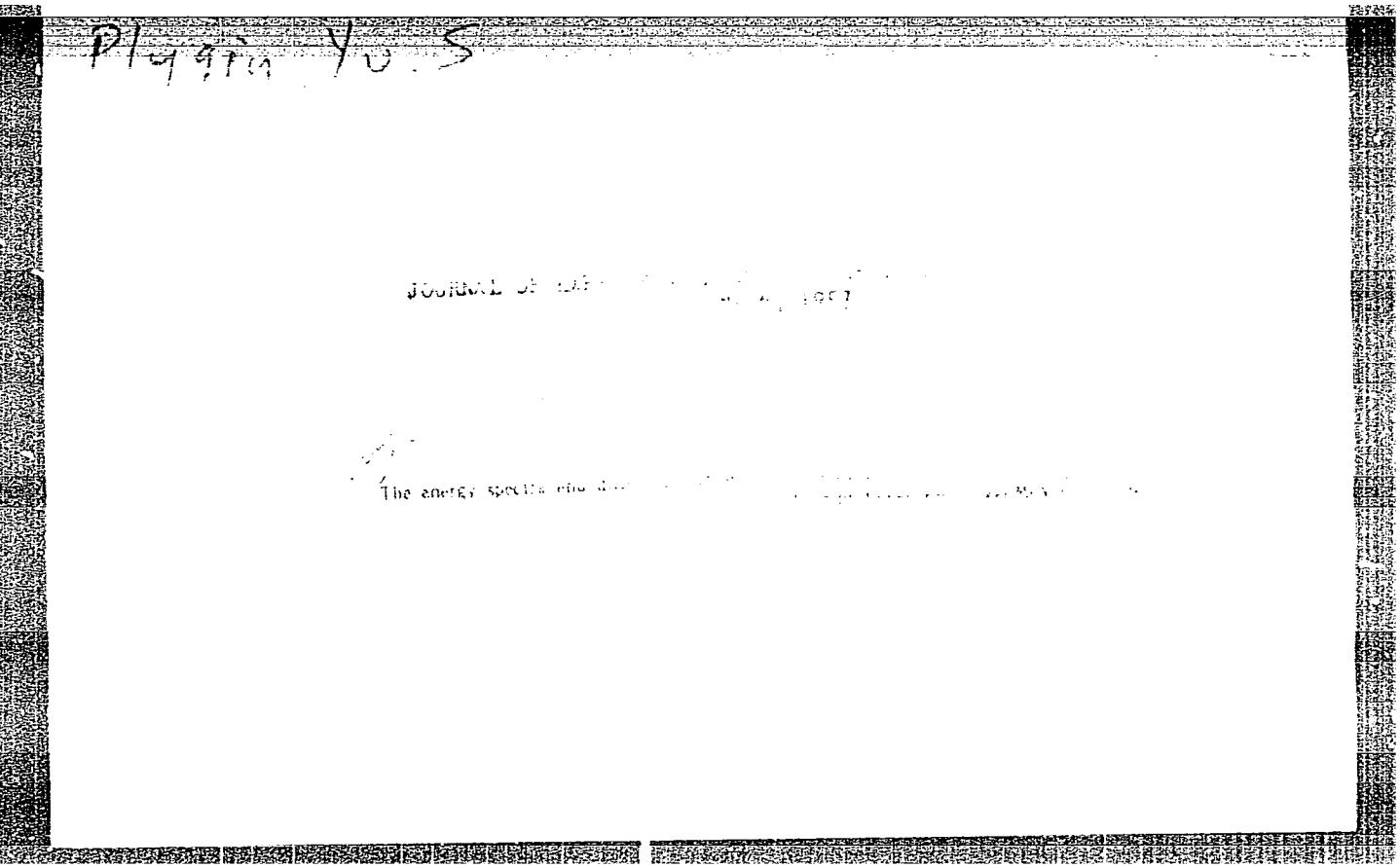
SO: LETOPIS' NO. 40



PLYGUNOV, ALEKSANDR SERGEYEVICH

Dir., Kiev Polytechnic Inst., -1948-.

Cand. Chem. Sci.

"Obtaining Aluminum Oxide from Keolins of the Ukraine," 50 Let. Kievsk Politekh. In-ta, Kiev, 1948.

(from Letopis)

ALENT'YEV, A.A.; PLYGUNOV, A.S.

