

IVANOV, D.N.

3636. IVANOV, D.N. Posobiya Po Pravilam Dvizhyeniya Avtotransporta. M.,
Voyeniznat. 1954. 192 s. s ill. 23sm. Gr. 20k B Pyer-(54-57606) P

SO: Knizhnaya Letopis', Vol. 3, 1955

IVANOV, Dmitriy Nikolayevich, kandidat tekhnicheskoy nauk, dotsent;
BELETSKIY, G.L., inzhener, retsenzent; NAZAROV, D.M., inzhener,
redaktor; GOFMAN, Ye.K., redaktor izdatel'stva; SOKOLOVA, L.V.,
tekhnicheskoy redaktor

[Feeding of engines consuming light liquid and gas fuel] Sistemy
pitaniya dvigatelei legkogo zhidkogo i gazovogo topliv. Izd. 2-oe,
dop. i perer. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit.
lit-ry, 1955. 238 p. (MLRA 9:9)
(Gas and oil engines--Fuel systems)

Zovneni D.A.
SOLOV'YEV, Georgiy Mikhaylovich; IVANOV, ~~Imitriy Nikolaevich~~; KOSOROTOV,
B.V., inzhener-polkovnik, redaktor; VOLKOVA, V.Ye., tekhnicheskij
redaktor

[Manual of automobile traffic regulations] Posobie po pravilam
dvizheniya avtotransporta. Izd.2-oe, ispr. Moskva, Voen.isd-vo
M-va obor.SSSR, 1957. 224 p. (MLRA 10:9)
(Traffic regulations)

SOLOV'YEV, Georgiy Mikhaylovich; IVANOV, Dmitriy Nikolayevich; KOSOROTOV,
B.V., inzh.-polkovnik, red.; STREL'NIKOVA, M.A., tekhn.red.

[Manual on traffic regulations] Posobie po pravilam dvizhenia
avtotransporta. Izd.3, perer. Moskva, Voen.izd-vo M-va obor.SSSR,
1959. 247 p. (MIRA 13:3)
(Traffic regulations)

MYSHKIN, Vyacheslav Grigor'yevich; SMORODINSKIY, I.M., inzh., retsen-
zent; IVANOV, D.N., inzh., red.; MODEL', B.I., tekhn. red.;
SMIRNOVA, G.V., tekhn. red.

[Truck-mounted cranes] Avtomobil'nye kran'y. Izd.2., perer. Moskva,
Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1961. 210 p.
(MIRA 14:12)

(Cranes, derricks, etc.)

SOLOV'YEV, Georgiy Mikhaylovich; IVANOV, Dnitriy Nikolayevich; DUKACHEV,
M.P., polkovnik, red.; KONOVALOVA, Ye.K., tekhn. red.

[Traffic regulations for automotive transportation in the U.S.S.R.]
Dvizhenie avtotransporta v SSSR. Moskva, Voen.izd-vo M-va obr.SSSR,
1961. 279 p. (MIRA 14:12)
(Traffic regulation) (Transportation, Automotive)

IVANOV, D.N.; GORYACHEV, V.T., red.; CHAPAYEVA, R.I., tekhn. red.

[Improving the roadability of motor vehicles]Povyshenie pro-
khodimosti avtomobilei. Moskva, Voenizdat, 1962. 66 p.
(MIRA 15:10)

(Motor vehicles--Dynamics)

IVANOV, D. N.

Division of the medium-grained granites of the Gul'shad deposit (central Kazakhstan) according to the results of quantitative mineralogical analysis and radiometric observations. Dokl. AN SSSR 147 no.6:1425-1428 D '62.
(MIRA 16:1)

1. Leningradskoye otdeleniye Matematicheskogo instituta im. V. A. Steklova AN SSSR. Predstavleno akademikom D. S. Korshinskiy.

(Gul'shad region--Granite) (Rocks--Analysis)
(Gamma rays--Measurement)

IVANOV, D.N.; FAAS, A.V.

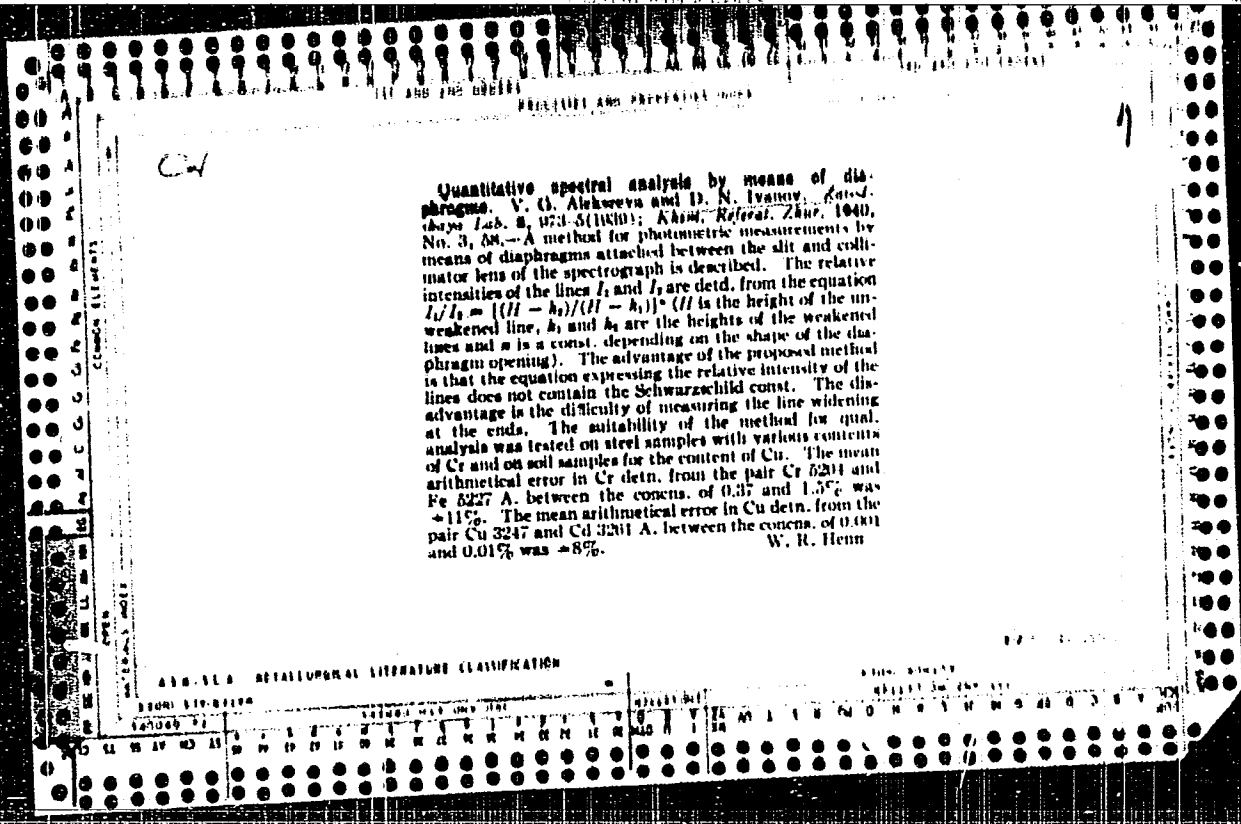
Relation between the distribution of scandium and the type of
rocks containing it. Dokl.AN SSSR 149 no.1:176-178 Mr '63.
(MIRA 16:2)

1. Leningradskoye otdeleniye Matematicheskogo instituta im.
V.A.Steklova AN SSSR. Predstavleno akademikom D.S.Korshinskim.
(Scandium)

IVANOV, D.N.

Linear paragenesis of the main rock-forming elements of central
Kazakhstan granites. Dokl. AN SSSR 150 no.2:392-395 My '63.
(MIRA 16:5)

1. Leningradskoye otdeleniye Matematicheskogo instituta im. V.A.
Steklova AN SSSR. Predstavleno akademikom D.S.Korzhin'skim.
(Kazakhstan—Granite)



13

CU

Determination of copper in soils by means of spectral analysis. D. N. Iyngov. *Pedology* (U. S. S. R.) 1939, No. 11, p4 0. Acetylene-oxygen flame was used. It brings out two fundamental lines of Cu: 3247 Å. and 3274 Å. with a sensitivity of 3.10⁻⁶%. As an internal standard the Cd line was used, 3261 Å. A microphotometer was used in the outfit. With a concn. of 1.10⁻⁶ to 1.10⁻⁸ the mean arithmetical error was +8.0%. The method is well adapted for all kinds of soils. J. S. J.

