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ACCESSION NR: AP5015909

"transfer" characteristics of the elements are mutually stable. Also, the limitations imposed on the repeater and inverter regions by maximum output signals are considered. These design steps are recommended: (1) Establishing the desirable characteristics of logical elements in terms of load, supply voltage, temperature, etc.; (2) Selecting the optimal parameters of the elements; (3) Finding the stable regions on the basis of the element characteristics or on the basis of input-output signals and noise immunity; (4) Allowance for the tolerable parameter spread; (5) Determining parameters for the quality control of logical elements. Orig. art. has: 8 figures and 6 formulas.

ASSOCIATION: none

SUBMITTED: 11Jul64 ENCL: 00 SUB CODE: DP, EC

NO REF SOV: 001 OTHER: 000

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

S/136/62/000/004/001/004
E021/E435

AUTHORS: Berengard, A.S., Vil'komirskiy, I.Ye., Kozhemyakin, V.A., Sedykh, T.S., Yerokhina, O.I.

TITLE: Study of the chlorination of loparite concentrate

PERIODICAL: Tsvetnyye metally, no.4, 1962, 56-61

TEXT: Results are given of investigations carried out to improve the process of chlorination of a loparite concentrate by using the apparatus for "dry" fractional condensation of the volatizable chlorides. The loparite ore used contained 36.2 to 36.5% TiO_2, 8.45 to 8.55% Nb_2O_5, 0.55 to 0.57% Ta_2O_5, 28.64 to 31.18% total rare earths, 1.5 to 3.04% Fe_2O_3, 0.87 to 4.76 % Al_2O_3, 2.5 to 5.87% SiO_2, 9.86% $Na_2O + K_2O$, 5.94 to 7.92% CaO, 0.15% P. A dry method is superior to a wet method because, for separation of the pulp, there is no need to use complex apparatus which has to operate inside aggressive media. The ore is crushed, briquetted with coke and chlorinated. It is shown that for chlorination it is possible to use a chlorine-air mixture containing up to 35% air. This corresponds to the composition of anode chlorine gas. It is

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possible to lower the carbon content of the coke briquettes from 18 - 20 to 12 - 13% (using concentrated chlorine) which permits reducing the quantity of furnace ash by a factor of about five, increasing the production of the furnace, decreasing the consumption of coke by 30% and increasing the coefficient of utilization of the working space by 6%.
There are 1 figure and 3 tables.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SUBMITTED: December 7, 1957 SOV/109-3-3-22/23

AUTHORS: Golubkov, P.V. and Tsimring, Sh. Ye.

TITLE: The Second All-Union Conference on Radioelectronics of the Ministry of Higher Education of the USSR (Vtoraya vsesoyuznaya konferentsiya MVO SSSR po radioelektronike) - News Item

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 3, pp 440 - 444 (USSR)

ABSTRACT: The conference took place during September 23 - 29, 1957, at Saratovskiy gosudarstvennyy universitet imeni N.G. Chernyshevskogo (Saratov State University imeni N.G. Chernyshevskiy). Apart from the universities, the conference was attended by the representatives of some scientific research institutes of the Soviet and Ukrainian Academies of Science, various industrial establishments and the interested ministries. This arrangement stimulated the discussion and evaluation of the papers presented and permitted the determination of plans for the future research to be carried out by the universities in the field of radioelectronics.

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A.I. Shtyrov proposed (and proved by means of the reciprocity theorem) an interference method of the "cold" investigation of delay systems. The method permits the measurement of electrical non-homogeneities of delay systems, given a high accuracy and requires comparatively little effort. The paper "Production of Periodic Structures by Means of Ultrasonics" by Ye.M. Gershenzon was devoted to the experimental investigations of an interesting modification of a periodic structure, i.e. a regular waveguide filled with a liquid in which an ultrasonic standing wave was excited. V.P. Sazonov described the results of an investigation of the distribution of electric fields in a number of important delay systems (combs, stub systems, etc.) by means of two methods (probes with a high-resistance input) and small perturbing objects). The author also obtained the distributions of tangential components of the electric fields along certain boundary surfaces, which are of considerable interest. In a number of cases, the author also measured the coupling impedance. Some of the lectures were devoted to the problems of diffraction

Card2/16 which are important in the analysis of the directional patterns of antennas. Here one should mention the papers by Ye.N. Vasil'yev and S.M. Verevkin, dealing with the excitation of the solids of revolution. The analysis of the oscillations in π-type and toroidal volume resonators and in π-type and cross-shaped waveguides was given in the papers by V.L. Patrushev and V.M. Bedykh, respectively. A number of the papers in the Electrodynamics Section dealt with the complex phenomena appearing at the junctions of waveguides. Here, it is necessary to mention the papers: "The Calculation of Junctions" by Ya.M. Turover; "The Problem of Construction of Certain Wideband Matching Devices" by Ye.V. Amitsov and V.D. Luchinin and "Measurement of the Parameters of the Energy Outputs in U.H.F. Devices by Means of a Symmetrical Transformer" by I.A. Dukhovnikova and M.M. Raymer. The behaviour of various substances in electromagnetic fields at U.H.F. was discussed in the papers of O.V. Karpova, U.P. Radin, I.A. Shekhtman, A.I. Pilshchikov, A.L. Levinson, N.S. Sedletskaya and A.A. Kuznetsov.

The paper of N.G. Basov and his collaborators described the principle of operation of a molecular clock having an accuracy of 10^{-9}. The results of a theoretical investigation of the molecular radiation in high-frequency fields were given in the papers of V.M. Fayn, entitled "Radiation of the Molecules in Strong High-frequency Fields" and "The Spontaneous Radiation of Molecules at Ultra-high Frequencies". In the second of the above papers, the author came to the conclusion that the width of the spectral line of the spontaneous radiation at U.H.F. is finite. The author also proposed a classical analogy for the phenomenon of coherence in the spontaneous radiation.

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9(2,9)

AUTHOR: Sedykh, V.M.

TITLE: The Calculation of the Attenuation in H-Shaped Waveguides

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1959, Vol 2, Nr 3, pp 333-340 (USSR)

ABSTRACT: According to literature data the attenuation in H-shaped waveguides must be considerably higher than in rectangular ones. These data are based on the work of B. Cohn, (Ref.3). However, the method of long lines used by B. Cohn for calculating critical frequencies of waveguides of complicated profile configuration produces results which do not coincide with experimental data. The calculation data of critical frequencies of wave-guides with complicated cross-sections, based on the solution of the field equation suggested by L.N. Deryugin, (Ref.4), and further developed by N.N. Malov, A.Ya. Yashkin and N.F. Funtova (Refs.5,6,7) are more reliable and produce a greater accuracy. Consequently, it may be expected that the application of this method for calculating the attenuation in H-shaped waveguides will produce a more accurate attenuation formula than the one derived by B. Cohn.

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The Calculation of the Attenuation in H-Shaped Waveguides

The author explains the calculation of basic wave attenuation in H-shaped waveguides, based on the solution of the field equation. Experimental attenuation measurements by the resonator method, coincide with calculation data and amount to 0.3-0.4 db/m in the 3 cm range. The author expresses his gratitude to the students of the radio-fizicheskiy fakultet (Radio Physics Faculty), V. Dimitriyev and N. Lyapunov for their assistance. The publication of this article was recommended by the Kafedra fiziki SVCh Khar'kovskogo ordena Trudovogo Krasnovo Znameni gosudarstvennogo universiteta, imeni A.M. Gor'kogo (Chair of Microwave Physics of the Khar'kov -Red Labor Banner Order- State University imeni A.M. Gor'kiy). There are 2 diagrams, 1 graph and 8 references, 7 of which are Soviet and 1 American.

SUBMITTED: October 9, 1958 (October 2, 1958)

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Translation from: Referativnyy zhurnal. Elektrotekhnika, 1960, No. 8, p. 412, # 6.7171

AUTHOR: Sedykh, V.M.

TITLE: Calculation of Critical Frequencies for H_{20} Waves in Waveguides of Cruciform Cross-Sections

PERIODICAL: Uch. zap. Khar'kovsk. un-t, 1959, Vol. 102, Tr. Radiofiz. fak. Vol. 3, pp. 63-68

TEXT: An equation was obtained connecting the dimensions of the cross-section of waveguides with the characteristic number in the form of an infinite matrix. The divergence between the critical frequency calculated with the aid of the first approximation and the one measured during the tests does not exceed 1.4%.

Translator's note: This is the full translation of the original Russian abstract.

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SEDYKH, V. M., Cand Phys-Math Sci -- (diss) "Investigation of waveguides of cross-shaped and H-shaped cross-section types." Khar'kov, 1960. 9 pp; (Ministry of Higher and Secondary Specialist Education Ukrainian SSR, Khar'kov Order of Labor Red Banner State Univ im A. M. Gor'kiy); 150 copies; free; bibliography on pp 8-9 (11 entries); (KL, 25-60, 126)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

S/141/60/003/02/011/025
E192/E382

AUTHORS: Sedykh, V.M. and Zorkin, A.F.

TITLE: Waveguide Having a Cruciform Cross-section

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1960, Vol 3, Nr 2, pp 269 - 275 (USSR)

ABSTRACT: The waveguide considered is illustrated in Figure 1. First, the propagation of the H_{10}-wave is considered. The problem is equivalent to finding the solution of:

$$\partial^2 H/\partial x^2 + \partial^2 H/\partial y^2 + k^2 H = 0 \qquad (1)$$

where $H = H_z = H(x,y)$ is the longitudinal component of the magnetic field,

$k = 2\pi/\lambda_c$ and

λ_c is the critical wavelength for the waveguide.

