"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

ACC NR: AR6031890

that SbJ_3 conductivity is due to impurities. The spectral characteristics of SbJ_3 photoconductivity is selective and contains 2 maxima in the vicinity of 4500 and 5500 Å. Apparently the presence of a photoconductivity maximum in the region of the longwave boundary of the absorption band is related to the dependence of the carriers' life on the wavelength. It was observed that an increase in temperature resulted in a decrease of the forbidden-band width with a temperature coefficient equal to $16 \cdot 10^{-4}$ ev/degree. F. Nad'.

SUB CODE: 20/

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

PANCHENKO, Dmitriy Yefimovich; BALUKHOVSKIY, N.F., doktor geol.-miner. nauk, otv. red.; CHEPUR, N.D., red.

[Geology and prospects for finding oil and gas in the southwestern part of the Ukraine and Moldavia] Geologicheskoe stroenie i perspektivy neftegazonosnosti iugo-zapada Ukrainy i Moldavii. Kiev, Naukova dumka, 1965. 141 p. (MIRA 18:7)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

SAVKOVSKIY, P.P., nauchn. sotr.; ISAYEVA, Ye.V., nauchn. sotr.; OLIFER, A.V., nauchn. sotr.; SHCHERBAKOV, V.V., nauchn. sotr.; POVZUN, I.D., nauchn. sotr.; MASLO, Ye.M., nauchn. sotr.; KRYLOVA, A.S., nauchn. sotr.; MATVIYEVSKIY, A.S., nauchn. sotr.; VASIL'KOVA, A.K., nauchn. sotr.; VOVCHENKO D.P., nauchn. sotr.; BOGDAN, L.I., nauchn. sotr.; GROTTE M.G., nauchn. sotr.; CHEPUR, N.D., red.

[Pests and diseases of fruit and berry plants; a manual] Vrediteli i bolezni plodovo-iagodnykh kul'tur; spravochnik. Kiev, Naukova dumka, 1965. 287 p. (MIRA 18:9)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

Some properties of solid solutions based on gallium phosphide.
V. V. Nezreskul, S. I. Radautsan, I. K. Takhtareva (10 minutes).

Some electrical, optical, and magnetic properties of the ternary semiconducting compound $CdIn_2Te_4$. I. V. Potykevich, O. I. Belyayev, S. V. Chepura (10 minutes).

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

Magnetic properties of semiconductors. K. D. Tovstyuk.

This presentation consisted of the following papers:

Anisotropy of susceptibility of semiconductors. K. D. Tovstyuk, E. I. Slynko, I. M. Stakira, O. M. Boretz.

Magnetic and thermomagnetic properties of HgTe, PbTe, HgSe, PbSe. K. D. Tovstyuk, M. P. Gavaleshko, Ya. S. Budzhak, P. M. Starik, P. I. Voronyuk.

Magnetic susceptibility of CdTe and ZnTe. I. V. Potykevich, A. V. Savitskiy.

Magnetic properties of the system HgTe-CdTe. K. D. Tovstyuk, I. M. Rarenko, I. V. Potykevich.

Anisotropy of the thermal conductivity of CdSb. I. M. Pilat, L. I. Anatychyuk.

Electrical, magnetic, and optical properties of the system In_2Te_3-CdTe. I. V. Potykevich, A. I. Belyayev, S. V. Chepura.

Properties of crystals of CdSb doped with elements of groups IV and VI. S. M. Cusev.

Papers presented at the Joint Meeting on Semiconductor Compounds,

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

ACCESSION NR: AP3006821 S/0185/63/008/008/0889/0893

AUTHOR: Poty*kevy*ch, I. V.; Chepura, S. V.

TITLE: Electrical properties of the ternary semiconducting compound $CdIn_2Te_4$

SOURCE: Ukrains'ky*y fizy*chny*y zhurnal, v. 8, no. 8, 1963, 889-893

TOPIC TAGS: semiconductor property, ternary semiconducting compound, cadmium-indium-tellurium semiconducting compound, cadmium-indium sub 2 tellurium sub 4, transport phenomena, thermal EMF, forbidden zone width, electrical conductivity

ABSTRACT: Temperature dependences of electrical conductivity and thermal E.M.F. were measured for $CdIn_2Te_4$ monocrystals from liquid air temperatures to 350C. The samples were grown from mixtures of CdTe and In_2Te_3, and were n-type. The effect of annealing on the stability of the characteristics $\sigma(T)$ and $\alpha(T)$ was studied. The width of the forbidden zone was found to be 1.0 eV. Sharp maxima are found on the $\alpha(T)$ curves in the temperature range of 120-250 C, Orig. art. has 2 figures and 1 table.

ASSOCIATION: Chernivets'ky*y Derzhuniversy*tet (Chernivets'ky*y State University)

Card 1/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

ACC NR: AR6030496 SOURCE CODE: UR/0275/66/000/006/B015/B015

AUTHOR: Potykevich, I. V.; Belyayev, O. M.; Chepura, S. V.

TITLE: Growing CdTe, In_2Te_3, $CdIn_2Te_4$ single crystals and CdTe—In_2Te_3 solid-solution single crystals and some of their physical properties

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 6B100

REF SOURCE: Sb. simpozium. Protsessy sinteza i rosta kristallov i plenok poluprovodnik. matelialov, 1965. Tezisy dokl. Novosibirsk, 1965, 29-30

TOPIC TAGS: single crystal growing, semiconductor single crystal

ABSTRACT: An investigation of electrical, thermoelectric, magnetic, and photo-optical properties has permitted conducting and controlling the process of synthesis and growing CdTe and In_2Te_3 single crystals and solid solutions based on them. X-ray diffraction data corroborated by the results of thermal analysis and microstructural study has pointed up to a formation of solid solutions in the CdTe—In_2Te_3 system. Optimal temperature conditions for single-crystal growing are selected. The most efficient methods of homogenization of solid solutions, particularly in In_2Te_3-rich alloys, are very important in handling the CdTe—In_2Te_3 system. Special attention is paid to the synthesizing and growing the crystals of a little-known triple semiconductor compound $CdIn_2Te_4$ which comes from a peritectic reaction in the above system and which belongs with the type AB_2X_4 compounds with SP^3-hybridization. I. P. and others . [Translation of abstract]

SUB CODE: 20

Card 1/1 UDC: 621.315.592:548.552:541.412

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

L 47387-66 EWT(l) EWT(m)/T/EWP(t)/ETI IJP(c) JG/JD

ACC NR: AR6025760 SOURCE CODE: UR/0058/66/000/004/A075/A075

AUTHOR: Potykevich, I. V.; Belyayev, O. M.; Chepura, S. V.

35
B

TITLE: Growing of single crystal CdTe, In_2Fe_3, and $CdIn_2Te_4$ and of single crystals of $CdTe-In_2Te_3$ solid solutions, and some of their physical properties

SOURCE: Ref. zh. Fizika, Abs. 4A633

REF. SOURCE: Sb. Simpozium. Protsessy sinteza i rosta kristallov i plenok poluprovodnik. materialov, 1965. Tezisy dokl. Novosibirsk, 1965, 29-30

TOPIC TAGS: single crystal growing, cadmium containing alloy, tellurium containing alloy, indium containing alloy, iron containing alloy, solid solution

ABSTRACT: Results are presented of a comprehensive study of the production conditions, structure, and physical properties of binary compounds CdTe and In_2Te_3 and of solid solutions on their basis. Questions dealing with the choice of optimal temperature regimes for single-crystal growth are considered. Of very great importance for the $CdTe-In_2Te_3$ system is the choice of the most effective method of homogenization of the solid solutions. Particular attention is paid to synthesis and growth of crystals of the ternary semiconductor compound $CdIn_2Te_4$, which is obtained via a peritectic reaction in the investigated system and is a compound of the type AB_2X_4 with

Card 1/2

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

L 47307-66

ACC NR: AR6025760

sp^3 hybridization. [Translation of abstract].

SUB CODE: 20

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APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

9(9) SOV/112-59-2-3809

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 2, p 227 (USSR)

AUTHOR: Chepura, V. F.

TITLE: Investigation of City Propagation of Ultrashort Radio Waves (Issledovaniye rasprostraneniya ul'trakorotkikh radiovoln v gorode)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Radiotekhnika, 1958, Nr 2, pp 209-213

ABSTRACT: An experimental investigation of city propagation of ultrashort waves was conducted. The field-strength intensity was measured in Khar'kov in 1952-1953 along seven routes spreading radially from the TV center. The frequency used was 59.25 mc. The results of an analysis of 15,000 measurements are presented. Probability of occurrences of field-intensity average values are computed. The distribution function of field-strength values of ultrashort waves at a certain distance from the transmitting antenna is normal. A curve of field intensity plotted against distance for various probability values

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

SOV/112-59-2-3809

Investigation of City Propagation of Ultrashort Radio Waves

is presented. A plot of intensity logarithm against distance logarithm is approximated by a straight line. This empirical formula is offered for calculating the average value of the ultrashort-wave field intensity

$$E = \frac{(0.231\ gp + 0.465)\ \sqrt{PDH}}{r^{(-5\times 10^{-3}\ p + 1.68)}}$$

where PD is the radiated power, H is the transmitting antenna height, p is the probability in per cent. It is stated that the above formula is valid for computing the field intensity in medium and large cities for 1-6-m waves.

T.S.R.

ASSOCIATION : Rekomendovana kafedroy osnov radiotekhniki Khar'kovskogo politekhnicheskogo instituta im. V. I. Lenina.

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APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

KASHCHEYEV, B.L.; LYSENKO, I.A.; CHERPURA, V.F.

Measuring wind speeds at altitudes of 80 to 120 km by reflections from meteors. Biul. Kom. po komet i meteor. AN SSSR no.3:9-14 '58 (MIRA 13:3)

1. Khar'kovskiy politekhnicheskiy institut.
(Atmosphere, Upper)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

NAMITOKOV, K.K., insh.; CHMPURA, V.F., asst.

Measuring vibrations and linear displacements. Izv.vys.ucheb. zav.; prib. no.3:129-130 '58. (MIRA 12:2)

1. Khar'kovskiy politekhnicheskiy institut.
(Vibration--Measurement)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

Chepura, V.F.

