

ZHEMOCHKIN, B.N., prof.; BERNSHTEYN, M.S., dotsent; NIKIFOROV, S.N.,
prof.; PASHCHEVSKIY, D.P., dotsent; TOCHISKIY, V.F., dotsent
[deceased]; VILKOV, G.N., red.isd-va; NAUMOVA, G.D., tekhn.red.

[Course in structural mechanics] Kurs stroitel'noi mekhaniki.
Pod obshchei red.B.N.Zhemochkina. Izd.2. Moskva, Gos.isd-vo
lit-ry po stroit., arkhit. i stroit.materialam. Pt.1. [Theoretical
mechanics] Teoreticheskaya mekhanika. 1960. 178 p.

(MIRA 14:1)

(Structures, Theory of)

NIKIFOROV, Sergey Nikolayevich, prof.; ZHEMOCHKIN, B.N., prof.;
BERNSHTEYN, M.S., dotsent; PASHCHEVSKIY, D.P., dotsent;
TOCHISKIY, V.F., dotsent [deceased]; VILKOV, G.N., red.izd-va;
OSENKO, L.M., tekhn.red.

[Course in structural mechanics] Kurs stroitel'noi mekhaniki.
Pod obshchei red. B.N.Zhemochkina. Izd.2. Moskva, Gos.izd-vo
lit-ry po stroit., arkhit. i stroit. materialam. Pt.2. [Strength
of materials] Soprotivlenie materialov. Izd.2. 1960. 245 p.
(MIRA 13:12)

(Strength of materials)

BERNSHTEYN, M.S., dotsent, kand.tekhn.nauk; TVERDYNINA, M.M., inzh.

Buckling of a circular disk of a constant thickness, jammed in the center as a result of temperature tensions. Nauch. trudy TSNIIMOD no.11:20-32 '61. (MIRA 17:9)

BERNSHTEYN, M.S., kand.tekhn.nauk, dotsent (Moskva)

Theorem on the action of external forces on final displacements
and its application to problems on the stability of elastic
equilibrium. Rasch.prostr.konstr. no.7:281-292 '62. (MIRA 15:4)
(Elasticity)

BERNSHTEYN, M.S. (Moskva)

Psychology of scientific creativeness. Vop. psikhol. 11 no.3:156-164
My-Je '65. (MIRA 18:7)

BERNSHTEYN, N.A.

BERNSHTEYN, N.A.

Grey Walter's book "The living brain." Vop.psikhol.3 no.3:136-141
My-Je '57. (MLRA 10:8)

(Brain)

USSR/Human and Animal Physiology (Normal and Pathological) T
Nervous System. General Problems.

Abs Jour : Ref Zhur Biol., No 6, 1959, 26945

Author : Bernsheyn, N.A.

Inst :

Title : Some Accumulating Problems of Regulation of Motor
Actions.

Orig Pub : Vopr. psikhologii, 1957, No 6, 70-90

Abstract : Proceeding from the admission of the insufficiency of
regarding receptors only as signal-actuating mechanisms
and from the principle of cycle of regulations of vital
processes, in particular of movements, the author has
theoretically analysed the problems of coordination - a
complex action of the organization of maneuverability of
motor apparatus. In every specific case of coordination
of movements, the following participate: effector, whose
work is subject to regulation; the ordering element,

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USSR/Human and Animal Physiology (Normal and Pathological)
Nervous System. General Problems.

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Abs Jour : Ref Zhur Biol., No 6, 1959, 26945

which brings the necessary significance of regulated parameter to the system; receptor, which receives the running significance of the parameter; the apparatus of comparison, which determines the difference of actual and required significance; the arrangement which forms corrective impulses, the regulator which maneuvers the effector. Since they are connected by a cycle-like connection, these apparatuses enter into cooperation with the object, at the same time assuring the objective perception of the latter. -- K.S. Ratner

Card 2/2

- 91 -

BERENSON, N.A.

"Mechanism of Regulating Human Movements" (19 April 1957)

paper presented at the Seminars on Cybernetics at Moscow University during the 1956-57 school year.

Problemy Kibernetiki, No. 1, 1958

BERNSHTEYN, N.A.

You bent your arm... Znan.sila 34 no.2:16-19 F '59. (MIRA 12:3)

1. Chlen-korrespondent AMN SSSR.
(Animal mechanics)

27.1230

S/044/62/600/007/089/100
C111/C333

AUTHOR: Bernshteyn, N. A.

TITLE: The coming problems of the physiology of activity

PERIODICAL: Referativnyy zhurnal, Matematika, no. 7, 1962, 74,
abstract 7V355. ("Probl. kibernetiki", no. 6, M., Fizmatgiz,
1961, 101-160)

TEXT: In the cooperation of biology and technics, the purpose and duty of a physiologist is, according to the author, "to clarify his partner as completely as possible on what the examination of life's activities has determined concerning the tendencies which have produced this cooperation". The multi-levelled, hierarchical system of the organism transforms the information it receives concerning the situation on the outside into a reasonable, and in most cases, motor problem. The aim of the author's paper is to represent the complex of problems encountered in the wide field of the physiology of activity; the paper at hand presents the first part and considers the general scheme of the organization of movement control in the human and higher animals; and primarily examines the motor side of these actions. The following are characterized in sequence: the biodynamic properties
Card 1/2

The coming problems of the . . .

S/044/62/000/007/089/100
C111/C333

and requirements of the movement apparatus; the basic elements of the block scheme of its central control and programming processes for the motor portion of the action, giving those means by which the human organism as a self-organizing system develops and completes the program of its typical movements. The author notes two strongly characteristic tendencies which differentiate the physiology of the active processes from the symptoms in non-active states. The realization of each purposeful action causes all physiological mechanisms to be drawn into a circular inter-action; the organisms answer to an exterior stimulus contains; as a rule, more than the stimulus itself. The author considers the general biological conditions which lead to the development of the circular cyclical control principle for the movement of higher organisms, and he then applies them to the concrete data related to the construction and organization of the movement of humans. The author gives particular attention to the examination of the apparatus which realizes the programming of human movements; The paper has an appendix with explanations of the anatomical-physiological terms used for non-biologists.

[Abstracter's note: Complete translation.]

Card 2/2

BERNSHTEYN, N.A.

Analysis of aperiodic oscillation sums with alternating spectra
using the suspended grating method. Biofizika 7 no.4:377-381 '62.
(MIRA 15:11)

(ELECTROPHYSIOLOGY)

CHERNYSH, Vladimir Ivanovich; NAPALKOV, Anatoliy Viktorovich;
BERNSHTEYN, N.A., prof., red.

