L 3773-66
ACCESSION NR: AT5007950

alternate deflecting systems--in the form of a waveguide or band line operating in the energy recuperation regime, or in the form of a system of many-cavity or single-cavity volume resonators. As shown by the computations, it is most expedient to make the deflecting system in the form of a set of independently phased resonators of the quasitoroidal type, which operate in the fundamental mode of the electric oscillations, with the use of high-frequency electrical field for deflecting the particles. The report discusses the resonators employed in the deflecting system and their arrangement in the system. The chosen resonator form permits one to obtain a specific homogeneity of the deflecting field in the cross section of a beam by selection of suitable dimensions. The report discusses the characteristics of the developed system. The linear dimensions of the apertures in the resonators for channeling the beam are commensurable with the operating wavelength, which fact leads to the radiation of electromagnetic energy and to the appearance of a strong bond among the resonators. In order to eliminate this phenomenon and preserve complete transparency of the channel for the beam of deflected particles among the resonators, the waveguide segments are provided with limiting wavelength much lower than the operating one, and feedback is introduced in the magnetic field. As shown by investigations, the bond among the resonators is almost completely eliminated. Considerable attention was paid to the electric transparency of the resona-

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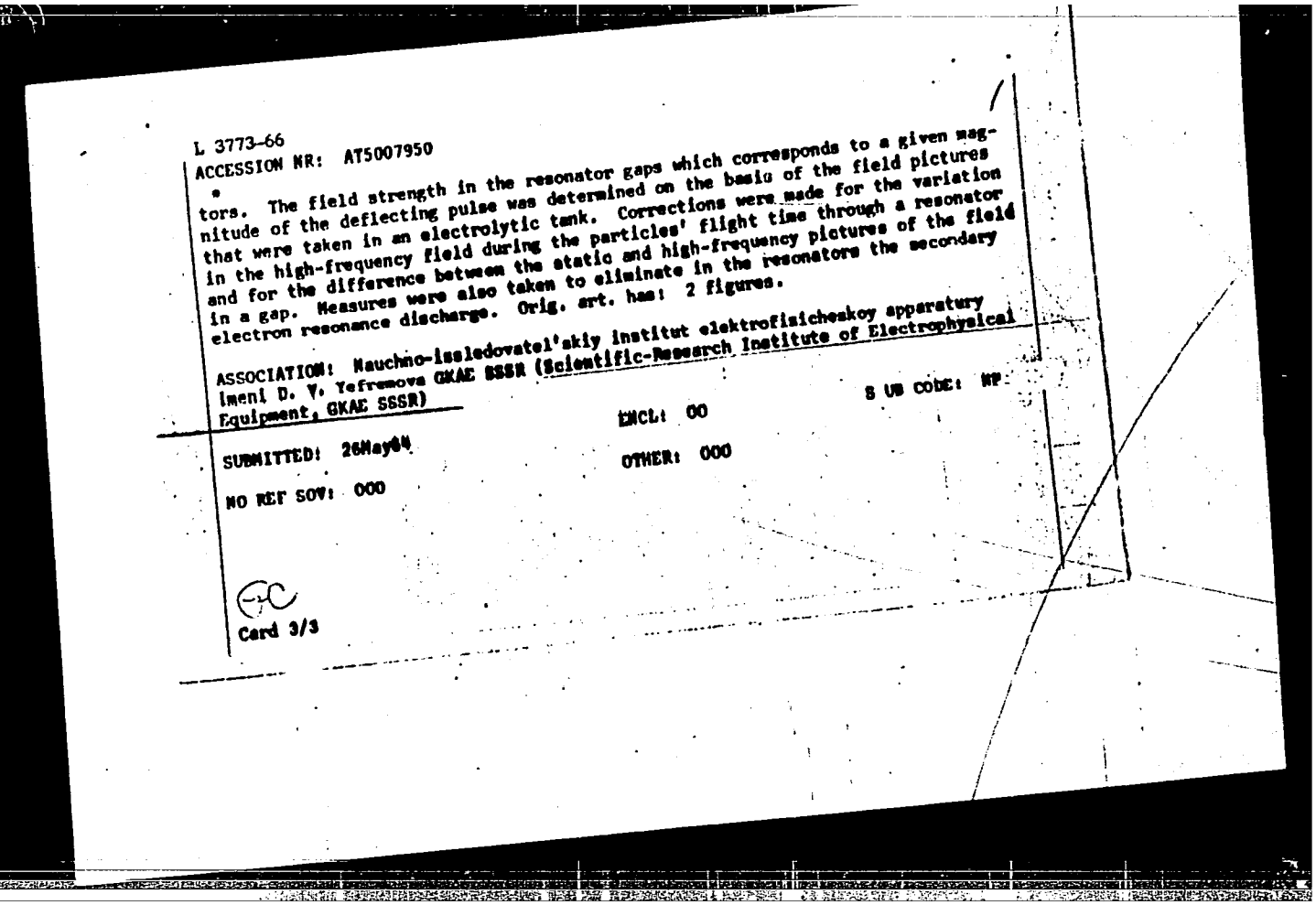

L 3773-66
ACCESSION NR: AT5007950

tors. The field strength in the resonator gaps which corresponds to a given magnitude of the deflecting pulse was determined on the basis of the field pictures that were taken in an electrolytic tank. Corrections were made for the variation in the high-frequency field during the particles' flight time through a resonator and for the difference between the static and high-frequency pictures of the field in a gap. Measures were also taken to eliminate in the resonators the secondary electron resonance discharge. Orig. art. has: 2 figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury imeni D. V. Yefremova GKAE SSSR (Scientific-Research Institute of Electrophysical Equipment, GKAE SSSR)

SUBMITTED: 26May64 ENCL: 00 SUB CODE: NP

NO REF SOV: 000 OTHER: 000

Card 3/3

FINKEL'SHTEYN, I.N.

Moving incandescent lights as a source of light in growing plants under artificial light. Trudy Inst. fiziol. rast. 8 no.1:175-183 '53. (MLRA 6:12)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva Akademii nauk SSSR. (Plants, Effect of light on)

YEDVABNIK, Yu.A.; GEL'FAND, Ya.Yo.; FINKEL'SHTEYN, I.V.

Automating the milling process in 3 x 14m separator cement mill at the Belgorod Cement Plant. Trudy IUzhgiprotsementa no.6:12-24 '64. (MIRA 17:12)

1. Gosudarstvennyy vsesoyuznyy institut po proyektirovaniyu i nauchno-issledovatel'skim rabotam Yuzhgiprotsement (for Yedvabnik). 2. TSentral'noye proyektno-konstruktorskoye byuro tresta Sevzapmontazhavtomatika (for Gel'fand, Finkel'shteyn).

GUR'YEV, I.A.; STRONGIN, G.M.; FINKEL'SHTEYN, Kh.A.

Cryoscopic determination of the gamma-isomer content of hexachlorocyclohexane in a highly concentrated hexachloran. Trudy po khim.i khim.tekh. no.1:65-68 '63. (MIRA 17:12)

STRONGIN, G.M.; KULIKOVA, M.N.; FINKEL'SHTEYN, Kh.A.

Production of highly concentrated hexachloran from a scaly product. Trudy po khim.i khim.tekh. no.1:69-74 '63.

(MIRA 17:12)

STRONGIN, G.M.; KULIKOVA, M.N.; FINKEL'SHTEYN, Sh.Z.

Cyclic method of preparation of highly concentrated hexachloran. Report 4. Trudy po khim.i khim.tekh. no.1:97-101 '64.

Cyclic method of preparation of highly concentrated hexachloran. Report 5: Effect of heptachlorocyclohexanes on the quality of highly concentrated hexachloran. Ibid.:102-104

(MIRA 18:12)

1. Submitted May 27, 1963.

FINKEL'SHTEYN, L., inzh.

Double trains as a means of increasing freight capacity. Zhel. dor.transp. 36 no.6:25-27 Je '55. (MIRA 12:4)

1. Nachal'nik tekhnicheskogo otdela Vostochno-Sibirskoy dorogi.
(Railroads--Freight)

FINKEL'SHTEYN, L.

"Obvious? No, not investigated yet..." V.Smilga. Reviewed by L. Finkel'shtein. Znan.-sila 37 no.10:46-47 O '62. (MIRA 16:1)

(Physics—Philosophy) (Smilga, V.)

FINKEL'SHTEYN, L.

Microns of tolerance and "microbes" of defective products.
Znan.sila 35 no.1:12-15 Ja '60. (MIRA 13:5)
(Production control)

Finkel'shteyn, L. A.

USSR/Electricity - Oscillator

Card 1/1 : Pub. 133 - 4/20

Authors : Riskin, A. A., and Finkel'shteyn, L. A.

Title : Wide-band frequency oscillator

Periodical : Vest. svyazi 10, 7-8, Oct 54

Abstract : A description of the operation and structure of a wide-band frequency oscillator is given, together with formulas for calculating frequencies and rectifier circuits. Diagrams.

Institution : ...

Submitted : ...

9(1), 6(4) SOV/112-59-2-3784

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 2, p 224 (USSR)

AUTHOR: Finkel'shteyn, L. A.

TITLE: Calculating a T-Network for the Antenna Circuit of a Wide-Band Transmitter (K raschetu T-skhemy antennogo kontura shiroko-diapazonnykh peredatchikov)

PERIODICAL: Sb. tr. Leningr. elektrotekhn. in-ta svyazi, 1957, Nr 3(33), pp 35-47

ABSTRACT: Suitability of antenna circuits for a wide-band transmitter with varying load resistance (from fractions of one ohm to several kohms) is analyzed. Advantages of a T-network using the components of conventional series and parallel networks are shown. The T-network parameters may be computed after the antenna-circuit parameters have been determined for the conditions imposed by application of the T-network. Methods of calculating the T-network parameters, energy relations, and of allowing for reactive-component losses

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SOV/112-59-2-3784

Calculating a T-Network for the Antenna Circuit of a Wide-Band Transmitter

are presented. An example is submitted that illustrates the procedure of computing the T-network components and shows how to use the graphs. Bibliography: 1 item.

V.M.L.