AUTHORS: Namitokov, K.K., Engineer, Chepura, V.F., Engineer (Khar'kov) 105-58-5-19/28

TITLE: A Device for Studying the Shape of the Surface of Commutators of Electric Machines (Pribor dlya issledovaniya formy poverkhnosti kollektorov elektricheskikh mashin)

PERIODICAL: Elektrichestvo, 1958, Nr 5, pp. 78-80 (USSR)

ABSTRACT: In collaboration with Ye.M. Ganapol'skiy the authors in 1955 elaborated the construction of a similar device developed by Ryan and Summers (Ref 1). In this case, however, the device operates with a longer wave for the purpose of utilizing standard tubular conductors and standard klystrons. The method employed by the authors is a further development of that developed by Ryan and Summers. Work is here based upon measuring the phase difference of two radiowaves of the centimeter range, one of which is reflected by the commutator surface of the machine in operation. Measuring the phase difference of two signals is based upon a property of a double-tubular conductor T-iron (Ref 2), which is described in detail. The scheme of this device as well as its description and data concerning its efficacy are

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

A Device for Studying the Shape of the Surface of Commutators of Electric Machines

105-58-5-19/28

given. By means of this device investigations of the shape of the commutator surface of various types of electric machines were carried out. According to the oscillogram obtained the maximum height of the unevennesses on the surface of the commutator can be determined. By comparing the basic width of the pulse with the length of development it is possible to estimate the number of protruding lamellae. There are 4 figures, and 3 references, 2 of which are Soviet.

SUBMITTED: September 16, 1957

AVAILABLE: Library of Congress

1. Commutators--Surface conditions
2. Radio waves--Applications
3. Phase measurement--Applications
4. Phase measurement--Equipment

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

S/115/60/000/05/12/034
B007/B011

AUTHORS: Namitokov, K. K., Chepura, V. F.

TITLE: Measurement of Vibrations and Longitudinal Displacements With the Aid of Superhigh Frequency Radio Waves

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 5, pp. 20-21

TEXT: On the strength of an idea given by A. H. Ryan and S. D. Summers (Ref. 1) concerning the utilization of centimeter radio waves for the investigation of vibrations, the authors designed and built an instrument which is shown in Fig. 1 and described. Ye. M. Ganapol'skiy also took part in the work. The instrument serves for measuring the amplitude and the frequency of vibrations in individual parts of different systems, among them also rotating systems. The instrument consists of standardized assemblies and parts. It can be also used for the investigation of vibrations in nonmetallic parts. There are 1 figure and 2 references: 1 Soviet and 1 English

Card 1/1

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

NAMITOKOV, K.K.; CHEPURA, V.F.

Using super-high frequency radio waves in measuring vibrations and linear displacements. Izm.tekh. no.5:20-21 My '60. (MIRA 14:5)
(Pulse techniques (Electronics))

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURA, V.F.; KASHCHEYEV, B.L.; BONDAR', B.G.

Study of the directional features of the scattering of microwave signals by meteor trails. Elektrosviaz' 16 no.11:3-10 N '62. (MIRA 15:11)

(Meteors) (Microwaves)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

L 10003-63 EWT(l)/EWG(k)/FCC(w)/BDS/EEC-2/ES(t)-2/ES(v)—
AFFTC/ASD/ESD-3/APGC/SSD—Pz-4/Pg-4/Pi-4/P1-4/Pe-4—GW
ACCESSION NR: AP3001132 S/0106/63/000/006/0002/0009 87

AUTHOR: Kashcheyev, B. L.; Chepura, V. F.; Bondar', B. G.

TITLE: An investigation of UHF radio signal scattering by meteor trails

SOURCE: Elektrosvyaz', no. 6, 1963, 2-9

TOPIC TAGS: radio signal scattering, meteor trails, UHF oblique scattering, duration distributions, transmission speed

ABSTRACT: An experimental study of the oblique scattering of ultrashort waves by meteor trails was carried out over a 900-km path. Both 31.2- and 48-Mc transmitters were used in the measurements. The 31.2-Mc transmitter was modulated by a code consisting of two pulses with durations of 20 + 10 microsec and having a peak power of 30 kw at 50 cps prf. The 48-Mc transmitter was modulated by 100-cps square waves with peak power of 1 kw. The bandwidths of the 31.2- and 48-Mc receivers at the 3-db level were 225 kc and 600 cps, respectively. Both transmission and reception were carried out with the aid of Yagi antennas placed at a height of 1.5 wavelengths above the ground. The

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L 10003-63
ACCESSION NR: AP3001132

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total duration of meteor signals for 31.75 hours of observations was 3026 sec, while the total duration of "repeated" signals, i.e., signals shifted in time which are caused by scattering and which accompany the main signal, was 280 sec for the same period of time. The maximum observed time shift of repeated signals was 770 microsec. Since the degree of allowable distortion due to repeated signals determines telegraphic transmission speeds, the 770-microsec time shift would limit this speed to 650 band. Certain statistical regularities which characterize the duration and amplitude distribution of signals, time intervals between signals, and the dependence of the signal on the time of day and season were also studied. Orig. art. has: 12 figures and 3 formulas.

ASSOCIATION: none

SUBMITTED: 26Dec61 DATE ACQ: 01Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 000 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

L 17875-63 FCS(k)/EWT(1)/BDS/EEC-2/EED-2 ASD/ESD-3/APGC Pi-4/Pj-4/
Pl-4 WR
ACCESSION NR: AP3004274 S/0106/63/000/007/0073/0074

75

AUTHOR: Chepura, V. F.

TITLE: Scheme of feeding a cophasal multiple-unit antenna that has unequal amplitudes of current in the radiators

25B

SOURCE: Elektrosvyaz', no. 7, 1963, 73-74

TOPIC TAGS: cophasal antenna, broadside array

ABSTRACT: A brief description is offered of an 8-radiator broadside array (two 4-element Yagi antennas) fed with an assigned proportion of currents in the radiators. Type RKG-5 cable was used for the central feeder and individual radiator feeders. Matching transformers were made from RKG-5, RK-3 cable and from coaxial tubing. The measured standing-wave ratio was about 1.1 for the central feeder. The radiation-pattern width was 8°, the maximum fringe-radiation level was 24.4 db within ±57°. This data is in good agreement with the theoretical data.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

KASHCHEYEV, B.L.; CHEPURA, V.F.; BONDAR', B.G.

Study of the dispersion of ultrashort radio wave signals by meteor trails. Elektrosviaz' 17 no.6:2-9 Je '63. (MIRA 16:7)

(Radio waves)
(Ionospheric radio wave propagation)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

NAMITOKOV, K.K.; CHEPURA, V.F.

Profile meter for studying the surface of the collectors of electrical machines. Energ. i elektrotekh. prom. no.1:53 Ja-Mr'64. (MIRA 17:5)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

L 07123-67 EWT(1)

ACC NR: AP6017163 (N) SOURCE CODE: UR/0144/66/000/001/0111/0114

AUTHOR: Namitokov, K. K. (Candidate of physico-mathematical sciences, Section head); Chepura, V. F. (Candidate of technical sciences, Senior research associate); Brezinskiy, V. G. (Head of laboratory)

ORG: none

TITLE: Device for measuring dynamic variations in the shape of commutator surface in electrical machinery

SOURCE: IVUZ. Elektromekhanika, no. 1, 1966, 111-114

TOPIC TAGS: electric machine, commutator

ABSTRACT: Even the best available mechanical gages (J. Dietrich, El. Bahnen, no. 9, 1953) cannot reliably detect commutator roughness due to centrifugal displacements of individual bars during the machine operation. The microwave-test method developed by A. H. Ryan et al. (EE, v. 73, no. 3, 1954) requires complicated equipment and has limited resolution. Hence, a new electronic device

Card 1/2 UDC: 621.313+621.3.047

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

L 07123-67

ACC NR: AP6017163 O

has been developed whose operation depends on frequency variation of a 1-Mc oscillator due to variation of distance between the commutator surface and an inductive (or capacitive) sensor. The inductive sensor comprises a coil on a ferrite core with an airgap; the sensor is firmly fastened to the machine, near the commutator surface. The coil forms a part of the oscillatory circuit. The resolution of the new device is claimed to be adequate: oscillograms show the profiles of the entire commutator, of a one-sixth part of it, and of an individual bar. Orig. art. has: 4 figures and 1 formula.

SUB CODE: 09 / SUBM DATE: 02Nov64 / ORIG REF: 003 / OTH REF: 002

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APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURCHENKO, I. A.

9(314) PHASE I BOOK EXPLOITATION SOV/2746

Akademiya nauk UkrSSR. Fiziko-tekhnicheskiy institut

Elektrostaticheskiye generatory; sbornik statey (Electrostatic Generators; Collection of Articles) Moscow, Atomizdat, 1959. 255 p. 4,100 copies printed.

Ed. (Title page): A. K. Val'ter, Member, Academy of Sciences, UkrSSR; Ed. (Inside book): Z. D. Andreyenko; Tech. Ed.: N. A. Vlasova.

PURPOSE: This collection of articles may be useful to scientists and engineers working with high-voltage electrostatic generators.

COVERAGE: The authors discuss the construction and operation of a number of electrostatic generators developed in the USSR and describe methods of generating negative hydrogen ions. They discuss the operation of accelerating tubes and present methods of stabilizing accelerator voltages. No personalities are mentioned. References appear at the end of some articles.

Syrbinov, A. S. High-frequency Sources for Electrostatic Generators 72
The author presents the results of study, conducted by FTI AN UkrSSR in 1953–1955, of factors affecting the ring discharge in hydrogen in a transverse magnetic field and those affecting the percentage of ions in a 10-50-mc frequency range and initial pressure in the discharge chamber of 1 through 4×10^{-2} mm Hg. He also discusses the construction and operation of a high-frequency ion source. There are 3 references: 2 English and 1 German.

Belyayev, V. Kh., A. K. Val'ter, K. K. Chernyavskiy and G. P. Tsytko. High-voltage Vertical-Horizontal Electrostatic Generator 90
The authors discuss the construction and operation of an electrostatic generator with a cross-shaped steel boiler and two horizontal tubes and describe the advantages of such a design over horizontal and vertical types of generators. There are 23 references: 8 Soviet, 13 English, 1 French and 1 Danish.

