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Foreign Documents Branch C I A Periodical Abstracts

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Number 71

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Abstracted in this issue:

<u>Title</u>	<u>Issue</u>	<u>Date</u>
<u>Russian Periodicals</u>		
"Avtomatika i Telemekhanika" (Automechanics and Telemechanics) Cards 2-8	Vol VIII No 2	Mar/Apr 1948
"Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Novaya Seriya, Otdel Biologicheskii" (Bulletin of the Moscow Society of Naturalists, New Series, Biological Section) Cards 63-65	Vol LIII No 2	Mar/Apr 1948
"Fiziologicheskii Zhurnal SSSR imeni I. M. Sechenova" (Physiology Journal of USSR imeni I. M. Sechenova) Cards 49-55	Vol XXXIV No 2	Mar/Apr 1948
"Gornyy Zhurnal" (Mining Journal) Cards 81, 97-103	No 5	May 1948
"Klinicheskaya Meditsina" (Clinical Medicine) Cards 56-62	Vol XXVI No 4	Apr 1948
"Mekhanizatsiya Stroitel'stva" (Mechanization of Construction) Cards 28-30	No 3	Mar 1948
"Ogneupory" (Refractories) Cards 90-96	Vol XIII No 4 No 5	Apr 1948 May 1948
"Promyshlennaya Energetika" (Industrial Energetics) Cards 9-12	No 4	Apr 1948
"Stal'" (Steel) Cards 82-89	No 5	May 1948
"Sbornik Rukovodyashchikh Materialov i Konsul'tatsiy po Stroitel'stvu" (Symposium of Guidance Materials and Consultation on Construction) Cards 13-21	No 2 No 4	Feb 1948 Apr 1948
"Torfyanaya Promyshlennost'" (Peat Industry) Cards 22-27	No 3 No 4	Mar 1948 Apr 1948
"Vestnik Mashinostroyeniya" (Herald of Machine Building) Cards 31-44	No 6	Jun 1948
"Veterinariya" (Veterinary Medicine) Cards 1, 66-80	No 3	Mar 1948
"Za Ekonomiyu Topliva" (Fuel Conservation) Cards 45-48	No 3	Mar 1948

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FDB Periodical Abstracts Scientific No 71

~~RESTRICTED~~

NOTE

In indexing these abstracts the following guides are used: MEDICINE - "Quarterly Cumulative Index Medicus," American Medical Association; CHEMISTRY - "Chemical Abstracts Subject Index," American Chemical Society; GENERAL - "Subject Headings for Technical Libraries," US Department of Commerce, Office of Technical Services.

Distribution

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FDB	<u>20</u>
Total	16

RESTRICTED		FDB Periodical Abstracts Scientific No 71		RESTRICTED	
USSR/Academy of Sciences Veterinary Medicine	Mar 1948	USSR/Electricity Drives, Electric Synchronization	Mar/Apr 1947		
"All-Union Intercollegiate Clinical Conference of the Zooveterinary Colleges, Ministry of Higher Education, USSR," Dr Ye. Shulyumova, Prof, 3 pp		"The Dynamics of the Contact Synchronization of Electric Drives," A. A. Bulgakov, 9 pp			
"Veterinariya" No 3		"Avtomat i Telemekhan" Vol VIII, No 2			
Conference was held in Leningrad from 25-29 Nov 1947. Over 200 delegates from 30 institutions took part. Article summarizes main speeches.		Describes system of contact synchronization of electric drives, applicable to low-power installations. Considers dynamics of process and deduces approximate equations. Establishes conditions for steady synchronized movements.			
FDB	71T1	FDB	71T2		
USSR/Electronics Telemechanics Communications	Mar/Apr 1947	USSR/Electronics Regulators, Electronic	Mar/Apr 1948		
"A Method of Obtaining Additional Channels for the Transmission of Telemechanics Signals," G. V. Dobrovolskiy, Wire Communications Dept, Inst Automatics and Telemechanics, Acad Sci USSR, 4 pp		"Review of 'The Dynamics of Automatic Regulation' by R. Oldenburg and H. Sartorius (Munich and Berlin, 1944)," A. V. Mikhaylov, 3 pp			
"Avtomat i Telemekhan" Vol VIII, No 2		"Avtomat i Telemekhan" Vol VIII, No 2			
Describes a method of obtaining supplementary channels for transmission of telemechanics signals, based on limitation of telephonic spectrum to 1700 cycles and utilization of higher frequencies for 2 to 3 telemechanics channels. Shows basic specifications for		Favorable review of above work on mathematical theory of servomechanisms. Linear problems are treated very exhaustively and there is much value in the 20 pages on nonlinear problems. Book incorporates all matter published up to 1944, in addition to some original research. Gives synopsis of the contents.			
FDB	71T3	FDB	71T4		
USSR/Electronics (Contd)	Mar/Apr 1947	USSR/Electronics Amplifiers, Magnetic	Mar/Apr 1947		
such channels. Recommends method for application to existing systems of high-frequency communication along high-voltage lines.		"In the Scientific Council of the Institute of Automatics and Telemechanics, Academy of Sciences, USSR" 2 pp			
		"Avtomat i Telemekhan" Vol VIII, No 2			
		Account of proceedings at meeting on 20 Dec 1945. M. A. Ayzerman read a dissertation on "Convergence Criteria of Servomechanisms, Taking Into Account the Nonlinear Characteristics of the Installation." M. A. Rozenblat read a dissertation on "Magnetic Amplifiers." Summary is given of both dissertations and ensuing discussions.			
FDB	71T5	FDB	71T5		
USSR/Electronics Control, Electronic Regulators, Electronic	Mar/Apr 1947	USSR/Electronics Modulation, Pulse Modulation, Phase	Mar/Apr 1947		
"The Frequency Characteristic Method in the Theory of Controls," V. V. Solodovnikov, Automatic Regulating and Controlling Dept, Inst Automatics and Telemechanics, Acad Sci USSR, 14 pp		"The Frequency Spectrum in Phase-Pulse Modulation," P. G. Tager, Electronic Automatics Dept, Inst Automatics and Telemechanics, Acad Sci USSR, 19 pp			
"Avtomat i Telemekhan" Vol VIII, No 2		"Avtomat i Telemekhan" Vol VIII, No 2			
General differential equations of control systems are examined and relationships obtained between frequency characteristics for open and closed circuits. It is necessary to know only one of these in order to describe behavior of system. Method is applied to gen-		Theoretical investigation of frequency spectrum produced under steady conditions at output of a transmitter working on a phase-pulse modulation system. Shows that frequency spectrum has a complicated structure consisting of: an infinite series of fundamental harmonics, short pulses of mean fre-			
FDB	71T6	FDB	71T7		

