L 10876-65

ACCESSION NR: AR4046551

300K connected with the transition of Cr from the antiferromagnetic state into the paramagnetic state. Connected with the same transition is also the peak on the curve showing the variation of the antiferromagnetic antiphase domain structure of Cr. At 70C the IF does not depend on the amplitude of the oscillations of the rigid stress [illegible] observed at zero and at [illegible] stresses. The increase in the level of the IF [illegible] state is related to the increase in the [illegible] below 11°. The IF [illegible] specimens forged by [illegible] broad triple peak in the 125--175°K and a small peak at 13°K. Annealing the samples at 600° reduces the IF level to the initial value and greatly reduces the IF level to the initial [illegible] peaks. L. Goldyenko.

SUB CODE: MM ENCL: 00

Card 2/2

L 14998-65 EWT(m)/EWP(w)/EPF(c)/EPF(n)-2/EWA(d)/EWP(t)/EWP(b) Pr-4/
Pu-4 BSD/ASD(m)-3/AS(mp)-2/IJP(c) MJW/JD/JW/GG/MLK

ACCESSION NR: AT4048134 S/0000/63/000/000/0250/0257

AUTHOR: Vasil'yev, A.A., Gruzin, P.L., Zharov, Yu. D., Polikarpov, Yu. A., Trokin, Yu. A., Breger, A. Kh., Gol'din, V.A.

TITLE: Effect of gamma and neutron irradiation on internal friction of copper

SOURCE: Vsesoyuznaya konferentsiya po relaksatsionnym yavleniyam v metallakh i splavakh. 3d, Voronezh, 1962. Relaksatsionnyye yavleniya v metallakh i splavakh (Relaxation phenomena in metals and alloys); trudy konferentsii. Moscow, Metallurgizdat, 1963, 250-257

TOPIC TAGS: copper, internal friction, copper irradiation, gamma irradiation, neutron irradiation

ABSTRACT: The paper reports the results of studies on irradiation of copper by gamma rays from Co-60, as well as by Po-Be neutrons and in atomic piles. The maximum dose was 580 r/sec. The irradiated objects were placed in water-cooled vessels, and in some cases the temperature of the samples reached 80C. Common electrolytic copper and pure copper, grade V2, containing not over 5×10^{-4} Bi, Fe, Si, Mg, Mn, As, Ni, Sn, Pb, Sb and Zn were used in the tests. After annealing, the internal friction of all samples was found to depend on the amplitude. Even small deformations increase the

Card 1/3

L 14998-65

ACCESSION NR: AT4048134

internal friction. Further irradiation by neutrons lowers the internal friction by 50%. However, the level of internal friction after irradiation is somewhat higher than after annealing at 800C. Annealing at 200C for 3 hrs. lowers the internal friction to the initial value. Several samples were irradiated by Po-Be neutrons at the temperature of liquid nitrogen. After irradiation, the internal friction dropped somewhat in comparison with the initial level. A polycrystalline sample was irradiated in a pile after deformation; although the internal friction increased after deformation and the maximum could not be observed, further irradiation in the pile lowered the internal friction. Annealing at 200C for 2 hours returned the internal friction to the initial value with the maximum dropping significantly. After gamma irradiation and annealing at 100 or 200C (5 hrs.), the internal friction did not change at all. Only annealing at 300C lowered the internal fric[illegible] the initial level for all temperatures. Radiation of an annealed poly-crystalline sample [illegible] the internal friction, forming two maxima on the curve. Beginning with [illegible] however, irradiation decreased the internal friction and increased the resonance frequency. The authors are unable to explain this fact. Most publications consider that the elimination of defects caused by radiation takes place at the dislocations in the crystals. It should be noted that the

Card 2/3

L 14998-65

ACCESSION NR: AT4048134

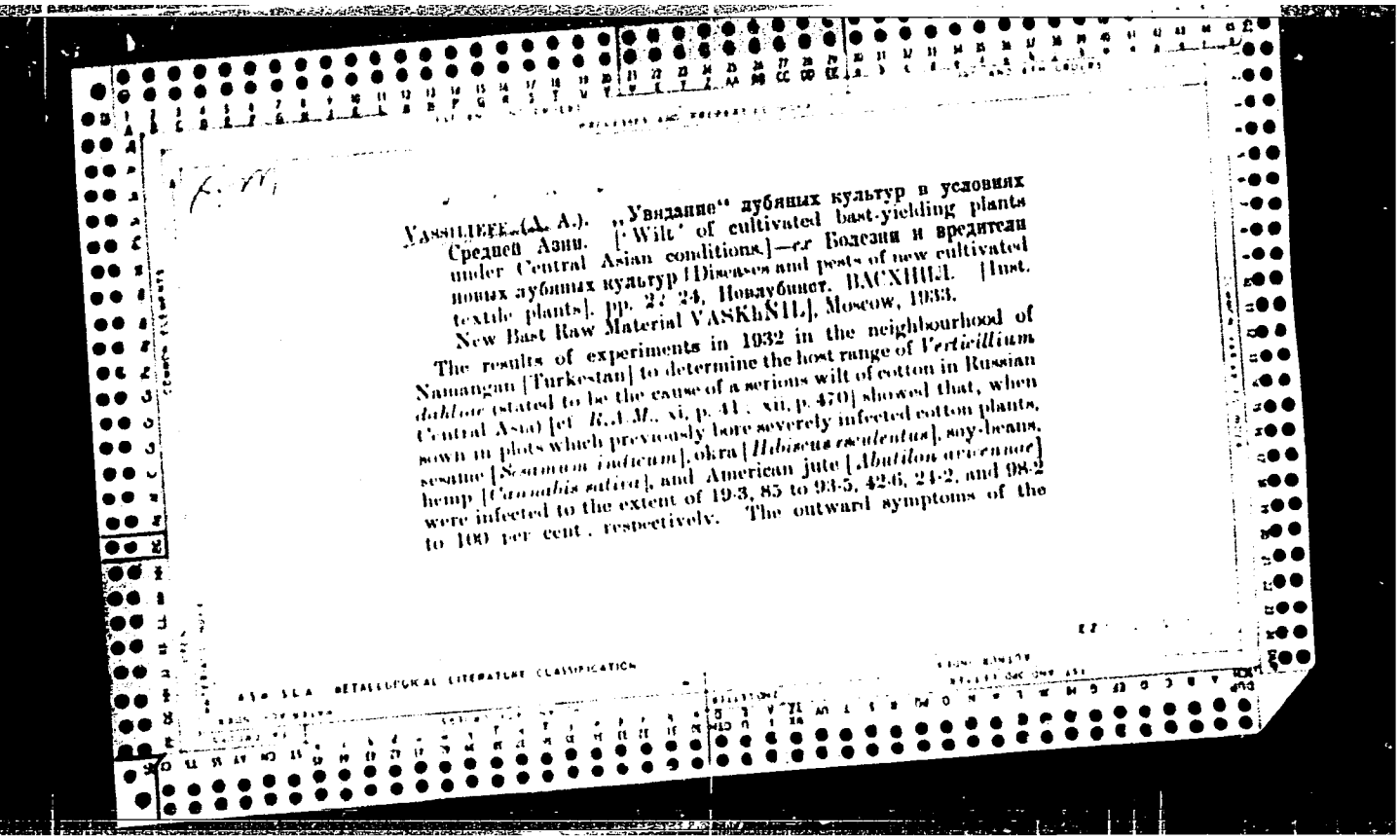
observed change in properties is not caused directly by radiation but by partial elimination of these effects during annealing. Electron microscopes show the defects which accumulate in flat groups, forming dislocation loops. Further tests will be required to explain this phenomenon. As a result of the tests performed, the activation energy, determined at the maxima of internal friction on the curves, was found to vary from 0.4 to 1.5 ev. It may be assumed that the maxima on the curves are not of the Bordoni type, since they are observed in properly annealed samples and do not depend on the degree of deformation, having a high activation energy. It is possible that the maxima are caused by the admixtures. Orig. art. has: 9 figures.

ASSOCIATION: Institut metallovedeniya i fiziki metallov TsNIIChM im. I.P. Bardina (Institute of Physical Metallurgy and Metal Physics, TsNIIChM)

SUBMITTED: 10Nov63 ENCL.: 00 SUB CODE: MM, NP

NO REF SOV: 002 OTHER: 006

Card 3/3



VASSILIEFF, (A. A.). „Увядание" дубяных культур в условиях Средней Азии. ["Wilt" of cultivated bast-yielding plants under Central Asian conditions.]—*cr* Болезни и вредители новых дубяных культур [Diseases and pests of new cultivated textile plants]. pp. 2; 24. Новолубинст. ВАСХНИЛ. [Inst. New Bast Raw Material VASKhNIL]. Moscow, 1933.

The results of experiments in 1932 in the neighbourhood of Namangan [Turkestan] to determine the host range of *Verticillium dahliae* (stated to be the cause of a serious wilt of cotton in Russian Central Asia) [cf. *R.A.M.*, xi, p. 41; xii, p. 470] showed that, when sown in plots which previously bore severely infected cotton plants, sesame [*Sesamum indicum*], okra [*Hibiscus esculentus*], soy-beans, hemp [*Cannabis sativa*], and American jute [*Abutilon avicennae*] were infected to the extent of 19·3, 85 to 93·5, 42·6, 24·2, and 98·2 to 100 per cent., respectively. The outward symptoms of the

disease on these hosts were similar to those on cotton, but internally it was noticed that while in cotton the internal mycelium was strictly confined to the vascular bundles in the stem, from which it did not emerge (except at wounds involving the vessels) even when cut cotton stems were kept for a long time in a moist chamber, in okra and *A. aricennae* the mycelium often grew out through the walls and penetrated, both inter- and intra-cellularly, to the pith. In jute [*Corchorus capsularis*], which was also infected by the wilt, the mycelium passed from the vessels but did not extend beyond one or two cells.

Isolations from the wilted plants mostly yielded *V. dahliae*, which was culturally identical with the strain isolated from cotton; the latter was successfully inoculated into the other hosts through wounds.

A careful selection of rotation crops is evidently necessary in infected land. *V. dahliae* may well be also parasitic on a wide range of weeds.

VASIL'YEV, A. A.

VASIL'YEV, A. A. "Centralization of Cotton Seed Treatment against Gummosis," in Results of the Work of the Station of Plant Protection of the All Union Order of Lenin Scientific-Research Institute of Cotton Production on the Study of Pests and Diseases of Cotton and Lucerne for 1939 (Auto-references and References), Publishing House of the All Union Order of Lenin Scientific-Research Institute of Cotton Production, Tashkent, 1941, pp. 52-54. 464.04 T18

SO: SIRA SI-90-53, 15 Dec. 1953.

VASIL'YEV, A. A.

36767. Tsentralizovannoye protravlivaniye posevnykh semyan khlopchatnika dlya bor'by s gommozom. Sots. sel. khoz-vo Uzbekistana, 1949, No. 4, s. 51-58

SO: Letopis' Zhurnal'nykh Statey, Vol. 50, Moskva, 1949

VASIL'YEV, A. A.

Gum oses of the Cotton Plant and Measures for Combating Them, Ed. by F. I. Uchevatkin, Tashkient 1951, 35 pp.

VASIL'YEV, A.A.

Tasks of primary processing workers in the flax and hemp industry.
Tekst.prom. 16 no.10:21-23 O '56. (MLRA 10:1)
(Flax) (Hemp) (Textile industry)

USSR/Cultivated Plants - Commercial. Oil-bearing. Sugar-bearing. ...

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44203

Author : Vasil'yev, A.A., Kuzn...va, K.G., Shver, Ye.V.
Inst :
Title : On the Effect of Preparation 2, 4-D on Cotton.

Orig Pub : S. Kh. Uzbekistana, 1957, No 4, 25-27.

Abstract : No abstract.

Card 1/1

VASIL'YEV, A.

Vegetable and fruit marketing in Rumania. Sov.torg. no.5:45-49 My '57. (MLRA 10:8)
(Rumania--Vegetables)
(Rumania--Fruit)

VASIL'YEV, A.

USSR / Cultivated Plants. Plants for Technical Use. H
Oil Plants. Sugar Plants.

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34726

Authors : Shver, L.; Vasil'iev, A.; Kuznetsova, M.
Inst : Sc. Institute for Plant Research of the Union.
Title : Injury to Cotton Plants by the Weed Killer Preparation 2,4 D.

Orig Pub : Khlopkovodstvo, 1957, No 6, 58-59

Abstract : Observations by the Central Station for Plant Protection of the Scientific Confederate Research Institute for Farming have shown that sprinkling of the cotton plant with dilutions of the preparation 2,4 D in doses of 100 and 500 g/h during the phase of fruit formation led to the burning of leaves and young shoots. After 20 days, the shrubs of these cotton plants were

Card 1/2

USSR / Cultivated Plants. Plants for Technical Use. M
Oil Plants. Sugar Plants.

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34726

completely dried up. Doses of 1 and 10 g/h showed harmful effects on the 13th to 15th day; this manifested itself by typical excrescences of the cotton plants not actually sprinkled with the preparation but standing close to those treated with2,4-D. Consequently, it appears that cotton plants are most sensitive, not only to small quantities of concentrations of 2,4-D, but also to volatile fractions of this preparation. As a result, measures are to be taken towards applying weed-killing measures at a safe distance from the cultivation of cotton plants. -- Shirnov.

Card 2/2

M-6

USSR / Cultivated Plants. Plants for Technical Use.
Sugar Plants.

Abs Jour: Ref Zhur-Biol., 1958, No 16, 73038.

Author : Vasil'yev, A. A.; Rakovskaya, M. V.; Stepanov, F.A.
Inst : Not given.
Title : Accelerating Boll Opening in the Cotton Plant by Chemical Means.

Orig Pub: Sots. s.kh. Uzbekistana, 1957, No 9, 23-24.

Abstract: Plant protection stations of the All-Union Scientific-Research Chemical Institute tested the effect of the following preparations from 1956: sodium arsenite (3%), sodium pentachlorphenolate (3%), a mineral oil emulsion of pentachlorphenol (3%), "endotal" (0.6%), sodium ethylxanthogenate (3%) and magnesium chlorate (1.5%). The harvested green boll were first treated by immersion in a solution

92

Card 1/2

VASIL'YEV, A.A.

VASIL'YEV, A.A., inzhener.

Warm water retting of flax in Belgium. Tekst. prom. 17 no.7:62-63 Jl '57. (MLRA 10:9)

(Belgium--Retting)

USSR / General and Specialized Zoology - Insects. P

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 20870

Author : Vasil'yev, A. A.
Inst : Central Station for the Protection of Plants of the All-Union Scientific Research Institute of Cotton Cultivation
Title : Results of Testing New Preparations for Controlling Cotton Plant Pests

Orig Pub : V sb.: Materialy Ob"yedin. nauchn. sessii po khlopkovodstvu. T.2. Tashkent, Gosizdat. UzSSR, 1958, 264-272

Abstract : The compiled data of tests carried out by the Central Station for the Protection of Plants of the All-Union Scientific Research Institute of Cotton Cultivation are presented. From the preparations of systemic

Card 1/3

dusting cotton plants with a mixture of 30% of DDT dust and 70% of cottonseed meal. For the control of both insects, the spraying of cotton plants with chlorophos (0.3 and 0.5%) is effective. Methylmercaptophos, M-81 and the thion isomer of methylmercaptophos proved in 1957 to be highly toxic for mites during 30 days and were recommended for productional application. The wetting of cotton plant seeds in octamethyl solution and mercaptophos emulsion and their introduction into fertilizing along with ammonium nitrate reduced the number of mites by 9 and 3 times, respectively. -- A. P. Adrianov

VASIL'YEV, A.A.

Initial processing of flax and hemp is on the upswing in White Russia. Tekst. prom. 18 no. 7:4-5 Jl '58. (MIRA 11:7)

1. Nachal'nik upravleniya i pervichnoy obrabotki l'na i konopli Sovnarkhoza BSSR.

(White Russia--Flax)
(White Russia--Hemp)

VASIL'YEV, A.A., kand.sel'skokhoz.nauk

Cotton diseases in the Chinese People's Republic. Zashch. rast. ot vred. i bol. 6 no.9:52-54 S '61. (MIRA 16:5)

1. Uzbekskiy institut zashchity rasteniy, Tashkent.
(China--Cotton--Diseases and pests)
(China--Fungi, Phytopathogenic)

SOLOV'YEVA, A.I.; VASIL'YEV, A.A.

Rice cultivation and the control of Verticillium wilt of cotton.
Zashch. rast. ot vred. i bol. 6 no.10:37 O '61.
(MIRA 16:6)

(Soviet Central Asia--Cotton wilt)
(Soviet Central Asia--Rice)

USPENSKIY, F.M., kand. biol. nauk; SOMOV, I.A.; MUMINOV, A.M., kand. sel'khoz. nauk; IVANOV, Ye.N., kand. biol. nauk; VASIL'YEV, A.A., kand. sel'khoz. nauk; SOLOV'YEVA, A.I., [illegible] nauk; ZAPROMETOV, N.G., doktor sel'khoz. nauk; YAKHONTOV, V.V., doktor biol. nauk; KAPUSTINA, R.I.; STROMM, N.G.; POLEVSHCHIKOVA, V.N., kand. sel'khoz. nauk; KARIMOV, M.A., doktor biol. nauk; NOSKOV, I.G., kand. sel'-khoz. nauk; KHODZHAYEV, A.Kh.; ALEYEV, B.G., kand. sel'khoz. nauk; YAKHONTOV, V.V., doktor biol. nauk; STEPANOV, F.A.; LYUBETSKIY, Kh.Z., kand. med. nauk; GUREVICH, B.E.; KONDRAT'YEV, V.I.; SUDARS, L.P.; KOSTENKO, I.R., zasl. agr. Uzbekskoy SSR; GORELIK, I.M., red.; BAKHTIYAROV, A., tekhn. red.

[Manual on controlling the pests, diseases and weeds of cotton, corn, and legumes] Spravochnik po bor'be s vreditelyami i boleznyami khlopchatnika, kukuruzy i bobovykh kul'tur. Izd.2., perer. i dop. Tashkent, Gos.izd-vo UzSSE, 1963. 325 p. (MIRA 16:5)

(Field crops—Diseases and pests)
(Weed control)

occupied by a low pressure band, which contributed to increasing the barometric

ACCESSION NR: AT5016797

characteristic signs of imminent bora winds are reviewed and discussed. The [illegible] structure of the winds is [illegible] [illegible] creation and manifestations of bora winds is hypothesized. A correlation is made of sub-wind and super-wind atmospheric [illegible]

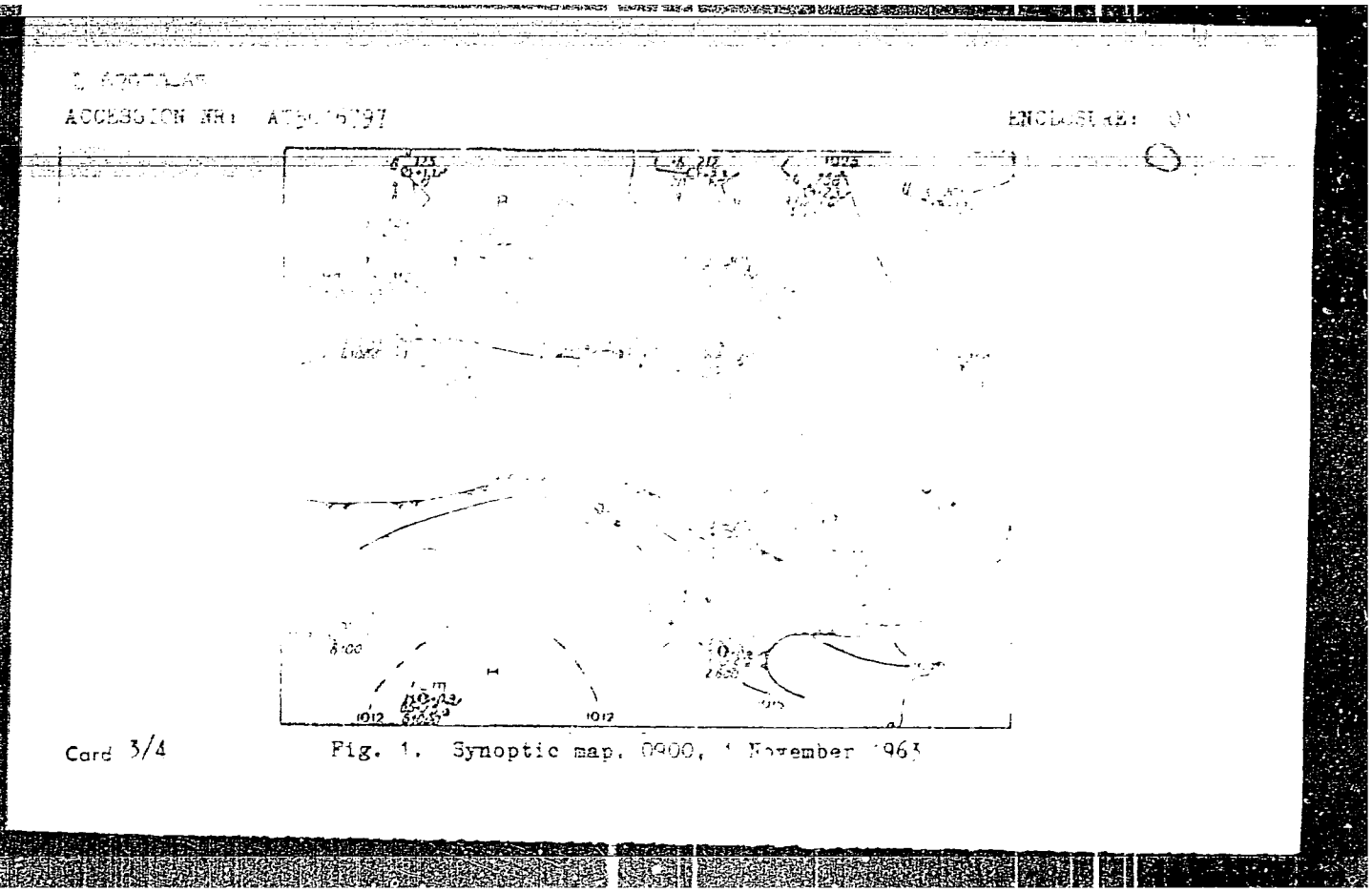
[illegible]

ASSOCIATION: Tsentral'nyy [illegible]

SUBMITTED: [illegible]

[illegible]

Card 2/4



ACCESSION NR: AT5016797

ENCLOSURE: 01

Card 3/4

Fig. 1. Synoptic map, 0900, 1 November 1963

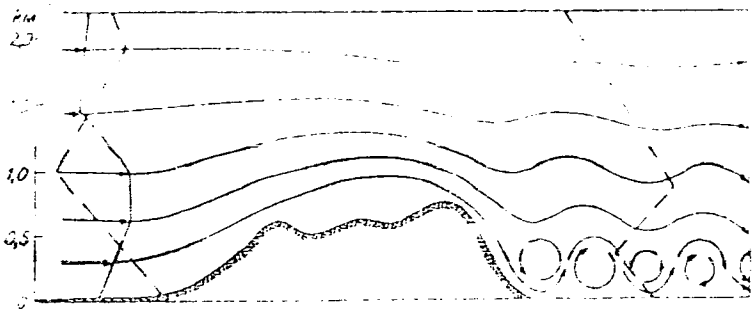


Fig. 2. Diagram of the form of turbulence during

Card 4/4

L 2539-66 EWT(d)/EWT(l)/EWT(m)/EWP(w)/FCC EM/GW

ACCESSION NR: AT5024884 UR/2531/65/000/171/0051/0061

AUTHOR: Vasil'yev, A. A. 44,55 34 31 B+1

TITLE: Distribution of wind over the Crimean Mountains and the characteristics of helicopter bumping under various synoptic conditions

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. 44,55 Trudy, no. 171, 1965. Rezul'taty issledovaniya atmosfernoy turbulentnosti na vertoletnykh trassakh (Results of the investigation of atmospheric turbulence on helicopter routes), 51-61

TOPIC TAGS: atmospheric turbulence, 44,55 aircraft bumping, 16 wind direction, wind velocity

ABSTRACT: A study has been made of the direction and velocity of wind over the Crimean Mountains to determine the nature and extent of atmospheric turbulence in that area. Data obtained (1952—1961) simultaneously at several locations (Simferopol, Yalta, Sokolinoye, and Orlinoye) and at different altitudes, using pilot balloons, MI-4 helicopters, and LI-2 airplanes, are presented and analyzed. The findings showed that: 1) when wind direction is perpendicular to the trend of the mountain range, or deviates by no more than 30° from the perpendicular,

Card 1/2

L 2539-66

ACCESSION NR: AT5024884

the critical wind velocity is 8 m/sec at the level of the mountain range for the occurrence of turbulence; 2) the maximum deformation of the air flow occurs with a northwest wind blowing perpendicular to the mountain range; 3) turbulent zones form in areas normal to air flow when the wind direction is either parallel or at a small angle to the trend of the mountain range; 4) at an altitude of 2 km above sea level, the direction and velocity of the wind is only slightly affected by orography; 5) turbulence occurs principally in the 1.5-km layer above sea level and depends mainly on the wind direction; 6) summer synoptic situations in the Crimea may be either cyclonic (3 types) or anticyclonic (2 types), depending on the prevailing direction and velocity of the wind. Orig. art. has: 4 tables and 6 figures.

ASSOCIATION: TsIP

44,55

[SP]

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 009 OTHER: 001 ATD PRESS: 4116

Card 2/2 mk

L 4141-66 EWT(d)/EWT(l)/EWP(m)/EWT(m)/EWP(w)/FCC/EWA(d)/FCS(k)/EWA(l) EM/GW

ACCESSION NR: AT5024886 UR/2531/65/000/171/0074/0080

AUTHOR: Vasil'yev, A. A. 44,55

TITLE: Flow deformation over the Crimean mountains at the longitudinal flow around the mountain range, and its effect on helicopter bumping

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 171, 1965. Rezul'taty issledovaniya atmosfernoy turbulentnosti na vertoletnykh trassakh (Results of the investigation of atmospheric turbulence on helicopter routes), 74-80

TOPIC TAGS: mountain, atmospheric pressure, air mass, atmospheric convection, atmospheric movement, Bernoulli equation

ABSTRACT: The effect of Crimean mountain ranges on horizontal air mass deformation was studied in some detail, and the resultant effects on helicopters and airplanes along the Simferopol'-Yalta route evaluated. On several points along the route wind velocity and direction measurements were carried out. These were made at 1.5-km altitude by means of pilot balloons (synchronized at 5 points). The mean wind velocity was estimated from the expression

$$\bar{\eta}_{\bar{z}} = \frac{\sum_{1}^{n}\left(\frac{u_z}{u_{1.5}}\right)}{n}.$$

Card 1/2

L 4141-66
ACCESSION NR: AT5024886

At 7 m/sec (and above) northeast air flow speeds along the longitudinal mountain range flow of the Crimean mountains, the changes in the wind velocity at the lower atmospheric layers were found to be in the direction of the flow. The layer in which wind speed changes occur extends to 0.8-1.0 km. This is 2/3 the height of the Crimean range. Pressure gradient measurements along the Simferopol'-Orlinoye air route were estimated to be 2 millibars/111 km. This increase in pressure in the flow direction causes flow reversals in the lower layers, with resultant vortex motion and flow deformations. This air vorticity in turn causes helicopter bumps over the southwest range of the Crimean mountains. Orig. art. has: 4 figures, 2 tables, and 4 formulas.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory); TsIP

SUBMITTED: 00 ENCL: 00 SUB CODE: ES, AC

NO REF SOV: 004 OTHER: 000

Card 2/2

VORONTSOV, P.A.; VASIL'YEV, A.A.

Problems of meteorological flight security on helicopter routes in mountainous regions. Trudy GGO no.171:122-129 '65.
(MIRA 18:9)

1. Glavnaya geofizicheskaya observatoriya im. A.I. Voyeykova, Leningrad (for Vorontsov). 2. TSentral'nyy institut prognozov (for Vasil'yev).

TROITSKIY, Leonid Vasil'yevich; VASIL'YEV, A.A., redaktor; ANDRIANOV, B.I., tekhnicheskiy redaktor

[The first receiving set] Pervyi radiopriemnik. Moskva, Izd-vo DOSAAF, 1956. 14 p. (MLRA 9:10)
(Radio--Receivers and reception)

NEFEDOV, Anatoliy Mikhaylovich; VASIL'YEV, A.A., redaktor; KARYAKINA, M.S., tekhnicheskiy redaktor

[How to adjust receivers with straight amplification] Kak naladit' priemnik priamogo usileniia. Moskva, Izd-vo DOSAAF, 1956. 15 p. (MLRA 10:2)

(Radio--Receivers and reception)

NEFEDOV, A.; VASIL'YEV, A.A., redaktor; TSIGEL'MAN, L.T., tekhnicheskiy redaktor

[Simple electron-tube receiver] Prostoi lampovyi priemnik. Moskva, Izd-vo DOSAAF, 1956. 19 p. (MLRA 10:9)
(Radio--Apparatus and supplies)

MATLIN, Semen L'vovich; VASIL'YEV, A.A., redaktor; ANDRIANOV, B.I., tekhnicheskiy redaktor

[Simple amplifiers in crystal receivers] Prosteishie usiliteli k detektornomu priemniku. Moskva, Izd-vo DOSAAF, 1956. 19 p.
(Amplifiers, Electron-tube) (MLRA 10:9)

VASIL'EV, ...

KUBARKIN, Leontiy Vladimirovich; VASIL'YEV, A.A., redaktor; GERASIMOVA, V.N., tekhnicheskiy redaktor

[Radio amature's shop] Masterskaia radioliubitelia. Moskva, Izd-vo DOSAAF, 1956. 31 p. (MLRA 10:9)
(Radio--apparatus and supplies)

MATLIN, Semen L'vovich; VASIL'YEV, A.A., redaktor; KARYAKINA, M.S., tekhnicheskiy redaktor

[Electron-tube power supply] Istochniki pitaniia radiolamp. Moskva, Izd-vo DOSAAF, 1956. 36 p. (MLRA 10:2)
(Electron tubes)

VASIL'YEV, A.A., redaktor; YENYUTIN, V.V., redaktor; KARYAKINA, M.S., tekhnicheskiy redaktor

[Best makes at the 12th radio exhibition] Luchshie konstruktsii 12-i radiovystavki. Moskva, Izd-vo DOSAAF, 1957. 263 p. (MLRA 10:6)

1. Vsesoyuznoye dobrovol'noye obshchestvo sodeystviya armii, aviatsii i flotu.
(Radio--Exhibitions)

107-57-2-42/56

AUTHOR: Vasil'yev, A. and Portsig, N. (Aleksandrov)

TITLE: "Rekord" TV set (Televizor "Rekord")

PERIODICAL: Radio, 1957, Nr 2 pp 45-48 (USSR)

ABSTRACT: Manufactured by the plants of the Ministry of Radio-Engineering Industry, the "Rekord" is a third-class table-model TV set. It is intended for 5-channel TV reception and FM radio reception within the 64.5- to 73-mc band. Its sensitivity is 200 μv, or better; definition is about 500 lines. Power supply is from a 127- or 220-v line. The TV set can be connected also to a noninterconnected power system where the power frequency at the TV set is nonsynchronous with that at the TV broadcast station. Power consumption is 160 w for the TV set or 85 w for FM radio alone. Its size is 485 x 425 x 525 mm; its weight is 24.5 kg. A superheterodyne single-channel receiver is used, and a 6.5-mc inter-carrier frequency is used for the sound system. A type DG-Ts1 semiconductor diode is used as the video detector. Four 6Zh1P, three 6N1P, two 6P9, one 6K4P, one 6P14P, one 6P13S, one 6Ts10P, and one 1Ts11P tubes and a 35LK2B kinescope are used in the TV set. A complete circuit diagram of the set is presented and discussed in detail. The TV set has a unitized construction described in some detail in the article. All

Card 1/2

"Rekord" TV set

fundamental units are standard and are manufactured in specialized plants.
Editor's note: "The 'Rekord' TV set is entirely modern. Regrettably, it uses a primitive sync system having a poor antinoise feature. In the first lot of the TV sets which appeared on the market, picture focusing was poor, welded contacts were inadequate, and a large number of shorts occurred in the wiring, for which the Aleksandrov Radio plant should be blamed."

There are 3 figures and 2 Soviet references in the article.

ABAILABLE: Library of Congress

Vasil'yev, A.

107-57-6-40/57

AUTHOR: Vasil'yev, A.

TITLE: 6P3S Tube Instead of G-807. Experience exchange
(Lampa 6P3S vmesto G-807. Obmen opytom)

PERIODICAL: Radio, 1957, Nr 6, p 47, Column 3 (USSR)

ABSTRACT: The tube 6P3S can be successfully substituted for the tube G-807 in horizontal sweep stages of a TV set. No changes in the circuit are necessary. Instructions are given on how to re-mount the tube base.
One figure shows the tube bases.

AVAILABLE: Library of Congress

Card 1/1

VASIL'YEV, A.A.

BORNOVOLOKOV, Eduard Pavlovich; KUPRIYANOVICH, Leonid Ivanovich; VASIL'YEV, A.A., red.; TSIGEL'MAN, L.T., tekhn.red.

[Portable ultrashort wave radio stations] Perenosnye UKV radiostantsii. Moskva, Izd-vo DOSAAF, 1958. 47 p. (MIRA 11:2)
(Radio, Shortwave)

SAVARTSEV, A.; KANTARIYA, A.; DOBARIN, B.; YEVLENT'YEV, N.; (selo Yegorkino Oktyabr'skogo rayona, Tatarskoy ASSR), OSOTKIN (g.Tyumen'); SHCHERBAKOV (g.Tyumen'); YERDAKOV (g.Tyumen'); VASIL'YEV (g.Tyumen'); RESHETNIK (Tyumen').

In radio clubs of the country. Radio no.12:11-12 D '58. (MIRA 11:12)

1. Predsedatel' soveta Ryazanskogo radiokluba Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu (for Savartsev). 2. Nachal'nik Kuybyshevskogo oblastnogo radiokluba Dorbovol'nogo obshchestva sodeystviya armii, aviatsii i flotu (for Kantariya). 3. Nachal'nik radiokluba (for Osotkin). 4. Starshiy inzh.radiokluba (Shcherbakov). 5. Nachal'nik uchebnoy chasti (for Yerdakov). 6. Chleny radiokluba (for Vasil'yev, Reshetnik).

(Radio clubs)

BORNOVOLOKOV, E.P., red.; VASIL'YEV, A.A., red.; GERASIMOVA, V.N., tekhn.red.

[Electronic devices for the domestic economy] Elektronnye pribory dlia narodnogo khoziaistva. Moskva, Izd-vo DOSAAF, 1959. 27 p. (Biblioteka zhurnala "Radio," no.3) (MIRA 12:12)
(Radio--Equipment and supplies)

BORNOVOLOKOV, E.P., red.; VASIL'YEV, A.A., red.; BLAZHENKOVA, G.I., tekhn.red.

[Ultrashort waves] Ul'trakorotkie volny. Moskva, Izd-vo DOSAAF, 1959. 30 p. (MIRA 12:12)
(Microwaves)

BORNOVOLOKOV, E.P., red.; VASIL'YEV, A.A.; BLAZHENKOVA, G.I., tekhn.red.

[Short waves] Korotkie volny. Moskva, Izd-vo DOSAAF, 1959.
31 p. (Biblioteka zhurnala "Radio," no.2) (MIRA 12:12)
(Radio, Short wave)

KURLYANDSKIY, Sergey Davidovich; VASIL'YEV, A.A., red.; IVANITSKIY, V.Yu., red.; KOBZAR', V.M., tekhn.red.

[Radar and its military application] Radiolokatsiia i ee voennoe primenenie. Moskva, Izd-vo DOSAAF, 1959. 44 p. (MIRA 12:9)
(Radar)

BURDEYNYY, Fedor Ivanovich (UA3-1); KAZANSKIY, Nikolay Valentinovich (UA3AF); KAMALYAGIN, Aleksandr Fedorovich (UA4LF); SHUL'GIN, Konstantin Aleksandrovich (UA3DA); VASIL'YEV, A.A., red.; TROITSKIY, L.V., red.; KARYAKINA, M.S., tekhn.red.

[Shortwave radio manual; reference manual and methods aid for radio amateurs] Spravochnik korotkovolnovika; spravochno-metodicheskoe posobie dlia radiolіubitelei. Izd.3., perer. i dop. Moskva, Izd-vo DOSAAF, 1959. 479 p. (MIRA 13:1)
(Radio, Shortwave)

VASIL'YEV, A.A., red.; FAYNSHMIDT, F.Ya., tekhn.red.

[Long-distance television reception] Dal'nii priem televideniia. Moskva, Izd-vo DOSAAF, 1960. 31 p. (Biblioteka zhurnala "Radio," no.6). (MIRA 13:8)
(Television--Receivers and reception)

SKVAST'YANOV, Mitrofan Ivanovich; VASIL'YEV, A.A., red.; DOLGOV, A.N., red.; YEZHKOV, V.V., red.; SMIRNOV, A.D., red.; USTINOV, P.I., red.; TUMANOV, B.V., red.; VORONIN, K.P., tekhn.red.

[Safety engineering in performing rigging operations in the installation of electric systems] Tekhnika bezopasnosti pri proizvodstve takelazhnykh rabot na montazhe energeticheskikh ustanovok. Moskva, Gos.energ.izd-vo, 1960. 55 p. (Biblioteka elektromontera, no.34) (MIRA 14:4)
(Electric engineering--Safety measures)

DOL'NIK, A.; EFRUSSI, M.; VASIL'YEV, A.A., red.; MUKHINA, Ye.S., tekhn.red.

[High-quality acoustical systems] Vysokokachestvennye akusticheskie sistemy. Moskva, Izd-vo DOSAAF, 1960. 75 p. (MIRA 14:4)

(Loudspeakers)

DOROVATOVSKIY, Pavel Sergeyevich; IVANOV, Viktor Mikhaylovich; VASIL'YEV, A.A., red.; KARYAKINA, M.S., tekhn.red.

[Replies to questions of radio amateurs] Otvety na voprosy radioliubitelei. Moskva, Izd-vo DOSAAF, 1960. 142 p. (MIRA 13:7)
(Radio)

MATLIN, S.; NOVIK, G.; VASIL'YEV, A.A., red.; FAYNSHMIDT, F.Ya., tekhn. red.

[Guide to the magazine "Radio" for 1950-1959] Putevoditel' po zhurnalu "Radio" za 1950-1959 gg. Moskva, Izd-vo DOSAAF, 1960. 268 p. (MIRA 14:8)

(Radio—Periodicals--Indexes)

KOSTIKOV, Viktor Fedorovich; VASIL'YEV, A.A., red.; TROITSKIY, L.V., red.; FAYNSHMIDT, F.Ya., tekhn. red.

[Design of television receivers for amateurs] Konstruirovanie liubitel'skikh televizorov. Moskva, Izd-vo DOSAAF, 1961. 173 p. (MIRA 15:2)

(Television--Receivers and reception)

VASIL'YEV, A. (Moskovskaya oblast', g. Kolomna)

Detecting a break in the cable of a television antenna. Radio no.2:38 F '61. (MIRA 14:9)

(Television--Antennas)

VASIL'YEV, A.A., red.; MUKHINA, Ye.S., tekhn. red.

[Aid for radio amateurs]V pomoshch' radioliubiteliu. Moskva, Izd-vo DOSAAF. No.12. 1962. 53 p. (MIRA 16:2)
(Radio—Equipment and supplies)

TROFIMOV, K.; VASIL'YEV, A.A., red.; KOROLEV, A.V., tekhn. red.

[Interference to radar stations]Pomekhi radiolokatsionnym stantsiiam. Moskva, Izd-vo DOSAAF, 1962. 74 p.
(MIRA 15:12)

(Radar, Military)

VASIL'YEV, A. (Moskva); MATYUSHIN, A. (Moskva); MARCHENKOV, L. (Voronezh); AGAFONOV, V. (Krasnodarskiy kray); SMELOV, M. (Moskva); KRAMER, A. (Leningrad); RETSENS, L.; KAYROD, V.; YEFREMENKOV, M. (Moskovskaya obl.)

Suggestions of the readers. Radio no.8:46 Ag '62. (MIRA 15:8)
(Radio—Equipment and supplies)

IVANITSKIY, V.Yu.; YAKOVLEV, B.N., spets. red.; VASIL'YEV, A.A., red.

[Advice to radio amateurs] Sovety radioliubiteliu. Moskva, DOSAAF, 1964. 223 p. (MIRA 17:12)

KOSTIKOV, V.F.; TROITSKIY, L.V., spets. red.; VASIL'YEV, A.A., red.

[How to build a radio receiver; principles of the design of simple electron-tube receivers] Kak postroit' radiopriemnik; osnovy konstruirovaniia prostykh lampovykh priemnikov. Moskva, DOSAAF, 1964. 245 p. (MIRA 18:6)

DOL'NIK, A.G.; EFRUSSI, M.M.; VASIL'YEV, A.A., red.

[How to build a radio system with good acoustical characteristics; principles of amateur sound reproduction systems] Kak sdelat' radioustanovku s khoroshim zvuchaniem; osnovy liubitel'skogo zvukovosproisvedeniia. Moskva, Izd-vo DOSAAF, 1965. 166 p. (MIRA 18:4)

VASIL'YEV, A. A.

"Storage Batteries in Power Systems" (Akkumulyatornyye baterei v energosystemakh), Gosenergoizdat, 168 pp, 1950

Books W-22517, 29 Apr 52

VASIL'YEV A.A.: BOZANOV G.M.: ANISIMOVA N.D.: CHILIKIN M.G.: SUKOMEL A.S.: SOLOV'YEV I.I.: SIROTINSKIY L.I.: BEL'KIND L.D.: FEDOSEYEV A.M.: GRUDINSKIY P.G.: UL'YANOV S.A.: VENIKOV V.A.: MEDVEDEV B.P.: SOLDATKINA L.A.:

Professor A.A.Glazunov. On his 60th Birthday and 30 Year of Scientific Pedagogical, Engineering, and Society Activity. Elektrichestvo, No. 1, 1952.

SO: Monthly List of Russian Accessions, Library of Congress, April '52 1955, Uncl.

VASIL'YEV, A. A.

USSR/Electricity - Power Stations, Mobile Feb 52

"A Mobile Electric Power Station," A. A. Vasil'yev, T. G. Gadzhinskiy

"Elektrichestvo" No 2, p 84

Abstract of an article originally published in "Mekhanizatsiya Stroitel'stva" (Mechanization of Contruction), No 10, 1951. The station, which has a 40-hp gasoline engine and a 30-kw, 230-v generator (type DGS-82), is used on the D-187A, a unit mounted on a ZIS-150 for repairing the asphalt or concrete surfaces of streets highways, etc.

208T34

1. VASIL'YEV, A. A.

2. USSR (600)

4. Electric Cables

7. Special knife for removing the lead sheathing of cables. Rab.energ., 2, no. 12, 1952.

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

VASIL'IEV, A.A., Kand.

Electric Motors

Current protection of electric motors from work in two phases. Prom. energ. 7, No. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, October, 1952, UNCLASSIFIED

VASIL'EV, A. I., Eng.

Electric Engineering - Safety Measures

Experience with safety work among electric power employees, Rab. energ. 3, No. 1, 1953.

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

1. VASIL'YEV, A.

2. USSR (600)

4. Electric Transformers

7. Construction of the magnetic conductor (core) of a transformer, Rab.energ. 3 no. 4, 1953.

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

VASIL'YEV, A.A., inzhener.

Improving repair work with line maintenance personnel. Elek.sta. 24 no.9: 46-49 S '53. (MLRA 6:8)

(Electric apparatus and appliances--Maintenance and repair)

Vasil'yev, A. A.

Subject : USSR/Engineering AID P - 984

Card 1/1 Pub. 28 - 7/9

Author : Vasil'yev, A. A.

Title : Use of oxygen from the main line after shut down of the oxygen compressor

Periodical : Energ. byul., #10, 28, O 1954

Abstract : A new pipe arrangement is offered for re-direction of the high pressure oxygen left in the main pipe line back to the oxygen tank, instead of blowing it out to the atmosphere. Two diagrams.

Institution : None

Submitted : No date

VASIL'YEV, A.A., inzhener.

Operating diagram for the district engineer of an electric network on duty. Elek.sta. 25 no.2:52-54 F '54. (MLRA 7:2)
(Electric networks)

SOV/124-57-5-6120

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 156 (USSR)

AUTHORS: Prigorovskiy, N. I., Vasil'yev, A. A., Bortkevich, V. I., Daychik, M. L.

TITLE: Wire Strain Gages (Provolochnyye tenzometry)

PERIODICAL: V sb.: Izmereniye napryazheniy i usiliy v detalyakh mashin, Moscow, Mashgiz, 1955, pp 5-43

ABSTRACT: A description is given of the properties of wire-type strain-gage pickups; experimentally plotted curves are given for hard and annealed constantan and Nichrome wire, curves showing the dependence of the stress and of the relative change in the electrical resistance on the relative elongation ϵ (for elongations ϵ up to 0.8%). The authors examine the actual process of transmission of the strain-producing forces from a metal specimen or machine part to a strain gage that has been glued to it, making due allowance for the stiffness of the glue used. The matter of selecting for the strain-gage pickup the gage of wire, current, and electrical resistance most compatible with the type of electrical meter being used is analyzed, and formulas and graphs are given to facilitate that selection; analyzed also are various methods of moisture-proofing the strain-gage pickups, and

Card 1/3

experimentally plotted curves are given showing the relationship between the amount of creep exhibited by the glue that is used and the temperature of the strain-gage pickup wire. Included,too, are: a) data on the varying degrees of error due to mechanical hysteresis exhibited by different strain-gage pickups pasted on with different types of glue; b) formulas permitting calculation of the maximum allowable length of a pickup intended for recording strains induced by high-frequency dynamic loads; c) a brief listing of the properties of the metals employed to make the strain-sensitive wires used as pickups; and d) a number of glue recipes. A description is given of the techniques and equipment used in the manufacture of wire strain-gage pickups; described also is a design for pickups capable of functioning at temperatures of up to 800°C. Describing, in addition, three types of electron-tube equipment suitable for use with wire pickups, the authors give: 1) a full circuit diagram for and essential data on all the elements of, the ISD static-strain gage developed by the Institut mashinovedeniya AN SSSR (Institute of Machine Construction, Academy of Sciences, USSR) [ISD = izmeritel' staticheskikh deformatsiy = static-strain gage; Transl. Note]. Operating either on 6N2P, 6Kh2P, or 6Ts4P radio tubes or on 6N1P television tubes and having a 50-cps measuring-bridge power supply, this instrument is sensitive to strains as small as 10^{-5} cm/cm. (Reviewer's Note: In the circuit diagram given for this instrument an error

Wire Strain Gages

appears; the indicated anode connection points of the 6Kh2P radio tube should be reversed); 2) a full circuit diagram of an automatic strain recorder that makes strain recordings at 120 different points in the course of 80 seconds; included is a diagram of the instrument's 120-point switch; 3) a summary account of the full-beam-deflection parameters on 2-500 μa current loads of the high-sensitivity frame-type vibrators put out by the "Geofizika" plant [Geofizika = geophysics; Transl. Note], plus a detailed description of a UD-3 type strain-testing laboratory capable of recording dynamic strains of frequencies up to 1,500 cps. A brief description is given also of a cathode-ray oscillograph specially designed to record impact strains.

P. V. Novitskiy

Card 3/3

VASIL'YEV, A.A.

MUSATOV, T.P., inzhener; NAUMOVSKIY, L.D., inzhener; IOFFE, Ye.F., inzhener; POBEGAYLO, K.M., inzhener; KUZMIN, Ya.F., inzhener; VASIL'YEV, A.A., inzhener.

On permanent markings on the supports of electric transmission lines. Elek. sta. 26 no.1:43-45 Ja '55. (MLRA 8:3)
(Electric lines--Overhead)

UGORETS, I.I.; GLAZUNOV, A.A.; SYROMYATNIKOV, I.A.; KASHUNIN, I.S.; POSTNIKOV, N.A.; RADTSIG, V.A.; UL'YANOV, S.A.; GRUDINSKIY, P.G.; YASIL'YEV, A.A.; KUVSHINSKIY, N.N.; BAPTIDANOV, L.N.; TARASOV, V.I.; KRIKUNCHIK, A.B.; SHAPIRO, A.B.; BIBIKOV, V.V.; DVOSHIN, L.I.; KLINGOF, I.D.; KARPOV, M.M.; USPENSKIY, B.S.; CHALIDZE, I.M.; BLOCH, Ya.A.; SHMOTKIN, I.S.

Iosif IAkovlevich Gumin; obituary. Elek.sta.26 no.12:58 D '55.
(Gumin, Iosif IAkovlevich, 1890-1955) (MLRA 9:4)

KAZANSKIY, P.; VASIL'YEV, A.A., redaktor; TSIGEL'MAN L.T., tekhnicheskiy redaktor

[How to make antennas and grounding systems] Kak sdelat' antennu i zazemlenie. Moskva, Izd-vo DOSAAF, 1956. 21 p. (MLRA 9:12)
(Radio--Antennas)

VASIL'YEV, A.A.

Simplified arrangement for starting electric motors. Prom.energ. 12 no.2:19-20 F '57. (MLRA 10:3)
(Electric motors—Starting devices)

Concerning nominal units for determination of the category 104-3-18/45
of power systems. (Cont.)

but they will be much more accurate.

There are 2 tables.

AVAILABLE: Library of Congress

Card 2/2

YAKOBSON, Il'ya Abramovich; VASIL'YEV, A.A., red.; VORONIN, K.P., tekhn. red.

[Making pressed contact connections for electric wires and electric lines] Opressovanie kontaktnykh soedinenii provodov i trosov. Moskva, Gos. energ. izd-vo, 1961. 47 p. (Biblioteka elektromontera, no.41)

(Electric connectors) (MIRA 14:9)

ANDRIYEVSKIY, Valeriy Nikolayevich; VASIL'YEV, A.A., red.; SHIMOKOVA, M.M., tekhn.red.

[Use of wooden supports for overhead electric power transmission lines]Ekspluatatsiia dereviannykh opor linii elektroperedachi. Moskva, Gosenergoizdat, 1962. 55 p. (Biblioteka elektromontera, no.71) (MIRA 16:2)

(Electric lines—Poles and towers)

KAYETANOVICH, Mikhail Mikhaylovich; VASIL'YEV, A.A., red.; SHIROKOVA, M.M., tekhn. red.

[Operation of wires, insulators, and equipment of electric power transmission lines]Kak rabotaiut provoda, izoliatory i armatura linii elektroperedachi. Moskva, Gosenergoizdat, 1962. 63 p. (Biblioteka elektromontera, no.63)

(MIRA 15:8)

(Electric lines--Overhead)

POYARKOV, Kirill Mikhaylovich; VASIL'YEV, A.A., red.; YEMZHIN, V.V., tekhn. red.

[Regulated transformers and their use]Reguliruemye transformatory i ikh ekspluatatsiia. Moskva, Gosenergoizdat, 1962. 174 p. (MIRA 15:11)
(Electric transformers)

VASIL'YEV, A.A.; OKOLOVICH, M.N.; CHUGREYEV, A.V.; KRYUCHKOV, I.P., red.

[Manual on laboratory course in "The electrical section of electric power plants."] Rukovodstvo dlia raboty v laboratorii po kursu "Elektricheskaia chast' stantsii." Red. I.P.Kriuchkov. Moskva, Mosk. energ. in-t, 1963. 85 p. (MIRA 16:10)

1. Prepodavateli kafedry elektricheskikh stantsiy Moskovskogo energeticheskogo instituta (for Vasil'yev, Okolovich, Chugreyev).
(Electric power plants—Electric equipment)

VASIL'YEV, A.A.; TKALIN, I.M.; SHTEYNSHNAYDER, M.B.

Line assembly of the movable parts of electric meters. Priborostroenie no.4:21-23 Ap '63. (MIRA 16:4)
(Assembly-line methods)

L 8304-66 EWT(m)/EWP(w) EM

ACC NR: AP5027724 SOURCE CODE: UR/0380/65/000/005/0117/0120

AUTHORS: Vasil'yev, A. A. (Moscow); Daychik, M. L. (Moscow)

ORG: none

TITLE: Thermal stability of a self-thermocompensating sensor for strain gauges

SOURCE: Mashinovedeniye, no. 5, 1965, 117-120

TOPIC TAGS: strain gage, thermocouple, thermal stability, heat transfer, heat treatment/ TKV58 300 strain gage

ABSTRACT: Special alloys to be used as self-compensating strain gauge sensors were investigated for their thermal stability at high temperatures. In particular, the alloy Kh20N80YuD was found to have a thermal coefficient within the limits + 2.9 10^{-5}/°C, -3.3 10^{-5}/°C. The thermal characteristics of this alloy were investigated up to temperatures of 460C. The change in resistivity of a 0.03-mm wire made from the above alloy ξ_τ was found to depend on two changes: temperature characteristic ξ_t and initial resistance $\xi_0 = f(t,\tau)$. Between 400 and 460C the

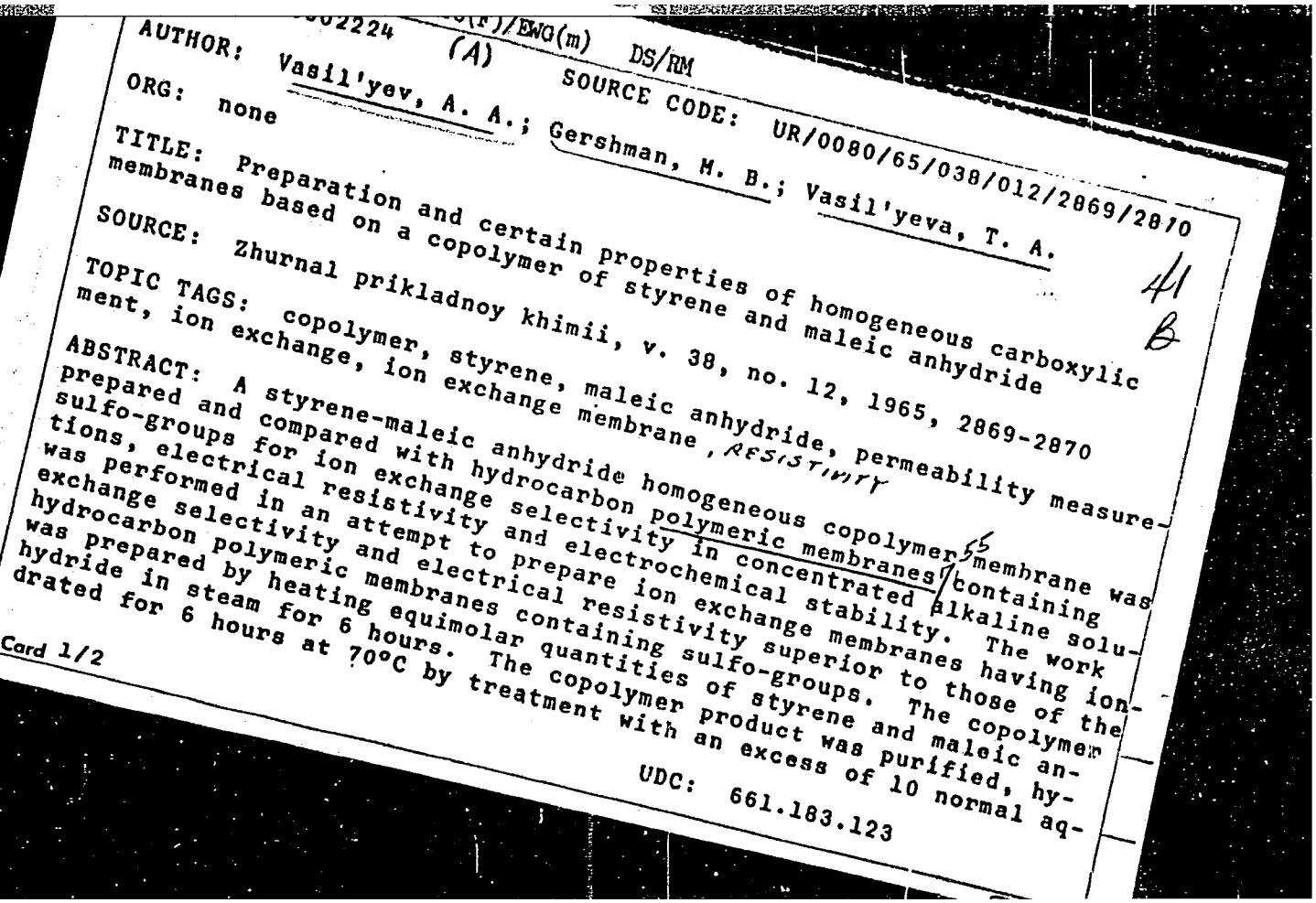
Card 1/2 UDC: 681.1/2

changes of these various magnitudes were found to be related by

$$\Delta\xi_{t=200} \approx -0{,}2\Delta\xi_{tr},\ \Delta\xi_{c} \approx 1{,}7\Delta\xi_{tr}.$$

Experiments with this alloy show that isothermal heat treatment affects the temperature characteristics slightly up to 350C, but significant deviations occur above 350C. Consequently, the various self-compensating sensors are divided into two groups, depending on whether the isothermal heat treatment exceeds 350C or not. Orig. art. has: 4 figures and 2 formulas.

SUB CODE: 20/ SUBM DATE: 26Apr65/ ORIG REF: 004



002224 (A) SOURCE CODE: UR/0080/65/038/012/2869/2870

AUTHOR: Vasil'yev, A. A.; Gershman, M. B.; Vasil'yeva, T. A.

ORG: none

TITLE: Preparation and certain properties of homogeneous carboxylic membranes based on a copolymer of styrene and maleic anhydride

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 12, 1965, 2869-2870

TOPIC TAGS: copolymer, styrene, maleic anhydride, permeability measurement, ion exchange, ion exchange membrane, RESISTANT

ABSTRACT: A styrene-maleic anhydride homogeneous copolymer membrane was prepared and compared with hydrocarbon polymeric membranes containing sulfo-groups for ion exchange selectivity in concentrated alkaline solutions, electrical resistivity and electrochemical stability. The work was performed in an attempt to prepare ion exchange membranes having ion-exchange selectivity and electrical resistivity superior to those of the hydrocarbon polymeric membranes containing sulfo-groups. The copolymer was prepared by heating equimolar quantities of styrene and maleic anhydride in steam for 6 hours. The copolymer product was purified, hydrated for 6 hours at 70°C by treatment with an excess of 10 normal aq-

Card 1/2

UDC: 661.183.123

L 13527-66

ACC NR: AP6002224

ueous KOH, washed with methanol, and dried. The membranes (85 microns thick) were drawn from 30% aqueous solution of copolymer. The electrical resistivity (in ohm·cm^2) of copolymer membranes treated for 1-30 days in 10 normal KOH solution was determined at 20°C. It was found that homogeneous cation-exchange membranes made of styrene-maleic anhydride copolymer display high exchange selectivity in concentrated alkaline solutions. The styrene-maleic anhydride copolymer membranes have higher electrical resistivity than membranes made of hydrocarbon polymer containing sulfo-groups. Orig. art. has: 2 tables.