Gostinskiy, G. M. Magnetic Analyzer as an Instrument for Measuring Voltages of an Electrostatic Generator 99
The author discusses the use of a magnetic analyzer for measuring voltages of an electrostatic generator. He briefly explains the construction of the analyzer and describes the procedure used in measurement. There are 3 references, all English.

Gostinskiy, G. M., and I. A. Chepurchenko. Voltage Stabilization of an Electrostatic Generator 106
The authors discuss the construction and operation of a voltage stabilization circuit and its elements such as a differential amplifier and a corona triode and describe the method of experimentally determining the degree of stabilization. There are no references.

Fogel', Ya. M., A. M. Markus, V. T. Tolok and Ya. I. Shvarts. Ion Sources for Electrostatic Generators in a Compressed Gas 113
The authors discuss the requirements of ion sources for electrostatic generators and describe the construction of a magnetic ion source with a cold cathode and a high-frequency source. They also discuss the experimental study of these sources conducted by FTI AN UkrSSR and describe the experimental results. There are 29 references: 9 Soviet, 18 English and 2 German.

Fogel', Ya. M., L. I. Krupnik, A. G. Koval' and A. D. Timofeyev. Source of Negative Hydrogen Ions for an Overcharging Electrostatic Generator 141
The authors describe the construction and operation of three models of negative hydrogen-ion sources developed by FTI AN UkrSSR and present the analysis of their characteristics. The first and the second models were developed in 1955 and 1956 respectively. The third model, built later, is essentially a copy of that developed by Weizman, J. A., and Cameron, J. K., of the University of Wisconsin, U. S. A. In the analysis of characteristics of these models the authors discuss the negative ion spectrum, methods of determining the coefficient of transformation of positive ions into negative, focusing of ion beams, and loss of ion energy. There are 9 references: 3 Soviet, 4 English and 2 German.

Pirozhenko, L. I. Accelerating Tube of an Electrostatic Generator 183
The author briefly discusses factors affecting electric strength of an accelerating tube and describes processes taking place on tube walls and intermediate electrodes. He also explains the effect of residual gases and vapors in a tube on its operation. There are 11 references: 3 Soviet, 7 English and 1 French.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

L 22737-66 EWT(1)/EWT(m) IJP(c)

ACC NR: AP6007960 SOURCE CODE: UR/0089/66/020/002/0165/0166

AUTHORS: Androsov, A. V.; Osetinskiy, G. M.; Chepurchenko, I. A.

ORG: none

TITLE: System for feeding gas to the ion source of an electrostatic generator

SOURCE: Atomnaya energiya, v. 20, no. 2, 1966, 165-166

TOPIC TAGS: valve, ion source, electrostatic generator, gas flow

ABSTRACT: In view of certain shortcomings of the presently used leak valves for the admission of gas into electrostatic generators, such as the low capacity (up to 10 cm^3/g) and high inertia, making regulation of the current in the electrostatic generator difficult, the authors have developed a new system, consisting of an electromagnetic valve built into the bottle with the gas, and a needle valve. When the electrostatic generator is turned on, the electromagnetic valve is operated and the gas is fed to the needle valve, which regulates the gas flow. Two methods of turning on the electromagnetic valve

Card 1/2 UDC: 539.107.6

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L 22737-66
ACC NR: AP6007960

were used, automatic (coupled to the electrostatic-generator belt) and remote (by means of a selsyn). In the case of the automatic control, provision is made to add a resistor to the electromagnetic valve circuit when the electrostatic generator is up to speed. In the case of remote control, the valve is turned on when the voltage control of the electrostatic generator is turned on. Diagrams of the electromagnetic valve and of the needle valve are included. Orig. art. has: 2 figures.

SUB CODE: 10,20/ SUBM DATE: 03Aug65/

Card 2/2 UVR

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

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S/139/62/000/006/012/032
E194/E435

B 2640

AUTHORS: Bogdanovich, A.S., Nekrasov, M.M., Sikorskiy, Yu.A. Chepurenko, V.G.

TITLE: A study of the electrical properties of solid solutions in pseudo ternary systems

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika, no.6, 1962, 72-76

TEXT: The following pseudo ternary ferroelectrics were studied: 1) 85% $BaTiO_3$ + 4% $BaSnO_3$ + 11% $BaZrO_3$; 2) 85% $BaTiO_3$ + 2% $BaSnO_3$ + 13% $BaZrO_3$ and 3) 90% $BaTiO_3$ + 4% $BaSnO_3$ + 6% $BaZrO_3$. Below a critical temperature, ranging from 20°C for (1) to 125°C for (3), the conductivity is below 10^{-12} $ohms^{-1}cm^{-1}$, at higher temperatures the conductivity increases rapidly and the presence of an inflection point in the curve of logarithm of conductance against reciprocal temperature indicates that at high temperatures the conductivity is intrinsic and relates to the stoichiometric composition whilst at lower temperatures it is extrinsic and depends on the divergence from the stoichiometric. The energy of activation depends on composition, heat treatment and oxygen content. Curves of permittivity (ε) as function of temperature

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A study of the electrical ...

show that the Curie point is at room temperature or above and is displaced towards lower temperatures as field strengths are increased without affecting ε_{max}. At room temperature tan δ as function of frequency for (2) and (3) alters little in the radio frequency range but increases greatly at 10^7 to 10^8 c/s whilst ε remains nearly constant. The space charge distribution was determined from measurements of potential distribution along the specimens which displayed internal regions with space charges of different sign so that they evidently contain irregularities in the form of regions of different conductivity, such as are found in certain single crystals, on the boundaries of which the space charges arise. The space charge distribution is affected by the presence of a polarizing field. Due to the favourable shift of the Curie point constancy of ε and only slight changes in tan δ at radio frequencies, the ferroelectrics investigated are suitable for use in radio frequency equipment. There are 5 figures.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut (Kiyev Polytechnic Institute)

SUBMITTED: May 22, 1961 (initially)
December 28, 1961 (after revision)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

L 36508-66 EWT(l)/EWP(e)/EWT(m)/EWP(j)/T IJP(c) GG/RM/WH

ACC NR: AP6013461 SOURCE CODE: UR/0139/66/000/002/0092/0097

AUTHOR: Bogdanovich, A. S.; Kalabukhov, N. P.; Nekrasov, M. M.; Sikorskiy, Yu. A.; Chepurenko, V. G.

ORG: Kiev Polytechnic Institute (Kiyevskiy politekhnicheskiy institut)

TITLE: Electrostriction of dielectrics

SOURCE: IVUZ. Fizika, no. 2, 1966, 92-97

TOPIC TAGS: dielectric capacitor, dielectric material, dielectric property, electrostriction, electric polarization, electric field

ABSTRACT: The purpose of the investigation was to ascertain whether deformation in an electric field and polarization are properties possessed by all dielectrics, and which of these properties plays the dominating role in electrostriction. The tests were made on commercial ceramic dielectrics and on certain technical dielectrics such as rubber, quartz, Plexiglas, Rochelle salt, and ADP. Altogether 166 samples were tested, 88 of which were piezoelectric. The measurement consisted essentially of determining the profile of the sample before and after application of the electric field, and hence the change in sample dimensions, with the aid of a profile gauge (IZP-17) accurate to 1.0×10^{-4} mm at a vertical magnification of 5200. The tests have shown that all the measured dielectrics can be divided into four groups, in which the thickness of the sample (i) decreases or (ii) increases with applied voltage, (iii) reversal of the voltage affects the change, and (iv) at low voltages the thickness first decreases and then with further increase in the field it begins to

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increase. Tables of the relative changes in dimensions are presented. The results confirm the correctness of the assumption that electrostriction and polarization are possessed by all dielectrics. In the case of polycrystalline ceramics, the polarization plays the major role, and the magnitude and direction of the electrostriction are strongly dependent on the field. Tests were also made of the variation of the rating of a capacitor under the influence of electrostriction, by applying to the capacitor a dc field superimposed on a high-frequency (10^7 cps) field. These tests have shown that with increasing applied additional dc field, the capacitance increases first and then reaches saturation or even decreases. Repetition of the tests under different conditions has shown that, other conditions being equal, the capacitance and the sign of the change depend on the composition of the ceramic and the technology of its preparation. It is also shown that the change in the capacitance is due essentially to polarization and that the effect of electrostriction is negligible. Orig. art. has: 5 figures, 2 formulas, and 2 tables.

SUB CODE: 20, 09/ SUBM DATE: 01Jul64/ ORIG REF: 002/ OTH REF: 003

Card 2/2 mlp

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURENKO, V. G.

IGNAT'YEV, Ye.A.

"Practical work in physics for secondary schools" (in Ukrainian) by V.G. Chepurenko. Reviewed by E.A. Ignat'ev. Fiz. v shkole 17 no.3:74-75 My-Je '57. (MLRA 10:6)

1. Gorodskoy institut usovershenstvovaniya uchiteley g. Kiyev.
(Physics--Study and teaching)
(Chepurenko, V.G.)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

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L 09367-67 EWT(l)/EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) WH/WW/JD/JG

ACC NR: AP6023413 SOURCE CODE: UR/0139/66/000/003/0050/0052

AUTHOR: Chepurenko, V. G.

ORG: Kiev Polytechnic Institute (Kiyevskiy politekhnicheskiy institut)

TITLE: Investigation of the pyroelectric effect in ceramic ferroelectrics

SOURCE: IVUZ. Fizika, no. 3, 1966, 50-52

TOPIC TAGS: ferroelectric material, pyroelectricity, ceramic dielectric, Curie point, dielectric constant, temperature dependence

ABSTRACT: The author investigated the pyroelectric emf in ceramic ferroelectrics made of mixtures of $BaTiO_3$, $BaSnO_3$, and $BaZrO_3$ with different compositions. The samples were made in the form of discs 10 - 15 mm in diameter and 1.5 - 3 mm thick. Their measurements were made at temperatures 20 - 100C, an interval which contains the Curie point and in which a sharp change of the dielectric constant takes place. The sample was connected in series with a galvanometer to a dry cell. When the circuit was closed and the sample was slowly heated to 100C, there is no current in the circuit. But if the sample and the closed electric circuit were placed in a thermostat at a temperature of 100C, then a time-varying electric current flowed in the circuit. This pyroelectric current reached a maximum value relatively rapidly, and then dropped off to zero within 3 - 5 minutes when the temperature of the sample became practically equal to that of the thermostat. The effects of both heating and cooling were investigated. The pyroelectric effect was found to be due to the displacement current

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produced by the change in the residual polarization of the sample with change in temperature. The pyroelectric effect is observed in the temperature interval neighboring on the Curie point. This effect can be used if capacitors must be operated under variable temperature conditions, or for a rapid determination of the temperature interval in which the Curie point of a given ferroelectric ceramic sample is located.