All the remaining magnetic-field components can be expressed in terms of H_z. For the purpose of analysis, the waveguide of Figure 1 is divided into two rectangular regions, I and II. For the region II the magnetic

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field is given by Eq (4), while in the second region it is expressed by Eq (5). At the boundaries of the two regions the equations should satisfy the continuity conditions expressed by Eqs (6). The coefficients defined by Eqs (7) and (8) are now introduced. From the conditions of Eqs (6) it follows that the relationships between M and N, and Q and R are defined by Eqs (9) and (10). The coefficient M_o can be evaluated from Eq (11), while the coefficients M_n are given by Eq (13). Similarly R_o and R_m are determined by Eqs (14) and (15). From the above it is seen that all the coefficients M_n can be expressed in terms of N_m if there exists an infinite system of infinite homogeneous equations whose determinant $\Delta = 0$. The minimum root of the characteristic equation $\Delta = 0$ will correspond to the H_{10}-wave. The first-approximation results in the following expression for k :

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$$\operatorname{ctg}(bk) - \frac{h}{g}\left\{ \operatorname{tg}(ak) + 2k\sum_{n=1}^{\infty} \frac{\operatorname{tg}(ap_n)}{p_n}\left[\frac{\sin(s_n h)}{s_n h}\right]^2 \right\} = 0 \quad (16).$$

For the region I this can be written as Eq (17). In the case of the H_{20}-wave, the fields in the two regions are expressed by Eqs (18) and (19). By applying the method indicated above, it is found that the formula for determining k is in this case given by Eq (20). Eqs (17) and (20) were employed to plot the graphs illustrating the dependence of the critical wavelengths on the parameter a (Figure 1) for the waves H_{10}, H_{01} and H_{20} for d = 4, 5 and 6 mm; the graphs are shown in Figure 2. The dependence of the critical wavelength on d for constant a is illustrated in Figure 3. For the case of the H_{11}-wave the boundary conditions are expressed by Eq (21) on the contour FAB and by Eq (22) on the contour BCDEF (Figure 1).

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SOV/57-30-2-5/18

AUTHORS: Sedykh, V. M., Zorkin, A. F.

TITLE: Propagation of a Quasi-Circular Electrical Wave in a Cross-Shaped Waveguide

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol 30, Nr 2, pp pp 159-164 (USSR)

ABSTRACT: Previously Sedykh (Patent Nr 108439 and Issledovaniye krestoobraznogo volnovoda, Uch. zap. KhGU, Trudy radiofizicheskogo fakyl'teta, 4, 1959) investigated waveguides with a cross-shaped cross section (Fig. 1) and discovered that such waveguides have values of parameters which are intermediate between those of rectangular and circular waveguides. The authors expected that the quasi-circular wave existing in such a waveguide can be considered to be a H_{01} wave of the circular waveguide transformed by means of a smooth transition from the circular to the cross-shaped

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cross section. They hoped that such a quasi-circular wave would have negligible losses and would be free from the E_{11} satellite existing in the circular waveguide.

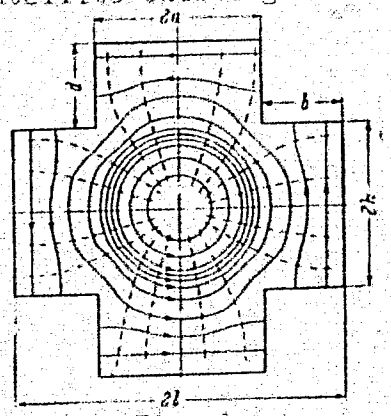

Fig. 1

During calculations the authors worked with a symmetrical configuration (a = b = d = h) since in this case the quasi-circular wave configuration was

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closest to a circular one. To find the critical frequency f_c they needed to evaluate the waveguide eigenvalue $\varkappa$:

$$\varkappa = \frac{2\pi f_c}{c} = \frac{2\pi}{\lambda_c},$$

where λ_c = critical wavelength of the wave. At this point they noted that instead of solving equations for the cross section on Fig. 1, one can use the much simpler geometry shown on Fig. 2.

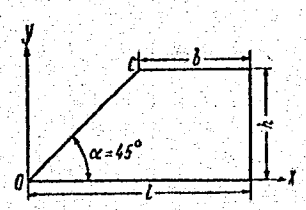

Fig. 2.

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This simpler waveguide form was already solved by Molov and Funtova (Kriticheskiye chastoty ochen' nizkih volnovodov trapetsiyevidnogo secheniya, Uch. zap. MGPI im Lenina, 101, 1957; Kriticheskiye chastoty volnovoda s secheniyem v vide pryamougol'noy trapetsii, Uch. zap. MGPI im. Lenina, 101, 1957), and the authors used their Eq. (3) to get the critical frequency:

$$(\cos a\varkappa - \cos 2a\varkappa)\left([\sin a(\varkappa - \xi_1) + \sin 2a(\varkappa - \xi_1)]\left[(\varkappa - \xi_1)^2 - \left(\frac{\pi}{a}\right)^2\right]^{-1} \times\right.$$
$$\times(\varkappa - \xi_1) + [\sin a(\varkappa + \xi_1) + \sin 2a(\varkappa + \xi_1)]\left[(\varkappa + \xi_1)^2 - \left(\frac{\pi}{a}\right)^2\right]^{-1}(\varkappa + \xi_1) =$$
$$= a\varkappa^2(\cos 2a\xi_1 + \cos a\xi_1)\left[\xi_1^2 - \left(\frac{\pi}{a}\right)^2\right]^{-1}. \qquad (3)$$

where $\varkappa^2 = \xi_n^2 + \eta_n^2, \quad \eta_n = n\frac{\pi}{a}, \; n = 0, 1, 2, \ldots$

The authors claim that experimental verification showed that the value of the critical frequency

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computed from (3) agrees very well with experimental results. As far as the damping constant is concerned, it is well known that it can be obtained using the conditions of Leontovich using equation:

$$\alpha = \frac{R_s \int_l |H_{tg}|^2 dl}{2\mathrm{Re} \int_{s_0} [EH^*]_s ds}, \quad \text{where} \quad R_s = \sqrt{\frac{\pi\mu f_0}{\sigma}}. \qquad (4)$$

Expanding the magnetic field as a series of products of trigonometric functions and using the first (n = 0) approximation, the authors computed α for the case of a copper cross-shaped waveguide with $\sigma = 58 \cdot 10^7$ mho/m and a = b = d = h = 12.7 cm. The damping vs. wavelength curve is plotted as curve 1 on Fig. 3. The critical wavelength in this case was 42 mm. For comparison the same figure contains curve 2 which represents the damping constant for H_{01} in a circular copper

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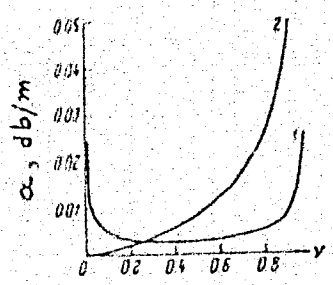

Fig. 3.

waveguide of 50-mm diam. Note the relative constancy of damping in a wide region of wavelengths in the case of the cross-shaped waveguide. Note also the possibility of working with larger values of the λ_0/λ_c ratio. To check on the problem of satellites the authors calculated the critical wavelength of the wave whose field is represented

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Propagation of a Quasi-Circular Electrical Wave in a Cross-Shaped Waveguide

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on Fig. 4. The computations were performed in the standard way using rectangular regions I and II of the waveguide. For the waveguide dimensions mentioned earlier, the critical wavelength came out to be 36.8 mm. This shows that there exists the possibility of propagation with low energy loss of quasi-circular waves in a cross-shaped waveguide without any satellite. There are 4 figures; and 7 Soviet references.

ASSOCIATION: Khar'kov State University imeni A. M. Gor'kiy (Khar'kovskiy gosudarstvennyy universitet imeni A. M. Gor'kogo)

SUBMITTED: July 29, 1959

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Propagation of a Quasi-Circular Electrical Wave in a Cross-Shaped Waveguide

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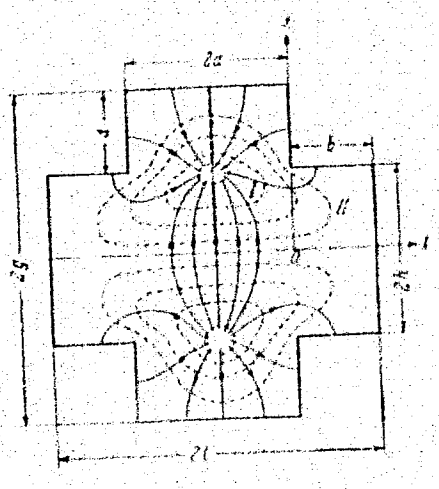

Fig. 4.

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Fourth all-Union Conference on Radioelectronics sponsored by the Ministry of Higher and Secondary Special Education of the U.S.S.R. Izv. vys. ucheb. zav.; radiotekh. 4 no.1:123 Ja-F '61. (MIRA 14:4)

(Electronics--Congresses)

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AUTHORS: Sedykh, V. M., Zorkin, A. F., Dmitriyev, V. M., Lyapunov, N.V., and Yatsuk, L. P.