AS B. S. A. METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

CA ИВАНОВ, Д. Н. Inst of Soils Acad V.V. Dokuchayev, Acad Sci USSR

Application of spectroscopic analysis in soil science.
 D. N. Ivanov. *Bull. Acad. Sci. U. R. S. S., Ser. phys.*
 4, 203-5 (1940).--The spectroscopic analysis of soils for
 the basic elements (K, Na, Mg, etc.) and also for trace
 elements (Cu, Zn, Li, Sr, etc.) is rapid and accurate.
 For the detn. of Cu, the acetylene flame in the air was
 used with the excitation lines Cu 3247 A. and 3274 A.
 Cd was used as the comparison element. The relative
 intensities of Cu and Cd lines (3247 and 3204 A., resp.)
 were detd. by the method of photographic photometry.
 As little as $3 \times 10^{-6}\%$ of Cu could be measured. Methods
 for the quant. analysis of K, Na, Mg are being developed
 Roksalana Gannow

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

15

(4)

Distribution of copper in the main soil types of the U. S. S. R. I. D. Sedletska and D. Ivanov. *Conf. read Acad. Sci. U. S. S. R.* 30, 51 (1941) (in English). The Cu content of certain Russian soils was: red earth, 0.014; chernozem 0.0008%, peaty-podzolized 0.0032, highly podzolized sandy, less than 0.0003%. The Cu content was const. throughout the profile of the red earth. It was relatively high in the A₁ horizon, min. in the A₂ horizon and accumulated in the B horizon of podzols. The Cu content decreased with depth in chernozems and increased with depth in the humic-kleyey soils. A subtropical podzol contained 0.0152% Cu and the horizon differences were less pronounced than in the northern podzol. A podzolized gleyey subtropical soil (I) contained 0.008% Cu which was uniformly distributed through the profile. The colloid of the horizons of I contained 0.0101-0.0104% Cu. The increased Cu content of the colloid shows the influence of adsorption on the migration of Cu in the profile. Weathering increased the Cu content of olivine basalts from 0.002% in the rock to 0.0110% in the friable weathered products.

Nelson McKaig, Jr.

AS & SLA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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PRECISES AND PROPERTIES INDEX

15

04

The copper content of the principal soil types of the U.S.S.R. and the spectral method of determining it. I. D. Sedletskii and D. N. Ivanov. *Akad. Nauk S.S.S.R., Pochvennyi Inst. im. V. V. Dokuchaeva, Rekomendatsiya dlya Pochvykh i Lab. Issledovaniya Pochv No. 1, 140-13 Arakhim. Metody Issledovaniya* (1944); cf. C.A. 35, 41409. —The authors make the generalization that soils of depressions are lower in Cu content. "Soil cultivation sickness" due to deficiency of Cu appears when the Cu content drops below $1-2 \times 10^{-4}\%$. Some peat soils contained less than $3 \times 10^{-4}\%$. A spectral method of detg. Cu is described and illustrated. I. S. Ioffe

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

IVANOV, D.N.

USSR

Physico-chem. Lab., Soil Inst. & Acad. Sci. (-1946-)

"To the farming utilization of peaty-boggy soils"

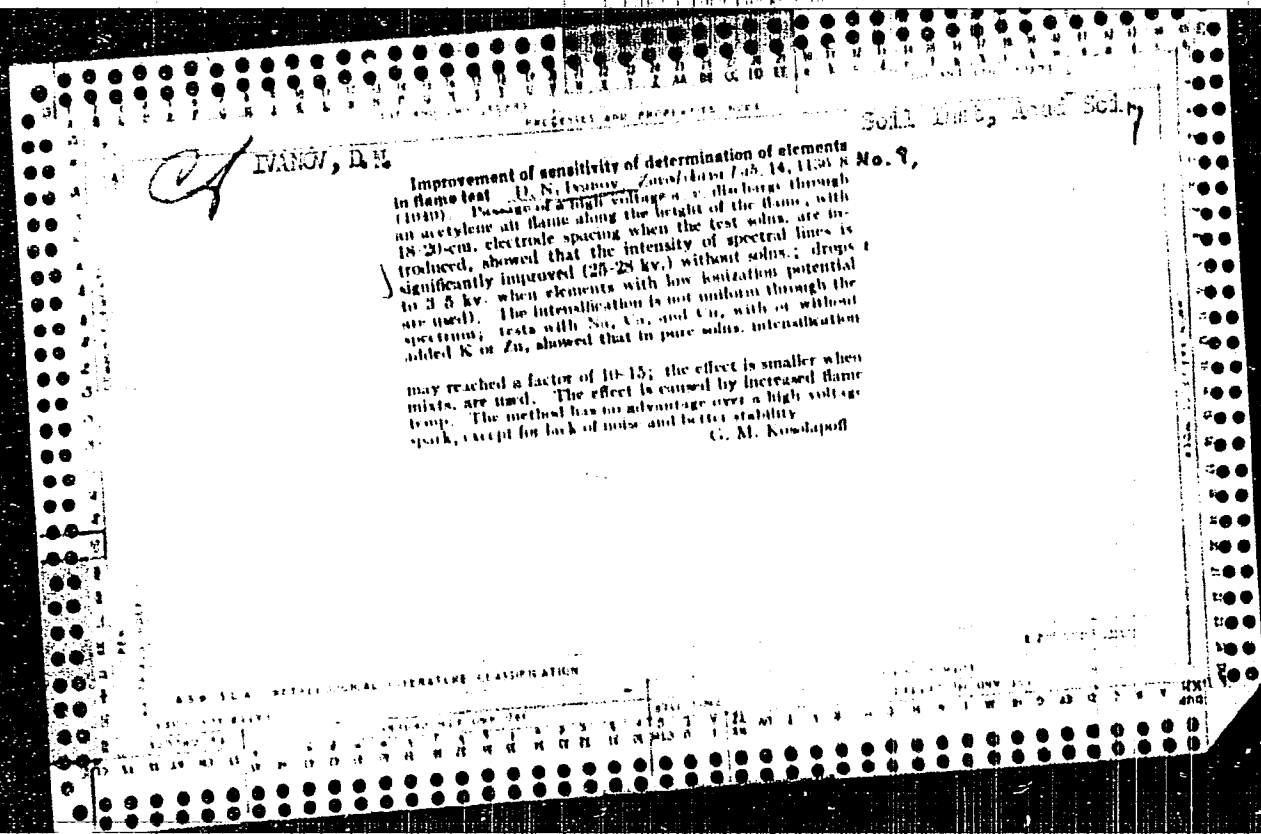
Pochvovedeniye, No. 12, 1946.

Oct 22 1951

CA

7

The application of the electron multiplier for the determination of the alkali elements. D. N. Ivanov (Inst. of Soils, Acad. Sci. U.S.S.R.). *Pochinok* (Pedology) 1949, 421-6; cf. Kubetskii (C.A. 39, 20038).—The multiplier is described and illustrated. The principal spectral lines of the alkali metals were measured: Li 6708 Å., Na 5890/95 Å., K 7665/99 Å., Rb 7800 Å., Cs 8521 Å. An acetylene-air flame was used to excite the spectrum. The logs of the deviations of the intensity of the spectral lines are plotted against the logs of the contents of the elements within the limits of 1×10^{-10} to 1×10^{-16} for Na and K, 5×10^{-10} to 1.1×10^{-16} for Li, Rb, and Cs. This method can be used in soil analyses. A comparison with standard techniques shows this method to be accurate. J. S. Ioffe



IVANOV, D.N.

USSR

"Occurrence of Copper in Soils and Role of Copper Fertilizers in Increasing the Yield Capacity of Farm Crops." Thesis for degree of Cand. Geological-Mineralogical Sci. Sub 7 Jun 50, Soil Inst imeni V.V. Dokuchayev, Acad Sci USSR

Summary 71, 4 Sept 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

CA

Distribution of copper in soils and the role of copper containing fertilizers in increasing the yield of agricultural plants. D. N. Ivanov. *Trudy Pochvennogo Inst. im. V. L. Dokuchaeva* 34, 143-80 (1950). The content of Cu in soils is 10^{-2} - $10^{-4}\%$; its content in the basic types of soil is $1 \cdot 10^{-2}$ - $1 \cdot 10^{-4}\%$. Ordinarily, there is a greater content of Cu in soils than in the igneous rocks on which the soils formed, also plant ash contains more Cu than the soils in which they grow. The humus contg. upper horizons contain most of the Cu. There the Cu is in the form of mineral-org. complexes. The distribution of Cu through the horizons of various soils is discussed. When the Cu content falls below a certain min., e.g. $1 \cdot 10^{-4}\%$, it must be added to prevent a drop in plant yield. M. Hoch.

IVANOV, D.N.

The application of interference light filters for the determination
of sodium and potassium in soils. Pochvovedenie '53, No.1, 61-6.
(CA 47 no.14:7144 '53) (MLRA 6:2)

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619020015-7

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619020015-7"

the deeper layers of the soil. In some cases, the
soil samples collected between 10 and 20 cm from the
surface sometimes seem to be enriched with respect to the

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619020015-7

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619020015-7"

The effect of
fusion, and plant ext.
C. J. 41. 1110

USSR

Flame-photometric method for determination of calcium
in solutions. D. M. Ivanov. *J. Anal. Chem. U.S.S.R.* 9,
1964, 1021-1024 (Eng. translation).—See *C.A.B.* 49, 4445i.
H. U. H. |

USSR/ Agriculture - Soil science

Card 1/1 Pub. 43 - 85/97

Authors : Ivanov, D. N.

Title : Use of interference light filters for the determination of Na and K in
 the soil

Periodical : Izv. AN SSSR. Ser. fiz. 18/2, page 294, Mar-Apr 1954

Abstract : The results obtained by utilizing interference light filters for the
 determination of sodium and potassium in the soil are briefly summarized.
 One USSR reference (1953).

Institution : Academy of Sciences USSR, The V. V. Dokuchayev Soil Institute

Submitted :

I. IVANOV, L. IVANOV

Distribution of rubidium in saline soils. D. N. Ivanov.
Trudy Pochvennogo Inst. im. V. V. Dokuchaeva, Akad.
Nauk S.S.S.R. 44, 292-6 (1954).—Rb content is tabulated
spectrometrically in 11 solonchaks (a variety of saline soil)
of Azerbaijan, 2 solonchaks and 1 solonetz of middle Asia,
and in 6 solonchaks and 1 solonetz of the Barabinsk plain.
The Rb content is 0.003-0.020% measured at depths up to
775 cm. The Rb level does not help to differentiate the
various types. The av. content of Rb in saline soils is
0.011%. 90% of all analyses fall in the range 0.005-
0.015%. There is apparently no accumulation of Rb dur-
ing salinization nor any well-expressed accumulation of Rb
in the surface horizons. A. W. Italy.