The author thanks Professor M. M. Nekrasov for supplying the samples and Professor N. P. Kalabukhov, Docents V. Ya. Zevin and Yu. A. Sikorskiy, and Senior Instructor A. S. Bogdanovich for a discussion of the results. Orig. art. has: 4 figures.

SUB CODE: 20, 03/ SUBM DATE: 04May64/ ORIG REF: 003

Card 2/2 gd

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

1. CHEPURENKO, Ya.

2. USSR (600)

4. Reservoirs

7. Measures for increasing water reserves in industrial reservoirs. Sakh. prom. 27, No. 2, 1953.

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

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

SVETLOPOLYANSKIY, V., starshiy prepodavatel'; CHEPURIN, M., starshiy prepodavatel'

Technological problems in electric spark hardening of machine parts. Zhil.-kom.khoz. 7 no.12:15-17 '57. (MIRA 11:12)

1. Stalingradskiy institut inzhenerov gorodskogo khozyaystva.
(Electric spark)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

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S/123/59/000/010/034/068
A004/A001

18.7000 2308, 1045, 1167

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 10, p. 119, # 38087

AUTHORS: Svetlopolyanskiy, V. I., Chepurin, M. S.

TITLE: Electric Spark Hardening of Metal Surface Layers

PERIODICAL: Stalingr. prom-st' (Sovnarkhoz Stalingr. ekon. adm. r-na)., 1958, Nos. 2-3, pp. 21-25

TEXT: For repair works the authors recommend an electric-contact build-up of worn components on the 5-electrode electric-spark apparatus of the TsNIITMASh IE-2M (IYe-2M) design. This apparatus is characterized by the low operating voltage (up to 50 v), a high operating current (up to 30 amp per each electrode) and a high capacitance of the capacitor batteries (600 microfarad per each electrode), which makes it possible to obtain a diffusion layer up to 1.6 mm deep. The authors present the technical characteristics of the apparatus, the recommended specific hardening time of the electrode material and the hardening conditions for various components. There are 2 figures and 4 references. R. A. P.

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

Card 1/1

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

1. CHEPURIN, N. M.

2. USSR (600)

4. Belov, P. A.

7. "Economic problems in contemporary war." P. A. Belov. Reviewed by N. M. Chepurin. Sov. kniga no. 9, 1952

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

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURIN, N.S.

CHEPURIN, N.S.

Fagotherapy of glaucoma at the resort "Ozero Tagarskoe". Vest. oft., Moskva 31 no.1:35-41 Jan-Feb 52. (CIML 21:5)

1. Candidate Medical Sciences. 2. Of the Clinic for Eye Diseases (Head--Prof. M.A. Dmitriyev), Krasnoyarsk Medical Institute.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURIN, N.S., kandidat meditsinskikh nauk(Krasnoyarsk)

Complaints of patients with glaucoma. Fel'd i akush. no.12:14-16 D '55. (MLRA 9:3)

(GLAUCOMA)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURIN, N.S.

CHEPURIN, N.S., kandidat meditsinskikh nauk

Resort therapy for glaucoma patients. Oft.zhur. 12 no.4:241-245 '57. (MIRA 10:11)

1. Iz kafedry glaznykh bolezney (zav. - prof. M.A.Dmitriyev) Krasnoyarskogo meditsinskogo instituta.
(GLAUCOMA)
(BARTHS, MEDICAL AND SURGICAL USES OF)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURIN, N.S., kandidat meditsinskikh nauk (Krasnoyarsk)

Myopia of a high degree as a contraindication for some types of physical exercise and sports. Fel'd.i akush. 22 no.5:13-14 My '57. (MLRA 10:6)
(MYOPIA)
(PHYSICAL EDUCATION AND TRAINING)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

ANDREYEV, L.L.; VAKHMAN, V.I.; CHEPURIN, P.I.; MIROSHNICHENKO, V.F.; BOGACHEV, A.S.; VOL'VACH, Ye.Ye., agronom-entomolog; CHEBOTAREV, M.Ya., agronom-entomolog (Georgiyevskiy rayon); ZGADOV, G.K., agronom po zashchite rasteniy

Killing shield bugs in combines. Zashch.rast.ot verd. i bol. 7 no.6:30-31 Je '62. (MIRA 15:12)

1. Zaveduyushchiy Severo-Kavkazskim opornym punktom Vsesoyuznogo instituta zashchity rasteniy (for Andreyev). 2. Zamestitel' direktora, glavnyy agronom sovkhoza "Kurskoy" (for Vakhman). 3. Zamestitel' direktora, glavnyy agronom oporno-pokazatel'nogo sovkhoza "Obil'nenskiy" (for Chepurin). 4. Glavnyy inzh. sovkhoza "Kurskiy" (for Bogachev). 6. Severo-Kavkazskiy opornyy punkt Vsesoyuznogo instituta zashchity rasteniy (for Vol'vach). 7. Sovkhoz "Starodubskiy" (for Zgadov).

(Stavropol Territory--Wheat--Diseases and pests)
(Stavropol Territory--Eurygasters)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURIN, V., shofer (Moskva); LAVRENT'YEV, A., avtolyubitel' (Syktyvkar); GRIGOR'YAN, V., shofer (Tbilisi); VASIL'YEV, A., inzh. po mekhanizatsii; RADVOGIN, M. (Moskva); VITYAZEV, P., inzh. (Chelyabinsk); YAKOVLEV, N. (Chirchik); VINOKUROV, A.; BUBLIK, T., shofer; LOKOT', I., avtoslesar'

Automobile drivers speak today. Izobr.i rats. no.9:9-11 S '62. (MIRA 16:3)

1. "Sel'khoztekhnika", Chelyabinskaya obl. (for Vasil'yev). 2. Nachal'nik tsekha Konservnogo zavoda, g.Temryuk Krasnodarskogo kraya (for Vinokurov). 3. Konservnyy zavod, g. Temryuk Krasnodarskogo kraya (for Bublik, Lokot').
(Automobile engineering—Technological innovations)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURIN, V.A.

Effect of the subcutaneous administration of antitumor sera on the development and growth of transplanted Brown-Pearce tumor. Biul. eksp. biol. i med. 49 no. 5:99-108 My '60. (MIRA 13:12)

1. Iz Stavropol'skogo meditsinskogo instituta (dir. - prof. V.G. Budylin), Stavropol' (Kavkazskiy). Predstavlena deystvitel'nym chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.
(TUMORS)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

SHIBKOV, I.V., inzh.; CHEPURIN, V.M., master

Automatic turning-on and off ov the oil heater in oil switch tanks. Elek. sta. 32 no.7:79-80 Jl '61. (MIRA 14:10)
(Electric switchgear)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

8 (2) SOV/112-57-5-10849

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1957, Nr 5, p 181 (USSR)

AUTHOR: Chepurin, V. N.

TITLE: Production of Telemechanical Equipment at the "Elektropul't" Factory (Proizvodstvo telemekhanicheskoy apparatury na zavode "Elektropul't")

PERIODICAL: V sb.: Telemekhaniz. v nar. kh-ve, M., AS USSR, 1956, pp 77-84

ABSTRACT: Data on telemetering systems, remote-control equipment, telesignaling and dispatcher's boards manufactured by the "Elektropul't" factory is presented. Modernization of existing equipment and development of new types of telemechanical devices are listed.

N.M.F.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURIN, V. N.

"Production of Telemechanic Apparatus in the 'Elektropul't' /Electric Panel/ Factory" (Proizvodstvo telemekhanicheskoy apparatury na zavode 'Elektropul't') from the book Telemechanization in National Economy, pp. 77-84, Iz. AN SSSR, Moscow, 1956

(Given at meeting held in Moscow, 29 Nov to 4 Dec 54 by Inst. of Automatics and Telemechanics AS USSR)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURIN, V. N. (Eng.); AMBROSOVICH, V. A.

"State of Production of Telemechanical Apparatus,"

paper read at the Session of the Acad. Sci. USSR, on Scientific Problems of Automatic Production, 15-20 October 1956.
Avtomatika i telemekhanika, No. 2, p. 182-192, 1957.

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APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURIN, Vitaliy Petrovich; VLASOV, L.V., red.

[Practice in introducing complex time control units (UKKV)] Opyt vnedreniia ustanovok kompleksnogo kontrolia vremeni (UKKV). Leningrad, 1964. 34 p. (MIRA 18:3)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURIN, V.P., inzh.

System for the remote control of machine shop equipping operations. Sudostroenie 31 no.1:53-55 Ja '65. (MIRA 18:3)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURINA, I.S.

RT-792 [Case of scopolamine poisoning in ophthalmic practice] Sluchai otravleniia scopolamin'om v glaznoi praktike.
Kazanskii Meditsinskii Zhurnal, 26(11): 1139-1140, 1930.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURINA, I. S.

Trachoma and its control in the population of Ket. Vest. oft., Moskva 30 no.3:27-28 May-June 1951. (CIML 21:1)

1. Of the Eye Clinic (Head -- Prof. M. A. Dmitriyev), Krasnoyarsk Medical Institute.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

BRAZHNIK, Leonid Ivanovich; CHEPURINA, Nikolay Petrovich; ZELENYY, Il'ya Iosifovich; AZARNINA, N.I., red.; YEREMINA, I.A., tekhn. red.

