

YROPP, L.I., inzh.; KUZNETSOV, N.V., doktor tekhn. nauk

Study of a vibrational method for cleaning a convective steam  
superheater. Teploenergetika 11 no.2 42-46 F '64. (MIRA 17:4)

1. Vsesoyuznyy teplotekhnicheskii institut.

FATNER, A.V., kand. tekhn. nauk; KRCPP, L.I., inzh.; KHFAMOV, S.I., inzh.

Testing of superheater tubes from 12Kh1MF steel under long-term vibration loads. Elek. stat. 35 no.1:33-37 Ja '64.  
(MIRA 17:6)

KARASINA, E.S., kand. tekhn. nauk; KHOPF, L.I., kand. tekhn. nauk;  
ABRYUTIN, A.A., inzh.; MINTS, M.S., inzh.

Use of a heat probe in the study of the heat exchange of furnaces  
and steam boilers. Teploenergetika 12 no.2:69-72 F '65.  
(MIRA 18:3)

1. Vsesoyuznyy teplotekhnicheskii institut.

Vitaminization of fruit juices with ascorbic acid. Maria  
Kropp, Franciszek Nowotny, and Wladyslaw Rajdowski.  
*Prace Glownego Instytutu Badawczego i Statystycznego* 4,  
No. 2, 1-5 (1954) (English summary). Effect of the follow-  
ing factors on stability of ascorbic acid added to apple juice  
was examined: ascorbinase, pasteurization, light and heavy

metals, deaeration, and SO<sub>2</sub> treatment. Pasteurization re-  
sults in a 5-15% loss. Losses on 2 mo. storage in glass  
bottles amounted to 70%. They could be reduced to 10%  
by the use of brown glass. Ascorbinase at a rate for 1 min.  
showed a 25% loss in ascorbic acid. Solubling reduced loss  
on 2 mo. storage from 49.5 to 37.4%. Cu and its salts  
had no adverse effect.

Alma S. Dziewiatk

2

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000826630006-0

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CIA-RDP86-00513R000826630006-0"

130-9-17/21

AUTHORS: Tylkin, M.A., Sivak, V.I., Parfent'yev, I.F. and Kropp, M.A.  
(Engineers)

TITLE: Increasing the Durability of Crane Wheels (Povysheniye stoykosti kranovykh koles)

PERIODICAL: Metallurg, 1957, Nr 9, pp.34-36 (USSR)

ABSTRACT: Short service life of crane wheels is due not only to design factors but also to the materials and methods of fabrication and heat treatment. The authors describe methods used at the major Soviet crane-wheel producing works, analyse causes of failure and deal with equipment used for surface hardening. They conclude with an account of the installation they developed with the help of K.F. Starodubov for the sorbitisation of crane wheels at the imeni Dzerzhinskiy works. Type 50Г2 steel (C 0.44-0.55%, Mn 1.4-1.8%, Si 0.17-0.30%, P  $\leq$  0.040, S  $\leq$  0.045) is used for the wheels which are cast and subjected to heat and mechanical treatment. The authors recommend the centralised manufacture of all-rolled crane wheels of standardised dimensions. There are 4 figures.

ASSOCIATION: Imeni Dzerzhinskiy Works (Zavod im.Dzerzhinskogo)

AVAILABLE: Library of Congress.

Card 1/1

25(1)

SOV/135-59-5-10/21

AUTHORS: Tylkin, M.A., Candidate of Technical Sciences; Sivak, V.M., Engineer; Parfent'yev, I.F., Engineer; Kropp, M.A., Engineer

TITLE: The Restoration of Crane Wheels by Building-Up

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 5, pp 25-27 (USSR)

ABSTRACT: To restore worn crane wheels, the Dneprovskiy metallurgicheskiy zavod im. Dzerzhinskogo (Dneprovskiy Metallurgical Plant imeni Dzerzhinskiy) has planned and put into operation a special unit for automatically building up under flux, and developed a technological process for restoring and strengthening crane wheels of up to 1200 mm diameter. It consists of a machine for fastening and rotating the crane wheel, an AJ84 welding head designed by the Institut elektrosvariki im. Ye.O.Patona AN USSR (Institute of Electric Welding imeni Ye.O.Paton of the AS UkrSSR), mechanisms for the longitudinal feed and raising of the welding head, a device for screening and feeding the flux into the hopper and an aspirator. The unit is provided with a girder crane, and its main layout is described and illustrated in Figure 1. It is fed by a/c from two STN-500 welding transformers connected in parallel. Figure 2 shows

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SOV/135-59-5-10/21

The Restoration of Crane Wheels by Building-Up

the wheel being welded on the unit. The used flux and waste (slag) pass into a special device where they are filtered and returned to the head hopper. This process is described and illustrated in Figure 3. The building-up is carried out by an electrode wire made of St. 6 steel of 5 mm diameter (for large or badly-worn wheels) or 30KhGSA steel of 3.5 mm diameter (for wheels less than 700 mm in diameter in which the height of the built-up layer is less than 6 mm). Operational experience with the unit at the plant has shown that the following procedure must be observed; 1) when the electrode made of 5 mm St.6 steel is used, the speed of the feed of the electrode wire is taken as equal to 43-49 meters per hour at a peripheral speed of the article of 32-38 meters per hour; the current being 650-700 amps and 28-36 volts; 2) When an electrode wire made of 3.5 mm 30KhGSA steel is used, its feed speed is taken as equal to 56-64 meters per hour at a peripheral speed of the article of 40-48 meters per hour, the current being 450-500 amps and 28-36 volts. Details of the chemical composition of the welded wheels are

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NOV/135-59-5-10/21

The Restoration of Crane Wheels by Building-Up

then given, to show that they can be subjected to thermal treatment - sorbitization. The plant imeni Dzerzhinskiy has devised a special process for doing this. It consists of heating the wheel to 840°, plunging it into a hardening bath, tempering it and boring the axle hole. There are 2 diagrams and 1 photo.

ASSOCIATION: Dneprovskiy metallurgicheskiy zavod im. Dzerzhinskogo  
(Dneprovskiy Metallurgical Plant imeni Dzerzhinskiy)

Card 3/3

18(5)

SOV/125-59-9-12/16

AUTHOR: Tylkin, M.A., Candidate of Technical Sciences, and  
Sivak V.I., Parfent'yev, I.P., and Kropp, M.A., Engineers

TITLE: Automatic Surfacing on Vertical Mill of Blast Furnace  
Charger Big Cone

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 9, pp 88-93 (USSR)

ABSTRACT: Experience of many a metallurgical plant has shown that the efficiency of blast furnaces depends to a large degree on the operation of the charger. It has been on many occasions noted that at the place where the big cone is connected to the furnace head, blowing-off of gases begins to appear after a few months of work; as a result, the cone goes prematurely out of service. In order to prolong its life, it was recommended to reinforce its working surface by hard steel alloys. In Fig 1, a big cone surfaced with alloy Sormayt Nr 1, 140 mm in the width and 2.5 mm deep, is shown; this cone was used in the course of a year on a blast

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NOV/125-59-9-12/16

Automatic Surfacing on Vertical Mill of Blast Furnace Charger Big Cone

furnace at the Dneprovskiy Metallurgical Works, working under an increased gas pressure of 0.8 atm. The institute of Electric Welding imeni Ye.O. Paton has worked out the method of automatic surfacing of the big cone by using PP-Kh10V14 and PP-Kh12V1F electrode wire. The Magnitogorsk Metallurgical Combine has, in its turn, constructed for this purpose a vertical mill (Fig 4). The process of surfacing is shown in Fig 5. The current intensity is 400-600 amp. depending on the zone of the cone to be surfaced; arc tension is 30-36 volts. Before the surfacing process begins, the cone is pre-heated to 400°C; to this end, a special design burner (Fig 6) working on coke gas has been constructed. There are 1 diagram and 5 photographs.