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619020015-7

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619020015-7"

IVANOV, D.N.

Occurrence of lithium, rubidium, and cesium in products of
recent weathering and in soils. Kora vyvetr. no.2:77-84 '56.
(MIRA 9:8)

(Minerals in soil)

IVANOV, D.N.

Making use of photoresistance in flame photometry. Pochvovedenie no.1:117-118 Ja '59. (MIRA 12:2)

1. Pochvennyy institut imeni V.V. Dokuchayeva AN SSSR.
(Flame photometry)

3(8)

AUTHOR:

Ivanov, D. N.

SOV/20-128-3-47/58

TITLE:

On the Orientation of the Optic Axes of Quartz Grains in Sandstones of the Red Mass on the Cheleken Peninsula

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 3, pp 604-606 (USSR)

ABSTRACT:

The present paper intends to clarify the position of quartz grains on the surface of the layers in the sandstones mentioned in the title. Borings of 1955 were investigated. It was then attempted to put in agreement the stratigraphy established by A. B. Vistelius and M. A. Romanova with the geophysical working characteristics of the cross section of the red mass. The author determined the directions of the optic axes of the quartz grains. 4 grindings were made in parallel to the layers (diagram of the 1st type), 4 more in a perpendicular direction (diagram of the 2nd type) (Table 1). The experimental results showed the following circumstances: (1) The optic axes of the quartz grains form, in most cases, an angle of $5-25^{\circ}$ with the plane of the sandstone layers, sometimes an angle of $25-50^{\circ}$, in the diagrams of the 1st type (the position of the axis in the plane of layers being assumed with 0°). This suggests a certain

Card 1/2

On the Orientation of the Optic Axes of Quartz Grains in Sandstones of the Red Mass on the Cheleken Peninsula SOV/20-128-3-47/58

predominance of grain surfaces in parallel to the prism facets over those in parallel to the rhombohedron faces. (2) The existence of 2 maxima in the diagrams of the 1st type surely points to the fact that the sandstones of the Karagel'skiy and Dokushkuzlanskiy horizons of the red mass were deposited in a medium with a directed motion. (3) The above-mentioned investigation confirms (for nonmetamorphized sandstones) the conclusions drawn by Ingerson - Ramish (Ref 7) and Rowland (Ref 8) saying that the quartz grains in the sedimentation are preferably deposited upon the surfaces in parallel to the rhombohedron- and prism facets. The types of structure diagrams constructed by the author are in agreement with those set up by T. Ye. Gryaznova (Ref 1) and V. K. Golovenok (Ref 2). There are 1 figure, 1 table, and 9 references, 5 of which are Soviet.

ASSOCIATION: Laboratoriya aerometodov Akademii nauk SSSR (Laboratory of Aeromethods of the Academy of Sciences, USSR)

PRESENTED: May 20, 1959, by D. S. Korzhinskiy, Academician

SUBMITTED: May 16, 1959
Card 2/2

IVANOV, D.N.

GP-21A flame photometer. Pochvovedenie no.8:106-109
Ag '60. (MIRA 13:8)

1. Pochvennyy institut im. V.V.Dokuchayeva Akademii nauk
SSSR.

(Flame photometry)

IVANOV, D. N.

High-temperature flame and large samples used in spectrum analysis.
Pochvovedenie no.10:109-112 '60. (MIRA 13:10)

1. Pochvennyy institut imeni V.V. Dokuchayeva Akademii nauk SSSR.
(Soils--Analysis) (Spectrum analysis)

IVANOV, D.N.

Use of the compensation method in flame photometry. Zav.lab. 27 no.3, 297-
299 '61. (MIRA 14:3)

(Flame photometry)

IVANOV, D.N.

Flame photometric analysis. Pochvovedenie no.4:62-70 Ap '62.
(MIRA 15:4)

1. Pochvennyy institut imeni V.V.Dokuchayeva.
(Photometry) (Soils--Analysis)

IVANOV, D.N., kand. geol.-min. nauk, otv. red.; PAVLOV, A.N., red.;
ANTSELOVICH, Ye.M., red. izd-va; KASHINA, P.S., tekhn.
red.; ZUDINA, V.I., tekhn. red.

[Trace elements in some soils of the U.S.S.R.] Mikroele-
menty v nekotorykh pochvakh SSSR. Moskva, Izd-vo "Nauka,"
1964. 162 p. (MIRA 17:1)

1. Akademiya nauk SSSR. Pochvennyi institut im. V.V.
Dokuchayeva.

IVANOV, D.N.; FAAS, A.V.

Evaluation of the content of accessory minerals in thin sections
using a linear calculation method. Sov. geol. 7 no.12:140-147 D
'64. (MIRA 18:4)

1. Leningradskoye otdeleniye Matematicheskogo instituta im.
V.A. Steklova AN SSSR.

IVANOV, D.N.; IVANOVA, N.N.; CRLOVA, L.P.

Concentration of microelements for their determination in soils and
other biological objects. Trudy Kom. anal. khim. 15:306-310 '65.
(MIRA 18:7)

IVANOV, D.N.; IVANOVA, N.N.; ORLOVA, L.P.

Use of organic coprecipitates for determining the Co, Cu, Ni, Pb, Sn, Zn, Cr, Mo, V, and W trace elements in soils. Pochvovedenie no.1:85-89 Ja '65. (MIRA 18:7)

1. Pochvennyy Institut imeni V.V. Dokuchaeva, Moskva.

IVANOV, D.N.; KOS'KO, M.K.

Linear parageneses of the main rock-forming elements of the andesite-basalts of Kamchatka. Dokl. AN SSSR 164 no.6:1363-1365 0 '65. (MIRA 18:10)

1. Gruppya matematicheskoy geologii Leningradskogo otdeleniya Matematicheskogo instituta im. V.A.Steklova AN SSSR i Nauchno-issledovatel'skiy institut geologii Arktiki Gosudarstvennogo geologicheskogo komiteta SSSR. Submitted April 21, 1965.

IVANOV, D.P.

On the afferent innervation of the autonomic ganglia. Dokl.
Bolg. akad. nauk 17 no.4:415-418 '64.

1. Note presentee par D. Kadanov.

KOTSYUBINSKIY, O.Yu., doktor tekhn. nauk; IVANOV, D.P., doktor
tekhn. nauk, prof., retsenzent; ZHESTKOVA, I.N., inzh.
red.

[Warping of iron castings from residual stresses] Koroblenie
chugunnykh otlivok ot ostatochnykh napriazhenii. Moskva,
Mashinostroenie, 1965. 174 p. (MIRA 18:4)

IVANOV, D.P., inzh.

Hollow punch for frozen ground used in driving down piles. Torf.
prom. 37 no.7:31-32 '60. (MIRA 13:11)

1. Torfopredpriyatiye Naziya.
(Peat industry—Equipment and supplies)

IVANOV, D.P.

On the problem of the development of incapsulated nerve endings
of the urinary bladder in man. Suvrem.med., Sofia no.9/10:31-45 '59.

1. Iz Katedrata po anatomia na choveka pri VMI - Sofia. Zav.
katedrata: prof. D. Kadanov.

(BLADDER innervation)

(NERVE ENDINGS embryol.)

IVANOV, D.P.

Embryogenesis of nerve cells in man's urinary bladder. Izv
Inst morf BAN no.5:83-91 '62.

IVANOV, D.P.

Afferent innervation of vegetative ganglia. Doklady Akad. Nauk SSSR no. 13415-418 '64.

1. Note présentée par D. Nadeau.

IVANOV, D.P.

✓ 197. DEVICE FOR EXCHANGING LOWER DANCE (PEAK) SOME WITH MY SOON
FROM TOP ROW OF DRYING PATTERN. Ivanov, D.P. (Leningrad; Glavart
1955, Intern. letter 129, 2pp.; title in Tert. Prun. (Peac. Ind., Moscow),
Jan. 1954, vol. 31, 32).

IVANOV, D.P., inzh.

Apparatus for the reconditioning of slurry pipes. Torf.prom. 34
no.6:35-36 '57. (MIRA 10:12)

1. Torfopredpriyatiye Naziya.
(Peat industry--Equipment and supplies) (Pipe)

PROKOPOV, P.Ye. [Prakopau, P.IA.]; IVANOV, D.P.

Scientific activity of the academicians and corresponding members of the Department of Agricultural Sciences of the Academy of Sciences of the White Russian S.S.R. for 1961. Vestsi AN BSSR.Ser. biial.nav. no.2:133-139 '62. (MIRA 15:8)

1. Chlen-korrespondent AN BSSR (for Prokopov).
(WHITE RUSSIA--AGRICULTURAL RESEARCH)

IVANOV, D. P.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1754
 AUTHOR BEZBATGENKO, A.L., GOLOVIN, I.N., IVANOV, D.P., KIRILLOV, V.D.,
 JAVLINSKIJ, N.A.
 TITLE The Investigation of a Gas Discharge with High Amperage in a
 Longitudinal Magnetic Field.
 PERIODICAL Atomnaja Energija, 1, fasc.5, 26-37 (1956)
 Issued: 1 / 1957

The present work describes the investigations of a gas discharge in deuterium at pressures of from 0,05 to 0,4 mm torr. The stages of the discharge from the growth of the field from zero to the maximum are investigated. Amperage attained 700 kiloampères and the field strength of the longitudinal field was 12000 Ørsted. Investigations were carried out at a field strength of the longitudinal field which was comparable to that of the discharge current. The momentum device used is explained on the basis of a drawing. It consists of a glass or farfor tube of a length of from 65 to 70 cm and with a diameter of from 18 to 20 cm with plane copper electrodes. These tubes are mounted inside a coil of 36 cm diameter. The condenser pile with $C_1 = 23.000$ microfarads on the occasion of its discharge by way of a spherical discharger produces damped electric oscillations with a frequency of 73 c.

