PHASE I BOOK EXPLOITATION SOV/6103

Gerd, Mariya Aleksandrovna, and Nikolay Nikolayevich Gurovskiy

Pervyye kosmonavty i pervyye razvedchiki kosmosa (First Cosmonauts and First Explorers of Space). Moscow, Izd-vo AN SSSR, 1962. 196 p. illus., plates. (Seriya: Akademiya nauk SSSR. Nauchno-populyarnaya seriya)

Resp. Ed.: V. I. Yazdovskiy, Professor; Ed. of Publishing House: N. V. Yashkova; Tech. Ed.: A. P. Guseva.

PURPOSE: The book is intended for the general reader.

COVERAGE: The book deals with Soviet achievements in the space flight of animals and man.

TABLE OF CONTENTS [Summarized]: The book begins with a note from the editor and a foreword (pp. 3-12). The first and second parts of the book

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(pp. 13-122) contain information on the selection, preparation, training, and space flight of dogs. The third part (pp. 123-197) gives information on the selection and training of Soviet cosmonauts, and includes some scientific data obtained from the space flights of Gagarin and Titov.

AVAILABLE: Library of Congress

SUBJECT: Aerospace

AD/dk/jk
11-8-62

VOLYNKIN, Yu.M.; YAZDOVSKIY, V.I.; GENIN, A.M.; VASIL'YEV, P.V.; GYURDZHIAN, A.A.; GUROVSKIY, N.N.; GORBOV, F.D.; SERYAPIN, A.D.; BELAY, V.Ye.; BAYEVSKIY, R.M.; ALTUKHOV, G.V.; KOPANEV, V.I.; KAS'YAN, I.I.; YEGOROV, A.D.; SIL'VESTROV, M.M.; SIMPURA, S.F.; TERENT'YEV, V.G.; KRYLOV, Yu.V.; FOMIN, A.G.; USHAKOV, A.S.; DEGTYAREV, V.A.; VOLOVICH, V.G.; STEPANTSOV, V.I.; MYASNIKOV, V.I.; YAZDOVSKIY, V.I.; KASHIN, P.S., tekhn. red.

[First space flights of man; the scientific results of the medicobiological research conducted during the orbital flights of the spaceships "Vostok" and "Vostok-2"]Pervye kosmicheskie polety cheloveka; nauchny rezul'taty mediko-biologicheskikh issledovanii, provedennykh vo vremia orbital'nykh poletov korablei-sputnikov "Vostok" i "Vostok-2." Moskva, Izd-vo Akad. nauk SSSR, 1962. 202 p. (MIRA 15:11)
(SPACE MEDICINE) (SPACE FLIGHT TRAINING)

S/865/62/002/000/021/042
D405/D301

AUTHORS: Borshchevskiy, I.Ya., Belyakov, G.M., Gurovskiy, N.N., Kuznetsov, V.S. and Yuganov, Ye.M.

TITLE: Estimating the quality of speech reception and transmission under weightlessness conditions

SOURCE: Problemy kosmicheskoy biologii. v. 2. Ed. by N. Sisakyan and V. Yazdovskiy. Moscow, Izd-vo AN SSSR, 1962, 215-217

TEXT: The investigations were conducted during periods of weightlessness ranging from 30 to 40 seconds on aircraft following a parabolic course. Four pilots participated in the experiments; 28 speech records were made during 23 flights. Ultra-shortwave ground and air radiostations were used. A tape-recorder was connected to the output of the ground station receiver; it recorded the entire cycle of speech reception and transmission. The quality of the speech was determined from a standard sentence (of 5 words) with subsequent frequency-spectrum analysis. The relative quality was assess-

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ed with reference to the pertinent experimental data prior to and after weightlessness. Conclusions: Weightlessness does not appreciably affect the quality of reception of speech ground signals. The quality of speech transmitted under conditions of weightlessness differs somewhat from that transmitted under normal flight conditions: the pronunciation is somehow forced, with an increase in vowel intensity. The frequency spectrum of speech under weightlessness conditions is analogous to that under normal flight conditions; at frequencies of 100-500 and 1000-2000 cycles the spectral components show a relative increase of 2-4 and 2-6 db respectively. The quality of speech changes but insignificantly under weightlessness conditions; thus it should be possible in principle to maintain good communications under such conditions. Further studies of the physiological characteristics of speech are necessary, in particular under more prolonged weightlessness conditions. There are 2 figures.

GENIN, A., doktor biologicheskikh nauk; GUROVSKIY, N., kand.med.nauk

Why fighter pilots became the first astronauts? Av.i kosm. 44 no.2:39-41 '62. (MIRA 15:3)

(Astronauts)

GENIN, Abram Moiseyevich; GUROVSKIY, Nikolay Nikolayevich; YEMEL'YANOV, Mikhail Dmitriyevich; SAKSONOV, Pavel Petrovich; YAZDOVSKIY, Vladimir Ivanovich; NEYMAN, M.I., red.; [redacted], G.M., tekhn. red.

[Man in space] Chelovek v kosmose. Moskva, Medgiz, 1963. 159 p. (MIRA 17:3)

VOLYNKIN, Yu.M.; YAZDOVSKIY, V.I., prof.; GENIN, A.M.; GAZENKO, O.G.; GUROVSKIY, N.N.; YEMEL'YANOV, M.D.; MIKHAYLOVSKIY, G.P.; GORBOV, F.D.; SERYAPIN, A.D.; BAYEVSKIY, R.M.; ALTUKHOV, G.V.; KOPANEV, V.I.; KAS'YAN, I.I.; MYASNIKOV, V.I.; TERENT'YEV, V.G.; BRYANOV, I.I.; FEDOROV, Ye.A.; FOMIN, V.S.; ARUTYUNOV, G.A.; ANTIPOV, V.V.; KOTOVSKAYA, A.R.; KAKURIN, L.I.; TSELIKIN, Ye.Ye.; USHAKOV, A.S.; VOLOVICH, V.G.; SAKSONOV, P.P.; YEGOROV, A.D.; NEUMYVAKIN, I.P.; TALAPIN, V.F.; SISAKYAN, N.M., akademik, red.; KOLPAKOVA, Ye.A., red.izd-va; ASTAF'YEVA, G.A., tekhn.red.

[First group space flight; scientific results of medical and biological studies carried out during the group orbital flight of manned satellites "Vostok-3" and "Vostok-4] Pervyi gruppovoi kosmicheskii polet; nauchnye rezul'taty mediko-biologicheskikh issledovanii, provedennykh vo vremia gruppovogo orbital'nogo poleta korablei-sputnikov "Vostok-3" i "Voskot-4." Moskva, Izd-vo "Nauka," 1964. 153 p. (MIRA 17:3)

GUROVSKIY, N., kand. med. nauk; GERD, A., kand. biolog. nauk

"Lost weight". Kryl. rod. 15 no.9:22-23 S '64. (MIRA 18:1)

L 27226-66 EEC(k)-2/ENT(1)/EWA(d)/FSS-2 IT/DD/RD/GW

ACC NR: AM6003010 Monograph UR/

Gerd, Mariya Aleksandrovna; Gurovskiy, Nikolay Nikolayevich

First cosmonauts and first explorers of space (Pervyye kosmonavty i pervyye razvedchiki kosmosa) 2d ed., enl. Moscow, Izd-vo "Nauka," 1965. 237 p. 40,000 copies printed.

Series note: Akademiya nauk SSSR. Nauchno-populyarnaya seriya

TOPIC TAGS: space program, bioastronautics, space biology, space biologic experiment, manned space flight, space physiology, cosmonaut training

PURPOSE AND COVERAGE: This book is intended to inform the reader about biomedical experiments conducted by the Soviet space scientists. It describes, in a popular form, all basic experiments conducted on animals in order to prepare them for space flight. The objective of the research was to provide cosmonauts with the most suitable space-flight environment and to obtain data on their physiological functions and psychological reactions. Selection criteria and training procedures designed for the cosmonauts are considered, and some biomedical data from the Vostok and Voskhod-1 space flights are evaluated.