In memory of Academician N.S.Kurnakov. Ukr. khim.zhur.17 no.2: 159-164 '51. (MLRA 9:9)
(Kurnakov, Nikolai Semenovich, 1860-1941)

SOV/143-59-1-1/17

5.24

AUTHOR: Plygunov, A. S., Docent, Director

TITLE: 60 Years of the Kiyev, Order of Lenin, Polytechnical Institute (60 let Kiyevskogo ordena Lenina Politekhnicheskogo instituta)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 1, pp 1-4 (USSR)

ABSTRACT: The article reviews the history of the Kiyev Polytechnical Institute, founded in 1898. 23,554 specialists have been graduated from the Institute since its foundation; 11,950 of this number, in the years from 1941 to 1958. At present, the Institute has 9 departments and 11,517 students. It trains engineers in 32 different fields. Its industrial basis has been enlarged by the recent incorporation of part of the Works im. Lepse. Students interested in scientific research are offered ample possibilities by the Students' Scientific and Technical Organization (SNTO) of the Institute. Large-scale research has been carried out by the various

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60 Years of the Kiyev, Order of Lenin, Polytechnical Institute

chairs of the Institute. The Kiyev School of Physics and Chemistry is known for its studies of the kinetics of reactions in solutions (Academician D.V.Pisarzhevskiy and his disciples) and of the electrochemical properties of solutions (Academician V.A.Plotnikov and his disciples). Special departments of the Chemicotechnological Department (Professor D.A.Chernobayev, Academician B.S.Lysin, Professor A.A.Alent'yev, Professor N.N.Voronin) have been playing an important part in the progress of the chemical industry. The Chair of Resistance of Materials (now under Corresponding Member of the Academy of Sciences of UkrSSR G.S.Pisarenko) has been doing important research in the field of strength of metals. The Chair of Metal-Cutting Machine-Tools, headed by Professor Ye.M. Khaymovich, has been concentrating on hydraulic drives and hydraulic automation as used in mechanical engineering. In the foundry field, new methods have been developed, under Professor K.I.Vashchenko, for the modification of pig-iron, for the smelting of acid-proof alloys with high chrome content, and for the smelting of the

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60 Years of the Kiyev, Order of Lenin, Polytechnical Institute

antichloric alloy, resistant to hydrochloric acid and chlorine. The Chair of Steel Metallurgy, headed by V.S. Kocho, has developed a method improving the operation of open-hearth furnaces. The Department of Heat Engineering has been doing research in the field of interchange of heat and raising the efficiency of thermopower equipment. The Department of Electrical Engineering has been successful in perfecting electrical apparatuses and electropower equipment. There is 1 photograph.

ASSOCIATION: Institut kandidatov khimicheskikh nauk (Institute of Candidates of Chemical Sciences)

SUBMITTED: December 15, 1958

Card 3/3

PLYKIN, R.V.

On p^{γ} -properties and metrization over half-fields. Izv. AN Uz.SSR. Ser. fiz.-mat. nauk 7 no.5:14-20 '63. (MIRA 17:8)

1. Tashkentskiy gosudarstvennyy universitet imeni Lenina.

PLYPLINA, A.I.; RASKIN, Ya.L.; ROGOVIN, Z.A.

Investigation of the processes of photochemical destruction of nitrocellulose coatings. Report No. 3: Effect of stabilizers on the resistance of nitrocellulose in lacquer-paint coatings to photochemical destruction. Lakokras. mat. i ikh. prim. no.4:2-5 '61. (MIRA 16:7)

(Protective coatings) (Nitrocellulose)

PLYPLINA, A.I.; RASKIN, Ya., L.; ROGOVIN, Z.A.

Photochemical degradation of nitrocellulose films. Report No.2: Effect of oil-containing components on the photochemical degradation of cellulose nitrates in paint coatings. Lakokras. mat. i ikh prim. no.3:8-11 '61. (MIRA 14:6)
(Nitrocellulose)
(Protective coatings)

PLYPLINA, A.I.; ROGOVIN, Z.A.

Effect of pigments on the photochemical destruction of cellulose nitrates in lacquer coatings. Lakokras.mat.i ikh prim no.3:36-37 '60. (MIRA 14:4)

(Pigments) (Nitrocellulose)

Plyshchev, V Ye

USSR/Inorganic Chemistry. Complex Compounds.

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26437.

Author : Komissarova, L.N.; Plyshchev, V.Ye.