ASSOCIATION: Dneprovskiy metallurgicheskiy zavod imeni Dzerzhinskogo (Dneprovskiy Metallurgical Works imeni Dzerzhinskiy)  
Card 2/3

18.5000

75574  
SOV/130-5-10-6/20

AUTHORS: Tylkin, M. A. (Candidate of Technical Sciences), Sivak, V. I., Parfent'yev, I. P., Kropp, M. A. (Engineers)

TITLE: New Design of Hot Blast Valve

PERIODICAL: Metallurg, 1959, . Nr 10, pp 10-11 (USSR)

ABSTRACT: Hot blast valves with cast bronze rings and bronze gates are used at Plant imeni Dzerzhinskoy (zavod imeni Dzerzhinskogo). The welded gate consists of a basic furodit (iron alloy with approximately 27 to 29% Cr and 5% Al) ring. Better results were achieved with chamotte rings made of wet pressed segments. The segments are fired and assembled in a ring-like manner in chamotte binding medium. The ring is ground along the periphery and side faces. After removal of the surface layer at the joint, no pores are observed. The segments are enclosed by a regular St3-steel tire as shown in Fig. 3.

Card 1/3

New Design of Hot Blast Valve

79574  
SOV/130-52-10-6/20

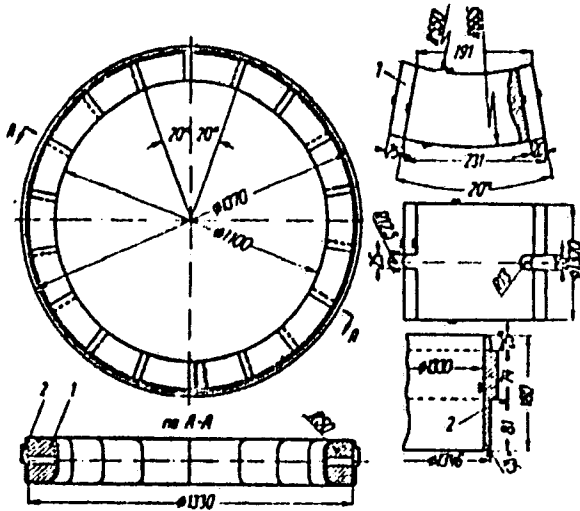


Fig. 3. Chamotte Ring:  
(1) segment: (2) tire.

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New Design of Hot Blast Valve

75074  
SOV/130-59-10-6/20

Loosening of the ring - tire contact is not detrimental since it widens the air gap between ring and tire, decreasing heat transmission from the ring to the tire. Such rings are installed in a blast furnace of the plant. There are 3 figures.

ASSOCIATION: Plant imeni Dzerzhinskiy (Zavod imeni Dzerzhinskogo)

Card 3/3

KHARAYA, Khirsoi (Yapostiya); KROPP, Vilem (Czechoslovakia); GRIBOVSEIY,  
Antonin (Czechoslovakia); KHEIMENI, Ken (SSHA)

For general disarmament and peace. Sov.foto 22 no.8:1-11 Ag '62.  
(MIRA 15:7)

(Photography, Journalistic)

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KROPSHOT, R.; ARP, V.

Superconducting magnets. Usp.fiz.nauk 78 no.4:653-678 D '62.  
(MIRA 15:12)  
(Superconductivity) (Magnets)

DOLGOPLOSK, B. A., YERUSALIMSKIY, B. L., KROPUCHEVA, Ye. N.,  
TINYAKOVA, Ye. L.

"Structure of Diene Polymers as a Function of the Nature  
of Catalytic Systems:"

Report presented at the Conference on International Symposium  
on Macromolecular Chemistry. Montreal, Canada, 27 July to 1 August 61.

/ Institute for Higher Molecular Compounds, Akademia  
Nauk, SSSR, Leningrad, USSR.

GERLIKH, P.; KFK, TS.; KRAUZE, Kh.; KROS, A.; POL', Kh.Ye.; SHLOTT, Kh.

Measuring proton currents. Izv.AN SSSR 24 no.6:668-672 Ja '60.

1. TSentral'nyy institut yadernykh issledovaniy, Dresden,  
Narodnoye predripiyatiye K. TSeysa, Iyena, Germanskaya Demokratiche-  
skaya Respublika.

(Protons)

YUGOSLAVIA/Chemical Technology. Chemical Products H  
and Their Applications. Corrosion.  
Corrosion Control.

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 19793

Author : Krosar, L., Jagrovic O., Podbreznik, F.  
Inst : -  
Title : Protection of Calvanized Iron Roofs.

Orig Pub : Zast. mater., 1958, 6, No 3, 129-133

Abstract : For corrosion control of galvanized iron roofs (GR) in the presence of marine and industrial atmospheric conditions, an additional one- and, more often, two-layered coating is necessary. As a primer  $Pb_3O_4$  can be used, as well as paints which contain zinc chromate or Zn dust. For the

Card : 1/3

H-10

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YUGOSLAVIA/Chemical Technology. Chemical Products H  
and Their Applications. Corrosion. CIA-RDP86-00513R000826630006-0  
Corrosion Control.

Abs Jour : Ref Zhur-Khimiya, No 6, 1959, 19793

application of the surface protective coat, oil paints, amide resins as well as paints with a base of chlorinated rubber, pigmented bitumens and Zn dust with various adhesives can be used. Chlorinated rubber coatings have the best protective properties in an acid atmosphere. Adhesion of paints on Fe which was electrolytically zinc-plated is higher than on that plated by the thermal method. The best results are obtained through cleaning with an 3 percent  $H_2SO_4$  or a 4-8 percent phosphoric acid; in the latter case, the corrosion resistance

Card : 2/3

KROGAR, LJ.

Protection of textile packing materials. p. 372.

TEKSTIL. (Društvo inženjera i tehničara tekstilaca Hrvatske) Zagreb, Yugoslavia.  
Vol. 8, no. 5, May, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 8, Aug. 1959.

Uncl.

YUGOSLAVIA/Chemical Technology. Chemical Products and Their      H  
Application, Part 4. - Varnishes, Paints. Paint  
Coatings.

Abs Jour: Referat. Zhurnal Khimiya, No 21, 1958, 72530.

Author : Lilijan Kroshar.

Inst :

Title : Successes in Use of Aluminum Powder as Pigment for  
Coatings.

Orig Pub: Tehnika, 1957, 12, No 12, Hem. ind., 11, No 12, 188-190.