[Mathematical apparatus of biological cybernetics] Ma-
tematicheskii apparat biologicheskoi kibernetiki. Mo-
skva, Meditsina, 1964. 373 p. (MIRA 18:2)

1. Chlen-korrespondent AMN SSSR (for Bernshteyn).

BOYKO, Yevgeniy Ivanovich; BERNSHTEYN, N.A., prof., retsenzent;
PARIN, V.V., prof., retsenzent; BYKOV, V.D., red.

[Reaction time in man; history, theory, contemporary state
and practical significance of chronometric studies] Vremia
reaktsii cheloveka; istoriia, teoriia, sovremennoe sostoianie
i prakticheskoe znachenie khronometricheskikh issledovani.
Moskva, Meditsina, 1964. 439 p. (MIRA 17:6)

1. Chlen-korrespondent AMN SSSR (for Bernshteyn). 2. Dey-
stvitel'nyy chlen-korrespondent AMN SSSR (for Parin).

TRINCHER, Karl Sigmundovich, st. nauchn. sotr.; BERNSHTEYN, N.A.,
prof., otv. red.; KOLPAKOVA, Ye.A., red.

[Biology and information; elements of biological thermo-
dynamics] Biologiya i informatsiya; elementy biologiches-
skoi termodinamiki. Moskva, Nauka, 1965. 118 p.

(MIRA 18:8)

1. Institut biologicheskoy fiziki AN SSSR (for Trincher).

BERNSHTEYN, N.D.; GOLOD, I.S.; GOLOSINSKIY, S.Ya.; ZAYTEV, A.N.; POGORELOV, E.M.;
SMIRNOV, S.V.; SHAMSHTEYN, M.G.; SHMAKOV, A.G.

23KTK-1 motion-picture contact printer set. Tekh.kino i telev. 4
no.10:10-19 0'60. (MIRA 13:10)

1. Tsentral'noye konstruktorskoye byuro Ministerstva kul'tury SSSR i
Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut, laboratoriya
obrabotki tsvetnykh fil'mov.

(Motion-picture photography--Equipment and supplies)
(Color photography--Printing processes)

BERNSHTEYN, P.B.; VIKTOROV, V.P.

Over-all mechanization and automation of shop No. 1 of the Semluki Refractories Plant. Ogneupory 26 no.11:513-519 '61. (MIRA 17:2)

1. Vsesoyuznyy institut ogneuporov.

KONETSKIY, N.V.; KOVTUN, V.A.; KARAS', G.Ye.; BERNSHTEYN, P.B.

Hydraulic press equalizing 1500 tons. Ogneupory 26 no. 2:62-
69 '61. (MIRA 14:2)

1. Semilukskiy ogneupornyy zavod (for Konetskiy, Kovtun, Karas').
2. Vsesoyuznyy institut ogneuporov (for Bernshteyn).
(Hydraulic presses)

BERNSHTEYN, P.B.

Improve the technological equipment of the refractories industry. Ogneupory 27 no.11:520-524 '62. (MIRA 15:11)

1. Vsesoyuznyy institut ogneuporov.
(Refractories ~~Industry~~—Equipment and supplies)
(Automation)

BERNSHTEYN, R.

Bernshteyn R. and Bryukman, B. Vvedeniye v meteorologiya (Introduction to Meteorology) GONTI NKTP SSSR, 1938.

SO: U-3039, 11 Mar 1953

BERNSHTEYN, B.S., inzh.; VALYUZHINICH, V.Ya., inzh.; GDALIN, A.D.,
inzh.; GOLOVKO, V.A., inzh.; GOLUBEVA, N.V., inzh.;
GUREVICH, V.G., inzh.; KROVIN, N.I., inzh.; KURDOV, V.G.,
inzh.; LEMAN, I.M., inzh.; MITRYASHIN, M.S., inzh.;
OGANESOV, N.G., inzh.; OKUNEV, N.A., inzh.; TURZHITSKIY,
V.I., inzh.; YUFIT, B.P., inzh.; SHEL'VAKH, V.F., inzh.

[Manual on the quarrying and processing of rock building materials] Spravochnik po dobyche i pererabotke nerudnykh stroitel'nykh materialov. Leningrad, Stroiizdat, 1965. 520 p. (MIRA 18:2)

1. Vsesoyuznyy gosudarstvennyy institut po proyektnym i nauchno-issledovatel'skim rabotam promyshlennosti nerudnykh stroitel'nykh materialov.

SHVERNIK, Aleksandr Mikhaylovich; SOKOLOV, Anatoliy Valentinovich;
POLUBELOV, Aleksey Sergeyevich; KISELEV, Georgiy Ivanovich;
~~BERNSHTEYN, Rafail Lazarevich;~~ SLAVUTSKIY, Samuil Oskarovich;
NEVEL'SHTEYN, Yuriy Grigor'yevich; KONDRATENKO, Leonid
Fedorovich; LASKIN, Anatoliy Aronovich; LUR'YE, Zakhar
Solomonovich; MAKAROV, Vladimir Aleksandrovich; NOVOZHILOV,
M.G., retsenzent; BILLICHENKO, N.Ya., retsenzent; VARSHAVSKIY,
A.M., retsenzent; TARTAKOVSKIY, B.N., retsenzent. Prinimali
uchastiy: ~~ANTONOV, V.A., inzh.;~~ VERBLYUNSKIY, Yu.I., inzh.;
ZEMSKOV, P.F., otv. red.

[Overall mechanization and automatic control in strip mines]
Kompleksnaya mekhanizatsiya i avtomatizatsiya na kar'erakh.
Moskva, Nedra, 1964. 582 p. (MIRA 18:4)

PROCESSIES AND PROPERTIES INDEX

21

Generalized abstractions for computing the combustion of a layer of fuel upon ignition from above. R. S. Ustinov and L. A. Vulis. *J. Tech. Phys. (U. S. S. R.)* 10, 647-56 (1940).—On the basis of the exptl. results the generalized parameters for the description and computation of combustion are proposed. The choice of parameters is based on the dimensional analysis, and the assumption that the process does not depend on its previous history (this assumption does not contradict the exptl. data). By assuming the additivity of the process (which also is supported by the expts.), it was found possible to use the generalized parameters, based on the lab. investigations, also in application to practical cases, where the coal is burning on chain grates. **Rekmalana Gamow**

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

FROM STUSSIVM

LITERATURE INDEX

LITERATURE INDEX

... , Pomerantsev, V. V. , Shagalova, S. L.,

"On the Mechanism of Resistance and Heat Loss in Clusters of Pipes," p 251, Aerodynamic and Heat Transfer Problems in Boiler and Furnace Processes; A Collection of Articles, Moscow, Gosenergoizdat, Moscow, 1958. 329 p.

Purpose: The book is intended for engineers and combustion specialists concerned with the design and operation of heating equipment and it is also for scientific workers and students of vtuzes.