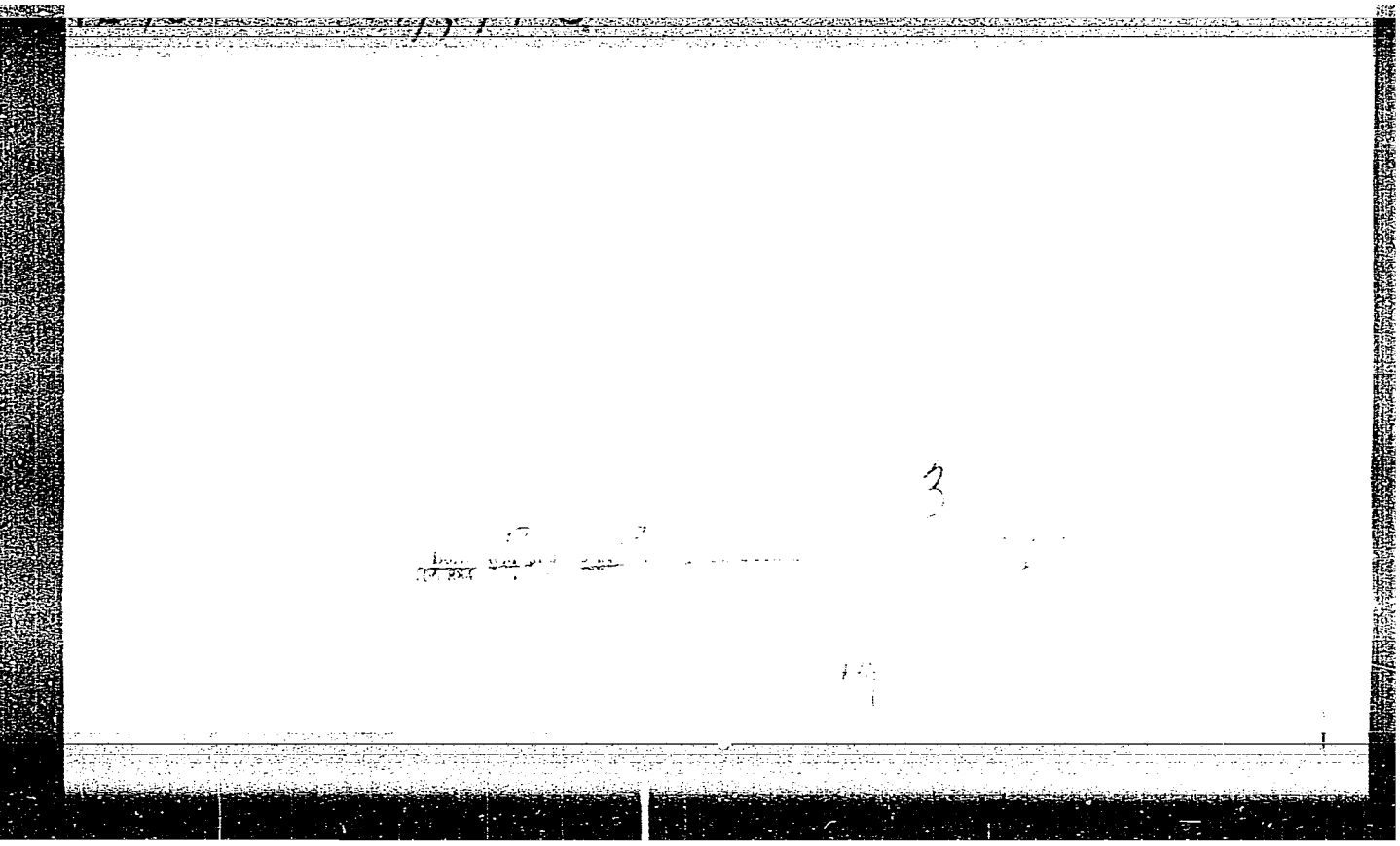
Inst :

Title : Separation of Zirconium and Hafnium.

Orig Pub : Uspekhi khimii, 1956, 25, No. 10, 1197 - 1222.

Abstract : Review. Bibliography with 123 titles.

Card 1/1



PLYSHEVSNIY, I. ; DOBROVOL'SKIY, N., Eng.

Boring Machinery

Drilling rig A VB-3-100. MTS 12, No. 9, 1952.

9. -Monthly List of Russian Accessions, Library of Congress, December 1953, Unclassified.

Plyszewskaja, E. G.

Nitrogen-15 in studies of nitrogen metabolism in plants.
F. W. Turczin, M. A. Gurninskaia and E. G. [illegible]

	Hrs. after feeding	Alanine	Aspartic acid	Glutamic acid	Asparagine	Serine	Tyrosine	Histidine
	0.5	3.5	0.50	0.50	0	0	0	0
	2.0	12.2	0.50	0.53	0	0	0	0
Roots	4.0	44.9	0.50	2.48	0	0	0	0
	20.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Stems and leaves	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

PLYSHEVSKAYA, N.I.

PHASE I BOOK EXPLOITATION SOV/4128

Grigor'yev, Ivan Ivanovich, Boris Grigor'yevich Diatroptov, and Nadezhda Ivanovna Plyshevskaya

Prepodavaniye teoreticheskoy mekhaniki v tekhnikume (The Teaching of Theoretical Mechanics in Tekhnikums) Moscow, Proftekhizdat, 1960. 243 p. 4,000 copies printed.