[Prestressing of reinforcements using an electric heating technique] Napriazhenie armatury metodom elektronagreva. Kiev, Gosstroiizdat, USSR, 1963. 96 p. (MIRA 17:1)
(Prestressed concrete)
(Concrete reinforcement)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

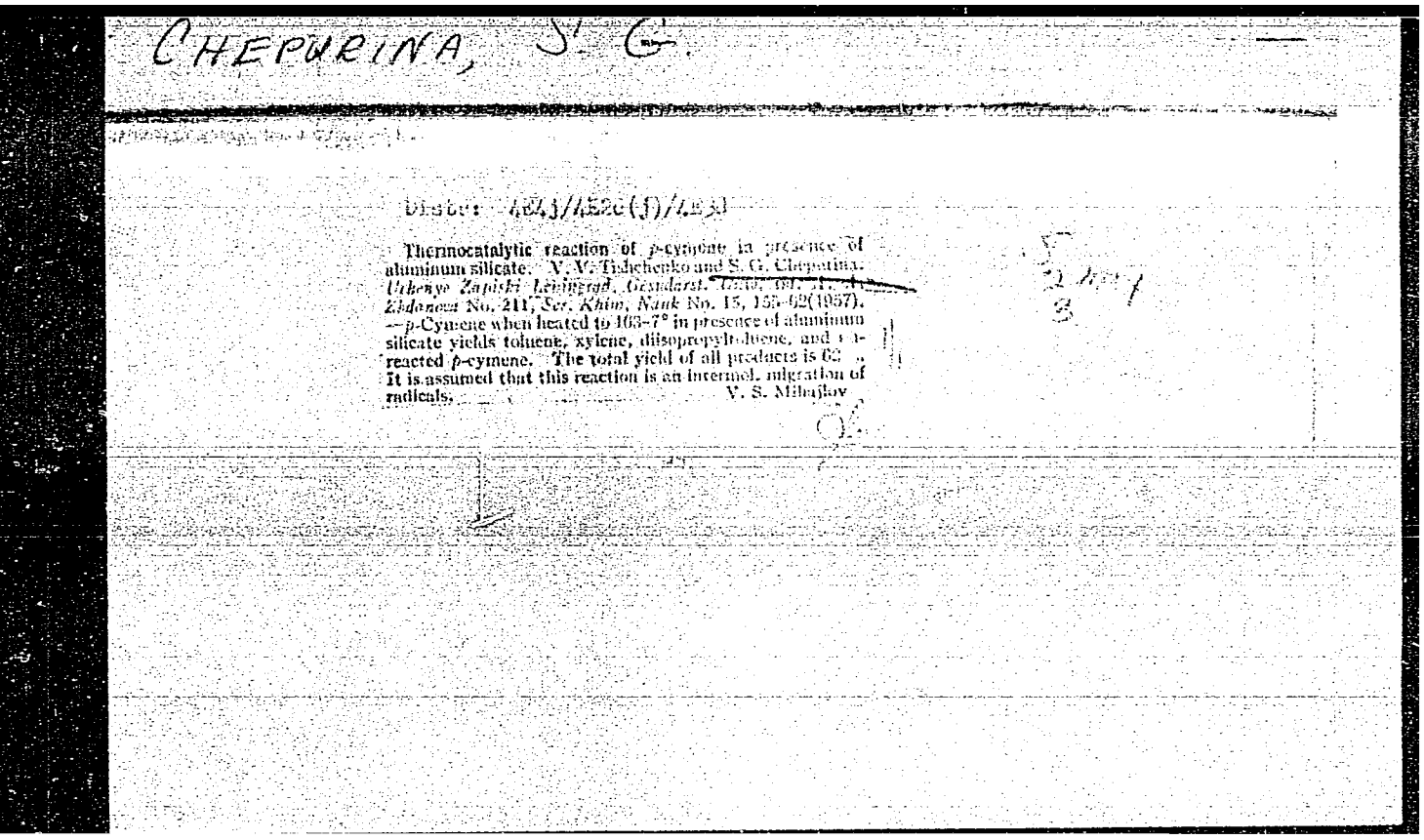
KOTELOVA, Natal'ya Vladimirovna, dots.; STEL'MAKHOVICH, Mariya Leont'yevna, dots. Prinimala uchastiye CHEPURINA, N.Ye., arkhit.; KAZAKOVA, Ye.D., red.; DEYEVA, V.M., tekhn. red.; SOKOLOVA, N.N., tekhn. red.

[Poplars and their use in landscaping] Topolia i ikh ispol'zovanie v zelenykh nasazhdeniiakh. Moskva, Sel'khozizdat, 1963. 124 p. (MIRA 16:7)

1. Kafedra selektsii i dendrologii Moskovskogo lesotekhnicheskogo instituta (for Kotelova, Stel'makhovich).
(Poplar) (Landscape gardening)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7



CHEPURINA, S. G.

USSR: 4243/452c(J)/4253

Thermocatalytic reaction of *p*-cymene in presence of aluminum silicate. V. V. Tishchenko and S. G. Chepurina. *Uchenye Zapiski Leningrad. Gosudarst. [illegible] Zhdanova* No. 211, *Ser. Khim. Nauk* No. 15, 155–62(1957). —*p*-Cymene when heated to 163–7° in presence of aluminum silicate yields toluene, xylene, diisopropyltoluene, and unreacted *p*-cymene. The total yield of all products is 62%. It is assumed that this reaction is an intermol. migration of radicals. V. S. Mikhailov

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURINA, Z.A., assistent

Intraorganic vessels of the external muscles of the human eyeball. Uch. zap. Stavr. gos. med. inst. 12:132-133 '63. (MIRA 17:9)

1. Kafedra anatomii cheloveka (zav. prof. A.G. Korotkov) Stavropol'skogo gosudarstvennogo meditsinskogo instituta.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

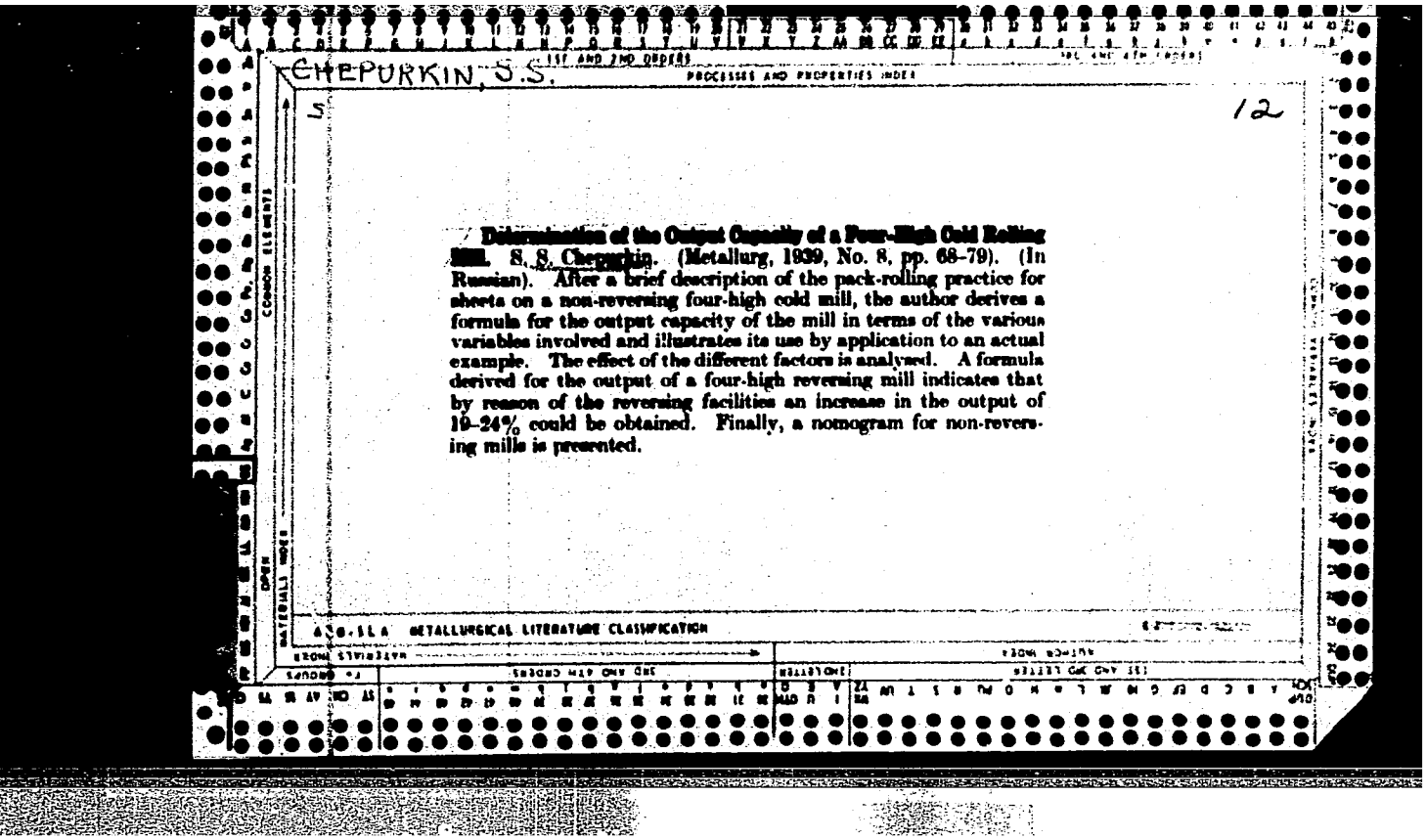
CHEPURKIN, I.

Transportation units haul agricultural freight.
Avt.transp. 40 no.11:12-13 N '62. (MIRA 15:12)

1. Zamestitel' nachal'nika Leningradskogo upravleniya avtotransporta.
(Transportation, Automotive)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7



CHEPURKIN, S.S.

S

12

Determination of the Output Capacity of a Four-High Cold Rolling Mill. S. S. Chepurkin. (Metallurg, 1939, No. 8, pp. 68–79). (In Russian). After a brief description of the pack-rolling practice for sheets on a non-reversing four-high cold mill, the author derives a formula for the output capacity of the mill in terms of the various variables involved and illustrates its use by application to an actual example. The effect of the different factors is analysed. A formula derived for the output of a four-high reversing mill indicates that by reason of the reversing facilities an increase in the output of 19–24% could be obtained. Finally, a nomogram for non-reversing mills is presented.

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

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the same is calculated by a formula obtained by transformation of G. Gerts's equation and with the use of Vinkler's hypothesis (Ref 5). The joint deflection of live roll and backing roll is examined, and the formulas required for calculating the same are derived. The equation of the curve is set up for the hot uncalibrated profile of a cylindrical roll. On account of all these formulas, all calculations may be carried out that are connected with roll designing for two-high, three-high and four-roller sheet-rolling mills. For simplification, the formulas may be transformed to tables, diagrams and nomographs. There are 4 figures and 10 Soviet references.