RESTRICTED		FDB Periodical Abstracts Scientific No 71		RESTRICTED	
USSR/Electronics (Contd)	Mar/Apr 1947	USSR/Electronics (Contd)	Mar/Apr 1947		
<p>eral case, i.e., any disturbing force acting on system when not in neutral condition. Finally, frequency criteria are given whereby conditions for avoidance of "over-regulation" and for "monotony" may be determined. A method of finding phase-amplitude or frequency characteristic from oscillograms is also described. Submitted 6 Mar 1947.</p>		<p>quency, and infinite series of cumulative and differential combined frequencies (between mean pulse frequency and modulating frequency), accompanying fundamental harmonics. Expressions are deduced for amplitude and phase of each frequency in spectrum. Finally, a numerical example is considered. Submitted 9 Jan 1947.</p>			
FDB	71T6	FDB	71T7		
USSR/Electronics Relays, Electronic Mathematics, Applied	Mar/Apr 1947	USSR/Electricity Power Plants - Electric Efficiency, Industrial	Apr 1948		
<p>"A General Method of Transforming Contact Relay Systems," M. A. Gavrilov, Inst Automatics and Telemechanics, Acad Sci USSR, 19 pp</p> <p>"Avtomat i Telemekhan" Vol VIII, No 2</p> <p>Mathematics of algebra at present used for synthesis and analysis of contact relay systems is applicable only to systems of multiple series type. Examines a more general method based on application of relationships obtained by considering systems as modifications of one general system, of which various elements have</p>		<p>"Technology and Mechanics of Control of the Economy of Electric Power," K. P. Malyshkin, UralMashZavod imeni S. Ordzhonikidze, 2 pp</p> <p>"Prom Energet" No 4</p> <p>Describes several measures taken to control waste of electrical power. Savings of 250 to 500% per unit manufactured product have been realized already in several industries.</p>			
FDB	71T8	FDB	71T9		
USSR/Electronics (Contd)	Mar/Apr 1947	USSR/Engineering Power Plants	Apr 1948		
<p>been short-circuited or cut out. Method is illustrated by an example.</p>		<p>"Thematic Plan of the Journal 'Industrial Energetics' for 1948" 1 1/2 p</p> <p>"Prom Energet" No 4</p> <p>Eleven main fields, each with a series of divisions, describing various aspects of industrial energetics which will be discussed in articles appearing in subject journal for year 1948.</p>			
FDB	71T8	FDB	71T10		
USSR/Engineering Compressors, Air Compressed Air	Apr 1948	USSR/Engineering Manometers	Apr 1948		
<p>"The Drying of Compressed Air in a Compressor Installation," A. A. Popov, Engr, Tashtagol Mines, Kemerovo Oblast, 1 1/4 pp</p> <p>"Prom Energet" No 4</p> <p>Popov wrote his article as a criticism of some of points expressed in Engineer Eberlin's "Localization of the Humidity in Compressed Air in Compressor Installations" which appeared in "Promyshlennaya Energetika" No 3, 1947.</p>		<p>"Differential Manometer With Corrugated Cylinder," G. G. Osepyan, Engr, MinAviaProm, 1 p</p> <p>"Prom Energet" No 4</p> <p>Description of subject manometer developed at one of aircraft plants of Ministry of Aviation Industries.</p>			
FDB	71T11	FDB	71T12		

RESTRICTED	FDB Periodical Abstracts Scientific No 71	RESTRICTED
USSR/Engineering Welding - Equipment Concrete, Reinforced	Feb 1948	USSR/Engineering Construction Industry Buildings Feb 1948
"Recommended Technical Improvements" 4 pp		"Standard Parts for Covering Buildings" 2 pp
"Sbor Rukovod Mater i Konsult po Stroi" No 2		"Sbor Rukovod Mater i Konsult po Stroi" No 2
Ye. I. Ugrinovich presents designs for an attachment to a welding tractor permitting welding of longitudinal seams, beams and columns. O. A. Gershberg, Cand Tech Sci, and Engr S. G. Skvortsov present an assembly line method of preparing reinforced concrete sheets with vacuum processing of concrete. Prof A. G. Panyutin and Engr G. N. Fedorov submit plans for a manually operated machine for formation of hollow gypsum-slag		Announces publishing of Part II of volume released by Ministry for Construction Industries, showing standard parts for building industry. Second volume contains information on covering materials.
FDB	71T13	FDB
USSR/Engineering (Contd)	Feb 1948	USSR/Engineering Construction Industry Tanks, Oil Feb 1948
bricks, and Engr A. Z. Magal presents an improved design for a pneumatic meter to be used in plastering work.		"Inserted Changes in the Operation of GOST 2486-47 and 2486-48 on Tanks for Petroleum Products" ½ p
		"Sbor Rukovod Mater i Konsult po Stroi" No 2
		Several changes to above-mentioned GOST standards.
FDB	71T13	FDB
USSR/Engineering Construction Industry Feb 1948		USSR/Engineering Construction Industry Apr 1948
"The New Sanitation Standards and Specifications for Designs of Industrial Enterprises" 5 pp		"List of Consolidated and Revoked Standards on Construction and Inserted Changes in Standards During October and December 1947 and January 1948" 1 p
"Sbor Rukovod Mater i Konsult po Stroi" No 2		"Sbor Rukovod Mater i Konsult po Stroi" No 4
Discusses requirements for administration and offices, living quarters, and health centers.		List of confirmed, amended, and revoked standards.
FDB	71T16	FDB
USSR/Engineering Construction Industry Tanks, Oil Apr 1948		USSR/Engineering Construction Industry Buildings Apr 1948
"Changes in GOST 2486-44 'Vertical Welded Cylindrical Tanks for Petroleum Products'" ¼ p		"Standard Plans of Residences for Ferrous Metallurgy of the South" 2½ pp
"Sbor Rukovod Mater i Konsult po Stroi" No 4		"Sbor Rukovod Mater i Konsult po Stroi" No 4
This change, effective 5 Feb 1948, adds following to subsection 2, section G, Part II which is known as Technical Conditions: "The use of wood as a covering material will be permitted only in special cases, and where due care has been taken to minimize danger of fire."		Standards established in preparation for mass building program planned for 1948, particularly for living quarters for southern metallurgical workers.
FDB	71T18	FDB
		71T19

RESTRICTED	FDB Periodical Abstracts Scientific No 71		RESTRICTED
<p>USSR/Engineering Construction Industry Construction Equipment</p> <p>Apr 1948</p> <p>"Increase of the Mechanization of Construction Work in 1948" 2 pp</p> <p>"Sbor Rukovod Mater i Konsult po Stroi" No 4</p> <p>Presents three points worthy of attention: 1) better training for personnel who are to use these tools; 2) improvement in mechanization of construction work and fuller utilization of construction machinery and equipment; 3) improvement of various technical aids available to construction workers.</p>	<p>USSR/Engineering Construction Industry Metals</p> <p>Apr 1948</p> <p>"The Economy of Metal in Construction" 3 pp</p> <p>"Sbor Rukovod Mater i Konsult po Stroi" No 4</p> <p>Short summarized version of Decree No 180 (18 Mar 1948) of Ministry for Construction Enterprises of Heavy Industries, and authorized by D. Rayzer, representing Ministry. Presents general over-all scope of decree, and its specific application to industrial and domestic buildings.</p>		
<p>FDB 71T20</p> <p>USSR/Engineering Peat Reserves Peat Industry</p> <p>Mar 1948</p> <p>"State Control of the Utilization of Peat Reserves," A. S. Olenin, Chief Engr, GlavTorfFond, 2½ pp</p> <p>"Torf Prom" No 3</p> <p>Urges state control of utilization of peat to conserve large peat reserves. This is especially desirable in the Moscow, Ivanovo, and Gor'kiy regions where extraction of peat is on a very large extensive scale.</p>	<p>FDB 71T21</p> <p>USSR/Engineering Peat - Drying Moisture</p> <p>Mar 1948</p> <p>"Relation of the Mechanical Stability of Peat and Other Rough Dispersed Systems to Moisture," S. S. Korshunov, VNIITP, 1½ pp</p> <p>"Torf Prom" No 3</p> <p>Mathematical formulas for calculating subject relationship.</p>		
<p>FDB 71T22</p> <p>USSR/Engineering Peat Industry Railroads</p> <p>Mar 1948</p> <p>"Fundamental Questions of the Rationalization of the Transportation of Peat on Wide-Gauge Track," B. V. Krich, 2½ pp</p> <p>"Torf Prom" No 3</p> <p>Many large power stations as well as industrial enterprises use peat as a fuel. Most of peat is transported on wide-gauge tracks. By 1950 it is hoped that peat production will have increased by 39%. Stresses economy which could be obtained by utilizing wide-gauge tracks, and recommends various methods for better use of available transportation.</p>	<p>FDB 71T23</p> <p>USSR/Electricity Generators, Electric Railroad Cars</p> <p>Apr 1948</p> <p>"Mobile Substation 35/3-6 Kw on a Narrow-Gauge Railroad Flatcar," S. L. Khazin, Engr, 3½ pp</p> <p>"Torf Prom" No 4</p> <p>Performance and circuit of subject substation.</p>		
<p>FDB 71T24</p> <p>USSR/Engineering Peat Industry Efficiency, Industry</p> <p>Apr 1948</p> <p>"Economy of Electric Power in the Peat Industry," B. I. Rozenberg, Engr, 3 pp</p> <p>"Torf Prom" No 4</p> <p>Stresses necessity for power economy. To effect power conservation in peat industries, first necessary to determine basic power consumption. Determined that pumps for washing peat deposits and accumulators used in transport of peat were greatest users of power. Presents methods whereby certain economies can be brought about in above-mentioned branches of peat industry.</p>	<p>FDB 71T25</p> <p>USSR/Engineering Tools, Cutting Tools - Heating</p> <p>Apr 1948</p> <p>"Utilization of a Fast Method of Treating in the Plant 'IvTorfMash'," Docent B. P. Ikonnikov and M. B. Gardon, Engr, 4½ pp</p> <p>"Torf Prom" No 4</p> <p>Describes new method which permits rapid finishing of metal parts at temperatures of 700 to 900° C. It was observed that resistance to cutting and finishing tools decreases by 30 to 40%, thus facilitating finishing process.</p>		
<p>FDB 71T26</p>	<p>FDB 71T27</p>		