Summary and discussion of results: The longitudinal magnetic field delays the compression of the discharge column under the influence of the eigenfield of the current. Breakdown of the discharge column begins later than at $H_0 = 0$. (H_0 - longitudinal field before the discharge). At $H_0 \leq 2000$ Ørsted radial

IVANOV, D.P.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1977
AUTHOR BEZBATCENKO, A.L., GOLOVIN, I.N., IVANOV, D.P., KIRILLOV, V.D.
JAVLINSKIJ, N.A.
TITLE On the Influence Exercised by a Longitudinal Magnetic Field on a
Pulse-Like Gas Discharge with High Amperage.
PERIODICAL Dokl. Akad. Nauk 111, fasc. 2, 319-321 (1956)
Issued: 1 / 1957

The authors investigated the influence exercised by a longitudinal magnetic field on the stability of a plasma column obtained by the pulse-like passage of a current through deuterium. Gas pressure on the occasion of these experiments amounted to from 0,05 to 0,4 mm torr. Amperage attained 700.000 ampères and the field strength of the longitudinal magnetic field was 12.000 Ørsted. A farfor or glass tube with a radius of 10 cm and an electrode distance of 70 cm served as discharge chamber. The scheme of the experimental system is shown in form of a diagram. On the occasion of these tests the strength of the discharge current, the voltage between the electrodes, the radius of the discharge column, and the average field strength of the longitudinal magnetic field in the plasma were determined simultaneously.

An enclosure shows recording of the discharge column during the first 10 micro-seconds. In the case of the presence of a longitudinal magnetic field the column contracts during the first 5 to 6 microseconds but remains homogeneous with respect to length. With an increase of field strength up to 6000 Ørsted compression slows down noticeably and a further increase of field strength is

Dokl.Akad.Nauk 111, fasc.2, 319-321 (1956)

CARD 2 / 2

PA - 1977

only little noticeable. At field strengths of 700 and 2000 Ørsted radial oscillations of the discharge column are noticed. The time of existence of a sharply outlined column is much longer in the case of the existence of a longitudinal magnetic field than if such a field is lacking. In the case of weak longitudinal fields the discharge column curves in the 8. microsecond, on which occasion it remains sharply outlined. However, if a longitudinal field is lacking, the discharge column loses its sharp outline already in the fifth microsecond. The duration of the existence of a sharply outlined column increases under the effect of a longitudinal field to a greater extent than the compression velocity diminishes.

Next, the conditions for the development of the elementary theory for the compression of the discharge column under the effect of the own magnetic field in the case of the existence of a longitudinal magnetic field are given. At a field strength of 2000 Ørsted the computed curves agree satisfactorily with experimental data, but at 6000 and 12000 Ørsted the computed contraction is several times lower than the observed one. Therefore the strong longitudinal field is not frozen in and a considerable part of its flux emerges from the column during the contraction. The authors obtained a solution of the equation of motion which agrees well with measuring results. In the case of very weak magnetic fields the flux of the longitudinal field within the column increases.

INSTITUTION:

IVANOV, D. P.

21(0)
 INTERNATIONAL CONFERENCE ON THE NEUTRON LOSS OF ATOMIC ENERGY, 2d., Geneva, 1958
 (Nuclear Physics) Moscow, Atomizdat, 1959. 522 p. (Soviet Inst Study, Vol. 2) 8,000 copies printed.
 Mos. (Title page): A.I. Alibekov, Academician; V.I. Vekker, Academician; and M. Vlasov, Candidate of Physical and Mathematical Sciences; Ed. of this volume: S.G. Brander and N.P. Pavlovskiy, Candidates of Physical and Mathematical Sciences; 2d. (Inside back): G.I. Smolyan; Tech. Ed.: Y.I. Masal'.
 PREFACE: This collection of articles is intended for scientific research workers and other persons interested in nuclear physics. The volume contains 43 papers presented by Soviet scientists at the Second Conference on Neutron Loss of Atomic Energy, held in Geneva in September 1958.

CONTENTS: It is divided into two parts. Part I contains 17 papers dealing with plasma physics and controlled thermonuclear reactions, and Part II contains 26 papers on nuclear physics, including problems of particle acceleration and of cosmic ray physics. The first paper by L.A. Artsimovich presents a review of Soviet work on controlled thermonuclear reactions. The remaining papers in Part I deal with particular problems in this field.
 Papers in Part II deal in detail with various problems in nuclear physics, such as the fission of heavy atoms and their isotopes, and with the study of cosmic radiation by means of artificial earth satellites and rockets, described in a paper by S.H. Vernov. The Russian-language edition of the proceedings of the conference is published in 15 volumes. The first 6 volumes contain all the papers presented by Soviet scientists as follows: Volume (1), *Neutrons* (Soviet Nuclear Physics); Volume (2), *Neutrons* (Soviet Nuclear Physics); Volume (3), *Neutrons* (Soviet Nuclear Physics); Volume (4), *Neutrons* (Soviet Nuclear Physics); Volume (5), *Neutrons* (Soviet Nuclear Physics); Volume (6), *Neutrons* (Soviet Nuclear Physics). The other 10 volumes contain selected papers presented at the conference by non-Soviet scientists. In the present volume discrepancies between the English and Russian language editions of the proceedings have been noted in three articles where the texts are not identical: V.I. Ivanov, et al., "High Current Pulsed Discharges"; A. Belyakov, et al., "High Frequency Plasma Oscillations"; and Belyakov, "Investigations of the 'Heavy Problem'". The serial numbers of reports 2502 and 2504 are reserved in the English edition. Report 2211, by Simulakov, et al., is numbered 2536 in the English edition.

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Cont 3/13

IVANOV, D. P.

21(0) **FRAN I BOG KRYLOVICH** 807/2001

International Conference on the Peaceful Uses of Atomic Energy, 24, Geneva, 1958
 (English translation) *Zhurnal Fiziki* (Reports of Soviet Scientists,
 Nuclear Physics) Moscow, Akademiya, 1959. 52 p. (Series: IAS Study, Vol. 1)
 8,000 copies printed.

See (this page): A.I. Akhmanov, Academiya; V.I. Zakharov, Academiya; and
 A.A. Vlasov, Candidate of Physical and Mathematical Sciences; M. of this
 volume; S.I. Broder and D.P. Karyakhty, Candidates of Physical and Mathematical
 Sciences; M. (Russian text); G.I. Smolyak, Dub. M.: Ye.K. Masal'.

NOTE: This collection of articles is intended for scientific research workers
 and other persons interested in nuclear physics. The volume contains 4 papers
 presented by Soviet scientists at the Second Conference on Peaceful Uses of
 Atomic Energy, held in Geneva in September 1958.

CONTENT: It is divided into two parts. Part I contains 17 papers dealing with
 plasma physics and controlled thermonuclear reactions, and Part II contains 20
 papers on nuclear physics, including problems of particle acceleration and of
 cosmic ray physics. The first paper by L.A. Arzhanovitch presents a review of
 Soviet work on controlled thermonuclear reactions. The remaining papers in

Part I deal with particular problems in this field.
 Papers in Part II deal in detail with various problems in nuclear physics,
 such as the fission of heavy atoms and their isotopes, and with the study of
 cosmic radiation by means of artificial earth satellites and rockets, described
 in a paper by S.E. Vozner. The Russian-language edition of the proceedings of
 the conference is published in 16 volumes. The first 6 volumes contain all the
 papers presented by Soviet scientists as follows: Volume (1), Zakharov
 (Nuclear Physics); Volume (2), Zakharov, Smolyak, and Yul'evskiy (Nuclear
 Reactor and Nuclear Power); Volume (3), Zakharov, Smolyak, and Yul'evskiy
 (Nuclear Fuel and Reactor Metals); Volume (4), Kiziyev, Smolyak, and Yul'evskiy
 (Neutron Physics); Volume (5), Smolyak, Kiziyev, and Yul'evskiy (Radiation Trans-
 fer and Radiation Heat Loss); Volume (6), Smolyak, Kiziyev, and Yul'evskiy (Cosmic
 Radiation and Cosmic Rays). The remaining 14 volumes contain selected papers
 presented at the Conference by non-Soviet scientists. In the present volume
 discrepancies between the English and Russian language editions of the proceed-
 ings have been noted in three articles where the texts are not identical:
 V.I. Andriyanov, et al., "High Current Pulsed Discharge"; Akhmanov, et al.,
 "High Frequency Plasma Oscillations"; and Bogolyubov, "Investigations of the Many-
 Body Problem". The serial numbers of reports 2508 and 2509 are reversed in the
 English edition. Report 2211, by Smol'nikov, et al., is numbered 2556 in the
 English edition.

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75331
SOV/57-29-10-8/18

21.9000

AUTHORS: Ivanov, D. P., Komar, A. P., Korobochko, Yu. S.