TITLE: Parameters of H-shaped waveguides in millimeter and centimeter wave bands

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 6, 1961, 699-703

TEXT: The authors divide the papers theoretically determining the parameters of H-shaped waveguides into two groups: (1) papers by foreign authors: S. Cohn (Ref. 1: Proc. IRE, 35, 783-788, August, 1947), K. Tomiyasu, L. Swern (Ref. 2: Proc. Nat. Electr. Cont., 10, 76-82, 1954), S. Hopfer (Ref. 3: Trans. IRE, MMT-3, no. 3, 1955), using the method of equivalent schemes; (2) papers by L. N. Deryugin (Ref. 4: Radiotekhnika, no. 6, 1948), A. Ya. Yashkin (Ref. 5: Uch. zap. MGPI imeni Lenina, 101, 1957), N. F. Funtova (Ref. 6: Uch. zap. MGPI imeni V. I. Lenina, 88, 1954), using the more accurate electrodynamic method of determining the eigenvalue (critical frequency) of the H-shaped waveguide (working on the basic wave H_{10}). The authors of the present paper calculated the main parameters

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of H-shaped waveguides: the critical frequency, the damping constant, the peak power, and the characteristic resistance, from a uniform standpoint, on the basis of the solution of the field equations. They present the scheme of calculation, the final formulas for calculating the parameters of H-shaped waveguides, and numerical data of these parameters for some H-shaped waveguides developed and tested at the Khar'kovskiy universitet (Khar'kov University). When determining the critical frequency (the eigenvalue) χ, they only study the two ranges I and II (Fig. 1), and obtain

$$\frac{\operatorname{tg}\chi a}{\chi}=\frac{g\operatorname{ctg}\chi b}{\chi h}+\frac{2}{gh}\sum_{n=1}^{\infty}\frac{\operatorname{ctg}s_n b}{s_n}\frac{\sin^2 p_n g}{p_n^2}. \qquad (6)$$

for the calculation of χ in first approximation. $p_n = \frac{\pi}{h}$; $\chi^2 = p_n^2 + s_n^2$; $n = 0, 1, 2...$ In a similar way, they obtain the formula

$$\frac{\operatorname{ctg}\chi a}{\chi}+\frac{g\operatorname{ctg}\chi b}{\chi h}=\frac{2}{gh}\sum_{n=1}^{\infty}\frac{\sin^2 s_n g}{s_n^2}\frac{\operatorname{ctg}p_n b}{p_n}, \qquad (7)$$

for an H_{20} wave. $s_n = \frac{\pi}{h} n$; $s_n^2 + p_n^2 = \chi^2$; $n = 0, 1, 2, ...$ In the practice, the H_{20} wave is the wave nearest to the basic wave (and

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therefore the most dangerous one) for the dimensions of the cross section of H-shaped waveguides. Thus, the pass-band of the H-shaped waveguide is obtained by determining the critical frequencies of the waves H_{10} and H_{20} from (6) and (7). The other parameters of an H-shaped waveguide had been calculated in a paper by V. M. Sedykh (Ref. 7: Izv. vyssh. uchebn. zaved. MVO SSSR, Radiotekhnika, no. 3, 1959). Further studies, however, showed that more accurate results nearly equal to the test results were obtained by using the formula

$$W_{\tau} = \frac{1}{2}\mathrm{Re}\int_{S}[\mathbf{EH}^{*}]\,ds. \qquad (8)$$

for determining the power transmitted by a waveguide of complicated cross section. In this case, the damping constant α at frequencies higher than the critical one can be determined from

$$\alpha = \frac{1}{2}\frac{R_s\int_{l}|H_l|^2\,dl}{\mathrm{Re}\int_{S}[\mathbf{EH}^{*}]\,ds}. \qquad (9)$$

where $R_s = \sqrt{\frac{\pi f \mu}{\sigma}}$. For an H-shaped waveguide,

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Parameters of H-shaped waveguides ...

$$\alpha = \frac{R_s\left[\left(\frac{f_c}{f}\right)^2 V + U\right]}{T\sqrt{1-\left(\frac{f_c}{f}\right)^2}}. \qquad (10)$$

is written down, where

$$V = \frac{g^2\cos^2\varkappa a}{h^2\sin^2\varkappa b}\left[\frac{\sin 2\varkappa b}{\varkappa} + 2(h + d\cos^2\varkappa b)\right] - \frac{\sin 2\varkappa a}{\varkappa},$$

$$U = a + \frac{\sin 2\varkappa a}{2\varkappa} + \frac{g^2\cos^2\varkappa a}{h^2\sin^2\varkappa b}\left(b - \frac{\sin 2\varkappa b}{2\varkappa}\right),$$

$$T = 240\pi g\left[a + \frac{\sin 2\varkappa a}{2\varkappa} + \frac{g}{h}\frac{\cos^2\varkappa a}{\sin^2\varkappa b}\left(b - \frac{\sin 2\varkappa b}{2\varkappa}\right)\right].$$

For the peak power of the waveguide, $\hat{W}_{t} = \frac{E^2}{2\eta_1} T\sqrt{1-\left(\frac{f_c}{f}\right)^2} = \hat{W}_{t|\infty}\sqrt{1-\left(\frac{f_c}{f}\right)^2}$. (12) is obtained, where $\hat{W}_{t\infty} = \frac{E^2 T}{2\eta_1}$ is the peak power at an infinitely high frequency, and $\eta_1 = \sqrt{\mu_1/\varepsilon_1}$. In analogy to the rectangular waveguide, the characteristic resistance Z is calculated from $Z = v_{eff}^2/W_t$ (13), where v_{eff} is the maximum effective voltage between the steps and W_t is the transmitted power. From (12) and (13), the authors obtain

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Parameters of H-shaped waveguides ...

$$Z = \frac{Z_{\infty}}{\sqrt{1 - \frac{f_c^2}{f^2}}} \qquad (14)$$

for the H-shaped waveguide, where $Z_{\infty} = \frac{4E^2 l^2}{T}$ is the characteristic resistance of the H-shaped waveguide at an infinitely high frequency ($f = \infty$). From formulas (6), (7), (10), (12), and (14), they compute the parameters for six H-shaped waveguides, and plot the curves $\alpha(f)$. There are 4 figures, 2 tables, and 9 references: 5 Soviet-bloc and 4 non-Soviet-bloc.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo (Khar'kov State University imeni A. M. Gor'kiy)

SUBMITTED: July 11, 1960

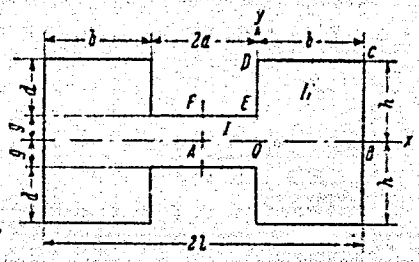

Fig. 1

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B116/B203

9,1300

AUTHORS: Dmitriyev, V. M., Zorkin, A. F., Lyapunov, N. V., and Sedykh, V. M.

TITLE: Approximation method for calculating the eigenfrequencies of irregular limit resonators

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 6, 1961, 712-716

TEXT: The approximation method described in the present paper is based on the use of the cross-section method, and yields rather simple and sufficiently accurate formulas for determining the resonance wavelengths of irregular limit resonators. First, the problem is formulated and a general solution is given. The authors consider a section of a tapered irregular waveguide (Fig. 1) made of an ideally conducting metal. The other end of the waveguide is assumed to be closed with a stopper; the waveguide is excited at that end. At certain frequencies, such a device will behave like a resonator. The relation between the reconance wavelengths of such a resonator and its dimensions is to be determined. The cross-section method developed by B. Z. Katsenelenbaum (Ref. 3: DAN SSSR,

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102, no. 4, 1955) is used for the calculation. The authors study an element lying between the planes S_1 and S_2 and the lateral resonator surface, assuming that the lateral surface only slightly differs from a cylindrical one. Then, $dz/dt = v_{Ph}(z)$ (1) holds with sufficient accuracy, where $v_{Ph}(z) = v_0 / \sqrt{1 - [\lambda_0/\lambda_c(z)]^2}$ is the phase velocity of the wave in the cylindrical waveguide; $\lambda_c(z)$ is the critical wavelength of the cylindrical waveguide; and λ_0 is the wavelength in the free space. After separating the variables, (1) is transformed:

$$\int_0^{p\frac{T}{2}} dt = \int_0^{p\frac{\lambda_d}{2}} \frac{1}{v_0}\sqrt{1-\left[\frac{\lambda_0}{\lambda_c(z)}\right]^2}\,dz. \qquad (2)$$

where λ_d is the wavelength in an irregular limit waveguide, T is the oscillation period, p = 1, 2, 3, ... It is assumed that the critical cross section totally reflects the electromagnetic waves like a metal wall.

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In this case, the resonance condition reads: $\lambda_0 = \lambda_p = \lambda_c(z)|_{z=p\frac{\lambda_c}{2}}$. (3), $\lambda_p = \lambda_r$ is the resonance wavelength of an irregular limit resonator. If $\lambda_c(z)$ is known, the resonance wavelengths can be determined from (2) and (3). $\lambda_c(z)$ must be determined separately for every resonator shape. Now, the authors study a conical limit resonator of any cross-section shape. With the use of the similarity of the resonator cross sections, they obtain the formula $\frac{p\,\lambda_c(0)}{2d} = \alpha - \arctan\alpha$ (6), where $\alpha = \sqrt{\left[\frac{\lambda_c(0)}{\lambda_0}\right]^2 - 1}$.