Card 2/2

PHASE I BOOK EXPLOITATION SOV/4681

Finkel'shteyn, Lev Aleksandrovich, and Gersha Khaimovich Girshman

Antennyye kontury shirokodiapazonnykh korotkovolnovykh peredatchikov; raschet i konstruirivaniye (Antenna Circuits of Wide-Band Shortwave Transmitters; Design and Construction) Moscow, Gosenergoizdat, 1960. 263 p. Errata slip inserted. 10,000 copies printed.

Eds.: N.S. Beschastnov, and N.Yu. Polyak; Tech. Ed.: O.S. Zhitnikova.

PURPOSE: The book is intended for technical personnel concerned with problems of calculation and design of radio transmitting equipment and for students of radio-engineering schools of higher education.

COVERAGE: The book discusses the calculation and design of wide-band antenna circuits for low- and medium-power radio transmitters which operate with a load that varies within considerably wide limits. Methods of designing circuits and their components, general problems in the basic structure of antenna components, and some characteristic structures used in practice are also included. Chapters I, II, III, IV, VIII, and IX were compiled by L.A. Finkel'shteyn, and

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chapters V, VI, VII, and X by G. Kh. Girshman. The authors thank B.V. Voytsekhovich, R.I. Georgenberg, N.S. Beschastnov, and N.Yu. Polyak for their help. A number of original diagrams and structural designs presented by B.S. Tsvetkov, B.A. Shtynkin, and N.K. Mukhin have been used. There are 34 references: 30 Soviet, 2 English, 1 French, and 1 German.

TABLE OF CONTENTS:

L 42153-66

ACC NR: AR6013879 SOURCE CODE: UR/0274/65/000/011/B052/B052

44
B

AUTHOR: Finkel'shteyn, L. A.

TITLE: Several questions for the development of a frequency multiplier for heterodynes of decimetric wave band receivers

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 11B403

REF SOURCE: Tr. Nauchno-tekhn. konferentsii Leningr. elektrotekhn. in-ta svyazi, vyp. 1, 1964, 82-89

TOPIC TAGS: radio receiver, receiver characteristic, decimeter wave, electronic circuit, circuit theory

ABSTRACT: The basic technical characteristics of resonance frequency multipliers for heterodynes of the decimetric wave band were investigated. Questions of multiplier circuit construction and the selection of the circuit parameters were also studied. Bibliography of 3 citations. P. U. [Translation of abstract]

SUB CODE: 09, 17

Card 1/1 UDC: 621.396.622.3

FINGER, G.G.; MOGILEVSKIY, Ye.M.; BAKSHEYEV, I.P.; FINKEL'SHTEYN, L.B.

Determining zinc xanthates in freshly formed viscose fibers.
Khim.volok.no.5:48-49 '64. (MIRA 17:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

SOV/126-7-6-24/24

AUTHORS: Nemnonov, S.A. and Finkel'shteyn, L.D.

TITLE: On the Change of the Debye Temperature During Ordering of the Alloy Fe_3Al

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 7, Nr 6, pp 944-945 (USSR)

ABSTRACT: Iveronova et al. (Ref 5) have found that the Debye temperature in the alloy Ni_3Fe is lower in the ordered state than in the disordered. In the present work the Debye temperature of the alloy Fe_3Al in the ordered and disordered states was measured. The measurement was carried out by an X-ray method described by Il'ina (Ref 2), immediately after pouring liquid nitrogen over the specimen. The relative intensities of the lines (220), (321), (411) and (510) were determined. The ordered state of the Fe_3Al alloy was obtained by annealing Fe_3Al powder at 370°C for 23 hours. The disordered state was attained by cold deformation: filing and grinding the powder in a mortar. No signs of super structure lines are evident in X-ray pictures of specimens of the deformed alloy. As a result of the investigation, it was found that the Debye temperature of the Fe_3Al alloy is lower in the

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On the Change of the Debye Temperature During Ordering of the Alloy Fe_3Al

ordered than in the disordered state (see table, p 944, and Fig 1). Other properties of the interatomic forces also point to a lower bond strength in the ordered than in the disordered state. According to Il'ina (Ref 4), the Debye temperature of pure metals is the same in the annealed as in the deformed state. From this it can be concluded that deformation alone does not bring about a redistribution of the alloy element, but leads to a change in Debye temperature. Hence the increase of the Debye temperature of the Fe_3Al alloy in the deformed state, as compared with the annealed one, can be ascribed to the action of disordering. There are 1 table, 1 figure and 5 references, 4 of which are Soviet and 1 English.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Metal Physics, Ac.Sc., USSR)

SUBMITTED: May 12, 1958

S/126/60/009/02/014/033
E111/E335

AUTHORS: Nemnonov, S.A., Finkel'shteyn, L.D. and Kolobova, K.M.

TITLE: X-ray Diffraction and X-ray Spectroscopic Investigation of Interatomic Bonding Forces in Iron-aluminium Alloys

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 2, pp 243 - 247 (USSR)

ABSTRACT: Two of the authors (Refs 3,4) have studied iron-aluminium alloys (9-75 at.% Al) by X-ray spectroscopic methods, They concluded that in the interaction of iron and aluminium atoms iron is electronegative with respect to aluminium. Further information on atomic interaction has been obtained by neutron-diffraction measurements of atomic magnetic moments (Ref 5). According to other works (Ref 6) in alloys with less than 25 at.% Al a closest order of the Fe_3Al type exists. The concentration redistribution of aluminium would appear to be the physical nature of the K-state in the given alloys. The Debye temperature and associated values are sensitive to the presence of the K-state and the authors therefore studied

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S/126/60/009/02/014/033
E111/E335

X-ray Diffraction and X-ray Spectroscopic Investigation of Interatomic Bonding Forces in Iron-aluminium Alloys

their variations in iron-aluminium alloys (2, 4, 10, 17, 25 and 50 at.% Al), previously homogenized at 800 °C and annealed at temperatures under 550 °C (heat treatment details and results are tabulated). Published (Ref 8) methods were used. A parallel study was also made of the ratio of the amplitudes of fluctuation of the coefficient of absorption of the fine structure of the K-region of iron absorption (Figure 1 shows the general form of K-region iron-absorption). Figure 2 shows the ratio and the Debye temperature as functions of aluminium content (0-25 at.% Al), while in Figure 3 K-region characteristics are similarly plotted (0-50 at.% Al). In work by two of the authors (Nemnonov and Kolobova) being published the sensitivity was noted of one of these characteristics, the energy interval between points corresponding to 3/4 and 1/4 of the height of the initial absorption range, to temperature (thermal oscillation). The reduction in its value towards 17 at.% Al in Figure 3 therefore confirms the indications of Figure 2 of

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S/126/60/009/02/014/033
E111/E335

X-ray Diffraction and X-ray Spectroscopic Investigation of Interatomic Bonding Forces in Iron-aluminium Alloys

increasing strength of interatomic bonds in iron-aluminium alloys.
There are 3 figures, 1 table and 12 references, 9 of which are Soviet, 2 English and 1 German.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Physics of Metals of the Ac.Sc., USSR)

SUBMITTED: June.12, 1959

Card 3/3

5.2200 (B)

30815
S/126/60/009/04/010/033
E111/E435

AUTHORS: Nemnonov, S.A. and Finkel'shteyn, L.D.

TITLE: Nature of the Interaction of Atoms in the Hydrides of Certain Transition Metals

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 4, pp 530-534 (USSR)

ABSTRACT: The authors point out that the nature of the interaction between atoms in transition-metal hydrides and the state of the hydrogen in them are still debatable. They examine the different published views on this (Ref 1 to 6) and tabulate calculated nearest distances between titanium atoms in metallic titanium, titanium nitride, carbide and the hydrides, $TiH_{0.95}$ and $TiH_{1.97}$. Their experimental work described in the present article consisted in the X-ray study of vanadium carbide. They studied the K-end of vanadium absorption in pure vanadium and vanadium hydride with 45 atomic % hydrogen (figure). The latter was supplied by I.I.Matveyenko of the Institut khimii UFAN SSSR (Chemistry Institute of UFAN SSSR). The analyser was a quartz crystal with a (1340) reflecting surface (d_1 = 1173.98 x E) and

Card 1/3

4

Nature of the Interaction of Atoms in the Hydrides of Certain Transition Metals

440 mm radius of curvature. The authors discuss the weakening (for the vanadium hydride) and the reported (Ref 7) disappearance for titanium and zirconium hydrides of the long-wave absorption lines in the K-spectra of the corresponding metals. In the β-hydrides the bond between the metal and hydrogen is ionic-covalent and unlocalized. In the α-hydrides magnetic resonance suggests a different bonding, perhaps of the metallic type (Ref 8). The difference in the nature of the atomic interaction in saturated hydrides of transition metals of the start and end of the long periods is attributable primarily to the fact that the electromagnetic nature of transition elements generally increases towards the end of a period, approaching that for hydrogen; again, the stability and heat of formation of hydrides starting with the chromium group falls sharply (Ref 5). There are 1 figure, 1 table and 8 references, 4 of which are Soviet, 3 English and 1 German.

80215
S/126/60/009/04/010/033
E111/E435

Nature of the Interaction of Atoms in the Hydrides of Certain Transition Metals

ASSOCIATION: Institut fiziki metallov AN SSSR
(Institute of Physics of Metals AS USSR)

SUBMITTED: July 6, 1959

Card 3/3

S/126/60/010/001/027/027/XX
E032/E314

AUTHORS: Nemnonov, S.A., Sorokina, M.F. and ~~Finkelshteyn, L.D.~~

TITLE: Study of the K Absorption Edge in a Zinc-Aluminium Alloy with Small Zinc Concentration

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol. 10, No. 1, pp. 148 - 150

TEXT: The present authors have investigated the K edge of zinc and aluminium in the alloy Al + 1.7% Zn (0.7 at.%) which constituted a solid solution based on the face-centred aluminium lattice. The K edge of Zn was obtained in the first-order reflection from quartz. The figure shows the K absorption edge of Al in the above alloy (Curve 1), the K absorption edge of Zn in this alloy (Curve 2) and the K absorption edge of pure Zn (Curve 3). It was found that the K absorption edges of Al and Zn in this alloy are displaced towards lower energies relative to the K absorption edge for pure Zn. The fine structures of the K edge of Zn and Al, including the position of the first maximum are very similar.