Scientific Ed.: G.M. Kurovskiy; Ed.: M.V. Kobrinskaya; Tech. Ed.: V.I. Sushkevich

PURPOSE: This book is recommended as a training manual for teachers at special secondary technical schools by the Training and Methods Direction for Special Secondary Institutions of the Ministry of Special Technical Colleges and Secondary Education in the USSR.

COVERAGE: The book discusses a number of general problems in the teaching of mechanics and also special methods of presentation (under the conditions of a tekhnikum) of individual topics. The limited size of this manual does not permit consideration of special methods for all topics of the course; therefore, the topics selected were those most difficult to teach. The topics treated are

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GRIGOR'YEV, Ivan Ivanovich; DIATROPTOV, Boris Grigor'yevich; PLYSHEVSKAYA, Nadezhda Ivanovna; KUROVSKIY, F.M., nauchnyy red.; KOBRINSKAYA, M.V., red.; SUSHKEVICH, V.I., tekhn.red.

[Teaching theoretical mechanics in a technical school] Prepodavanie teoreticheskoi mekhaniki v tekhnikume. Moskva, Vsesoiuznoe uchebno-pedagog. izd-vo Proftekhizdat, 1960. 241 p. (MIRA 13:3)
(Mechanics, Analytic--Study and teaching)

USSR/Chemistry - Catalysts, Heavy Oxygen May/Jun 52

"Study by Means of O^{18} of the Oxygen Exchange on Vanadium Catalysts," L. Ya. Margolis, Ye. G. Plyshevskaya, Inst of Phys Chem, Acad Sci USSR

"Iz Ak Nauk, Otdel Khim Nauk" No 3, pp 415-421

Heavy oxygen was obtained by electrolysis of heavy CO_2 cont 0.9% O^{18}. Using oxidation catalysts (V_2O_5, V_2O_4, $MgCr_2O_4$, Ag) which did not contain O^{18} in the gas phase. Using the same catalysts into which O^{18} was introduced by means of H_2O^{18}, studied exchange with O^{16} in the

220T6

gas phase. The kinetics of O_2 adsorption on V catalysts at temps 250-400° were established in this manner. The inhomogeneity of the surface of V catalysts was demonstrated. Oxygen exchange at catalysts of mild and severe oxidation was detd at the temp of the oxidation reaction (350-450°). The mass-spectrographic method of analysis was applied in investigating the oxygen resulting from the exchange after conversion into $CO^{18}O^{16}$ and CO_2^{16}.

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PLYSHEVSKAYA, Ye. G.

Biological - Chemistry - A
General - 11

CA

The role of the structure of glycogen molecules in the process of formation of glycogen-protein complexes. E. L. Rozenfel'd and E. G. Plyshevskaya. *Doklady Akad. Nauk S.S.S.R.* **85**, 615-18(1952); cf. *C.A.* **46**, 7005*h*. Under the action of phosphorylase that incompletely cleaves glucose residues from terminal branches of the glycogen mol., the glycogen loses the ability to react with proteins. Hence, the formation of glycogen-protein complexes depends on terminal, nonaldehydic groups as well as on the hemiacetal hydroxyls (potential aldehydic groups). The above concept is supported by expts. in which β-dextrins were obtained by the action of β-amylase on glycogen of frog or rabbit muscle. For complete cleavage of the terminal chains up to the sites of chain branching repeated treatment with the enzyme was needed in some cases. The protein used was myosin whose absorption max. is 2775 A. The absorption max. of β-dextrin mixts. with myosin corresponded in full with those of myosin alone; the complex of myosin with glycogen has an absorption max. at 2825 A. Dextrins formed from glycogen by the action of phosphorylase differ from β-dextrins by residual terminal glucose groups; such φ-dextrins, prepd. by incubation of glycogen in phosphate buffer (pH 6.8-7.0) in presence of neutralized cysteine-HCl and purified phosphorylase for a total of 48 hrs., also fail to show spectral evidence of any combination with myosin.

G. M. Kosolapoff

[redacted], Ye. A.; [redacted], Ye. I.; [redacted], V. F.

[redacted]

Interaction between proteins and [redacted] with varying length of terminal molecular branches. Dokl. AN SSSR, 86, No. 1, 1952.

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

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2. USSR (600)

4. Photosynthesis

7. Study of the formation of albumin in the process of photosynthesis with the use of N^{15}. Dokl. AN SSSR, 87, No. 2, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

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USSR.

Catalytic oxidation of simplest unsaturated hydrocarbons by heavy oxygen. L. Ya. Margolis and E. G. Plyshevskaya. *Bull. Acad. Sci. U.S.S.R., Div. Chem.* [illegible] (Engl. translation).—See *C.A.* 48, 12072*f*. H. L. H.