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SUB CODE: 06/ SUBM DATE: 06Jul65

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VOLYNKIN, Yu.M.; ARUTYUNOV, G.A.; ANTIPOV, V.V.; ALTUKHOV, G.V.; BAYEVSKIY, R.M.; BELAY, V.Ye.; BUYANOV, P.V.; BRYANOV, I.I.; VASIL'YEV, P.V.; VOLOVICH, V.G.; GAGARIN, Yu.A.; GENIN, A.M.; GORBOV, F.D.; GORSHKOV, A.I.; GUROVSKIY, N.N.; YESHANOV, N.Kh.; YEGOROV, A.D.; KARPOV, Ye.A.; KOVALEV, V.V.; KOLOSOV, I.A.; KORESHKOV, A.A.; KAS'YAN, I.I.; KOTOVSKAYA, A.R.; KALIBERDIN, G.V.; KOPANEV, V.I.; KUZ'MINOV, A.P.; KAKURIN, L.I ; KUDROVA, R.V.; LEBEDEV, V.I.; LEBEDEV, A.A.; LOBZIN, P.P.; MAKSIMOV, D.G.; MYASNIKOV, V.I.; MALYSHKIN, Ye.G.; NEUMYVAKIN, I.P.; ONISHCHENKO, V.F.; POPOV, I.G.; PORUCHIKOV, Ye.P.; SIL'VESTROV, M.M.; SERYAPIN, A.D.; SAKSONOV, P.P.; TERENT'YEV, V.G.; USHAKOV, A.S.; UDALOV, Yu.F.; FOMIN, V.S.; FOMIN, A.G.; KHLEBNIKOV, G.F.; YUGANOV, Ye.M.; YAZDOVSKIY, V.I.; KRICHAGIN, V.I.; AKULINICHEV, I.T.; SAVINICH, F.K.; STMPURA, S.F.; VOSKRESENSKIY, O.G.; GAZENKO, O.G., **SISAKYAN, N.M.**, akademik, red.

[Second group space flight and some results of the Soviet astronauts' flights on "Vostok" ships; scientific results of medical and biological research conducted during the second group space flight] Vtoroi gruppovoi kosmicheskii polet i nekotorye itogi poletov sovetskikh kosmonavtov na korabliakh "Vostok"; nauchnye rezul'taty medikobiologicheskikh issledovanii, provedennykh vo vremia vtorogo gruppovogo kosmicheskogo poleta. Moskva, Nauka, 1965. 277 p. (MIRA 18:6)

L 34909-65 EWG(j)/EWG(r)/EWT(l)/FSS-2/FS(v)-3/EWG(v)/EWG(a)/EWG(c) DD
ACCESSION NR: AP5008725 S/0209/65/000/003/0034/0036

AUTHOR: Gurovskiy, N. (Candidate of medical sciences); Cherepakhin, M. (Candidate of medical sciences)

TITLE: In a flying laboratory

SOURCE: Aviatsiya i kosmonavtika, no. 3, 1965, 34-36

TOPIC TAGS: weightlessness, weightlessness training, training device, parabolic flight

ABSTRACT: The authors studied 25 healthy men aged 18—43 who experienced weightlessness and high G's in jet aircraft flying in Keplerian trajectories. The period of weightlessness in each case lasted 18—25 sec, followed by 2 G's for 5—10 sec. On the basis of the subjects personal notes, it was found that reactions to the first period of weightlessness varied greatly. The men were divided into three groups: those who experienced few changes, those who experienced positive emotional reactions, and those who exhibited significant changes in physiological functions and sharply lowered working ability. Of the 25 subjects, 15 experienced no significant psychological or physiological shifts from the flights, 4 experienced increased emotional tonus, and 6 showed sharply negative psychological and physiological reac-

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tions. Subjects who had difficulty in the first flight suffered general upset. Some were extremely pale, perspired profusely, and were disoriented during floating. In subsequent flights, this group did not react sharply to weightlessness and considered the phenomenon as a negative condition. Another subjective feature of weightlessness was the sensation that time seemed to pass very slowly. One subject commented that while in a state of weightlessness, he felt helpless and alarmed; it seemed to him that the floating situation would last forever, even though he was in a zero-G state for only 10 sec. Another subject commented that the first experience with weightlessness was not frightening since he had experienced the sensation in earlier missions. However, he felt that his ability to concentrate was lowered. In general, as the number of exposures to zero-G increased, the reactions by all subjects moved closer to identity. The process of adapting to weightlessness was more pronounced in people who had reacted negatively to the first flight. Their reactions were characterized by nausea and, in some cases, vomiting. Space orientation was disrupted for the first 3—5 sec while coordination of movements was restored only after 25 sec. The severity of these symptoms, their duration, and interrelation depended on the training of the particular subject, the time of day of the flight, and the intervals between flights. A logged example of the process of adaptation to weightlessness is given by the coauthor, who had flown 8 parabolic missions in 1961. His first parabolic flight produced "graying-out", for 2—3 sec, so much so that he could not

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orient himself while floating. Later, notwithstanding the long intervals between flights, disorders of this sort did not occur. Only when the shift from weightlessness to G force took place was there a sinking sensation in the heart area and an altered respiratory rhythm. The same adaptation processes were observed even in subjects who had experienced initial negative reactions to zero G. Negative subjective reactions to parabolic flight always coincided with vegetative reactions in the subjects and, consequently, appeared to be psychological precursors to the vegetative reactions. These and new data from the Voskhod flight are the bases for future studies of the effects of weightlessness on man. [CD]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: PM

NO REF SOV:: 000 OTHER: 000 ATD PRESS: 3212

Card 3/3

L 14267-66 EWT(1)/FS(v)-3 SCTB DD/RD

ACC NR: AT6003834 SOURCE CODE: UR/2865/65/004/000/0003/0009

AUTHOR: Gurovskiy, N. N.; Denisov, V. G.; Kuz'minov, A. P.; Sil'vestrov, M. M.

ORG: none

TITLE: Training devices for preparing cosmonauts for occupational activity in controlling spacecraft and their systems

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 3-9

TOPIC TAGS: cosmonaut training, space flight simulation, manned spacecraft, space physiology, spacecraft navigation, spacecraft control, space environment simulation, training equipment, spacecraft capsule

ABSTRACT: Training craft such as are used for actual flight schooling of aviators do not exist for training cosmonauts. Reliance must therefore be place on ground trainers, which must be able to simulate the conditions and factors of normal and emergency spaceflight situations and model the operation of spacecraft systems and the dynamics of flight.

A great variety of training devices are used. The general characteristics of such devices must be based on time and motion studies of cosmonaut

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activities, operation of various systems, definition of training objectives, and analysis of training programs and effectiveness of training devices.

All training devices fall into one of three groups: 1) those for physiological training to increase resistance or adaptation to extremal flight factors; 2) those for occupational training in flight operations; and 3) those which combine physiological with occupational training. The present article discusses various types of devices designed to provide training in spacecraft piloting and systems control.

Depending on the number of systems, flight stages, and flight tasks to be modeled, trainers may be classed as 1) universal, 2) complex, 3) specialized, or 4) functional.

Universal trainers (which may be dynamic or static) are complex devices which may be adjusted to simulate the characteristics of existing or projected spacecraft. The most important elements of a universal trainer are a cabin mockup, computer, instructor's control panel, night sky and earth simulators, program device, and recording apparatus. The cabin mockup may be designed to simulate flight conditions (temperature, noise, vibration, atmospheric gas composition, pressure, humidity, and convection) on the spacecraft.

Complex trainers are designed to train all crew members in the details of their activities on a given type of ship at all stages of flight. The complex trainer used for Vostok pilots includes training for flight and for using systems monitoring manual attitude control, for Earth-ship communications, systems control, manual deorbiting procedures, and for various types of emergencies. All on-board equipment was simulated; the mockup cabin was identical with that of the actual ship. Such details as the alternation of day and night in orbital flight were reproduced. Training problems were imposed from the instructor's control panel outside the trainer. All phases of normal flight and emergencies in every flight stage were simulated on the Vostok trainer. The construction of complex trainers for multiman interplanetary and orbital spacecraft crews and pilots of orbital aircraft (rocket planes) is envisioned.

Specialized trainers are those designed to provide training in specific flight tasks or activities or the use of control equipment for specific maneuvers. Examples are devices for training cosmonauts in attitude control, navigation, changing orbits, rendezvous and docking operations, assembly and repair of space stations or spacecraft while in orbit, getting an inter-

planetary vessel under way from a space station, and so on. Specialized trainers model only those systems and information sources entering into the performance of a specific flight task. A specialized trainer was used to prepare the crew of Voskhod-2 for EVA. Consisting of a cabin mockup with an airlock, which was placed in a vacuum chamber, it enabled Leonov and Belyayev to rehearse every detail of the EVA until it was second nature. Another example of a specialized trainer is the airlock flown on parabolic trajectories to provide training in egress and ingress procedures during weightlessness. Training devices carried on long spaceflights to keep space pilots from getting rusty in landing procedures are also classed as specialized trainers. On-board trainers are designed to make use of existing indicators, signals, manual controls, and the on-board computer.

Functional trainers are designed to provide practice in motor habits or other functional capacities utilized during more complex flight operations, e.g., tracking, concentration, perception, and other basic skills. It models only what is required to increase human functional capacity in one or another respect. Functional trainers are simple, cheap, and efficient. They are, therefore, well suited to types of training requiring many hours to establish

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ACC NR: AT6003834

or perfect the required habit patterns.

Theoretically it would be possible to build a combined trainer which would combine all the modeling capabilities of universal, complex, and specialized trainers, but this would be a prohibitively expensive proposition, and at present it is considered neither desirable nor necessary to do so. Universal-type trainers, which also attempt to model too wide a variety of characteristics and conditions, are unwieldy and inefficient.