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S/126/60/010/001/027/027/XX
E032/E314

Study of the K Absorption Edge in a Zinc-Aluminium Alloy with Small Zinc Concentration

The K edge of Zn in the alloy is displaced by about 0.8 eV from the position of the K edge in pure Zn. The fine structure obtained is summarised in the following table

	Extrema, eV				
	A	α	B	β	C
K edge of Al in the alloy Al + 1.7% Zn	6.0	9.0	13.7	27.6	38.2
K edge of Zn in the alloy Al + 1.7% Zn	6.2	8.8	13.9	28.0	40.2
K edge of Zn (metal)	10.1	16.2	18.8	24.0	38.4

where A, B, C are the positions of the first three maxima, respectively, and α and β are the positions of the

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S/126/60/010/001/027/027/XX
E032/E314

Study of the K Absorption Edge in a Zinc-Aluminium Alloy with Small Zinc Concentration

first three maxima, respectively, and α and β are the positions of the first two minima, respectively. The slope of the rapidly varying part of the absorption curve is roughly the same in the case of pure Zn and the Zn in the alloy but is very different (higher) for the Al.
There are 1 figure, 1 table and 2 references: 1 Soviet and 1 non-Soviet.

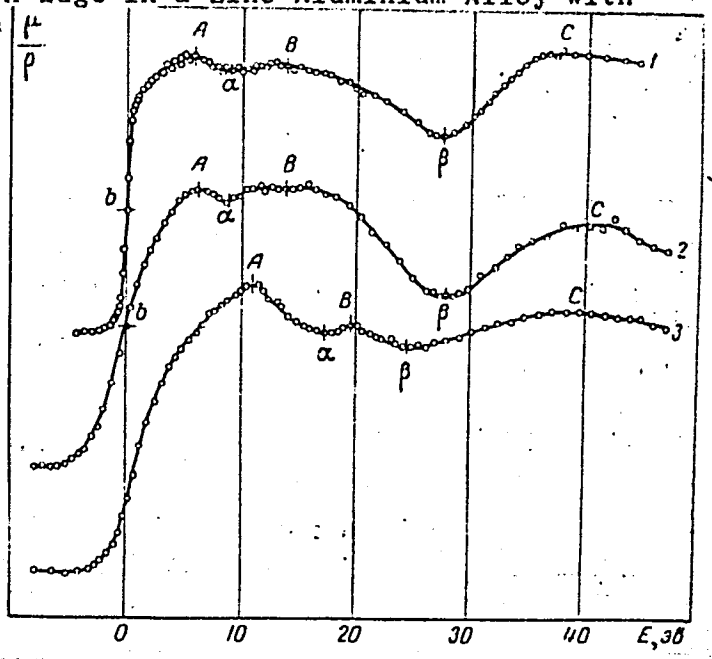
ASSOCIATION: Institut fiziki metallov AN SSSR
(Institute of Metal Physics of the AS USSR)

SUBMITTED: December 4, 1959

Card 3/4

S/126/60/010/001/027/027/XX
E032/E314

Study of the K Absorption Edge in a Zinc-Aluminium Alloy with Small Zinc Concentration



Card 4/4

26334
S/048/61/025/008/006/009
B104/B202

18.8100

AUTHORS: Nemnonov, S. A., Finkel'shteyn, L. D.

TITLE: K_{β_x} emission bands and K absorption edge of aluminum in some alloys with transition metals

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 8, 1961, 1007-1012

TEXT: The present paper was the subject of a lecture delivered at the 5th Conference on X-ray Spectroscopy at Khar'kov, January 30 to February 4, 1961. The K emission spectra and the absorption spectra of aluminum were taken by means of a quartz crystal (reflection from the $(10\bar{1}0)$ plane; $d_1 = 4.24$ Å). Linear dispersion in the part of the spectrum studied was 14 X-units·mm^{-1}. The K_{β_x} emission bands were excited at 10 ma, 3 kv, by a method described in previous papers by S. A. Nemnonov et al (Fizika metallov i metallovedeniye, 9, 243 (1960); Izv. AN SSSR, Ser. fiz., 24, no. 4, 455 (1960)). The vacuum was kept in a range of

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K_{β_x} emission bands and K absorption ...

$3 \cdot 10^{-6}$ - $3 \cdot 10^{-7}$ mm Hg. The absorption edge was recorded at 50 ma and 2.5 kv. In the first part of the paper the K_{β_x} absorption bands and the K absorption edge of pure aluminum are discussed. The authors discuss the distribution of electron p-states in the conduction band and state that the valence electrons of aluminum are distributed over two Brillouin zones, the first of which is completely, the second only partly filled. The band scheme shows a reduction of the state density on transition from the first into the second zone. This is in agreement with the distance of the two absorption maxima of 7 and 11 ev from the edge of the long-wave band. In the second part the authors present measurement results of the K_{β_x} emission bands of aluminum in alloys with transition metals. Fig. 3 shows some emission bands of alloys and compounds of Al with transition metals (Cr, Fe, and Ni). These diagrams show that the change of the emission bands on transition from higher intermetallic compounds to lower ones is identical in all three systems: The intensity of the short-wave part of the K_{β_x} band is reduced if the content of the transition metal increases. For alloys with maximum content of transition metals (Cr_2Al,

Fe_3Al, Ni_3Al) the bands become very narrow, almost symmetrical and, as compared to the K_{β_x} band of pure aluminum, are shifted to the side of lower energies. The table gives some data on the K_{β_x} bands of Al in the alloys studied. Fig. 4 shows three K_{β_x} bands of Al and Al-compounds. It is assumed that in compounds of Al with transition metals with a metallic bond, an interaction occurs between the atoms of the transition metals and of aluminum whose nature is similar to that of the covalent ionic bond between pure Al and oxygen in Al_2O_3. Furthermore, it is found that the polar covalent interaction between the atoms of the transition metals and Al is considerably smaller than in the ionic compound Al_2O_3. The change of the emission bands of Al alloys with transition metals in the direction to the $K\beta_1$ emission band of Al_2O_3 proves the presence of a polar-covalent interaction in the compounds investigated. A similar development is assumed to take place in the K absorption edge of Al in some compounds with transition metals. Fig. 5 shows the K absorption edges of five compounds, the K absorption edge of pure Al being given for comparison.

26334
S/048/61/025/008/008/009
B104/B202

K_{β_x} emission bands and K absorption ...

Only in Ni_2Al_3 a shift towards shorter wavelengths is observed. The authors further study the absorption spectrum of aluminum and of compounds with transition metals with consideration of higher concentrations. There are 5 figures, 1 table, and 8 references: 3 Soviet-bloc and 5 non-Soviet-bloc.

ASSOCIATION: Institut fiziki metallov Akademii nauk SSSR (Institute of Physics of Metals of the Academy of Sciences USSR)

Card 4/7

S/126/62/014/004/008/017
E111/E160

AUTHORS: Nemnonov, S.A., Sorokina, M.F., Men'shikov, A.Z., Kolobova, K.M., and Finkel'shteyn, L.D.

TITLE: The character of the atomic interactions in the intermetallic compounds of the transition elements aluminium and silicon

PERIODICAL: Fizika metallov i metallovedeniye, v.14, no.4, 1962, 535-541

TEXT: A combination of the crystallochemical and X-ray spectroscopic characteristics of the compounds examined with their physicochemical properties, enables one to assert that the character of the interatomic bonding forces in these compounds (Fe_3Al, $NiAl_3$, FeSi, CrSi, $CrAl_7$, $MnAl_6$, $FeAl_3$, Co_2Al_9, $CuAl_2$, etc) is extremely complicated. The structural characteristics, the X-ray emission data and the magnetic properties show the presence, on a background of the predominantly metallic interaction, of certain localised bonds between different kinds of atoms, in which the 3d electrons of the transition metal actively participate.

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In all phases studied, the K absorption spectra of the transition metal show strong hybridisation of the 3d and 4s wave functions of the transition element with the 3p functions of aluminium or silicon. Allowing for certain conventions in the separation of the interatomic forces into their components, it can be reckoned that the predominantly metallic interaction is supplemented in the cases examined by the interaction of the covalent and resonating covalent type of bonding with a certain polarity, understood as a drawing out of the connecting electron cloud to the side of the more electronegative component (the transition metal). In the system transition metal / Al, this polar component of the bonding forces is strongly expressed but in the system transition metal / Si, it is almost absent. There is 1 table.

ASSOCIATION: Institut fiziki metallov AN SSSR
(Institute of Physics of Metals, AS USSR)

SUBMITTED: April 4, 1962.

FINKEL'SHTEYN, L.D.; NEMNONOV, S.A.

Correlation between changes in the K_{β}-line intensity and the values of initial absorption regions in certain cobalt compounds. Fiz.met.i metalloved. 14 no.5:660-665 N '62. (MIRA 15:12)

1. Institut fiziki metallov AN SSSR.
(Cobalt compounds) (Absorption spectra)

FINKEL'SHTEYN, L. M.

"Changes in the Pleura During Pulmonary Tuberculosis and Artificial Pneumothorax Based on Thoracoscopic Data." Cand Med Sci, Republic Sci-Res Inst of Tuberculosis, Lithuanian SSR, Vil'nyus. (RZhBiol, No 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educations Institutions (12)
SO: Sum. No. 556, 24 Jun 55

USSR/Pharmacology. Toxicology. Chemotherapeutic Preparations. Anti-Tuberculous Remedies. V

Abs Jour: Ref. Zhur- Biol., No 22, 1958, 102921

Author : Finkel'shteyn, L. M.; Sher, T. M.