RESTRICTED	FDB Periodical Abstracts Scientific No 71		RESTRICTED
USSR/Engineering Cableways	Mar 1948	USSR/Engineering Construction Equipment Cranes, Lifting	Mar 1948
"A Heavy Passenger Overhead Cable Line," G. G. Zeli- chenok, Engr, StroyMekhMontazh Trust, 5½ pp		"Cable Cranes in Mass Concrete Works," Maj G. D. Petrov, Engr, 3 pp	
"Mekhan Stroi" No 3		"Mekhan Stroi" No 3	
Detailed diagrams and performances of heavy duty cable car systems for passengers. Describes one sys- tem which is capable of carrying 200 passengers per hour in one direction. Projected line will be run on a braking incline principle.		Describes various types of overhead cranes, travel- ling on cables, which have greatly reduced amount of work necessary in construction sites where large concrete installations are being built.	
FDB	71T28	FDB	71T29
USSR/Engineering Cableways Conveyors	Mar 1948	USSR/Engineering Automobile Industry Electrical Equipment	Jun 1948
"The Wider Introduction of Overhead Cable Transporta- tion Into the Construction Industry" 1½ pp		"New Standards for Electrical Equipment for Automo- biles, Tractors, and Motorcycles," G. S. Piss, Cand Tech Sci, 1½ pp	
"Mekhan Stroi" No 3		"Vest Mashinostroye" No 6	
General description of cable conveyor systems in USSR. In 1935-1936 a 75-km conveyor system was built. Plans are under way for building of a 100-km cable conveyor system. Points out economy realized from use of such methods and recommends increased use.		Reports confirmation of GOST 3940-47, and briefly discusses points covered in subject standardization plan.	
FDB	71T30	FDB	71T31
USSR/Engineering Machinery - Construction Machine - Design	Jun 1948	USSR/Engineering Machinery - Construction Construction Industry	Jun 1948
"In the Pages of Soviet Literature," Ya. S. Golitsyn, 1½ pp		"New Books" 2 pp	
"Vest Mashinostroye" No 6		"Vest Mashinostroye" No 6	
List of articles dealing with machine construction and designing that have appeared in "Autogenous Mat- ters," "Automobile Industry," "Railroad Transporta- tion," "For Fuel Economy," "Industrial Energetics," and "Shipbuilding."		List of some 15 new books released by State Scien- tific and Technical Publishing House for Machine Construction Literature. Also list of books pub- lished by Publishing House for Defense Construction.	
FDB	71T32	FDB	71T33
USSR/Engineering Automobile Industry	Jun 1948	USSR/Engineering Tools, Cutting	Jun 1948
"New Standards" 2 pp		"The Cutting of Metals in Our Science (80 Years of the Foremost Scientific Work on the Theory of Cut- ting)," Prof I. M. Besprozvanny, Dr Tech Sci, 5 pp	
"Vest Mashinostroye" No 6		"Vest Mashinostroye" No 6	
List of new standards to be used in tractor, automo- bile, and transport machine construction industries.		Brief historical review of development of technique of cutting metals. Mentions various scientists con- nected with important advances.	
FDB	71T34	FDB	71T35

RESTRICTED	FDB Periodical Abstracts Scientific No 71	RESTRICTED
USSR/Engineering Instruments, Measuring Jun 1948 "New Devices" $\frac{1}{4}$ p "Vest Mashinostroye" No 6 Describes a new measuring device produced by Kalibr Works, an interferometer, designed by Engr P. N. Gundarev, which has a margin of error of 0.03 μ .	USSR/Engineering Cutting Torches Steel, Cutting Jun 1948 "New Autogenous Apparatus" 1 p "Vest Mashinostroye" No 6 All-Union Scientific and Research Institute for the Autogenous Finishing of Metals has developed a semi-automatic portable apparatus for acetylene-oxygen cutting of steel. Gives photographs and discusses performance.	FDB 71T36
USSR/Engineering Steel Ingots Cutting Torches Jun 1948 "Torch Cutting of the Shrinkage Heads of Large Ingots of Stainless Steel at 1000°," G. S. Rebenok, Engr, 2 pp "Vest Mashinostroye" No 6 Such cutting was usually a laborious process accomplished with aid of saws or circular cutting discs. Presents a new method utilizing torches which cut at a temperature of 1000°.	USSR/Engineering Welding, Seam Welding - Inspection Jun 1948 "Appraisal of the Quality of Welded Joints by X-Ray Photographs," Docent S. T. Nazarov, Cand Tech Sci, 10 $\frac{1}{2}$ pp "Vest Mashinostroye" No 6 Three sections to article: 1) methods for determining defects in arc-welded seams with aid of X-ray photographs, 2) X-ray photograph method for determining macroscopic defects, and 3) methods for conducting these studies.	FDB 71T37
USSR/Engineering Tracks, Railroad Machines, Bending Jun 1948 "Bending Machine of the Ural Machine Factory," I. A. Revin, Engr, 1 p "Vest Mashinostroye" No 6 New machine which will permit bending of railroad rails much more efficiently than methods currently in use. New machine permits bending of rails while they are still hot.	USSR/Engineering Construction Industry Construction Equipment Jun 1948 "New Construction Grab Bucket," V. I. Kandeyev, Engr, $\frac{1}{2}$ p "Vest Mashinostroye" No 6 Description and performance record of a new 10-ton grab bucket produced at Pod'yemnik Works in Moscow. Bucket is equipped with seven teeth, and can also be adapted by having a magnet attached to it.	FDB 71T38
USSR/Engineering Engines, Automobile Engines, Gasoline Jun 1948 "New Automobile Engine ZIS-120," G. A. Festa, Engr, 1 p "Vest Mashinostroye" No 6 New engine, developed for ZIS-5 truck, has six cylinders developing 85 hp at 2,400 rpm, on type 60 or 70 fuel (GOST 2084-47).	USSR/Engineering Automobiles Engines, Diesel Jun 1948 "New Bus ZIS-154" 1 $\frac{1}{4}$ pp "Vest Mashinostroye" No 6 Performance and some of basic facts regarding new ZIS, 60-seater bus for city service. Production began on assembly lines in 1947. It is powered by a 110-hp 2-cycle Diesel.	FDB 71T40
FDB 71T42	FDB 71T41	FDB 71T43

