SIVOSHINSKIY, D.A.; VYSOKIY, F.F.

Concerning F.F. Kaperko's article "Determination of heart volume and other indications of central cardiac hemodynamics by means of radioactive krypton Kr^{85}." Med. rad. 10 no.6: 62-68 Je '65. (MIRA 18:6)

SIVOV, A. G.

42123 SIVOV, A. G. - Kembriy I Dokembriy Zapadnogo Sayana. Trudy Gorno-geol. In-ta (AKad. Nauk SSSR, Zap.-Sib. Filial), VYl. 2, 1948. c 125-43. - Bibliogr: 15 Nazv.

SO: Letopis'Zhurnal'nykh Statey, Vol. 47, 1948

SIVOV, A. I.

"Cambrian Deposits of Western Sayan and Continuous Regions." Dr Geol-Min Sci, Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov, Tomsk, 1954. (KL, No 10, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Insitutions (15)

SIVOV, A. G.

Elements of the Stratigraphy and Tectonics of the Devonian Deposits of the Minusinsk Hollow

The application of the paleontological method to the analysis of the Devonian of the Minusinsk hollow (syncline) permits one to establish reliably only divisions. A more detailed analysis is made difficult by the limitedness of the distribution of organic remains and by their independence of associations; here a local subdivision possesses the most important significance. At the foundation of the Lower Devonian of the Minusinsk Hollow lies the Kharadzhul'sk effusive series (basic unit of regional scale is in the author's opinion formations limited below and above by nonconformities and divided into strata). (RZhGeol, No. 5, 1955) Tr. Tomskogo un-ta, ser. geol., 132, 1954, 239-260.

SO: Sum. No. 744, 8 Dec 55 - Supplementary Survey of Soviet Scientific Abstracts (17)

Name: SIVOV, Aleksandr Grigor'yevich

Dissertation: The Cambrian Period of the Western Sayan and its Adjacent Regions

Degree: Doc Geol-Min Sci

Affiliation: [Not indicated]

Defense Date, Place: 12 Jan 55, Council of Tomsk Order of Labor Red Banner Polytech Inst imeni Kirov

Certification Date: 29 Sep 56

Source: BMVO 6/57

AKSARIN,A.V.; ANAN'YEV,A.P.; BENEDIKTOVA,R.N.; GORBUNOV,M.G.; GRATSIANOVA, R.T.; YEGOROVA,L.I.; IVANIYA,V.A.; KRAYEVSKAYA,L.N.; KRASNOPEYEVA, P.S.; LEBEDEV,I.V.; LOMOVITSKAYA,M.P.; POLETAYEVA,O.K.; ROGOZIN,L.A.; RADCHENKO,G.P.; RZHONSNITSKAYA,M.A.; SIVOV,A.G.; FOMICHEV,V.D.; KHALFINA,V.K.; KHALFIN,L.L.; CHERNYSHEVA,S.V.; NIKITINA,V.N., redaktor; GUROVA,O.A., tekhnicheskiy redaktor

[Atlas of leading forms of fossils in the fauna and flora of Western Siberia] Atlas rukovodiashchikh form iskopaemykh fauny i flory zapadnoi sibiri. Pod red. L.L.Khalfina. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po geologii i okhrane nedr, Vol.1. 1955. 498 p. Vol.2. 1955. 318 p. [Microfilm] (MLRA 9:3)

1. Tomsk. Politekhnicheskiy institut imeni Kirova.
(Siberia, Western--Paleontology)

SIVOV, A.G.; TOMASHPOL'SKAYA, V.D.

Age of Sanashtykgol archaeocyathid-tribolite complexes in the Sayan-Altai area. Mat.po geol.Zap.Sib. no.61:40-48 '58. (MIRA 12:8)
(Altai Mountains--Paleontology) (Sayan Mountains--Paleontology)

SIVOV, A. N.

B. Z. Katsenelenbaum, N. P. Kehzhentseva, V. V. Malin, A. N. SIVOV: "Propagation of H_{01} waves in a periodic waveguide." Scientific Session Devoted to Radio Day, May 1958, Tradreservizdat, Moscow, 9 Sep. 58

Conditions for the propagation of a summetric magnetic H_{01} wave in a rectilinear periodic waveguide and the transmission of an H_{01} wave through a bend in a periodic waveguide are investigated.

The periodicity, shape and size of the conductor from which the waveguide is wound, the finite conductivity of the metal, the dielectric shell of the waveguide are taken into account in computing the damping of the H_{01} wave.

The coupling coefficients of the H_{01} wave with the parasitic E. and H_1 type waves which arise are found when analyzing the transmission of the H_{01} wave through the bend.

AUTHORS: V.V. Malin, and A.N. Sivov SOV/109--4-3-12/30

TITLE: On the Theory of Propagation of the H_{01}-Wave in a Helica- Waveguide (K teorii rasprostraneniya volny H_{01} v spiral'nom volnovode)

PERIODICAL: Radiotekhnika i Elektronika, Vol 4, Nr 3, 1959, pp 433-439 (USSR)

ABSTRACT: It was shown in the preceding paper (see this issue of the journal, pages 428/432) that the attenuation due to the radiation in a helical waveguide is given by Eq (1). On the other hand, the attenuation due to the angle of inclination of the turns of the helix is expressed by Eq (2). The following notation is adopted in these equations: a is the radius of the helix, λ is the wavelength in free space, $\varepsilon = \varepsilon' - i\varepsilon''$, $k = 2\pi/\lambda$ and H_1 are Hankel functions of the 2nd kind, H_0 and H_1 are Hankel functions preceding article it was shown that the attenuation caused by the finite conductivity of the conductor is expressed by Eq (3) where σ and t are the parameters depending on the form of the conductor. Eq (3) is valid for a helix whose conductor is rectangular in cross

Card 1/3

...σ cm,
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...(3) can be
...nis can be used
..., the resulting
...nce Eq (1) cannot be
... due to the dielectric
... the helix, a special equation
... derived. The resulting
... given by Eq (14). The
...ernal dielectric sheath of the waveguide
...nto account by using Eqs (1) and (2).
...applicable to helical as well as ring-type
...des. The presence of a small elipticity in a

Card 2/3

SOV/109- - -4-3-12/38

AUTHORS: V.V. Malin, and A.N. Sivov

TITLE: On the Theory of Propagation of the H_{01}-Wave in a Helical Waveguide (K teorii rasprostraneniya volny H_{01} v spiral'nom volnovode)

PERIODICAL: Radiotekhnika i Elektronika, Vol 4, Nr 3, 1959, pp 433-439 (USSR)

ABSTRACT: It was shown in the preceding paper (see this issue of the journal, pages 428/432) that the attenuation due to the radiation in a helical waveguide is given by Eq (1). On the other hand, the attenuation due to the angle of inclination of the turns of the helix is expressed by Eq (2). The following notation is adopted in these equations: a is the radius of the waveguide, p is the period of the helix, λ is the wavelength in free space, $\varepsilon = \varepsilon' - i\varepsilon''$, H_0 and H_1 are Hankel functions of the 2nd kind, $k = 2\pi/\lambda$ and $\mu = 3.83$. Also in the preceding article it was shown that the attenuation caused by the finite conductivity of the conductor is expressed by Eq (3) where σ and t are the parameters depending on the form of the conductor. Eq (3) is valid for a helix whose conductor is rectangular in cross

Card 1/3

On the Theory of Propagation of the H_{01}-Wave in a Helical Waveguide

section. The parameters σ and t can be evaluated on the basis of the transformation defined by Eq (4). It is shown that, if the wave of the conductor is 2b and its height is 2c, the parameters σ and t can be evaluated from Eqs (5) and (6). The variations of these parameters as a function of $q = 2b/p$ for a given b/c are plotted in Fig (2). If $a = 0.9$ cm and $\lambda = 0.8$ cm, Eq (1) can be written as Eq (7). The results of Fig (2) can be used to evaluate a parameter $\ln \sigma$; the resulting graphs are shown in Fig (3). Eq (3) can be approximately represented by Eq (8). This can be used to evaluate η as a function of q; the resulting curves are shown in Fig (5). Since Eq (1) cannot be used for evaluating the losses due to the dielectric situated in the vicinity of the helix, a special equation for this type of loss is derived. The resulting attenuation per unit length is given by Eq (14). The effect of the external dielectric sheath of the waveguide can be taken into account by using Eqs (1) and (2). These are applicable to helical as well as ring-type waveguides. The presence of a small elipticity in a

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On the Theory of Propagation of the H_{01}-Wave in a helical Waveguide

waveguide can also be taken into account. The attenuation produced by this effect is given by Eq (17), where Δ denotes the difference in the semi-axes of the elipse.

The authors make acknowledgement to B.Z. Katzenelenbaum for his interest in this work and his valuable remarks.

Card 3/3 There are 7 figures, 4 tables and 8 references, 4 of which are Soviet, 2 English, 1 French and 1 German.

ASSOCIATION: Institut Radiotekhniki i Elektroniki AN SSSR
(Institute of Radio Engineering and Electronics of the Academy of Sciences of the USSR)

SUBMITTED: March 1st, 1958

S/109/61/006/001/007/023
E032/E114

9.1912

AUTHOR: Sivov, A.N.