The authors conclude that since cosmonauts are trained for specific ships and specific tasks on a given ship, three types of trainers are necessary and sufficient: complex, specialized, and functional. [ATD PRESS: 4091-F]

SUB CODE: 05, 22 / SUBM DATE: none / OTH REF: 001

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Card 5/5

L 14268-66 FSS-2/EWT(1)/FS(v)-3 DD/RD

ACC NR: AT6003835 SOURCE CODE: UR/2865/65/004/000/0010/0016

AUTHOR: Gurovskiy, N. N.; Yemel'yanov, M. D.; Karpov, Ye. A.

ORG: none

TITLE: Basic principles of special cosmonaut training

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 10-16

TOPIC TAGS: cosmonaut training, vestibular training, manned space flight, centrifuge training, space physiology, space psychology, space flight simulation, spacecraft capsule, flight disorientation, physical fitness

ABSTRACT: The individual characteristics of healthy humans are not stable; external and internal stimuli may produce drastic nonpathological deviations from physiological norms. Resistance to external stress, however, may be greatly increased by training.

Special cosmonaut training is based on analysis of those factors which most substantially affect the cosmonaut and his activities in flight. Flight factors fall into four groups: 1) extremal environmental factors (vacuum,

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ionizing radiation, low temperatures); 2) dynamic flight factors (noise, vibration, acceleration, weightlessness, prolonged vestibular stimulation); 3) ship environmental factors (cabin microclimate, restricted movement, special foods and clothing, time-deficit working conditions, emotional tension); and 4) factors associated with landing (especially when the ejection-parachute descent method is used). Since protection against extremal factors (group 1) is provided by the ship, it is with factors of the last three groups (2, 3, and 4) that the special cosmonaut training program is concerned.

The aims of special cosmonaut training, which simulates on the ground the conditions of flight, are twofold: 1) to provide a basis for the selection or elimination of cosmonaut candidates, and 2) to increase the resistance of the candidates selected to the unavoidable stresses of actual flight.

Since certain factors (prolonged weightlessness, the unique psychological "atmosphere" of flight) cannot be reproduced on Earth, the training program must include a number of nonspecific exercises designed to increase the general resistance of the organism. Special methods are used to increase tolerance to psychological stresses and predict behavior of candidates in flight.

In addition, the training program includes exercises designed to develop motor habits and skills needed in flight and to train the cosmonaut in the performance of actual flight operations.

The methods discussed are: 1) parabolic airplane flights, 2) isolation in an echoless chamber, 3) cabin mockup flight simulation, 4) thermochamber training, 5) centrifuge training, and 6) special physical and vestibular training.

The brief duration of the weightlessness created by parabolic flights limits their usefulness for training, since adaptation to brief periods of weightlessness does not necessarily help an individual withstand the prolonged weightlessness of spaceflight.

Prolonged isolation in an echoless chamber with deprivation of external information is a useful tool for neuropsychiatric studies of individual ability to perform assigned tasks under novel conditions, circadian physiological rhythms, the ability (with sudden stimuli) to pass quickly from the sleeping to the waking state and back, and memory, attention, and so forth.

Even though space cabins are air-conditioned, thermochamber training is useful in discovering hidden pathologies and studying individual stress reactions.

Centrifuge training is especially important, both for familiarization and for increasing resistance to spaceflight accelerations. The most careful monitoring is required during this training, since existing information on the cumulative effects of acceleration is contradictory and uncertain. The cosmonauts themselves are emphatic about the usefulness and importance of this type of training.

Mockup training is all the more important in view of the fact that training flights with an experienced instructor, such as are used in training drivers or pilots, cannot be conducted for space crews. All training must thus be accomplished on the ground.

A program of special vestibular training was instituted after the flight of G. S. Titov, who experienced some autonomic maladjustments as the result of vestibular stimulation in flight. This training is directed at 1) increasing vestibular resistance to a wide variety of external factors and 2) reinforcing the functional interaction of the vestibular, visual, and

kinesthetic analyzers in order to eliminate postural-spatial illusions under conditions of altered gravity and to increase inhibition of the vestibular function. This program must be custom-tailored to compensate the individual vestibular weaknesses of each cosmonaut, which are identified beforehand by determining semicircular canal and otolith thresholds for adequate and inadequate stimulation.

All special training must be supplemented by general physical training designed to improve the cosmonaut's physical condition and perfect the visual-motor coordination required by spaceflight.

The total program must be adjusted to the needs of the individual cosmonaut. The sequence, alternation, and spacing of the various kinds of special training are important here. [ATD PRESS: 4091-F]

SUB CODE: 05, 06 / SUBM DATE: none

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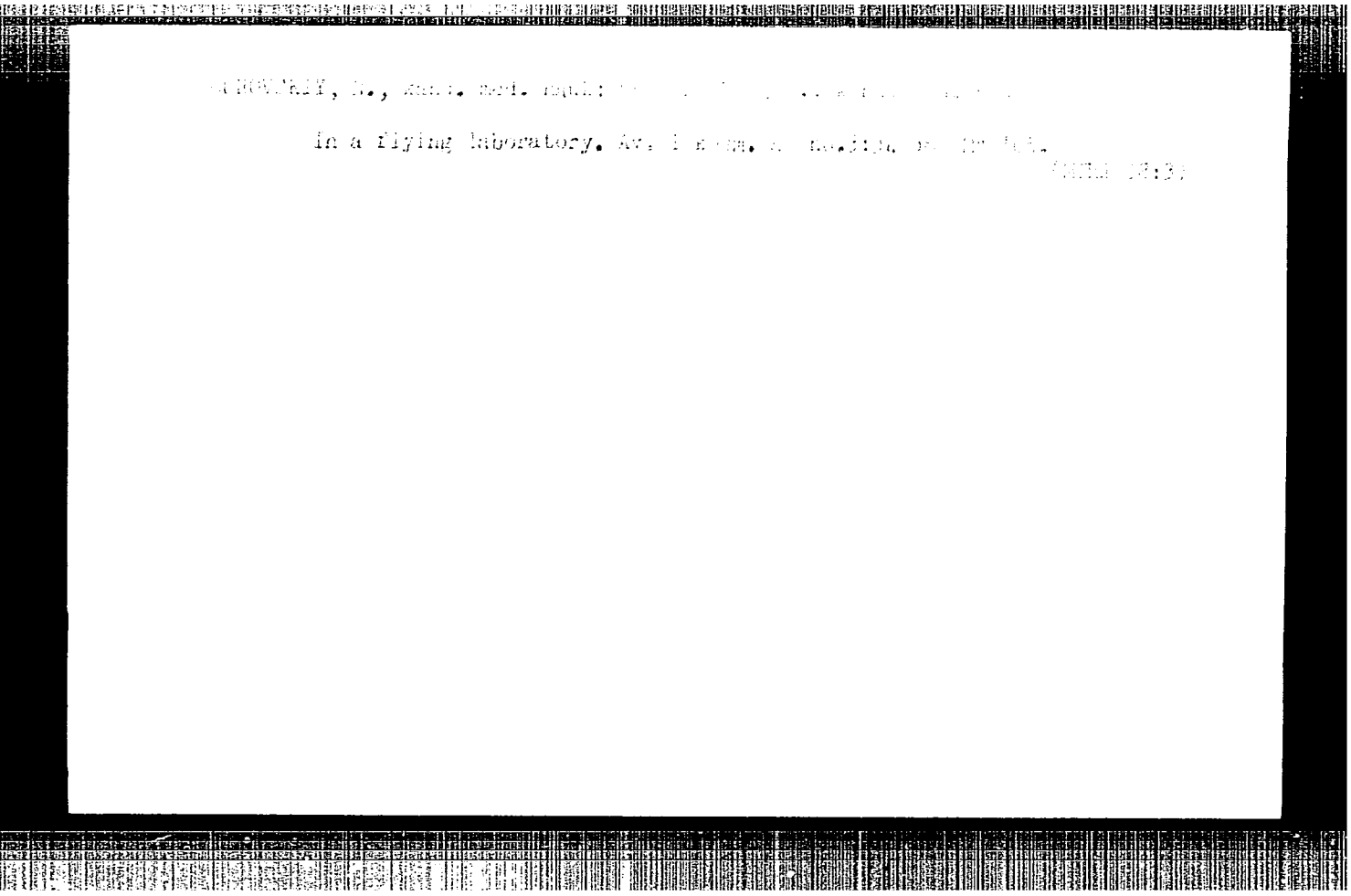

in a flying laboratory.