Abstract: A review of modern methods of Al powder production (by  
atomizing Al melted in an electric furnace with highly  
pressurized air and others), and of its properties  
and use. It is noted that the greatest successes  
have been achieved in the development of Al pastes,

Card : 1/2

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YUGOSLAVIA/Chemical Technology. Chemical Products and Their  
Application, Part 4. - Varnishes, Paints, Paint  
Coatings.

H

Abs Jour: Referat. Zhurnal Khimiy; No 21, 1958, 72530.

which guarantee highly uniform and explosion proof  
materials.

Card : 2/2

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**CIA-RDP86-00513R000826630006-0"**



KIPRIANOV, A.I.; KROSHCHENKO, M.M.

Synthesis of 1,2-benzophenazine derivatives. Ukr.khim.zhur. 19  
no.1:73-80 '53. (MLRA 7:4)

1. Institut organicheskoy khimii Akademii nauk USSR.  
(Phenazine)

Synthesis of derivatives of 1,2,3,4-dihydroquinoline and acenaphthylene(1,2,3)quinoline. A. K. Krasnikov and M. M. Krasnikova, *Vizn. Khim. Akad. Nauk SSSR*, 19, 302-3 (1953); *Angew. Chem.*, 66, 100 (1954). — The derivatives of 1,2-benzophenazine, 1,2,3,4-dihydro-8-methoxyphenazine (C. d. 10-methoxydibenzofenazine) (I), and 1,2,3,4-dihydro-7-methoxyphenazine (II) were synthesized. Heating these with HBr produced the corresponding HO compounds (III and IV, resp.) from which the MeI salts toluenesulfonates of III and IV were obtained. 1,2,3,4-dimethyl-6-phenazine (VI) and 1,2,3,4-dibenzofenazine-10-methyl-6-phenazine (VII) and acenaphthylene-8-methoxyquinoline (VIII) and its 7-MeO analog (IX), the HO analogs (X and XI, resp.) of VIII and IX, and acenaphthylene-8-methoxyquinoline (XII) and its 7-MeO analog (XIII), I, m. 270-1°, was obtained (50% yield) by condensation of 0.5 g. of phenanthrenequinone (XIV) with 0.5 g. of 2,4-diaminobenzene-HCl (XV) in 30 ml. of AcOH and 15 ml. of alk. by heating for 20 min. II, m. 261-2°, was similarly obtained (50% yield) from 0.5 g. XIV and 0.6 g. 2,4-diaminobenzene-HCl for 4 hrs. at 15-40°. III, m. 252-3°, (from Cl<sub>2</sub> in a sealed tube, to aq. P-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Me<sub>3</sub>OH), m. 252-3°, (from Cl<sub>2</sub> in a sealed tube, to aq. P-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>Me<sub>3</sub>OH), m. 252-3°. IV, m. 305-6°. VI, m. 215-16°. Acenaphthenequinone (XVII) was obtained from acenaphthene (Grabe and Gledler, *Jahrb. f. Arzneyk.* 276, 4 (1885)), m. 273-4°. VIII was obtained (51% yield) from 0.5 g. XVII and 0.3 g. of 3,4-diaminobenzene. VIII (50% yield) from 0.5 g. XVII and 0.4 g. XV. IX (50% yield) from 0.5 g. XVII and 0.51 g. XVI. XI (50% yield) from 0.5 g. XVII and 0.51 g. XV. XII (50% yield) from 0.5 g. XVII and 0.51 g. XVI. XIII (40% yield) from 0.5 g. XVII and 0.51 g. XVI. m. 182-3°. XIII (40% yield) from 0.5 g. XVII and 0.51 g. XVI.

KROSHCHENKO, M. M.

Acad Sci Ukrainian SSR. Inst of Organic Chemistry

KROSHCHENKO, M. M.- "The synthesis of homologues and analogues of pyrocyanine."  
Acad Sci Ukrainian SSR. Inst of Organic Chemistry. Kiev, 1956.  
(Dissertation for the Degree of Candidate of Chemical Sciences.)

SO: Knizhnaya Letopis' No. 13, 1956

KIPRIANOV, A.I.; KROSHCHENKO, M.M.

N-alkylphenazinones. Part 2. Ukr.khim.zhur.22 no.3:351-354 '56.  
(MIRA 9:9)

1.Institut organicheskoy khimii AN USSR.  
(Pyocyanine)

KIPRIANOV, A.I.; KROSHCHENKO, M.M.

N-alkylphenazinones. Part 3. Ukr.khim.zhur.22 no.3:355-358 '56.  
(MIRA 9:9)

1.Institut organicheskoy khimii AN USSR.  
(Pyocyanine)

ACC NR: AP7002983 (A) SOURCE CODE: UR/0413/66/000/024/0081/0081

INVENTOR: Kroshchenko, V. D.; Duvanov, A. M.; Kuleshov, Yu. N.

ORG: None

TITLE: An installation for studying the ballistics of artillery systems. Class 42, 189608 [announced by the Ramenskoye Department of the All-Union Scientific Research Institute of Geophysical Exploration Methods (Ramenskoye otdeleniye Vsesoyuznogo nauchno-issledovatel'skogo instituta geofizicheskikh metodov razvedki)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 81

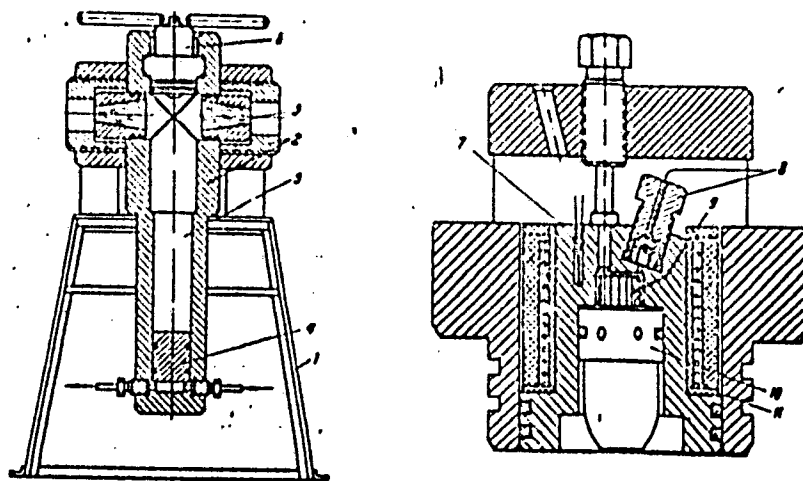
TOPIC TAGS: ballistics, artillery weapon, ballistic test facility

ABSTRACT: This Author's Certificate introduces an installation for studying the ballistics of artillery systems. The unit is mounted on a stationary framework and contains a hermetically sealed housing with optical inputs. A piston in this housing separates the optically transparent fluid which fills the test chamber of the installation from the working fluid fed from a hydraulic compressor. To eliminate the effect of temperature on the housing and optical inputs, a chamber is built into the housing to hold the experimental capsule with fuse, powder charge and firing pin. A heating element is used for localized heating of the experimental capsule alone.