TITLE: Incidence of a plane electromagnetic wave on a plane grid (H parallel to the conductors)

PERIODICAL: Radiotekhnika i elektronika, 1961, Vol.6, No.1, pp. 58-66

TEXT: The problem considered is that of a plane electromagnetic wave incident obliquely on an infinite grid, the magnetic vector being parallel to the conductors in the grid, the magnetic filled uniformly with a dielectric although the dielectric is not, in general, the same on either side of the grid. The space is the grid spacing is small compared with the wavelength, formulae are derived for the transmitted and reflected fields. It is assumed that the magnetic permeability of the medium is equal to unity and that the grid is formed by parallel and perfectly conducting metal conductors having cross-sections of arbitrary form with two symmetry axes ox and oy (ox is perpendicular to the conductors and lies in the plane of the grid, and oy is normal to the plane of the grid). The time dependence of the fields is

Card 1/2

S/109/61/006/001/007/023
Incidence of a plane electromagnetic... E032/E114

taken to be of the form exp(iωt). Since the directions of propagation of the waves are perpendicular to the conductors and the grid is uniform in one direction, the problem is essentially a plane one. The paper is entirely theoretical and consists of the following sections: 1) formulation of the problem, 2) expressions for the fields at large distances from the grid in terms of the field on the conductors and in the plane $y = 0$, 3) the electromagnetic field in the neighbourhood of the conductors, 4) discussion of formulae, 5) asymptotic forms, 6) circular and rectangular cross-section conductors, 7) equivalent boundary conditions for the grid, 8) calculation of the effective reflection coefficient of a system consisting of a grid and a parallel screen. Acknowledgements are expressed to B.Z. Katsenelenbaum for his advice and attention to the work. There are 4 figures and 7 references: 6 Soviet and 1 German.

SUBMITTED: May 10 1960

Card 2/2

21087
S/109/61/006/004/001/025
E032/E314

9.1912

AUTHOR: Sivov, A.N.

TITLE: Electrodynamic Theory of a Plane Grid Consisting of Parallel Conductors

PERIODICAL: Radiotekhnika i elektronika, 1961, Vol. 6, No. 4, pp. 483 - 495

TEXT: The problem considered is formulated as follows. The infinite grid lies in free space and the plane electromagnetic wave is obliquely incident upon it. The grid is formed by parallel conductors, whose cross-sections have two symmetry axes. Assuming that the period of the grid is small compared with the wavelength it is required to determine the transmitted and reflected fields in the immediate neighbourhood of the conductors, and to obtain the local boundary conditions representing the action of the grid. The problem is investigated in connection with the attenuation and phase characteristics of electromagnetic waves in periodic waveguides. Two cases of polarisation are distinguished, depending on the orientation of the electric and magnetic vectors,

Card 1/..

Electrodynamic Theory ....

relative to the grid elements. In the case of "H-polarisation" the electric field lies in the plane of the grid and is perpendicular to the conductors while in the case of "E-polarisation", the magnetic field is perpendicular to the conductors. It is found that Lamb's results (Ref. 7) obtained for the acoustic case of a grid consisting of thin circular rods and the results of Von R. Gans (Ref. 8) for a similar case are incorrect. These authors did not take into account peripheral currents and their reflection coefficients are out by a factor of 1.5. The formulae obtained in the present paper can be specialised to the case where the conductors touch each other. The expressions obtained for fields in the immediate neighbourhood of the conductors can be used to correct for losses due to the fact that the conductors are not perfect.

Acknowledgments to B.Z. Katsenelenbaum for interest and advice.

There are 5 figures and 9 references: 8 Soviet and 1 non-Soviet.

SUBMITTED: July 23, 1960

Card 2/2

30437
S/109/61/006/012/007/020
D266/D305

9,1300

AUTHORS: Kotik, I.P., and Sivov, A.N.

TITLE: Propagation of H_{0n} type waves in a ring waveguide having a dielectric-metal jacket

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 12, 1961, 2005 - 2011

TEXT: The purpose of the paper is to solve two closely related problems: (1) to calculate the reflection and transmission coefficients of plane electromagnetic waves incident upon a set of parallel conductors (E parallel to the conductors, distance between the conductors is small in comparison with the wavelength, the upper half-spaces are filled with different dielectrics), (2) to calculate the propagation and attenuation coefficients of a ring waveguide half embedded into dielectric and the whole structure surrounded by a metal wall (Fig. 5). The solution of the planar problem is again divided into two parts: (1) The fields near to the conductors are obtained with the aid of the Laplace equation (solu-

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Propagation of H_{0n} type waves ...

tion given by A.N. Sivov (Ref. 5: Radiotekhnika i elektronika, 1961 v. 6, no. 4, 483));(2) The fields further away from the conductor are related to those near to the conductor by using the Lorentz lemma (explained by L.A. Vaynshteyn (Ref. 2: Elektromagnitnye volny (Electromagnetic Waves) Izv. Sovetskoye radio, 1957, 418)). The auxiliary fields - required by the lemma - are taken as the fields in the absence of the conductors. Performing the calculations the reflection and transmission coefficients are obtained in the following form

$$2\sqrt{\varepsilon_1}\beta_1 p(R_1 - R) = \oint_C E_\xi^1 H_s ds,$$

$$2\sqrt{\varepsilon_2}\beta_2 p(T_1 - T) = \oint_C E_\xi^2 H_s ds. \qquad (7)$$

where ε_2, ε_1 -dielectric constants in the upper and lower half-spaces, φ_1, φ_2 - angles of incidence and refraction respectively, R_1, T_1 - reflection and transmission coefficients of plane waves inci-

Card 2/5

Propagation of H_{0n} type waves ...

dent upon the boundary of two dielectrics, p - distance between the conductors, E_{ξ}^{1}, E_{ξ}^{2} - auxiliary fields corresponding to the reflected and refracted waves respectively, H_s - magnetic field on the surface of the conductor, C - contour of the conductor. With the aid of (7) equivalent boundary conditions are derived which are represented by an electric current in the direction of the conductors and by magnetic current perpendicularly to the conductors. These boundary conditions are applied to the corresponding boundary of the ring waveguide. In the region $0 < r < a$ the dielectric constant is taken as unity whilst the dielectric surrounding the rings is assumed lossy ($\varepsilon = \varepsilon' - j\varepsilon''$). The propagation and attenuation coefficients of this composite waveguide are expressed in the following form:

$$h' = h_0 + \frac{p}{a}\frac{l_2}{p}\frac{\mu^2}{h_0 a^2}; \quad J_1(\mu) = 0; \quad h_0 = \sqrt{k^2 - \left(\frac{\mu}{a}\right)^2}. \tag{18}$$

$$h'' = \frac{(l_3 - l_2)^2}{4}\frac{\mu^2}{h_0 a^4}\operatorname{Im}\left[\frac{\beta_0 a}{\operatorname{tg}\beta_0 d + \beta_0 l_2}\right], \tag{19}$$

$$\beta_0 = \sqrt{k^2\varepsilon - h_0^2}.$$

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Propagation of H_{0n} type waves ...

where h_0 - propagation coefficient of the smooth waveguide (H_{0n} mode), μ - root of the J_1 function, l_2 and l_3 depend on the shape and dimensions of the conductors (obtained in Ref. 3: Op.cit.), $k = 2\pi/\lambda$. If $d \to \infty$ the formulae agree with those of B.Z. Katsenelenbaum (Ref. 5: Radiotekhnika i elektronika, 1959, no. 3, v. 4, 428). If

$$d = \frac{\lambda}{2} m \frac{1}{\sqrt{\varepsilon^1 - 1}} \quad (m = 1, 2, ..)$$

there is a sudden increase in attenuation due to resonance. There are 4 figures and 5 Soviet-bloc references.

SUBMITTED: April 17, 1961

Card 4/4

KATSENELENBAUM, B.Z.; SIVOV, A.N.

Lamb's error in a problem on diffraction on a lattice from thin round rods. Radiotekh. i elektron. 9 no.2:360-361 F '64. (MIRA 17:3)

L 13569-65 EWT(d)/EEC(k)-2/EEC-4 Pn-4/Pg-4/Pt-10/P1-4 ASD(a)-5/BSD/AFETR/
AFWL/SSD/AFMD(t)/RAEM(a)/ESD(gs)/ESD(t) WS S/0109/64/009/010/1821/1827
ACCESSION NR: AP4046682

AUTHOR: Sivov, A. N.

TITLE: Reflection of electromagnetic waves by a short-period corrugated surface [Report at a session of the Scientific and Technical Society of Radio Engineering and Electrocommunication, 1961]

SOURCE: Radiotekhnika i elektronika, v. 9, no. 10, 1964, 1821-1827

TOPIC TAGS: electromagnetic wave, electromagnetic wave reflection

ABSTRACT: The reflection of electromagnetic waves by a corrugated conducting surface whose corrugations are small as compared to the wavelength is considered. These cases are dealt with: (1) An arbitrarily polarized plane wave falls at a slope angle on a shallow-corrugated surface, $c \ll \lambda$, where c is the depth of corrugation; (2) An H-polarized wave is normal to a deep-corrugated surface, c is comparable with λ; the results are also applicable to the case of a

Card 1/2

L 13569-65
ACCESSION NR: AP4046682

slope angle of incidence. In a static approximation, the fields near the corrugations are evaluated, and formulas for reflection factors are derived. Corrections allowing for local waves are found. Orig. art. has: 6 figures and 31 formulas.