ASSOCIATION: Zhdanovskiy metallurgicheskiy institut (Zhdanov Institute of Metallurgy)

SUBMITTED: January 20, 1958

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHERPAKIN, S.S.

Boussinesko law and the Herts problem in determining the length of the flattened arc of gripping. Izv.vys.ucheb.zav.; chern. met. no.7:89-98 '60. (MIRA 13:8)

1. Zhdanovskiy metallurgicheskiy institut.
(Elasticity) (Deformations (Mechanics))

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

S/137/60/000/011/020/043
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No.11, p.119, # 26160

AUTHOR: Chepurkin, S.S.

TITLE: Contact Deformation of Sheet Rolling Rolls

PERIODICAL: Sb.nauchn. tr.Zhdanovsk. metallurg. in-t, 1960, No. 5, pp. 322-345

TEXT: In connection with the cold rolling of sheets, the author analyzes a number of equations which describe the shape of the surface of a roll in the zone of its contact with the cold rolled metal. Specific pressure is assumed to be distributed over the contact surface of the rolls in the shape of a parallelepiped, a parabolic cylinder, an elliptic cylinder, and a narrow and a long semi-ellipsoid. Formulae are given to determine the relative deformations of the roll generatrix and of the grip-arc chord.

A.G.

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

Card 1/1

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

20277

S/148/60/000/009/010/025
A161/A030

16.7300 also 1496, 1045

AUTHOR: Chepurkin, S.S.

TITLE: Application of fourier series for calculating the deformations of sheet mill rolls

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 9, 1960, 68-78

TEXT: The deformations of two-high hot sheet mill rolls have been studied and the elastic line equation derived, taking into account the bending moments and shearing forces. Equations are derived for the gaging line of two-high mill rolls taking into account all the deformation factors. The equation (5) (in polynomes) is the equation of the gaging curve in relation to its apex and valid within the range of the sheet width:

$$\Delta v = \left[\frac{qb^4}{4EI}(1 + 2\bar{\lambda} + S_q) + 13.5_q\theta - R_c\gamma'\tau_1\right] \cdot \bar{\xi}^2 - \frac{qb^4}{24EI} \cdot \bar{\xi}^4 , \quad (5)$$

$$\frac{x}{b} = \bar{\xi} \leqslant 1; \quad \bar{\lambda} = \frac{n}{b}; \quad q = \frac{P}{2b};$$

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Application of fourier series ...

where n - distance from the pressure resultant on the roll neck to the side edge of sheet;
2b - sheet width;
S_Q - the shearing forces coefficient, $S_Q = k(1 + \nu)\left(\frac{D}{2b}\right)^2$;
E - the modulus of elasticity, $\theta = \frac{1 - \nu^2}{\pi E}$;
EI - bending rigidity of the roll barrel;
ν - the Poisson coefficient of the roll barrel material;
k - 1.22 (for round cross section area).

The rolls can be gaged by the equation (5) on the length under the sheet, and the barrel ends can be gaged on an arbitrary curve. But in practical work it is more convenient to calculate and check the entire barrel length, and a sufficiently accurate equation for the full length is derived (38) by decomposing the arbitrary function into an infinite trigonometric series, i.e. the fourier series. [Abstracter's note: An obvious misprint in the equation (5) - ...+ 2 (sheet width), 2b is correct]. The equation (38) permits the calculation of the full barrel length (1) taking into account the bending moments, the shearing forces, the longitudinal flattening, and

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Application of fourier series ...

the heat expansion of the barrel. The first part of the curve (38) is accurate on the entire barrel length ($\xi \leqslant 1$), and the second half takes into account the deformations in contact and heat deformations and is accurate within the width of the sheet ($\xi \leqslant \beta$) and approximate in portions outside the sheet width ($\beta \leq \xi \leqslant 1$):

$$\Delta u = \frac{4Pl^3}{\beta EI\pi^5}\left\{\left[(1 + c_Q)\sin\frac{\pi\beta}{2} + c_m\right]\left(1 - \cos\frac{\pi\xi}{2}\right) + (c_\omega + c_t)\left(1 - \cos\frac{\pi\xi}{2\beta}\right)\right\} \quad (38)$$

The values of the coefficients in the equation (38) are determined from the following formulae:

$$c_Q = 1.5(1 + \nu)\left(\frac{D}{l}\right)^2; \quad c_m = \frac{\pi^2}{4}\beta\lambda; \quad c_\omega = 16.65(1 - \nu^2)\cdot\left(\frac{D}{l}\right)^4;$$
$$c_t = -3.88\,\frac{ER_0\gamma_1}{q}\left(\frac{D}{l}\right)^4; \quad \lambda = \frac{s}{a}. \quad (38a)$$

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Application of fourier series ...

The calculations include formulas (24) and (26) that are valid for the entire barrel curve length but taking into account the bending moments and the shering forces only. A practical calculation example is included for a cast iron roll with barrel diameter D = 630 mm; barrel length $\ell = 2\alpha$ = 1600 mm; half neck length e = 200 mm; E = 1.15 . 10^6 kg/cm^2; ν = 0.25; linear expansion coefficient γ = 0.0011; temperature difference between the barrel mid and in the spot at the sheet edge $\tau_1 = 50^\circ$C; rolling pressure 400 tons; sheet wihth 2b = 1100 mm. The result by the equation for the curve over the full barrel length is:

$$\Delta u = 0.55 \left[\left(1 - \cos\frac{\pi\xi}{2}\right) - 32.2 \left(1 - \cos\frac{\pi\xi}{2\beta}\right)\right] ;$$

the curve convexity over the full barrel length

$$\Delta u_{\xi=1} = - 28.6 \text{ mm} ;$$

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Application of fourier series ...

and the convexity within the sheet width

$$\Delta l_{\xi-\beta} = -17.5 \text{ mm} .$$

There are 4 figures and 11 Soviet-bloc references.

ASSOCIATION: Zhdanovskiy metallurgicheskiy institut (Zhdanov Metallurgical Institute)

SUBMITTED: 6 November 1959

Card 5/7

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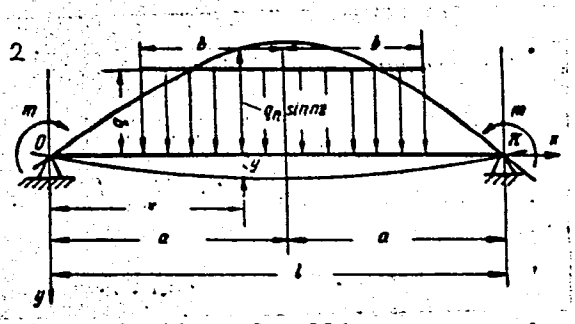

Fig. 2 - Approximation of rolling pressure by trigonometric series

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Application of Fourier series ...

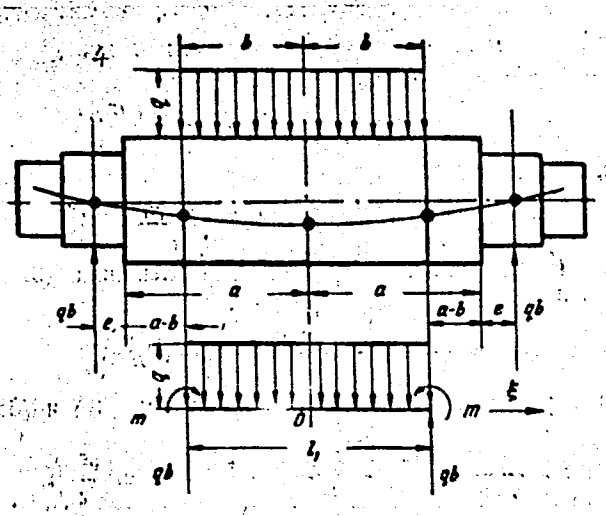

Fig. 4 - Deformation of a roll within the width of sheet

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GALANI, V.P.; CHEPURKIN, S.S.; MALEYEV, L.I.

Investigating dynamic forces in the operation of a hot-rolled strip coiler (determination of acceleration). Izv.vys.ucheb.zav.; chern. met. 8 no.8:172-177 '65. (MIRA 18:8)

1. Zhdanovskiy metallurgicheskiy institut.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURKIN, S.S., prof.; KHOMENKO, V.I., inzh.; DANILOV, S.S., inzh.

Investigating the roughing stand of a 1700 continuous mill.
Stal' 25 no.10:920-922 O '65. (MIRA 18:11)