"Generalized Calculation Method for Aerodynamic Resistance of Filled Cross Sections, p. 267.

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SOV/81-59-10-35116

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 10, p 254 (USSR)

AUTHORS: Bernshteyn, R.S., Pomerantsev, V.V., Shagalova, S.L.

TITLE: The Problem of the Mechanism of Resistance and Heat Emission in Pipe Bundles

PERIODICAL: V sb.: Vopr. aerodinamiki i teploperedachi v kotel'no-topochn. protses-sakh. Moscow - Leningrad, Gosenergoizdat, 1958, pp 251-267

ABSTRACT: The distribution of the pressures and the coefficients of heat emission over the surface of porous pipes of 28 mm in diameter with air flowing around them in the case of artificial moistening of the pipe material have been investigated. The experiments were carried out in an aerodynamic pipe at stationary heat and hydrodynamic conditions with three pipe bundles arranged in the corridor type with the ratio of the steps $S_1/d = S_2/d = 1.13$; $S_1/d = 1.13$ and $S_2/d = 2.26$; $S_1/d = 2.26$ and $S_2/d = 1.13$ and also with two pipe bundles arranged in the chessboard order with the ratio of the steps $S_1/d = S_2/d = 1.2$; $S_1/d = 2.26$ and $S_2/d = 1.13$ within the range of the Re criterion 100 - 50,000. Based on the found fields of pressures and coefficients of heat emission on the surface of the pipes it has been shown that between the pipes of one and the same row a jet flow takes place; in the free section

Ca1

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SOV/81-59-8-27676

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 8, p 306 (USSR)

AUTHORS: Bernshteyn, R.S., Pomerantsev, V.V., Shagalova, S.L.

TITLE: A Generalized Method for Calculating the Aerodynamic Resistance of
Constrained Cross Sections

PERIODICAL: V sb.: Vopr. aerodinamiki i teploperedachi v kotel'no-topochn. pro-
tssakh. Moscow-Leningrad, Gosenergoizdat, 1958, pp 267 - 289

ABSTRACT: Equations have been cited for calculating the hydraulic resistance for
pipe bundles in the corridor and chessboard pattern arrangement of the
pipes, as well as for the layer of lump- and ball-shaped particles, which
are applicable to technical calculations.

V. Gertsovskiy

Card 1/1



15(2)

AUTHOR:

Bernshteyn, R. S.

SOV/131-59-3-3/18

TITLE:

Automatic Control of the Temperature Conditions of a Tunnel Kiln
(Avtomaticheskoye regulirovaniye teplovogo rezhima tunnel'noy
pechi)

PERIODICAL:

Ogneupory, 1959, Nr 3, pp 108-111 (USSR)

ABSTRACT:

In most cases a stability of the temperature of the kiln can only be secured by direct control of fuel and air supply. In practice only the drop in pressure in the kiln can be measured which in the case of a stable temperature of the kiln and moisture of the charge is proportional to the square of air consumption. Figure 2 gives the scheme of the automatic temperature control of a tunnel kiln of the Borovichskiy kombinat (Borovichi Kombinat). In this case a potentiometer of the EPP-120 type is used as well as an isodromic system of the IR-130 type, a slave manipulator of the IM2/120 type. Figure 2 shows the diagrams of kiln temperature and air consumption for the gasification during the operation of the isodromic system in which connection air consumption is measured by a diaphragm connected with a manometer of the DM-218 type. An automatic recorder of the EVS type, an electronic isodromic system of the ERS-67 type as well as a primary control element of the TNSK-4 type are used

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SOV/131-59-3-3/18

Automatic Control of the Temperature Conditions of a Tunnel Kiln

for this purpose. The final control element of the IMT-25/120 type is fed by pulses from the isodromic system and acts upon the throttle valve of the pressure blast by means of which the kiln pressure is kept in proportion to gas consumption (see reference 3). The kiln draft is brought about by a manometer of the RDM-35 type and the final control element of the IMT-12/120 type which acts upon the throttle valve of the exhaustor and thus maintains the stipulated kiln pressure (Fig 4). Finally, the author of the abstract states that the construction of tunnel kilns facilitates a complex mechanization and automation of the production of refractories. The experience of the Borovichi Kombinat facilitates the construction of an automation-tunnel kiln which meets modern requirements.-There are 4 figures and 2 Soviet references.

ASSOCIATION: Vsesoyuznyy institut ogneporov (All-Union Institute of Refractories)

Card 2/2

15 (2)

AUTHORS:

Bernshteyn, R. S., Ivanov, S. M.

SOV/131-59-5-3/12

TITLE:

Aerodynamic Resistance of the Charge in Tunnel Furnaces
(Aerodinamicheskoye soprotivleniye sadki v tunnel'nykh
pechakh)

PERIODICAL:

Ogneupory, 1959, Nr 5, pp 201-209 (USSR)

ABSTRACT:

At the Vsesoyuznyy institut ogneuporov (All-Union Institute of Refractories) and the Nauchno-issledovatel'skiy institut stroitel'nykh materialov RSFSR (ROSNIIIMS) (Scientific Research Institute for Building Materials of the RSFSR (ROSNIIIMS)), simulating work of the gas current through the furnace charge was carried out. In this article, the authors give the generalizing results of former experiments as well as of their own, and outline a calculating system of the charge resistance in tunnel furnaces. Figure 1 shows a model on a scale of 1 : 5 of a furnace section and of the experimental charges. The characteristic of the charges is given in table 1. The air consumption in the furnace was measured by a Pitot-Prandtl tube, and the pressure by a micromanometer of the type MPU-3. Figure 2 shows the results of experiments made by the authors of this article and by former researchers for an isothermal

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Aerodynamic Resistance of the Charge in Tunnel
Furnaces

SOV/131-59-5-3/12

gas current. A detailed description follows. Table 2 indicates the distribution of the gas current to individual types of canals according to calculations and measurements. Figure 3 shows the calculation results of the charge resistance for a non-isothermal current (drop of temperature in the furnace). A calculation example of the charge resistance in a tunnel furnace of the Borovichi Kombinat of Refractories is further given. The geometrical characteristic of the charge of the products KP-1 is given in table 3, and the charge scheme in figure 4. Figure 5 shows the distribution of the gas current to the charge canals in consideration of the non-isothermal course. Conclusions: On the basis of experimental values, calculation formulas were worked out for the aerodynamic resistance and the flowing through in tunnel furnaces. The resistance values calculated by these formulas agreed well with the experimental values. There are 5 figures, 3 tables, and 2 Soviet references.

ASSOCIATION:
Card 2/2

Vsesoyuznyy institut ogneporov (All-Union Institute of Refractories)

15(2)

AUTHOR:

Bernshteyn, R. S.