ASSOCIATION: none

SUBMITTED: 14Aug63 ENCL: 00

SUB CODE: EC NO REF SOV: 002 OTHER: 000

Card 2/2

SIVOV, A.N.

Reflection of electromagnetic waves from a corrugated surface with a small period. Radiotekh. i elektron. 9 no.10:1821-1827 O '64. (MIRA 17:11)

L 31044-65 EWT(1)/EEC-4/EWA(h) Peb

ACCESSION NR: AP5002912 S/0109/65/010/001/0175/0178

29
26
B

AUTHOR: Kotik, I. P.; Sivov, A. N.

TITLE: Diffraction of electromagnetic waves by a mirror placed in the waveguide bend

SOURCE: Radiotekhnika i elektronika, v. 10, no. 1, 1965, 175-178

TOPIC TAGS: diffraction, electromagnetic wave diffraction, waveguide, waveguide bend

ABSTRACT: An approximate solution of the problem of wave diffraction by a planar metallic mirror in a waveguide was given by Katsenelenbaum (Rad. i elektronika, 1963, 8, 7, 1111). The present article clarifies the limits of applicability of the above solution and the validity of the solution near critical frequencies. Hence, a rigorous solution is offered of the problem of finding amplitudes and phases of normal modes in a flat waveguide diffracted by a planar

Card 1/2

[illegible], I.F.; [illegible]

[illegible] types and the filtering [illegible] of a [illegible]. Radiotekh. i elektron. 10 no.[illegible] (MIRA 18:6)

L 60874-65 EWT(1)/EEC-4/EWA(h)

ACCESSION NR: AP5017658 UR/0109/65/010/007/1226/1232
621.372.823.09

25
B

AUTHOR: Kotik, I. P.; Meriakri, V. V.; Persikov, M. V.; Sivov, A. N.

TITLE: Theoretical analysis and some applications of circular waveguides with longitudinal slots

25

SOURCE: Radiotekhnika i elektronika, v. 10, no. 7, 1965, 1226-1232

TOPIC TAGS: waveguide, circular waveguide, wave filter, energy coupler, directional coupler, attenuator

ABSTRACT: Symmetrical wave propagation in circular waveguides with the periodic structure in the φ-axis shown in Fig. 1 of Enclosure is analyzed. For waves with $\lambda > p$, the longitudinal slots act as a heavy shield for TM_{nm} waves and a weak shield for the TE_{nm} waves, permitting separate coexistence of symmetrical magnetic and electrical waves. A model, of finite length and end-coupled with solid metallic circular waveguides, is discussed. It has the following characteristics: $a = 10$ mm, $p = 2$ mm, $q = 2b'/p = 0.72$, and $b = 20.75$ mm. An incident TE_{01} wave with the characteristic value of $\mu_{01} = 3.83$ is applied from the solid waveguide. Energy transfer from the $r \leq a$ region into the $a \leq r \leq b$ region is periodic with a beat

Card 1/3

L 60874-65

ACCESSION NR: AP5017658 O

wavelength λ_b = 26 cm. Practically complete energy transfer (99% or -20 db) should take place at Z = $\lambda_b/2$ = 13 cm; however, actual tests showed energy transfer of -18 db at Z = 11 cm. When loaded, the waveguide behaves like a TE_{01} variable linear attenuator with an approximate slope of 1 db/cm. The waveguide when used as a filter is characterized by 0.1—0.2-db TM_{01} and TM_{11} attenuation while the TE_{01} wave was down 20 db. Orig. art. has: 7 figures and 21 formulas. [BD]

ASSOCIATION: none

SUBMITTED: 13May64 ENCL: 01 SUB CODE: EC

NO REF SOV: 006 OTHER: 002 ATD PRESS: 4063

Card 2/3

L 60874-65
ACCESSION NR: AP5017658

ENCLOSURE: 01 0

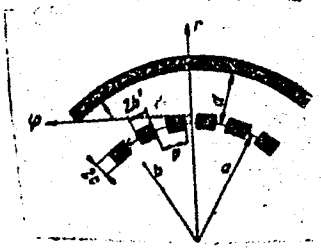

Fig. 1. Cross-section of the waveguide

Card 3/3

ACC NR: AP6018995 SOURCE CODE: UR/0109/66/011/006/1046/1050

AUTHOR: Persikov, M. V.; Kotik, I. P.; Sivov, A. N.

ORG: none

TITLE: Optimizing the pattern of radiation from the open end of a waveguide

SOURCE: Radiotekhnika i elektronika, v. 11, no. 6, 1966, 1046-1050

TOPIC TAGS: waveguide antenna, antenna radiation pattern

ABSTRACT: This problem is considered: What relations among amplitudes and phases of modes emerging from a waveguide open end are required in order to ensure that the ratio of energy radiated within an angle 2δ to the energy delivered by all arriving modes be maximum? To simplify mathematical operations, a simplest model of a planar waveguide is considered in which the modes ($TE_{0,2n-1}$ and $E_{0,2n-1}$) with cophasal current-density distribution at the opposite plates

UDC: 621.372.8.09

Card 1/2

S/0137/64/000/001/G037/G037

ACCESSION NR: AR4018315

SOURCE: RZh. Metallurgiya, Abs. 1G265

AUTHOR: Tikhonov, G. F.; Sivov, A. V.; Pyryalov, L. A.

TITLE: Effect of the particle size of 1Kh18N9T steel powder on its properties

CITED SOURCE: Tr. Gor'kovsk. politekhn. in-ta, v. 19, no. 1, 1963, 42-50

TOPIC TAGS: steel powder, steel powder flow, steel powder particle size

TRANSLATION: A study was made of the effect of the particle size on the properties of reduced powder with composition (in %): C 0.11; Si 0.12; P 0.002; S 0.011; Cr 18.77; Ni 10.45; Ti 0.51; Mn, trace. Bulk density of the powder varies between 1.49 and 2.59 g/cm^3 and flow characteristic varies from 0.46 to 1.58 g/sec. The results of a study of the bulk density versus particle size of a mixture of three powder fractions are represented in the form of a three-dimensional diagram plotted on the basis of a concentration triangle. For the reduced powder, bulk density decreases with increasing content of coarse fraction in the mixture. The opposite dependence is observed in pulverized and atomized powders. Analysis of the relationships discovered in the change of bulk density with flow characteristic showed

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SIVOV, Ferdo, inzh., ml. n. sutr.

Some notes on pneumatic amplifiers. Tekhnika Bulg 11 no.9: 321-324 '62.

1. Bulgarska akademiia na naukite, sek. "Avtomatika i telemekhanika".

SIVOV, Ferdo At., inzh., nauch. sutr.

Studies of hydraulic jet regulators. Tekhnika Bulg 11 no.10: 372-374, 388 '62.

1. Sektsiia "Avtomatika i telemekhanika" pri BAN.

SIVOV, F., inzh., nauchni sutrudnik; TSANEV, Ts., inzh., nauchni sutrudnik

Electric measurement of nonelectric quantities. Tekhnika Bulg 12 no.1:35-36 '63.

1. Sektsiia "Avtomatika i telemekhanika" pri BAN.

SIVOV, F., inzh.

Improving the effect of the pneumatic membrane performing mechanism by using the position relay. Mashinostroene 12 no.2:22-25 F '63.

1. Bulgarska akademiia na naukite.

TSANEV, Ts. St., inzh.; SIVOV, F. At., inzh.

Inductive instrument transformer. Tekhnika Bulg 12 no.2:26-27 '63.

SIVOV, Ferdo At., inzh.

Control of pressure with hydraulic jet regulators. Tekhnika Bulg. 12 no.3:5-8 '63.

SIVOV, Ferdo At., inzh.; TSANEV, Tsanko St., inzh.

Capacitive measuring transformer. Tekhnika Bulg 12 no.4: 29-31 '63.

TSANEV, Tsanko St., inzh.; SIVOV, Ferdo At., inzh.

Classification of linear regulators in function of their working characteristics. Tekhnika [illegible]lg 12 no.5:16-18 '63.