RESTRICTED	FDB Periodical Abstracts Scientific No 71	RESTRICTED
USSR/Engineering Tools, Machine Jun 1948 "Speeding Up the Mechanization of Work Processes" 2 pp "Vest Mashinostroye" No 6 Urges speeding up of mechanization of various processes in workshops and industries in order to permit the machine-building industry of the Soviet Union to fulfill postwar Five-Year Plan in 4 years.		USSR/Engineering Boilers Heating, Industrial Mar 1948 "The Design of a Coil Waste Gas Heater for Small and Medium Power Boilers," Z. M. Feygel'man, Engr, 1½ pp "Za Ekonomiyu Topliva" No 3 Lists various efficiency factors connected with use of such coil waste gas heaters.
FDB USSR/Engineering Turbines, Gas Compressor, Air Mar 1948 "New Design of a Gas Turbine Installation With a 'Kompreks' Device," I. A. Sandomirskiy, Engr, 2 pp "Za Ekonomiyu Topliva" No 3 Description of Kompreks device which compresses air with objective of giving a more intense gas jet when it is injected into blower chamber of a gas turbine. This equipment is at present being produced by Brown-Bower firm in Switzerland.	71T44	FDB USSR/Engineering Turbines, Gas Fuel Mar 1948 "The Use of Boiler Fuel for Gas Turbines," Prof B. V. Kantorovich, 6½ pp "Za Ekonomiyu Topliva" No 3 Results of various tests conducted to determine efficiency of operating gas turbines on boiler fuel. Describes changes made in standard turbines to permit operation on solid fuel.
FDB USSR/Engineering Heating, Industrial Mar 1948 "Council on the Technical Problems of Thermification in Postwar Planning" 1 p "Za Ekonomiyu Topliva" No 3 Description of proceedings of 23-28 Dec meeting of Section of Central Heating of the MONITOE, held in Moscow, at which were discussed problems connected with greater spread of central heating systems in USSR during postwar Five-Year Plan.	71T46	FDB USSR/Medicine - Nervous System Medicine - Salivary Glands Mar/Apr 1948 "Experimental Basis for the Views of I. P. Pavlov on the Processes of Exhaustion and Recovery in Higher Nervous Activity," G. V. Fol'bert, Kiev, 8 pp "Fiziol Zhur SSSR" Vol XXXIV, No 2 After stating views of I. P. Pavlov on subject, author describes a series of experiments which support them. Basic method adopted was to apply stimuli (bells, light, gurgling noises) at regular intervals to dogs with chronic fistulae of salivary glands and observe time required in termination of conditioned reflex, and time of recovery. Samples
FDB USSR/Medicine - Nervous System Medicine - Sneezing Mar/Apr 1948 "The Problem of the Distribution of Stimuli From the Respiratory Center to the Central Nervous System. Report III. The Effect of Sternutation on the Distribution of Stimuli," V. A. Vinokurov, Lab of Avn Med, Chair of Physiol, Mil Med Acad imeni S. M. Kirov, 4 pp "Fiziol Zhur SSSR" Vol XXXIV, No 2 Description and results of experiments performed on guinea pigs. Sneezing was induced by snuff or tickling nose with paper, and effects observed on quadriceps muscles of thigh and peritoneal and digastric muscles. Charts are reproduced which show relation	71T48	FDB USSR/Medicine - Nervous System (Contd) Mar/Apr 1948 of saliva were taken and analyzed for nitrogen concentration, mucine, etc. Results were checked by experiments on other glands (stomach, pancreas) and on muscular system. Submitted 17 Mar 1946.
FDB 71T50		FDB 71T49

RESTRICTED

FDB Periodical Abstracts Scientific No 71

RESTRICTED

USSR/Medicine - Nervous System (Contd) Mar/Apr 1948

between muscular contraction and breathing. Submitted 6 May 1946.

FDB

71T50

USSR/Medicine - Respiratory Tract Mar/Apr 1948
Medicine - Strychnine

"The Problem of the Distribution of Stimuli From the Respiratory Center to the Central Nervous System. Report IV. Effect of Strychnine, Eserine, and Morphine on the Distribution of Stimuli From the Respiratory Center," V. A. Vinokurov, Lab of Avn Med, Chair of Physiol, Mil Med Acad imeni S. M. Kirov, 12 pp

"Fiziol Zhur SSSR" Vol XXXIV, No 2

Description and results of experiments on dogs and puppies. Charts are reproduced showing effect of each drug on respiratory system and corresponding contraction in quadriceps muscles of thigh. Author

FDB

71T52

USSR/Medicine - Respiratory Tract Mar/Apr 1948
(Contd)

concludes that all three drugs facilitate distribution of stimuli. With morphine poisoning, effect of respiratory impulses on tonicity of skeleton muscles is clearly noticeable. Submitted 6 May 1946.

FDB

71T52

USSR/Medicine - Strychnine Mar/Apr 1948
Medicine - Prostigmine

"Antagonism Between Prostigmine and Strychnine," A. M. Rusanov, Chair of Pharmacology, Leningrad Pediatrics Med Inst, 2 pp

"Fiziol Zhur SSSR" Vol XXXIV, No 2

Antagonism was investigated by performing experiments on mice. One hundred and seventy white mice were given subcutaneous injections of strychnine, of these 80 had received similar injections of proserium (a Soviet preparation, analagous to prostigmine) ten minutes previously. Tabulated results show that proserium increased resistance of mice to strychnine. Submitted 3 Aug 1946.

FDB

71T54

USSR/Medicine - Adrenal Preparations Mar/Apr 1948
Medicine - Cholinesterase

"The Relation of Adrenaline to the Activity of Cholinesterase," N. Yu. Belenkov, Lab of Endocrinology, Inst Experimental Med, Acad Med Sci USSR, Leningrad, 5 pp

"Fiziol Zhur SSSR" Vol XXXIV, No 2

Investigation was conducted in vitro on smooth abdominal muscle of a frog (m. rectus abdominis). Cholinesterase was obtained from brain of same animal. Adrenalin in concentrations 10^{-7} - 10^{-8} decreases activity of cholinesterase. Weak concentrations of adrenaline (10^{-9} - 10^{-10}) have no effect

FDB

71T51

USSR/Medicine - Adrenal Preparations Mar/Apr 1948
(Contd)

on reaction of acetylcholine (10^{-6} - 10^{-7}) on an "uneserized" striated muscle. Higher concentrations (10^{-6} - 10^{-7}) of adrenaline increased the reaction in 53%, decreased it in 21% and had no effect in 16% of experiments. Adrenaline had no effect on an "eserized" muscle. Submitted 20 Jul 1946.