Inst : Institute of Tuberculosis, LitSSR

Title : On the Problem of Laboratory and Clinical Streptomycin-Resistance in Combined Treatment with Streptomycin and PAS of Patients with Pulmonary Tuberculosis

Orig Pub: Sb. nauchn. tr. Resp. n.-i. tuberkulezn. in-t, LitSSR, 1956, 2, 93-104

Abstract: Species of mycobacteria tuberculosis originally resistant to streptomycin (I) were not discovered. The degree of resistance depends on the amount of introduced I. In accordance with the increase of the amount of I, the frequency and degree of

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USSR/Pharmacology. Toxicology. Chemotherapeutic Preparations. Anti-Tuberculous Remedies. V

Abs Jour: Ref. Zhur. - Biol., No 22, 1958, 102921

streptomycin-resistance increases. As a result of treatment of 87 patients with streptomycin resistance established by laboratory means (the majority of patients took I in daily dose of 0.5 g in combination with PAS at the rate of 2 g/kg daily), in almost 50% of patients a certain relief from intoxication symptoms which were expressed in a decrease of T^0, slowing down of ESR [sed. rate] and subjective improvement was observed. Roentgenologic shifts were obtained in less than 1/3 of the patients. In three cases, liquidation of tuberculosis of the larynx and intestine which complicated the cavernous pulmonary tuberculosis was noted. A comparatively fast manifestation of resistance to I requires its careful, purposeful administration. - From the author's resume

Card 2/2

FINKEL'SHTEYN, L.M., kandidat meditsinskikh nauk

On the problem of allergic reactions of pleural layers. Probl. tub. 34 no.6 supplement:8-9 N-D '56. (MLRA 10:2)

1. Iz Respublikanskogo nauchno-issledovatel'skogo tuberkuleznogo instituta Litovskoy SSR (dir. - kandidat meditsinskikh nauk Yu.L. Gamperis, zam. direktora po nauchnoy chasti - prof. I.Ya.Kazakevich)
(PLEURA--DISEASES) (TUBERCULOSIS)

FINKEL'SHTEYN, L.M., kandidat meditsinskikh nauk

Relapse during antibacterial therapy [with summary in French]. Probl. tub. 35 no.4:24-29 '57. (MIRA 10:8)

1. Iz Respublikanskogo nauchno-issledovatel'skogo tuberkuleznogo instituta Litovskoy SSR (dir. - kandidat meditsinskikh nauk Yu.L. Gamperis, zam. direktora po nauchnoy chasti - prof. I.Ye.Kazakevich)
(STREPTOMYCIN, ther. use
tuberc., with isoniazid & PAS, relapse (Rus))
(ISONIAZID, ther. use
tuberc., with PAS & streptomycin, relapse (Rus))
(PARA-AMINOSALICYLIC ACID, ther. use
tuberc., with isoniazid & streptomycin, relapse (Rus))

FINKEL'SHTEYN, L.S.

Role of serodiagnosis as a secondary method for diagnosing diphtheria. Trudy LSGMI 30:105-108 '56. (MLRA 10:8)

1. Laboratoriya bol'nitsy im. Botkina (glavnyy vrach M.M.Figurina; zav. laboratoriyey - prof. M.N.Fisher)
(DIPHTHERIA, diagnosis,
serodiag. as secondary method (Rus))

FINKEL'SHTEYN, L.V.

Pathogenesis of postnatal psychoses. Ped., akush. i gin. 22 no.4: 52-53 '60. (MIRA14:5)

1. Kafedra psikhiatrii (zaveduyushchiy - prof.G.Yu.Malis [Malis, H.IU.]) Chernovitskogo meditsinskogo instituta (direktor - dotsent M.M.Kovalev [Koval'ov, M.M.]) i Chernovetskoy psikho-nevrologicheskoy bol'nitsy (glavnyy vrach - N.F.Chubinets').
(PSYCHOSES) (CHILDBIRTH)

GUREVICH, I.M., kand. tekhn. nauk; BARYSHNIKOV, V.G., inzh.;
FINKEL'SHTEYN, L.Ye., inzh.

Registering electronic LER-1 luxmeter. Svetotekhnika 9 no.5:16-19 My '63. (MIRA 16:7)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Light--Measurement)
(Photoelectric measurements)

MAYKOVA-STROGANOVA, V.S., FINKEL'SHTEYN, M.A.

[Radiographs of bones and joints; general principles in the interpretation of radiographs for normal and pathological conditions] Kosti i sustavy v rentgenovskom izobrazhenii; obshchie ustanovki v traktovke snimkov v norme i patologii tulovishcha. Leningrad, Medgiz, 1952. 218 p. (MLRA 8:1)
(Bones--Radiography) (Joints--Radiography)

MAIKOVA-STROGANOVA, V.S.; FINKEL'SHTEYN, M.A. [authors]; OSINTSEVA, V.P., kandidat meditsinskikh nauk [reviewer].

"Bones and joints in the X-ray picture." Probl.tub. no.3:95 My-Je '53. (MLRA 6:7)

(Radiography) (Maikova-Stroganova, V.S.) (Finkel'shtein, M.A.)

MAYKOVA-STROGANOVA, V.S.; ROKHLIN, D.G.; FINKEL'SHTEYN, M.A.

[Bones and joints in X-ray pictures; general directions in the interpretation of pictures of normal and pathological conditions] Kosti i sustavy v rentgenovskom izobrazhenii; obshchie ustanovki v traktovke snimkov v norme i patologii. Leningrad. Medgiz. Vol.3. [Head] Goleva. 1955. (MLRA 9:6)

(BONES--RADIOGRAPHY) (JOINTS--RADIOGRAPHY)

MAYKOVA-STROGANOVA, Varvara Sergeyevna, prof.; ROKHLIN, Dmitriy Gerasimovich, prof.. Prinimal uchastiye: FINKEL'SHTEYN, M.A., starshiy nauchnyy sotrudnik. ABRAMOV, Sh.I., red.; RULEVA, M.S., tekhn.red.

[Bones and joints in X-ray photography; extremities] Kosti i sustavy v rentgenovskom izobrazhenii; konechnosti. Leningrad, Gos.izd-vo med.lit-ry, Leningr.otd-nie, 1957. 482 p. (MIRA 12:11)

1. Chlen-korrespondent AMN SSSR (for Rokhlin).
(BONES--RADIOGRAPHY) (JOINTS--RADIOGRAPHY)

FINKEL'SHTEYN, M.A., starshiy nauchnyy sotrudnik; KAGANOVA, E.D., starshiy nauchnyy sotrudnik

Changes in the muscles in x-ray pictures in certain diseases of the nervous system in children. Vest.rent.i rad. 34 no.6:75-77 N-D '59. (MIRA 13:5)

1. Iz kafedry rentgenologii I Leningradskogo meditsinskogo instituta (zav. - chlen-korrespondent AMN SSSR prof. D.G. Rokhlin) i Nauchno-issledovatel'skogo pediatricheskogo instituta (nauchnyy rukovoditel'- prof. N.A. Kyshova).

(NERVOUS SYSTEM dis.)
(MUSCLES radiogr.)

FINKEL'SHTEYN, M.A., starshiy nauchnyy sotrudnik

Degenerative-dystrophic processes in the sternoclavicular joints.
Trudy LIETIN no.16:398-403 '64. (MIRA 19:1)

1. Pervyy Leningradskiy meditsinskiy institut imeni akademika I.P. Pavlova.

REYBMAN, A.I.; FINKEL'SHTEYN, M.I.

Use of paint and lacquer coatings with a base of epoxy resins. Lakokras. mat. i ikh prim. no.2:33-36 '63. (MIRA 16:4)

1. Leningradskoye otdeleniye Gosudarstvennoy vsesoyuznoy proizvodstvennoy kontory po lakokrasochnym pokrytiyam Glavkhimplastkraski Ministerstva khimicheskoy promyshlennosti SSSR.
(Protective coatings) (Epoxy resins)

ZHOLONDZ', I.A.; FINKEL'SHTEYN, M.I.

Protective coatings preventing paraffin deposition on the internal surfaces of petroleum pipes. Lakokras.mat. i ikh.prim. no.4:40-44 '62. (MIRA 16:11)

1. Leningradskoye otdeleniye Gosudarstvennoy vsesoyuznoy proizvodstvennoy kontory po lakokrasochnym pokrytiyam Glavkhimplastkrasi Ministerstva khimicheskoy promyshlennosti SSSR.

ACCESSION NR: AP4043822 S/0303/64/000/004/0042/0045

AUTHOR: Reybman, A. I., Finkel'shteyn, M. I.

TITLE: Solvent resistant organic coatings

SOURCE: Lakokrasochny*ye materialy* i ikh primeneniye, no. 4, 1964, 42-45

TOPIC TAGS: organic coating, solvent resistant coating, enamel VL-515, enamel EP-718, enamel KhS-710, lacquer F-10, lacquer KhS-76, lacquer MS-25, lacquer EP-096, aluminum powder coating, primer VL-02, primer KhS-04, primer FL-03K, primer EP-09T, toluene resistant coating, water resistant coating, butylacetate resistant coating, ethyl alcohol resistant coating, bakelite lacquer, ethinol lacquer, paint EKZhE-40, paint EKA-15, ED-6 based epoxy, benzene resistant coating

ABSTRACT: Air and heat dried serial production finishes (enamels VL-515, EP-718, KhS-710, lacquers F-10, KhS-76 and aluminum powder modified KhS-76, MS-25 and EP-096, over primers VL-02, KhS-04, FL-03K and EP-09T) were laboratory tested for resistance to toluene, toluene + 20% H_2O, benzene (270 hrs., 18-25C for all three), 40% epoxy enamel solution in toluene (270 hrs., 50C, except 150 hrs. for EP-718), 60 proof ethyl alcohol (90 hrs., 18-25 or 40C) and 40 proof ethyl alcohol (90 hrs., 40C). These finishes and laboratory samples of bakelite lacquer, epoxy coating on an ED-6 base, paints

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ACCESSION NR: AP4043822

EkZhE-40 and EKA-15, as well as ethinol lacquer, were also field tested under various conditions prevalent in the chemical and shale processing industries. Results are tabulated and show that air or heat cured enamel VL-515 (3 or 4 coats) protects steel against toluene at 40C and against ethyl chloride with ethyl alcohol and ethyl ether admixtures. Only the heat cured variant (120C) was resistant to the presence of water in the solvents. Heat dried F-10 (3 or 4 coats, 150-160C) is resistant to toluene at 40C. Six coats of EP-718 over a coat of VL-02 provided the best protection against benzene, benzene with water, ethyl alcohol and ethyl ether at temperatures up to 40C. Five coats of KhS-76 (metallic) over a coat of KhS-04, five coats of KhS-710 over a coat of FL-03K or five coats of modified EP-096 over a coat of EP-09T protect against 60 proof ethyl alcohol at 18-20 or 40C. Three coats of EKZhS-40 and two coats of ethinol lacquer protect steel against 94% butyl acetate with 5% phenol and 1% water or against 99% butyl acetate with 1% water. "G. V. Yelesina, I. A. Zholondz' and R. P. Ioffe took part in the work." Orig. art. has: 4 tables.