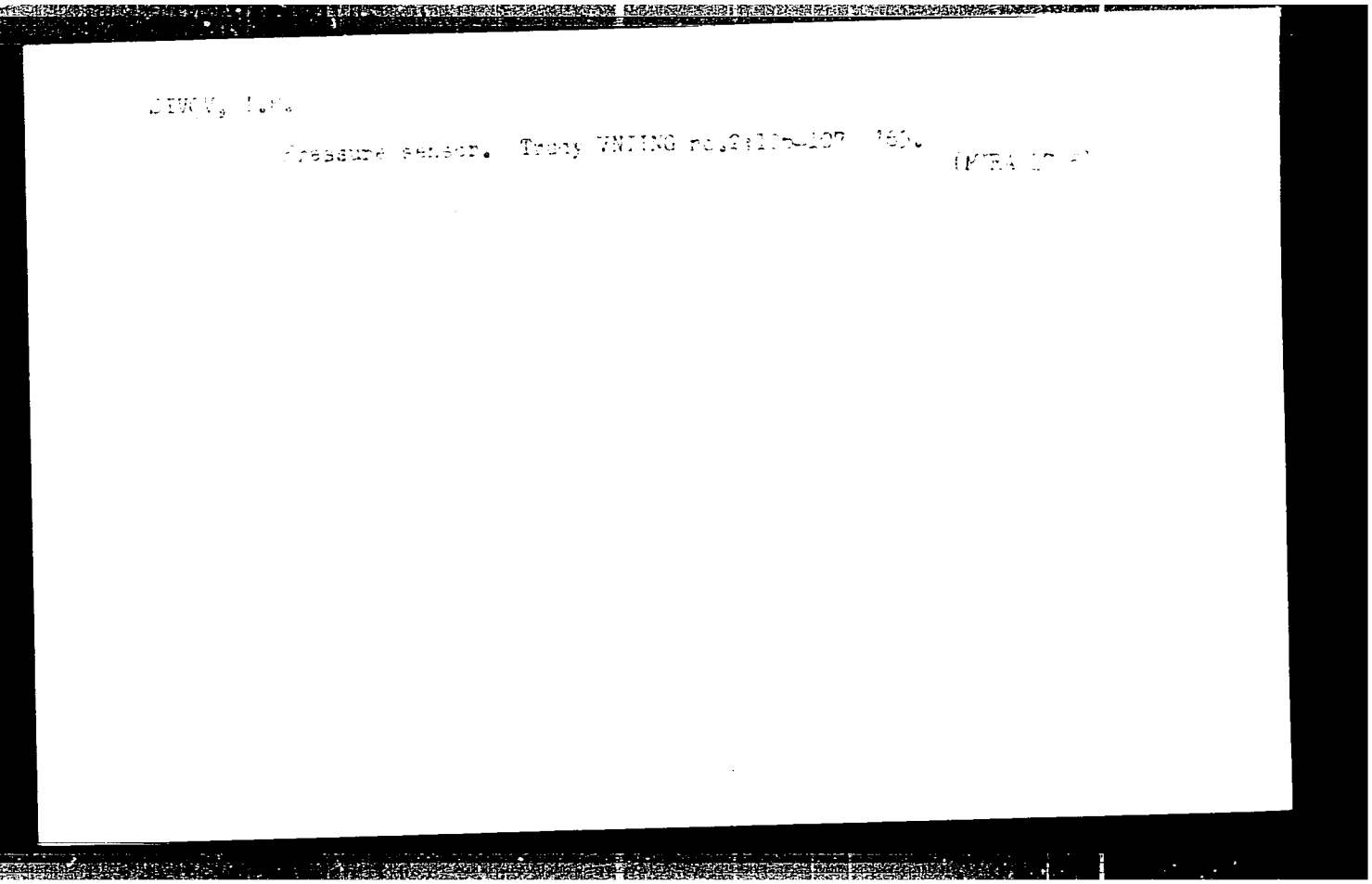
SIVOV, Ferdo, inzh., nauch. sutr.

Choke devices as equipment for automation and measurement technique. Tekhnika Bulg 12 no. 10:11-14 '63.

1. TsLAT pri Bulgarskata akademiia na naukite.

BELCHEV, D.; RADEV, Khr.; SIVOV, F.; STANULOV, N.; TSANEV, TS.

Automation of certain foundry processes. Izv Lab avtomat telemekh 1:95-108 '64.



SIVOV, I.F.

Pressure gauge. Trudy VNIING no.2:106-107 '63. (MIRA 17:10)

S/138/60/000/009/001/012
A051/A027

The Production of Soft Butadiene-Nitrile Rubbers

is especially evident for SKN-40 rubber, where the consumption of triethanolamine is only 0.0075 weight part based on the hydrocarbons. The strip of soft rubber obtained from experimental SKN-40 and SKN-26 was found to be thinner than the standard one and to have less tenacity (especially for rubbers with a hardness of only 900 g), therefore causing cracks in the surface after drying. The drying unit's productivity drops by 10 - 12% in producing soft rubbers with a hardness of 900 - 1200 g, and in producing rubbers with a hardness of less than 900 g it drops by 25 - 30%. The soft SKN-40 and SKN-26 vulcanizates comply with the standards of the GOST as to their cracking resistance, specific and residual elongation. It is noted, however, that the cracking resistance is lower by an average of 15 kg/cm^2 in vulcanizates from soft rubbers than those from standard mass-produced rubbers. Other disadvantage noted in the soft rubbers were the difficulty of packing, transportation and storage. They tend to adhere to the drying rods. Vulcanizates obtained from standard soft SKN-40 and SKN-26 mixes are actually equivalent to those obtained from vulcanizates based on mass-produced rubbers. Experiments and tests were carried out at the NIIRP, the "Kauchuk" Plant and the Yaroslavl' Plant for Rubber Articles. There are 5 tables, 2 graphs and 7 Soviet references.

ASSOCIATION: Yaroslavskiy zavod sinteticheskogo kauchuka (Yaroslavl' Plant of Synthetic Rubber)

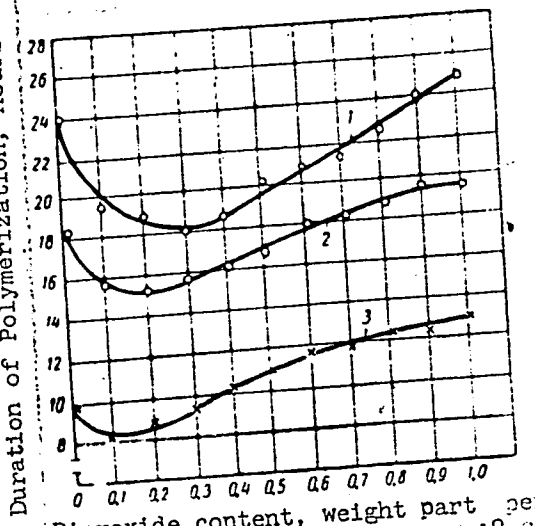
Card 3/5

85654

S/138/60/000/009/001/012
A051/A029

The Production of Soft Butadiene-Nitrile Rubbers

Figure 1:



Diproxide content, weight part per 100 weight part of rubber SKN-18 SKN-26 SKN-40

Card 4/5

ACC NR: AT6032626 (A) SOURCE CODE: UR/0000/66/000/000/0077/0094

AUTHOR: D'yachenko, V. V. (Candidate of technical sciences); Morozov, B. P. (Engineer); Sivov, Ye. N. (Engineer)

ORG: none

TITLE: Fusion welding of dissimilar metals

SOURCE: Moscow. Vyssheye tekhnicheskoye uchilishche. Avtomatizatsiya, mekhanizatsiya i tekhnologiya protsessov svarki (Automation, mechanization and technology of welding processes) Moscow, Izd-vo Mashinostroyeniye, 1966, 77-94

TOPIC TAGS: titanium welding, refractory metal, ~~nickel~~ dissimilar metal welding, fusion welding, electron beam welding, TIG welding/TsM-2A molybdenum alloy, VN-2 niobium alloy, 1Kh18N9T steel

ABSTRACT: Experiments have been made at the Moscow Aviation Technological Institute (MATI) to develop a welding method which would ensure direct joining of a refractory metal to steel by fusing the low-melting metal without fusing (or with minimum fusing) the refractory metal. TsM-2A molybdenum alloy sheets, 0.3—0.5 mm thick, and VN-2 niobium alloy sheets 0.3 mm thick, were welded directly to each other or to 1Kh18N9T stainless steel sheets 0.4—0.8 mm thick by electron beam or automatic TIG welding in a chamber with a controlled atmosphere. Both these methods were found to be satisfactory for direct welding TsM-2A and VN-2 alloys to 1Kh18N9T steel.

Card 1/2

ACC NR: AT6032626

The welds made under optimum conditions by fusing only the steel without fusing the refractory metal, had no cracks or pores, were vacuum-tight and had a satisfactory strength and ductility. Satisfactory direct joining of TsM-2A molybdenum alloy to VN2 niobium alloy has been achieved only by electron-beam welding in vacuum. Welds with a satisfactory ductility have been made with minimum fusion of molybdenum, so that the weld metal contained max 10% Mo. Arc-welded joints of these two alloys had a very brittle weld metal with numerous transverse cracks. Lap and butt joints with flanged edges of the metal to be fused are recommended for direct welding of the investigated dissimilar metals. The strength and ductility of the welded joints are determined primarily by the weld metal structure which, in turn, depends on the condition of the metal surface, fitting of the edges, and welding conditions. Electron-beam welded joints are stronger and more ductile than joints arcwelded in a controlled atmosphere. Orig. art. has: 10 figures and 7 tables.