Card 1/2

UDC: 620.17:623.522

ACC NR: AP7002983



1--stationary frame; 2--housing; 3--optical inputs; 4--piston; 5--test chamber;  
6--chamber; 7--experimental capsule; 8--fuse; 9--powder charge; 10--firing pin;  
11--heating element

SUB CODE: 19/ SUBM DATE: 18Dec64

Card 2/2

CHESNOKOV, A.A.; KROSHCHENKO, V.D.; GORBENKO, L.A.

Studying the impulse loads in shooting a perforator or core lifter.  
Razved. i prom. geofiz. no.46:118-125 '62. (MIRA 16:3)  
(Boring machinery—Testing)



KROSHEV, A. N.

"Study of the Excretion of Bacteria by Cows During Tuberculosis in Relation to the Physiological Condition of the Animals and a Comparative Appraisal of Methods of Detecting the Bacteria in Milk." Cand Vet Sci, Khar'kov Veterinary Inst, Min Higher Education USSR, Khar'kov, 1954. (KL, No 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)  
SO: Sum. No. 556, 24 Jun 55

ROTOV, V.I., dotsent; KROSHEV, A.N., assistant.

Diagnosis of paratuberculosis in cattle. Veterinariia 33 no.7:64-65  
Jl '56. (MIRA 9:9)

1.Khar'kovskiy veterinarnyy institut.  
(Johns's disease)

KROSHEV, A.N., kand. veterinarnykh nauk

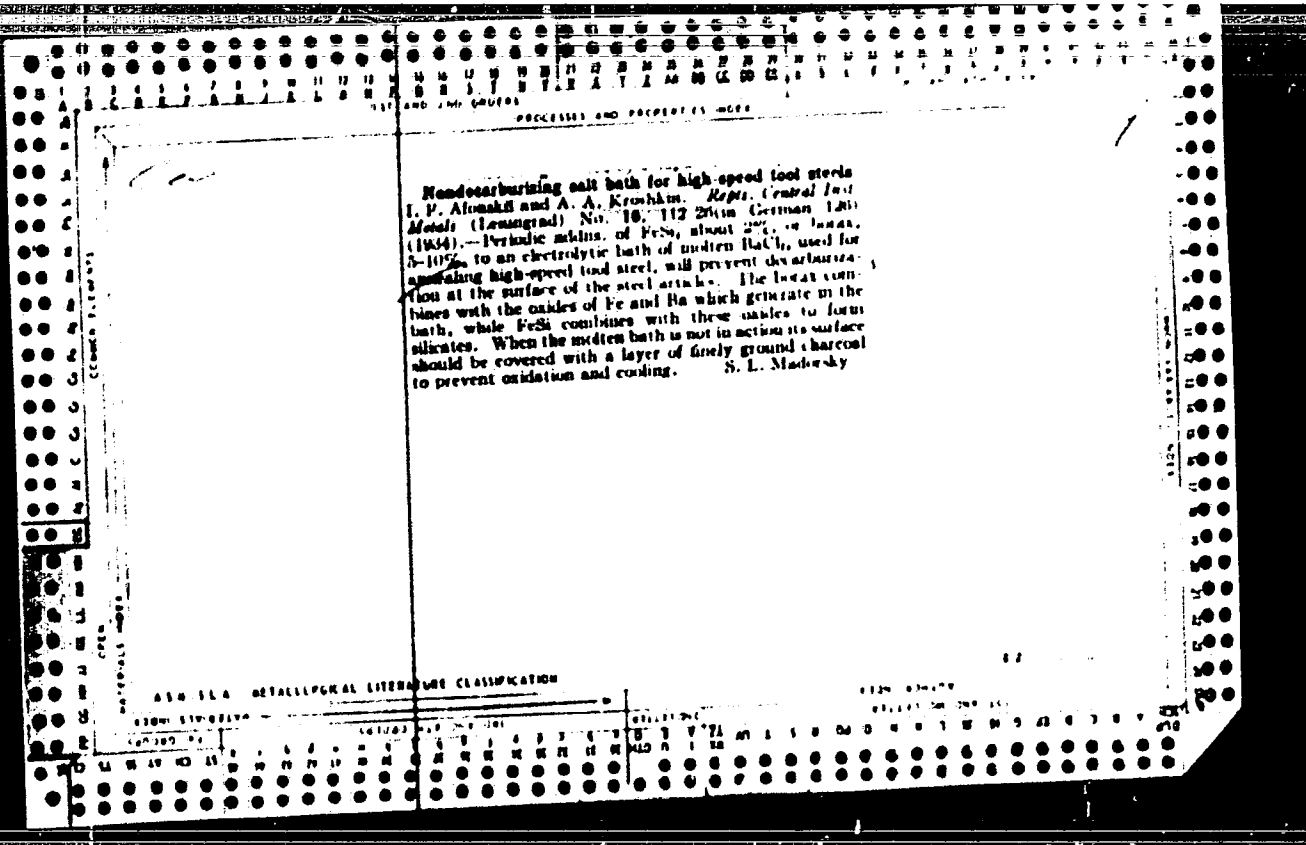
Elimination of tuberculosis in cattle. Veterinariia 36 no.9:20-21  
S '59, (MIRA 12:12)

1. Predsedatel' kolkhosa imeni XX s"yezda Kommunisticheskoy partii  
Sovetskogo Soyusa, Starosaltovskogo rayona, Khar'kovskoy oblasti.  
(Tuberculosis in animals)

KROSHKA, S.N., inzh.

Regulator of the angular velocity of the shaft of the 2D100 diesel.  
Elek. i topl. tiaga 7 no.6:19-20 Je '63. (MIRA 16:9)

1. Teplovozhnoye depo Gudermes Severo-Kavkazskoy dorogi.  
(Diesel engines)



24(7) PAGE 1 BOX EXTENDED 007/1038  
Metallography, Special Study, [v. 2] (Study of Metals) Collection of Articles,  
[No. 2] [Leningrad] Izdatel'stvo, 1958. 265 p., 5,000 copies printed.

Author: M.I. Dvornik, Candidate of Technical Sciences; M.I. Ts. A. Dvornik,  
Tech. M.I. E.R. Vokhob.

Subject: This book is intended for metallurgists and metallurgical engineers.  
Comments: This is the second volume of collected articles papers dealing with  
various problems in special metallurgy, particularly in mechanical metallurgy  
and metallography. Topics covered include: (1) hydrogen embrittlement, inter-  
granular distribution of brittleness in alloys, effect of tempering on carbon  
resistance of steels, (2) brittleness of low-alloy steels, (3) brittleness of  
alloys of various alloying elements on temper brittleness and hardenability of  
steel, (4) strength of welded specimens of brittle steels, effect of stress hardening  
on the strength of an aluminum alloy, etc. The articles are concerned mainly  
with various types of steel, though some deal with austenitic alloys.

Study of Metals (Cont.) 007/1038 / 177  
Dvornik, M.I., Candidate of Technical Sciences, and I.S. Shkharobin.  
Investigation of the Strength of Heat-Treated Specimens of Brittle  
Steels.