ASSOCIATION: Leningradskoye otdeleniye VPK "Lakokraspokry*tiye" (Leningrad division of the VPK "Paint and Varnish Coatings")

SUBMITTED: 00 ENCL: 00

SUB CODE: MT NO REF SOV: 000 OTHER: 000

Card 2/2

FINKEL'SHTEYN, M.I.

USSR/Chemistry - Protective coating FD-2641

Card 1/1 Pub. 50-6/18

Authors : Reybman, A. I.; Finkel'shteyn, M. I.

Title : Anticorrosion protection with lacquer, varnish, and paint materials of the equipment and metal constructions at sulfuric acid and superphosphate plants

Periodical : Khim. prom. No 3, 150-152, Apr-May 1955

Abstract : Recommend types of coatings to be used for the protection of metal surfaces exposed to the action of various corrosive agents encountered at sulfuric acid and superphosphate plants.

Institution : Leningrad Division ["Otdeleniye"], State All-Union Production Office "Lakokraskopokrytiye" [Lacquer, Varnish, and Paint Coating].

FINKEL'SHTEYN, M.I.

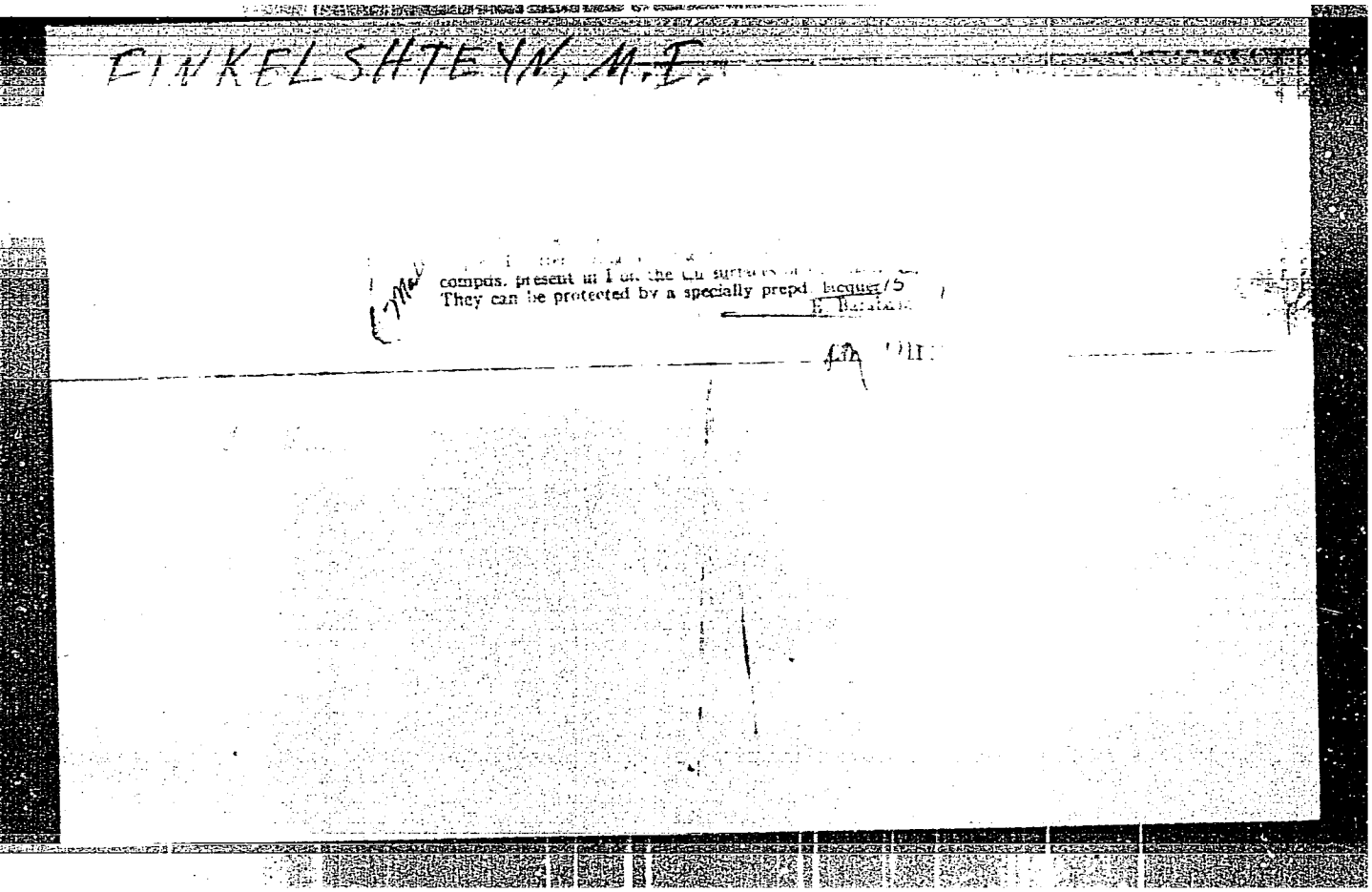
5
1-4E2c

Protection of inner surfaces of apparatus designed for use with sulfuric and fluosilicic acids. A. I. F. [illegible] and M. I. Finkel'stein. Khim. Prom. 1956, [illegible] corrosion prevention as practiced in [illegible]

W. M. Sternberg

pa [illegible]

1. Leningradskoye otdeleniye Gosudarstvennoy Vsesoyuznoy proizvodstvennoy Kontory Lakokrasokpokrytiye



FINKEL'SHTEYN, M.I.

REYBMAN, A.I.; FINKEL'SHTEYN, M.I.; IOFFE, R.P.

Protecting metal and concrete surfaces of the Bachman apparatus. Khim. prom. no.6:373-375 S '57. (MIRA 11:1)

1.Leningradskoye otdeleniye Gosudarstvennoy proizvodstvennoy kontory "Lakokraspokrytiye."
(Corrosion and anticorrosives)

S/081/61/000/019/079/085
B103/B147

AUTHORS: Reybman, A, I., Finkel'shteyn, M. I.

TITLE: Application of anticorrosive coats based on divinyl acetylene polymers

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 511-512, abstract 19P239 (Lakokrasochn. materialy i ikh primeneniye, no. 4, 1960, 44-48)

TEXT: In an investigation of the behavior of various coats based on divinyl acetylene applied to steel and concrete in various media under different conditions it was found that divinyl-acetylene-coatings were highly resistant to standing and running fresh and sea water. This also applies to water with a content of free CO_2, a sandy water flow, a mixture of butyl acetate, phenol, and water, moist chlorine, and bleaching solution. Fourfold coatings based on "Etinol" varnish and iron minium (ЭКЖС-40 (EKZhS-40) paint), as well as the same varnish with aluminum powder, are recommended as protection of hydrotechnical plants and metal structures in standing water or in water running at ≤ 5 m/sec. This also

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applies to plants subjected to an alternate action of water and mineral oil, as well as to the inside of containers permanently holding fresh water. Four-layer coatings of EKZhS-40 paint can be used for painting the submerged parts of seaship hulls and concrete surfaces which are subjected to a permanent action of water containing free CO_2 up to 30 mg/liter at $\leq 50^{\circ}C$. Objects exposed to atmospheric influences should not be coated with paints based on "Etinol" with iron minium or aluminum powder having a reduced light and weather resistance. Five-layer coatings of EKZhS-40 paint and "Etinol" varnish with aluminum powder can be used for protecting steel surfaces which are permanently exposed to illuminating gas or a mixture of butyl acetate, phenol, and water at different quantitative ratios. Heat-dried (at $100^{\circ}C$) Asbovinyl coatings are recommended as protection for various metal surfaces exposed to moist chlorine, bleaching powder at $50^{\circ}C$, bleaching solution, or a 3% NaCl solution flowing at ≤ 16 m/sec. Naturally dried Asbovinyl may be used for protecting metal subjected to the permanent action of a sandy water flow (5-6 m/sec). [Abstracter's note: Complete translation.]

FINKEL'SHTEYN, M.I., inzh.; ZHOLONDZ', I.A., inzh.

Anticorrosion protection of hydromechanical equipment with lacquer paints. Elek.sta 32 no.4:28-33 Ap '61. (MIRA 14:7)
(Hydraulic machinery) (Corrosion and anticorrosives)

Z/011/62/019/012/002/005
E112/E435

AUTHORS: Zholonds, I.A., Finkelshteyn, M.I.

TITLE: Coating materials preventing deposits of paraffin in crude-oil pipe-lines

PERIODICAL: Chemie a chemická technologie. Přehled technické a hospodářské literatury, v.19, no.12, 1962, 564, abstract Ch 62-7622. (Lakokras. Materialy, no.4, 1962, 40-44)

TEXT: During the testing of various coating materials for resistance to crude-oil and abrasion, the interesting observation was made that some of the compositions prevented, to a considerable degree, the depositing of paraffin in solid form. The coating materials can therefore be applied successfully as protective coatings to the interior of crude-oil pipe-lines. Coatings based on epoxy-resins, e.g. E-40 gave the best results. A two-component lacquer, based on E-40, was applied in three coats, containing hardening catalyst and plasticizer. Drying temperature was 70°C. However, three protective coats with a bakelite lacquer gave also sufficient protection against paraffin deposition. The bakelite coats were hardened for 2 hours at 100°C.

Card 1/1 [Abstracter's note: Complete translation.]

108-7-8/13

AUTHOR: FINKEL'SHTEYN, M.I.

TITLE: Transition Processes in Cam Filters. (Perekhodnyye protsessy v grebenchatykh fil'trakh, Russian)

PERIODICAL: Radiotekhnika, 1957, Vol 12, Nr 7, pp 63-69 (U.S.S.R.)