SUB CODE: 13/11/ SUBM DATE: 14May66/ ORIG REF: 003/ OTH REF: 004/

Card 2/2

L 14503-66 EWT(1)/EWT(m)/EPF(n)-2/EWG(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) IJP(c)
ACC NR: AP6003277 MJW/JD/HW/JG SOURCE CODE: UR/0135/66/000/001/0002/0004

AUTHOR: D'yachenko, V. V. (Candidate of technical sciences); Sivov, Ye. N. (Engineer); Morozov, B. P. (Engineer)

ORG: MATI

TITLE: Welding of molybdenum and niobium with stainless steel

SOURCE: Svarochnoye proizvodstvo, no. 1, 1966, 2-4

TOPIC TAGS: electron beam welding, molybdenum, niobium, stainless steel, structural steel, weld evaluation, arc welding, butt welding

ABSTRACT: The welding of refractory metals (Nb, Mo, W) to Fe-, Ni- and Co-based constructional steels is complicated by the marked differences in their crystalline structure and thermophysical properties. One of the techniques of surmounting this difficulty is to melt steel without melting the refractory metal. In this connection the authors show that it is possible to obtain welded joints of TsM-2A molybdenum alloy with 1Kh18N9T stainless steel, by means of electron beam welding in a vacuum or arc welding in a controlled (argon) atmosphere so as to fuse steel only (without fusing the refractory metal. The technique best recommended for this purpose is that of butt or lap welding with beading of the edges of the molten metal (steel), and in all cases the weld pool must be displaced by 2/3 diameter in the direction of steel. Fundament-

Card 1/2 UDC: 621.791:669.28:669.293:669.15-194

L 14503-66
ACC NR: AP6003277

ally similar results were obtained when welding joints of VN-2 niobium alloy and 1Kh18N9T steel. The optimal welding regimes are: voltages, amperages and welding rates for TsM-2A and steel --16-16.5 v, 9-20 a, 30-40 m/hr; for VN-2 and steel -- 9-16.5 kV, 13-25 a, 30 m/hr. It is found that the strength and plasticity of the welded joints thus produced are chiefly determined by the structure of the weld metal which, in its turn, depends on the state of the surface of the welded metal, the fit of edges and the welding regime. Joints welded by the electron-beam method display a higher strength and plasticity than joints welded by the controlled-atmosphere arc method. Orig. art. has: 5 figures, 4 tables.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 002

Joining of dissimilar metals

2/2

SIVOVOLOV, B., starshiy prepodavatel'

Gratifying changes. Sov. profsoiuzy 5 no.5:72-73 My '57. (MLRA 10:6)

1. Khar'kovskiy pedagogicheskiy institut imeni Skovorody.
(Social group work) (Trade Unions)

SIVOVOLOV, B.M.

AUTHOR: Sivovolov, B.M., Candidate of Philological Sciences 3-2-12/32

TITLE: Philologists Should Possess Profound Philosophical Knowledge (Filologam - glubokiye filosofskiye znaniya)

PERIODICAL: Vestnik vysshey shkoly, Feb 1957, # 2, p 48-50 (USSR)

ABSTRACT: The author criticizes the training of philology students in general, and their knowledge of Marxist-Leninist methodology in particular. Their lack of knowledge and interest is in the opinion of the author due to the fact that several of the subjects taught are lectured without regard to the characteristics of the teachers. Mostly at fault are the teacher-philosophers many of whom cannot get rid of their dogmatism and superficial knowledge consisting only of quotations and phrases. The author objects to the students of our higher educational institutions operating only with individual principles, formulas and catch-phrases from the works of Marx and Lenin without going to the trouble of grasping the basic principles of the Ism itself. He also stresses the necessity that the students, when studying the history of literature should be able to understand thoroughly the philosophical views of Russian and foreign writers and critics. In conclusion the author expresses the wish that in the course of

Card 1/2

SIVOVOLOV, G

Tank for washing color photographic film. Sov.foto 17 no.8:58 Ag '57 (MLRA 10:9)

(Color photography)

KHRISTOFOROV, L.; SIVOVSKI, Iv.

Complement fixation reaction in bovine tuberculosis. Pt. 3.
Izv Vet inst zaraz parazit 7 103-109 '63.

KHRISTOFOROV,L.; SIVOVSKI, Iv.

Hemagglutination reaction in case of tuberculosis in cattle.
Pt.2. Izv Vet inst zaraz parazit 8:107-116 '64

SIVOZHELEZOV, F.P., elesar'.

Improvement of the MPE-1 screw press. Mas1.-zhir.prom. 17 no.11:21-23 N '52. (MLRA 10:9)

1. Volchanskiy maslozavod.
(Oil industries--Equipment and supplies)

SIVOZHELEZOV, F.P., slesar'.

Devices for lifting and removing the balance mechanisms of screens in suction fanning mills. Masl.-zhir.prom. 19 no.7:35 '54. (MLRA 8:1)

1. Volchanskiy maslozavod.
(Fanning mills)

S/169/63/000/001/034/062
D263/D307

AUTHOR: Sivozhelezov, S.S.

TITLE: A survey of some gravimetric studies in regions of active volcanism

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1963, 17, abstract 1G104 (Tr. Sakhalinskogo kompletsn. n.-i. in-ta, 1961, no. 10, 147-159)

TEXT: The gravimetric method may be used in active volcanic regions to study the distribution of the gravitational force in volcanic belts, and the internal structure and state of volcanos. The volcanos of Japan are at present studied with gravimeters accurate to 0.01 mgals (Wardens and North America). The observed values of Δg are corrected for variations in the gravitational force, caused by telluric tides, and for the effect of the vertical gradient of gravitational force (Δ (dg/dz) is generally calculated by Tsuboya's method). Japanese workers give maps of gravity anomalies in the region of some volcanos. The central volcanic cones are

Card 1/2

usually characterized by positive anomalies; lesser positive anomalies are also sometimes associated with hidden bosses. The recorded variations of Δg with time, caused by the volcanic activity, reach 0.5 mgals (the Mikhar volcano). Further studies in this direction allow the state of volcanic foci to be followed during various stages of the volcanic activity. This may lead to the development of a method for forecasting volcanic eruptions from observational gravimetric data.
[Abstracter's note: Complete translation]

BRISTOL', Boris Nikolayevich; PREYS, G.A., kand.tekhn.nauk, retsenzent; SIVOY, A.V., dotsent, retsenzent; OLEYNIK, N.V., dotsent, red.; LEUTA, V.I., red.

[Designing attachments for machine tools] Konstruirovanie prisposoblenii dlia metallorezhushchikh stankov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 238 p. (MIRA 13:3)
(Machine tools--Attachments)

LEVINSON, B.; SIVOZHELEZOV, G.; YUSHCHENKO, P.

Centralized maintenance and repair of electrical devices. Avt. transp. 41 no.2:20-21 F '63. (MIRA 16:2)
(Motor vehicles—Electric equipment)

SIVRIEVA, St., inzh.

First experiment in testing the fire-resistance of building constructions. Stroitelstvo 11 no. 3:23-25 My-Je '64.

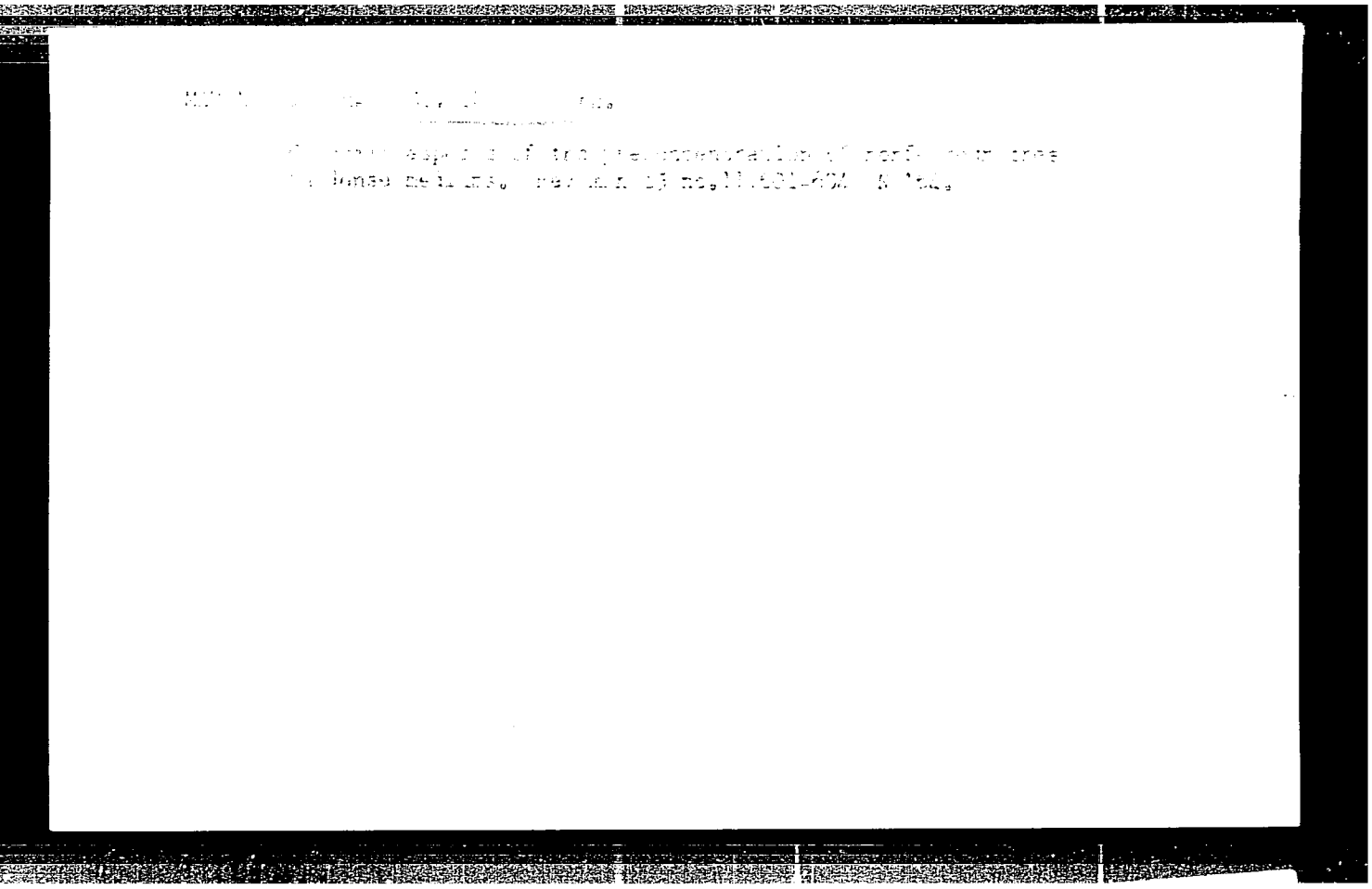
CHERNORUTSKIY, G.S., kand. tekhn. nauk, dotsent; SIVRIN, A.P., inzh.