L 26088-66 EWT(1)/EWA(d)/FSS-2 SCTB TT/DD/RD/GW

ACC NR: AP6014999 SOURCE CODE: UR/0209/66/000/005/0032/0034

AUTHOR: Gurovskiy, N. (Candidate of medical sciences) 14

ORG: none B

TITLE: The "biosatellite" is making studies

SOURCE: Aviatsiya i kosmonavtika, no. 5, 1966, 32-34

TOPIC TAGS: biosatellite, animal flight, animal experiment/Kosmos 110

ABSTRACT: The alimentation, life support, and body waste elimination systems used on Kosmos-110 are described briefly and compared with those used on earlier animal flights. Earlier alimentation systems (which consisted of rations on a conveyor) were unreliable, in that the amount of food ingested by the animal could not be precisely controlled, as the animal ate only the amount it desired. The animals on Kosmos-110 were fed precise amounts of food by stomach tube. The air regeneration system was similar to those used on earlier flights. Body wastes on earlier flights were dealt with by enclosing the animal's hindquarters in a special rubber coverall connected to a sanitation tank. This coverall, which impeded the animal's movements, was eliminated on Kosmos-110, and the problem of getting liquid and solid body wastes into the sanitation tank under conditions of weightlessness was solved by routing the flow of air through the cabin so that it was removed by the waste collector behind the animals. Convection was maintained by an exhaust fan located at the

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end of the sanitation tract. Periodically a similarly located booster fan was turned on briefly to pull in small droplets and particles of excreta which had escaped the waste collector. (For a detailed description of the experimental equipment and goals, see the Foreign Science Bulletin, v. 2, no. 4, April 1966, 18-26.) [DP]

SUB CODE: 06,22/ SUBM DATE: none/ ATD PRESS: 4254

Card 2/2 CC

L 26155-66 EEC(k)-2/EWT(1)/EWA(d)/FSS-2 SCTB IJP(c)/JD/GW

ACC NR: AN6014086 (N) SOURCE CODE: UR/9008/66/000/112/0004/0004

AUTHOR: Pravetskiy, V. N.; Gurovskiy, N. N.; Yegorov, B. B.; Kiselev, A. A.

ORG: none

TITLE: An important stage in space medicine. Results of the experiment with sputnik Kosmos-110

SOURCE: Krasnaya vzezda, 17 May 66, p. 4. col. 1-5

TOPIC TAGS: weightlessness, space medicine, space flight, spacecraft, dog/ Kosmos-110 spacecraft

ABSTRACT: Clinical data on the dogs Vgolek and Veterok, following an extended space flight on Kosmos-110, are presented. The aim of the experiment was to determine the effect of extended periods of weightlessness on living organisms. Immediately following the flight, both test animals registered a decrease in muscular volume and a loss of coordination. In the first few days following the flight, an upsurge in the calcium content of the urine and blood was observed. Disturbance of the calcium regime during extended space flight is earmarked for further study. In both animals, gastrointestinal disturbances vanished after 6-8 days. The data point to the adaptation of the animals' cardiovascular systems to the state of weightlessness while the return to the earth's gravitational field served to further aggravate certain disruptions in their bodily functions, the animals ultimately returned to normal. The authors con-

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clude that the question whether a man or animal can return to normal (without great difficulty) following extremely long periods of weightlessness remains unanswered.

SUB CODE: 06, 22/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 000

Card 2/2

LYUL'YEV, B.V., kandidat tekhnicheskikh nauk, dotsent, GUROVSKIY, N.Ya., inzhener; ERTE, I.A., inzhener.

Review of I.LA. IUkhim's and N.D.Zolotnitskii's books on safety engineering ("Safety measures in carpentry, stonemasonry and construction work." "Safety measures in pipe laying and plumbing." "Safety measures in mechanical woodworking, mechanical metalworking and forge work in building." I.IA. IUkhim. "Safety engineering in construction work." N.D.Zolotnitskii. Reviewed by B.V.Liul'ev, N.LA.Gurovskii, I.A.Erte). Gor.khoz.Mosk. 24 no.2:44-46 F '50. (MLRA 7:11)
(Building--Safety measures)

GUROVSKIY, M.Ya.; PROSTOSERDOV, A.P., redaktor izdatel'stva; STEPANOVA, E.S., tekhnicheskiy redaktor

[Safety manual for gas welders and metal cutters] Pamiatka po tekhnike bezopasnosti dlia gazosvarshchika i rezchika metalla. Moskva, Gos.izd-vo lit-ry po stroit. i arkhit., 1957. 15 p. (MLRA 10:10)

(Gas welding and cutting--Safety measures)

VOSTROV, V.M., inzh.; GUROVSKIY, N.Ya., nauchnyy red.; PONOMAREV, P.Z., red. izd-va; ABRAMOVA, V.M., tekhn. red.

[Pamphlet on safety measures for the asphalt concrete worker] Pamiatka po tekhnike bezopasnosti dlia asfal'tonshchika. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 22 p. (MIRA 14:6)
(Asphalt concrete--Safety measures)

GUROVSKIY, N,Ya.; RYAZANTSEVA, L.I., red. izd-va; NAUMOVA, G.D., tekhn. red.

[Handbook on accident prevention for the pipelayer when installing outdoor pipelines]Pamiatka po tekhnike bezopasnosti dlia trubouklad chika pri montazhe truboprovodov naruzhnykh setei. 2., perer. i dop. izd. Moskva, Gosstroiizdat, 1962. 15 p. (MIRA 16:1)

(Pipelines--Safety measures)

GUROW, S.G.

Economic evaluation of mining from safety pillars. Wiadom gorn 13 no.11:406 N '62.

L 32267-65 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(w)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l) Pf-4 MJW/JD/HW

ACCESSION NR: AR4048242 S/0137/64/000/009/I052/I052

SOURCE: Ref. zh. Metallurgiya, Abs. 9I324

AUTHOR: Pilyushenko, V. L.; Kondrashov, A. I.; Tutov, I. Ye.; Savukov, V. P.; Gurozhiyenko, K. F.; Kamalov, V. Z.

TITLE: High strength steel for hydropresses

CITED SOURCE: Sb. Legirovaniye staley. Kiyev, Gostekhizdat USSR, 1963, 20-32

TOPIC TAGS: high strength metal, steel, hydropress, heat treatment, metal mechanical property/ steel KhMFN, steel 25Kh2MFN, steel 5KhNM

TRANSLATION: An investigation was made of steel KhMFN, alloyed with additions of aluminum (0.6%), boron (0.0015-0.0085%), tungsten (0.7-1.25%), sulfur (0.015-0.040%), silicon (0.3-2.1%), manganese (0.4-1.4%). Forged billets were heat treated under two conditions: 1) normalization from temperature Ac3+50°, cooling at the rate of 100°/hr to 300°, and 2) quenching in oil from Ac3+50°. Tempering was performed for 5 hrs at 500, 550, 600, and 650°. The steel was

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evaluated by mechanical tests at 20, 350, and 450°. Steel 25Kh2MFN has the highest strength and ductility. A model of a hydropress container ring (diameter 1220/1850 mm, height 880 mm) prepared from this steel has, in an annealed state, sigma$_s$ 54.2-57.4 kg/mm2, sigma$_b$ 70.5-75.5 kg/mm2, delta 19.4-21.6%, psi 56.5-59.8%, a$_k$ 9.7-14.4 kgm/cm2, H_B 217-228. The critical points of the steel are Ac_1=780°, Ac_3=830°, Ar_3=470°, Ar_1=340°. Optimum temperature of austenization is 900°. Mechanical properties do not change in the cross sections of either annealed or normalized states from 900° (sigma$_s$ 115 kg/mm2, sigma$_b$ 133-147 kg/mm2). Additional tempering at 450° for 5 hrs increases ductility. Optimal tempering temperature (after normalization and quenching with tempering at 450°), ensuring the best combination of ductility and strength, is at 540-560°. Steel 25Kh2MFN has high hardenability. The properties of steel 25Kh2MFN are compared with those of steel 5KhNM. The resistance of steel 25Kh2MFN to tempering is determined: a) by carbide dispersion, and b) by alloying with ferrite of chromium, molybdenum and vanadium, regardless of tempering temperature. Agint the steel at 400-450° (500 and 1000 hrs) does not lower mechanical properties. Tests were performed on steel 25Kh2MFN for wear resistance, erosion resistance

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and stress-rupture strength under cyclic stress (4500, sigma 50-100 kg/mm^2). 8 tables. B. Samarin.

SUB CODE: MM ENCL: 00

Extrusion, container ring

Card 3/3

EPEL'BAUM, Kh.I.; GURSALYUK, V.G.; RAFIKOV, S.R.

Influence of the residues of thermal cracking on the viscous properties of lubricating oils. Izv.AN Kazakh.SSR.Ser.khim. no.1:95-106 '59. (MIRA 13:6)

(Lubrication and lubricants)

GURSHIY, I.O. [Hurzhii, I.O.], doktor istor.nauk; MAKARENKO, L.L.; ZHEVAKHOV, B.I.; DMITRIYENKO, M.F. [Dmytriienko, M.F.], zhurnalist

History of names. Nauka i zhyttia 12 no.1:17 Ja '63. (MIRA 16:3)

1. Chlen-korrespondent AN UkrSSR (for Gurzhiy). 2. Direktor Gosudarstvennyy istoricheskoy biblioteki UkrSSR (for Makarenko). 3. Glavnyy bibliotekar' Gosudarstvennoy istoricheskoy biblioteki UkrSSR (for Zhevakhov).
(Donets Basin—Names, Geographical)

GAL'PERIN, F.I., kand.tekhn.nauk; DUSHIN, B.M., inzh.; GURSHPON, I.B.