ABSTRACT: The transition amplitude, i.e. the oscillation amplitude is determined at the output of the filter system on the occasion of the effect of a harmonic voltage jump at the input with a single amplitude. A method for the determination of the shape of the transition amplitude is given and it is shown that it is a step-like curve increasing according to the exponential law. The method for the determination of the time of setting up of the transition amplitude for the total filter system depends on the time of setting up the transition amplitude of the central filter and on the time of setting up the oscillations caused by the reaction of the lateral filters. The total time can be determined for the larger of the two amounts mentioned.
It is proved that the initial slope of the transition amplitude for cam filters is directly proportional to the number of filters. (With 5 Illustrations and 5 Slavic References).

Card 1/2

108-7-8/13

Transition Processes in Cam Filters.

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED: 4.6.1956, after revision on 7.1.1957
AVAILABLE: Library of Congress

Card 2/2

FINKEL'SHTEYN, M. I.

Radio navigation. Moskva, Gos. energ. izd-vo, 1952. 79 p. (Massovaia radio-biblioteka, vyp. 150) (53-39907)

VK560.F55

FINKEL'SHTEYN, M.I.

Optimum passbands of comb filters. Radiotekhnika 14 no.1:62-67 Ja '59. (MIRA 12:2)
(Radio filters)

6.9000

77561
SOV/108-15-2-6/12

AUTHOR: Finkel'steyn, M. I.

TITLE: On the Accumulation of Impulse Signals at an Unstable Sequence Frequency

PERIODICAL: Radiotekhnika, 1960, Vol 15, Nr 2, pp 43-46 (USSR)

ABSTRACT: The paper considers a finite sequence of impulses. Assuming unstability of the sequence frequency the problem of maximum signal-to-noise ratio is discussed. It is best to approximate the frequency characteristic of a sequence of impulses by a series of peaks located near the harmonics of the sequence frequency. An optimum signal-to-noise ratio may be obtained using a corresponding comb filter as a signal accumulator. According to a previous Soviet publication, the optimum passband width $\Delta\omega_{opt}$ of the filter peaks is given as

$$\Delta\omega_{opt} = \frac{2,48}{NT_1}, \qquad (2)$$

where N is the number of impulses and T_1 is the sequence

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period. This $\Delta\omega_{opt}$ assures a maximum signal-to-noise ratio as given by Eq. (3).

$$H_{max} = 0{,}905\sqrt{N}. \qquad (3)$$

It is seen that by infinitely increasing N, the optima passband widths tend to zero, and the noise-to-signal ratio increases infinitely. However, the narrowing of the passbands is limited by fluctuation processes. In case of unstability of the sequence frequency of impulses, the passband width of the optimal filter may be selected in accordance with Eq. (8)

$$\Delta\omega_{\kappa} = 2\kappa\omega_1\left(\frac{\sqrt{\overline{\Delta\omega_1^2}}}{\omega_1}\right). \qquad (8)$$

where $\Delta\omega_1^2$ is the mean square root deviation of the sequence frequency and K is the number of the harmonic. It is seen from Eq. (8) that the width of the spectral lines is directly proportional to the relative unstability of the sequence frequency and to the number K.

Using a filter system consisting of n filters, the signal-to-noise ratio given by Eq. (11) may be obtained:

$$H = \sqrt{\frac{1}{(n+1)\left(\frac{\sqrt{\Delta\omega_1^2}}{\omega_1}\right)}}. \qquad (11)$$

The increase of $\Delta\omega_k$ caused by fluctuation of sequence frequency is assumed to be equivalent to an increase caused by a decrease in the number of impulses. Thus the equivalent number N_e of accumulated impulses is defined. Comparing Eq. (3) and (11), an expression is obtained for N_e:

$$N_e \approx \frac{1,22}{n\left(\frac{\sqrt{\Delta\omega_1^2}}{\omega_1}\right)} = \frac{1,22}{\left(\frac{\omega_n}{\omega_1}\right)\left(\frac{\sqrt{\Delta\omega_1^2}}{\omega_1}\right)},$$

where $\omega_n = n\omega_1$.

On the Accumulation of Impulse Signals at an Unstable Sequence Frequency

77561
SOV/108-15-2-6/12

In case of radio impulses when the sequence frequency ω_1 is stable but the carrier frequency ω_0 is fluctuating, the signal-to-noise ratio is given as

$$H = \sqrt{\frac{\omega_1}{\gamma\sqrt{\Delta\omega_0^2}}} = \sqrt{\frac{\omega_1}{\gamma\omega_0\left(\frac{\sqrt{\Delta\omega_0^2}}{\omega_0}\right)}}.$$

Here $\sqrt{\Delta\omega_0^2}$ is the mean square root deviation of the carrier frequency and γ is a factor depending on character of frequency fluctuation. No particular conclusions are drawn by the author. There are 4 Soviet references.

SUBMITTED: November 24, 1958

Card 4/4

FINKEL'SHTEYN, Moisey Ionovich; VLADIMIROV, V.T., red.; MEDNIKOVA, A.N., tekhn. red.

[Artificial lines] Iskusstvennye linii. Moskva, Voen. izd-vo M-va obor. SSSR, 1961. 84 p. (MIRA 14:7)
(Radio lines) (Delay networks)

S/108/61/016/001/003/007
B010/B077

9.2550

AUTHOR: Finkel'shteyn, M. I., Member of the Society

TITLE: Transmission of Radio Pulses With a Filter Having a Comb-type Passband Curve

PERIODICAL: Radiotekhnika, 1961, Vol. 16, No. 1, pp. 26 - 32

TEXT: The transition function, the amplitude characteristic, and the output pulse shape of a filter with staggered circuits are calculated, which is suitable for transmitting a sequence of square radio pulses. If N denotes the number of pulses per period, τ_u the pulse period, and T_n the period of the pulse train, then the amplitude spectrum of a sequence of square pulses is composed of fundamental-frequency amplitudes and (N - 2) intermediate side-frequency amplitudes (continuous line in Fig.1). A filter with 2n + 1 (n is the number of side frequencies) staggered circuits having resonance frequencies of $\omega_o \pm k\omega_n$ (ω_o is the carrier frequency of the h-f pulse-train signal, ω_n is the side frequency, and k is an integer) is best suited for

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transmitting this complicated spectrum without distortion (dotted line in Fig.1), and in order to obtain optimum ratios, the bandwidth of single circuits with respect to $\frac{1}{\sqrt{2}}$ decrease has to be $\Delta\omega = \frac{2.48}{NT_n}$ (1). The signal-to-noise ratio is only 9.5% lower than in an ideal integrator. Since $\frac{\Delta\omega}{\omega_n} \ll 1$, the following well-known transmission function is valid for such a filter:

$A(t) = 1 - \exp(-\frac{\Delta\omega}{2}t) + \frac{\Delta\omega}{\omega_n}\exp(-\frac{\Delta\omega}{2}t)\sum_{k=1}^{n}\frac{\sin k\omega_n t}{k}$ (4). This expression can be composed of step functions and enables one to determine the behavior of the envelope for the output pulses as a function of the number M of received pulses and pulse intervals of a pulse sequence ($M = 0,1,..,N$). If $\alpha = \frac{t'}{\tau_u} - (M-1)q$, $q = \frac{T_n}{\tau_u}$, $f(x) = 1 - \frac{0.4}{N}\sum_{k=1}^{q-1}\frac{\sin 2\pi\frac{k}{q}t'}{k}$ are substituted, and using equations (1) and (4) one obtains the envelope

after the M-th pulse:

$$A_{u_M}(\alpha) = \left\{1 + \frac{\exp(-\frac{1.24}{Nq}\alpha)}{1-\exp(1.24/N)}\left[\exp(1.24/N)f(\alpha) - \exp(1.24/Nq)f(q-1+\alpha)\right]\right\}$$

$$- \left\{\frac{\exp(-1.24\alpha/Nq)}{1-\exp(1.24/N)}\left[f(\alpha) - \exp(1.24/Nq)f(q-1+\alpha)\right]\right\}\exp(-1.24(M-1)/N$$

$$= B_1(\alpha) - B_2(\alpha)\exp(-1.24(M-1)/N).$$

Now it may be seen that the output amplitude of the signal leaving the filter is an exponential function of M. Differentiating equation (4) with respect to time yields the steepness of the first pulse: $S_o = (dA(t)/dt)_{t=0} \approx n\Delta\omega$ and also the rise time: $t_{fg} = A_1/S_o = 0.25/nF_n$, where F_n is the pulse repetition frequency. A numerical example is used to demonstrate the practical applicability of these expressions. There are 5 figures, 1 table, and 3 Soviet references.

SUBMITTED: May 10, 1960

88376
S/108/61/016/001/003/007
B010/B077

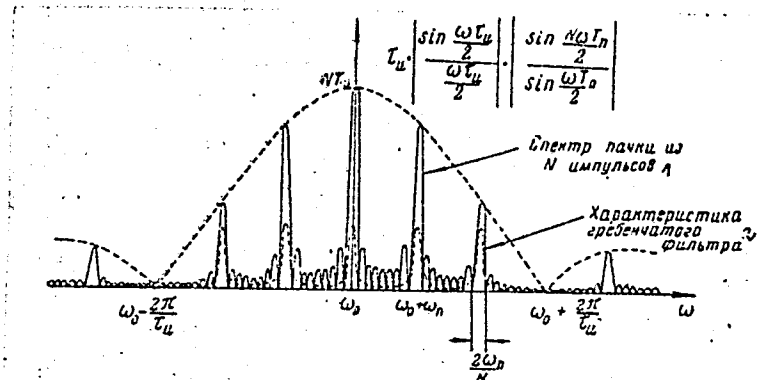

Рис. 1 (Fig. 1)

Legend to Fig.1: 1) Spectrum of a sequence of N pulses;
2) Characteristic of the comb-type filter

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S/108/62/017/004/003/010
D288/D301

6.4770

AUTHOR: Finkel'shteyn, M.I., Member of the Society (see Association)