FDB

71T51

USSR/Medicine - Electrocardiogram Mar/Apr 1948
Medicine - Altitude, High

"Electrocardiogram of a Human Under High Altitude Conditions," O. P. Minut-Sorokhtina, N. V. Rayeva, B. M. Lemazhikhin, Sec of Sensory Organs, All-Union Inst Experimental Med imeni A. M. Gor'kiy, Moscow, 7 pp

"Fiziol Zhur SSSR" Vol XXXIV, No 2

Alteration of electrocardiogram due to insufficient oxygen has been previously studied but only for short periods, except for one series of observations of invalids carried out at Kislobodsk in 1935. Author's observations were made on healthy persons.

FDB

71T53

USSR/Medicine - Electrocardiogram Mar/Apr 1948
(Contd)

No clear change in electrocardiogram was perceptible at 2,200 meters. Alterations at 4,250 meters are described with photographs. Electrocardiograms were taken with subject resting and after physical labor. Effect of drinking coffee with luminal is also discussed. Submitted 2 Mar 1946.

FDB

71T53

RESTRICTED	FDB Periodical Abstracts Scientific No 71	RESTRICTED
USSR/Medicine - Brain, Physiology Medicine - Nervous System, Physiology	Mar/Apr 1948	USSR/Medicine - Nicotinic Acid Medicine - Pathology
"Method of Chronic Electrocardiographic Investigations on Animals by Tapping Biopotentials With a Point Electrode From Two Zones of the Cortex," B. Kh. Gurevich, Inst Evolutionary Physiol and Pathol of Higher Nervous Activity imeni Academician I. P. Pavlov, Acad Med Sci USSR, 4 pp		"Nicotinic Acid in Internal Pathology," Prof S. M. Ryss, Propaedeutic Therapeutic Clinic, 2d Leningrad Med Inst; Leningrad Affiliate, All-Union Sci Res Vitamin Inst, 13 pp
"Fiziol Zhur SSSR" Vol XXXIV, No 2		"Klin Med" Vol XXVI, No 4
Author has carried out electrocardiographic experiments on 13 rabbits lasting over a year. His method is described in detail, with a sketch of electrode and a diagram of electrical connections. A photograph is		Article is presented in six sections treating: nicotinic acid and its effect on blood vessels; nicotinic acid and carbohydrate metabolism; nicotinic acid and gastric secretion; nicotinic acid and blood coagulation, leucopoiesis and erythrocytogenesis; nicotinic acid and sulfamide preparations; calculation of nicotinic acid deficiency.
FDB 71T55		FDB 71T56
USSR/Medicine - Brain, Physiology (Contd)	Mar/Apr 1948	USSR/Medicine - Nicotinic Acid Medicine - Blood, Circulation
reproduced, showing results obtained for the visual and motor-sensory zones of cortex. Submitted 22 Jan 1947.		"The Effect of Nicotinic Acid on the Circulation of the Blood," K. F. Vlasov, Therapeutic Dept of the Order of Lenin Clinical Hosp imeni Botkin, 11 pp
		"Klin Med" Vol XXVI, No 4
		Describes effect of nicotinic acid on blood pressure, circulation, pulse rate, and electrocardiogram in actual cases. It was observed that nicotinic acid administered perorally and intravenously in doses of 100-300 mg and 50-100 mg, respectively, has a hypotensive action, inducing a decrease in systolic and diastolic pressures.
FDB 71T55		FDB 71T57
USSR/Medicine - Insulin Medicine - Pellagra	Apr 1948	USSR/Medicine - Blood, Examination Medicine - Blood, Coagulation
"Insulin and Pellagra," N. N. Zak, Psychiatric Clinic, TsIU; Cen Inst of Psychiatry, Ministry of Public Health, RSFSR, 3 pp		"A Method of Determining Prothrombin in the Blood," D. P. Borovskaya, S. D. Rovinskaya, Cen Sci Res Inst of Roentgenology and Radiology imeni V. M. Molotov, 1 p
"Klin Med" Vol XXVI, No 4		"Klin Med" Vol XXVI, No 4
Wealth of material gathered in connection with insulin shock therapy raises a number of interesting pathologicophysiological problems beyond bounds of psychiatry. Problem of interrelationship of insulin and vitamins, particularly vitamin B group, is studied.		A test for prothrombin which can be made by clinical-laboratory methods is described.
FDB 71T58		FDB 71T59
USSR/Medicine - Pneumonia Medicine - Therapeutics	Apr 1948	USSR/Medicine - Malaria Medicine - Nervous System, Sympathetic
"Some Features of the Course and Treatment of Lobar Pneumonia," V. N. Khlebnikov, 1 p		"Hyperchloremia in Recurrent Malaria," Docent T. M. Efendiyev, First Hosp Therapeutic Clinic, Azerbayd-zhan Med Inst, 1 p
"Klin Med" Vol XXVI, No 4		"Klin Med" Vol XXVI, No 4
X-ray observations, treatment and results of treatment with sulfidine, sulfazole and camphor in cases of lobar pneumonia are described.		Data shown lead to conclusion that in prolonged recurrent malaria functions of vegetative nervous system and saline concentration are impaired, leading to hyperchloremia which vanishes with specific treatment of basic disorder.
FDB 71T60		FDB 71T61

RESTRICTED	FDB Periodical Abstracts Scientific No 71	RESTRICTED
<p>USSR/Medicine - Typhus Medicine - Diagnosis</p> <p>Apr 1948</p> <p>"The Problem of the Diagnostic Value of a Hemoculture in Brush Typhus of Vaccinated Patients," Maj S. Ye. Shapiro, Maj P. I. Baykovskaya, Med Sv, Nth Field Infection Hosp, 1 1/2 pp</p> <p>"Klin Med" Vol XXVI, No 4</p> <p>From observations described, conclusion is drawn that extraction of a hemoculture from infected patients who are inoculated for brush typhus is as effective a diagnostic method as it is in case of infected persons who have not been inoculated.</p> <p>FDB 71T62</p>	<p>USSR/Medicine - Plants, Growth Medicine - Botany</p> <p>Mar/Apr 1948</p> <p>"Ecology of Species of the Genus 'Adonis.' I. Ecological and Phytocenological Reasons for Rhythm of Growth and for Some Morphological Features of the Structure of the Species," G. I. Dokhman, 13 pp</p> <p>"Byul Mosk Obshch Ispy Prirod, Nov Ser, Otdel Biolog" Vol LIII, No 2</p> <p>A description of various species of this genus of flowers, which flourish in northern steppes. They are remarkable for their early flowering and subsequent intensive production of foliage. Perennial species can be classed as either long- or short-</p> <p>FDB 71T63</p>	
<p>USSR/Medicine - Species Medicine - Botany</p> <p>Mar/Apr 1948</p> <p>"Phytocenosis and Species," N. Ya. Kats, 13 pp</p> <p>"Byul Mosk Obshch Ispy Prirod, Nov Ser, Otdel Biolog" Vol LIII, No 2</p> <p>Best approach to phytocenosis is an intensive study of the component species--geography, vitality, succession, and ecological amplitude. Method is illustrated by applying it to flowering and spagnum bryophyta in swamps of European Russia.</p> <p>FDB 71T64</p>	<p>USSR/Medicine - Plants, Growth (Contd) Mar/Apr 1948</p> <p>petioled. In certain species leaves are mere scales. Discusses these and other phenomena and suggests explanations for them.</p> <p>FDB 71T63</p>	
<p>USSR/Medicine - Zoology Medicine - Biology</p> <p>Mar/Apr 1948</p> <p>"Contributions to Knowledge of the Mammals of Mongolia II. Gray Voles, Lemmings, and Moles," A. G. Bannikov, 19 pp</p> <p>"Byul Mosk Obshch Ispy Prirod, Nov Ser, Otdel Biolog" Vol LIII, No 2</p> <p>Report of examinations carried out at Zoological Museum, Moscow University, of specimens of above animals collected in Mongolia. Information is classified under headings of "systematic notes," "geographical propagation," and "biological notes." There are four maps and two tables of measurements.</p> <p>FDB 71T65</p>	<p>USSR/Medicine - Haemosporidia Medicine - Veterinary Medicine</p> <p>Mar 1948</p> <p>"Preparation for the Prophylaxis of Haemosporidian Infections" 4 pp</p> <p>"Veterinariya" No 3</p> <p>In Feb, Central Committee of the Communist Party passed a resolution calling for improved veterinary services and a reduction in disease toll of farm animals. Now, in immediate postwar period, a substantial proportion of animal ailments were haemosporidian: for horses, over 20%; for large cattle, up to 13%; and for small cattle, up to 10%. Importance of carrying out countermeasures ordered by</p> <p>FDB 71T66</p>	
<p>USSR/Medicine - Epizootic Diseases Medicine - Immunization</p> <p>Mar 1948</p> <p>"Progress of Soviet Epizootiology in Thirty Years," Prof S. N. Vyshel'skiy, Active Mem, Acad Sci USSR, Laureate of the Stalin Prize, 5 pp</p> <p>"Veterinariya" No 3</p> <p>General review of Soviet achievements in this field. Most serious disease common to all species is malignant anthrax; mentions immunization progress, particularly STE vaccine. Summarizes progress made in control of various other epizootic diseases.</p> <p>FDB 71T67</p>	<p>USSR/Medicine - Haemosporidia (Contd) Mar 1948</p> <p>the Ministry of Agriculture (dipping, spraying, etc) is stressed, especially concerning avoidance of tick infested pasture.</p> <p>FDB 71T66</p>	