TITLE: Investigation of the Non-Steady-State Current in a Betatron

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1959, Vol 29, Nr 10, pp 1235-1244 (USSR)

ABSTRACT: In the chamber of the betatron a circulatory current of electrons exists during the time of capture. This non-steady-state current, as it is called by the authors, is the subject matter of the study described in this paper. The study is of a purely experimental nature. Two methods of operation of the betatron are considered: a normal operation when the gamma-radiation is present, and the constant field operation. In the normal operation the intensity of gamma-radiation was 5 to 7 roentgen, the amplitude of the magnetic field was 4,050 oersteds, and the amplitude of the injection impulse was 30 to 50 kv. In the constant field method the amplitude of the magnetic field was 0 to 40 oersteds and the amplitude of the injection impulse did not exceed 10 kv. In the latter method the magnetic field in the airgap was constant,

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Investigation of the Non-Steady-State Current
in a Betatron

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the radial coordinate r_N of the injection filament decreases. The magnitude of n begins to remain constant at the moment when almost all the electrons have been emitted within the limits of the capture angle and the orbital current begins to decrease. At that moment the gamma-radiation reaches its maximum value. It is described how this fact can be used for simple adjustment of the electrons in the betatron; it is stated that the method is used in factories for unsealed betatron chambers of sizes sufficiently small to be placed on a table. A relationship is given between the magnitude of the non-steady-state current at the time of capture and the current caused by the electrons emitted by the injector. As the emission current increases, the number n of revolutions decreases from 6-8 to about 2-3, or even less. The greatest value of the non-steady-state current never reached more than one half of the calculated value, which does not include the first-turn electrons. It was observed that the magnitude of n cannot be clearly defined as a function of the magnetic field, and that in the constant field method the magnitude of n fell considerably after several months of betatron operation. As n changes so also in a similar manner does the non-steady-state

Card 3/4

IVANOV, D.P.; KIRILLOV, V.D.

[Studying a toroidal discharge in a rapidly changing
longitudinal magnetic field] Issledovanie toroidal'-
nogo razriada v bystromenialushchensia prodol'nom magnit-
nom pole. Moskva, In-t atomnoi energii AN SSSR, 1960.
26 p. (MIRA 16:12)

(Magnetic fields)

(Electric discharges through gases)

21.2000

77325

SOV/57-30-1-4/18

AUTHORS: Denisov, S. G., Ivanov, D. P., Komar, A. P., Korobochko, Yu. S.

TITLE: Investigation of Electron Distribution in a Batatron Vacuum Chamber

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol 30, Nr 1, pp 31-36 (USSR)

ABSTRACT: The authors devised experiments to investigate the space charge distribution over the cross section of the chamber. During the injection time the electron distribution was studied with a fixed magnetic field while the distribution of the trapped electrons was studied during the work of the betatron and in the presence of γ -rays. All measurements were done on the betatron of the Leningrad Politechnic Institute (Leningradskiy politekhnicheskiy institut), with a maximum γ -ray energy of 15 mev. (1) Investigations of electron distribution over the chamber cross section at injection time: The block diagram is on Fig. 1. The probe is a molybdenum wire

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Investigation of Electron Distribution in
a Batatron Vacuum Chamber

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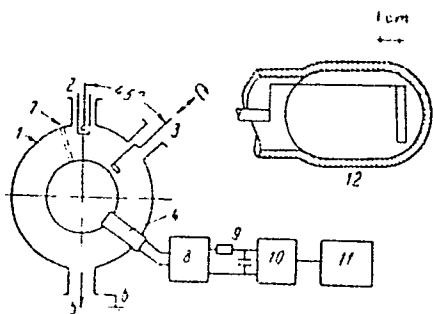


Fig. 1. (1) vacuum chamber;
(2) injector; (3) probe;
(4) coil; (5) pump connections;
(6) grounding of the conducting coating of the chamber; (7) slit in the conducting coating; (8) and (10) preamplifier and amplifier; (9) integrating circuit; (11) oscillograph; (12) diagram of the probe position in the chamber.

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1.2 mm in diameter, with a 5 x 25 mm² stainless steel plate at the end. The current in the chamber is reduced by the amount of the charge caught by the probe, and this quantity is proportional to the density of electrons at the position of the probe. The size of the current is measured by means of a coil, wound around the chamber, whose signal after amplification and time integration is fed to the input of an oscillograph with slave scanning. The input signal is, at every moment, proportional to the instantaneous magnitude of the nonstationary current in the chamber. The apparatus registers the current distribution at the moment when the radius of the injected electrons is near the geometrical center of the cross section of the chamber. The injection impulse was nearly equal to a half-wave of a sinusoid of approximately 40 μ sec duration and of an amplitude 4 to 8 kv. Prior to measurements the injector is always adjusted to yield a maximum value of the nonstationary current for the given emission from the injector. Figures 2a and 2b represent the decrease in the nonstationary current, I,

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a Batatron Vacuum Chamber

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as a function of the position of the probe. Curves are obtained for emission currents varying between 7 and 30% of the calculated limiting current. The authors explain that the variation in I/I_{\max} with the injection current intensity, is due to the registration procedure they have chosen and not due to processes occurring in the camera. Figure 2b shows two clear minimums corresponding to the first and second electron revolution in the chamber. From the position of these and the position of the filament, the authors obtain 0.69 for the effective value of n over the gap width, and for the angle between the circle tangent to the filament and the direction of the beam axis, a value $\theta = -2.2^\circ$. This yields the beam regions for the first five turns plotted at the top of Fig. 2b., where the trapping angle for the beam is limited by the width of the chamber to 8.8° . Compared to this, the width of the minimum shows that the actual trapping width corresponds to a $\theta' = 4.5^\circ$. These regions are shown by thick lines on Fig. 2b.

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Investigation of Electron Distribution in
a Batatron Vacuum Chamber

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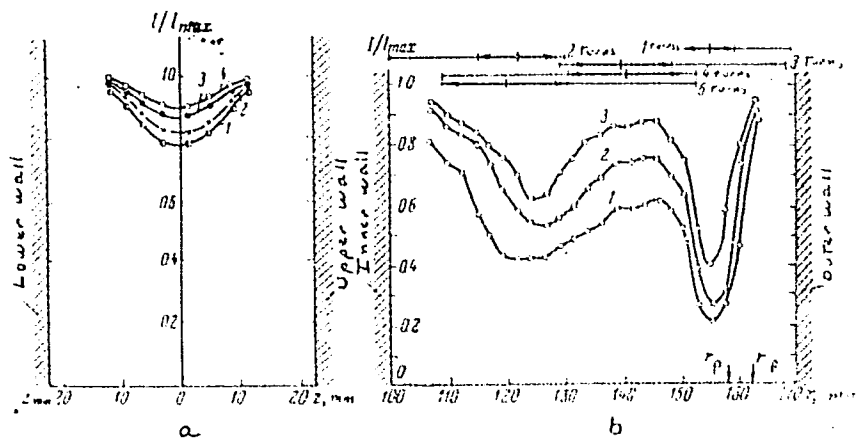


Fig. 2. (a): (1) $I_{em} = 0.07 I_{lim}$; (2) $I_{em} = 0.16 I_{lim}$; (3) $I_{em} = 0.25 I_{lim}$; (4) $I_{em} = 0.3 I_{lim}$ (b): (1) $I_{em} = 0.07 I_{lim}$; (2) $I_{em} = 0.16 I_{lim}$; (3) $I_{em} = 0.3 I_{lim}$. r_p and r_f are radial coordinates of the injector filament and injector point nearest the orbit (similar in Fig. 4b).

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SOV/57-30-1-4/16

Attempts to measure the probe current fail, mostly because of secondary electron emissions. (II) Distribution of trapped electrons: While the probe in the stationary magnetic field is almost completely transparent to electrons, which made some 10 turns, during the working cycle of the betatron the probe becomes completely opaque when at the place of the equilibrium radius, as seen in Fig. 4a and 4b. Figure 4b shows that electrons occupy practically the entire width of the chamber, and the largest electron current density is in the equilibrium region. This takes place also during the accelerating cycle. Detecting the γ -rays generated by means of a scintillation detector, the authors found rays of 4-5 mev energy hitting the probe during the acceleration process. The authors do not know the exact cause of the step to the left of the minimum of the equilibrium radius. They speculate that there may be two trapping orbits, or that for some values of the instantaneous radius and radial oscillation amplitudes, there may be a resonance value of 0.75

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Investigation of Electron Distribution in
a Batatron Vacuum Chamber

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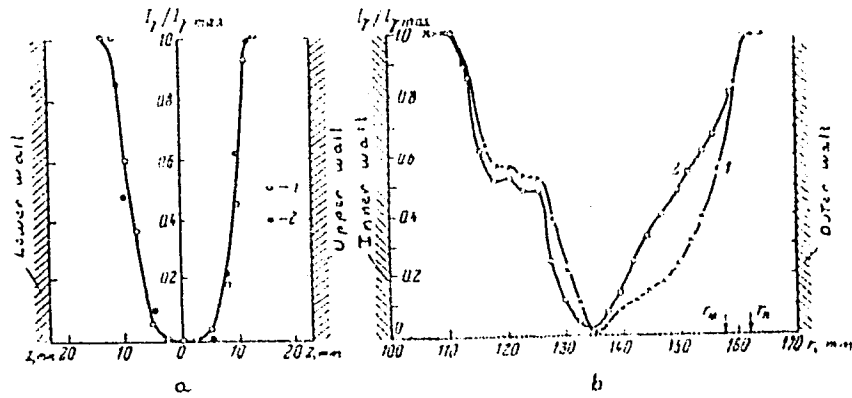


Fig. 4. (a): (1) energy of accelerated electrons, 5 meV; (2) energy of accelerated electrons, 15 meV; (b): (1) electron throw-off on external target; energy of accelerated electrons, 5 meV; (2) electron throw-off on inner wall of the chamber; energy of accelerated electrons, 5 meV.