TITLE: Spectral analysis of a pulse burst

PERIODICAL: Radiotekhnika, v. 17, no. 4, 1962, 18 - 22

TEXT: The problem of spectral analysis of a pulse burst with a time-symmetrical amplitude envelope arises often in filter design. The burst is considered as consisting of a central pulse of unity amplitude and (m-1) number of side pulses. The spectrum is then described by:

$$S(\omega) = S_0(\omega)[1 + 2\sum_{k=1}^{m-1} A(kT_n)\cos \omega kT_n],$$

where $S_0(\omega)$ - spectrum of the central pulse, T_n - pulse repetition frequency, $A(t)$ - envelope, $A(kT_n)$ - amplitude of k-pulse pair, $\pm mT_n$ - time boundary of the burst. An analysis of $g(\omega) = S(\omega)/S_0(\omega)$

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S/108/62/017/004/003/010
D288/D301

Spectral analysis of a pulse burst

follows first for a rectangular envelope, leading to a simple expression $g(x) = \sin Nx/\sin x$, where $x = \omega T_n/2$ and $N = 2m - 1$, (total number of pulses). The physical meaning is that main lobes are issuing at $\omega = 0$, $2\pi F_n$, $4\pi F_n$ etc., where F_n = pulse repetition rate, and side lobes have maxima corresponding to $1/\sin x$. The new concept of the concentration coefficient "p" is introduced, being the ratio of main lobe maxima to lowest side lobe maxima. For the rectangular envelope $p = N$. Next, a cosine envelope is calculated which yields for a large number of pulses

$$p = \frac{4}{\pi^2} (N + 1)^2.$$

A graphical presentation of the $/g(x)/ = f(x)$ function for $N = 9$ is shown. Finally, a case typical for radar operation is discussed, where transmitted pulses are amplitude - modulated by the directional characteristics of the aerial. Numerical values are selected, typical for half-power points of the aerial polar diagram, and $g(x)$ and p are calculated, the latter being $2/\pi^2 (N + 1)^3$. A tabulation of the relative width of the main lobes follows, indicating that with growing N any type of envelope tends towards same loca-

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tion of maxima and zeros as the rectangular envelope. There are 5 figures and 1 table.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi imeni A.S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communications, imeni A.S. Popov) [Abstractor's note: Name of Association taken from first page of journal]

SUBMITTED: May 30, 1961

Card 3/3

KANEVSKIY, Zinoviy Moiseyevich; FINKEL'SHTEYN, Moisey Ionovich; TIKHONOV, V.I., retsenzent; GOLUBTSOV, M.G., red.; BUL'DYAYEV, N.A., tekhn.red.

[Fluctuation noise and radio impulse signal detection] Fluktuatsionnaia pomekha i obnaruzhenie impul'snykh radiosignalov. Moskva, Gosenergoizdat, 1963. 215 p. (MIRA 16:8)

(Radio--Interference)
(Pulse techniques (Electronics))

FINKEL'SHTEYN, M.I.

Multiple synchronous accumulation of impulse signals. Radiotekhnika 18 no.10:15-21 O '63. (MIRA 16:12)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi im. A.S.Popova.

FINKEL'SHTEYN, M.I.

Duhamel's integral for the envelope of a pulse train acting on a comb filter. Izv. vys. ucheb. zav.; radiotekh. 8 no.3: 350-352 My-Je '65. (MIRA 18:9)

ACCESSION NR AP5010091 UR/0109/65/010/004/0614/0617

B

AUTHOR: Finkel'shteyn, M. I.

TITLE: Plotting transient responses of periodic filters

SOURCE: Radiotekhnika i elektronika, v. 10, no. 4, 1965, 614-617

TOPIC TAGS: transient response, periodic filter

ABSTRACT: A method is suggested for constructing the transient-response characteristic of a periodic filter by considering the latter as a combination of an ideal periodic filter and a low-pass filter corresponding to the frequency-response envelope. It is shown that the transient response of the ideal periodic filter is a step function with equally-spaced steps. A periodic filter in the form of a feedback-type double accumulator is considered as a particular case. The above method of plotting the transient-response curve presupposes a knowledge of the frequency response of the periodic filter. Orig. art. has: 4 figures and 12 formulas.

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L 47061-65
ACCESSION NR: AP5010091

ASSOCIATION: none

SUBMITTED: 11Feb64 ENCL: 00 SUB CODE: EC

NO REF SOV: 005 OTHER: 000

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L 7790-66 EWT(d)/EWP(1) IJP(c) BB/GG

ACC NR: AP5027624 SOURCE CODE: UR/0109/65/010/011/2021/2025

AUTHOR: Finkel'shteyn, M. I. 44

ORG: none

TITLE: Peculiarities in the synthesis of delay-line storages 16,44

SOURCE: Radiotekhnika i elektronika, v. 10, no. 11, 1965, 2021-2025

TOPIC TAGS: pulse storage, computer storage device

ABSTRACT: Based on the z-transformation method applied to delay-line circuits by W. D. White et al. (IRE Nat'l. Conv. Rec., 1957, 5 part 2, 186), the synthesizing of pulse-signal storage devices is considered. It is proven that a storage system will be most efficient, with a specified constant degree of stability of all its stages, if its transfer function has an n-multiple pole lying on the real axis; such a system has the narrowest-band teeth of its frequency characteristic. This requirement is satisfied, e.g., in a system of n identical cascade-connected simple storage devices. Orig. art. has: 5 figures and 22 formulas.

SUB CODE: 09 / SUBM DATE: 30Jul64 / ORIG REF: 002 / OTH REF: 003

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UDC: 621.374.325.001

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S/129/60/000/007/014/014/XX
E073/E335

AUTHORS: Soloveychik, I.Ye and Finkel'shteyn, M.L., Engineers

TITLE: Embrittlement of Steel During Anticorrosion Nitriding

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, No. 7, pp. 52 - 54

TEXT: Production batches of components nitrided after machining became extremely brittle. For elucidating the reasons for this embrittlement experiments were carried out with the same material in the initial state and also after normalisation annealing, high-temperature tempering or quenching, followed by tempering or without tempering (combination of tempering with nitriding). After heat treatment specimens were produced of which the hardness, mechanical properties, impact strength and microstructure were studied. The results of these tests for steels 10, 20 and 45 are entered in Tables 1-3. It can be seen that for the steels 10 and 20 the impact strength increased to 15 to 20 kgm/cm^2 from 7 to 10 kgm/cm^2 in the initial state after normalisation annealing at 800 to 840 °C. In the case of steel 45 the impact strength increased after normalisation annealing at 840 to 860 °C from

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E073/E335

Embrittlement of Steel During Anticorrosion Nitriding

5 to 6 kgm/cm^2 to 10 kgm/cm^2. The experiments have shown that no embrittlement could be detected on nitrided specimens which have been preliminarily normalised, of cold-rolled steel 10 and 20; after nitriding the impact strength was 16 to 18 kgm/cm^2. Preliminary normalisation did not bring about a reduction in the embrittlement of steel 45 after nitriding; its impact strength was 1.0 to 1.5 kgm/cm^2. Preliminary normalisation has less influence on the reduction of the embrittlement of hot-rolled steel 10 and 20 than for the same steel in the cold-rolled state. More stable impact strength values after nitriding were obtained for the steels 10 and 20 after preliminary quenching in oil from 820 °C. The preliminary heat treatment enabled obtaining impact-strength values of 10 to 13 kgm/cm^2. The brittleness of components which became embrittled after nitriding, can be eliminated by heating to 820 °C for at least 30 min, followed by quenching in water or oil, sand-blasting and nitriding again. By means of this procedure, it became possible to eliminate brittleness.

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Embrittlement of Steel During Anticorrosion Nitriding

In conclusion it is stated that prior to nitriding, heat-treatment should be applied. For the low-carbon steels 10 and 20 normalising at 800 to 840 °C or quenching from 800 to 840 °C in water or oil should be applied. In the case of the steel 45 it is preferable to use a heat-treatment consisting of quenching from 840 °C in water, tempering at 650 °C for one hour.
There are 2 figures, 3 tables and 2 Soviet references.

ASSOCIATION: Moskovskiy zavod "Dinamo"
(Moscow "Dinamo" Works)

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FINKEL'SHTEYN, M. M.

Yefimtsev, B. M. and Finkel'shteyn, M. M. "Progress in the rolling of tractor and reviting steel," Trudy Stalinskogo obl. otd-niya VNITOM, No 1, 1949, p. 79-81

SO: U-5241, 17 December 1953, (letopis 'Zhurnal 'nykh Statey, No. 26, 1949)

MAL'KOV, V.G., inzh.; PRILEPSKIY, V.I., inzh.; DUBROV, V.S., inzh. V rabote prinimali uschastiye; KHIL'KO, M.M., inzh.; MERSHCHIY, N.P., inzh.; CHETVERIKOV, V.Ya., inzh.; KUROV, I.N., inzh.; RATNER, B.R., inzh.; BUBYCHEV, G.D., inzh.; ALFEROV, K.S., inzh.; PAVLENKO, N.M., inzh.; FINKEL'SHTEYN, M.M., inzh.; PLUZHKO, N.F., inzh.; SAMSONOV, T.F., inzh.; BABENKO, N.N., inzh.; LAD'YANOV, N.I., inzh.; TUPIL'KO, V.S., inzh.

Deoxidizing and alloying 25G2C steel with ferromanganese and ferrosilicon in 200-ton ladles. Stal' 20 no.9:803-806 S '60. (MIRA 13:9)
(Steel, Structural—Metallurgy)

S/133/61/000/006/010/017
A054/A129

AUTHOR: Finkel'shteyn, M. M., Engineer

TITLE: New steels for automatic electric hard facing of the continuous billet mill and blooming mill rolls

PERIODICAL: Stal', no. 6, 1961, 535-538

TEXT: In several plants electrode wires (from 30ХГСА = 30KhGSA steel) are used as a rule for the automatic electric hard facing of blooming mill rolls, wile powder-made (ПП3Х2В8 = PP3Kh2V8) steel wires are applied for roughing and finishing stand rolls. Rolls hard-faced with powder-made steel wires are very wear-resistant but their service life is short on account of scaling; moreover, they are expensive. In order to develop new and efficient steels for this purpose, tests were carried out in the Makeyevskiy zavod (Makeyevka Plant) with the cooperation of the institut elektrosvarki imeni Ye. O. Patona (Institute of Electrowelding imeni Ye. O. Paton), in which Yu. P. Dolgoker, N. V. Pashutin, N. A. Volubuyev, L. B. Dolmat, V. K. Adamkovich and I. N. Aksenov took part. The following steels were investigated:

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New steels for automatic electric ...