The article indicates that in the fracture testing of these specimens  
the magnitude of the effective stress concentration factor (K<sub>t</sub>)  
depends on the testing temperature, sharpness of the notch (radius of  
curvature at the base of the notch) depth of the notch, and the size  
of the specimen (size effect), and (2) does not usually agree with the  
magnitude of the theoretical stress concentration factor calculated  
by Neuber's formula. This discrepancy is caused by local plastic  
deformation at the base of the notch, which takes place even when the  
specimens is brittle from all indications. If local plastic deforma-  
tion at the peak of the notch takes place even in such a brittle  
material as high-phosphorus steel at the temperature of liquid  
nitrogen, it may be assumed that in general, any part of specimen will  
fail at a higher average stress than that computed on the basis of the  
theoretical stress concentration factor. It is recommended that in the  
design also that when it is impossible to obtain a brittle fracture in  
a material, using plain specimens, the value of the effective stress  
concentration factor in testing of notched specimens remains unknown.  
Specimens made of the fracture of the notched specimens. In the testing of  
notched specimens it is advisable to use deep notches with a large radius  
of curvature as well as specimens of large diameter. In this case the  
actual and theoretical stress concentration factors correspond most closely.

Author: M.I. Dvornik, Candidate of Technical Sciences, and V. P. Zhukovskiy, Candidate  
of Technical Sciences.

Investigation of the Temperature Dependence of the  
Substitution of Carbon During the Tempering of Steel  
Steel

Application of the micrographic method is  
described for the investigation of the redistribution of  
carbon in 1045 steel during tempering. In particular it was  
established that holding this steel for 6 hours at 600° C may lead to the  
formation of a zone rich in carbon along the boundaries of martensite  
grains having a width of the order of 5·10<sup>-3</sup> cm. This zone, depending  
on the amount of carbon included in it, is equivalent to a boundary  
layer about 10<sup>-3</sup> cm thick. The amount of carbon diffusing to the  
martensite grain boundaries in this kind of tempering constitutes a few  
percent of the total quantity of carbon in the grains. Lengthening  
the period of tempering at 600° results in a more intensive diffusion  
of carbon, whose concentration at the grain boundaries exceeds the  
limiting amount appreciably on the order of 10<sup>-3</sup> cm. The presence of  
this carbon along the grain boundaries leads to the fact that the quantity  
of carbon which graphically demonstrates the fact that the quantity  
of carbon leads to a marked elongation of the diffusion of carbon and to  
the separation of carbon of structure along the martensite grain boundaries.

SOV/123-59-15-58973

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, p 18 (USSR)

AUTHORS: Kroshkin, A.A., Shimelevich, I.L.

TITLE: Investigations of the Strength of Notched Specimens of Brittle Steel

PERIODICAL: V sb.: Metallovedeniye, Vol 2, L., Sudpromgiz, 1958, pp 175 - 185

ABSTRACT: As a result of experimental investigations carried out it was found that, when submitting specimens of brittle materials to tensile strength tests, the effective coefficient of concentration of stress does not agree with the theoretical coefficient of concentration of stress. The cause of this discrepancy is the local plastic deformation at the basis of the notch which is taking place even in the case of the tested material being, to all appearance, in a brittle state. It is stated that the following factors influence the magnitude of the effective coefficient:

Card 1/2

SOV/123-59-15-58973

Investigations of the Strength of Notched Specimens of Brittle Steel

test temperature, size of the specimen, depth and pointedness of the notch. When testing various materials with the aim of determining the actual stress in a state of an existing concentration of stress it is recommended to use less pointed notches (with a larger radius of rounding at the top and with a great depth).

B.A.M.

Card 2/2



807/32-24-10-25/70

AUTHORS: Danilov, T. L., Ivanov, A. P., Kroshkin, I. A., Razov, I. A.,  
Shevandin, Ye. M., Shimelevich, I. L.

TITLE: Investigation of the Bending of a Broad Sample in Classifying  
the Deformability of Metals (Ispytaniye širokoy proby na zagib  
dlya otsenki deformatsionnoy sposobnosti metallov)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 10, pp 1233-1236 (USSR)

ABSTRACT: Testing the bending strength in the cold state serves to classify  
the plasticity of steel. According to OST 1683 a certain ratio  
between the width and the thickness of the sample must exist  
in the bending tests of sheet iron and other sectional materials.  
Under actual conditions the width of the sheet of metal exposed  
to bending exceeds, however, the thickness by ten- to one hundred-  
fold. For this reason the testing of sheet iron is carried out  
with broad samples at present. The new steel types (St. 4, 09g 2,  
MK have a higher resistance to brittle breaking. The use of a  
wide sample in cold bending tests makes possible the classi-  
fication of the deformability of steel under rigid limiting  
conditions, close to real ones. The testing of the broad sample  
with respect to bending is to be arranged for sheet iron of

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SOV/32-24-10-25/70

Investigation of the Bending of a Broad Sample in Classifying the Deformability of Metals

any thickness. The results obtained are called satisfactory if the sample can be bent by  $120^\circ$  in the case of a special mandrel diameter, and if the sample does not break into two pieces on a further bending to  $180^\circ$ . From a diagram it may be seen that the extent of the maximum deformation of steel of type SKhLi decreases to a great extent with increase in the span width (Ref 2). According to a suggestion by A. P. Ivanov and S. S. Kanfer and parallel to tests with samples of normal width tests on broad samples with cores were also carried out. In papers by E. S. Volokhvyanskaya (Ref 6) tests of samples with grooves and numbered cores are described. It was found that the bending tests according to OST 1683 concerning the narrow samples ( $b=2a$ ) should be followed by those for broad samples ( $b=5a$ ) ( $b$ =width;  $a$ =thickness). There are 2 figures and 6 references, 5 of which are Soviet.

Card 2/2

KROSHKIN, A.N.

Conditions of formation and some calculated dynamic characteristics of mud flows in the Aluarcha River. Trudy Inst.vod. khoz.i energ. AN Kir.SSR no.5:159-167 '59.

(MIRA 13:5)

(Aluarcha River--Floods)

KROSHKIN, A.N.

Morphometric relationships in the stable channel sections of  
mountain rivers in Kirghizistan. Trudy Inst. vol. khoz. i energ.  
AN Kir. SSR no.6:101-111 '59. (MIRA 15:5)  
(Kirghisistan--Rivers)

KROSHKIN, A.N.; TALMAZA, V.F.

Flash floods in Kirghizia. Izv.AN Kir.SSR.Ser.est.1 tekhnauk 2  
no.4:147-162 '60. (MIRA 14:8)  
(Kirghizistan--Floods)

KROSHKIN, A.N.

Distribution of hydrodynamic pressure in a steady flow of liquid.  
Izv.AN Kir.SSR.Ser.est.i tekhnauk 2 no.4:163-173 '60. (MIRA 14:8)

(Hydraulics)

KROSHKIN, A.N.

Flow of a current against obstacles in mountain rivers. Izv.  
AN Kir. SSR. Ser. est. i tekhn. nauk 4 no.5:37-49 '62,

(MIRA 1684)

(Rivers) (Hydraulics)

KROSHKIN, A.N.