1. Zhdanovskiy metallurgicheskiy institut.

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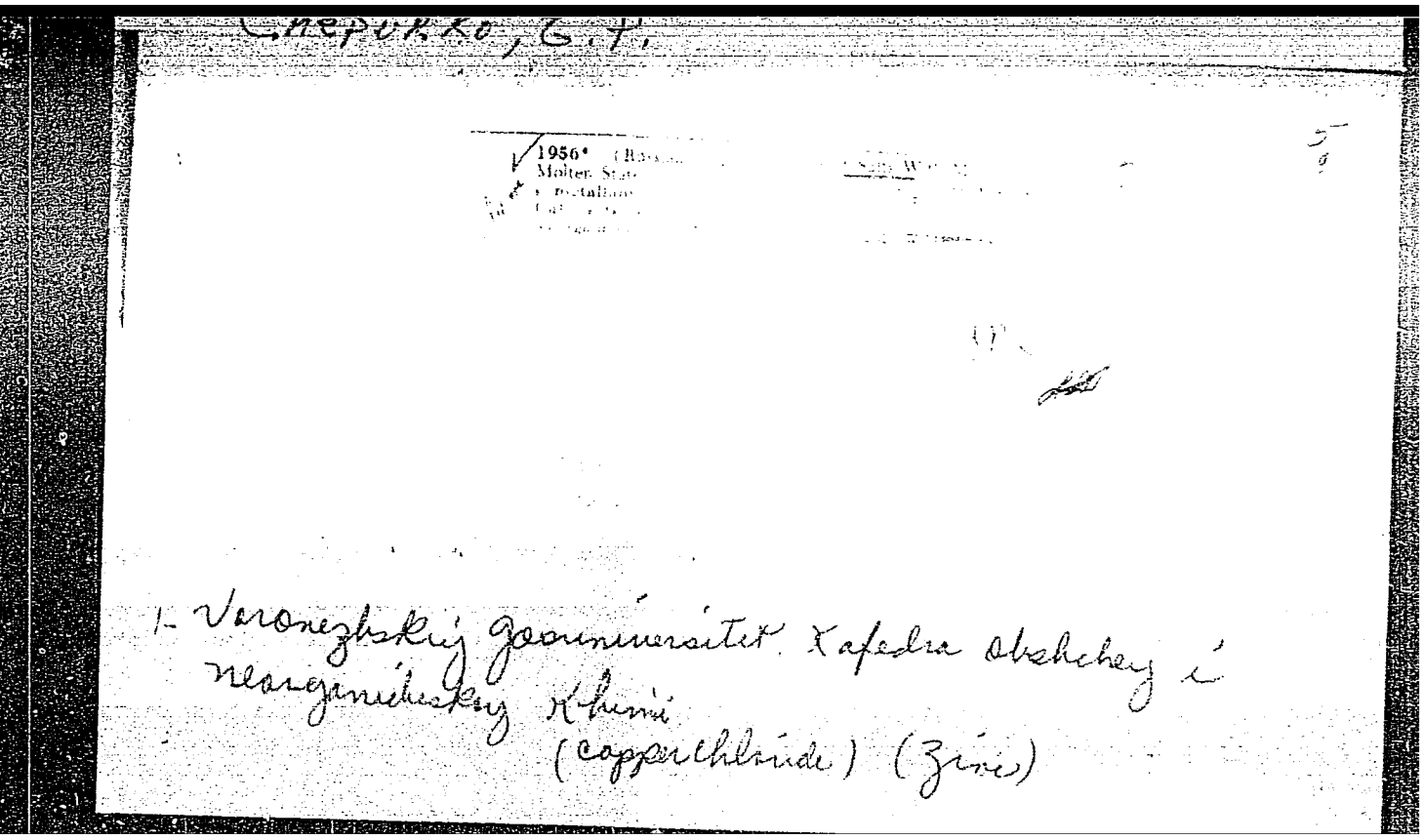

Chepurko, G. F.

1956 (Russian)
Molten Salts
Electrolysis

1- Voronezhskiy Gosuniversitet Kafedra Obshchey i Neorganicheskoy Khimii
(Copper chloride) (Zinc)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

BORISOV, S.I., kandidat tekhnicheskikh nauk; CHERPURKO, M.I., inzhener.

The production of bimetal tubes. Stal' 7 no.2:135-138 '47.
(MLRA 9:1)

1.Nauchno-issledovatel'skiy tekhnologicheskiy institut.
(Metal drawing) (Pipe, Steel)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

SOV/137-58-11-22500

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 94 (USSR)

AUTHOR: Chepurko, M. I.

TITLE: Deformation Outside the Contact Area in Tube Manufacture, and the Relation Thereof to Deformation Resistance (Vnekontaktnaya deformatsiya pri proizvodstve trub i yeye vliyaniye na soprotivleniye deformatsii)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1958, Nr 4-5, pp 38-51

ABSTRACT: An investigation is conducted of Nr-10 steel tubes (T) measuring 84x11x320 and 99x20x250 mm. After turning on the lathe, a coordinate network 5 mm on each side was inscribed on the outer surface of the T. A wide band of lacquer was painted on opposite sides and dried to loss of plasticity. After measurement, the T was expanded on a 100-t laboratory press until the process had stabilized. Expansion was performed at a mandrel velocity of 15-20 cm/min, a force curve was plotted in terms of force versus press-plunger stroke. After expanding, the T was measured within fixed points. The results of these experiments are: 1) It is shown that on deformation

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Deformation Outside the Contact Area in Tube Manufacture (cont.)

(D) of T, D occurs outside the contact area and substantially increases the length of the effective area of D; 2) the effect of mandrel taper (3, 6, 9, and 12°), the amount of D (5 and 9mm) and the thickness of the T wall (11 and 20 mm) upon the magnitude of D outside the contact area and upon the boundary of the effective area of D is investigated; 3) the influence of outside zones upon D resistance in drawing on the mandrel is investigated; 4) it is shown that analytical formulas derived without consideration of the influence of outside zones, and with a number of things assumed, yield highly underrated results and cannot be recommended for practical employment.

Ye. T.

Card 2/2

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

S/137/61/000/002/009/046
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1961, No. 2, p. 20, # 2D190

AUTHORS: Chepurko, M.I., Rokhman, D.Ye., Tyr, V.R.

TITLE: Methods of Calculating Tables for Pipe Pressing

PERIODICAL: "Byul. nauchno-tekhn. inform. Ukr. n.-i. trubn. in-t", 1959, No. 8, pp. 27 - 35

TEXT: Methods are given for calculating the dimensions of blanks and tools in pressing steel pipes.

M. Ts.

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

Card 1/1

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURKO, M.I.

(4)

PHASE I BOOK EXPLOITATION SOV/3611

Dnepropetrovsk. Metallurgicheskiy institut

Obrabotka metallov davleniyem (Metal Forming) Dnepropetrovsk, Metallurgizdat, 1960. 326 p. (Series: Its: Nauchnyye trudy, vyp. 39) 2,100 copies printed.

Ed.: A.P. Chekmarev; Ed. of Publishing House: R.A. Beline; Tech. Ed.: S.P. Andreyev.

PURPOSE: This collection of articles is intended for technical and scientific personnel in metallurgy and in mechanical engineering. It will also be of interest to designers of rolling equipment.

COVERAGE: This collection of articles treats the theory of rolling. It discusses such factors as the total and the unit pressures of the work on rolls, moments of rolling, forward slip, spread, etc. It also includes results obtained from investigation of roll quality, rolling of cast iron sheets, and other problems. No personalities are mentioned. References follow each article.

Chekmarev, A.P., and B.A. Chernyy [Candidate of Technical Sciences]. Deformation of Metal in the Temperature of Pipe 173
The authors present a method for determination of local (layer) deformations for any element of pipe in the focus of deformation, at various manufacturing processes (rolling,drawing, rotary rolling) in order to determine the most suitable process for given conditions.

Chekmarev, A.P.; Ya.S. Pinkel'shtern [Candidate of Technical Sciences]; and I.M. Ludanskiy [Engineer]. Kinematics of the Process of Helical Rolling 191
The authors try to explain in a new way a number of phenomena occurring during helical rolling, the kinematics of the process magnitude and direction of forces in the contact area, slip of metal, and the ways of intensification of the process of helical rolling.

Galkin, M.F. [Candidate of Technical Sciences]. Effect of Size and Shape of Trapezoidal Roll Passes on the Quality of Rails 221
The article deals with experiments undertaken by the author in order to determine the effect of the conditions of deformation at rolling on elimination of defects in rails. The practical recommendations concerning the shape passes and magnitude of drafts are presented.

Chekmarev, A.P., A.F. Grudev [Candidate of Technical Sciences], and V.G. Zhak [Engineer]. Cold Rolling of Annealed Cast Iron Sheet 231
The authors describe process of removing defects on cast iron sheets either by hot or by cold rolling

Nikolayenko, Ye.G. [Engineer], S.I. Vitenzon [Candidate of Technical Sciences], and L.D. Stepanova [Engineer]. Effect of Cold Deformation on the Properties of Cast Iron Sheets 243
Effect of cold hardening, recrystallization, number of passes, and amount of drafts on the ductility and strength of cast iron sheets is discussed.

Yatkin, Ya.L. [Candidate of Technical Sciences], I.D. Kronfeld, S.V. Korkhov, and I.A. Chekmarev [Engineers]. Investigation of Pressure on Rolls, and Power Consumption at Rolling Pipe in Continuous Rolling Mill with Long Mandrel 252
The authors discuss the distribution of pressure on rolls, the effect of wall thickness and amount of additional alloy in steel on the pressure of the rolls. They give formulas for determination of unit and total roll pressure, and for power consumption in continuous rolling.

Chekmarev, A.P., and L.Ya. Kapturov. Experimental Investigation of Unit Pressures in Hot Rolling 278
The authors conducted a laboratory investigation in the Dnepropetrovsk Metallurgical Institute on determination of magnitude, and distribution pattern of the unit pressure in the contact area at rolling of steel and, of various thickness and with various drafts.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEKMAREV, A.P., akademik; CHEPURKO, M.I., kand.tekhn.nauk

Deformation of the metal in tube production. Nauch. trudy IMI no.39:173-190 '60. (MIRA 13:10)

1. AN USSR (for Chekmarev).
(Deformations (Mechanics)) (Pipe mills)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

S/137/61/000/007/049/072
A060/A101

AUTHORS: Chekmarev, A. P.; Chepurko, M. I.

TITLE: Deformation of metal in pipe production

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1961, 37-38, abstract 7D300 ("Nauchn. tr. Dnepropetr. metallurg. in-ta", 1960, no. 39, 173-190)

TEXT: Methods are elaborated for determining the coefficient of partial (layer by layer) deformation for any element of the strain seat and the separation boundary of zones with different direction of radial deformation. For all kinds of pipe drawing equations are given for determining them. Curves of radial deformations in the strain seat are given. It is shown that the radial deformation of surface layers and the numerical values of the coefficients K_1 and K_2 of the changes ($K_1 = D_1/D_2\mu$ [Abstracter's note: D_2 should read D_o, as it seems to be a misprint.] and $K_2 = d_1/d_o\mu$, where D_o, d_o, D_1, and d_1 are respectively the outside and inside diameters of the pipe before and after the deformation, and μ is the elongation coefficient) make it possible to determine the pattern and the nonuniformity of radial deformation in the strain seat. It is shown that in

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S/137/61/000/007/049/072
A060/A101

Deformation of metal in pipe production

the drawing of pipe through the draw-hole, whose cone generatrix represents a straight line, the axial deformation increases sharply from the beginning to the end of the strain seat, indicating the inefficiency of the draw-hole grooving. It is demonstrated that when the wall thickness of the pipe is retained or else increased or decreased only by little while it is being deformed in any manner, a two-valued radial deformation occurs. It is impossible to realize a plane deformation over the entire strain seat. The method of determining the partial (layer by layer) deformation in tube production may also be applied to deformation analysis in the production of other profiles, for example, in section rolling.