Stiff leather for welted and glued-on soles. Kozh.-obuv. prom. 2 no. 11:17-19 N '60. (MIRA 13:12)
(Shoe manufacture) (Leather)

GURSHPON, I.B., inzh.; MAKUKHA, V.I.

Problems in providing a practical assortment of sizes of footwear. Izv.vys.ucheb.zav.; tekh.leg.prom. no.2:58-66 '61. (MIRA 14:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti. Rekomendovana kafedroy tekhnologii obuvnogo proizvodstva Moskovskogo tekhnologicheskogo instituta legkoy promyshlennosti.

(Ukraine--Shoe manufacture)

BABAYEV, E.A., inzh.; FARNIYEVA, O.V., kand.tekhn.nauk; GURSHPON, I.B., inzh.; MAKUKHA, V.I., inzh.

Orthopedic footwear for school children. Nauch.-issl.trudy Ukr NIIKP no.13:156-164 '62. (MIRA 18:2)

GURSHTEYN, A.A., student

Some problems in estimating the accuracy of a series of measurements of equal precision. Trudy MIIGAIK no.33:99-111 '58.
(MIRA 12:8)

1.Geodezicheskiy fakul'tet Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii.
(Errors, Theory of)

GURSHTEYN, A.A., student IV kursa

Observations of artificial earth satellites. Trudy MIIGAIK no.40:103-113 '60. (MIRA 13:11)

1. Geodezicheskiy fakul'tet Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii i Studencheskoye nauchnoye obshchestvo togo-zhe instituta.
(Artificial satellites--Tracking)

30810
S/537/60/000/041/002/005
D034/D113

16.6200

AUTHORS: Solikhanovich, V.G., Candidate of Technical Sciences, Docent, and Gurshteyn, A.A., Engineer

TITLE: A new scheme for solving conditional equation systems

SOURCE: Moscow. Institut inzhenerov geodezii, aerofotos"yemki i kartografii, Trudy, no. 41, 1960, 19-27

TEXT: With reference to the Gaussian method of least squares, used for the adjustment of conditional measurements, the authors attempt to explain the principles of a new method of solving conditional equation systems, proposed by an Australian geodesist, Doctor Bogomil Tsvetkov. Tsvetkov's method is called "a system of solution without forming normal equations". Similarly to the Gaussian method, it is also an elimination method, in which, instead of unknowns, equations are to be eliminated. The orthogonalization process is, to a certain extent, similar to the solution process of normal equations; however, when applied to Tsvetkov's method, it contains some shortcomings and

X

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A new scheme for ...

advantages. Tsvetkov's method was once used by the Canadian geodetic service for the adjustment of a net containing 19 conditional equations. Unfortunately, no basic conclusions could be drawn from this particular application of the system. The system's advantages are as follows: it is simple, the operations are fully repeatable, the problem may be solved using several calculators, and the independence of operations offers possibilities for accelerating the computation process. An important feature of the system is acceleration of the process of preadjustment. Tsvetkov's method allows dependent equations to be found. Moreover, the order in which numbers of the scheme are introduced into the calculations, allows fewer errors to be accumulated than in the Gaussian scheme. The new scheme may be successfully used for calculations using computers. However, the amount of operations using Tsvetkov's method is double that used in the Gaussian method. A thorough analysis of Tsvetkov's method shows, that the increased number of operations does not affect the procedure. It must be noted, that the computation example shown in the article does not exhibit a typical characteristic of constructing a net. Another disadvantage is the insufficient checking ability

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A new scheme for ...

of the system, and the presence of certain operations which are not checked at all. It may be assumed that further practical use of the scheme will lead to the establishment of checking methods, which will prevent omissions and complicated recalculations. Apparently the method could be applied for adjustment of intermediate measurements. Academicians P.L. Chebyshev, A.M. Lyapunov, A.A. Markov, A.N. Kolmogorov and Pranis-Pranevich are mentioned in the article. There is 1 table and 7 references: 2 Soviet-bloc and 5 non-Soviet bloc. The four most recent references to English-language publications read as follows: Bogomil Tsvetkov, "Empire Survey Review", no. 102, April, 1956; id., no. 102, October 1956; id., no. 103, January 1957; id., no. 108, April, 1958.

ASSOCIATION: Kafedra geodezii Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii (Department of Geodesy of the Moscow Institute of Engineers of Geodesy, Aerial Photography and Cartography).

X

Card 3/3

GURSHTEYN, A.A.

Considering temperature effect in determining the screw-turn value of the eyepiece micrometer of the ZT-180 Zenith telescope by the method of wide scale pairs. Astron.zhur. 39 no.2:345-348 Mr-Ap '62. (MIRA 15:3)

1. Gosudarstvennyy astronomicheskiy institut im. P. K. Shternberga.
(Micrometer) (Telescope, Zenith)

GURSHTEYN, A. A.

Theory of wide scale pairs. Astron. zhur. 40 no.1:178-179 J-F '63. (MIRA 16:1)

1. Gosudarstvennyy astronomicheskiy institut im. P. K. Shternberga i Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii.

(Micrometer)

GURSHTEYN, Aleksandr Aronovich; BAGRATUNI, G.V., prof., red.; BRAZHNIKOV, V.I., red.izd-va; ROMANOVA, V.V., tekhn.red.

[Man measures the earth] Chelovek izmeriaet Zemliu. Pod red. G.V.Bagratuni. Moskva, Gosgeoltekhizdat, 1963. 35 p. (MIRA 16:12)

(Geodesy)

ACC NR: AP6022190 SOURCE CODE: UR/0026/66/000/006/0006/0018

AUTHOR: Lipskiy, Yu. N.; Gurshteyn, A. A.

ORG: State Astronomical Institute im. P. K. Shternberg, Moscow (Gosudarstvennyy astronomicheskiy institut)

TITLE: The space age and the exploration of the moon

SOURCE: Priroda, no. 6, 1966, 6-18

TOPIC TAGS: moon, space station, lunar surface, satellite photography, artificial satellite, /Ranger artificial satellite, Zond-3 artificial satellite, Luna-9 artificial satellite, Luna-10 artificial satellite

ABSTRACT: The author discusses lunar exploration and recent discoveries of lunar characteristics, presenting both US and Soviet achievements in this field with emphasis on those of the Soviet. General details on the launching and flight of the Soviet Luna-9 interplanetary automatic station are given. The discovery of the asymmetrical morphological structure of the lunar surface by Soviet photographs of the dark side of the moon is described in detail. The missions of the nine US Rangers and the flight of the Soviet Zond-3 are described. The discovery of

Card 1/2 UDC: 523.3.34.39

ACC NR: AP6022190

talassoids, unusual ring-shaped depressions on the back side of the moon is discussed, and the continental formation of the lunar surface is confirmed. The new phase in lunar exploration which started with the landing of Luna-9 on the moon is discussed. The luna soil is found to have high porosity and extremely low heat conductivity. The space soundings of the US Rangers are described briefly. The discovery of "dimple-craters" is explained. The mission of "Luna-10" is analyzed, and forecasts on the scientific program of lunar exploration for 1975-1985 are given. Orig. art. has: 10 figures. [GC]

SUB CODE: 03, 22/ SUBM DATE: none/

Card 2/2 mT

ACC NR: AP7000549 SOURCE CODE: UR/0293/66/[illegible]/006/0912/0922

AUTHORS: Lipskiy, Yu. N.; Pskovskiy, Yu. P.; Gurshteyn, A. A.; Shevchenko, V. V.; Pospergelis, M. M.