Some problems of the morphometry of mountain rivers of Kir-  
ghizistan. Izv. AN Kir. SSR. Ser. est. i tekhn. nauk 5 no.3:  
13-26 '63. (MIRA 16:11)



AKTAMONOV, K.F. ; KOSTYUCHENKO, E.V.; KRUSHKIN, A.N.; LOPATIN, A.S.

Experiment with filtering rock-fill dams in Kirghizistan. Izv.  
AN Kir. SSR. Ser. est. i tekh. nauk 5 no.3:79-101 '63.

KOSTYUCHENKO, E.V.; KROSHKIN, A.N.

Brief information about some natural fill in the mountain rivers  
of Kirghizistan. Izv. AN Kir. SSR. Ser. est. i tekhn. nauk 5 no.3:  
119-128 '63. (MIRA 16:11)

29(1)

PHASE I BOOK EXPLOITATION SOV/2147

Kroshkin, Mikhail Galaktionovich, Candidate of Physical and Mathematical Sciences

Sputnik Solntsa (Artificial Sun Satellite) Moscow, Izd-vo "Znaniye," 1959.  
31 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IX, 1959, vyp. 6) 40,000 copies printed.

Sponsoring Agency: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy.

Ed.: I.B. Faynboyn; Tech. Ed.: Ye. V. Savchenko.

PURPOSE: This booklet is intended for the general reader.

COVERAGE: The author gives a brief outline of the history of the development of artificial satellites in the USSR and abroad. He explains the general mechanics of earth and sun satellites. Two photos of the interior and the exterior of the satellite are shown. Some technical data are given. The

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Artificial Sun Satellite

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following Russian scientists are mentioned: Astronomer N.A. Kozyrev , Profes-  
sor B.V. Kukarkin, and Academician Skobel'tsyn.

TABLE OF CONTENTS:

Beginning of the Space Age	3
Power of Terrestrial Gravitation	6
Past the Moon Into Orbit Around the Sun	10
Better Variant of the Trajectory	14
Scientific Program and the Apparatus of a Space Rocket	16
Scientific Significance of the Launching of a Space Rocket	21
Study of the Moon	26

Card 2/ 3

KROSHKIN, M.O.

Topics on the fluid mechanics of ships. Trudy MOI 10:53-72 '57.  
(Ships--Hydrodynamics) (MIRA 11:3)

*Topics Hydrodynamics*

Artificial Sun Satellite

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Launching of the First Space Rocket is an Event of Historic Significance 27

AVAILABLE: Library of Congress

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DMS/ral  
9-18-59

KROSHKIN, M.G., kand. fiz.-mat. nauk

How the artificial earth satellites move. Nauka i zhizn' 25 no. 6:78-  
79 Je '58. (MIRA 11:8)

(Artificial satellites)

PHASE I BOOK EXPLOITATION

SOV/3508

Kroshkin, Mikhail Gavrilovich

Raketa pokidayet zemlyu (A Rocket Leaves The Earth) [Moscow]  
Profizdat, 1959. 88 p. (Series: Massovaya biblioteka rabochego) 26,000  
copies printed.

Ed.: M. I. Kornilova; Tech. Ed.: N. D. Shadrina.

PURPOSE: This book is intended for the educated layman.

COVERAGE: The book discusses Soviet and U. S. space achievements, the problems of rocket and space flight, the earth's atmosphere, the ionosphere, space and rocket equipment, and future trends in astronautics.

TABLE OF CONTENTS:

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A Study of the Terrestrial Atmosphere

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Enigmas of the Ionosphere

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Magnetic Fields

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Rays From the Depths of the Universe

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AVAILABLE: Library of Congress

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SOV/25-59-3-3/46

AUTHOR: Kroshkin M.G., Candidate of Physical - Mathematical Sciences

TITLE: New Stage in Space Study (Novyy etap v izuchenii kosmosa)

PERIODICAL: Nauka i zhizn', 1959, Nr 3, pp 6 - 11 (USSR)

ABSTRACT: The launching of the Soviet cosmic rocket is a deserved success of Soviet science, proving its progress in space study. The author repeatedly stresses that hitting the moon was not intended, but that after approaching the moon zone, the rocket was put into orbit around the sun as a new planet of the solar system. The type of experiments to be carried out, the equipment installed in the rocket, its start and flight program, all point to the aim of investigating a number of physical parameters on the earth-moon route and the surrounding cosmic space at a distance. Moreover, recording the magnetic field of the moon, measuring the radioactivi-

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New Stage in Space Study

ty and the intensity of cosmic radiation might result in interesting data concerning various hypotheses on earth magnetism and the structure of the moon itself. The study of cosmic rays might prove very important for various cosmogonic hypotheses, e.g. the origin of celestial bodies and star systems. The problem presented by meteoric streams to space flights will also be closely investigated as well as the problem of corpuscular radiation of the sun which might be solved with the help of the first cosmic rocket. Apart from various devices and radio-telemetric installations for transmitting scientific information the rocket has been equipped with an apparatus for developing a sodium cloud at the moment the rocket reaches very great distances from the earth. Thus, e.g. it was possible to watch the rocket on 3 January 1959 with the naked eye. There are 3 graphs and 1 photo.

Card 2/2

KROSHKIN, M.G.

Geophysical explorations carried out by rockets and artificial  
earth satellites in the United States under the program of  
the International Geophysical Year. *Mazhdunar.geofiz.god* no.7:  
74-102 '59. (MIRA 13:2)  
(Atmosphere, Upper--Rocket observations)  
(Artificial satellites)

80015

S/025/60/000/06/01/C12

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AUTHOR: Kroshkin, M.G., Candidate of Physico-Mathematical Sciences

TITLE: Missiles of Peace

PERIODICAL: Nauka i zhizn', 1960, No. 6, pp 5 - 10

TEXT: A general review of the rocket development abroad and in the USSR is made on the occasion of the launching of the "Space ship". The author mentions the international cooperation in the Geophysical Year, the organization of the international COSPAR committee, the discoveries made etc. He dwells on the launching of the Soviet "Space ship" on May 15, 1960, which had a detachable cabin not expected to return. He speaks of the many aspects opening with the data obtained by the Earth satellites and states that the data from the third Soviet sputnik already indicated that the cause of the East Siberian magnetic anomaly lay in great depth. For many of the future experiments the artificial satellites will have to be programmed, and the experience made in photographing the Moon shows that this is possible. The most convenient orientation for most of the experiments is to direct one axis on the sputnik's direction of motion and the other toward the Earth. In the introductory editorial note to the article the

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Missiles of Peace

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following is said: On May 15, 1960, a space ship was launched to an altitude of about 320 km on a nearly circular orbit, where it detached itself from the last stage of the carrier rocket. In the beginning it circled the Earth in 91 min; its axis is inclined  $65^{\circ}$  to the plane of the equator; its weight without the last rocket stage is 4,540 kg. It had on board a cabin with a load imitating the weight of a man, and all the equipment necessary for the future manned flight. The weight of the equipment including the power source is 1,477 kg. The purpose of the launching is to test the control systems ensuring safe flight and control, return to the Earth, and the conditions necessary for man aboard the ship. After the data were obtained, the cabin weighing about 2.5 ton had been detached. The ship carried a "Signal" radio transmitter working on a frequency of 19,995 megacycles in tele-graph as well as telephone transmission. It carried also special radio equipment for transmission of data on the operation of the devices on board and for accurate measurements of orbit elements. Chemical means and sun batteries are the power sources for the scientific and for the measuring equipment of the ship. The flight test program was completed on 19th May.