RESTRICTED	FDB Periodical Abstracts Scientific No 71	RESTRICTED
USSR/Medicine - Medical Education Medicine - Veterinary Medicine	Mar 1948	USSR/Medicine - Physiology Medicine - Veterinary Medicine
"The Construction of the Moscow Zooveterinary Institute" 1 p		"Review of 'Pathological Physiology' by Prof N. I. Shokhor, 3d Edition, Revised and Enlarged," Meshcheryakov, Active Head, Pathol Physiol Dept, Kazan State Vet Inst, Lecturer, Cand Vet Sci, 1 p
"Veterinariya" No 3		"Veterinariya" No 3
Two and one half million rubles have been allotted for design of Moscow Zooveterinary Institute which will cover an area of 8,500 sq meters. It will accommodate 1,680, of whom 1,500 will be students. Building will start in 1948 and will be completed in 1950.		Published ten years ago, 2d Edition has been revised by Prof T. P. Protaseny. Although a valuable work there are still some defects. For example, in section on propagation of disease, author has neglected to stress point that it is only socialist planned economy that has insured development of healing and
FDB	71T68	FDB
USSR/Medicine - Veterinary Medicine Medicine - Bibliography	Mar 1948	USSR/Medicine - Physiology (Contd)
"New Books on Veterinary Medicine" 1 p		Mar 1948
"Veterinariya" No 3		prophylactic work among farm animals in USSR. Vitamin content of foods is merely shown as "+" or "-." It should be expressed in international units. There are numerous quotations from foreign sources which have proved unsound in light of contemporary Soviet scientific achievements.
A list of 12 new Russian books on this subject giving authors, titles, publishers, pages, and number printed.		
FDB	71T70	FDB
USSR/Medicine - Veterinary Medicine Medicine - Trypanosoma	Mar 1948	USSR/Medicine - Trypanosomiasis Medicine - Trypanosoma
"Detection of Dourine in Horses by Trypanosomes," F. M. Alekseyenko, Sci Contributor, Ukrainian Inst of Experimental Vet. Med, 3 pp		"Experimental Trypanosomiasis in Asses (Su-auru)," S. A. Abramov, 2 pp
"Veterinariya" No 3		"Veterinariya" No 3
Slides were made from 13 stallions and mares afflicted with dourine in various stages. In four cases microscope revealed presence of trypanosoma equiperdum, a sketch of which is given. Method used in biopsy of lymph and preparing slide is described in detail; it is considered that this procedure in bacteriology should assist diagnosis.		Four asses were infected with trypanosoma ninae kohl-jakimovi. Resultant alterations in temperature, pulse and respiration are described.
FDB	71T71	FDB
USSR/Medicine - Piroplasmiasis Medicine - Immunization	Mar 1948	USSR/Medicine - Haemosporidia Medicine - Veterinary Medicine
"Immunization of the Pedigreed Young of Large Cattle Against Piroplasmiasis, Francilliosis, and Theileriasis," A. V. Bogoroditskiy, Z. M. Bernadskaya, Sci Contributors, Uzbek Sci Res Vet Experimental Sta, 1 p		"Treatment of Haemosporidian Infections in Calves With LP-2 and the Intramuscular Introduction of Flavacridine," Z. P. Korniyenko-Koneva, Cand Vet Med, M. D. Orekhov, N. G. Nikitin, I. F. Borisov, Vet Doctors, Turkmen Vet Experimental Sta, 1 p
"Veterinariya" No 3		"Veterinariya" No 3
Report of experiments on natural and artificial immunization of calves against haemosporidian infections. Natural immunization resulted in losses of 4% due to piroplasmiasis and francilliosis (?) and 16.2% due to theileriasis. With artificial immunization corresponding figures were 0% and 4%. Technique of arti-		Experiments show that LP-2 and flavacridine are equally effective. However, LP-2 has several advantages: it is readily soluble in distilled water; it can be injected subcutaneously, instead of intravenously; and has no toxic effect in calves. In this
FDB	71T73	FDB