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for the effective value of n . The difference in shape of curves 1 and 2, Fig. 4b, is due only to the fact that when the back side of the injector is used as the target, the γ -rays from the probe (which is also a target for electrons, see Fig. 3) miss the ionization chamber. There are 4 figures; and 3 Soviet references.

ASSOCIATION: Physics-Technical Institute AS USSR, Leningrad C. (Fiziko-tekhnicheskiy Institut AN SSSR, g. Leningrad)

SUBMITTED: July 20, 1959

Card 8/9

Investigation of Electron Distribution in
a Betatron Vacuum Chamber

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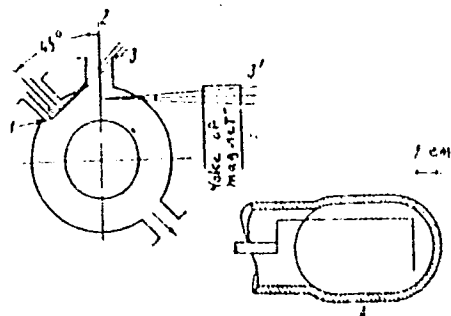


Fig. 3. (1) injector with
the target mounted on its
back side; (2) probe;
(3 and 3') - beams of
 γ -rays generated at
the target and in the
probe; (4) diagram of
probe position in the
chamber.

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82518

S/020/60/133/04/11/031
B019/B060

24.2/20

AUTHORS:

Ivanov, D. P., Kirillov, V. D.

TITLE:

A Study of the Toroidal Discharge in a Fast-changing
Longitudinal Magnetic Field

PERIODICAL:

Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 4,
pp. 793-796

TEXT: The authors state in the introduction that a longitudinal alternating field can be also used for the conservation and heating of plasma and not only for securing its stability. It is briefly shown that there may be an equilibrium between outer and inner magnetic field, if either the plasma pressure in unidirectional fields is maintained by means of a slight difference of the outer and inner field, or if the field inside the plasma cord almost equals the outer field, but has the opposite direction. In both cases, formulas (1) and (2) are derived for

$$\Delta H = \sqrt{H_1^2 - H^2}, \text{ where } H_1 \text{ is the inner field, and } H \text{ is the outer field.}$$

It is further shown that if the outer field changes rapidly enough, the

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A Study of the Toroidal Discharge in a Fast-changing Longitudinal Magnetic Field

S/020/60/133/04/11/031
B019/B060

pressure of the excessive inner field is considerably larger than the plasma pressure. If the outer field then changes its direction and attains the value $-\Delta H/2$, the inner field is equal to $+\Delta H/2$. On an interruption of the further change in the outer field, the plasma cord starts contracting in agreement with (2). The experiments described here, were carried out in a toroidal discharge chamber having a diameter of 40 cm. The working pressure of deuterium or argon was varied from 0.004 to 0.02 torr; and the discharge current attained 50 ka at an initial voltage of 360 v. The half-period was 250 microseconds. A longitudinal field with 4000 oersteds, that was practically constant during the discharge, and a fast-changing field with ± 6000 oersteds were generated in the chamber. The discharge was photographed with quick photorecorders, and the magnetic longitudinal field as well as the self-consistent field of the current were measured with probes. Examples are given in Figs. 1 and 2. It appears from the discussion of results that the opposing field lasted for 10-25 microseconds, and the conductivity at the beginning of contraction was $(1 - 2) \cdot 10^{14}$ CGSE. In contrast to Kolb (Ref. 5) the existence of an opposing field was established by measuring the conductivity in the longitudinal direction of the magnetic field. There are

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ACCESSION NR: AT4025321

S/0000/63/000/000/0292/0299

AUTHORS: Ivanov, D. P.; Krasil'nikov, S. S.

TITLE: Measurement of distribution of conductivity in a plasma pinch

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963; 292-299

TOPIC TAGS: plasma pinch, plasma conductivity, high frequency plasma, gas jet, plasma confinement

ABSTRACT: It is proposed to determine the radius of a plasma pinch from the distribution of its conductivity, by superimposing an additional high-frequency component on the voltage exciting the discharge, such that the reactance of the pinch relative to the supplementary frequency is much larger than the resistance. The inductance and consequently also the geometrical dimensions of the pinch can

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ACCESSION NR: AT4025321

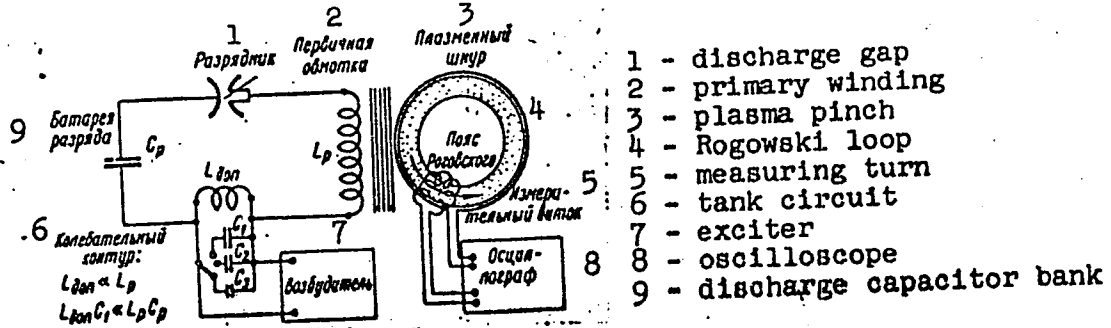
then be determined from the ratios of the amplitudes of the supplementary component on the circuit voltage and on the derivative of the current. A similar method was used by K. V. Donokoy et al. for investigation of conductivity in gas jets (Zh. tekhn. fiz. v. 32, 9, 1095, 1962). The plasma pinch is assumed to be axially symmetrical. The dependence of the measured inductance on the frequency of the supplementary oscillations is qualitatively estimated for different distributions of the conductivity over the cross section of the plasma pinch and it is concluded that the method can be used for estimates of the conductivity in the outer zone of the plasma pinch and of irregularities in the distribution of the conductivity over the cross section, and for approximate measurements of the internal high-conductivity zone. The approximate radius of the current and its time variation can be derived from these estimates. It is emphasized that the results are still preliminary. Orig. art. has: 4 figures and 4 formulas.

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ACCESSION NR: AT4025321

ENCLOSURE: 01

Measurement set-up:

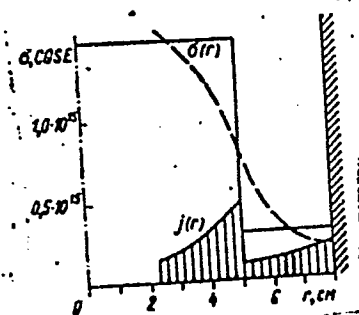


- 1 - discharge gap
- 2 - primary winding
- 3 - plasma pinch
- 4 - Rogowski loop
- 5 - measuring turn
- 6 - tank circuit
- 7 - exciter
- 8 - oscilloscope
- 9 - discharge capacitor bank

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ACCESSION NR: AT4025321

ENCLOSURE: 02



Distribution of conductivity and density of additional alternating current over the cross section of the pinch

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Anatomy

BULGARIA

IVANOV, D. P., Department of Anatomy, Faculty of Medicine, Sofia

"Meissner Corpuscles Within the Bladder and Their Functional Importance"

Sofia, Doklady Bolgarskoy Akademii Nauk, Vol 19, No 7, 1966, pp 669-672

Abstract: [French article] The specific characteristics of receptors (extero, intero, and proprio) were studied extensively without yielding definite results. Meissner corpuscles found in various tissues seem to play the role of receptors of the sense of touch. They have not yet been noticed within the human bladder and, consequently, the author studied the bladder of newly born and of children up to seven years of age using the Bielschowsky-Gross impregnation method. In addition to the F. P. Golgi-Mazzoni corpuscles and Krause terminal bulbs, he found also Meissner corpuscles. A discussion of the results is also given. There are 3 Bulgarian and 5 Western references. (Manuscript received, 7 Apr 66.)

GAVRILOV, A.N., prof., doktor tekhn.nauk; DEM'YANYUK, F.S., prof., doktor tekhn.nauk; MITROFANOV, S.P., kand.tekhn.nauk; KORSAKOV, V.S., prof., doktor tekhn.nauk; IVAHOV, D.P., doktor tekhn.nauk; STO-ROZHEV, M.V., kand.tekhn.nauk; MALOV, A.N., kand.tekhn.nauk; KUDRYAVTSEV, I.V., prof., doktor tekhn.nauk; SHNEYDER, Yu.G., kand.tekhn.nauk; SHUKHOV, Yu.V., dotsent; KAZAKOV, N.P., kand. tekhn.nauk; ZOLOTYKH, B.N., kand.tekhn.nauk; ROZENBERG, L.D., prof., doktor tekhn.nauk; YAKHIMOVICH, D.Ya., inzh.; NIKOLAYEV, G.A., prof., doktor tekhn.nauk; VLADZIYEVSKIY, A.P., doktor tekhn. nauk; SHAUMYAN, G.A., prof., doktor tekhn.nauk; KOSHKIN, I.N., kand.tekhn.nauk; BOBROV, V.P., kand.tekhn.nauk; NOVIKOV, M.P., kand.tekhn.nauk; VIKHMAN, V.S., kand.tekhn.nauk; DERBISHER, A.V., kand.tekhn.nauk; KLIMENKO, K.I., prof., doktor ekonom.nauk; VYATKIN, A.Ye., inzh.; SATEL', E.A., prof., doktor tekhn.nauk; FOFANOV, I.G., inzh.; MATVEYENKO, V.V., inzh.; KOCHETOVA, G.F., inzh., red.izd-va; EL'KIND, V.D., tekhn.red.; TIKHANOV, A.Ya., tekhn.red.