Effect of the elastic coupling between an electromechanical transducer and motor on the dynamics of an automated electric drive. Elektrichestvo no.7:83-86 Jl '65. (MIRA 18:7)

1. Chelyabinskiy politekhnicheskiy institut.

CRISTOVICI, M., ing.; FRUMOSU, B., ing.; APOSTOLESCU, M., ing.; SIVRIU, M., ing.; MARIN, I., ing.; POPESCU, M., ing.

Application joint flotation of lead and zinc of nonferrous ores in order to apply a new metallurgic method. Rev min 15 no.11: 582-585 N '64.



137-58-3-5969

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 216 (USSR)

AUTHORS: Chernashkin, V. G., Gofner, A. M., Sivryukova, M. A.

TITLE: Properties of Structural Open-hearth Steel Containing Arsenic (Svoystva stroitel'noy stali martenovskogo proizvodstva, soderzhashchey mysh'yak)

PERIODICAL: V sb.: Issledovaniya. Stal'nyye konstruktsii. Moscow, Gos. izd-vo lit. po str-vu i arkhitekt., 1957, pp 55-89

ABSTRACT: Investigations were performed in order to establish the effect of As (0.118 - 0.29 percent) on the mechanical properties (σ_b, σ_s, δ, ψ, H_B), microstructure, and weldability of low carbon structural steel (rimmed and killed) containing 0.15 - 0.25 percent C, 0.37 - 0.62 percent Mn, up to 0.25 percent Si, 0.025 - 0.45 percent S, and 0.02 - 0.46 percent P. The As is introduced as a special alloying element. Aside from the As, the chemical composition of steel used in the experimental smeltings did not differ from standard open-hearth steel MSt.3. An investigation of macro- and microstructure has shown that in this respect also the As steel is similar to

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Properties of Structural Open-hearth Steel Containing Arsenic

the usual steel. Mechanical properties of all steel melts containing As fully meet the GOST 380-50 specifications for steel MSt. 3. The As steel does not exhibit any increased tendencies to mechanical aging. The a_k of the steel decreased by approximately 35 percent upon aging. Low-temperature a_k tests of the steel located the threshold of cold shortness in rimmed As steel in the interval between -20° and 40°, whereas in killed steel it was found to be between -40° and -60°. Mechanical properties of seams and welded joints fully satisfy the GOST 2523-51 requirements. Hardness and plasticity investigations of steel within the entire range of the welding cycle revealed no brittle conditions in the metal. The reaction of As steels in the course of thermal welding cycle is analogous to the reaction of steel produced in open-hearth furnaces. No cold or hot cracks were observed during welding. Both killed and rimmed steel of MSt. 3 type containing up to 0.28 percent As may be used in welded construction in a manner identical to the employment of rimmed and killed MSt. 3 steel containing no As. Bibliography: 8 references.

N. K.

Card 2/2

SOV/32-24-9-26/53

AUTHORS: Chernashkin, V. G., Gofner, A. M., Sivryukova, M. A.

TITLE: On the Question of the Estimation of the Quality of Steel Plate by Testing Its Toughness (K voprosu otsenki kachestva listovoy stali putem ispytaniya na udarnuyu vyazkost')

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 9, pp 1112-1115 (USSR)

ABSTRACT: In the course of the last few years, destructions of vertical, cylindrical welded 5000 m^3 tanks for petroleum products have occurred. The embrittling of steel during production and the formation of fissures in the welding seams are thought to be responsible for these destructions. The possibility of a localization of these fissures or of a complete prevention of fissure formation, depends on the quality of the steel plate and on a low tendency to brittleness. At the laboratories of the institute (no name given), steel plate samples (of a thickness below 10 mm) were used to study the influence of the cross section and the depth of notching on the tensile strength and the toughness. Three types of samples were used, and, amongst others, results analogous to those obtained by G. I.

Card 1/2

On the Question of the Estimation of the Quality of Steel Plate by Testing Its Toughness

Pogodin-Alekseyev (Ref 1) were attained. Graphic representations of the variation of tensile strength as determined by notch depth, sample height and sample width in MSt 3 steel (0,19% C, 0,54% Mn, 0,25% Si, 0,035% S and 0,020% P) are given, together with the corresponding explanations and tables of results. Mention is made of the fact that the Mezhdunarodnaya assotsiatsiya po standartizatsii priyemochnykh ispytaniy stali po udarnoy vyazkosti (International Association for the Standardization of Steel Acceptance Tests According to Toughness) has fixed the sample notch at 5 mm.
There are 5 figures, 3 tables, and 1 reference, which is Soviet.

SIVRYUKOVA, V., prepodavatel' torgovo-kooperativnoy shkoly.

For the further development of trade on commission. Sov.torg. no.1:48 Ja '58. (MIRA 10:12)
(Farm produce--Marketing)

SIVTSEV, D. M.

SIVTSEV, D. M. -- "Role of Russian Scientists in the Study of the Critical Physical Form of Matter in the Second Half of the 19th Century." Sub 23 Apr 52, Moscow Order of Lenin State U imeni M. V. Lomonosov. (Dissertation for the Degree of Candidate in Physicomathematical Sciences).

SO: Vechernaya Moskva January-December 1952

SIVTSOV, D.M.

Discovery of the critical temperature. Uch. zap. IAk. un. no.1:33-47 '57. (MIRA 11:3)
(Critical point)

BARTASHEVSKIY, Ye.L. [Bartashevs'kyi, IE.L.]; KOLOMOYTSEV, F.I. [Kolomoitsev, F.I.]; KODZHESPIROV, F.F.; POGOREL'SKIY, A.Ye. [Pohorel'skyi, A.IE.]; SIVTSEV, D.S.; YAKUNIN, A.Ya. [IAkunin, O.IA]

Relationship between saturation magnetization and the parameters of ferrites used in the superhigh-frequency technique. Ukr. fiz. zhur. 8 no.8:894-899 Ag '63. (MIRA 16:11)

1. Dnepropetrovskiy gosudarstvennyy universitet.

[illegible], M. V.- "Effect of the Microelements on the Yield of Cultivated Crops under Conditions of the Caucasian foothills Leached Black Soil of Stavropol'." Min of Higher Education USSR, Stavropol' Agricultural Inst Stavropol', 1955 (Dissertations for Degree of Candidate of Agricultural Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

SIVTSEV, M V

The influence of minor elements on the yield of corn. M. V. Sivtsev. *Zemledelie* 4, No. 3, 122(1956).—Addns. of Mn, Mo, B, and Zn [soaking the seeds (20 hrs.) in solns. of $KMnO_4$, $(NH_4)_2MoO_4$, H_3BO_3, or $ZnSO_4$ (20 mg./l.) in the ratio of 3:5 of seed to soln.] to seeds have increased the yield of corn. The highest increase was obtained from B and Zn. The protein content decreased but the starch increased.

J. S. Joffe

1

SIVTSEV, M.V., kand.sel'skokhozyaystvennykh nauk; MARAKHOVSKIY, I.P., uchitel'

Determining the role of microelements in the life of a plant. Biol.v shkole no.4:65-67 Jl-Ag '62. (MIRA 15:12)

1. Krymskiy pedagogicheskiy institut (for Sivtsev). 2. Krasnogorskaya vos'miletnyaya shkola Belogorskogo rayona Krymskoy oblasti (for Marakhovskiy).
(Plants, Effect of trace elements on)

SIVTSEV, S.A. (Checheno-Ingushskaya ASSR, Groznyy, Pionerskaya ul.,d.--)

Unusual case of destruction of the pelvic ring in tuberculous coxitis and reconstructive surgery of this condition. Ortop., travm.i protez. 24 no.9:47 S '63. (MIRA 17:4)

1. Iz kostnotuberkuleznogo otdeleniya gospitalya dlya invalidov Otechestvennoy voyny (nachal'nik - zasluzhennyy vrach Chechenno-Ingushskoy ASSR F.Ya.Alekrapel'skiy).

SIVTSEV, S.A., zasluzhennyy vrach Chechensko-Ingushskoy ASSR (Groznyy 33, Pionerskaya ul., d.71)

Angular incision in retroperitoneal approach to the bodies of lumbar vertebrae. Ortop., travm. i protez. 26 no.12: 32-36 D '65.

(MIRA 19:1)

1. Iz kostnotuberkuleznogo otdeleniya (nachal'nik - S.A.Sivtsev) Groznenskogo gospitalya dlya invalidov Otechestvennoy voyny (nachal'nik - zasluzhennyy vrach Chechensko-Ingushskoy ASSR F.Ya. Aleksapol'skiy). Submitted November 23, 1964.

SIVTSOV, V., podpolkovnik; KASHINTSEV, V., mayor

Example of a commander. Av. i Kosm. 47 no.1:15-18 Ja '65
(MIRA 18:1)

SIVTSIKS B

SIVCIKS, B., prof., doktor sel'khoz. nauk; KLAVINS, E., red.; DUMAISKIS, Z., tekhn. red.