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3.2000

AUTHORS: Blagonravov, A. A., Academician, Kroshkin, M. G.

TITLE: Geophysical Research by Means of <sup>12</sup>Rockets<sup>2</sup> and <sup>12</sup>Artificial Satellites

PERIODICAL: Vestnik Akademii nauk SSSR, 1960, No. 7, pp. 7-20

TEXT: The authors discern two trends in the development of geophysical and cosmic research: a) recording the data of the upper strata of the atmosphere, such as solar radiation, cosmic radiation,<sup>12</sup> electric and magnetic fields, and b) preparing the cosmic flight of man.<sup>2</sup> Research by means of rockets and satellites complement each other. On the Soviet Delegate's proposal to the 5th Assembly of the Special Committee of the International Geophysical Year (Moscow, August, 1958), the activities of the International Geophysical Year were extended as International Geophysical Cooperation. Altogether 175 rockets have been launched by the Soviet Union. The following launching bases are mentioned: the Heiss Island (Franz Josef Land), mean latitudes of the USSR territory and an expedition vessel (launchings in the vicinity of the South Pole

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Geophysical Research by Means of Rockets  
and Artificial Satellites

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Observatory Mirnyy, in equatorial latitudes, and in the North Pacific). 158 rockets investigated the meteorological conditions of the upper stratosphere, 17 rockets served for a comprehensive geophysical study of the atmosphere at altitudes of from 100 to 470 km. The measuring instruments used are tabulated. Nine rockets carrying experimental animals were launched. When studying micrometeors, not only the number of collisions was recorded, but also their energy, which has the order of  $10^4$  erg. The number of collisions fluctuates, owing to the inhomogeneity of meteor showers, between  $1.7 \cdot 10^{-3}$  and 9 collisions per  $m^2$  and sec. Three satellites were launched during the International Geophysical Year. Their high weight permitted comprehensive measurements of the pressure and composition of the atmosphere, study of corpuscular radiation, short-wave spectrum, and magnetic field, as well as biological experiments. The cosmic rockets launched to the moon are mentioned. Further international cooperation is to be ensured by the United Nations Committee on Space Research. Some satellites launched in the USA for both scientific and military purposes (such as Midas) endanger this cooperation. The following data of the atmosphere are mentioned: at a

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Geophysical Research by Means of Rockets  
and Artificial Satellites

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height of 225 km: density =  $2.12 \cdot 10^{-3}$  g/cm<sup>3</sup>, temperature 936°K; at a  
height of 300 km: density  $3.53 \cdot 10^{-14}$  g/cm<sup>3</sup>, temperature 1048°K; at a  
height of 400 km: density  $6.6 \cdot 10^{-15}$  g/cm<sup>3</sup>, temperature 1373°K; and at a  
height of 500 km: density  $2.21 \cdot 10^{-15}$  g/cm<sup>3</sup>, temperature 1953°K. Above  
250 km, the atmosphere is of atomic composition, oxygen ions being pre-  
dominant. The corona of the earth, a belt of cosmic radiation, was dis-  
covered in cooperation with USA scientists. The authors briefly outline  
such unsolved problems as the causes of the heating of the upper  
atmosphere, the structural inhomogeneity of the ionosphere, the formation  
of the F<sub>2</sub> layer, and the radiation balance of the earth. The results  
obtained so far are only a beginning. The realization of the cosmic flight  
of man and the exploration of other planets are no longer a fantasy.  
There is 1 table.

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85331

S/084/60/000/007/007/007  
A104/A029

3,2000

AUTHOR: Kroshkin, M. G. Candidate of Physics and Mathematics

TITLE: From Aeronautics to Ballistic Flights

PERIODICAL: Grazhdanskaya Aviatsiya, 1960, No. 7, pp. 16 - 18

TEXT: The author discusses rocket<sup>13</sup> tests in the USSR and in the USA in general and tests carried out by the Soviet spaceship launched on May 15, 1960, in particular. The spaceship reached nearly circular orbit at an altitude of approximately 320 km, where it detached itself from the last stage of its carrier-rocket. The weight of the spaceship without carrier-rocket was 4,540 kg. It contained a detachable airtight cabin equipped for a manned flight, with a dummy and various equipment, the latter weighing 1,477 kg. The test was successfully completed on May 19. At 14.52 h order was given for the ship to leave the orbit; the engine braking instruments were switched on and at the same time the stabilization of the ship took place. As a result of a defective orientation instrument the braking impulse deviated from calculation and the spaceship proceeded on a new elliptic orbit which was at almost the same level as the initial one, but with a greater apogee. The hermetic cabin detached itself according to

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From Aeronautics to Ballistic Flights

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plan. The weight and power of this spaceship permitted experiments on technical features and a number of physical and biological tests with a view to future manned flights. From the point of view of safety from cosmic radiation the orbit of the spaceship was particularly favorable: perigee 312 km, apogee 369 km, slant 65°. The technical safety of rocket flights was investigated in January 1960 and based on data recorded by instruments of the above-mentioned spaceship. Research continues. The article concludes by accusing the USA of using rocket-tests for espionage purposes and refers to the U-2 shot down at Sverdlovsk and to the satellite "Tiros", both belonging to the National Association of Aeronautics and Inter-Planetary Research (NASA) of the USA. X

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PHASE I BOOK EXPLOITATION

SOV/5152

Kroshkin, Mikhail Galaktionovich, Candidate of Physics and Mathematics

Planeta v laboratorii issledovatelya; na sluzhbe geofiziki (The Planet as the Laboratory of the Investigator; in the Service of Geophysics) Moscow, Izd-vo "Znaniye," 1961. 30 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IX, 1961: Fizika i khimiya, no. 1) 30,000 copies printed.

Ed.: I. B. Faynboym; Tech. Ed.: A. S. Nazarova.

PURPOSE: This booklet is intended for the general reader.

COVERAGE: The author discusses current geophysical investigations conducted with the aid of rockets and artificial satellites. Studies of the earth's corona, atmosphere, ionosphere, and shape, as well as of solar radiation, made during the last several years and particularly during the International Geophysical Year, are described. No personalities are mentioned. There are 9 references, all Soviet.

Card 1/3

KROSHKIN, Mikhail Galaktionovich, kand. fiziko-matem. nauk; SUSHKOV, Yu.N., kand. tekhn. nauk, red.; KADER, Ya.M., red. izd-va; TSVETKOVA, L.K., red. izd-va; CHAPAYEVA, R.I., tekhn. red.

[Man penetrates outer space; scientific research by means of rockets and artificial satellites] Chelovek pronikaet v kosmos; nauchnye issledovaniia s pomoshch'iu raket i sputnikov. Moskva, Voen. izd-vo M-va oborony SSSR, 1961. 158 p. (MIRA 15:3)  
(Space sciences)

PETROV, Viktor Pavlovich; SOCHIVKO, Arkadiy Arkadiyevich; KROSHKIN, M.G.,  
kand. fiziko-matem. nauk, rotsenzent; YASNOGORODSKAYA, M.M., red.;  
BRAYNINA, M.I., tekhn. red.