If p, $\lambda_c(0)$, and d are known, it is possible to determine α, and, therefore, also the resonance wavelength, because $\lambda_p = \lambda_0 = \frac{\lambda_c(0)}{\sqrt{1+\alpha^2}}$. (7),

where $\lambda_c(0)$ is the critical wavelength of the cylindrical waveguide of the cross-section S; d is the cone height. With the use of (6) and (7), it is possible to determine the resonance wavelengths of conical resonators of any cross-section shape (H, T , and others) for which the critical

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wavelength is known. Conical resonators of rectangular and round cross section are studied as examples. For the former case,

$$\frac{abp}{d\sqrt{(mb)^2 + (na)^2}} = \alpha - \arctan \alpha \quad (8) \text{ and}$$

$$\lambda_r = \frac{2ab}{\sqrt{(mb)^2 + (na)^2}\sqrt{1 + \alpha^2}} \quad (9)$$ are written down instead of (6) and (7). For the latter case,

$$\frac{\pi p \tan \theta}{u_{mn}} = \alpha - \arctan \alpha \quad (10) \text{ and}$$

$$\lambda_r = \frac{2\pi a}{u_{mn}\sqrt{1 + \alpha^2}} \quad (11)$$ are written down for E waves, and

$$\frac{p\pi \tan \theta}{u'_{mn}} = \alpha - \arctan \alpha \quad (12) \text{ and } \lambda_r = \frac{2\pi a}{u'_{mn}\sqrt{1 + \alpha^2}} \quad (13)$$ for H waves,

where u_{mn} are the roots of the Bessel function and u'_{mn} are the roots of the derivative of the Bessel function. To check the formulas obtained, the authors determined the resonance wavelengths of rectangular, irregular

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limit resonators by experiment. They examined two resonators with $a = 20$ mm, $a_1 = 16.6$ mm, $d_1 = 280$ mm, $a = 23$ mm, $a_1 = 17$ mm, and $d_1 = 120$ mm, respectively, where the narrow cross section was unchanged over the length and equal to $b = 10$ mm. The resonators were excited by the H_{10} wave. Since λ_c does not depend on b in this case, formulas (8) and (9) could be checked with these resonators. Measurements were made by the "sucking-off" method in the three-centimeter band. The experimental test showed that the formulas obtained are usable for the practical calculation of conical limit resonators. There are 4 figures, 3 tables, and 5 Soviet-bloc references.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo (Khar'kov State University imeni A. M. Gor'kiy)

SUBMITTED: July 27, 1960

Card 5/6

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

BOCHARNIKOV, M.M.; SEDYKH, V.M.

More complete mining of mica reserves. Razved. i okh. nedr 28 no.12:28-30 D '62. (MIRA 16:5)

1. Irkutskiy gosudarstvennyy institut redkikh metallov.
(Mica)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

ACCESSION NR: AR4023755 S/0274/64/000/001/A057/A057

SOURCE: RZh. Radiotekhnika i elektrosvyaz', Abs. 1A362

AUTHORS: Sedy*kh, V. M.; Zorkin, A. F.

TITLE: Limiting power and characteristic resistance of cruciform waveguide

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 132, 1962, Tr. Radiofiz. fak., v. 7, 96-100

TOPIC TAGS: waveguide, cruciform waveguide, limiting power, maximum power rating, characteristic resistance, wave resistance

TRANSLATION: The calculation of the limit of the H_{10} mode power begins with the breakdown field intensity. The cruciform waveguide is divided into regions of two types; expressions for the transverse components of the electric and magnetic field intensities in terms

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

ACCESSION NR: AR4023755

of the longitudinal components and for the limiting power are obtained for each region. The limiting power for cruciform waveguides of two types is calculated for a frequency of 10 Gc and is found to be larger than for the corresponding rectangular waveguide. A plot of the breakdown power and of the wave resistance against frequency is presented. Bibliography, 4 titles. V. N.

DATE ACQ: 03Mar64 SUB CODE: GE, CO ENCL: 00

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

ACCESSION NR: AR4023756 S/0274/64/000/001/A057/A057

SOURCE: RZh. Radiotekhnika i elektrosvyaz', Abs. 1A363

AUTHOR: Sedy*kh, V. M.; Zorkin, A. F.

TITLE: E_{11} modes in a cruciform waveguide

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 132, 1962, Tr. Radiofiz. fak., v. 7, 101-105

TOPIC TAGS: waveguide, cruciform waveguide, longitudinal electric field, critical wavelength, cutoff wavelength, cruciform resonator, E_{11} mode

TRANSLATION: Conditions under which an E_{11} mode can propagate in a cruciform waveguide are investigated; the E_{11} mode critical frequency is calculated as a function of the transverse waveguide dimensions.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

ACCESSION NR: AR4023756

Waves with longitudinal electric field components can be used in devices operating on the principle of interaction between an electron beam and the field. A characteristic equation is derived and solved approximately. Plots of λ_{cr} against the dimensions of the waveguide projections are constructed. The critical wavelength increases monotonically with increasing height and width of the projections of the cruciform waveguide. An experimental determination of λ_{cr} in a cruciform resonator, excited by a post located along the waveguide axis perpendicular to the transverse cross section plane, has confirmed the correctness of the calculations. Bibliography, 2 titles. N. B.

DATE ACQ: 03Mar64 SUB CODE: GE, CO ENCL: 00

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, V.M.; YATSUK, L.P.

Parameters of an H-shaped wave guide with dielectric filling. Izv. vys. ucheb.zav.; radiofiz. 6 no.3:572-580 '63. (MIRA 16:9)

1. Khar'kovskiy gosudarstvennyy universitet.
(Wave guides)

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L 9858-66 EWT(1)/EWA(h)

ACC NR: AP6000524 SOURCE CODE: UR/0142/65/008/005/0601/0602

15
B

AUTHOR: Sedykh, V. M.

ORG: none

TITLE: Two-frequency cavity resonator with independent tuning

SOURCE: IVUZ. Radiotekhnika, v. 8, no. 5, 1965, 601-602

TOPIC TAGS: resonator, cavity resonator

ABSTRACT: A cavity resonator is described which provides fully independent tuning during operation over a wide frequency range. The tuning elements for each of the resonance frequencies are mounted at points along the resonator where the effects of resonance frequencies are mutually excluded. Structurally, the resonator is a regular waveguide section which at one end is a waveguide with a high critical frequency and at the other end, a waveguide band-pass filter. A resonator using a П-shaped waveguide (see Fig. I) with an operating wavelength of 4—6 cm is studied experimentally. Coupling with the resonator is effected with probes. With one of the coupling elements placed behind the junction and the other behind the filter, sources oscillating at different frequencies are disconnected. The filter on the П-shaped waveguide is designed for a cutoff frequency of 4000 Mc. It is shown that the res-

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onator can be tuned independently at frequencies lying in two different ranges, i.e.,

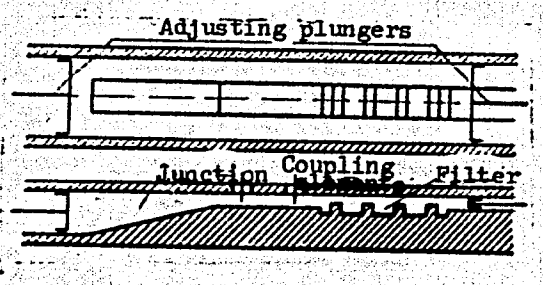

Fig. 1. Cavity resonator

4400—7500 Mc and 1900—3900 Mc. The loaded Q of the resonator varies from tens to hundreds of units over the entire range. Orig. art. has: 1 figure. [JR]

SUB CODE: 09/ SUBM DATE: 23Jul64/ ORIG REF: 002/ ATD PRESS: 4165

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

LYAPUNOV, N.V.; DMITRIYEV, V.M.; SEDYKH, V.M.

Calculation of cutoff frequencies of H and π waveguides. Radiotekh. i elektron. 11 no. 2:345-346 F '66 (MIRA 19:2)

1. Submitted June 2, 1965.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, Veniamin Mikhaylovich; BOCHARNIKOV, Mstislav Mikhaylovich; SHUVALOV, Nikolay Grigor'yevich; KONSTROMITINOV, Konstantin Nikolayevich; BURLUTSKIY, Boris Dmitriyevich; SHCHERBAKOVA, Lidiya Maksimovna; SHCHERBAKOV, Valentin Innokent'yevich

[Mining and dressing mica minerals]Razrabotka i obogashchenie sliudianykh rud. Moskva, Nedra, 1965. 247 p. (MIRA 18:12)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, V.S., inzhener.

Conference on the problems of hot cracking in welds welded castings and ingots. Svar.proizv. no.12:10 D '55. (MLRA 9:2)

1.Institut metallurgii imeni A.A.Baykova AN SSSR.
(Welding)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SKDYKH, V.S.

Conference on hot cracks in welded parts, castings and ingots. (MIRA 10:11)
Trudy Inst. met. no.2:217-223 '57.
(Metals--Defects)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

AUTHOR: Gulyayev, B.B. SOV/24-58-4-37/39

TITLE: Conference on Crystallisation of Metals (Soveshchaniye po kristallizatsii metallov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 4, pp 153 - 155 (USSR)

ABSTRACT: This conference was held at the Institut mashinovedeniya AN SSSR (Institute of Mechanical Engineering of the Ac.Sc. USSR) on June 28-31, 1958. About 400 people participated and the participants included specialists in the fields of foundry, metallurgy, crystallography, physics, welding, heat, physical chemistry, mathematical physics and other related subjects. In addition to Soviet participants, foreign visitors included Professor D. Czikl (East Germany) and N.I. Chvorinov (Czechoslovakia). This conference on crystallisation of metals was the fourth conference relating to the general problem of the theory of foundry processes.

Crystallisation of Non-ferrous Metals. N.N. Belousov and A.A. Bodonov - in their paper "Investigation of the Crystallisation and the Properties of Non-ferrous Metals Under Conditions of Applying Pressure", presented results of experiments on producing castings which crystallise under pressure from all sides and piston pressure within a wide range of specific loads. The results of the investigation provide material for improving existing methods of applying pressure to influence the crystallisation of alloys. The influence of the conditions of crystallisation on the casting and mechanical properties of aluminium alloys, at normal and at elevated temperatures, were discussed in the papers of I.F. Kolchnev and A.Ye. Semenov. The results of investigations of the conditions of crystallisation of aluminium alloys during continuous casting were presented in the paper of Ye.D. Zakharov. N.L. Pokrovskiy and D.Ye. Qvsiyenko dealt with the features of crystallisation of various non-ferrous alloys and the physico-chemical phenomena accompanying this process.