RESTRICTED		FDB Periodical Abstracts Scientific No 71		RESTRICTED	
USSR/Medicine - Piroplasmosis (Contd)	Mar 1948	USSR/Medicine - Haemosporidia (Contd)	Mar 1948		
<p>ficial immunization is described. In 1946 a mixed herd was attacked; 76.4% of immunized cattle and only 8.6% of remainder survived.</p>		<p>connection, author advocates use of flavacridine in weaker doses than those specified in instructions.</p>			
FDB	71T73	FDB	71T74		
USSR/Medicine - Endometritis Medicine - Therapeutics	Mar 1948	USSR/Medicine - Pneumonia Medicine - Veterinary Medicine	Mar 1948		
<p>"Treatment of Endometritis With Lactic Acid Microbes," F. Panacenko, Cand Vet Sci, Stavropol Agr Inst, 2 pp</p> <p>"Veterinariya" No 3</p> <p>Acute and chronic endometritis in cows can be cured by microbes <i>Str. lactis</i> and <i>Bac. casei</i>, which are readily applied in form of sour milk. Dose is up to 400 cc. No complications ensue. In cases where there is a copious discharge, uterus should be washed with a 1:10,000 solution of potassium permanganate before treatment.</p>		<p>"Alkaline Solution of Red Streptocide," Prof N. R. Semushkin, 1 p</p> <p>"Veterinariya" No 3</p> <p>A 0.5% solution of caustic soda can be used for obtaining 1% and higher solutions of red streptocide. Intravenous injections of such solutions do not give rise to complications in horses, and were successfully used in cases of catarrhal pneumonia.</p>			
FDB	71T75	FDB	71T76		
USSR/Medicine - Parasites Medicine - Parasiticides	Mar 1948	USSR/Medicine - Parasiticides Medicine - Haemosporidia	Mar 1948		
<p>"Testing the Parasitocidal and Toxic Properties of DDT-5 on the Ectoparasitic Diseases of Animals," A. G. Ostashevskiy, Pharmacology and Chemiotherapy Sec, UIEV, 3 pp</p> <p>"Veterinariya" No 3</p> <p>Report on experiments carried out in vitro (applying DDT-5 to parasites in a Petri dish) and in vivo (observations on pigs, cows, etc.). Results show that DDT-5 has only a weak action on mange mites of genus <i>Psciroptes</i> but has strong insecticidal properties on insect parasites found in farm animals and birds. In</p>		<p>"Acaricidal Properties of DDT, Hexachlorane, and Soap 'K' Against Ticks That Transmit Haemosporidiosis in Horses," I. A. Yegarov, Cand Vet Sci; F. M. Leont'yev, Jr Sci Collaborator, 3 pp</p> <p>"Veterinariya" No 3</p> <p>Experiments were carried out in vitro at room temperature and on animals (rabbits and horses). Following acaricides were used: American DDT dust, Soviet CC-5 dust, Soviet manufactured hexachlorane, soap "K," preparation "CK," and diphenylamine. Results are tabulated and compared.</p>			
FDB	71T77	FDB	71T78		
USSR/Medicine - Parasites (Contd)	Mar 1948	USSR/Medicine - Pediculosis Medicine - Parasiticides	Mar 1948		
<p>some cases, DDT-5 may cause acute inflammation of animal's skin, with fatal results. Also, DDT-5 is a powerful intestinal poison and care must be taken to prevent animal under treatment from swallowing any.</p>		<p>"Study of the Therapeutic Properties of DDT in the Control of Pediculosis in Swine," V. P. Arkadakskiy, Cand Biol Sci, 2 pp</p> <p>"Veterinariya" No 3</p> <p>Report of observations made when DDT was applied to herds of pigs. Results show worthlessness of exaggerated DDT advertisements. DDT and its analogue Detcil keep pigs louse-free for a month, not a year. However, they are better than creolin and when applied in correct strengths have no toxic effects on adult pigs.</p>			
FDB	71T77	FDB	71T79		

RESTRICTED	FDB Periodical Abstracts Scientific No 71		RESTRICTED
USSR/Medicine - Parasiticoles Chemistry - DDT	Mar 1948	USSR/Metals Magnitite Mining Methods	May 1948
"DDT," A. P., 2 pp		"Kachkanar Deposits of Titaniferous Magnitite Ore," Z. V. Rupasova, Geol, 4 pp	
"Veterinariya" No 3		"Gorn Zhur" No 5	
A general article on DDT--composition, history, preparations, and use.		This deposit, 200 meters in width, is of great importance to ferrous metallurgy of Urals. Survey work, started in 1946, has resulted in sufficient data to draw conclusions regarding industrial value of deposits, as well as most efficient methods for working them.	
FDB	71T80	FDB	71T81
USSR/Metals Steel Castings Steel Ingots	May 1948	USSR/Metal Steel - Heat Treatment Steel - Electric Furnace Process	May 1948
"Casting of 230-Ton Ingots," M. I. Yakhnenko, Engr, NKMZ imeni Stalin, 4 1/4 pp		"Influence of High-Speed Electric Heating for Tempering on the Toughness of Construction Steel," R. M. Lerinman, Engr; V. D. Sadovskiy, Dr Tech Sci, Inst of Phys of Metals UFAN, 9 pp	
"Stal'" No 5		"Stal'" No 5	
Special technological conditions had to be arranged prior to casting steel in 230-ton ingots. This was necessary to exclude as much foreign material as possible. Casting of large ingots was accomplished by means of an uninterrupted flow of molten metal, thus assuring good compactness.		Use of an electrode for heating greatly reduces time necessary for heat treatment and at same time increases impact strength of structural iron. Circuits and performance of new system.	
FDB	71T82	FDB	71T83
USSR/Metals Steel, Stainless Steel, Corrosion Resistant	May 1948	USSR/Metals Metallurgy, Ferrous Smelting	May 1948
"Stainless Steel Type 18-8 With Titanium, Niobium, and Molybdenium," M. I. Vinograd, Engr, ElektroStal' Works, 7 pp		"Factors for Speeding-Up Open-Hearth Smelting," Docent N. G. Butylev, Magnitogorsk Mining Metallurgical Inst, 6 1/2 pp	
"Stal'" No 5		"Stal'" No 5	
Subject steel has high resistance to intercrystalline corrosion. Niobium lowers plasticity of alloy. An increase of nickel content lowers amount of alpha-stage.		Rapid formation of active liquid slag with high iron oxide content speeds up oxidizing processes, facilitates final separation of slag, greatly decreases time necessary for smelting with a resultant increase in efficiency of furnace.	
FDB	71T84	FDB	71T85
USSR/Metals Metallurgy, Ferrous Efficiency, Industrial	May 1948	USSR/Minerals Coal Ore Dressing	May 1948
"For Further Increase of the Work Output in Ferrous Metallurgy" 2 pp		"Estimate of the Concentration of Coal," I. Ya. Fomin, Cand Tech Sci, MekhanObr, 7 1/2 pp	
"Stal'" No 5		"Stal'" No 5	
Soviet metallurgy is complying with principle of fulfilling present Five-Year Plan in four years. Last year total production of metallurgical industries hit 101%. Plans for first quarter of 1948 have already been exceeded. However, labor appears to be great stumbling block in path of successful production. Presents methods for overcoming this deficiency.		Recommends use of an absolute index for coal concentrate, based on theoretical index of concentration. Curves showing distribution of fractions with similar specific weights between products of dressing. Numerous graphs.	
FDB	71T86	FDB	71T87

RESTRICTED	FDB Periodicals Abstracts Scientific No 71	RESTRICTED
USSR/Minerals Coal Ore Dressing "Dressing of Coking Coal in the USSR and the Method for Estimating the Concentration of Coal," V. Ya. Toporkov, Engr, Ukrainian Sci Res Coal Chem Inst, 9 1/2 pp "Stal'" No 5 Establishes a method for evaluating in advance results of dressing coking coals. States that recommended method is particularly valuable for determining degree of difficulty encountered during dressing process. FDB 71T88	USSR/Minerals Coal Ore Dressing "Determination of the Concentration of Coking Coal," Docent L. I. Ulitskiy, TsNIICHM, 5 pp "Stal'" No 5 A check of intermediary products is a reliable method for determining concentrate of coal. Ash content and specific loss of organic matter in coal is another method for checking concentrate of coal. This method permits determination of degree of difficulty in dressing coal, amount of ash content in coke, and losses of pure coal during dressing. FDB 71T89	USSR/Mineral May 1948
USSR/Mining Excavating Machinery "Disc Friction Clutches in Excavators," N. I. Kachura, Engr, 1 p "Ogneupory" Vol XIII, No 5 Certain excavators are fitted with friction clutches having ferodo linings. These have proved unreliable, due to rapid wear of ferodo, and Voronezh Mining Administration has replaced them by disc clutches. One of these, a sketch of which is given, has been in service for nearly a year without refitting. Wider employment of such clutches is recommended, especially in view of acute shortage of ferodo. FDB 71T90	USSR/Minerals Refractory Materials Machines, Grinding "The Question of Design of Dinas Plants," B. N. Vovoevodin, Engr, 2 pp "Ogneupory" Vol XIII, No 5 Stresses points to watch in dinas plant layout, e.g., washing quartzite before crushing, reducing dust formation to avoid silicosis, best way of adding lime, handling methods, etc. FDB 71T91	USSR/Mining May 1948
USSR/Minerals Refractory Materials Open-Hearth Furnaces "The Problems of Wear of Dinas in the Cupola of an Open-Hearth Furnace," B. A. Bron, Cand Tech Sci, 10 pp "Ogneupory" Vol XIII, No 5 Method of investigation adopted is described and illustrated by analysis tables and photographs. For improved resistance to wear author recommends small grained dinas of low specific gravity. Siliceous bonding effects no improvement in basic furnaces; its trial in acid furnaces would be of interest. Type of quartzite has a considerable influence on quality of FDB 71T92	USSR/Minerals Clays Refractory Minerals "Effect of the Granular Composition of Dinas Paste on Its Solidity," I. S. Kaynarskiy, Dr Tech Sci, S. L. Lesnichenko, 8 pp "Ogneupory" Vol XIII, No 4 Sets forth results of research on influence of quantity and proportion of various constituents of dinas paste on solidity of product. Tables and graphs of results are shown, from which author concludes that grain size is not important factor, same porosity can be obtained by using 2 mm or 5 mm FDB 71T93	USSR/Minerals May 1948
USSR/Minerals (Contd) May 1948 dinas; in particular, Al ₂ O ₃ content should not exceed specified limit. FDB 71T92	USSR/Minerals (Contd) Apr 1948 grains. However, proportion of small grains (less than .088 mm) has considerable influence on clinker resistance. FDB 71T93	USSR/Minerals (Contd) May 1948