Yu. Manegin

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURKO, M.I., kand.tekhn.nauk; VERKHOVOD, V.K.

Present state of the process of extruding hollow, steel sections.
Met.i gornorud. prom. no.6:90-92 N-D '63. (MIRA 18:1)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

CHEPURKO, M.I., kand. tekhn. nauk; BEYNOVSKIY, A.M.; STEFANSKIY, I.S.; KIRVALIDZE, N.S.; PANYUSHKIN, A.V.; TARASENKO, V.A.; SHERSTYUK, Ya.P.

Extrusion of bimetallic pipe made of steel and copper. Met. i gornorud. prom. no.6:36-38 N-D '64. (MIRA 18:3)

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L 41361-65 EWP(k)/EWP(z)/EWA(c)/EWT(d)/EWT(m)/EWP(h)/EWP(b)/T/EWA(d)/EWP(l)/EWP(w)/EWP(v)/EWP(t) Pf-4 MJW/JD/HW

ACCESSION NR: AR5000589 S/0137/64/000/008/I039/I040

SOURCE: Ref. zh. Metallurgiya. Sv. t., Abs. 8D230

AUTHOR: Chepurko, M. I.; Kovalevskiy, N. G.; Yushkevich, P. M.; Verkhovod, V. K.; Shepetovskiy, A. Ya.

TITLE: Production of pipes from high strength stainless steel Kh17N5M3

CITED SOURCE: Sb. Proiz-vo trub, vyp. 12. M., Metallurgiya, 1964, 44-51

TOPIC TAGS: pipe, stainless steel, metal ductility, drawing, steel Kh17N5M3, steel Kh18N10T

TRANSLATION: To determine the ductility of steel Kh17N5M3, samples were subjected to hot torsion and piercing tests according to the method of the Ukrainian Pipe Research Institute. The torsion tests were carried out at 975-1225°, the piercing tests at 950-1250°, with a shrinkage of 1.6-15.5%. The data obtained show that the steel investigated has the highest ductility in the interval 1150-1250°.

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ACCESSION NR: AR5000589

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Comparison of test results for hot torsion of steel Kh17N5M3 and steel Kh18N10T, which is widely used in pipe production, show that the former is characterized by a considerable lower ductility than the latter, and that the former is consequently related to the low ductility difficult drilling steels. It was established by an investigation of the microstructure of steel Kh17N5M3 under different heating conditions (from 1000 to 1350°) that the quantity of ferrite in the steel increases starting with 1200° but that grain boundary fusion takes place only at 1340-1350°. Pipes with dimensions 20 x 1.5, 18 x 1, and 12 x 1 mm made of Kh17N5M3 were prepared by hot pressing tubular billets on a vertical hydraulic 600 ton press with subsequent rolling on cold rolling mills (KhPT-75 and KhPTR-15-30) and drawing on drawing mills. To reduce cold hardening of the metal after pressing, conditions for normalizing were worked out. A mixture of castor oil (70%) and talc (30%) was used as a lubricant in rolling on mill KhPT-75 and castor oil was used for rolling mill KhPTR-15-30. Rolling of pipes with dimensions 25 x 2.5 mm proceded in a satisfactory manner. An attempt to roll pipes with dimensions 25 x 2 mm, that is, with a higher degree of deformation (86%), was not crowned with success since the mandrel failed because of the

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considerable increase in the load on the working instrument. To alter pipes with dimensions of 23 x 1.95 mm and 20 x 1.45 mm, parts were rolled into pipes with finished dimensions of 20 x 1.5 and 18 x 1 mm. To decrease bending, the drawing was done through two draw plates at the same time. The diameter of the intermediate draw plate used in drawing full size pipes with dimensions 18 x 0.98 was 16 mm, but in drawing from dimensions 14.5 x 0.98 mm to finished dimensions of 12 x 1 it was 13 mm. During this process pipes with dimensions of 14.5 x 0.98 mm were not subjected to hot working before drawing. The lubricant for them was the oxalate film which they retained from the coating received before the first drawing. Cold rolling of such pipes is feasible with consecutive deformations up to 60%, but rolling is feasible with only a single deformation up to 30%. Heat treatment of full size pipes made of the steel under investigation should be carried out at 1100-1150° with air cooling. K. Ursova

SUB CODE: MM ENCL: 00

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

L 5250-66 EWP(e)/EWT(m)/EPF(c)/EWP(i)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c)

ACC NR: AT5022781 JD/WW/HW/DJ/WH SOURCE CODE: UR/3164/64/000/014/0034/0039

AUTHOR: Verkhovod, V. K. (Engineer); Pritomanov, A. Ye. (Candidate of Technical Sciences); Chepurko, M. I. (Candidate of Technical Sciences)

ORG: none

TITLE: Investigation of metal flow during the extrusion of shaped tubing

SOURCE: Dnepropetrovsk. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorsko-tekhnologicheskiy institut trubnoy promyshlennosti. Proizvodstvo trub, no. 14, 1964. Sbornik statey po teorii i praktike trubnogo proizvodstva (Collection of articles on the theory and practice of pipe production), 34-39

TOPIC TAGS: metal extrusion, pipe, tensile stress

ABSTRACT: The study was carried out at the Ukrainian Scientific Research Pipe

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L 5250-66

ACC NR: AT5022781

Institute under laboratory conditions using lead, since the character of the flow of lead and steel, as the author proved in previous tests, is identical during the extrusion of tubing. The extrusion was performed on a 100-ton hydraulic press and a container with a diameter of 60 mm and a height of 200 mm, using 25-34-mm diameter dies. Lubrication consisted of 60% graphite and 40% engine oil. The picture of the metal flow during the extrusion of lead tubes with inner and outer ribs is not modified significantly when changing the basic parameters of the operation. When extruding the tubes with the outer ribs, the center of deformation concentrates at the die with inner ribs, it centers at the grooves of the longitudinal needle (over the whole length of the tube) and the die. The angle of the inlet cone and the width of the cylindrical belt of the die, as well as the speed and the extent of the deformation, do not exert any influence on the execution of the extruded tube shape. The speed of the metal flow in its cross section is not uniform when extruding the shaped tubing, and produces shearing deformation and a large amount of tensile stress. Special design of the dies is needed to prevent tears. Orig. art. has: 5 figures.

SUB CODE: MM/ SUBM DATE: 00/ ORIG REF: 006/ OTH REF: 003

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

ACC NR: AP6018224 (N) SOURCE CODE: UR/0383/66/000/001/0041/0043

AUTHOR: Chepurko, M. I. (Candidate of technical sciences); Smorshchok, V. S.; Buynovskiy, A. M.; Panyushkin, A. V.

ORG: none

TITLE: Extrusion of bimetallic steel-copper pipes

SOURCE: Metallurgicheskaya i gornorudnaya promyshlennost', no. 1, 1966, 41-43

TOPIC TAGS: pipe, metal extrusion, bimetal, metal cladding

ABSTRACT: Bimetallic pipes of No. 10 steel and M3S copper were extruded on a vertical 1500 T power press (container ϕ=150 mm, die ϕ=74 mm, punch ϕ=64 mm, temperature 900 to 920C, graphite oil and 10% salt lubricant). The pipe sections were 4000 mm long, had an outside diameter of 73.5 mm and total wall thickness of 5 mm. Thickness of the inside copper layer ranged from 0.20—0.25 to 0.90 mm. The extrusion technique is described. Inspection of finished pipe indicated a relatively uniform distribution of copper cladding over the length of the pipe. Copper thickness below 0.90 mm resulted in substandard material. It is concluded that the technology described can be employed to manufacture steel pipe with inside copper cladding as a finished product or as a final billet. Orig. art. has: 3 figures and 2 tables.

Card 1/2

UDC: 621.774.332

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

L 40924-66

ACC NR: AP6018224

SUB CODE: 13,11/ SUBM DATE: none

Joining of dissimilar metals 18

Card 2/2 vmb

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308330007-7

L 04635-67 EWT(m)/EWP(k)/EWP(t)/ETI IJP(c) JD/HW

ACC NR: AP6020935 SOURCE CODE: UR/0383/66/000/003/0038/0040

AUTHORS: Chepurko, M. I. (Candidate of technical sciences); Buynovskiy, A. M.; Smorshchok, V. S.; Legavets, G. A.

38
B

ORG: none

TITLE: Rolling of bimetallic pipes of steel-copper, on a continuous pipe rolling mill

27 18

SOURCE: Metallurgicheskaya i gornorudnaya promyshlennost', no. 3, 1966, 38-40

TOPIC TAGS: metal tube, pipe, bimetal, steel, copper, metal rolling

ABSTRACT: A general discussion of the industrial production of bimetallic pipes (steel-copper and others) is presented. The discussion is based on the bimetallic pipe production method proposed by one of the present authors, M. I. Chepurko (Sposob izgotovleniya bimetallicheskikh trub. Avtorskoye svidetel'stvo No. 87842, vydannoye Gostekhnikoy SSSR v 1950 g.). Experiments have shown that the best preliminary treatment for copper surfaces is a chemical one consisting of an alkali and acid application. To avoid defects in the copper member of the bimetallic pipe, care should be exercised not to overheat the copper member (see Fig. 1). It is concluded that, with present day techniques, it is possible to manufacture bimetallic pipes of various metals up to a diameter of 70 mm.

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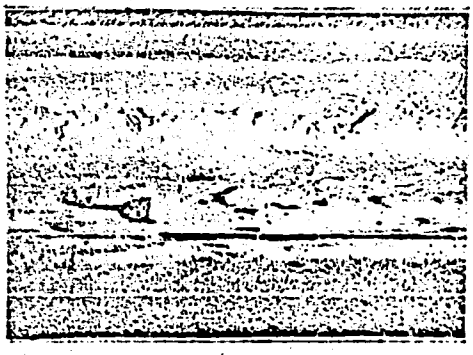
Fig. 1. Characteristic defects on the inner surface of steel-copper pipes of 57 x 6.0 mm cross section.



Orig. art. has: 2 graphs.

SUB CODE: 13, 11/ SUBM DATE: none/ ORIG REF: 004

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