Card8/10

Crystallisation of Metals in the Welding Bath. The following papers were read: B.A. Movchan - "Investigation of the Features of the Microscopic Chemical Non-uniformity in Alloys"; G.L. Petrov - "Crystallisation and Chemical Non-uniformity in Weld Joints"; M.Kh. Shorshorov and V.A. Sedykh - "Influence of Non-uniformities of Crystallisation in the Weld Bath on the Formation of Hot Cracks".

Crystallisation of Metals in an Ultrasonics Field. The following papers were read: Member of the Ac.Sc. Belorussian SSR N.N. Sirota, Ye.L. Lakhtin and N.N. Smolyarenko - "Crystallisation of Metals and Alloys in an Ultrasonics Field"; I.I. Tsygin - "Influence of Elastic Oscillations on the Processes of Crystallisation and the technological properties of Alloys"; L.L. Silin and A.A. Yerokhin - "Effect of Ultrasonics on Crystallising Metal in the Weld Bath".

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

Sedykh, V.S.

135-58-8-3/20

AUTHORS: Shorshorov, M. Kh., Candidate of Technical Sciences, and Sedykh, V. S., Engineer

TITLE: On the Evaluation of Proneness to Hot Cracks of Welded Metal in the Welding Process (Ob otsenke sklonnosti metalla shvov k obrazovaniyu goryachikh treshchin pri svarke)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 8, pp 10 - 14 (USSR)

ABSTRACT: Detailed information is presented on a method and machine ("IMET-11") used to investigate the kinetics of the formation and expansion of cracks in metal during the welding process. It was stated that crack formation is caused by non-simultaneous crystallization of the weld metal and by the existence of temperature interval of brittleness. Development of hot cracks was observed in weld portions adjacent to base metal zones where the heat emission was most intensive. In welding "St.3" steel with "UONI-13/45" electrodes with "EI582" rods, hot cracks developed at a temperature interval of 1420 - 1300°C and most easily at 1320 - 1350°C which corresponds to the minimum degree of plasticity of the crystallizing metal. Comparative eval-

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135-58-8-3/20

On the Evaluation of Proneness to Hot Cracks of Welded Metal in the Welding Process

uations of metal proneness to crack formation in welding low-carbon and austenitic steels with different grades of electrodes were obtained. There are 3 diagrams, 1 photo, 1 graph, 1 table and 7 references 4 of which are Soviet and 3 English.

ASSOCIATION: Institut metallurgii imeni A. A. Baykova AN SSSR (Institute of Metallurgy imeni A. A. Baykov, AS USSR)

1. Steels--Welding 2. Welds--Fracture--Test methods
3. Electrodes--Applications

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1.2300 2208only

AUTHORS: Shorshorov, M. Kh., Candidate of Technical Sciences, Sedykh, V. S., Engineer, Zemzin, V. N., Candidate of Technical Sciences, Runov, A. Ye., Engineer

TITLE: The Effect of the Ferrite Phase on the Resistance of Austenite Seams to Hot Crack Formation

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 1, pp. 1-4

TEXT: Electrodes ensuring a 2 to 5% ferrite content in the built-up metal are used for welding heat resistant austenitic steels. A large number of data are now available for regulating the upper limit of the ferrite phase content in the seam and heat treating conditions of weld joints, applied to various operational parameters, types of articles and austenitic steel grades. On the basis of quantitative evaluation methods, experimental results are presented on the effect of the ferrite phase amount on the resistance to hot cracking of metal built up with КТИ-5 (KTI-5), ЦТ-15 (TsT-15), ЗИО-3 (ZIO-3) and ЗИО-7 (ZIO-7) electrodes, and of the seam metal when welding 1Х18Н12Т (1Kh18N12T) steel with these electrodes. Electrodes from TsKTI imeni Polzunov,

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

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A006/A001

The Effect of the Ferrite Phase on the Resistance of Austenite Seams to Hot Crack Formation

the welding department of TsNIITMASh and the Podol'skiy mashinostroitel'nyy zavod imeni Ordzhonikidze (Podol'sk Machinebuilding Plant imeni Orzhonikidze) were tested. Table 1 contains the composition of electrodes, Cr and Ni equivalents, the equivalence ratio of these components, and the ferrite phase content in the built-up metal, determined by the magnetic method using the TsNIITMASh ferritometer. For some compositions of the built-up metal the ferrite phase content was established additionally by metallographical analysis. The resistance of the seam metal to hot cracks was evaluated by the magnitude of the critical rate of its linear deformation when elongated during the crystallization process. This was established by tests on the ИМЕТ-2 (IMET-2) and П-3-4 (P-3-4) machines designed by MVTU. The tests were made with butt(IMET method) and T-welds (MVTU method). The following results were obtained: The index of hot crack resistance (critical rate of linear deformation) of austenite-ferrite built-up metal depends on the amount of the ferrite phase and on the nature of its alloyint. This index increases from 8 to 12 mm/min for weld metal of 1Х19Н12М2Ф (1Kh19N12M2F) composition with a ferrite content increased from 0 to 4 - 5%.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

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A006/A001

The Effect of the Ferrite Phase on the Resistance of Austenite Seams to Hot Crack Formation

A further increase in the ferrite content up to 12% does not affect the proneness to hot cracks. The index of hot crack resistance increases continuously from 3.6 to 11 - 12 mm/min for weld metal of 1X19H9Б (1Kh19N9B) composition (TsT-15 and ZIO electrodes) at an increase of the ferrite phase from 0 to 10 - 16%. At a content of the ferrite phase within 0 to 6 - 7%, the index of hot crack resistance of the built-up metal and the seam metal of KTI-4 electrodes is 2 to 1.3 times higher as compared to TsT-15 electrodes when welding 1Kh18N12T steel of a medium grade chemical composition. ZIO electrodes range between both the aforementioned types. A 1:10 ratio of the C and Nb content is recommended to raise the resistance of the built up metal to hot cracks when welding with TsT-15 and ZIO type electrodes. TsT-15 electrodes must ensure a ferrite phase content in the built-up metal not below 5 - 6% and KTI electrodes not below 2 - 3% to obtain resistance to hot cracks when welding root layers of the seam in steel with a higher austenite content (such as 1Kh18N12T steel). The evaluation of hot crack resistance of the seams according to the results of testing butt welds on the IMET-2 machine and T welds on the

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A006/A001

The Effect of the Ferrite Phase on the Resistance of Austenite Seams to Hot Crack Formation

P-4-3 machine yields similar results. It is concluded that in estimating the advantages and selecting the electrode type it is necessary to consider, besides the index of hot crack resistance of the built-up metal, its operational properties depending on temperature, stress, the corrosion medium, the duraction of operation, the type of alloying and the composition of the base metal to be welded. The authors thank Professor K. V. Lyubavskiy, Doctor of Technical Sciences, for his assistance in the work performed. There are 3 figures, 3 tables, and 8 Soviet references.

ASSOCIATIONS: Institut metallurgii im. A. A. Baykova AN SSSR (Institute of Metallurgy imeni A. A. Baykov, AS USSR) Shorshorov and Sedykh; TsKTI imeni I. I. Polzunov (Zemzin); TsNIITMASh (Runov)

Card 4/4

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SHORSHOROV, M.Kh, kand.tekhn.nauk; SOKOLOV, Yu.V., inzh.; RUSSIYAN, A.V., kand.tekhn.nauk; MATSNEV, E.P., inzh.; KURKINA, N.I.; Prinimali uchastiye: BELOV, V.V., inzh.; SEDYKH, V.S., kand.tekhn.nauk; OLUKHOV, Yu.P., inzh.

Effect of the composition and structure of chromium-nickel steels and alloys on the formation of hot cracks in the weld zone. Svar.proizv. no.4:12-17 Ap '62. (MIRA 15:3)

1. Institut metallurgii im. Baykova (for Shorshorov, Sokolov, Belov, Sedykh). 2. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. Bardina (for Russiyan, Matsnev).
(Chromium-nickel alloys--Metallography)
(Welding--Defects)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

37405

S/135/62/000/005/001/007
A006/A101

AUTHORS: Sedykh, V. S., Candidate of Technical Sciences, Deribas, A. A., Candidate of Physical and Mathematical Sciences, Bichenkov, Ye. I., Trishin, Yu. A., Engineers

TITLE: Explosion welding

PERIODICAL: Svarochnoye proizvodstvo, no. 5, 1962, 3 - 6

TEXT: The possibility of explosion-welding similar and dissimilar metals [steels СТ.3 (St.3) + St.3; St.3 + 1Х18Н9Т (1Kh18N9T), M3 + M3; OT4 + OT4; OT4 + M3; 1Kh18N9T + M3 and 1Kh18N9T + АДН(ADN)] was experimentally investigated. (See Figure 1). Plates 150 - 200 mm long, 20 - 40 mm wide and 1.5 - 15 mm and 1.5 - 4 mm thick were welded. The variable values were: distance h between the plate surfaces, angle α between the plates along the longitudinal axis of the samples, and the charge height of the explosive. Explosion welding makes it possible to obtain weld joints in the solid phase without the formation of intermediate chemical components between dissimilar metals and alloys. In explosion welding, the joint is produced under the effect of the energy of the scattering

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S/135/62/000/005/001/007
A006/A101

Explosion welding

explosive detonation products upon the surfaces to be welded which are arranged to each other at a certain angle. During their collision, a cumulative jet is being formed, and the motion of the movable plate along the fixed one causes the tangential shift of their surface layers. The tangential discontinuity of speed which then occurs is accompanied by an increase of disturbances. The jet destroys and carries away oxide films and other non-metallic inclusions from the surfaces to be joined. The disturbances, additionally to tangential shifts, cause the joint formation of "waves" on the surfaces to be joined at the collision points; they are thereby approached to distances which are necessary for the arising of metallic bonds between the parts, and the junction surface is thus increased. The explosive type is an important factor in explosion welding; best results were obtained with low-density granular materials such as Hexogen, etc. Explosion welding can be used in the manufacture of blanks for bimetal rolling, cladding of structural steel surfaces with metals and alloys, having particular physical and chemical properties; and for welding dissimilar metal blanks and parts. The authors thank Academician M. A. Lavrent'yev for his assistance. There are 9 figures, 1 table and 9 references: 6 Soviet-bloc and 3 non-Soviet-bloc.