RESTRICTED		FDB Periodical Abstracts Scientific No 71		RESTRICTED	
USSR/Minerals Refractory Materials	Apr 1948	USSR/Minerals Refractory Materials Open-Hearth Furnaces	Apr 1948		
<p>"The Technical Testing of Refractory Materials," Prof E. K. Keler, Dr Tech Sci, 4 pp</p> <p>"Ogneupory" Vol XIII, No 4</p> <p>After discussing technique of testing in general terms, author regrets that existing tests are not as yet widely applied in manufacture of refractory materials. This state of affairs must be remedied. At the same time, new testing methods, corresponding with conditions of service, must be evolved in laboratory.</p>		<p>"Two Cases of Breakdown of the Bottoms of Basic Open-Hearth Furnaces," P. S. Manykin, Dr Tech Sci, 3 pp</p> <p>"Ogneupory" Vol XIII, No 4</p> <p>Bottom of a basic open-hearth furnace should last 10-20 years. Strict attention must therefore be paid to any signs of rapid wear. In first case, furnace had dealt with 706 charges averaging 15.3 hours each. Analysis and investigation of brickwork is described. Damage was attributed to an increase</p>			
FDB	71T94	FDB	71T95		
USSR/Minerals Refractory Materials Furnaces, Electric	Apr 1948	USSR/Minerals (Contd)	Apr 1948		
<p>"Production of Dinas for the Crowns of Electric Furnaces of the Berkh-Isetskiy Plant," A. A. Berezhnaya, A. G. Prokop'yeva, 3 pp</p> <p>"Ogneupory" Vol XIII, No 4</p> <p>Raw material is quartzite from mountain of Kararel'na. Manufacture of dinas is described in detail. Quality of product is still unsatisfactory.</p>		<p>in brick size due to water reacting with magnesium oxide and forming brucite. This was confirmed by foreman, who recalled that lining bricks had got damp during transport and arrived frozen together. In second case, trouble was due to dolomite reacting with acid iron slag to form crystals of γ-Ca₂SiO₄.</p>			
FDB	71T96	FDB	71T95		
USSR/Mines Mining Methods Mining Equipment	May 1948	USSR/Mines Mining Equipment	May 1948		
<p>"The Physicomathematic Properties of Varieties of Roofing of the Dzhezkazgan Deposits," P. N. Torskiy, Cand Tech Sci, M. V. Guminskiy, 2½ pp</p> <p>"Gorn Zhur" No 5</p> <p>Brief physical and mathematical characteristics of types of roofing and methods in which data obtained can be used to increase yield of pillars by some 40%.</p>		<p>"Selection of Standard Wagons for Underground Working in the Mining Industry," V. V. Vladimirov, 3 pp</p> <p>"Gorn Zhur" No 5</p> <p>Describes characteristics of some present-day wagons and methods in which they are utilized. Discusses closed wagonettes (glukhiye), dump cars, and self-loading cars.</p>			
FDB	71T97	FDB	71T98		
USSR/Mines Mining Methods	May 1948	USSR/Mines Mining Methods Ore Deposits	May 1948		
<p>"New System of Mining in Dzhezkazgan," S. G. Borisenko, Mining Engr, 4 pp</p> <p>"Gorn Zhur" No 5</p> <p>Description of an overhead method of mining with frequent storing of ore, and underhand stoping with regularly formed steps and zigzag construction of tunnel facing. Diagrams of each of described methods.</p>		<p>"Cutting Supporting Pillars in the Mines of Dzhezkazgan," O. A. Baykonurov, Mining Engr, 4½ pp</p> <p>"Gorn Zhur" No 5</p> <p>Usually in cutting supporting pillars it has been found that resulting ore output is much less than theoretical. Much of difference is due to incorrect estimation of size of pillars. Experience has shown that at Dzhezkazgan mines some 5% of total ore is located in various supporting pillars and walls. Suggests methods for making full use of ore reserves.</p>			
FDB	71T99	FDB	71T100		

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FDB Periodical Abstracts Scientific No 71

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USSR/Mining

May 1948

Mining Equipment
Engineers, Electrical

"The Expedience of Training the Mining Electromechanic in Mining Colleges and Technical Schools," Ye. A. Kandel', Chief Energetics Engr, Vysokogorskiy Ore Adm, 1 p

"Gorn Zhur" No 5

Short letter urging greater adoption of "on the job training" as well as larger attendance at qualified institutions with object of obtaining more mining electrical engineers. Cites success achieved at Nizhne-Tagil technical education system.

FDB

71T101

USSR/Mining Methods

May 1948

Mining Equipment

"Books and Articles on Mining in the Fourth Quarter of 1947," O. G. Bekker, Tech Editor, 4 1/2 pp

"Gorn Zhur" No 5

List of articles and books published on geology, exploitation of ore deposits, methods for supporting mine shafts and tunnels, methods for drilling and blasting, mechanization of mining operations, surveying and testing of ore and metals, methods for hoisting and transporting ore, questions of ventilation and illumination of tunnels and shafts, and problems of dressing ores.

FDB

71T102

USSR/Mining

May 1948

Mining Equipment
Mining Methods

"Soviet Works on Mining Bibliography in 1941-1947," Ye. P. Shevchenko, Mining Engr, 1 1/2 pp

"Gorn Zhur" No 5

A general review of some of more outstanding articles on mining and mining techniques which have been published by various authors during period 1941 to 1947.

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71T103

List of Abbreviations
used in FDB Periodical Abstracts

ID Intelligence Division Library
AMC Air Documents Division, Air Materiel Command
ST Reference Division, State Department
BM Bureau of Mines, Department of Interior
BS National Bureau of Standards
SI Smithsonian Institution
LC Library of Congress
FDB Foreign Documents Branch, CIA
COM Department of Commerce
AF A-2 Library, USAF

List of Abbreviations
used in FDB Periodical Abstracts

ID Intelligence Division Library
AMC Air Documents Division, Air Materiel Command
ST Reference Division, State Department
BM Bureau of Mines, Department of Interior
BS National Bureau of Standards
SI Smithsonian Institution
LC Library of Congress
FDB Foreign Documents Branch, CIA
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List of Abbreviations
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