ORG: none

TITLE: Current problems of lunar surface morphology

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 6, 1966, 912-922

TOPIC TAGS: moon, selenography, lunar crater, lunar probe, lunar satellite, lunar surface, lunar topography, morphology, astronomy, mars planet, mars probe

ABSTRACT: In this profusely illustrated article use is made of photographs taken by "Zond-3," "Luna-3," and the American satellites to analyze the surface features of the moon and to compare the moon with other celestial bodies. The surface of the moon is divided into continental and marine masses. These are described and classified according to their sizes, shapes, and locations, as are craters, mountain ranges, and radial fissures (see Fig. 1). Older hypotheses pertaining to the invisible lunar hemisphere are either sustained or disproved. Newly discovered depressions on the invisible hemisphere are discussed, and their origin is hypothetically explained. The impact theory pertaining to the formation of the lunar relief is criticized on the basis of the regularity in the location and distribution of many features. The analogy between the lunar and the Martian surfaces is analyzed and explained with the

Card 1/3 UDC: 523.34

ACC NR: AP7000549

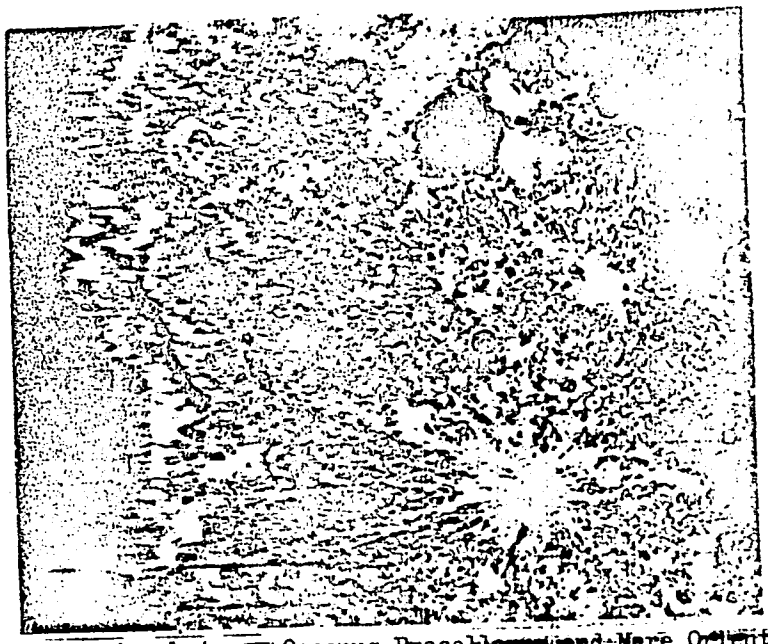

Fig. 1. Continental region between Oceanus Procellarum and Mare Orientale. Bright crater with a radial system in the lower right of the photograph is Birgium A. This illustration represents a rectification of a photograph taken from the earth and shown by J. Franz (Der Mond, 2 Auflage, Leipzig, 1912)

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ACC NR: AP7000549

help of photographs taken by "Mariner-4," and the problems of lunar morphology to be attacked in the future are suggested. The authors thank L. N. Bondarenko, Zh. F. Rodionova, and V. V. Novikov, co-workers at the Division of Lunar and Planetary Physics of the State Astronomical Institute im. P. K. Shternberg (Otdel fiziki Luny i planet Gosudarstvennogo astronomicheskogo instituta), for their help. Orig. art. has: 8 photographs, 2 charts, and 1 table.

SUB CODE: 03/ SUBM DATE: 07Jul66/ ORIG REF: 004/ OTH REF: 019

Card 3/3

GURSHTEYN, A.I.

Saving electric power in the operation of conveying systems of production lines. Prom.energ. 16 no.6:8-9 Je '61. (MIRA 15:1)
(Conveying machinery) (Electric power supply to apparatus)

GURSKAYA, A.I.

Therapeutic treatment of peptic ulcer. Zdrav. bel. 8 no.1:25-28 Ja '62. (MIRA 15:3)

1. Iz kafedry gospital'noy terapii (zaveduyushchiy kafedroy - prof. G.Kh. Dovgyallo) Minskogo meditsinskogo instituta.
(PEPTIC ULCER)

GURSKAYA, A.I. [Hurskaia, A.I.]

Content of some microelements in the blood of ulcer patients. Vestsi AN BSSR.Ser.bilal.nav. no.3:107-111 '62. (MIRA 15:12)
(TRACE ELEMENTS IN THE BODY) (ULCERS)

GURSKAYA, A.I.

Functional state of the liver in peptic ulcer. Zdrav. Bel. 8 no.6:7-9 Je'62. (MIRA 16:8)

1. Iz kafedry gospital'noy terapii (zav. - prof. G.Kh. Dovgyallo) Minskogo meditsinskogo instituta.
(PEPTIC ULCER) (LIVER)

KARAL'NIK, S.M. [Karal'nyk, S.M.]; GURSKAYA, A.P. [Hurs'ka, A.P.]; DOBROVOL'SKIY, V.M. [Dobrovol's'kyi, V.D.]

Study of the characteristic X-ray absorption of germanium in alloys with aluminum. Ukr.fiz.zhur. 7 no.3:327-330 Mr '62. (MIRA 15:7)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Germanium-aluminum alloys--Spectra)
(X-ray crystallography)

GURSHTEYN, T. V.

33549

Ob Iskhodakh Khirurgicheskogo Lecheniya Tsistitserkoza Golovivogo Mozga. Voprosy Neyrokhi rurgii, 1949 No 5, c. 49-52

SO: Letopis' Zhurnal'nykh Statey, Vol. 45, Maskva, 1949

GURSKAYA, A. P.

24.7300

S/185/62/007/003/012/015
D299/D301

AUTHORS: Karal'nyk, S.M., Hurs'ka, A.P. and Dobrovol's'kyy V.D.

TITLE: Study of characteristic absorption of X-rays by germanium-aluminum alloys

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 3, 1962, 327 - 330

TEXT: The position of the K-edge of absorption of Ge in the investigated alloys was studied in comparison with its position in pure Ge. The Al-Ge alloys contained 1, 2, 3, 8, 27 and 98 atom. % Ge, respectively. The displacement of the K-edge of absorption in Al-Ge and in pure Ge at high temperatures (400 - 430°C) was compared with its position at room temperature. The tabulated values are the average results of many repeated experiments. Thereby, the thickness of the absorbing layers varied, as well as the height and width of the diaphragm, the operating conditions of the X-ray tubes, and the number of pulses. The shape of the K-edge was similar to that obtained

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by other investigators. It was found that at high temperatures, the K-edge of absorption of Ge was considerably shifted (about 6 ev.) for low Ge concentrations (2 - 3 atom.%). No such shift was observed at room temperature. The K-edge shift at high temperatures is related to the complete dissolution of Ge in the solid solution. It is noted that the magnitude of the observed shift is greater than that of GeO_2. The K-edge shift in the system Al-Ge is explained by a mechanism proposed in S.M. Karal'nyk et. al (Ref.1: Ukr. fizychn. zh., 6, no. 1, 1961); thereby it is assumed that the redistribution of electrons of the Ge-atoms during its dissolution in Al, takes place at external orbits and the size of the Ge-atoms increases. The present study shows that the results obtained in Ref.1 (Op. cit.) (with Cu-Al and Zn-Al) are not accidental, but apply to various systems. The value of the obtained results would increase even further, if the X-ray investigations were extended to the spectra of the solvent (in the given case -- Al). There are 2 tables and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc.

S/185/62/007/003/012/015
Study of characteristic ... D299/D301

ASSOCIATION: Kyyivs'kyy derzhuniversytet im. T.H. Shevchenka (Kyyiv State University im. T.H. Shevchenko).

SUBMITTED: June 20, 1961

Card 3/3

GURSKAYA, G.V.; VAYNSHTEYN, B.K.

Crystalline structure of hydrochloric l-phenylalanine and determination of its model. Kristallografiia 8 no.3:368-373 My-Je '63. (MIRA 16:11)

1. Institut kristallografii AN SSSR.

VAYNSHTEYN, B.K.; GURSKAYA, G.V.

X-ray diffraction study to determine the structure of hydrochloric phenylalanine. Dokl. AN SSSR 156 no. 2:312-314 My '64. (MIRA 17:7)

1. Institut kristallografii AN SSSR. 2. Chlen-korrespondent AN SSSR (for Vaynshteyn).

GURSKAYA, I. A.

Gurskaya, I. A. - (On the breakage in knitted materials and measures for elimination," (Collected articles on the 1947 scientific work), Nauch.-issled. in-t trikotazh. prom-sti, Moscow-Leningrad, 1949, p. 61-84, 3 (folders)

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

GURSKAYA, I.A.

"Sewing machines in the knit goods industry." L.N. Fedorova, V.A. Shefer. Reviewed by I Gurskaia. Leg.prom. 15 no.12:49-50 D '55. (MLRA 9:5)

(Knit goods industry) (Sewing machines)

S/190/63/005/004/006/020
B101/B220

AUTHORS: Tolmachev, V. N., Lomako, L. A., Gurskaya, L. A.