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	C	Mn	Si	Cr	W	V	S	P	Ni
5Х4В3Ф (5Kh4V3F)	0.55	0.93	0.98	3.64	2.9	0.20	0.037	0.029	0
4Х2Г2В (4Kh2G2V)	0.42	1.92	0.89	2.88	1.08	-	0.026	0.040	0
4Х3Г2Ф (4Kh3G2F)	0.42	1.44	0.85	3.7	-	0.92	0.030	0.026	0

The steel was cast in 3.4 ton ingots which were rolled on 1,150-type blooming mills, on 630- and 450-type continuous roughing mills and on 250-type wire-drawing mills. The wear-resistance of rolls electro-hard-faced with the new steels was tested on the 630- and 450-type mill rolls, which are mostly utilized, both from a point of view of time and load. The parameters of hard-facing technology will be found in Table 1. The efficienty of electro-hard-facing was assessed by the wear-resistance of the rolls of one equipment in hours, the processing of calibers on one equipment in depth and width in mm, the character of processing and the labor involved in the mechanical processing of the rolls. The tests showed that the rolls hard-faced with powder-made wires have the greatest wear-resistance (t/mm), but the lowest service life expressed in time.

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Already after 8 x 24 hours of operation scaling can be observed on the roll-pass design surface and rolls have to be replaced. The longest service life of rolls could be obtained by hard-facing the rolls with the 5Kh4V3F and 4Kh2G2V steel wires. Moreover, the speed of cutting the roll-pass design on the rolls hard-faced with the new steels could be increased by 20 - 25% as compared with the results obtained for hard-facing with powder-made wires. The wear of the calibers when using the new steels in hard-facing is within the standards set for the technology of the experimenting factory. The chemical composition, microstructure and hardness of the hard-faced layer was investigated on 3 rings cut out from the caliber-bottom of one roll on the 450-stand, processed in turn with the three new steels. The chemical composition was uniform in the height of the rings, Rockwell-hardness was greatest at the surface of the hard-faced layer. The quality of hard-facing was tested with a РУП (RUP)-200 type apparatus. The X-ray tests revealed a boundary between the metal-base and the first layer of hard-facing and also between the first and the second layer, while no boundary is found between the second and the third layer. For hard-facing the blooming mill rolls, which have to work under the heaviest load, it was found advisable to use 5Kh4V3F steel wires. When using this steel, the ouput of blooming mills can be raised by 1 - 1.5% due to the reduction in time required for replacing rolls.

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When the technology of producing electrodes wires from the new steels is established, their cost will be 30 - 40% lower than the cost of powder-made steel wires. There are 2 figures, 2 tables and 1 non-Soviet-bloc reference.

ASSOCIATION: Makeyevskiy metallurgicheskiy zavod (Makeyevka Metallurgical Plant)

Table 1: Average technological parameters of the automatic electric hard-facing of the experimental rolls on blooming mills (the type of the flux: АН-20 [AN-20])
Legend: 1 - number of stands; 2 - diameter of the wire, mm; 3 - conditions of hard-facing; 4 - voltage, v; 5 - current intensity, a; 6 - feed-rate of wire, m/hr; 7 - revolving speed of spindle, rpm; 8 - hardness of the hard-faced layer, H_{sh}; 9 - quantity of metal rolled on one stand, per 24 hours; 10 - quantity of metal rolled in one roll-pass design, t; 11 - wear of calibers, mm (in the numerator) and t/mm (in the denominator); 12 - thickness of the hard-faced layer, mm.

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S/125/61/000/007/006/013
D040/D112

AUTHORS: Frumin, I.I., Nerodenko, M.M., Finkel'shteyn, M.M., Mal'tsev, N.A.

TITLE: New electrode wire grades for wear-resistant surfacing

PERIODICAL: Avtomaticheskaya svarka, no. 7, 1961, 54-64

TEXT: Surfacing wire grades used presently in mechanical surfacing of machine parts at 40 Soviet metallurgical plants are 30ХГСА (30KhGSA) for restoring dimensions, and ПП-3Х2В8 (PP-3Kh2V8) powder-metal wire or its equivalent high-alloy ЭИ701 (EI701) wire for wear-resistant coatings. The 3Kh2V8 metal deposits are difficult to machine and crumble in the rolling mill. rolls before they wear off. This was the reason for joint experiments conducted by the Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR (Electric Welding Institute "Order of the Red Banner of Labor" im. Ye.O. Paton of the AS UkrSSR), Makeyevskiy metallurgicheskiy zavod im. S.M. Kirova (Makeyevka Metallurgical Plant im. S.M. Kirov) and "Tsvetmet" Plant in Artemovsk. Three steel grades were selected for the experiments - 4Х4В3Ф (4Kh4V3F), 4Х2Г2В (4Kh2G2V),

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New electrode wire grades...

and 4Kh3G2F (4Kh3G2F). The first heat of 4Kh4V3F had a higher carbon content than intended and was re-named - "5Kh4V3F". The chemical composition of the first three is (Table 1):

(%)	C	Mn	Si	Cr	W	V	Ni	S	P
4Kh4V3F	0.35-0.45	0.8-1.2	0.7-1.0	3.6-4.1	2.5-3.0	0.2-0.4	<0.3	<0.04	<0.04
4Kh2G2V	0.35-0.45	2.2-2.7	0.4-0.7	2.2-2.7	0.8-1.7	-	<0.3	<0.04	<0.04
4Kh3G2F	0.35-0.45	1.3-1.8	0.4-0.7	3.4-3.6	-	0.5-0.8	<0.3	<0.04	<0.04

Wire was drawn at the "Tsvetmet" Plant in a vertical 20-ton drawing machine with an 800 mm-diameter drum at a drawing speed of 35 m/min. Electric heating current was fed from a TSD-1000 (TSD-1000) welding transformer to the die plate and wire with the use of a roller slip ring. Colloidal graphite was used for lubricant. The distance from the current-feed point to the die and the strength of the current were selected so that the wire was heated to 600°C. One "annealing" pass with this heating was stated to make

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any intermediate reheats and pickling quite unnecessary. Shop technology for hot drawing was developed at the Khartsyzskiy staleprovolochno-kanatnyy zavod (Khartsyzsk Steel Rope Plant) on the suggestion of Engineer V.A. Chepinog. In this method an approximately 5m-long section of the wire is electrically heated to 480-500°C in front of the die plate and the current is adjusted in steps for different drawing speeds; a 6.5 mm rod can be reduced in seven passes to 3.5 mm in diameter, the drawing speed increasing from 35 m/min in the first passes to 250 m/min in the last. A new graphite lubricant greatly reduces friction in the die and ensures that the wire runs correctly over the drum. A minimum of graphite is left on the ready wire. Surfacing is produced with the use of standard АН -20 (AN-20) flux. [Abstracter's note: The new graphite lubricant and AN-20 flux are not further specified]. Rolls surfaced by the new wire grades were tested in operation in two continuous billet mills, the "630" and the "450", at the Makeyevka Plant. The rolls were preheated by induction current to 350-400°C for surfacing and then cooled slowly in heat-insulated boxes. Metal deposited with 5Kh4V3F wire had the best wear-resistance. Its composition (determined on two rolls at the Makeyevka Plant) was (Table 6):

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New electrode wire grades...

(%)	C	Mn	Si	Cr	W	V	S	P
	0.42	0.77	1.11	3.41	2.61	0.43	0.036	0.023
	0.40	0.78	1.11	3.36	2.63	0.43	0.037	0.025

The wear resistance of 4Kh2G2V coating had insufficient wear resistance, and 4Kh3G2F even lower. Rolls surfaced with 4Kh3G2F wire withstood as long a service time as rolls surfaced with PP-3Kh2V8, but the wear of the former was greater and endurance (t/mm) lower. Thus, the best results were obtained with 5Kh4V3F wire. After the rolls had been surfaced with this wire it was found possible to increase the cutting speed by 20-25% compared with rolls coated with PP-3Kh2V8 powder wire. The new wire-drawing technology is recommended for mass application. The following participated in the development of the new wire and techniques: A.V. Mel'nik and Ye.N. Morozovskaya (Electric Welding Institute im. Paton); Yu.P. Dolgoker, V.N. Pashutin, G.V. Mal'kov, V.A. Polstyanoy, and L.B. Dolmat (Plant im. S.M. Kirov);

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S/125/61/000/007/006/013
D040/D112

New electrode wire grades...

V.A. Sabayev and T.A. Mal'tseva (the "Tsvetmet" Plant). There are 7 figures, 8 tables and 3 Soviet-bloc references.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR (Electric Welding Institute "Order of the Red Banner of Labor" im. Ye.O. Paton AS UkrSSR) (I.I. Frumin and M.M. Nerodenko); Makeyevskiy metallurgicheskiy zavod im. S.M. Kirova (Makeyevka Metallurgical Plant im. S.M. Kirov)(M.M. Finkel'shteyn); Artemovskiy zavod "Tsvetmet" (Artemovsk "Tsvetmet" Plant) (N.A. Mal'tsev)

SUBMITTED: January 20, 1961

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VENEDIKTOV, L.A.; FINKEL'SHTEYN, M.O.

Plastic potentials of the venous system when the anterior and posterior venae cave are cut off from the heart [with summary in English]. Arkh.anat.gist. i embr. 34 no.6:51-58 N-D '57. (MIRA 11:3)

1. Kafedra normal'noy anatomii (zav.-prof. F.P.Markizov) Kuybyshevskogo meditsinskogo instituta. Adres avtorov: Kuybyshev, Meditsinskiy institut, kafedra normal'noy patologii.
(VENAE CAVAE, surg.
exper. deflection of posterior & anterior in cats)

MARKIZOV, F.P.; FINKEL'SHTEYN, M.O.

Volga conference of physiologists, biochemists, pharmacologists, morphologists, and clinicians. Arkh.anat.gist. i embr. 34 no.6:133 N-D '57. (MIRA 11:3)
(PHYSIOLOGY)