[Milk yield of herds in the Latvian S.S.R.]Latvijas PSR ganampulku piena razotspeja. Riga, Latvijas Valsts izdevnieciba, 1961. 74 p. (MIRA 15:10)
(Latvia—Dairy cattle)

S/133/62/000/012/001/012
A054/A127

AUTHORS: Yefimov, V.A., Candidate of Technical Sciences, Legenchuk, V.I., Sivtsov, G.V., Konovalov, I.M., Bykov, G.D., - Engineers

TITLE: Top-pouring steel under slag

PERIODICAL: Stal', no. 12, 1962, 1,074 - 1,078

TEXT: To improve the quality of the surface of top-poured low-carbon steel ingots, the processes taking place at the contact-surfaces of metal, slag and ingot-mold have been investigated at the Cherepovetskiy metallurgicheskiy zavod (Cherepovetsk Metallurgical Plant). The quality of the ingot surface is known to depend on the size of the liquid metal meniscus forming at the place of contact between mold wall and metal. The radius of this convex meniscus depends on the surface stresses at the boundary between metal and liquid slag. It was found that addition of synthetic slags on the mold bottom considerably improved the conditions of skin formation and, consequently, also the quality of the metal surface. For, if the slowly rising metal is covered by a low-smelting slag layer, the latter will protect the metal against oxidation and cooling, it will adsorb

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S/133/62/000/012/001/012
A054/A127

Top-pouring steel under slag

the high-smelting reduction products and prevent the creasing of the skin. The liquid slag penetrates between the metal meniscus and the mold wall and forms a heat-insulating layer. This will cause the skin of the metal to cool down more slowly and will reduce the shrinkage stresses. The slag composition must ensure a heat-insulating layer of optimum thickness between mold wall and ingot. The greater the meniscus radius, the thicker the slag crust will be. The optimum surface tension of the slag must be determined experimentally. The required viscosity of the synthetic slag can be ensured by addition of liquefiers. Moistening of the mold wall tends to thicken the solidifying slag layer. It is advisable to coat the mold wall with a substance of high surface tension, such as aqueous graphite suspension or lime milk. The method has been applied in the top-pouring of Ст.3сп (St.3sp), 3т (3t) and 19 Г (19G) low-carbon grades. The following slag compositions were tested:

	A	B	C	D	E
Components, %					
cupola furnace slag	-	100	90	95	93
fluorite	24	-	10	5	7
Grain size, mm	1-0	3-0	3-0	5-2	3-0

Card 2/4

S/133/62/000/012/001/012
A054/A127

Top-pouring steel under slag

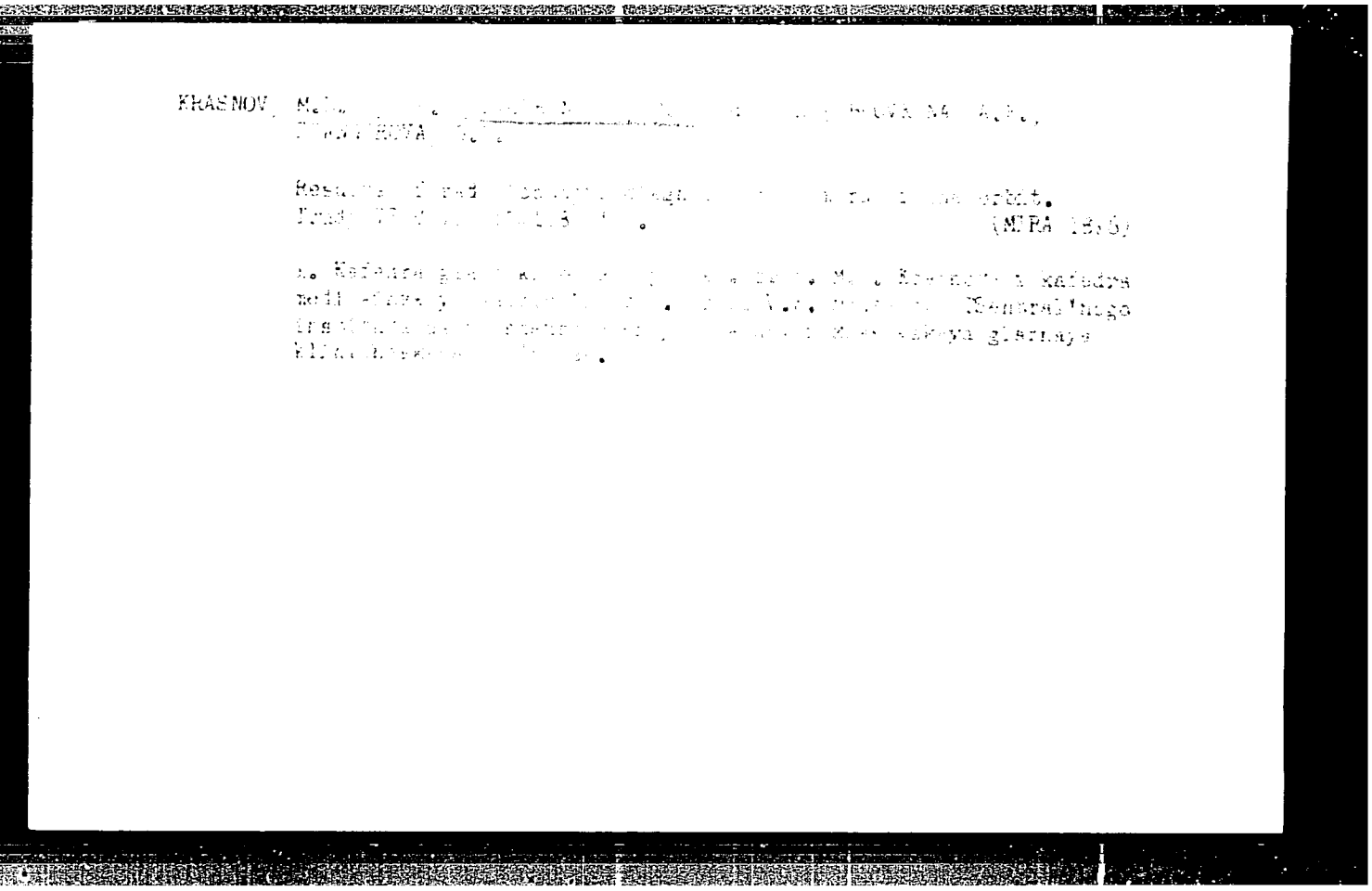
	A	B	C	D	E
Chemical composition, %					
CaO	20.0	26.7	24.2	24.2	30.0
SiO_2	15.2	43.2	39.0	43.0	40.5
Al_2O_3	22.8	18.9	17.1	12.9	10.9
CaF_2	38.0	—	9.5	4.6	6.5
FeO	2.0	5.6	5.0	9.7	7.0
MgO	2.0	2.0	1.8	1.7	2.1
MnO	—	3.6	3.4	3.9	3.0
Surface tension (calculated, dyne/cm)	425	428	421	402	403

Slag was fed into the mold prior to pouring, in some tests it was also added onto the metal surface during pouring. To accelerate the smelting of the slag, the quantity of fluorite was raised to 25%; at the beginning of the tests the amount of slag added was 60 - 80 kg, later this was reduced to 40 kg (3 kg/ton), because when greater amounts were added, the bottom part of the ingot deteriorated. The favorable effect of the new method can be seen from a comparison of the defect percentages of conventional and slag-poured ingots: the amount of cracks and

Card 3/4

fissures in the latter was reduced by a factor of 4, that of scales by a factor of 6. The labor consumption for cleaning the 13.6-ton slabs poured under slag decreased by a factor of more than 2. The article contains formulae for the calculation of the forces involved in the formation of the meniscus and the slag layer. There are 4 figures.

ASSOCIATION: Institut ispol'zovaniya gaza AN USSR (Institute of Gas-Utilization of the Academy of Sciences of the Ukrainskaya SSR) and Cherepovetskiy metallurgicheskiy zavod (Cherepovetsk Metallurgical Plant)



KRASNOV

YEGIMOV, V.A.; OSIPOV, V.P.; SAPKO, V.N.; LEGENCHUK, V.I.; SIVTSOV, G.V.; BYKOV, G.D.

Measures for improving the top pouring of steel. Vop. proizv. stali no.9:79-95 '63. (MIRA 16:9)

L 00557-66 EWT(m)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) IJP(c)
JD/HW

ACCESSION NR: AP5019944 UR/0133/65/000/008/0706/0707
669.18-412 : 621.746.753

AUTHORS: Borodulin, A. I.; Smolyarenko, D. A.; Sivtsov, G. V.; Chizhova, V. Ya.