TITLE: Complex compounds of polymethacrylic hydrazide with some metal ions

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 4, 1963, 512-518

TEXT: When polymethacrylic acid (PMA) is boiled with $N_2H_4 \cdot H_2O$, the PMA hydrazide is obtained. Mass polymerized PMA yielded insoluble PMA hydrazide but emulsion polymerized PMA the soluble hydrazide. The molecular weight was 100,000 - 400,000; the nitrogen content was 12 - 17 % in the soluble PMA hydrazide and 1.5 - 2.0 % in the insoluble compound. The content of hydrazide groups in the polymer was determined by potentiometric titration with sodium nitrite and found to be 1 mg-equiv. per g of insoluble polymer. The mean exchange capacity for hydrogen was 1.9 mg-equiv/g. The viscosity does not follow the linear rule $\eta_{sp}/c = f(c)$, but decreases with time owing to desaggregation and with increasing pH owing to coiling of the molecules. From PMA hydrazide solutions or on the surface of the insoluble polymer precipitations were obtained with Ni, Co, Cr, Zn or Cd

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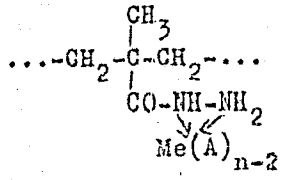
S/190/63/005/004/006/020
B101/B220

Complex compounds of ...

sulfates, which contained N as well as metal ions and whose reflexion spectra differed from those of the metal hydroxides. In ammoniac solution no precipitations formed with Co, Ni, Zr or Cd ions. The precipitations obtained are polychelates of the general formula:



where Me is the metal ion, A is H_2O, NH_3, OH etc., and n is the coordination number of the metal. There are 5 figures and 2 tables.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A. M. Gor'kogo (Khar'kov State University imeni A. M. Gor'kiy)

SUBMITTED: September 15, 1961

Card 2/2

GURSKAYA, L.I.

Influence of the nervous system on the types of stomach secretion in man. Zdrav.Belor. 5 no.8:24-27 Ag '59.
(MIRA 12:10)

1. Iz Slutskoy gorodskoy bol'nitsy (glavnyy vrach V.M.Buketov).
(STOMACH--SECRETIONS)

GURSKAYA, L.I.

Stability of types of gastric secretion in patients. Zdrav. Bel. 7 no. 4:45-46 Ap '61. (MIRA 14:4)

1. Iz terapevticheskogo otdeleniya Slutskoy gorodskoy bol'nitsy.
(STOMACH—SECRETIONS)

ZAKHAROV, M.S.; STROMBERG, A.G.; STEPANOVA, O.S.; GURSKAYA, S.F.

Determination of the microconcentrations of germanium, barium, potassium, nickel. Metod. anal. khim. reak. i prepar. no.5/6: 95-101 '63. (MIRA 17.9)

1. Tomskiy politekhnicheskiy institut.

L 38675-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6008274 SOURCE CODE: UR/0080/66/039/002/0447/0448

AUTHOR: Bayanov, A. P.; Gurskaya, S. F.; Serebrennikov, V. V.

ORG: Tomsk State University im. V. V. Kuybyshev (Tomskiy gosudarstvennyy universitet)

TITLE: Distribution of rare earth metals and yttrium during crystallization of zinc from fused lead

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 2, 1966, 447-448

TOPIC TAGS: rare earth metal, yttrium, lanthanide series, metal crystallization

ABSTRACT: A study was made of the distribution of yttrium and certain rare earth metals in a system in which zinc is crystallizing from fused lead. The rare earth metals included the series from lanthanum to luterium. Spectroscopic analysis was used in the determination of the distribution of the elements. The rare earth metals and yttrium were found in both lead and zinc phases. The lighter rare earths (e. g., cerium) were concentrated in the molten lead, while the heavier rare earths (e.g., luterium) and yttrium were principally found in the zinc phase. Orig. art. has: 1 table.

SUB CODE: 11,20/ SUBM DATE: 06Apr64/ ORIG REF: 003/ OTH REF: 001

UDC: 546.65+546.641

Card 1/1 vmb

1. GURSKAYA, M.A.; PUTYATOV, V.D.

2. USSR (600)

4. Flax

7. Achievements of crew chief M.A. Gurskaya, V.D. Putyatov, Dost.sel'khoz. no. 5, 1953.

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

GURSKAYA, N.V.; IVANOV, K.P.

Features of the gas equilibrium between the blood and intestinal cavity. Biul. eksp.biol.i med. 50 no.9:45-48 S '60.(MIRA 13:11)

1. Iz laboratorii krovoobrashcheniya i dykhaniya (zav. - prof. G.P.Konradi) i laboratorii ekologicheskoy fiziologii (zav. - prof. A.D.Slonim) Instituta fiziologii imeni I.P.Pavlova (dir. - akademik K.M.Bykov) AN SSSR, Leningrad.
(OXYGEN) (CARBON DIOXIDE) (BLOOD, GASES IN)
(INTESTINES)

IVANOV, K.P.; GURSKAYA, N.V.

Formation and secretion of gases in the air bladder of fish. Priroda 50 no.6:107-108 Je '61. (MIRA 14:5)

1. Institut fiziologii imeni I.P.Pavlova AN SSSR, Leningrad.
(Air bladder (in fishes))

SHAPOSHNIKOVA, L.A., dots.; GURSKAYA, O.A. [Hurs'ka, O.A.], starshiy prepodavatel'

Valuable forage plants in Odessa Province. Na dopom.sil'. hosp.ta vyr. no.5:23-24 '58. (MIRA 13:3)

1. Kafedra sistematiki rasteniy Odesskogo gosuniversiteta.
(Odessa Province--Forage plants)

KRISTER, E.E., dotsent; BELYAYEVA, O.N.; GOLDINA, V.V.; GURSKAYA, T.K.; LESHCHENKO, A.I. (Kiyev)

Coronary insufficiency in people engaged in mental work. Klin.med. no.12:3-6 '61. (MIRA 15:9)

1. Iz otdela funktsional'noy patologii (zav. - dotsent E.E. Krister) Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny imeni akad. N.D. Strazhesko (dir. - zasluzhennyy deyatel' nauki prof. A.L. Mikhnev).

(CORONARY HEART DISEASE)

SADYKOV, Arkamdzhan Sadykovich; GURSKAYA, T.M., otv. za vypusk; SMIRNOV, N.A., red.; BALUNOV, A.A., tekhn.red.

[Good yields of silkworm cocoons] Vystavka dostizhenii narodnogo khoziaistva SSSR. Vysokii urozhai kokonov tutovogo shelkopriada. 10 p. (MIRA 13:6)

(Silkworms)

NIKITIN, Ye.K.; GURSKAYA, T.P.

Homogenization of reacted mixtures by water as a method of quantitative analysis. Part 1: Determination of magnesium. Izv.vys.ucheb. zav.;khim.i khim.tekh. 3 no.4:591-599 '60. (MIRA 13:9)

1. Saratovskiy meditsinskiy institut, kafedra neorganicheskoy i analiticheskoy khimii.
(Magnesium--Analysis)

GURSKAYA, Ye.A.

Materials on the study of higher aquatic vegetation in bottom-land waters of the Dniester River. Mat. po gidrobiol. i rybol. lim. severozap. Pricher. no.2:75-79 '53. (MIRA 12:8)
(Dniester Valley--Fresh-water flora)

COUNTRY : USSR
CATEGORY : Meadow Cultivation. L

ABS. JOUR. : RZhBiol., No.23, 1958, No. 104584

AUTHOR : Shaposhnikova, L. A., Gurskaya, Ye. A.
INST. : Odessa University
TITLE : Botanical Characteristic of Slope Pastures at the Kolkhoz imeni Lenin and Kolkhoz imeni Dimitrov (Odessa Oblast').

ORIG. PUB. : Nauchn. yezhegodnik. Odessk. un-t, 1956, Odessa, 1957, 228-229
ABSTRACT : No abstract.

Card: 1/1

SHAPOSHNIKOVA, L.A. [Shaposhnykova, L.A.], dots.; GURSKAYA, Ye.A. [Gurs'ka, E.A.]

Study of wild forage plants in the southern part of Odessa Province. Pratsi Od. un. Ser.biol.nauk no.8(vol.147):111-114 '57. (MIRA 12:4)

(Odessa Province—Forage plants)

BOBROVSKI, Lekh [Bobrowski, Lech]; VIL'GEL'MI, Zdzislav [Wilhelmi, Zdzislaw]; GURSKI, Eugenyush [Gorski, Eugeniusz]; MARTSINKOVSKI, Andzhey [Marcinkowski, Andrzej]; SOLTAN, Andzhey [Soltan, Andrzej]; YASKULA, Maryan [Jaskula, Marian]

Lech, the pressurized electrostatic accelerator. Nukleonika 8 no.1:1-28 '63.

1. Institut yadernikh issledovaniy, Varshava 9 i Varshavskiy universitet, Varshava.

GURSKIS, Verners; DIMDINS, J., red.; UDRE, V., tekhn. red.

[Using herbicides in weed control] Nezalu apkarosana ar herbicidiem. Riga, Latvijas Valsts izdevnieciba, 1962. 143 p. (MIRA 16:5)
(Weed control) (Herbicides)

GURSKIY, A.

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1. Pervyy sekretar' Borisovskogo gorkoma Kommunisticheskoy partii Belorussii.

(Borisov--Civic improvement)

GURSKIY, A., inzh.