SOV/131-59-6-3/15

TITLE:

Heat Emission in Tunnel Kilns (Teplootdacha v tunnel'nykh pechakh)

PERIODICAL:

Ogneupory, 1959, Nr 6, pp 251-254 (USSR)

ABSTRACT:

The present paper contains the results obtained by investigating heat emission. They were achieved with a model of a tunnel kiln, using the method of evaporating water on the surface of bricks. The evaporation coefficient β can be computed from the equation 1) $G = \beta(d_{pov} - d_o)f\Delta\tau$, with G denoting the water consumption in kg, d_{pov} - the moisture content of the air above the evaporation surface in kg/kg, and d_o - the moisture content in the surrounding air stream in kg/kg, f - the evaporation surface in m^2 , and $\Delta\tau$ - the time of evaporation in h. The values d_{pov} and d_o can be taken from the i-d diagram. Heat emission to the test set in the form of normal bricks was studied by means of a test set with the measurements 1 : 5 (Figure 1). It is described in detail. Figure 2 shows heat emission in longitudinal channels, and

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Heat Emission in Tunnel Kilns

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figure 4 in transverse channels of the test set. In figure 3 the test curve and data added by Mikheyev are given. Figure 5 shows the relative coefficient of heat emission on the frontal surface and on the transverse surface of the test set. Conclusion: The coefficients of heat emission to the longitudinal surface of the test set are expressed in a formula which is given, and their character is of general nature. In order to determine the regularity of heat emission to the transverse surface of the test set, further investigations are necessary. There are 5 figures and 6 Soviet references.

ASSOCIATION: Vsesoyuznyy institut ogneporov (All-Union Institute of Refractories)

Card 2/2

BERNSHTEYN, R.S.; LARIN, A.P.; FINKEL'MAN, S.G.

Main trends in the over-all mechanization and automation of the manufacture of refractory products. Ogneupory 25 no.10:455-459 '60.
(MIRA 13:10)

1. Vsesoyuznyy inatitut ogneuporov.
(Refractories industry--Equipment and supplies)
(Automatic control)

NOVIKOV, B.G.; BERNSHTEYN, R.S.; BYTKIN, V.N.

Reducing air dustiness in sintering plants. Metallurg 9 no.1:
14-15 Ja '64 (MIRA 18:1)

1. Zavod "Zaporozhstal".

BERNSTEIN, S.A.
CA

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An experiment with a gas-absorbing installation in a superphosphate plant. S. A. Bernstein. *Illig. i Santl.* (U. S. R.) 1940, No. 4, 47-8. A gas-absorbing device eliminated the harmful effect of fluorine gases. The gases are not discharged into the air, but conducted into the absorption chamber, and then into the absorbing tower. The chamber and tower are irrigated with water or with a weak acid that absorbs the gases. Then the fluorine solutions are treated with NaCl. The Na_2SiF_6 pptd. in the form of crystals is dried and used as an insectofungicide and antiseptic for seeds, railroad-ties, etc. 97% of gases are absorbed that were formerly discharged into the atm.

S. Machelson

ASB-SLA METALLOGICAL LITERATURE CLASSIFICATION

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U.S. DEPARTMENT OF COMMERCE

STANDARD

~~BERNSHTAYN S.A.~~

Forgotten pages from the history of Russian building technology.
Trudy po ist tekhn. no.8:29-36 '54. (MIRA 8:2)
(Building—Early works to 1800)

BERNSHTEYN, S.A.

ANDROS, I.P., inzh.; ASSONOV, V.A., kand. tekhn. nauk.; BERNSHTEYN, S.A., inzh.; BOKIY, B.V., prof.; BROVMAN, Ya.V., inzh.; BONDARENKO, A.P., inzh.; BUCHNEV, V.K., kand. tekhn. nauk.; VERESKUNOV, G.P., kand. tekhn. nauk.; VOLKOV, A.F., inzh.; GELNSKUL, M.N., kand. tekhn. nauk.; GORODNICHIEV, V.M., inzh.; DEMONT'YEV, A.Ya., inzh.; DOKUCHAYEV, M.M., inzh.; DUBNOV, L.V., kand. tekhn. nauk.; YEPHANTSIEV, Yu.K., kand. tekhn. nauk.; YERASHKO, I.S., inzh.; ZHEDANOV, S.A., kand. tekhn. nauk.; ZIL'BERBROD, A.F., inzh.; ZINGHENKO, M.M., inzh.; ZORI, A.S., inzh.; KAPLAN, L.B., inzh.; KATSAUROV, I.N., dots.; KITAYSKIY, M.W., inzh.; KRAVTSOV, Ye.P., inzh.; KRIVOROG, S.A., inzh.; KRINITSKIY, L.M., kand. tekhn. nauk.; LITVIN, A.Z., inzh.; MALVICH, N.A., kand. tekhn. nauk.; MAN'KOVSKIY, G.I., doktor tekhn. nauk.; MATKOVSKIY, A.L., inzh.; MINDELI, E.O., kand. tekhn. nauk.; NAZAROV, P.P., kand. tekhn. nauk.; MASONOV, I.D., kand. tekhn. nauk.; NEYENBURG, V.Ye., kand. tekhn. nauk.; POKROVSKIY, G.I., prof., doktor tekhn. nauk.; PROYAVKIN, E.T., kand. tekhn. nauk.; ROZENBAUM, inzh.; ROSSI, B.D., kand. tekhn. nauk.; SEMEVSKIY, V.N., doktor tekhn. nauk.; SKIRGELLO, O.B., inzh.; SUKHUT, A.A., inzh.; SUKHANOV, A.F., prof., doktor tekhn. nauk.; TARANOV, P.Ya., kand. tekhn. nauk.; TOKAROVSKIY, D.I., inzh.; TRUPAK, N.G., prof., doktor tekhn. nauk.; FEDOROV, S.A., prof., doktor tekhn. nauk.; FEDYUKIN, V.A., inzh.; KHOKHLOVKIN, D.M., inzh.; KHRABROV, N.I., kand. tekhn. nauk.; CHMKAREV, V.A., inzh.; GHERNAVKIN, N.N., inzh.; SHREYBER, B.P., kand. tekhn. nauk.; EPOV, B.A., kand. tekhn. nauk.; YAKUSHIN, N.P., kand. tekhn. nauk.; YANCHUR, A.M., inzh.; YAKHONTOV, A.D., inzh.; POKROVSKIY, N.M., otvetstvennyy red.; KAPLUN, Ya.G. [deceased], red.; MONIN, G.I., red.; SAVITSKIY, V.T.,

(Continued on next card)

ANDROS, I.P.---(continued) Card 2.

red.; SANOVICH, P.O., red.; VOLOVICH, M.Z., inzh., red.; GORITSKIY, A.V., inzh., red.; POLUYANOV, V.A., inzh., red.; FADEYEV, E.I., inzh., red.; CHECHKOV, L.V., red. izd-va; PROZOROVSKAYA, V.L., tekhn. red.; NADEINSKAYA, A.A., tekhn. red.