[Artificial earth satellites and the weather] Iskusstvennye sputniki  
Zemli i pogoda. Leningrad, Gidrometeor. izd-vo, 1961. 182 p.  
(MIRA 14:11)  
(Artificial satellites in meteorology)

KROSHKIN, M., kand.fiziko-matematicheskikh nauk

Soviet rockets serve science. *Starsh.-serzh.* no.9:6-7 S '61.

(MIRA 15:2)

(Rockets(Astronautics))

26121

S/017/61/000/010/001/002  
D036/D113

3,2300

AUTHOR: Kroshkin, M., Candidate of Physics and Mathematics  
TITLE: An important stage in the storming of the cosmos  
PERIODICAL: Voyennyye znaniya, no. 10, 1961, 5-6

TEXT: The author reviews achievements in various fields of science and research made possible by artificial satellites and space vehicles in the four years since the launching of the first artificial satellite on October 4, 1957. He also discusses future prospects for the use of space vehicles and artificial satellites in scientific research. Space vehicles enabled much information on the upper atmosphere to be obtained. It was found that the boundaries of the exosphere extend up to 2,000-3,000 km, not 500-800 as previously supposed, and that even at greater distances from the Earth traces of the Earth's atmosphere are to be found in the form of a unique geocorona, consisting of hydrogen particles and extending many tens of thousands of kilometers from the Earth's surface. The upper atmosphere is not a static medium, but changes from day to night and season to season according to geo-

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An important stage ....

graphical latitude; these changes are closely linked with solar activity, particularly solar radio emission. With the aid of space vehicles the nature of the Earth's magnetic field and its anomaly at high altitudes was studied, the shape of the Earth more precisely defined and new experimental data on the short-wave emissions of the Sun in the ultra-violet and X-ray regions of the spectrum obtained. It was established that the intensity of cosmic radiation in interplanetary space at great distances from the Earth is comparatively small when the Sun is in a quiescent state. Both Soviet and American research workers found that the Earth is encircled by two concentric belts of intense cosmic radiation above the dense layers of the atmosphere in the plane of the geomagnetic equator. The lower edge of the inner belt is roughly 500-1500 km above the western and eastern hemispheres. The lower boundary of the belts is geometrically uneven; in regions coinciding with the large magnetic anomalies on Earth they approach to about 300 km from the Earth's surface. Beyond the outer belt, at a distance of 60,000-80,000 km from the Earth, there is a highly variable third radiation belt composed of particles with relatively low energies. However, man can break through into interplanetary space when the intensity of radiation in

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An important stage ....

the polar regions is sufficiently low to be countered by normal protection measures. Study of meteorites showed that the chances of a space vehicle colliding with one were small, especially if the start and trajectory are chosen so as to avoid the main meteorite streams. However, the American satellite "Explorer III" was damaged by a meteorite in May 1958, and it is probable that the Soviet automatic interplanetary station which photographed the Moon in October 1959 was also damaged in a collision with a meteorite. It was seen that the temperature regime inside space ships and artificial satellites was not disrupted as a result of damage to their outer skins by micrometeoritic particles. Soviet cosmic rockets showed that the Moon has no magnetic field. The author then discusses ways in which the use of space vehicles and artificial satellites will help to solve many problems in the natural sciences. They will make it possible to study the structure, origin and evolution of a wide range of heavenly bodies, and thus help to discover the formation and development of the Solar system. The Moon should be particularly rewarding in this respect; as it has no atmosphere and no water it is not subject to destructive processes, such as erosion, which destroy traces of geological processes. Artificial satellites will permit observa-

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An important stage ....

tions of meteorological processes over the entire surface of the Earth, as they develop, thus enabling the weather to be accurately forecast, and even changed at will. Space ships will be used to study the microcosm, as the cosmos is an ideal nuclear laboratory, a vacuum containing particles with very high energies. In this connection the author remarks that the second Soviet artificial satellite had instruments on board for studying cosmic radiation: Space vehicles will carry instruments beyond the dense atmosphere of the Earth, thus making it possible to study electromagnetic emissions important for astrophysical research. Man will be able to fly to other planets and study other forms of life which may exist on them. However, the uses of artificial satellites and space ships are unlimited. At the beginning of the article the author remarks that the Soviet Union has been ahead of the USA in all stages of cosmic research, despite the latter's attempts to catch up. There are 2 figures.

Card 4/4

KROSHKIN, M., kand.fiz.-mat.nauk

Man in space! Sov. profsoiuzy 17 no.8:8-9 Ap '61. (MIRA 14:3)  
(Astronautics)

BR

## PHASE I BOOK EXPLOITATION

SOV/5984

Kroshkin, Mikhail Galaktionovich, Candidate of Physics and Mathematics

Chelovek pronikayet v kosmos; nauchnyye issledovaniya s pomoshch'yu raket i sputnikov (Man Penetrates Space; Scientific Investigations With the Help of Rockets and Satellites) Moscow, Voenizdat M-va obr. SSSR, 1962. 158 p. (Series: Nauchno-populyarnaya biblioteka voyennogo izdatel'stva) 50,000 copies printed.

Ed.: Yu. N. Sushkov, Candidate of Technical Sciences; Eds. of Publishing House: Ya. M. Kader and L. K. Tsvetkova; Tech. Ed.: R. I. Chanayeva.

PURPOSE: This book is intended for general readers.

COVERAGE: The book deals with man's flight into space and the use of rockets and artificial satellites for scientific purposes. The development of the "space age", the work of K. E. Tsiolkovskiy, and the flights of Soviet cosmonauts are described. The results of scientific investigations conducted in space and their importance to geophysics and astronomy are given special attention. In

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Man Penetrates Space (Cont.)

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addition to a description of the radiation belts of the Earth, the book also presents data obtained from investigation of the far side of the Moon and a discussion on the possibility of life on other planets. There are no references.

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KROSHKIN, M.G.; SAMARIN, V.G.

Exchange through the World Data Center B of materials obtained  
with rockets and satellites. Geofiz.biul. no.12:115-124 '62.  
(Artificial satellites) (Rockets (Aeronautics)) (MIRA 16:5)

KROSHKIN, M., kand.fiziko-matematicheskikh nauk

The figure of our planet. Tekh.mol. 30 no.1:4-5 '62. (MIRA 15:2)  
(Earth—Figure)

ARKHANGEL'SKIY, Mikhail Mikhaylovich; SHEBALIN, Oleg Dmitriyevich;  
KROSHKIN, M.G., nauchnyy. red.; FAYNBOYM, I.S., red.;  
ATROSHCHENKO, L.Ye., tekhn. red.

[Mysteries of the earth are revealed in space] Tainy Zemli  
raskryvaiutsia v kosmose. Moskva, Izd-vo "Znanie," 1963.  
45 p. (Novoe v zhizni, nauke, tekhnike. IX Seriya: Fizika i  
khimija, no.11) (MIRA 16:7)  
(Geodetic satellites) (Meteorological satellites)  
(Astronautics in navigation)



FETROV, