L 27881-65

ACCESSION NR: AT5004213 S/0000/64/000/000/0010/0013

AUTHOR: Tolubinskiy, V. I. (Corresponding member AN UkrSSR); Ornatskiy, A. P. (Candidate of technical sciences); Kichigin, A. M.; Litoshenko, A. K. 14

TITLE: Heat exchange crisis for boiling in narrow annular channels B+1

SOURCE: AN UkrSSR. Institut tekhnicheskoy teplofiziki. Teplefizika i teplotekhnika (Thermophysics and heat engineering). Kiev, Naukova dumka, 1964, 10-13

TOPIC TAGS: boiling, heat exchange, heat exchange crisis, critical thermal load, heat transfer

ABSTRACT: The purpose of the investigation, performed at the Problem Laboratory of Kiyevskiy politekhnicheskiy institut (Kiev Polytechnik Institute) was to ascertain the dependence of the critical thermal load on the width of the annular

Card 1/2

L 27881-65

ACCESSION NR: AT5004213

heat -- + 420 to - 420 kJ/kg; pressure -- 4.9, 9.8, and 14.7 MN/m^2. Unilateral and bilateral heating was used. The load was maintained constant on the inner tube at either 0.93 or 2.1 MW/m^2, and the heat load on the outer tube was varied smoothly until the heat-exchange crisis set in; this was assumed to occur when the tube turned red. The tests have shown that the critical heat load is practically independent of the underheat or the pressure if the weight velocity and gap width are constant. The critical heat load increases with increasing weight velocity. Other conditions being equal, the values of the critical heat load for unilateral

with increasing width of the annular gap. Orig. art. has: 3 figures and 4 formulas.

ASSOCIATION: Kiyevskiy ordena Lenina politekhnicheskiy institut (Kiev "Order of Lenin" Polytechnic Institute)

SUBMITTED: 10Aug64 ENCL: 00 SUB CODE: TD

NR REF SOV: 000 OTHER: 000

Card 2/2

L 63207-65 EWT(l)/EPF(c)/EPF(n)-2/EWG(m) WW

ACCESSION NR: AP5018205 UR/0207/65/000/003/0113/0116

AUTHOR: Ornatskiy, A. P. (Kiev)

TITLE: Generalization of experimental data on hydraulic drag during surface boiling

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 3, 1965, 113-116

TOPIC TAGS: experimental method, heat transfer, boiling heat transfer, drag coefficient, temperature distribution, pressure distribution

ABSTRACT: Methods are outlined for generalizing experimental data on drag during boiling under conditions of large underheating (40-50C). Data from a number of

cally as a function of q", flow rate W, Δt, specific heat c and diameter d.

Card 1/3

L 63207-65

ACCESSION NR: AP5018205

Using 440 data points from various experiments, the following set of expressions is obtained for the channel pressure drop.

$$\Delta p' = 4.3\,S''\frac{l}{d}\frac{\rho W^2}{2}$$

$$\Delta p' = \xi\frac{l}{d}\frac{\rho W^2}{2} = \xi_0\left(\frac{\mu_+}{\mu}\right)^{0.25}\frac{l}{d}\frac{\rho W^2}{2}$$

$$\frac{\Delta p}{\Delta p'} = 1 + 4.3\frac{S''}{\xi_0(\mu_+/\mu)^{0.25}}$$

where $S'' = E''d/Al$ is the modified Stanton number, E'' the modified Euler number, A

[illegible] ordinate. A plot of $\Delta p/\Delta p'$ versus S'' shows data correlation within a band of [illegible] evaluation of this

work." Orig. art. has: 12 equations and 3 [illegible]

ASSOCIATION: none

SUBMITTED: 09Oct64 ENCL: 01 SUB CODE: ME, TD

NO REF SOV: 007 OTHER: 003

Card 2/3

L 63207-65

ACCESSION NR: AP5018205 ENCLOSURE: 01

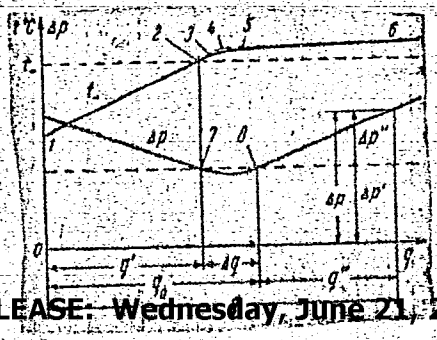

Fig. 1.

Card 3/3

ORNATSKIY, A.P., [illegible], L.S.

Critical state of heat transfer under conditions of forced motion of underheated water in tubes of small diameter. Teplofiz. vys. temp. 3 no.3:444-451 My-Je '65. (MIRA 18:8)

1. Kiyevskiy politekhnicheskiy institut.

L 21987-66 EWT(l)/EPF(n)-2/ETC(m)-6 WW/GG

ACCESSION NR: AP5025987 UR/0294/65/003/005/0727/0730
532.543.6:536.423.1

AUTHOR: Ornatskiy, A. P.; Glushchenko, L. F.

TITLE: The hydraulic resistance of annular channels with surface boiling of water at pressures of 172 to 216 bars

SOURCE: Teplofizika vysokikh temperatur, v. 3, no. 5, 1965, 727-730

TOPIC TAGS: hydraulic resistance, boiling, water, high pressure research

ABSTRACT: Experiments were carried out at pressures of 172-216 bars, mass velocities of 1000 and 2000 kg/m^2-sec, specific heat fluxes of 0.5 and 1.0 megawatts/m^2, underheating from 5-10 to 80-90C, and with a width of the annular gap of 1.5 mm. Results are shown graphically. In the region of ultrahigh pressures, right up to pressures close to the critical (216 bars), the appearance of boiling of the liquid in the layer close to the wall causes a rise in the hydraulic resistance of the channel, as in earlier investigations in a pressure range of 4.9 to 172 bars. This indicates that the mechanism of hydraulic resistance in the presence of surface boiling is qualitatively identical in the regions of low, high,

Card 1/2

L 21987-66

ACCESSION NR: AP5025987

and ultrahigh pressures. The magnitude of the hydraulic resistance with surface boiling in the ultrahigh pressure region (172-216 bars) is practically independent of the pressure, within the range of 4.9 to 216 bars. An empirical equation is derived which is said to be applicable for determination of the hydraulic resistance under the above conditions up to a pressure of 216 bars. Orig. art. has: 2 formulas and 4 figures

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiev Polytechnic Institute)

SUBMITTED: 09Jun64 ENCL: 00 SUB CODE: 20

NR REF SOV: 001 OTHER: 000

Card 2/2

ACC NR: AP60...2166 (N) SOURCE CODE: UR/0096/66/000/010/0066/0069

AUTHOR: Ornatskiy, A. P. (Candidate of technical sciences); Kichigin, A. M. (Candidate of technical sciences); Glushchenko, L. F. (Candidate of technical sciences)

ORG: Kiev Polytechnical Institute (Kiyevskiy politekhnicheskiy institut)

TITLE: Studying critical heat flux in annular channels during external heating

SOURCE: Teploenergetika, no. 10, 1966, 66-69

TOPIC TAGS: heat flux pickup, heat transfer, heat measurement, flow velocity

ABSTRACT: Experimental data are given on the magnitude of critical heat flux as a function of mass velocity, pressure and underheating during forced circulation of water in annular channels under conditions of unilateral heating. The experiments were carried out at the Laboratory of Heat Exchange Problems and Gas Dynamics of Kiev Polytechnical Institute in 1963-1964 at pressures of 9.8, 24.5, 49.1, 73.6, 98.1, 122.5, 147, 172, 186.4, 196, 201 and 216 bars with underheating variation limits of +750 to 100 KJ/kg. The basic tests were done at mass velocities of 1000 and 2000 $kg/m^2 \cdot sec$. All experiments were carried out under external heating conditions. A diagram is given showing the experimental unit. A comparison of the experimental and theoretical data shows disagreement which is apparently due to the fact that most of the work on this problem has been done at higher mass velocities that were used in this study. An empirical formula is given for calculating the magnitude of critical heat flux for engineering purposes. Orig. art. has: 7 figures, 1 table, 1 formula.

SUB CODE: 20/ SUBM DATE: None/ ORIG REF: 008

Card 1/1 UDC: 536.24.532.3.536.68

ORNATSKIY, Igor' Aleksandrovich, kand.ekon. nauk; LIVSHITS, Ya.L., red.; RAKITIN, I.T., tekhn. red.

[Profitable to everybody; on international trade] Vygodno vsem; o mezhdunarodnoi torgovle. Moskva, Izd-vo "Znanie," 1963. 47 p. (Novoe v zhizni, nauke, tekhnike. VII Seriia: Mezhdunarodnaia , no.13) (MIRA 16:8)
(Russia--Commerce)

ANDREYEV, Oleg Vladimirovich; BABKOV, Valeriy Fedorovich; GEHBURT-GEYBOVICH, Andrey Vladimirovich; ZAMAKHAYEV, Mitrofan Semenovich; KRUTETSKIY, Yevgeniy Vladimirovich; OHMATSKIY, Nikolay Petrovich; SKUBL'NIKOV, Pavel Ivanovich; SMIRNOV, Andrey Sergeyevich; SHESTAKOV, P.N.[deceased] PLOTNIKOV, S.A., redaktor; KOGAN, F.L., tekhnicheskiy redaktor.

[Examples of highway design] Primery proektirovaniia avtomobil'nykh dorog. Izd.2-e, perer. Moskva, Nauchno-tekhn.izd-vo avtotransp. lit-ry, 1955. 283 p. (MLRA 8:12)
(Roads)

ACC NR: AM7002944 (A) Monograph UR/

Andreyev, Oleg Vladimirovich; Babkov, Valeriy Fedorovich; Gerburt-Geybovich, Andrey Vladimirovich; Krutetskiy, Yevgeniy Vladimirovich; Zamakhayev, Mitrofan Semenovich; Afanas'yev, Mikhail Borisovich; Bim-Bad, Maks Isaakovich; Ornatskiy, Nikolay Petrovich; Porozhnyakov, Vladimir Sergeyevich; Pryakhin, Aleksey Ivanovich; Sebel'nikov, Petr Ivanovich

Highway designing (Examples) (Proyektirovaniye avtomobil'nykh dorog (primary), Moscow, Izd-vo "Transport", 66, 0395 p. illus., biblio., tables. 6,000 copies printed, 3d ed., rev.

TOPIC TAGS: highway network, highway engineering, highway structure, hydraulic engineering, hydrological calculation

PURPOSE AND COVERAGE: The book gives technico-economic fundamentals for road network designing, and presents examples of transverse and longitudinal cross sections as well as methods of determining openings in small artificial structures. Calculations of earth bed stability and thickness of road pavements are given; planning and design of highways in complicated conditions is described. Hydrological and hydraulic calculations involved in the planning of crossings of

Card 1/3 UDC: 625.721.2(075.8)

ACC NR: AM7002944

large water expanses are examined. The book is intended primarily as a textbook for highway engineering students at institutions of higher learning and may likewise be useful for engineers and technicians. The authors express their gratitude to the reviewers: professors, doctors of technical sciences Ya. A. Kaluzhskiy and I. A. Romanenko; to docents, candidates of technical sciences V. A. Bogayeva, L. A. Barats, N. I. Baskevich, V. M. Kislyakov, and I. A. Nosich; to the chief engineer of the GPI Soyuzdorproyekt V. B. Zavadskiy, and to engineers A. A. Semenovskiy, M. L. Sokolov, and A. S. Fedner; also to instructors of MADI, doctor of technical sciences L. A. Bronshteyn, and candidate of technical sciences Ye. N. Garmanov.

TABLE OF CONTENT [abridged]:

Card 2/3

ACC-NR: AM7002944

SUB CODE: 13/ SUBM DATE: 08Jul66/ ORIG REF: 003/

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORNATSKIY, N.P., inzh.

Rated soil conditions. Trudy MADI no.22:156-160 '58.
(MIRA 12:4)
(Soil mechanics)

ORNATSKIY, N.P., inzh.

Compacting soil embankments. Avt. dor. 23 no.8:18-20 Ag '60.
(MIRA 13:8)
(Soil stabilization) (Embankments)

ORNATSKIY, Nikolay Vladimirovich, prof., doktor tekhn. nauk; KISELEVSKIY, Aleksey Nikolayevich, dots.; ORNATSKIY, Nikolay Petrovich, kand. tekhn. nauk; ANDREYEV, Oleg Vladimirovich, kand. tekhn. nauk, dots.; IVANOV, Nikolay Nikolayevich, zasl. deyatel' nauki i tekhniki RSFSR, prof., doktor tekhn. nauk; BIRULYA, Aleksandr Konstantinovich, prof., doktor tekhn. nauk; BABKOV, V.F., prof., doktor tekhn. nauk; NOVIKOV, L.V., prof., retsenzent

[Automobile roads; an introductory course] Avtomobil'nye dorogi; vvodnyi kurs. Moskva, Vysshaia shkola, 1964. 294 p. (MIRA 18:4)

1. Kiyevskiy avtomobil'no-dorozhnyy institut (for Ornatskiy, N.V., Kiselevskiy, A.N., Andreyev, O.V., Ivanov). 2. Khar'kovskiy avtomobil'no-dorozhnyy institut (for Ornatskiy, N.P., Babkov). 3. Khar'kovskiy avtomobil'no-dorozhnyy institut (for Birulya). 4. Voyennaya Akademiya Tyla i Transporta (for Novikov).

ORNATSKIY, N.V.

25178 Ornatskiy, N.V. Grafoanaliticheskiy Metod Proektirovaniye Variantov Organizatsii Mekhanizirovannykh Dorozhnostroitel'nykh Rabot. Trudy, Mosk. Avtomob-Dor. In-ta Im Molotova, VYP. 11, 1949, c.21-36

SO: Letopis' No. 33, 1949

ORNATSKIY, N. V.

Soil mechanics; a textbook Moskca Izdvo Moskovskogo universiteta, 1950. 419 p. 52-16730

TA710.072

ORNATSKIY, N.V.

ANOKHIN,A.I., doktor tekhnicheskikh nauk,prof.[deceased]; BORODACHEV,I.P. kand. tekhnicheskikh nauk; BROMBERG, professor; VASIL'YEV,A.A., laureat Stalinskoy premii; PETERS, kandidat tekhnicheskikh nauk; POLOSIN-NIKITIN,S.M., kandidat tekhnicheskikh nauk; PRUSSAK,B.N., inzhener; RITOV,M.N., inzhener; FEYNBERG,G.M., inzhener; ESTRIN, M.I., inzhener; ALEKSEYEV,A.P., inzhener; BIRULYA,A.K., professor, doktor tekhnicheskikh nauk; BOLDAKOV,Ye.V., doktor tekhnicheskikh nauk;BOCHIN,V.A., laureat Stalinskoy premii,inzhener; VOLKOV,M.I., professor; GIBSHMAN,Ye.Ye., professor, doktor,technicheskikh nauk; DONCHENKO,V.G., dotsent, kandidat tekhnicheskikh nauk; ZHURAVLEV,A.Ya., laureat Stalinskoy premii; IVANOV,N.N., laureat Stalinskikh premii, professor, doktor tekhnicheskikh nauk; KUVASOV,A.S., inzhener; NEKRASOV, V.K., kandidat tekhnicheskikh nauk; POLOSIN-NIKITIN,S.M., dotsent, kandidat tekhnicheskikh nauk; KHLEBNIKOV,Ye.L., laureat Stalinskoy premii, professor; ORNATSKIY,N.V., doktor technicheskikh nauk, professor, redaktor; VOSKRESENSKIY,N.N., redaktor; KOVALIKHINA,N.F., tekhnicheskiy redaktor

[Manual for highway engineers; road building machinery] Spravochnik inzhenera dorozhnika; dorozhno-stroitel'nye mashiny. Moskva, Izdvo dorozhno-tekhn. lit-ry. Gushosdora MVD SSSR, 1952. 698 p. [Microfilm]

(Road machinery) (MLRA 9:2)

ORNATSKIY, N V

N/5
632.898
.07

ORNATSKIY, N V

Issledovaniye protsessa kol'matatsii peskov (Investigation of the process of improving land by sand deposition, by) N. V. Ornatskiy, Ye. M. Sergeyev, i Yu. M. Shekhtman. Moskva, Izd-vo Moskovskogo Universiteta, 1955.
181 p. diagrs. graphs, tables.
Bibliography: p. 178-180.

ORNATSKIY, N.V., professor.

A valid engineering theory for calculating road surfaces is needed. Avt.dor.18 no.7:17-18 N '55. (MLRA 9:4)
(Roads)

15-57-10-14686

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10, p 218 (USSR)

AUTHOR: Ornatskiy, N. V.

TITLE: An Experiment on the Theoretical Investigation of the Limiting Equilibrium of Loose Soil for Purposes of Geological Classification of Districts for Sensitivity to Microseisms (Opyt teoreticheskogo issledovaniya predel'nogo ravnovesiya sypuchikh gruntov dlya tseley geologicheskogo mikroseysmorayonirovaniya)

PERIODICAL: Uch. zap. Mosk. un-t, 1956, Nr 177, pp 201-225

ABSTRACT: The author investigates the conditions of limiting equilibrium of loose soil on a slope, with consideration of the inclined inertial force that arises during the action of a seismic wave. The direction of the inertial force is associated with spatial orientation of the slope in relation to the seismic source. A method is proposed to define earthquake-resistant slopes, depending on their steepness and direction of inertial

Card 1/2

An Experiment on the Theoretical Investigation (Cont.)

force. In addition, a method is proposed for determining the relationship between the geological profile of a site and the characteristics of anticipated seismic activity.

N. V. Ornatskiy

Card 2/2

IVANOV, N.N., doktor tekhn.nauk; ORNATSKIY, N.V., doktor tekhn.nauk;
BABKOV, V.F., doktor tekhn.nauk; MIKHAYLOV, V.V., kand.tekhn.nauk

Achievements of Soviet highway research. Avt.dor.20 no.10:18-20
O '57. (MIRA 10:12)
(Roads--History)

IVANOV, Nikolay Nikolayevich, prof.; ORNATSKIY, Nikolay Vasil'yevich, prof.; BABKOV, Valeriy Fedorovich, prof.; IYEVLEVA, T.A., red.; MAL'KOVA, N.V., tekhn.red.

[Fourth International Conference on Soil Mechanics and Foundation Engineering] IV Mezhdunarodnyi kongress po mekhanike gruntov i fundamentostroeniiu, London, 1957 g. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1958. 178 p. (MIRA 12:6)
(London--Soil mechanics--Congresses) (Great Britain--Road construction)

ORNATSKIY, N.V.

Deformability of water saturated soils. Nauch.dokl.vys.shkoly; geol.-nauki no.4:182-187 '58. (MIRA 12:6)

1. Moskovskiy universitet, geologicheskiy fakul'tet, kafedra gruntovedeniya i inzhenernoy geologii.
(Soil mechanics) (Water, Underground)

ORNATSKIY, N.V.; TROITSKAYA, M.N.

Fourth International Congress on Soil Mechanics and Foundation Engineering. Vest. Mosk. un. Ser. biol., pochv., geol., geog. 13 no. 1:243-252 '58. (MIRA 11:7)
(London--Soil mechanics--Congresses)
(Foundations)

ORNATSKIY N.

IVANOV, N.N., prof.; ORNATSKIY, N.V., prof.; BABKOV, V.F., prof.

Problems in road construction at the Fourth International Conference on Soil Mechanics and Foundation Engineering in London. Avt. dor. 21 no.1:24-26 Ja '58. (MIRA 11:1)
(London--Soil machanics--Congresses)

ORNATSKIY, N.V.

IVANOV, N.N., prof.; ORNATSKIY, N.V., prof.; BABKOV, V.F., prof.

Roads in southeastern England. Avt. dor. 21 no.2:26-28 F '58.
(MIRA 11:2)
(England--Roads)

Ornatskiy, N.V.

IVANOV, N.N., prof.; ORNATSKIY, N.V., prof.; BABKOV, V.F., prof.

Highway research center and soil laboratories in England. Avt. dor. 21 no.4:26-28 Ap '58. (MIRA 11:4)
(England--Soil mechanics) (England--Highway research)

ORNATSKIY, N.V.; PREFERANSOV, L.A.

Stations for observing subgrade water regimen and pavement performance. Avt. dor. 22 no.5:31-32 My '59. (MIRA 12:8)

(Highway research)

ORMATSKIY, N.V.

Using tables of mechanical characteristics of rocks for studying their petrographic types. Vest.Mosk.un.Ser.4: Geol. 15 no.3: 15-23 My-Je '60. (MIRA 13:8)

1. Kafedra gruntovedeniya i inzhenernoy geologii Moskovskogo universiteta.

(Soil mechanics)

ORNATSKIY, Nikolay Vasil'yevich, prof., doktor tekhn. nauk; POPOV, I.V., prof., doktor geologo-miner. nauk, retsenzent; GUMENSKIY, V.M., prof., doktor geol.-miner. nauk, retsenzent; MAKSIMOV, S.N., red.; GEORGIYEVA, G.I., tekhn. red.

[Soil mechanics]Mekhanika gruntov. Moskva, Izd-vo Mosk. univ., 1962. 446 p. (MIRA 15:9)

(Soil mechanics)

BABKOV, Valeriy Fedorovich, prof.; ORNATSKIY, Nikolay Vasil'yevich, prof.; MASLOV, Nikolay Nikolayevich, prof.; IVANOV, Nikolay Nikolayevich; KOVRIZHNYKH, L.P., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Problems of road construction at the 5th International Conference on Soil Mechanics and Foundation Engineering, Paris, 1961] Voprosy dorozhnogo stroitel'stva na V Mezhdunarodnom kongresse po mekhanike gruntov i fundamentostroeniiu, Parizh, 1961. [By] V.F.Babkov i dr. Moskva, Avtotransizdat, 1963. 200 p. (MIRA 17:4)

NESTERENKO, A.D.; ORNATSKIY, P.P.

Improving the design of electric measuring instruments. Izm.tekh.no.2: 51-54 Mr-Ap '56. (Electric instruments) (MIRA 9:7)

ORNATSKIY, P.P.

Analysing errors of electrostatic wattmeters. Izv. KPI 22:47-59 '57.
(Wattmeter--Testing) (MIRA 11:3)

ORNATSKIY, P.P.

Additional temperature errors in thermocouple instruments. Izv. KPI 22:60-62 '57. (MIRA 11:3)

(Electric instruments)

ORNATSKIY, P.P.

Certain dynamic problems of the moving system in electric measuring instruments used for measurements at infralow frequencies. Izv. KPI 26:463-474 '57. (MIRA 11:6)

1. Kafedra izmeritel'nykh ustroystv Kiyevskogo politekhnicheskogo instituta.

(Electric meters)

AUTHOR: Ornatskiy, P.P., Candidate of Technical Sciences (Kiev Polytechnical Institute).

TITLE: Some special features of the development of indicating electrical instruments. (Nekotorye osobennosti razvitiya pokasyvayushchikh elektroizmeritel'nykh pribor.)

PERIODICAL: "Vestnik Elektropromyshlennosti" (Journal of the Electrical Industry), 1957, Vol. 28, No. 5, pp. 5 - 9, (U.S.S.R.)

ABSTRACT: This article describes briefly some special features of the development of indicating instruments.

Accurate portable instruments are being developed and it appears possible to produce class 0.05 instruments. Electrodynamic spring suspension instruments of class 0.01 are being made as a result of the application of new platinum base alloys for the spring suspension. Further increase in accuracy can be achieved by the use of longer scales. Pivots have been improved. The frequency range of instruments is being increased. The development of panel mounting instruments shows the following tendencies: increase of accuracy, class 1.0 is manufactured and class 0.5 is being developed. The use of spring suspension is being extended. The production of small size instruments with a circular scale of 240° is being increased, a series of shock-resistant instruments has been developed. Panel mounting frequency meters are not yet accurate enough and VAR meters and apparent power meters are not yet produced.

Some special features of the development of indicating electrical instruments. (Cont.)

Magneto-electric instruments are being perfected mainly in respect of increased accuracy and sensitivity. Class 0.1 instruments were first made in the U.S.S.R. and such Soviet instruments are better than those of the leading foreign firms. The development of magnetic systems of these instruments is characterised by the application of alloys of high coercivity and other magnetic developments. Special attention has recently been paid to moving magnet instruments.

Electro-dynamic instruments of a new astatic design have appeared. Designs using ceramic parts are used in instruments for high frequency and for low power factor. High sensitivity, spring suspension, electro-dynamic instruments are also being developed.

Ferro-dynamic instruments have mainly been made in panel mounting and recording types. The "Vibrator" Works produces an eight range, class 1.5, portable, ferro-dynamic voltammeter. The use of low loss magnetic material in powder form, of new magnetic materials with constant permeability at the origin of the magnetisation curve and the use of spring suspension will make it possible to increase the accuracy and sensitivity of ferro-dynamic instruments.

Electro-magnetic instruments are also being developed in respect of improved accuracy and sensitivity and extension of frequency range. The development of permalloy with a coercive force of the order of a few thousandths oersteds made it

Some special features of the development of indicating electrical instruments. (Cont.) 410

possible to produce class 0.2 electro-magnetic instruments.

Induction instruments of the pointer type have so far only been used in panel-mounting wattmeters.

Electrostatic instruments are developing mainly in respect of increasing the range of measurement but also in respect of increased accuracy.

Thermo-electric instruments are being developed in respect of extending the frequency range and improving the accuracy. The "Vibrator Works" has produced new portable thermo-electric instruments: ammeter T-12 and milli-ammeter T-13 with a range of from 1 mA to 20 A for frequencies of 25-50 Mc/s.

Multi-range instruments. The production of multi-range instruments is expanding rapidly.

In many instances, the design of cases and auxiliary parts of instruments is out-of-date and several improvements are suggested.

5 figures, no literature references.

ORNATSKIY, P. P.

PHASE I BOOK EXPLOITATION 649

Nesterenko, Anatoliy Dmitriyevich and Ornatskiy, Petr Pavlovich

Detali i uzly priborov; raschet i konstruirovaniye (Instrument Parts and Joints; Design and Construction) Kiyev, Gostekhizdat, USSR, 1958. 375 p. 8,000 copies printed.

Ed.: Korsak, Yu. Tech. Ed.: Kukharenko, Z.

PURPOSE: This book is intended for students of vuzes and tekhnikums specializing in the field of instrument making, and for design engineers working in instrument-making plants.

COVERAGE: The book deals with the basic problems of design and construction of various instrument parts and joints. A detailed presentation includes information on allowances and fits, materials used in instrument making, and the technological characteristics of manufacturing parts by various methods such as cold forging, die-casting processes and molding of plastics.

Card 1/10

The supports for various movable systems, speed regulators, electrical switches and contacts, springs and different types of transmissions are also discussed in detail. There are 29 Soviet references.

TABLE OF CONTENTS:

Instrument Parts and Joints (Cont.) 049

Card 3/ 10

Instrument Parts and Joints (Cont.)

Instrument Parts and Joints (Cont.)

Card 7/ 10

Instrument Parts and Joints (Cont.)

Card 9/10

Instrument Parts and Joints (Cont) 649

AVAILABLE: Library of Congress

Card 10/10

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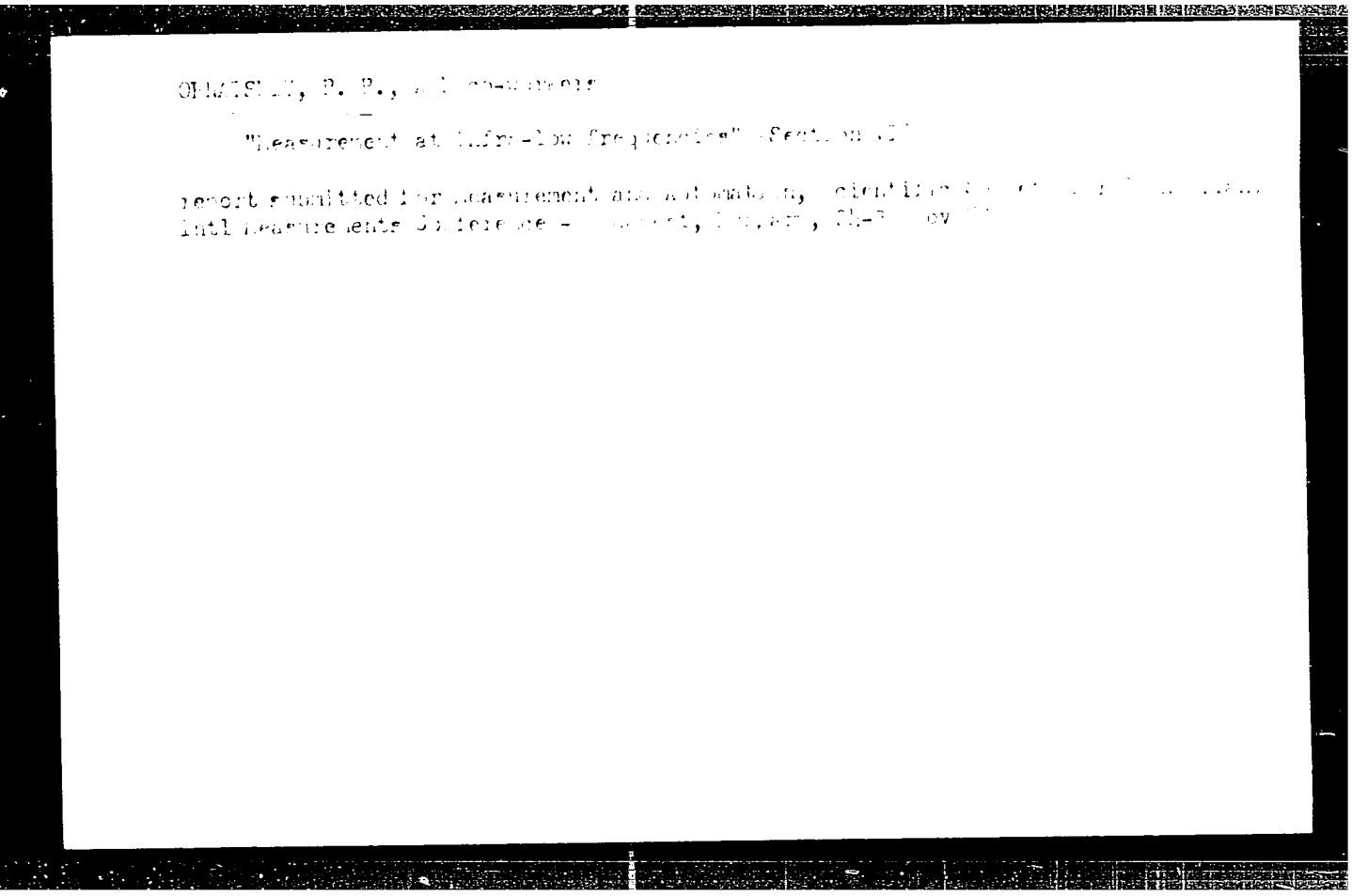

SOV/146-58-4-4/22

AUTHORS: Ornatskiy, P.P., Candidate of Technical Sciences, Docent Khodeyev, I.K., and Dem'yanenko, V.A., Engineers

TITLE: A Sensitive, Multirange Electromagnetic Milliampere-Voltmeter for a Broadened Frequency Band

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Priborostroyeniye, 1958, Nr 4, pp 19-25 (USSR)

ABSTRACT: Presently a rapid improvement and further development of electrical measuring instruments of almost all systems is observed. However, the improvement of moving-iron instruments in regard to sensitivity, extended measuring and frequency ranges is advancing slowly at the present time. Recently the Kiyev plant "Tochelektropribor" developed a new series of class 0.5, E-59 moving-iron instruments, having increased sensitivity. The ammeters of this series, built for current of 2.5-10 amperes, have an increased frequency range. The multirange milliammeter for 10-20-40 milliamperes and the voltmeters of this series do not have an extended frequency range. In these devices a difference of the

Card 1/5

A Sensitive, Multirange Electromagnetic Milliampere-Voltmeter for a Broadened Frequency Band

readings on direct current and on 50-cycle alternating current is observed with uncharged values of the magnitudes to be measured. The magnitude of this difference limits the sensitivity of the multirange milliampere-meters and voltmeters of type E-59. The frequency error of these instruments is positive and caused by a considerable interturn capacitance in the tapped measuring coil. At the Kafedra izmeritel'nykh ustroystv Kiyevskogo politekhnicheskogo instituta (Chair of Measuring Devices of the Kiyev Polytechnic Institute) in cooperation with the laboratory of indicating instruments of the plant "Tochelektropribor", special studies were performed for the purpose of improving the parameters of class 0.5 moving-iron instruments. The results of this work may be used for the development of high-sensitive alternating current instruments of electromagnetic and other systems for higher frequencies. A new multirange instrument with

 a tapped coil was created on the basis of the E-59

A Sensitive, Multirange Electromagnetic Milliampere-Voltmeter for a Broadened Frequency Band

instrument. For increasing the sensitivity of these instruments and for reducing their current consumption, above all the number of turns of the measuring coil was increased. With a larger number of turns, the internturn capacitances increased considerably, especially the capacitance between the taps of the measuring coil. The capacitances between the taps of the measuring coil attained magnitudes of approximately 0.015 microfarads. The increase of internal capacitances led to a noticeable rise of frequency errors of the device which were 1-1.5% even at a frequency of 50 cycles. For eliminating the errors caused by the internal coil capacitance, a new compensating system was suggested, which provides a high sensitivity of the instrument while maintaining its ranges and its universality. This circuit provides measurements not only at direct current and alternating current of 50 cycles but also on alternating current up to 400 cycles in the 0.5 accuracy class. The authors consider the

A Sensitive, Multirange Electromagnetic Milliampere-Voltmeter for a Broadened Frequency Band

frequency error of the moving-iron milliammeter in the presence of internal capacitance and especially in the suggested frequency compensation circuit. The compensation of the frequency error may be performed by means of an auxiliary coil which has a negative frequency error. As shown in Figure 4, the auxiliary coil will compensate in a certain frequency range the positive frequency error caused by parasite capacitance in the basic instrument coil. On this basis, a measuring instrument was built with the following ranges: 7.5, 15, 30 milliamperes; 30, 75, 150 v, and with additional resistors up to 600 v inclusively. The power required by the measuring coil in all measuring ranges is 0.09 w. The voltage drop in the working coil within the different ranges: 30 milliamperes = 3 v; 15 milliamperes = 6 v; 7.5 milliamperes = 12 v. The impedance of the voltmeter is in the following ranges: 30 v - 1,000 ohm, 75 v - 5,000 ohm; 150 v - 20,000 ohm. The instrument is designed for measuring direct

SOV/115-58-5-21/36

AUTHOR: Ornatskiy, P.P.

TITLE: The Use of Thermo-Electric Equipment at Infra-Low Frequencies (Primeneniye termoelektricheskikh priborov na infranizkikh chastotakh)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 5, pp 44-46 (USSR)

ABSTRACT: In order to clarify what possibilities exist for using thermo-electric equipment at very low frequencies (under 15 cycles), it is necessary to resolve the problem of the selection of the optimum inertia value for the thermoelement used, and to establish the dependence of this inertia on the characteristics of the thermo-element. This is necessitated by the difficulty of increasing the inertia of the thermo-converters. If the measuring conditions are to be improved such an increase is necessary even if it results in reduced sensitivity of the equipment and in greater time required for its movable part to settle. Thermo-converters are quite inert devices at frequencies above

Card 1/2

The Use of Thermo-Electric Equipment at Infra-Low Frequencies

15 cycles, below 15 c their inertia is insufficient. In order to clarify this problem, the author composes and solves an equation for the thermal state of a heater. It is assumed that the temperature does not exceed 100°-150°C and that the heat dissipation of the thermo-electrodes is not very great. To check the equations, the device was tested at a frequency of 0.5 c. A non-contact thermo-converter for 5 a. was used with a thermo-electrode resistance of 78 ohm and T = 1.1 sec. A GNKP pyrometric millivoltameter served as measuring device, having the following parameters: T_0 = 3.4 sec; β = 6.7 with a load resistance at the terminals of 78 ohms. An experimental check of the device at a frequency of 0.5 c showed that the dc component of the deflection was 77 scale divisions and the amplitude of the ac component 0.8 divisions. The amplitude factor of the ac components, obtained experimentally, was 1/96. There are 3 Soviet references.

Card 2/2

ORNATSKIY, P.P.

SOV/144-58-9-18/18

AUTHOR: Gikis, A. F., Candidate of Technical Sciences, Docent

TITLE: Inter-University Scientific Conference on Electric Measuring Instruments and Technical Means of Automation (Mezhvuzovskaya nauchnaya konferentsiya po elektroizmeritel'nym priboram i tekhnicheskim sredstvam avtomatiki)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika, 1958, Nr 9, pp 130-135 (USSR)

ABSTRACT: The conference was held at the Leningradskiy elektrotekhnicheskiy institut imeni V. I. Ul'yanova (Lenina) (Leningrad Electro-technical Institute imeni V. I. Ul'yanov (Lenin)) on November 11-15, 1958. The representatives of eleven higher teaching establishments and three research institutes participated and a large number of specialists of various industrial undertakings were present.

Candidate of Technical Sciences P. G. Nikitin and Senior Lecturer D. A. Bezukladochnikov (Ural Polytechnical Institute) read the paper "Measuring the potential of a magnetic field by means of bismuth resistance and Hall e.m.f. pick-ups"; he described a new method of producing

Card 1/3

bismuth spirals by electrolytic deposition of bismuth inside grooves of a base made of insulation material.
Senior Lecturer V. A. Fyrents (Kazan' Aviation Institute) presented the paper "High sensitivity magnetic gas analysers for oxygen"; the increased sensitivity was achieved by separating the heat sensitive element from the heating element.
Docent P. P. Ornatskiy (Kiyev Polytechnical Institute) presented the paper "Measurement of electrical magnitudes at infra-low frequencies by electric indicating instruments of various systems"; this is of interest since there is a demand for instruments operating at frequencies of 1.5 to 0.5 c.p.s.
Docent R. I. Yurgenson (Leningrad Electrotechnical Institute) presented the paper "Methods of ensuring stability against interference in discrete selection systems" in which he dealt with the principles of ensuring active and passive stability against interference in the transmission of

Card 11/3 codes used for transmitting discrete data.

ORNATSKIY, P. P.

8(2), 9(6) Anisimov, V. I. Engineer SOV/119-59-3-13/15
AUTHOR:

TITLE: The Inter-university Scientific Conference on Electrical Measuring Instruments and on the Technical Means of Automation (Mezhvuzovskaya nauchnaya konferentsiya po elektroizmeritel'nym priboram i tekhnicheskim sredstvam avtomatiki)

PERIODICAL: Priborostroyeniye, 1959, Nr 3, pp 30-31 (USSR)

ABSTRACT: This Conference was held at the Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Institute of Electrical Engineering Imeni V. I. Ul'yanov (Lenin)) in November 1958. It was attended by more than 500 representatives of universities, scientific research institutes, of the OKB, the SKB (Special Design Office), of industries and other organizations. More than 30 lectures were delivered in the meetings of this Conference. In opening the conference M. P. Borodilskiy underlined the outstanding importance of automation and of measuring technique for the development of national economy. M. M. Shmailovskiy in his lecture reported on "The Trends in the Development of Methods of Radioactive Control of Production Data" and outlined the extensive possibilities of using radioactive methods in such control. Ye. G. Shrakov and S. A. Spektor reported on a new method of measuring heavy direct currents with the help of the nuclear magnetic resonance. M. A. Rozenblat investigated problems of the application of magnetic amplifiers in automation and measuring technique. A. V. Fateyev reported on the present-day state on the prospects of automatic control technique. Ya. Z. Tsypkin investigated some peculiar features of and the prospects offered by automatic pulse systems. The lecture by M. G. Boldyrev dealt with problems of stability of discrete automatic systems. V. B. Shakov discussed the main trends in the development of mathematical analog computers and of computers designed for industrial use. The report by V. S. Rybyshkin deals with an electronic analog correlator for the calculation of correlation functions in the investigation of winds in the ionosphere. M. I. Furgenson reported on the most important methods, which guarantee both an active and passive freedom from disturbances in discrete selective systems. Ya. V. Morozevich discussed problems of averaging, differentiation, and balancing of time-dependent functions which can be represented by electric signals. V. P. Skuridin investigated new computing devices with polarized relays. A. V. Frenke and Ye. M. Dubin reported on instrument transformers for automatic instruments with automatic recording. V. B. Shakov and B. M. Kopay-Gora reported on a computer for the automatic centralized control of production specifications. Z. M. Fel'dman discussed fundamental problems of the theory of automatic measuring instruments with an inverse conversion for the measurement of non-electric quantities. Ya. I. Zaydman dealt with problems of the construction of automatic d. c. potentiometers with high accuracy. D. I. Malov discussed a high-precision automatic d. c. bridge for digital computations. The participants in the Congress listed below discussed the following subjects, which, however, are not given by the exact wording of the titles: V. A. Ivanov on the planning of measuring elements for

Card 1/5 Card 2/5 Card 3/5

PAGE - 2

The Inter-university Scientific Conference on SOV/119-59-5-13/15
Electrical Measuring Instruments and on the Technical
Means of Automation

accurate automatic quotient-type meters in digital computatems.
M. E. Kharchenko: Methods of determining the dynamic errors
of a magnetic oscilloscope by simulation. P. P. Ornatskiy:
Problems in measuring electric quantities at different low
frequencies by electrical indicating instruments of various
systems. L. F. Kulikovskiy: Novel types of a. c. compensators.
A. S. Kozakrentes: Automatic bridges and a. c. compensators
suited for the control of the parameters of condensers in
series production. L. L. Stolov: Some characteristics of
widget induction motors which can be used in measuring
technique and automation. D. A. Borodayev: Ultrasonic
pressure and liquid level gages. Yu. A. Skripnik: The
circuitry of a phase-sensitive commutation indicator for
a. c. semi-equilibrium bridges. E. F. Suvidi: The application
of instruments with magnetic bridges, which permit a
considerable simplification of the design of the apparatus
and the circuitry used in the measurement of non-electric
quantities. V. A. Perents: Method of increasing the
sensitivity of oxygen gas analyzers. P. V. Sovetskiy:
Design of apparatus for measuring vibration quantities.
V. V. Pasynkov: Main types of non-linear semiconductor
resistors and possibilities of their application to
circuitry in automation and measuring technique. G. N.
Borogasbanyan: Development of measuring amplifiers with
semiconductor triodes. Ya. V. Morozevich, E. A. Smirnov,
Ya. Ya. Afanas'yev, Ya. P. Ogrymov: Precision semiconductor
frequency meter operating according to the pulse-counting
principle. P. G. Nikitin and A. Berukhadnikov: Methods of
measuring the magnetic field strength by means of bismuth
resistors and transducers operating on the Hall effect
principle. A resolution was adopted by the closing plenary
meeting of the Conference, which indicates ways of
improving and coordinating scientific research work in the
field of automation, electric measuring- and computing
technique.

Card 4/5

Card 5/5

9(6) SOV/146-2-5-8/19

AUTHORS: Ornatskiy, P.P., Candidate of Technical Sciences, Docent; Ogorelin, M.A., Engineer; Polishchuk, Ye.S., Candidate of Technical Sciences; Gnatyuk, V.S., Engineer

TITLE: A Miniature Monophase Ferrodynamic 1 5 Class Phase Meter

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Priborostroyeniye, 1959, Nr 5, pp 54-57 (USSR)

ABSTRACT: With the cooperation of the "Tochelektropribor" Plant a portable phasemeter was developed by the Chair of Measuring Devices at the Kiyev Polytechnic Institute Order of Lenin. The device is illustrated by a diagram (Figure 1) and a photograph (Figure 3), and the authors discuss its working principle and design. Errors due to temperature changes of $\pm 10^{0}$C and frequency variations of $\pm$ 2% do not exceed 1.5%. This phasemeter was demonstrated at the International Exhibition in

Card 1/2

A Miniature Monophase ferrodynamic 1.5 class Phase Meter

Brussels, and is now on show at the Vsesoyuznaya vystavka dostizheniy narodnogo khozyaystva SSSR (The All-Union Exhibition of National Economic Achievements of the USSR) in Moscow. This article was recommended by the Kafedra izmeritel'nykh ustroystv (The Chair of Measuring Instruments). There are 1 photograph, 1 diagram, and 1 graph.

ASSOCIATION: Kiyevskiy ordena Lenina politekhnicheskiy institut (Kiyev Polytechnical Institute of the Order of Lenin); Kiyevskiy zavod "Tochelektropribor" (The Kiyev "Tochelektropribor" Plant).

SUBMITTED: August 3, 1959

a(0), 9(0) SOV/119-59-7-17/18

AUTHOR: Ornatskiy, P. P., Candidate of Technical Sciences

TITLE: Successes in Instrument Construction in the Czechoslovakian Republic

PERIODICAL: Priborostroyeniye, 1959, Nr 7, pp 31-32 (USSR)

ABSTRACT: The Gauss-meter developed by the firm of Metra-Blansko, which uses the Hall effect, is described for the measuring ranges of 2, 10 and 20 Gauss; this instrument is found to surpass those produced by the British firm of Tompson with respect to finish and sensitivity. Furthermore, electromagnetic miniature instruments with flange—dimensions of 22×22 mm are discussed. The complete-circle-scale instruments are produced by the same firm in four sizes (70×70 mm, 90×90 mm, 110×110 mm, and 140×140mm). This series comprises electromagnetic voltmeters, ammeters, three-phase phasometers, synchronoscopes, ferrodynamic watt meters and frequency meters as well as magnetoelectric ammeters, voltmeters, and differential detector voltmeters for synchronization. A new way of fastening instruments to the switch boards is described, and miniature recording instruments are discussed. The latter include single- and multi-system instruments, and the

Card 1/2

Successes in Instrument Construction in the Czechoslovakian Republic

measuring mechanism is the same. These instruments are of smaller size than the same instruments made by the AEG (Germany). Next, galvanic amplifiers with an input voltage of 6 mv are described, to the output of which the recording instrument is directly connected. Megohmmeters for 50 and 1000 megohm are mentioned. The universal instrument Avomet-II with 34 measuring ranges has a resistance of 50,000 ohm/v for direct current and of 30,000 ohm/v for alternating current. Several technological production processes, which are being employed by the already mentioned firm, are discussed. In the factory of Regula-Nusle there is an ultrasonic device for the grinding of valve-seats. The use of crystal moiré-varnish in instrument building factories as well as the varnishing of casings with the new Czech polishing varnish form the subject of reports. In conclusion, the successes attained by a group of firms for industrial automation in Prague are discussed. There are 6 figures.

Card 2/2

PHASE I BOOK EXPLOITATION SOV/4407

Akademiya nauk Ukrainskoy SSR. Institut elektrotekhniki

Voprosy obshchego elektropriborostroyeniya (Overall Problems of the Electric Instrument Industry) Kiyev, 1960. 262 p. 3,000 copies printed.

Additional Sponsoring Agency: Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy promyshlennosti. Ukrainskoye respublikanskoye pravleniye.

Editorial Board: A. D. Nesterenko, Corresponding Member, Academy of Sciences Ukrainskaya SSR (Resp. Ed.), M. I. Levin, Doctor of Technical Sciences, P. P. Ornatskiy, Candidate of Technical Sciences, V. F. Petrochenko, Candidate of Technical Sciences, A. F. Gorodovskiy, Engineer, S. Sh. Zaslavskiy, Engineer, and B. A. Seliber; Ed. of Publishing House: B. A. Kazantsev; Tech. Ed.: M. I. Yefimova.

PURPOSE: This book is intended for technical personnel working in the field of electric measurement techniques, in electrical instrument plants, in laboratories of electric power systems and in electric measurement laboratories of plants.

Card 1/12

Overall Problems of the Electric (Cont.) SOV/4407

COVERAGE: This is a collection of reports presented at a conference on the overall development of the Soviet electrical instrument industry held in Kiyev on October 23-27, 1956. The conference was convened by the Institut elektrotekhniki AN USSR (Institute of Electrical Engineering, Academy of Sciences UkrSSR) and the Ukrainskoye respublikanskoye pravleniye NTO priborostroitel'noy promyshlennosti (Ukrainian Republic Administration of NTO of the Instrument-making Industry). Problems relating to electrical instrument-making as a whole (reports by A. D. Nesterenko, P. P. Ornatskiy, Ya. S. Averbukh, Ye. G. Shramkov) were discussed, as well as problems relating to the development of reference instruments (Ya. S. Averbukh, I. K. Khodeyev), the automation of electric-measuring circuits (A. Ya. Shramkov, L. Ya. Mizyuk) and to the theory and practice of magnetic measurements (N. N. Shol'ts, G. L. Gornshteyn). Attending the conference were workers of scientific research institutes and schools of higher education, along with representatives of the main electric instrument plants ("Vibrator" in Leningrad, "Tochelektropribor" in Kiyev, "Omelektrotochpribor" in Omsk, ZIP in Krasnodar and others) and of various electric power systems. No personalities are mentioned. References accompany ten of the reports.

Card 2/32

TABLE OF CONTENTS:

9(6)

AUTHORS: Ornatskiy, P. P., Candidate of Technical Sciences, Usatin, I. B. Engineer

TITLE: Measurement of Electrical Quantities at Infralow Frequencies

PERIODICAL: Priborostroyeniye, 1960, Nr 5, pp 7-10 (USSR)

ABSTRACT: In the introduction, the authors mention several fields in which electrical quantities with very low frequencies must be measured. In the present paper methods for the decrease and complete compensation of the instrument hand due to the hitherto occurring fluctuations are discussed. The authors first deal with the reduction of these fluctuations by increasing the mechanical inertia or the damping of the instrument. In this they proceed from the equation of motion of the moved parts of the system, and they show that the lower limiting frequency is considerably below 10 cps. In the case of heat-, bimetal-, and thermoelectrical instruments, heat inertia may also be used for the purpose of reducing the fluctuations. Experiments, which were carried out with thermoelectric instruments at the Laboratoriya kafedry izmeritel'nykh ustroystv Kiyevskogo politekhnicheskogo instituta (Laboratory of the Chair for Measuring Instruments of the Kiyev Polytechnic Institute) gave satisfactory

Card 1/2

Measurement of Electrical Quantities at Infra[illegible] SOV/3004-317
Frequencies SC14/B007

results. The use of rectifiers and electric and electromechanical filters also yielded good results. The collaborators of the above mentioned laboratory, V. I. Chervyakova and F. B. Usatin, developed instruments, using voltmeters and ammeters of the types Ta150, which permit measuring the low frequency alternating quantities by rectification and filtering. Here a suggestion made by Professor S. R. Kharchenko (Ref. 5) was used. It is further possible to reduce indicator fluctuations by compensation of the alternating component of the torque acting upon the indicator. This is done by using a double-measurement-instrument (Fig. 5), the coils of which are connected within the circuit in such a manner that the fluctuations compensate one another. Finally, frequency measurement in this low-frequency region is dealt with. In the frequency meter for the range of from 0 - 2 cps, which is shown in figures 8 and 9, the rectified low-frequency alternating voltage charges a condenser the discharge current of which is measured by means of a milliammeter. There are 9 figures and 5 Soviet references

Card 2/2

ORNATSKIY, P.P.; SKRIPNIK, Yu.A.; SUVID, N.F.

Methods and units for accurate indication of a 90° phase shift. Izm. tekh. no.8:24-29 Ag '60. (MIRA 13:9)
(Electric measurements)

NESTERENKO, Anatoliy Dmitriyevich; ORNATSKIY, Petr Pavlovich; POLYANSKIY, N.A., red.; GORKAVENKO, L.I., tekhn. red.

[Parts and units of instruments; design and construction] Detali i uzly priborov; raschet i konstruirovanie. Izd.2., ispr. i dop. Kiev, Gos. izd-vo tekhn.lit-ry USSR, 1961. 425 p. (MIRA 15:4)

(Instruments--Design and construction)

S/263/62/000/003/012/015
I004/1204

AUTHOR: Ornatskiy, P. P.

TITLE: Measurement of currents and voltages of infra low frequencies (up to 10 cps) by means of bimetallic devices

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. Izmeritel'naya tekhnika, no. 3, 1962, 45, abstract 32.3.283. "Tr. Konferentsii po avtomat. kontrolu i metodam elektr. ismereniy, 1959" Novosibirsk, Sib. branch of the AS USSR, 1961, 73 77

TEXT: A report of the development of measuring devices intended for measurement of electric currents and voltages of infra low frequency (up to 10 cps) is given. The mechanical inertia of these devices is insignificant but due to their thermal inertia, the swinging of the pointer of the meter may be made sufficiently small. From the analysis of the thermal state equation of the spiral it was found, that the ratio of the amplitude of the pointer swing to its mean deviation is $k_T = 1/2\omega_T$, where ω angular frequency of the current and T time constant of the spiral. For a steel spiral of 5 × 0.2 mm cross-section and 120 mm long the time constant was calculated as $T = 36.8$ sec. Assuming $k_T = 0.01$ one may obtain for a meter using this spiral, the minimum frequency $f = \omega/2\pi = 0.228$ cps. The opposite problem was also considered: at a given frequency to find the

Card 1/2

minimum value of T in order to obtain the necessary value of k_T. At the Kiev Polytechnical Institute a bimetallic ammeter was made with a time constant $T = 16$ sec for a full deflection current of 0.4 A. At $f = 0.5$ cps the relative amplitude of the alternating deviation of the device was 1.5% and the calculated value was 1%. There are 3 references.

[Abstracter's note: Complete translation.]

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

S/194/62/000/007/150/160
D413/D308

AUTHOR: Ornatskiy, P.P.

TITLE: The measurement of low-frequency current and voltage amplitudes with moving-coil instruments

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1962, abstract 7-7-273 e (Tr. Kiyevsk. politekhn in-ta Sb. statey elektrotekhn. fak; Kiev, 1961, 228 - 233)

TEXT: The author determines the conditions under which permanent-magnet moving-coil instruments may be used for current measurements at very low frequencies, below 10 c/s. He considers two possible cases of the relation between pointer deflection angle and frequency. The degree of damping and natural oscillation period of the instrument are calculated for which the error in measurement of low-frequency current amplitudes falls within prescribed limits. 2 references. [Abstracter's note: Complete translation.]

Card 1/1

ORNATSKIY, P.P.; SUVID, N.F.; TUZ, Yu.M.

Electromagnetic devices for measuring high frequencies.
Izm.tekh. no.11:45-47 N '61. (MIRA 14:11)
(Frequency measurements)

ORNATSKIY, P.P.

Electric measuring devices with a bimetallic spiral. Prom.energ. 16 no.5:16-19 My '61. (MIRA 14:7)
(Electric measurements)

ORNATSKIY, P.P., kand.tekhn. nauk; ZOZULYA, V.I.; DEREVOYEDOV, A.A.

Using electrochemical converters in electric measuring equipment. Avtom.i prib. no.1:67-70 Ja-Mr '62. (MIRA 15:3)

1. Kiyevskiy politekhnicheskiy institut (for Ornatskiy, Zozulya).
2. Krasnodarskiy zavod izmeritel'nykh priborov (for Derevoyedov).

OGORELIN, M.A., inzh.; ORNATSKIY, P.P., kand.tekhn.nauk, dotsent; TOLMACHEV, Ye.S., inzh.

Measurement of electrical magnitudes in the presence of non-sinusoidal currents and voltages. Izv. vys. ucheb. zav.; energ. 5 no.7:25-30 Jl '62. (MIRA 15:7)

1. Zavod "Tochelektropribor" (for Ogorelin). 2. Kiyevskiy ordena Lenina politekhnicheskiy institut (for Ornatskiy, Tolmachev).
(Electric measurements)

S/119/62/000/007/002 006
I045/1245

AUTHOR: Ornatskiy, P. P.

TITLE: Self-compensating a c instruments

PERIODICAL: Priborostroyeniye, no. 7, 1962, 16-19

TEXT: The article classifies and analyzes quantitatively electronic self-compensating a c-measuring instruments. It deals with the following 5 types: a) voltmeter measuring the output voltage, b) voltmeter measuring the current in the compensation circuit, c) ammeter measuring the current in the compensation circuit, d) ammeter measuring the output voltage, e) ammeter measuring the output current. There are 3 figures and 1 table.

Card 1/1

ORNATSKIY, P.P.; TUZ, Yu.M.; GRESHCHENKO, Ye.V.

Highly sensitive self-compensating millivoltmeter for 1,0 value of precision classes. Izm. tekh. no.8:36-39 Ag '63.
(MIRA 16:10)

ZHOGOT, V.D.; ORNATSKIY, P.P.; [illegible], A.F.

Low-cosine wattmeters for the sonic frequency range. Nov. nauch.-issl. rab. po metr. VNIIM no.6:12-13 '64. (MIRA 18:3)

50 c

L 41182-65 EWT(d)/EWP(e)/EWP(v)/T/EWP(k)/EWP(l) Pf-4
ACCESSION NR: AP5004677 S/0115/64/000/009/0058/0059

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18
B

AUTHOR: none

TITLE: Fourth scientific and technical conference on "Cybernetics for the improvement of measurement and inspection methods"

SOURCE: Izmeritel'naya tekhnika, no. 9, 1964, 58-59

TOPIC TAGS: cybernetics, electric measurement, electric quantity instrument, digital computer, electronic equipment, electric engineering conference

ABSTRACT: The conference was held 1-4 July at the All-Union Scientific Research Institute of Metrology by the Section of Electrical Measurements of the Council on the Problem of "Scientific Instrument Making" of the State Committee on Coordination of Scientific Research Work in the USSR together with the All-Union Scientific Research Institute of Electrical Measurement Instruments and the Leningrad Regional Administration of the Scientific and Technical Division of the Instrument Making Industry. More than 400 delegates from 29 cities of the country participated. Fifty-seven reports were heard and discussed. Reports were given by: P. V. NOVITSKIY (Leningrad)--"Definition of the Concept of Informational Error in Measurement and its Importance in Practical Use" and "On the Problem of the Average Informational Criterion of Accuracy Throughout the Entire Scale of an Instrument"; Ya. A.