Card 2/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

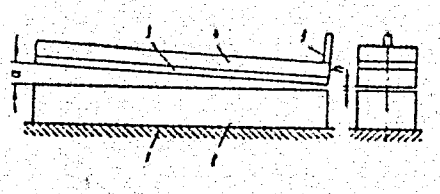
"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

Explosion welding

S/135/62/000/005/001/007
A006/A101

ASSOCIATION: Institut gidrodinamiki Sibirskogo otdeleniya AN SSSR (Institute of Hydrodynamics at the Siberian Branch of AS USSR)

Figure 1. Schematic diagram of explosion-welding of specimens
Legend: 1 - rigid base
2, 3 - plates to be welded
4 - explosive charge
5 - detonator
α - angle between the plates
h - least distance between the plates



Card 3/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, V.S., kand.tekhn.nauk; BONAR', M.P., inzh.

Basic parameters of explosive welding and the strength characteristics of weldments. Svar. proizv. no.2:1-5 F '63. (MIRA 16:2)

1. Institut gidrodinamiki Sibirskogo otdeleniya AN SSSR.
(Explosives in welding)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

L 14546-66 EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b) JD/HM

ACC NR: AP6005386 SOURCE CODE: UR/0413/66/000/001/0134/0134

INVENTOR: Sedykh, V. S.; Pashkov, P. O.; Kofman, A. P.; Gokhshteyn, B. Ye.; Pavlov, A. I.; Likhachev, G. F.

ORG: none

TITLE: A method of producing three-layer metal plates. Class 49, No. 177759

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 134

TOPIC TAGS: metal plate, three layer plate, clad plate, plate cladding, explosive cladding

ABSTRACT: This Author Certificate introduces a method of producing three-layer metal plates by explosive welding. Explosive charges are placed on the outer surface of the plates to be welded. In order to increase productivity, both outer plates are welded to the center plate simultaneously by a charge detonated at one point. In order to improve the quality of the bond, a centering prism is set up on the upper edges of the plates so that one edge of the prism faces the detonator. Orig. art. has: 1 figure. [WW]

SUB CODE: 11/ SUBM DATE: 23Mar64/ ATD PRESS: 4197

Cladding

Card 1/1 UDC: 621.791.044—419.5

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

L 09390-67 EWT(k)/EWT(m)/EWP(w)/EWP(v)/EWP(t)/ETI IJP(c) JD/HM

ACC NR: AR6033108 SOURCE CODE: UR/0137/66/000/007/E005/E005

34
33

AUTHOR: Kazak, N. N.; Sedykh, V. S.; Trykov, Yu. P.

TITLE: Formation of the white phase on impact of titanium and steel plates

SOURCE: Ref. zh. Metallurgiya, Abs. 7E29

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovnarkhoz Nizhne-Volzhsk. ekon. r-na. Volgogradsk. politekhn. in-t. T. 1. Volgograd, 1965, 347-350

TOPIC TAGS: collision parameter, impact parameter, white phase, welding, microhardening

ABSTRACT: The composition and structure of the so called "white phase" created on collision of Ti with steel are independent of the collision parameters of the plates. Within the limits of each section of the "white phase" its microhardness is equal to 880—940 Hv. The hardness of the "white phase" remained constant during changes of the material base having Armco iron, steel 3, and carbon steel as a base. The microhardness of the "white phase" somewhat decreases during heating welds at >700C and increased aging (0.75—2.0 hours) at a constant temperature for various gages of Ti plates. The relative amount of the "white phase" in the weld area is

Card 1/2 UDC: 621.791.1.011:669.14.018+669.295

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L 09390-67

ACC NR: AR6033108

determined by impact velocity, increasing in proportion to the kinetic energy introduced during welding with the plate used for impact. V. Fomenko. [Translation of abstract]

SUB CODE: 11, 13/

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

ACC NR: AR6029511 SOURCE CODE: UR/0137/66/000/006/I066/I066

AUTHOR: Kazak. N. N.; Sedykh, V. S.; Trykov, Yu. P.

TITLE: Effect of heating on the strength of the bimetal titanium-steel

SOURCE: Ref. zh. Metallurgiya, Abs. 6I464

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovnarkhoz Nizhne-Volzhsk. ekon. r-na. Volgogradsk. politekhn. in-t. T. 1. Volgograd, 1965, 351-353

TOPIC TAGS: metal heat treatment, titanium containing alloy, bimetal / BT1 titanium containing alloy, ST3 steel

TRANSLATION: The strength properties of the bimetal Ti-alloy BT-1 + ST 3 steel were studied, after preliminary heating to various temperatures (the maximum temperature was 1000°C) for 45 min with subsequent air cooling. A sharp drop of σ_b was initiated after heating at 700°C, while at 1000°C, the strength of the combination practically decreased to zero. The change of the strength properties of the bimetal were associated with the occurrence of diffusion processes between Ti and Fe at heating temperatures above 700°C and by the formation of a brittle compound of Ti with Fe and carbides in the boundary layer. L. Gordiyenko.

SUB CODE: 11,13

UDC: 669.018.9

Card 1/1

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

ACC NR: AR6034731 (A) SOURCE CODE: UR/0124/66/000/008/V039/V039

AUTHOR: Pashkov, P. O.; Sedykh, V. S.; Trykov, Yu. P.

TITLE: Failure of edges of metallic bar flats under pulsed loading

SOURCE: Ref. zh. Mekhanika, Abs. 8V291

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovnarkhoz Nizhne-Volzhsk. ekon. r-na. Volgogradsk. politekhn. in-t T. 1. Volgograd, 1965, 309-313

TOPIC TAGS: detonation velocity, shear, metal failure

ABSTRACT: Bar flats made of various metals were thrown against a prismatic steel sample with the use of flat explosive charges. The throwing was mostly parallel, and partly at a small angle of incidence with varying air gaps or without them. The length and width of the thrown flats exceeded the respective dimensions of the stationary sample. A correlation was established between the velocity of detonation of the explosive and the angle of shear forming over the perimeter of the thrown plate (the angle between the surface of failure and the bar flat plane). Changes in the thickness of the flats (made of titanium alloy, 18-8 steel LO-62-1 brass, AMr 5BM

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ACC NR: AR6034731

aluminum alloy, in the throwing speed or charge level (ranging from 50 mm to 130 mm), as well as exceeding the dimensions of the flats over those of the stationary sample did not affect the shear angle. At a detonation velocity of 1750 m/sec, the shear angle was about 87 degrees, and at 3500 m/sec velocity, the angle was about 52 degrees. Orig. art. has 3 bibliographic titles. [KP]

SUB CODE: 20/

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, K.F.;SEDYKH, Ye.D.

Diurnal butterflies of Ukhta District, Komi A.S.S.R. Ent. oboz. 38 no.4:829-832 '59 (MIRA 13:3)
(Ukhta District--Butterflies)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

NIKITIN, I.; SEDYKH, Ye., prepodavatel'

Let's improve the training of machine operators for forest industries. Prof.-tekh. obr. 20 no.8:27 Ag '63. (MIRA 16:9)

1. Zamestitel' direktora po uchebno-proizvodstvennoy rabote Khanty-Mansiyskogo uchilishcha mekhanizatsii sel'skogo khozyaystva No.8 Tyumenskoy oblasti (for Nikitin).
(Forest workers—Education and training)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SOV/124-57-9-10907

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 9, p 153 (USSR)

AUTHOR: Sedykh, Ye. K.

TITLE: Contribution to the Calculation of Pile Foundations (K voprosu rascheta svaynykh osnovaniy)

PERIODICAL: Sb. stud. nauchn. rabot. Belorussk. politekhn. in-ta, 1957, Nr 3, p 71

ABSTRACT: Bibliographic entry

Card 1/1

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, Ye.K. (g.Volzhskiy)

Plotting the curve of reactive pressures under a rigid foundation on the basis of a mixed elastoplastic problem. Osn., fund. i mekh. grun. 3 no.4:13-15 '61. (MIRA 14:8)
(Foundations) (Earth pressure)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, Ye.K., inzh.

Manufacture and assembly of the precast reinforced-concrete columns of the main building of the Volga Thermal Electric Plant. Energ. stroi. no.26:8-11 '61. (MIRA 15:7)

1. Upravleniye Volgogradgidrostroya.
(Electric power plants) (Columns, Concrete)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, Ye.K. [Siadykh, IA.K.]

Determining the boundary between the elastic and plastic zones in the sandy base of a rigid foundation. Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.3:118-123 '63. (MIRA 16:10)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

S/745/62/000/004/005/007
D201/D308

13.2920

AUTHORS: Mamonov, Ye. I. and Sedykh, Ye. V.