[Mining; an encyclopaedic handbook] Gornoe delo; entsiklopedicheskiy spravochnik, Glav. red. A.M. Terpigorev. Moskva, Gos. nauchno-tekhnicheskoe izd-vo lit-ry po ugol'noi promyshl. Vol. 4 [Mining and timbering] Provedenie i krepleniye gornykh vyrabotok. Redkollegiya: toma: N.M. Pokrovskii... 1958. 464 p. . . (MIRA 11:7)

(Mine timbering) (Mining engineering)

BernshTeyn, S.A.

ANDREYEV, A.B.; ANTONOV, A.I.; ARAPOV, P.P.; BARMASH, A.I.; BEDNYAKOVA,
A.B.; BENIN, G.S.; BERESNEVICH, V.V.; BERNSHTEYN, S.A.; BITUTSKOV,
V.I.; BLYUMENBERG, V.V.; BOMCH-BELUYEVICH, M.D.; BORMOTOV, A.D.;
BULGAKOV, N.I.; VEKSLER, B.A.; GAVRILENKO, I.V.; GENDLER, Ye.S.,
[deceased]; GRELIVANOV, N.A., [deceased]; GIBSEMAN, Ye.Ye.;
GOLDOVSKIY, Ye.M.; GOEBUNOV, P.P.; GORYAINOV, F.A.; GRINBERG, B.G.;
GRYUNER, V.S.; DANOVSIIY, N.F.; DZEVUL'SKIY, V.M., [deceased];
DREMAYLO, P.G.; DYBETS, S.G.; D'YACHENKO, P.F.; DYURKBAUM, N.S.,
[deceased]; YEMORCHENKO, B.F. [deceased]; YEL'YASHKEVICH, S.A.;
ZHERBOV, L.P.; ZAVEL'SKIY, A.S.; ZAVEL'SKIY, F.S.; IVANOVSKIY,
S.R.; ITKIN, I.M.; KAZHDAN, A.Ya.; KAZHINSKIY, B.B.; KAPLINSKIY, S.V.;
KASATKIN, F.S.; KATSAUROV, I.N.; KITAYGORODSKIY, I.I.; KOLESNIKOV,
I.F.; KOLOSOV, V.A.; KOMAROV, N.S.; KOTOV, B.I.; LINDE, V.V.;
LEBEDEV, H.V.; LEVITSKIY, N.I.; LOKSHIN, Ya.Yu.; LUTTSAU, V.K.;
MANNERBERGER, A.A.; MIKHAYLOV, V.A.; MIKHAYLOV, N.M.; MURAV'YEV, I.M.;
NYDEL'MAN, G.E.; PAVLYSHKOV, L.S.; POLUYANOV, V.A.; POLYAKOV, Ye.S.;
POPOV, V.V.; POPOV, N.I.; RAKHLIN, I.Ye.; RZHEVSKIY, V.V.; ROZEMBERG,
G.V.; ROZENTRETER, B.A.; ROKOTYAN, Ye.S.; RUKAVISHNIKOV, V.I.;
RUTOVSKIY, B.M. [deceased]; RYVKIN, P.M.; SMIRNOV, A.P.; STEPANOV, G.Yu,
STEPANOV, Yu.A.; TARASOV, L.Ya.; TOKAREV, L.I.; USPASSKIY, P.P.;
FEDOROV, A.V.; FERB, N.E.; FRENKEL', M.Z.; KHEYFETS, S.Ya.; KHLOPIN,
M.I.; KHODOT, V.V.; SHAMSHUR, V.I.; SHAPIRO, A.Ye.; SHATSOV, M.I.;
SHISHKINA, N.N.; SHOR, M.R.; SHPICHENNETSKIY, Ye.S.; SHPRINK, B.E.;
SHTERLING, S.Z.; SHUTYY, L.R.; SHUKHGAL'TER, L. Ya.; ERVAYS, A.V.;

(Continued on next card)

ANDREYEV, A.B. (continued) Card 2.

YAKOVLEV, A.V.; ANDREYEV, Ye.S., retsensent, redaktor; BERKIN-
GIM, B.M., retsensent, redaktor; BERMAN, L.D., retsensent, redaktor;
BOLTINSKIY, V.N., retsensent, redaktor; BONCH-BRUYEVICH, V.L.,
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A.V., retsensent, redaktor; GUDTSOV, N.T., retsensent, redaktor;
DEGTIAREV, I.L., retsensent, redaktor; DEM'YANYUK, F.S., retsensent;
retsensent, redaktor; DOBROSMYSLOV, I.N., retsensent, redaktor; YELANCHIK, G.M.
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SHURAVCHENKO, A.N., retsensent, redaktor; ZLODEYEV, G.A., retsensent,
redaktor; KAPLUNOV, R.P., retsensent, redaktor; KUSAKOV, M.M.,
retsensent, redaktor; LEVINSON, L.Ye., [deceased] retsensent, redaktor;
MALOV, N.N., retsensent, redaktor; MARKUS, V.A. retsensent, redaktor;
METELITSYN, I.I., retsensent, redaktor; MIKHAYLOV, S.M., retsensent;
redaktor; OLIVETSKIY, B.A., retsensent, redaktor; PAVLOV, B.A.,
retsensent, redaktor; PANYUKOV, M.P., retsensent, redaktor; PLAKSIN,
I.N., retsensent, redaktor; RAKOV, K.A. retsensent, redaktor;
RZHAVINSKIY, V.V., retsensent, redaktor; RINBERG, A.M., retsensent;
redaktor; ROGOVIN, N. Ye., retsensent, redaktor; RUDENKO, K.G.,
retsensent, redaktor; RUTOVSKIY, B.N., [deceased] retsensent,
redaktor; HYZHOV, P.A., retsensent, redaktor; SANDOMIRSKIY, V.B.,
retsensent, redaktor; SKRAMTAYEV, B.G., retsensent, redaktor;
SOKOV, V.S., retsensent, redaktor; SOKOLOV, N.S., retsensent,
redaktor; SPIVAKOVSKIY, A.O., retsensent, redaktor; STRAMENTOV, A.Ye.,
retsensent, redaktor; STRELITSKIY, N.S., retsensent, redaktor;
(Continued on next card)

ANDREYEV, A.V., (continued) Card 3.