Card 1/4

L 41182-65
ACCESSION NR: AP5004677

17

KUPERSHMIDT (Moscow)--"On Determination of the Criteria of Accuracy for Measurement Devices"; S. M. MANDEL'SHTAM (Leningrad)--report on a new criterion of accuracy of measurement instruments; P. F. PARSHIN (Leningrad)--report on optimization when using Fourier transforms on electronic digital computers; S. P. DMITRIYEV, G. Ya. DOLGINTSEVA and A. A. IGNATOV (Leningrad)--proposal of a new method for solving problems of optimum filtering for non-stationary random signals and interference; I. B. CHELPANOV--"Calculation of the Dynamic Characteristics of an Optimum Complex Two-Channel System which Uses Signals from a Position Meter and from a Speed Meter"; R. A. POLUEKTOV (Leningrad)--"Optimum Periodic Correction in the Measurement of Continuous Signals"; S. P. ADAMOVICH (Moscow)--"Analysis and Construction of Devices for Correction of Non-linearity and Scaling for Unitary Codes; G. V. GORELOVA (Taganrog)--"A Method for Statistical Optimization in Graduating the Scales of Electrical Measuring Instruments"; M. A. ZEMEL'MAN (Moscow)--"Analog-Digital Voltage Convorter with Automatic Error Correction"; B. N. MALINOVSKIY, V. S. KALENCHUK and I. A. YANOVICH (Kiev)--"Automatic Monitoring of the Parameters of the Electrical Signals of Complex Radio and Electronic Equipment"; V. P. PEROV (Moscow)--"Operational Cybernetics as an Independent Scientific Specialization"; Ye. N. GIL'BO (Leningrad)--"On the Problem of Effective Non-linear Scales"; A. I. MARKELOV (Moscow)--"Devices for Preliminary Processing of the Results of Measurements Presented in the Form of

Card 2/4

L 41182-65

ACCESSION NR: AP5006677

20

Graphic Recordings For Subsequent Introduction of the Information into Universal Digital Computers"; O. M. MOGILEVER and S. S. SOKOLOV (Leningrad)--"On a Method for Reducing Excess Information"; T. V. NIKOLAYEVA (Leningrad)--"A Device for Temporal Discretization of Continuous Signals"; A. A. LYOVIN and M. L. BULIS (Moscow)--"Optimization of the Transmission of Telemetric Information as a Means for Raising the Efficiency and Eliminating Interference"; D. E. GUKOVSKIY (Moscow)--"On a Statistic Approach to the Detection of Events in Automatic Inspection"; M. I. LANIN (Leningrad)--"Method for Calculating the Holding Time of Communications in a Centralized Inspection System or Constant Servicing Time"; O. N. BRONSHTEYN, A. L. RAYKIN and V. V. RYKOV (Moscow)--"On a Single-Line Mass Service System with Losses"; V. M. SHLYANDIN (Penza)--report on circuit designs for direct compensation electrical digital measuring instruments; A. N. KOMOV (Novocherkassk)--report on a new method for compensation of digital bridges; M. N. GLAZOV (Leningrad)--report on the problem of voltage-to-angular rotation conversion; V. S. GUTNIKOV (Leningrad)--"Methods for Construction of Frequency Capacitance Pickups with a Linear Scale"; R. Ya. SYROPYATOVA and R. R. KHARCHENKO (Moscow)--report on the determination of the amplitude-frequency and phase characteristics of PFM and PWM modulators; Ye. I. TENYAKOV (Novocherkassk)--"The Phototransistor as a Switch for Electrical Measurement Purposes"; N. V. MALYGINA (Leningrad)--a report on ways for making universal equipment for measurement of current, voltage and power; P. P. ORNATSKIY and V. I. ZOZULYA (Kiev)--reports on the construction of static voltmeters, wattmeters and

Card 3/4

L 41182-65

ACCESSION NR: AP5004677

15

phase motors; A. V. TRIKHANOV, I. G. SMYSHLYAYEV, N. I. SABLIN, V. M. RAZIN and V. A. GORBUNOV (Tomsk)--report on a device for automatic processing of the measurements of vibration amplitude of pneumatic hammers; L. K. RUKINA and V. G. KNORRING (Leningrad) --report on the development of a digital compensator for measuring pressure, force, etc.; N. B. DADUKINA (Leningrad)--report on a method for constructing frequency pickups for gas analysis; Yo. M. KARPOV, V. A. BRAZHNIKOV and B. Ya. LIKHTTSINDER (Kuybyshev)--reports on analysis and recording of boring speeds; Yu. V. PSHENICHNIKOV (Kuybyshev)--"A High Speed Voltage-to-Digital Code Converter for ac Pickups"; G. P. VIKHROV and V. K. ISAYEV (Vilna)--"A Highly Accurate Digital Peak-to-Peak Voltmeter"; and S. M. PERSIN (Leningrad)--"A Low Level Analog-Digital Voltage Converter."

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EE, EC

NO REF SOV: 000 OTHER: 000 JPRS

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Card 4/4

ORNATSKIY, Petr Pavlovich, kand. tekhn. nauk; NESTERENKO, A.D., doktor tekhn. nauk, retsenzent; MELIK-SHAKHNAZAROV, A.M., doktor tekhn. nauk, retsenzent

[Automatic measuring instruments; analog and digital] Avtomaticheskie izmeritel'nye pribory; analogovye i tsifrovye. Kiev, Tekhnika, 1965. 421 p.
(MIRA 18:8)

NESTERENKO, Anatoliy Dmitriyevich; ORNATSKIY, Petr Pavlovich; POLYANSKAYA, L.O., inzh., red.

[Components and blocks of devices; calculation and design] Detali i uzly priborov; raschet i konstruirovanie. Izd.2., ispr. Kiev, Tekhnika, 1965. 428 p. (MIRA 18:2)

ORNATSKIY, P.P.; ZOZULYA, V.I., ZORIN, V.V.

Integrating voltmeters and their use in municipal electric power distribution networks. Energ. i elektrotekh. prom. no.3:10-14 Jl-S '62. (MIRA 18:11)

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Ornatskiy, Petr Pavlovich

Analog and digital automatic measuring instruments (Avtomaticheskiye izmetritel'nyye pribory, analogovyye i tsifrovyye) Kiev, Izd-vo "Tekhnika," 1965. 421 p. illus., biblio. Textbook for students at institutions of higher learning specializing in information processing and measurement techniques 8200 copies printed.

TOPIC TAGS: analog system, electric analog, digital system, automatic control equipment, electric measuring instrument, servosystem

PURPOSE AND COVERAGE: This textbook has been approved by the Ministry of Higher and Special Secondary Education of the UkrainianSSR for students of advanced courses in schools of higher education specializing in the field of information and measuring equipment. The book deals with analog and digital automatic electric measuring equipment. Among the analog instruments, major attention is paid to automatic balancing instruments with static and astatic characteristics, and to those among digital instruments, that possess direct conversion and automatic balancing. Basic networks and individual instrument elements are briefly described, and data on measuring information systems are given. M. I. Levin, M. P. Tsapenko (Doctors of Technical Sciences) G. I. Kavalerov, M. A. Ogorelin, P. V. Novitskiy, and Yu. A. Skripnik (Candidates of Technical Sciences) provided comments and advice.

TABLE OF CONTENTS

Card 1/5 UDC: 681.2

L 26406-66

ACC NR. AM5025515

0

Card 2/5

L 26406-66
ACC NR: AM5025515

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Card 5/5 cc

ORNATSKIY, V.V., prof.

Vladimir Andreevich Oppel'; on the 90th anniversary of his birth. Vest. khir. 91 no.7:129-134 Jl'63 (MIRA 16:12)

ORNATSKIY, V. V.

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Docent, 2nd Surg. Ch. Leningrad State Order of Lenin Inst. for Improvement of Doctors imeni S. M. Kirov, -1948-.

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Rezul'taty lecheniya zakrytykh perelomov kostey goleni. Vestnik khirurgii im. Grekova, 1949, No. 4, s. 34-37

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