[Present status and trends of future development of technological processes in the manufacture of machinery and instruments] Sovremennoe sostoyanie i napravleniia razvitiia tekhnologii mashinostroeniia i priborostroeniia. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 563 p. (MIRA 13:7)
(Machinery industry--Technological innovations)
(Instrument manufacture--Technological innovations) (Automation)

SOV/137-57-6-10903

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 214 (USSR)

AUTHOR: Ivanov, D.P.

TITLE: Problems of Crystallization of Graphite in Alloys of Iron and Carbon
(Voprosy kristallizatsii grafita v zhelezouglerodistykh splavakh)

PERIODICAL: V sb.: Kovkiy chugun. Moscow, Mashgiz, 1954, pp 78-126

ABSTRACT: A presentation is made of the results of study of various types of native graphite (G). An investigation is made of the structure of G in various alloys of iron and carbon (IC) in which the initial G structure is compact spheroidal with signs of hexagonal structure. All the other structural forms of G must be regarded as derivative and determined by the conditions of alloy crystallization. In molten iron G appears as more or less hexagonal inclusions, and the crystallization thereof in the form of blocks that are close to the hexagonal in shape is entirely in order and appropriate to its crystal lattice. There is no evidence for considering the structure of flake G as the initial or natural form. The form of precipitated G (flake, rosette, or eutectic) depends upon the rate of cooling of the metallic phase.

Card 1/2

The properties of G manifest themselves most fully in Mg iron. The

SOV/137-57-6-10903

Problems of Crystallization of Graphite in Alloys of Iron and Carbon

concept that the G grain grows in the form of successive increments of concentric layers of C atoms occurring as even precipitation from the liquid solution is wrong. Graphite inclusions are conglomerates of sandwiches of flat layers of G retaining the configuration characteristic of the crystal lattice of G as they grow larger. Other factors in crystallization (diffusion through a solid solution from the onset of crystallization, uniform accretion of C atoms by the growing crystal, influence of surface films, etc.) are not decisive.

Yu.R.

Card 2/2

IVANOV, D P.

USSR/Miscellaneous

Card 1/1 : Pub. 61 - 10/23

Authors : Ivanov, D. P.

Title : About the nature of lamelar graphite

Periodical : Lit. prizv. 3, 18-24, May-June 1954

Abstract : The problems of the theory of graphitization, which include graphite crystallization during the hardening and cooling of the smelt directly in the form after casting as well as in the process of its thermal treatment, are discussed. The form, amount and nature of orientation of graphite inclusions in the basic metallic mass of cast iron are considered the major factors determining the quality, properties and designation of the alloy. The structure of lamelar graphite, characteristics for gray iron and its development, are described. Illustrations.

Institution : ...

Submitted : ...

LEVI, L.I., laureat Stalinskoy premii; BARDIN, I.P., akademik, redaktor;
IVANOV, D.P., kandidat tekhnicheskikh nauk, retsenzent; KRYLOV, V.I.
Inzhener, redaktor; TIKHONOV, A.Ya., tekhnicheskii redaktor.

[Oxygen in cast iron production] Kislorod v protsessakh polycheniia
chugunnogo lit'ia. Pod red. I.P.Bardina. Moskva, Gos.nauchno-
tekh.izd-vo mashinostroitel'noi lit-ry, 1955. 274 p. (MLRA 8:11)
(Cast iron--Metallurgy) (Oxygen)

Category : USSR/Solid State Physics - Phase transformation of solid bodies

E-5

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 1193

Author : Ivanov, D.P.

Title : Fundamentals of Crystallization of Graphite in Cast Iron

Orig Pub : Metallovedeniye i sovrem. metody termicheskoy obrabotki chuguna. M., Mashgiz, 1955, 26, 46

Abstract : It is indicated that regardless of the crystallization condition of iron-carbon alloys and regardless of the variety in the graphite bodies, the crystalline structure of the alloys is practically identical and represents a combination of structures of α and β graphite. An x-ray investigation of lampblacks and of mined coal has shown, that the formation of graphite crystals and carbon substances consists of the occurrence of flat molecular layers and of a parallel orientation of these layers into packets. It is proposed that the dissolution of the graphite contained in the charge is not accompanied by complete destruction of either the individual flat layers of the graphite, or of their packets. The dependence of the crystalline form of the graphite on the crystalline lattice of the impurities is doubted. It is stated that the initial structure of the graphite in the iron-carbon alloys is compact

Card : 1/2

IVANOV, D.I.

AVRASIN, Ya.D., kandidat tekhnicheskikh nauk; BERG, P.P., professor, doktor tekhnicheskikh nauk, BERNSHTEYN, M.L., kandidat tekhnicheskikh nauk; GENEROZOV, P.A., starshiy nauchnyy sotrudnik; GLIHER, B.M., inzhener; DAVIDOVSKAYA, Ye.A., kandidat tekhnicheskikh nauk; YELCHIN, P.M., inzhener; YEREMIN, N.I., kandidat fiziko-matematicheskikh nauk; IVANOV, D.P., kandidat tekhnicheskikh nauk; KNOROZ, L.I., inzhener; KOBRIN, M.M., kandidat tekhnicheskikh nauk; KORITSKIY, V.G., dotsent; KROTKOV, D.V., inzhener; KUDRYAVTSEV, I.V., professor, doktor tekhnicheskikh nauk; KULIKOV, I.V., kandidat tekhnicheskikh nauk; LEPETOV, V.A., kandidat tekhnicheskikh nauk; LIKINA, A.F., inzhener; MATVEYEV, A.S., kandidat tekhnicheskikh nauk; MIL'MAN, B.S., kandidat tekhnicheskikh nauk; PAVLUSHKIN, N.M., kandidat tekhnicheskikh nauk; PFITSYN, V.I., inzhener [deceased]; RAKOVSKIY, V.S., kandidat tekhnicheskikh nauk, RAKHSHTADT, A.G., kandidat tekhnicheskikh nauk; RYABCHENKOV, A.V., professor, doktor khimicheskikh nauk; SIGOLAYEV, S.Ya., kandidat tekhnicheskikh nauk; SMIRYAGIN, A.P., kandidat tekhnicheskikh nauk, SUL'KIN, A.G., inzhener; TUTOV, I.Ye., kandidat tekhnicheskikh nauk, KHRUSHCHOV, M.M., professor, doktor tekhnicheskikh nauk; TSYPIN, I.O., kandidat tekhnicheskikh nauk; SHAROV, M.Ya., inzhener; SHERMAN, Ya.I., dotsent; SHMELEV, B.A., kandidat tekhnicheskikh nauk; YUGANOVA, S.A., kandidat fiziko-matematicheskikh nauk; SATEL', E.A., doktor tekhnicheskikh nauk, redaktor; SOKOLOVA, T.F., tekhnicheskiy redaktor

[Machine builder's reference book] Spravochnik mashinostroitel'ia; v shesti tomakh. izd-vo mashinostroit. lit-ry. Vol.6. (Glav. red.toma E.A.Satel'. Izd. 2-oe, ispr. i dop.) 1956. 500 p. (MLRA 9:8)
(Machinery--Construction)

VASHCHENKO, Konstantin Il'ich; SOFROHI, Laurentsio; IVANOV, D.P., kandidat
tekhnicheskikh nauk, retsenzent; SERDYUK, V.K., inzhener, redaktor
izdatel'stva; RUDENSKIY, Ya.V., tekhnicheskiy redaktor

[Magnesium cast iron] Magnievyi chugun. Kiev, Gos. nauchno-tekhn.
izd-vo mashinostroit. lit-ry, 1957. 421 p. (MLRA 10:5)
(Cast iron)

IVANOV, Dmitriy Petrovich -- awarded sci degree of Doc Tech Sci for
20 Jun 57 defense of dissertation: "Problems of the primary crystal-
lization of graphite in ferroc carbon alloys (pig iron)" at the Council,
Mos Steel Inst imeni Stalin; Prot No 7, 29 Mar 58.

(BMVO, 8-58,22)

25(1)

PHASE I BOOK EXPLOITATION

SOV/1500

Vasilevskiy, P. F., B.B. Gulyayev, D.P. Ivanov, V.V. Ioda, I.P. Karev,
G.I. Kletskin, A.G. Korotkov, A.S. Murakhin, Yu.A. Nekhendzi, P.G.
Petrov, and M.A. Smelov

Liteynaya tekhnika; 2-ya Mezhdunarodnaya vystavka liteynoy tekhniki i liteynnye
tsekhi FRG i GDR (Foundry Technology; Second International Exhibition of
Foundry Technology and the Foundries of the FRG and GDR) Moscow, Mashgiz, 1958.
212 p. 3,500 copies printed.