TITLE: Problems of reliability of electronic automatic computers. Some of the theoretical and practical trends of solution

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Vychislitel'naya tekhnika, no. 4, 1962, 65-78

TEXT: The authors consider the following problems: 1. Analysis or determination of the reliability from the available information on reliability of separate elements constituting a system or a sub-system. 2. The synthesis or design of a system for a required reliability and other performance criteria (e.g. economy). 3. Statistical determination of the reliability of the most common components (valves, resistors, capacitors) from given experimental data. By reviewing the existing literature the authors conclude that the most promising method of improving the reliability of automatic computers is the use of logic and electric control within the computer. With new computer elements and new physical media

Card 1/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

Problems of reliability ... S/745/62/000/004/005/007
D201/D308

which have practically unlimited life-time and permit micro-miniaturization, it seems possible that biological principles could be successfully used for computer design. Further trends in obtaining the required reliability seem to be the development of self-adapting systems, based on biological systems, e.g. the development of bionics. There are 3 figures and 21 references: 18 Soviet-bloc and 3 non-Soviet-bloc.

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, YE. V.

95

S/089/62/013/006/019/027
B102/B186

AUTHORS: G. T. and M. R.

TITLE: Nauchnaya konferentsiya Moskovskogo inzhenerno-fizicheskogo instituta (Scientific Conference of the Moscow Engineering Physics Institute) 1962

PERIODICAL: Atomnaya energiya, v. 13, no. 6, 1962, 603 - 606

TEXT: The annual conference took place in May 1962 with more than 400 delegates participating. A review is given of these lectures that are assumed to be of interest for the readers of Atomnaya energiya. They are following: A. I. Leypunskiy, future of fast reactors; A. A. Vasil'yev, design of accelerators for superhigh energies; I. Ya. Pomeranchuk, analyticity, unitarity, and asymptotic behavior of strong interactions at high energies; A. B. Migdal, phenomenological theory for the many-body problem; Yu. D. Fiveyskiy, deceleration of medium-energy antiprotons in matter; Yu. M. Kogan, Ya. A. Iosilevskiy, theory of the Mössbauer effect; M. I. Ryazanov, theory of ionization losses in nonhomogeneous medium; Yu. B. Ivanov, A. A. Rukhadze, h-f conductivity of subcritical plasma;

Card 1/4

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18

Nauchnaya konferentsiya...

S/089/62/013/006/019/027
B102/B186

B. V. Pletnev, F. M. Spevakov, A. M. Stolov, supply of synchrotron electromagnets; G. L. Saksaganskiy, V. Ya. Moiseyev, flanged separable heat-resistant junctions of great diameter; B. G. Klimov, A. S. Vayradyan, V. F. Yevseyev, I. B. Mikhaylov, I. N. Afonskiy, B. N. Belov, Ye. I. Mamonov, B. I. Strelkov, Ye. V. Sedykh, B. A. Shchukin, optical principles in computer engineering technique; R. S. Nakhmanson, N. M. Roymin, M. E. Mostovlyanskiy, Yu. A. Volkov, electronics; Ye. L. Sulim, transmitter for electromagnetic flow-meter, V. M. Ovsyankin, V. M. Plushnikov, application of varicondes for transforming d.c. into a.c.

Card 4/4

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

L 24262-66 EWT(1)/EWA(h) TG

ACC NR: AR6005248 SOURCE CODE: UR/0058/65/000/009/H012/H012

44
B

AUTHOR: Yevseyev, V. F.; Sedykh, Ye. V.

TITLE: Method of estimating reliability, taking into account the physics of the operation of electronic circuits

25

SOURCE: Ref. zh. Fizika, Abs. 9Zh90

REF SOURCE: Sb. Nekotoryye vopr. nadezhnosti elementov i sistem avtomatiki. M., 1964, 29-39

TOPIC TAGS: circuit reliability, electronic circuit, radio equipment, random process, statistics, computer component, computer reliability, flip flop circuit

TRANSLATION: A method is described for calculating the parameters of reliability of electronic circuits, with account of gradual failures, based on the analysis of functional relations describing the electronic circuit operation. The problem formulation is based on the assumption that the parameters of radio circuit components are realizations of certain nonstationary random processes, and the statistical operating conditions of the circuits are known. The solution of the system of inequalities, which determine the parameters of reliability, is made by the Monte Carlo method with an electronic digital computer in accordance with an algorithm which is described in detail. In the appendix is given the program for calculating the reliability of the circuit of a flipflop which controls the potential input to a coincidence circuit. L. Subbotin.

SUB CODE: 09

Card 1/1 dda

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, Yu.

Photographic exhibition in the Ukraine. Okhr.truda i sots.strakh. 5 no.3:24 Mr '62. (MIRA 15:4)

1. Tekhnicheskiy inspektor Ukrainskogo respublikanskogo soveta professional'nykh soyuzov.
(Ukraine--Industrial hygiene)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

IPPOLITOV, A. (Leningrad); SEDYKH, Yu. (Leningrad)

Industrial Hygiene Day. Prof.-tekh. obr. 21 no.7:11 Jl '64.
(MIRA 17:11)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, Yu.N.

Coking coal deposit in Shmidt Mountain and Nadezhda Mountain. Inform. biul. NIIGA no.19:30-41 '60. (MIRA 13:12)
(Noril'sk region--Coal geology)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

NESTEROVSKIY, V.S.; SEDYKH, Yu.N.; CHEREPANOV, V.A.

Mechanism of the formation of the Talnakh ore-bearing intrusion. Uch. zap. NIIGA. Reg. geol. no.2:188-192 '64.

(MIRA 19:1)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

GOR, Yu.G.; DYUZHIKOVA, Ye.Ye.; LOBANOVA, O.V.; SEDYKH, Yu.N.

Some data on the biostratigraphy of Upper Paleozoic coal-bearing sediments in the Talnakh deposit. Uch. zap. NIIGA. Reg. geol. no.4:116-122 '64. (MIRA 18:12)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKH, Yu.V., otv. red.; PETUKHOV, P.I., red.; REZNIKOV, F.I., prof., red.; STARTSEV, A.V., red.; SHESHIN, S.S., kand. sel'khoz.nauk, red.; SOKOLOVA, S.I., tekhn. red.

[Costs, business accounting and profitableness on collective farms] Sebestoimost', khozraschet i rentabel'nost' v kolkhozakh. Vologda, Vologodskoe knizhnoe izd-vo, 1963. 102 p. (MIRA 16:12)

1. Zaveduyushchiy sel'skokhozyaystvennym otdelom oblastnogo komiteta Kommunisticheskoy partii Sovetskogo Soyuza, Cherepovetskoye proizvodstvennoye upravleniye (for Sedykh).
(Collective farms--Finance)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKIN, F. V.

USSR/ Engineering—Machining

Card 1/1 ; Pub. 128—7/33

Authors : Sedykin, F. V., Engineer

Title : The effect of cutting systems and the geometrical parameters of hard-alloy facing cutters on durability in forced milling

Periodical : Vest. mash. 34/8, 28-31, Aug 1954

Abstract : An account is given of experiments in milling with a more rapid feed. The tool used was a facing cutter; D = 150 mm; number of teeth = 4. The tool was provided with a hard-steel edge. It was found that the more rapid feed is feasible if the feed is not too deep (up to 5 mm). Symmetrical cutting assures the greatest durability for the milling equipment. Graphs; drawings; table.

Institution : .....

Submitted : .....

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

ACC NR: AP7001194 (A) SOURCE CODE: UR/0407/65/000/05-/0045/0050

AUTHOR: Sedykin, F. V. (Tula); Dmitriyev, A. B. (Tula)

ORG: none

TITLE: Effect of electrochemical machining on the fatigue strength of metal

SOURCE: Elektronnaya obrabotka materialov, no. 5-6, 1965, 45-50

TOPIC TAGS: METAL MACHINING low carbon steel, abrasive ground steel, electrochemistry, METAL SURFACE, ~~steel~~ fatigue strength, electrochemical machining effect/St.3 steel

ABSTRACT: Specimens of annealed low-carbon St.3 were electrochemically machined in a 15% NaCl aqueous solution or ground and tested for fatigue strength under a stress of 15, 18.5 or 20 kg/mm^2. The ground specimens sustained 51300, 78130 and 493766 cycles under respective stresses of 20, 18.5, and 15 kg/mm^2. The corresponding figures for electrochemically machined specimens were 72000, 100500, and 621000 cycles, i.e., 28, 22, and 21.5% higher because electrochemical machining leaves no plastically deformed surface layer, produces a better surface finish, and reduces the number of the centers of origin of microcracks. Electrochemical machining also removes the work-hardened surface layer and residual stresses, which increases the cyclic toughness of the metal and promote extinction of resonance vibrations. Orig. art. has: 8 figures, and 1 table.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 005/

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Bulk Done

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKIN, P. V.

Electrochemical working of metals and alloys. Mashinostroitel' no.3:14-16 Mr '65. (MIRA 18:4)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

GEKHTMAN, M.Ya., dotsent; SEDYKIN, K.G.

Improving public health planning. Sov.zdrav. 16 no.11:33-37 N '57. (MIRA 11:1)

1. Iz kafedry organizatsii zdravookhraneniya i istorii meditsiny Kishinevskogo meditsinskogo instituta (zav. - dotsent M.Ya.Gekhtman)

(PUBLIC HEALTH
in Russia, problems in improvement of planning (Rus))

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKIN, K.G.; KANT, V.I.; TRYATITSYN, P.M.

Results of the efforts of a Communist working collective. Zdravookhraneniye 6 no.2:3-5 Mr-Ap'63. (MIRA 16:10)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKIN, K.G.

Brief news. Zdravookhranenie 6 no.3:63-64 My-Je'63 (MIRA 16:11)

1.Predsedatel' respublikanskogo komiteta professional'nogo soyuza meditsinskikh rabotnikov Moldavskoy SSR.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKINA, Ye.I.