TRET'YAKOV, A.P., retsenzent, redaktor; FAYERMAN, Ye.M., retsenzent, redaktor; KHACHATYROV, T.S., retsenzent, redaktor; CHERNOV, H.V., retsenzent, redaktor; SHERGIN, A.P., retsenzent, redaktor; SHESTOPAL, V.M., retsenzent, redaktor; SHESHKO, Ye.F., retsenzent, redaktor; SHCHAPOV, N.M., retsenzent, redaktor; YAKOBSON, M.O., retsenzent, redaktor; STEPANOV, Yu.A., Professor, redaktor; DEM'YANUK, F.S., professor, redaktor; ZNAMENSKIY, A.A., inzhener, redaktor; PLAKSIN, I.N., redaktor; RUTOVSKIY, B.N. [deceased] doktor khimicheskikh nauk, professor, redaktor; SHUKHGAL'TER, L. Ya, kandidat tekhnicheskikh nauk, dotsent, redaktor; BRESTINA, B.S., redaktor; ZNAMENSKIY, A.A., redaktor.

(Continued on next card)

ANDREYEV, A.V. (continued) Card 4.

[Concise polytechnical dictionary] Kratkii politekhnicheskii slovar'. Redaktsionnyi sovet; IU.A.Stepanov i dr. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1955. 1136 p. (MLRA 8:12)

1. Chlen-korrespondent AN SSSR (for Plaksin)
(Technology--Dictionaries)

BERNSHTEYN, SERGEY ALEKSANDROVICH

PHASE I BOOK EXPLOITATION

461

Bernshteyn, Sergey Aleksandrovich, Professor

Ocherki po istorii stroitel'noy mekhaniki (Studies in the History of Structural Mechanics) Moscow, Gosstroyizdat, 1957. 235 p. 6,000 copies printed.

Scientific Ed.: Berdichevskiy, G. I. Candidate of Technical Sciences;
Ed. of Publishing House: Berdichevskiy, G. I.; Tech. Ed.: Guseva, S. S.

PURPOSE: This book is intended for scientific workers, engineers, and students of structural engineering vuzes.

COVERAGE: The author divides the development of structural mechanics into three periods. Period one began with the publication in 1638 of the works of Galileo who considered the phenomena of strength of materials at the moment of break under stress or in present day terminology, at limit stress. Period two began in the 1820's, when technological progress showed Galileo's approach to be too narrow, and unable to solve new practical problems of structural mechanics. At that time Kulibin and later Navier initiated and developed a new method of studying structures

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Studies in the History (Cont.)

461

subject to working stresses. Their method proved not only satisfactory for the solution of current problems, but also promoted the development of the science of structural mechanics. The third period began when the Soviet economy was unsatisfied with the excessively large safety margins of the working stresses method. The new approach is not a return to the limit stress method of Galileo as the method is supplemented with the modern theory of elasticity, the theory of plastic deformations, and working stress analysis. There are 204 names of scientists connected with the field of structural mechanics mentioned in the text and indexed at the end of the books. The Bibliography contains 170 references, 60 of which are Russian.

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Studies in the History (Cont.)

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July 31, 1958

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Use of rapid-hardening concrete in lining ventilation shafts at
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[Selected works on the theory of structures] Izbrannye trudy po
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BERNSHTEYN, S.A., prof. Primalni uchastiye: KRAVCHENKO, P.Ye., dots.;
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[Strength of materials] Soprotivlenie materialov. Moskva,
Gos. izd-vo "Vysshaya shkola," 1961. 463 p. (MIRA 15:4)
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(Electric power plants)

SHISHOV, Ye.L., kand.tekhn.nauk; BERNSHTEYN, S.A., inzh.

Construction of an underwater protective cushion. Ugol' Ukr. 5
no.7:28-30 J1 '61. (MIRA 15:1)
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otv. red.; KRASOVSKIY, I.P., red. izd-va

[New, more waterproof types of concrete with lower consumption
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nepronitsaemosti s ponizhennym raskhodom shlakoportland-tsementa;
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SHTEYN, S.B., prof., red.; VILENSKIY, D.G., prof., red.;
GORDEYEV, D.I., prof., red.; GUDZIY, N.K., prof., red.; ZAYON-
CHKOVSKIY, P.A., prof., red.; KECHER'YAN, S.V., prof., red.;
POLYANSKIY, F.Ya., prof., red.; RYBNIKOV, K.A., prof., red.;
SKAZKIN, S.D., akademik, red.; SOLOV'YEV, A.N., dotsent, red.;
ZAYTSEVA, M.G., red.; GEORGIYEVA, G.I., tekhn.red.

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91 p.

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prof., red.; GUDZIY, N.K., prof., red.; ZAYONCHKOVSKIY, P.A., prof.,
red.; KECHER'YAN, S.F., prof., red.; MEL'NIKOVA, K.P., kand.nauk, red.;
POLYANSKIY, F.Ya., prof., red.; RYBNIKOV, K.A., prof., red.; SKAZKIN,
S.D., akademik, red.; SOLOV'YEV, A.N., dotsent, red.; ZAYTSEVA, M.G.,
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red.; GUDZIY, N.K., prof., red.; ZAYONCHKOVSKIY, P.A., prof., red.;
KECHEK'YAN, S.F., prof., red.; MEL'NIKOVA, K.P., kand. geologo-
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prof., red.; SKAZKIN, S.D., akad., red.; SOLOV'YEV, A.I., dots., red.;
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[deceased]; GORIN'YEV, D.I., prof., red.; GUDZIY, N.K., prof.,
red.; ZAYONCHKOVSKIY, P.A., prof., red.; KECHERK'YAN, S.F.,
prof., red.; MEL'NIKOVA, K.P., kand.nauk, red.; POLYANSKIY,
F.Ya., prof., red.; RYBNIKOV, K.A., prof., red.; SKAZKIN,
S.D., akademik, red.; SOLOV'YEV, A.N., dotsent, red.;
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Nil Aleksandrovich Glagolev. Moskva, Izd-vo Mosk.univ.,
1961. 29 p. (Zamechatel'nye uchenye Moskovskogo universiteta,
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(Glagolev, Nil Aleksandrovich, 1888-1945)
(Nomography (Mathematics)) (Geometry, Projective)

ALEKSANDROVA, V.P.; BEREZINA, N.K.; BERNSHTEYN, A.I.; BERNSHTEYN, S.E.;
BLOKH, R.L.; ZINKOVETSKAYA, T.S.; IDESIS, Ye.S.; SMOLENKOVA, O.N.;
TOSHINSKIY, I.I.; TSARFIS, P.G.; SHABAD, Ye.T.; SHEYNBERG, O.A.

Professor E.IA. Stavskaja; obituary. Vop. kur., fizioter. i lech.
fiz. kul't. 26 no. 2:191 Mr-Apr '61. (MIRA 14:4)
(STAVSKAIA, EVGENIIA IAKOVLEVNA, 1892-1960)

BERNSHTEYN, S.F., redaktor; MATVEYEVA, Ye.M., tekhnicheskiy redaktor

[Catalog of wholesale prices on equipment for blast furnaces, steel smelting, founding and nonferrous metallurgy] Preiskurant optovykh tsen na domennoe, staleplavil'noe, liteinoe oborudovanie i oborudovanie dlia tsvetnoi metallurgii. Uvershden postanovleniem Soveta Ministrov Sviusa SSR No.5833 ot 27 dekabria 1949 g. Vvoditsia v deistvie s 1 ianvaria 1950 g. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1949. 100 p. (MIRA 10:7)

1. Russia (1923- U.S.S.R.) Ministerstvo tyazhelogo mashinostroyeniya.

(Metallurgy--Equipment and supplies--Prices)

BERNSHTEIN, S. I.

3

Journal of Applied Chemistry
June 1954
Industrial Inorganic Chemistry

Mass production of cast steel parts. S. I. Bernshteyn, V. R. Balinskii, and B. I. Shaftan (*Litovos Proizvodstvo*, 1953, 3, No. 3, 2-5).—Problems involved in the mass production of corrosion-resisting steel castings for high-pressure work are considered. The steel used contained Mn 1.5, Cr 17-19, Ni 8-9.5, and Ti 0.8%. Special attention is devoted to variations in Si and Ti contents during acid melting and casting. Mechanical properties of cast specimens of different shapes are compared, and the influence of Ti on these properties is illustrated. Results of corrosion and intercryst. corrosion tests on cast specimens show the decisive influence of Ti. J. IRON STEEL INST. (R.B.C.)

BERNSHTEYN, S. I.

BERNSHTEYN, S.I., inzhener., BALINSKIY, V.R., inzhener., RUBINCHIK, A.V.
inzhener.

Making coal mill beaters. Lit.proisv. no.4:27-28 Ap '57.
(MLRA 10:5)
(Coal preparation) (Crushing machinery)

BERNSHTEYN, S.I.

5(1)

PHASE I BOOK EXPLOITATION

SOV/1520

USSR. Gosudarstvennyy nauchno-tekhnicheskiy komitet

Avtomatizatsiya khimicheskikh i koksokhimicheskogo proizvodstv; sbornik statey
(Automation of the Chemical and By-product Coking Industries) Moscow,
Metallurgizdat, 1958, 377 p. 4,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii.

Eds.: N.Ya. Fest, N.N. Yelshin, and Yu.N. Gerulyaytis; Ed. of Publishing House: M.R. Lanovskaya; Tech. Ed.: M.P. Shvetsov.

PURPOSE: This book is intended for industrial engineers and technologists interested in the state of industrial automation and may be especially useful to organizations concerned with the multifarious automation problems of the chemical industry.

COVERAGE: This collection was compiled to fulfill to some degree the need for a readily accessible information source on the latest developments in the automation of industrial processes, both foreign and domestic, and to give supplementary information on the automation state of several chemical, metallurgical, petroleum
Card 1/4

Automation of the Chemical (Cont.)

SOV/1520

and textile-cellulose production processes

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Petroleum Refining and Petroleum-Chemical Industries

354

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5-21-59

Card 4/4

BERNSHTEYN, S.I.

Portable equipment for basic electric measurements at radio centers.
Vest.sviazi 14 no.1:15-17 Ja '54. (MLRA 7:5)

1. Starshiy inzhener laboratorii Novosibirskoy DRTS. (Radio measurements)

124-1957-1-126

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 14 (USSR)

AUTHOR: Bernshteyn, S. I.

TITLE: Theory of Vibratory Regulators for Electric Machines (Teoriya vibratsionnykh regulyatorov elektricheshikh mashin)

PERIODICAL: Tr. 2-go Vses. soveshch. po teorii avtomat. regulirovaniya. Vol I. Moscow-Leningrad, Izd-vo AN SSSR, 1955, pp 439-458

ABSTRACT: The Author examines the theory and basic details of automatic regulation systems for electric machines employing vibratory regulators. The A. presents a qualitative analysis of an extremely idealized equation of motion for a system having a relay-type vibratory regulator; he arrives at the conclusion that, when the system is acted upon by an external perturbation which modifies the tuning of the vibratory regulator, the mean value of the regulated quantity, within the limits of small tuning oscillations, may be assumed to be proportional to the aboveindicated perturbation, provided that the speed of its variation is smaller than the velocity of the switching element of the regulator. The A. shows that the aforementioned "condition of linearization" in reality is always fulfilled for the vibratory link which in the so-called compound

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124-1957-1-126

Theory of Vibratory Regulators for Electric Machines

regulator is employed as an operating organ, and then proceeds to investigate the linearized equations of a voltage-regulating system for generators employing a compound vibratory regulator. The investigation of the linearized system, however, yields only qualitative deductions, inasmuch as the values of the coefficients in the equation of a link which replaces a corresponding non-linear link remain unknown. It is shown that quantitative results can be obtained if the accurate methods for the determination of self-induced vibratory regimes evolved by A. I. Lur'ye (Avtomatika i telemekhanika, 1947, Vol 8, Nr 5) and Ya. Z. Tsypkin (Perekhodnyye i ustanovivshiesya protsessy v impul'snykh tsepyakh. Moscow-Leningrad, 1951) are applied to the systems under investigation. By way of illustration, the fundamental ideas of the Lur'ye method are utilized to determine the self-induced oscillations in a speed-regulating system for an electric motor having a conical centrifugal governor and a vibratory regulator. In contrast to the abovementioned studies the characteristic of non-linearity of the present system is unsymmetrical and, hence, renders the basic regimen of the self-induced oscillation unsymmetrical; more specifically, this leads to unequal switching-time intervals t_1 and t_2 between two successive switching

Card 2/3

124-1957-1-126

Theory of Vibratory Regulators for Electric Machines

actuators of the regulating element. Two transcendental equations are obtained for the two time intervals, the sum of which equals the period of the self-induced oscillation. The development of the theory is briefly reviewed and a description of structural system diagrams for the vibratory-regulator type automatic regulation of electric machines is given.

I. I. Blekhman

1. Electric machines
2. Vibration regulators--Theory

Card 3/3

BERNSHTEYN, S.I.

TOPCHIYEV, A.V., akademik, glavnyy redaktor; PETROV, B.N., otvetstvennyy redaktor; AYZERMAN, M.A., redaktor; ~~BERNSHTEYN, S.I., redaktor;~~
VASIL'YEV, R.V., redaktor; IVANOV, V.I., redaktor; KAREGUODIN, V.M., redaktor; KOGAN, B.Ya., redaktor; LETOV, A.M., redaktor; PORTNOV-SOKOLOV, Yu.P., redaktor; SOLODOVNIKOV, V.V., redaktor; ULANOV, G.M., redaktor; TSUPKIN, Ya.Z., redaktor; KRUTOVA, I.N., redaktor; ASTAF'YEVA, G.A., tekhnicheskiiy redaktor

[A session of the Academy of Sciences of the U.S.S.R. on scientific problems in automatization of production, October 15-20, 1956; principal problems of automatic control] Sessia Akademii nauk SSSR po nauchnym problemam avtomatizatsii proizvodstva, 15-20 oktiabria 1956 g.; osnovnye problemy avtomaticheskogo regulirovaniia i upravleniia. Moskva, 1957. 334 p. (MLRA 10:5)

1. Adakemiya nauk SSSR. 2. Chlen-korrespondent AN SSSR. (for Petrov)
(Automatic control)

5(1)

SOV/112-59-3-5622

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 3, p 193 (USSR)

AUTHOR: Bernshteyn, S. I.

TITLE: Automating Production of Sulfuric Acid
(Avtomatizatsiya proizvodstva sernoy kisloty)

PERIODICAL: V sb.: Avtomatiz. khim. i koksokhim. proiz-v. M., Metallurgizdat, 1958, pp 5-18

ABSTRACT: The state of automation of sulfuric acid production in the Soviet Union and abroad is examined. A review of the devices for automatic controlling and checking developed at IAT AS USSR, UNIKhIM, NIUIF, NIOKhIM, and GIPROKhIM is presented.

Card 1/1

8(0), 5(0)

SOV/112-59-4-7666

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 4, p 174 (USSR)

AUTHOR: Bernshteyn, S. I.

TITLE: Automating the Ammonia Industry

PERIODICAL: V sb.: Avtomatiz. khim. i koksokhim. proiz-v. M., Metallurgizdat, 1958, pp 19-40

ABSTRACT: The state of automation of the ammonia industry in the USSR and abroad is considered. A review of research work carried out by GIAP IAT AS USSR, OKBA and others is offered. Examples of automating the ammonia industry are cited: protection against gas breaking from a scrubber, automatic control of ethanalamine cleaning from carbon dioxide, automatic control of a gas producer, automatic control of a CO-conversion unit, automatic control of a high-pressure compressor, automatic control of scrubbing from carbon dioxide, automatic copper-ammonia cleaning, automatic control of regeneration of copper-ammonia solution, automatic control of an ammonia synthesis unit, automatic control of methane- and CO-conversion units. Eleven illustrations. Bibliography: 5 items.

Card 1/1

A.A.S.

CHERNOGOROV, P.V.; BOBROV, A.V.; Prinimali uchastiye: BABARYKIN, N.V.;
MONOYENKO, I.P.; MOREV, I.P.; KUTUYEVA, F.S.; OKUL'SKIY, M.K.;
GAL'PERIN, I.B.; VASINA, Z.M.; BERNSHTEYN, S.I.; BALINSKIY, V.R.

Effect of foundry iron prepared by a non-blast-furnace method on
the quality of foundings. Lit.proizv. no.7:9-12 Je '60.
(MIRA 13:7)

(Cast iron--Metallurgy)
(Foundries--Quality control)

86309

S/111/ 60/000/011/001/004
B019/B067

9,6000 (1013,1024,1099)

AUTHOR: Bernshteyn, S. I., Senior Engineer

TITLE: Measuring Instrument for Nonlinear Distortions

PERIODICAL: Vestnik svyazi, 1960, ²⁰No. 11, pp. 5 - 6

TEXT: The instrument described here consists of semiconductors and serves for measuring the coefficient of nonlinearity in the frequency range of 50 - 15000 cycles. This coefficient may be measured in the range of 0.3% - 30% at input voltages of 0.75 to 75 v. The input impedance is 12 kilohms. The nonlinearity coefficient is measured by comparing the effective voltage of the distorted signal with the effective voltages of the upper harmonic of the signal. The instrument may be fed by a 220 v or 127 v grid voltage or battery voltage of 23 - 45 v; power consumption is about 1.3 watt. The circuit shown in Fig. 1 consists of the following units: input stage, RC four-terminal network, intermediate amplifier, semiconductor voltmeter, and a rectifier with voltage stabilizer. The input stage is a triode of the

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Measuring Instrument for
Nonlinear Distortions

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B019/B067

type П5А (P5D) and serves for tuning the input resistance of the RC four-terminal network to the output resistance of the device to be studied. The RC four-terminal network serves for suppressing the fundamental frequency and is discussed in detail. The intermediate amplifier is used to amplify the voltage of the harmonic to a level suiting the measurement. It consists of three cascades of П5Г (P5G) triodes and a П14 (P14) triode. The semiconductor voltmeter consists of an input voltage divider, six amplifier stages, and a full-wave rectifier. The calibration in percents or decibels is discussed, and the mode of operation is described. There are 2 figures. ✓

ASSOCIATION: Laboratoriya Novosibirskoy DRTS
(Laboratory of the Novosibirsk DRTS)

Card 2/4

AVEN, O.A.; DVORETSKIY, V.M.; DOMANITSKIY, S.M.; ZALMANZON, L.A.;
KRASSOV, I.M.; KRUG, Ye.K.; TAL', A.A.; KHOKHLOV, V.A.;
BULGAKOV, A.A.; DEMIDENKO, Ye.D.; BERNSHTEYN, S.I.; YEMEL'YANOV,
S.V.; LERNER, A.Ya.; MEYEROV, M.V.; PEREL'MAN, I.I.; FITSNER,
L.N.; CHELYUSTKIN, A.B.; ZHOZHKASHVILI, V.A.; KL'IN, V.A.;
AGEYKIN, D.I.; GUSHCHIN, Yu.V.; KATYS, G.P.; MEL'TTSER, L.V.;
PARKHOMENKO, P.P.; MIKHAYLOV, N.N.; FITSNER, L.N.; PARKHOMENKO,
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SEARCHED	INDEXED	SERIALIZED	FILED

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- "Some Remarks Concerning the Limited Liapunoff Theorem," Dok.AN, 24, No. 1, 1939. Mbr., Acad. Sci., c1939-.
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Subject: Probabilities.

A. BERNSTEIN, S. Sur le théorème limite de la théorie des

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If $f(x)$ satisfies the Lipshitz condition: $|f(x+h) - f(x)| \leq h$, its closer approximation $E_n f(x)$ for polynomials of degree n in the segment $(-1, +1)$ satisfy the exact inequality $E_n f(x) \leq \frac{C_n}{n+1}$ where $C_n \rightarrow \frac{\pi}{2}$ as

$n \rightarrow \infty$. . . Generalization is made for $|f(x+h) - f(x)| \leq h^a$.

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