SUB CODE: 07/ SUBM DATE: 25Feb65/ ORIG REF: 003/ OTH REF: 001

Card 2/2 DR

VASILIEV, A.A., [illegible], KUZMIN, V.F.(U.S.S.R.)

Measurements of the instantaneous values of the dynamic characteristics in proton synchrotrons

CERN-Symposium on High Energy Accelerators and Pion Physics

Geneva 11-23 June 56
In Branch #5

MINTS, A.L.; RUBCHINSKIY, S.M.; VEYSBEYN, M.M.; VASIL'YEV, A.A.

Injection process control systems and particle acceleration in the proton synchrotron. Radiotekh. i elektron. i no.7:974-985 Jl '56. (MLRA 10:1)

(Synchrotron)

VASIL'YEV, A. A.

"On Measuring the Instantaneous Frequency of Frequency-Modulated Oscillations," by S. M. Rubchinskiy, A. A. Vasil'-yev, V. F. Kuz'min, and N. I. Fedorenko, Radiotekhnika i Elektronika, No 7, Jul 56, pp 986-1000

Four methods for precision measurement of the instantaneous frequency of frequency-modulated oscillations were considered. It was proved that the four methods employed in the construction of the 10 Bev synchrophasotron, the selectivity method, the stroboscope method, the two-channel heterodyne method, and the phase method, all possessed accuracies better than $\pm 5 \times 10^{-4}$.

SUM. 1305

VASIL'YEV, A.A., SELDOVICH, M.P., RUBCHINSKIY, S.M. KUZMIN,V.F., KUROCHKIN, S.S.

"Measurement of Instantaneous Values of Variabla Magnitude in Proton Synchrotron Technique," paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments, No. 1, pp. 21-30, 1957

Vasil'yev A. A.

AUTHOR: Timofeyev, P. V., Corresponding Member, AS USSR. 30-1-20/39

TITLE: Short Reports (Kratkiye soobshcheniya). The 4. International Convention on Atomic Energy, Electronics, and Radio Engineering (IV Mezhdunarodnyy kongress po atomnoy energii, elektronike i radiotekhnike).

PERIODICAL: Vestnik AN SSSR, 1958, Vol. 28, Nr 1, pp. 104-105 (USSR)

ABSTRACT: The congress took place in Rome from June 22 to July 7, 1957. It was attended by the representatives of Italy, England, Belgium, Poland, the USSR, U.S.A., France and other countries. The reports on atomic energy referred to the building of electric power stations. The majority of the reports on electronics, radio engineering, and automation was delivered by the representatives of firms. Reports dealt with the methods of producing semiconductor devices and of their application. Also questions of automation, computers, and the use of electronics and nuclear radiation for medical purposes were discussed. The Soviet scientists reported about counters of nuclear radiations (A. A. Markov), on the electron system of the synchrophasotron of the United Institute for Nuclear Research (A. A. Vasil'yev), on electronoptical devices for investigations carried out with gamma rays (P. V. Timofeyev). The congress

Card 1/2

Short Reports. The 4. International Convention on Atomic Energy, Electronics, and Radio Engineering. 30-1-20/39

was connected with an exhibition. The Soviet delegates demonstrated an apparatus for the application of atomic energy in industry and medicine. After the end of the congress the Soviet delegates accepted the invitation by Italian firms to visit firms of the elctron-, electrical engineering-, and optical industries.

AVAILABLE: Library of Congress

1. Atomic energy-Reports 2. Electronics-Reports

Card 2/2

66477

~~9(6), 9(8)~~ 9.3270 SOV/20-129-1-23/64

AUTHOR: Vasil'yev, A. A.

TITLE: On Production of Frequency-modulated Oscillations by Means of Relaxation Generators

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 1, pp 85 - 87 (USSR)

ABSTRACT: Frequency-modulated relaxation generators exhibit great potential possibilities and may be applied to a large field of frequency-modulation technique. Some preliminary papers dealing with this subject are shortly indicated. Operations, necessary in the frequency-modulation technique, may be realized by means of frequency-modulated relaxation generators, as is shown in present paper. For constant frequency of the succession of pulses the relaxation oscillations may be described by a periodic function of time. The author investigates a periodic function Π with the period 2π of the argument φ. The argument φ in turn is a function of the independent variable t. The quantity $f = \frac{1}{2\pi}\frac{d\varphi(t)}{dt}$ is termed as the instantaneous frequency of the oscillation $\Pi[\varphi(t)]$, and the function $\varphi(t)$ is termed instantan-

Card 1/4

eous phase. For $f(t) = f_0 = \text{const}$, the thus defined instantaneous frequency agrees with the frequency of the succession of pulses. The definition of the instantaneous frequency for oscillations of the form $\Pi[\varphi(t)] = \sin \varphi(t)$ in the frequency-modulation technique, is used already since long time. The above given definition also applies to oscillations, which are not described by the formula, given right now. The frequency of the succession can be varied by the usual relaxation generators, as for instance by a multivibrator or by a blocking generator, if the displacement voltage or another control voltage is varied. Concerning the realization of high stability and linearity of the modulation characteristics, the frequency-modulated relaxation generators with one or two switchable integrators exhibit remarkable advantages. The principle of the action of a frequency-modulated relaxation generator with an integrator (of which the triangular shape of the output voltage $\Pi(\varphi)$ is preferred) bases on the following: The integrator is connected to the input voltage $+U(t)$ and $-U(t)$ by an electronic switch. The electronic switch is controlled by a

trigger, which in turn is controlled by an amplitude selector. The switch connects the voltages $+U(t)$ and $-U(t)$ to the input of the integrator, when the input voltage of the integrator attains the levels of selecting $+U_o$ and $-U_o$ of the amplitude-selector. The instantaneous frequency is found to be $f(t) = \pi U(t)/RCU_o$. The triangular shape of the output voltage of the generator is to prefer, due to the fact, that oscillations with another shape may be easily obtained by non-linear transformations. In certain cases, two or more phase-shifted oscillations are necessary. Such shift is obtained by use of an additional circuit. Finally, the band-amplifying of the instantaneous frequency of frequency-modulated relaxation oscillations is investigated. This is important, for instance, for attaining a steady modulation characteristics in the range of high frequencies. The author thanks S. M. Rytov and S. M. Rubchinskiy for discussion of the paper and for advice. There are 4 figures and 7 references, 1 of which is Soviet.

66417
On Production of Frequency-modulated Oscillations by Means of Relaxation Generators SOV/20-129-1-23/64

PRESENTED: July 2, 1959, by A. L. Mints, Academician

SUBMITTED: June 30, 1959

VASIL'YEV, A.A.

Modeling of the phase motion of particles in a proton-synchrotron by means of a system providing for the inertial synchronization of the frequency-modulated oscillator. Dokl.AN SSSR 133 no.2:345-348 Jl '60. (MIRA 13:7)
(Synchrotron)

VASIL'YEV, A.A.

S/020/60/133/02/25/068
B019/B060

AUTHOR: Vasil'yev, A. A.

TITLE: Simulation of the Phase Motion of Particles in a Proton-synchrotron With the Aid of a System of Inertial Synchronization of a Frequency-modulated Generator

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 2, pp. 345-348

TEXT: Formula (1) describes the voltage of the system shown in Fig. 1 for the inertial synchronization of a frequency-modulated generator. Formulas are established for voltages at the inputs and outputs of the various blocks, and the conditions are specified as to when the generator shown in the block diagram of Fig. 1 simulates the phase of the accelerated particles. The conditions must first be satisfied, concerning the oscillations relative to the equilibrium phase. Moreover, the first term of equation (9) occurring in the system describing the modulation characteristic, must change like the revolution frequency of equilibrium particles. The securing of this requirement with a

Card 1/2

Simulation of the Phase Motion of Particles in a Proton-synchrotron With the Aid of a System of Inertial Synchronization of a Frequency-modulated Generator

S/020/60/133/02/25/068
B019/B060

frequency-modulated relaxation generator, the block diagram of which is shown in Fig. 2, is discussed. The simulator described here can be connected directly to the apparatus effecting particle acceleration. Moreover, this simulator may serve for studying the influence of the discrete energy increases of the particles on the phase oscillations. Such investigations on accelerators with constant magnetic field are briefly explained, and in this connection, also the adaptations required for the simulator shown in Fig. 1 (Figs. 3 and 4) are discussed. The author thanks E. L. Burshteyn for valuable advice given. There are 4 figures and 10 references: 5 Soviet, 2 American, 2 Swiss, and 1 German.

PRESENTED: March 19,1960, by A. L. Mints, Academician

SUBMITTED: March 17, 1960

VC

Card 2/2