Treatment of rheumatic fever with butadione. Zdravookhranenie 2 no.4:28-32 Jl-Ag '59. (MIRA 14:6)

1. Iz 3-yey gorodskoy bol'nitsy g. Kishineva (glavnyy vrach L.A. Torchinskaya).
(RHEUMATIC FEVER) (PYRAZOLIDINEDIONE)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYKINA, Ye.I.; TERESHCHENKO, P.V.

Agranulocytosis of medicinal origin. Zdravookhranenie 4 no.5: 55-57 S-O '61. (MIRA 14:11)

1. Iz gematologicheskogo otdeleniya Respublikanskoy stantsii perelivaniya krovi (direktor G.A.Dubovik).
(AGRANULOCYTOSIS)

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L 42051-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6011231 (A) SOURCE CODE: UR/0413/66/000/006/0073/0073

INVENTOR: Klauzner, G. M.; Sedymova, L. P.; Murasev, N. V.

ORG: none

TITLE: Method of hardening "Arzamit" paste. Class 39, No. 179916

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 73

TOPIC TAGS: phenolformaldehyde, resin, nitric acid/ Arzamit paste

ABSTRACT: An Author Certificate has been issued for a method of hardening "Arzamit" paste with a base of modified phenolformaldehyde resins by aging them at room temperature and followed by step-by-step heat treatment. To obtain a material resistant to the effect of oxidation agents such as 60% nitric acid, the heat treatment is carried out first at about 100C, then about 140C, and finally about 170C over a period of 1—3 hr. [Translation] [NT]

SUB CODE: 11/ SUBM DATE: 19Jan65/

Card 1/1 af UDC: 678.632.028:66.046.4

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

S/006/60/000/06/22/025
B007/B005

AUTHOR: Sedyshev, M. Ye.

TITLE: Comments on the Article by V. S. Vandalov "Permissible Length of Theodolite Traverses in Systems With Nodal Points"

PERIODICAL: Geodeziya i kartografiya, 1960, No. 6, pp. 72 - 73

TEXT: The author of the present comments points out that V. S. Vandalov correctly makes the following statement in the present periodical, 1958, No. 6: Too little attention is paid in prescriptions and manuals on planning to the previous calculation of the accuracy of a system of theodolite traverses with nodal points. V. S. Vandalov tries to close this gap but makes some errors which are studied here in detail.

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MAKSIMOV, V. A.; KOSTYLEV, A. D.; GURKOV, K. S.; VOLOD'KO, K. P.; YUSHCHENKO, A. I.; SEDYSHEV, V. F.; KOLESNIKOV, A. T. YAGODIN, A. I.; PONOMARENKO, Yu. F.; FOLKOV, A. N.; BELAK, N. A.

BPM-1 vibrating drill and loader. Gor. zhur. no.10:53-56 O '62. (MIRA 15:10)

(Mining machinery)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

KOSTYLEV, A.D., kand.tekhn.nauk; GURKOV, K.S., kand.tekhn.nauk; PARINSKIY, Yu.P., inzh.; TISHKOV, A.Ya., inzh.; MAKSIMOV, V.A.; SEDYSHEV, V.F.; KOLESNIKOV, A.T.

Continuous operation working element of a vibration loader. Ugol' 39 no.12:40-43 D '64. (MIRA 18:2)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR (for Kostylev, Gurkov, Farinskiy, Tishkov). 2. Aleksandrovskiy mashinostroitel'nyy zavod (for Maksimov, Sedyshev, Kolesnikov).

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYSHEVA, N.

Fifth Congress of the Trade Union of Food Industry Workers. Mias.ind. SSSR 33 no.3:56 '62. (MIRA 15:7)
(Trade unions) (Food industry--Employees)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDYUKEVICH, V.

SENDEROVICH, B., inzh.; SEDYUKEVICH, V., inzh.

Efficient method for binding steel cables. Stroitel' no.12:11 D '57. (MIRA 11:2)
(Cables)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDZIERSKI, Krescencjusz, inz.

The application of epoxy resin in the production of foundry patterns in the Pomeranian Machinery Construction Plants at Bydgoszcz. Przegl odlew 11 no.10:308-310 '61.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDZIKOWSKI, T.

4429 628.2/.3.001 : 550.8

Sędzikowski T. On the Ventilation of Washed Filters.

„O wietrzeniu złoża spłukiwanego". Gaz, Woda i Technika Sanitarna. No. 8, 1955, pp. 262—265, 3 figs.

This paper represents an attempt to determine data concerning the design of the sizes of apertures ventilating a washed filter, and to determine both the admissible losses of air pressure originating on the ventilating apertures, and the drainage of the filter during the flow of air. The following formulae are derived: 1) correlation between, on the one hand, the air pressure losses on air admission ports and the drainage (h_w), and on the other, the height H of the filter and temperature difference Δt; 2) correlation between the size of air admission ports, as a percentage of the surface of the filter, and the height H of the filter and temperature difference Δt. It is shown that in filters of a height of 2—3 m, commonly used in practice, and at a temperature difference of 2°C., the size of ventilation openings should not exceed 0.6 to 0.90 per cent of the surface of the filter; this result is in agreement with Imhoff's investigations.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDZIKOWSKI, Tadeusz, mgr. inz.

Postulates of designing offices in the field of sewage purification installations with reference to scientific research institutions. Gosp wodna 22 no.7:296-299 Jl '62.

1. Biuro Projektow Budownictwa Komunalnego, Lodz.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDZIKOWSKI, Tadeusz

Determination of the initial value of the biochemical oxygen demand of rivers heavily contaminated by sewages. Gaz woda termo sanit 37 no.7:206-209 Jl '62.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDZIKOWSKI, Tadeusz

Contribution to the problem of dimensioning biologic de-
posits. Gaz woda techn sanit 38 no.1:22-25 Ja '64.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDZIMIR, ANNA

B-9

POLAND/Physical Chemistry - Kinetics, Combustion, Explosions, Topochemistry, Catalysis.

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 20696

Author : Adam Bielanski, Anna Sedzimir.

Inst : Chin Inorg Chem, Acad. Mining & Metallurgy, Krakow

Title : Some Differences and Chemical Properties of Intermediate Products of Aluminum Hydroxide Dehydration in $-Al_2O_3$.

Orig Pub : Roczn. chem., 1956, 30, 995-998

Abstract : The dissolution rate in NaOH and HCl of Al_2O_3 samples prepared by calcining $Al(OH)_3$ at temperatures from 500 to 1300° in the duration from 15 minutes to 16 hours was studied. The curve of the dependence of the dissolution rate in NaOH on the dissolution rate in HCl is expressed by 3 segments of straight lines with different inclination corresponding to samples identified roentgenographically as δ $-Al_2O_3$ (segment 1), θ - and $\varkappa$ $-Al_2O_3$ (segment 2) and

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-998, 20696

$-Al_2O_3$ (segment 3).

Assuming that points located on the same straight line segment correspond to samples differing only by the magnitude of specific surface but not by chemical properties, the authors arrive at the conclusion that some chemical differences should exist between the form δ and the forms θ and $\varkappa$, as well as between the latter and the form $\varkappa$.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

L 00923-67 EWT(J) IJP

ACC NR: AP6035467 SOURCE CODE: PO/0099/66/040/004/0711/0712 34 B

AUTHOR: Deren, Jerzy, Grzybowska Barbara and Sedzimir, Anna of the Department of Inorganic Chemistry, School of Mining and Metallurgy (Katedra Chemii Nieorganicznej Akademii Gorniczo-Hutniczej), Krakow; Institute of Physical Chemistry of Surface Phenomena, Polish Academy of Sciences (Zaklad Fizykochemii Zjawisk Powierzchniowych Polskiej Akademii Nauk), Krakow.

"Catalytic Properties of Alumina Varieties"

Warsaw, Roczniki Chemii, Vol 40, No 4, 1966, pp 711-712.

Abstract: In the course of investigating the catalytic properties of alumina it was found that α -Al_2O_3 attained at 1,200°C behaves differently from the grades prepared at 500, 900 and 1,000°C. The former sample catalyzes isopropanol dehydrogenation to acetone, while the latter catalyse the dehydration reaction. (Original article in English.) Orig. art. has: 1 table.

[JPRS: 36,862]

TOPIC TAGS: alumina, dehydration, dehydrogenation

SUBCCODE: 07 / SUBM DATE: 20 Dec 65 / ORIG REF: 001 / OTH REF: 004
SOV REF: 002

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001447620019-7

SEDZIMIR, J.

6

Titration of phosphoric acid and barium hydroxide. J. Kamecki, Z. Lobodzinska, and J. Sedzimir. *Bull. intern. acad. polon. sci., Classe sci. math. nat., Ser. A* 1951, 345–77 (Pub. 1952)(in English).—The Poggendorff compensation method with a standard calomel electrode and Sb electrode were used for potentiometric titrations. Two series of titrations, one with 0.05*N* and the other with 0.015*N* H_3PO_4, were made with $Ba(OH)_2$ soln. Two inflection points occurred on the potentiometric curve corresponding to the formation of the monobasic and tribasic salts. In a more dil. soln. a characteristic max. appeared when the second equiv. of base was added. For conductometric measurements, 0.0045 and 0.015–0.020*N* H_3PO_4 solns. were titrated with $Ba(OH)_2$ soln. Three reflection points appeared though not sharp. Glenn Dooley

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Poland CA: 47:12109

SEDZIMIR, JERZY

with JULIAN KAMECKI

Acad. Mining Met., Cracow, Poland

"Determination of both copper and iron in solutions."

Roczniki Chem. 26, 288-92 (1952) (English summary).

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