Serious defect in experimental testing. Zhil.stroi. no.12:29-30 '64. (MIRA 18:2)

97 - 1 - 5/10

AUTHOR: Gurskiy, A.F., Engineer, and Krylov, B.M., Candidate of Technical Science.

TITLE: Joints of Assembled Reinforced Concrete Columns Without Coupling Plates for Industrial Constructions. (Styki sbornykh zhelezobetonnykh kolonn bez tsentriruyushchikh prokladok dlya promyshlennogo stroitel'-stva.)

PERIODICAL: Beton i zhelezobeton, 1957, No. 1, pp. 19-23, (U.S.S.R.)

ABSTRACT: The method devised by engineer A.F. Gurskiy in simplifying connections with precast columns for multistorey structures omits steel coupling plates and bolts. It relies on the direct contact of the concrete surfaces (with or without steel collars.) This method is more suitable for columns with large cross sections. Different variations of this method were developed: 1) A joint without coupling plates constructed to transmit the pressure directly from concrete to concrete to counteract bending moments. Connection is provided by extended corner reinforcing bars which are welded together. In the factories the column is cast in a horizontal position, simultaneously for all the required number of floors.

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TITLE: Joints of Assembled Reinforced Concrete Columns Without Coupling Plates for Industrial Constructions. (Styki sbornykh zhelezobetonnykh kolonn bez tsentriruyushchikh prokladok dlya promyshlennogo stroitel'stva.)

Steel plates are inserted in the joints (10 - 12 mm thick) which are removed with the casing. Method 2) A steel base plate is welded to a sleeve which in turn is welded to the main reinforcement. Columns are joined by welding the sleeve of one column to the base plate of the second column. Method 3) The reinforcement is inserted into the casing (including the steel plates) after which the concreting of all beams proceeds simultaneously. The metal plates are removed after 12 - 24 hours. The joint is obtained by welding the sleeves together. The secondary reinforcement was calculated according to A.P. Kuznetsov's formula.

ЦНИИС carried out tests on the above joints. Concrete grade 200 and steels T-1 to T-5 were used. Test conditions and excentrical loading tests were given. The joints made according to the above method proved to be as strong as those which were cast monolithically. It is possible to form joints at any selected column height. Calculation of construction was possible on the base of monolithic frame structures, omitting the effects of the joints. The method

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97 - 1 - 5/10

TITLE: Joints of Assembled Reinforced Concrete Columns Without Coupling Plates for Industrial Constructions. (Styki sbornykh zhelezobetonnykh kolonn bez tsentriruyushchikh prokladok dlya promyshlennogo stroitel'stva.)

simplifies the process of jointing as well as that of assembly. The process can be carried out in any type of weather because of the elimination of the wet processes. It can be applied to any type of construction, e.g. beams, arches, frames, etc.

There are 4 sets of diagrams, 2 photographs, 2 graphs and 2 tables.

ASSOCIATION: ---

PRESENTED BY: ---

SUBMITTED: ---

AVAILABLE: Library of Congress

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97-57-9-4/17

AUTHORS: Gurskiy, A. F. (Engineer) and Krylov, S. M. (Candidate of Technical Sciences

TITLE: The Rigidity and Strength of Joints of Pre cast Reinforced Concrete Columns. (O zhestkosti i prochnosti stykov sbornykh zhelezobetonnykh kolonn).

PERIODICAL: Beton i Zhelezobeton, 1957, Nr.9. pp.351-355 (USSR).

ABSTRACT: According to investigations carried out by the Academy of Architecture of USSR, the joints of pre-cast reinforced concrete columns with central pads, and also joints grouted in cement, tend to settle. V. N. Gornov, Candidate of Technical Science, in an article entitled "Investigations into the Rigidity and Strength of Industrially Manufactured Housing Units" (Ref.1), concluded that settling of such joints amounts to 0.85-2 mm under superimposed load, and in the moment of breaking to 1.7-4 mm. N. V. Morozov and B. N. Zavadivker, Candidates of Technical Science (Ref.2) state that precast reinforced concrete columns jointed by high quality cement, when under superimposed load show compression of 0.8-2 mm, and during breaking load 1.7-4 mm. Calculations are given for defining the bending moment of a frame, at a joint, and Fig.1 shows the effect of the

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The Rigidity and Strength of Joints of Precast Reinforced Concrete Columns.

bending moment at the position of the joint. Fig.2 illustrates diagrammatically the basic requirements for calculation. Frames for housing purposes having pin-joints are subject to warping, which, according to a given formula, is 0.9 mm when the bending moment in the top corner of the frame equals 12 tm, the width of frame 30 cm, the height 40 cm; and the height of the column (floor height) equals 3.3 m, and the coefficient of elasticity 180 000 kg/cm². These figures show that the warping of pin-joints, investigated by the Academy of Architecture of the USSR (Akademiya arkhitektury SSSR), and the warping of grouted joints, have virtually similar values, and from this it follows that these joints cannot be regarded as stiff joints for the purpose of calculating bending moments. This was originally pointed out by A. F. Gurskiy, Engineer, in an article "Joints of Pre-Cast Reinforced Concrete Constructions Without Central Pads" (Ref.3). Experimental checking on the deformations of joints made by grouting with cement and with central pads has been carried out by TsNIPS. Testing samples were 400 x 500 mm in cross-

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section, of two heights, 950 mm and 2250 mm, reinforced by hot rolled standard bar reinforcement consisting of 4 x 25 mm bars. Joints had been made by welding to bars a short length of mark 3 steel bar. Fig.3a gives type T-6 without metal collars at the place of jointing. The ends were cross-reinforced with 8 mm diameter mesh for the height of 320 mm at 60 mm c/c. A steel pad 150 x 150 mm, 10 mm thick, was inserted in the middle of the joint. Fig.3b, type T-7, is similar to the previous one, but the height of the joint is 30 mm, grouted in cement of 480 kg/cm² strength. Fig.3v, T-8, represents a joint made using central strong steel collars 150 x 150 mm in size and 3 mm thick. The collar of the joint consisted of an angle iron 150 x 150 x 12 mm with a 6 mm plate welded on. The main reinforcement of the column was welded to the above angles. In addition, the ends of the columns were specially reinforced with three layers of cross-reinforcement in the form of mesh as described for T-6. To each main reinforcement bar, was welded a steel plate of 9.6 cm² area. The joint of the columns in this case was investigated with an eccentric load 120 mm off the centre line of the column.

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T-9 is similar to T-8 but was tested by a much bigger eccentric load at a distance of 500 mm from the centre of the column. T-10 (Fig.3g) is similar in construction to T-8, but without the welded-on connecting plates, and this was tested by applying a central load. The thickness of the steel pad was 30 mm. Fig.4 illustrates the column T-7 after being subjected to a crushing test. The crushing test on columns T-6, T-8 and T-9 has similar results, tabulated on p.353. At the upper end of this Table all the samples, with the exception of T-10, withstood the theoretical crushing load. The crushing of columns T-6, T-7, T-8 and T-9 occurred through the whole joint. Sample T-10 collapsed under a load of 275 tons; the calculated crushing strength was 493.2 tons. Fig.5 shows graphically the curves of deformation of centrally padded columns T-6, T-7 and T-10. The most intensive crushing of the pad occurred when the stresses around 1 000 kg/cm^2 were applied. From tests on T-6 it was found that a joint with a central pad (without steel collars, and without cement grouting), when a comparatively thin pad is used, is as good as other joints,

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but shows bigger deformations. T-7, according to graph in Fig.5, showed very little deformation of the joint. The mean deformation load produced only 0.12-0.15 mm deformation, and when loaded by 500 tons (i.e. 0.75 of the crushing strength) produced only 0.16 mm deformation. It can be concluded, therefore, that T-7 with a cement grouted joint has low deformation values, and when the ends of columns are well cross-reinforced, using a form of mesh, the joint is as strong as any section of the column. This finding contradicts views expressed in the publications of the Academy of Architecture of the USSR. Fig.6 shows the deformation of joints for T-8 and T-9 under eccentric loading. Comparison of the graphs of deformation of joints given in Fig.5 with those given in Figs. 108, 109 of V. N. Gornov's book (Ref.1) shows a discrepancy, e.g. the deformation of T-8 is many times smaller than the deformation given in the above book, where the author gives values of 0.6 - 1.7 mm. This discrepancy could, however, be explained by the use of stronger steel collar angles. When T-9 was loaded by half of the crushing load, the deformation of the compressed side reached 0.1 mm, and when loaded up to

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130 tons, it reached 0.3 mm (Fig.6). The deformation graph of T-10 is given in Fig.5. The mean deformation of this joint during loading of 250 tons equals 5.5 mm, which is rather excessive. This could be explained by the absence of welded plates joining the reinforcements. Article in Nr.1 of this Journal, 1957, gives detailed description of joints, their design, and experimental results. There are 6 Figures and 1 Table.

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1. Concrete-Precast-Reinforced 2. Concrete columns 3. Concrete joints-Rigidity 4. Concrete joints-Strength

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