TITLE: Improving the quality of metal for cold-rolled sheet metal

SOURCE: Stal', no. 8, 1965, 706-707

TOPIC TAGS: sheet steel, steel pouring, steel foundry, deep drawing steel

ABSTRACT: Some of the reasons why Cherepovets steel is superior to others for deep-drawing are discussed. The factory uses ore containing 62% Fe (to be raised to 63% in 1965) and coke containing to 0.55% S (compared with normal 1.6-1.8%) to obtain only 0.018% S in the cast iron (to be lowered to 0.015-0.017%). Fuel consumption (natural gas) in 1964 was 136 kg/ton. C content in medium and large capacity furnaces is taken as 0.35-0.80 and 0.25-0.70% respectively, while cast iron consumption (containing 0.40% Si, 0.25% Mn) is 55-58%. The steel produced for deep-drawing corresponds to stricter limitations on chemical composition (imposed within the factory) than those established by GOST specifications (primarily, smaller % of Si, P, and S). Since the heating of the ingredients was found to be a major factor in steel quality, the following order is used: agglomerate is uniformly loaded on the fettlings and covered with lime. The charge is heated 7-10 minutes and scrap is

Card 1/2

L 00557-66

ACCESSION NR: AP5019944

loaded at 3 tons/min to speed the melting. Since the S content remains essentially constant through the melting operation (small amounts only are removed in slag), the charge must consist of materials containing little S. The Mn/S ratio has to be substantially above 12 (around 20-30). The metal temperature is kept at 1530-1600C while the slag temperature should not drop below 1580C. Speed pouring through 60-70 mm spouts (12 tons/min) results in 1.45% increased yield of class I metal compared with normal pouring through 30 mm spout (2.5 t/min). I. M. Konovalov, E. V. Tkachenko, K. I. Zhurkin (Cherepovets); V. N. Gasilina, K. A. Kapustin (TsNIIChM) participated in the work. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Cherepovetskiy metallurgicheskiy zavod (Cherepovets Metallurgical Factory); TsNIIChM

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 000 OTHER: 000

Card 2/2

URAZGIL'DEYEV, A.Kh.; PRONSKIKH, S.N.; SIVTSOV, G.V.

Hydrogen segregation in steel in the ingot crystallization process.
Trudy LPI no.253:94-101 '65. (MIRA 18:8)

URAZOVSKIY, A.Kh.; PRONSKIKH, B.N.; SAVTSOV, G.I.; CHUKHLOV, V.I.

Behavior of gases in the crystallization process of killed steel ingots. Izv. vys. ucheb. zav.; chern. met. 8 no.9: 69-73 '65. (MIRA 18:9)

1. Leningradskiy politekhnicheskiy institut.

[illegible] [illegible]YEV, [illegible]; [illegible], G.N.; [illegible], [illegible].V.; [illegible], S.Z.

Effect of the treatment of metals by solid slag mixtures on the behavior of gases during the crystallization of ingots. Stal' 25 no.8:698-700 Ag '65. (MIRA 18:8)

1. Leningradskiy politekhnicheskiy institut i Cherepovetskiy metallurgicheskiy zavod.

D'YAKONOV, V.S., inzh.; SAKHAROV, A.A., inzh.; [illegible], T.V., inzh.; MEL'NIKOV, O.A., inzh.; SIVTSOV, G.V., inzh.; KONTS, Ye.P., inzh.

Technology of the production, and properties of 17GS steel for welded gas and oil pipelines. Stal' 25 no.8:740-744 Ag '65. (MIRA 18:8)

1. Cherepovetskiy metallurgicheskiy zavod.

SHUR, [illegible]; [illegible]SOV, G.V.; RUSHNEMEVA, M.N.; BABIY, A.S.; TOL'SKIY, A.A.

New developments in research. Stal' 25 no.8:709-71[illegible] Ag '65.
(MIRA 18:8)

L 32080-66 EWT(m)/EWP(e)/EWP(t)/ETI/EWP(v)/EWP(k)/EWP(h)/EWP(l)/EWA(c)/EWA(h)

ACC NR: AP6021713 SOURCE CODE: UR/0130/66/000/003/0027/0028

AUTHOR: Monid, A. G.; Benyakovskiy, M. A.; Smolyarenko, D. A.; Sivtsov, G. V.; Tkachenko, E. V.; D'yakonova, V. S.; Popov, P. I.; Pakudin, V. P.; Shirinskaya, S. A.; Sosipatrov, V. T.

ORG: none

TITLE: Production testing of 08Yu cold rolled low carbon steel

SOURCE: Metallurg, no. 3, 1966, 27-28

TOPIC TAGS: low carbon steel, deoxidation, cold rolling, quality control / 08Yu steel

ABSTRACT: Production testing was carried out on nonaging 08Yu steel sheets at the Cherepovetsky Metallurgical Plant and the results were compared to the norms set by GOST 9045-59. Melting was carried out in single-grooved Martens furnaces of average capacity; deoxidation by ferromanganese was done in steps--50% in the furnace and 50% in the ladle; Al was also introduced in the ladle in quantities of 100-150 g/T of steel while full deoxidation was accomplished by the addition of Al pellets in quantities of 900-1000 g/T. The chemical composition of 08Yu steel compared favorably with the standards set by GOST 9045-59 (experimentally--C=0.04-0.08%, Si=0.01%, Mn=0.32--0.38%, S=0.009-0.016%, P=0.01-0.015%, Cr=0.01-0.03%, Ni=0.03-0.07%, Cu=0.02-0.07% and Al=0.02-0.05%). Ingots weighing 14T were hot rolled in 15-18 passes into slabs of

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L 39980-66
ACC NR: AP6021713 3

135-140 mm thickness and 1070-1430 mm width on a 1150 bloom. These slabs were next cold rolled to a maximum of 68% reduction into sheets of 2.5-3.5 mm thickness and 1040--1430 mm width. Annealing was done at 550°C for 10 hrs at a heating rate of 15°/hr and cooling was at 6°/hr. The final operation was a finishing pass at 1.0-1.3% reduction. Tests made on the sheets after aging at 200°C for 30 min substantiated that the steel was nonaging. The sheets performed well in stamping tests which were run under the stamping conditions used at the Gor'ky Automotive Plant. Orig. art. has: 1 table.

SUB CODE: 11,14/ SUBM DATE: none

Card 2/2

SIVTSOV, K.I., gornyy inzhener.

Pattern for locating and directing blast holes in shaft sinking. Ugol' vol. 28 no.11:45 N '53. (MLRA 6:11)

1. Shakhta No.2 "Rodinskaya", Donbass. (Shaft sinking) (Blasting)

SIVTSOV, L. I.

"A Powerful Whirlwind," Meteorologiya i Gidrologiya, Issue No. 1, 1949.

U-1442, 28 Aug 51

SIVTSOV, P. V. (Medical Assistant, Temnikov, Veterinary Bacteriological Laboratory, Mordov Autonomous SSR). (Abstracted by V. A. ALIKAYEV)

"Reduction of used aviation gasoline after the extraction of carotene from feeds"
Veterinariya, vol. 39, no. 2, February 1962 pp. 79

AID P - 4516

Subject : USSR/Engineering-Welding

Card 1/1 Pub. 107-a - 2/13

Authors : Siunov, N. S. and V. P. Sivtsov

Title : Monophase Welding Transformer Combined with D-C Saturable Reactor.

Periodical : Svar. proizv., 2, 4-6, F 1956

Abstract : A description of combination of a single-phase welding transformer with a d-c controllable reactor designed by the Ural Polytechnic Institute is presented by the authors with results of the test given in detail. Five graphs, 2 photos and 2 drawings.

Institution : Ural Polytechnical Institute

Submitted : No date

DANILYUK, V.A.; ZHUKOV, V.N.; PANOV, G.I.; KUTSENKO, G.L.; LUGOVETS, V.A.; NEKHONOV, N.A.; PORTNYAGIN, A.I.; RECHKIN, L.A.; SEREGIN, V.P.; SIVTSOV, V.P.; KHOLODNOV, Yu.I.; MEL'NIKOV, V.V., kand.tekhn.nauk, red.; KOZULIN, B., red.; CHERNIKHOV, Ya., tekhn. red.

[Radio amateur's handbook]Spravochnik radioliubitelia. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo, 1962. 838 p. (MIRA 15:8)

(Radio--Handbooks, manuals, etc.)

L 10784-66 EWT(m)/EWP(j) RM

ACC NR: AP6000009 UR/0080/65/038/011/2609/2611

AUTHOR: Sivtsova, E.V.; Kogan, V.B.; Ogorodnikov, S.K.

ORG: None

TITLE: Use of gas-liquid distributing chromatography in the choice of a separation agent for extraction rectification for mixtures of methylchlorosilanes

SOURCE: Zhurnal prikladnoy khimii, V.38, no.11, 1965, 2609-2611

TOPIC TAGS: chromatography, rectification, silane

ABSTRACT: The experiments were performed on a gas chromatograph with a detector operating on the principle of heat conductivity and an automatic recording device. The chromatographic column was 2.5 meters long and 4 mm in diameter. It was filled with previously calcined brick impregrated to the amount of 20 weight percent with the separation agent being tested. Preliminary tests showed that the brick did not absorb methylchlorosilanes. The carrier gas was helium. The tests were run at a temperature of 25.0°. Based on the experimental results, the article gives a table showing calculated values of the relative volatility coefficients. It was found that a majority of the substances tested greatly increased the relative volatility of silicon tetrachloride,

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L 10784-66

ACC NR: AP6000009

methyldichlorosilane, trimethylchlorosilane, methyltrichlorosilane, and, to the greatest degree, dimethylchlorosilane. A study was made of the temperature dependence of the relative volatility coefficients of the methylchlorosilanes for the most effective separation agents. Results of the tests show that with an increase in temperature the relative volatility of the components of the mixture decreases. Orig. art. has: 2 formulas and 2 tables.

SUB CODE: 07/ SUBM DATE: 12Apr65/ ORIG REF: 001/ OTH REF: 014

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