Ed.: P.F. Vasilevskiy; Ed. of Publishing House: A.I. Sirotin, Engineer; Tech. Ed.:
A.Ya. Tikhanov; Managing Ed. for Literature on Heavy Machine Building (Mashgiz):
S.Ya. Golovin, Engineer.

PURPOSE: The purpose of this book is to acquaint readers with new developments in
foundry technology as presented at the 23rd International Congress of Foundrymen
held in Duesseldorf, Germany in 1956.

COVERAGE: The Soviet delegation under the leadership of P.G. Petrov, Engineer, and
his deputy D.P. Ivanov, along with nine other engineers, attended the Congress of

Card 1/6

Foundry Technology (Cont.)

SOV/1500

Foundrymen and the Foundry Exhibition held in Duesseldorf September 1 to 9, 1956. In this book the delegates present a joint report on the state of art in the foundries and research institutes which they visited. The book contains many photographs and diagrams of the machinery and equipment used in foundries and also photographs of finished foundry products. Illustrations accompany the technical descriptions and technical data. One chapter deals with leading German foundries and the major automotive and machine-building plants which maintain their own foundries. Another chapter deals with research and scientific institutes in Germany in which problems of melting and casting are studied. Finally, the authors attempt to evaluate German methods and techniques and compare them with their own. There are no references.

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Foundry Technology (Cont.)

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Card 5/6

IVANOV, D.P., doktor tekhn.nauk

Scientific problems in the development of founding. Nauch.dokl.
vys.shkoly; mash.i prib. no.2:7-14 '58. (MIRA 12:10)
(Founding--Technological innovations)

1958

AUTHORS: Mitin, V.I., and Aristov, I.A.; Engineers SOV-117-58-4-20/21

TITLE: 4th Plenary Session of TsP NTO Mashprom (IV plenum TsP NTO Mashproma)

PERIODICAL: Mashinostroitel', 1958, Nr 4, pp 45-47 (USSR)

ABSTRACT: The Plenary Session of the Central Board of the Scientific-Technical Society of the Machine-Building Industry was convened in January 1958. Central Board Chairman, D.A. Ryzhkov, opened the session with his report, "The Objectives of NTO Mashprom". Assistant Central Board Chairman, N.S. Fedotenko, delivered a report "On the Thematic and Financial 1958 Plan of NTO MASHprom". The following NTO members from different towns participated in the general discussions: B.S. Mordvinov (Omsk); P.P. Berg, Chairman of Vsesoyuznaya sektsiya liteyshchikov (All-Union Foundry Workers Section); I.G. Fofanov, Chairman of Vsesoyuznaya sektsiya ekonomiki i organizatsii proizvodstva (All-Union Section for Economics and Production Organization); A.B. Gol'denberg(Ufa); K.V. Lyubavskiy, Chairman of Vsesoyuznaya sektsiya svarochnogo proizvodstva (All-Union Section of Welding Industry); B.G. Yegerman, Director of Obshchestvennyy Universitet (Public University). G.S. Strizhanov (Perm'); P.V. Chernogorov (Chelyabinsk); V.P.

Card 1/2

4th Plenary Session of TsP NTO Mashprom

SOV-117-58-4-20/21

Chenobrovkin (Head of the Foundry Section of Sverdlovsk NTO); B.D. Groznov (Kiyev); S.S. Chetverikov (Chairman of the All-Union Section of Mechanical Engineering and Assembling); I.A. Aristov; F.N. Tovadze; S.A. Vorob'yev; N.O. Okerblom; S.S. Zaslavskiy. The following reports were also heard: "News in Technology of Prefabricating Shops of Plants" by Doctor of Technical Sciences D.P. Ivanov; "News in Machinebuilding Technology of USSR" by Engineer I.G. Foranov; "Mineral Ceramics and Their Prospective Applications in Machinebuilding" by Professor S.S. Chetverikov. The session approved the thematic and financial plan for 1958.

1. Machines--USSR

Card 2/2

IVANOV D P

128-58-5-1/16

AUTHOR: Ivanov, D.P., Doctor of Technical Sciences

TITLE: Integrated Mechanization and Automation - the Decisive Factor in Foundry Progress (Kompleksnaya mekhanizatsiya i avtomatizatsiya - reshayushchiy faktor progressa liteynogo proizvodstva)

PERIODICAL: Liteynoye Proizvodstvo, 1958, Nr 5, pp 1-2 (USSR)

ABSTRACT: The author makes a brief general review of new foundry machines and technological processes being introduced into USSR foundries. In all, there are about 20,000 molding machines in the foundries, but 30% of these are primitive manual stripping devices while 20% have been provided with devices assuring removal of models without damaging and deforming the mold. The Nauchno-issledovatel'skiy institut liteynoy tekhnologii i mashinostroyeniya (Research Institute of Foundry Technology and Machine Building) has done considerable modernization work and has developed designs of machines based on new principles. However, little use is made of this work in practice, and the institute has no experimental plant. At present, 20 odd non-specialized plants and organizations are designing and pro-

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128-58-5-1/16

Integrated Mechanization and Automation - the Decisive Factor in Foundry Progress

ducing 300 different types of foundry machines, 40 of which are for common molding methods apart from shell molding. Most of these designs are obsolete, and some designs are unnecessarily duplicated. The current foundry-shop planning method - by the weight of produced castings only - causes difficulties that a foundry or even an entire machine building plant cannot solve.

AVAILABLE: Library of Congress
Card 2/2

IVANOV, D.F.

AUTHOR: Nauman, F. SOV/128-58-12-17/21

TITLE: The Fourth Conference of the Foundry Workers of the GDR
(Chetvërtaya konferentsiya liteyshchikov GDR)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 12, pp 25 - 27 (USSR)

ABSTRACT: The Fourth Conference of Founders was organized in May 1958 by the Leipzig Chamber of Engineering together with the Leipziger Tsentral'nyy institut liteynoy tekhniki (Leipzig Central Institute of Foundry Engineering) and the Liteynyy institut Gornoy akademii (Foundry Institute of the Mining Academy) at Freyberg. The Conference was attended by 630 specialists, workers from industrial enterprises, institutes and representatives from the USSR, Poland, Hungary, Bulgaria, Czechoslovakia and the German Federal Republic. The Conference heard the following reports: F. Nauman, Director of the Leipzig Institute of Foundry Engineering, on "Ways to Increase the Accuracy of Castings"; D.F. Ivanov, Doctor of Technical Sciences, on "Scientific Problems in the Progress of Foundry Practice"; Yosif Chikel', Professor of the Foundry Institute of the Freyberg Academy of Mining, on "Spherical Specimens for the Investigation of Cast-Iron Shrinkage"; Gerhard Hertz, Technical Director of the Leipzig Institute

Card 1/2

The Fourth Conference of the Foundry Workers of the GDR SDT/128-58-12-17/21

of Foundry Engineering, on "Prospects of Induction Smelting of Cast Iron in the GDR"; Yosif Chikel' and Yosif Shturm on "Results of Investigations on the Chemical Composition, Structure and Mechanical Properties of Gray Iron"; Helmut Grom on "Positive Results in the Correction of Deficiencies in Castings With the Use of Toxic Resins"; Walter Fayke and Georg Arand on "Stability of Permanent Molds"; Yosif Chikel' and Klaus Kvappe on "Thermal Regeneration of Waste Mixtures by Organic Strengthening Materials"; Georg Geve-nezi and Yogan Stekeres on "Preparation and Properties of Mold Sand"; Hans Voykos on "Economics in the Production of Steel Diecasting"; N.I. Paskacheyev on "Economical Methods in Pattern Production"; Herman Vesner on "Casting of Steel in Chill-Molds"; Walter Fayke and Karl Lange on "Experience in Casting Automobile Parts from Cast-Iron With Spherical Graphite"; Gerd Sharf on "Practice in Chemical Hardening of Molds"; Marton Zol'ti on "Production of Large-Size Cylinder Blocks for Diesel Engines". There are 3 photos, 2 diagrams, 2 graphs and 1 table.

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PHASE I BOOK EXPLOITATION

SOV/2156

Soveshchaniye po kompleksnoy mekhanizatsii i avtomatizatsii tekhnologicheskikh protsessov. 2nd, 1956.

Avtomatizatsiya mashinostroitel'nykh protsessov; /trudy soveshchaniya/, tom. 1: Goryachaya obrabotka metallov (Automation of Machine-Building Processes; Proceedings of the Conference on Over-All Mechanization and Automation of Technological Process, Vol 1: Hot Metal-Forming) Moscow, 1959. 394 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut machinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: V.I. Dikushin, Academician; Compiler: V.M. Raskatov; Ed. of Publishing House; V.A. Kotov; Tech. Ed.: I.F. Kuz'min.

PURPOSE: The book is intended for mechanical engineers and metallurgists.

Card 1/8

Automation of Machine-Building Processes (Cont.)

SOV/2156

COVERAGE: The transactions of the Second Conference on the Over-All Mechanization and Automation of Industrial Processes, September 25-29, 1956, have been published in three volumes. This book, Vol. I, contains articles under the general title, Hot Working of Metals. The investigations described in the book were conducted by the Sections for Automation and Hot Working of Metals, under the direction of the following scientists: casting - P.N. Aksenov, D.P. Ivanov and G.M. Orlov; forming - A.I. Tselikov, A.D. Tomlenov and V.T. Meshcherin; welding - G.A. Nikolayev, B.I. Frolov and G.A. Maslov. There are 183 references: 142 Soviet, 34 English, 6 German, and 1 French.

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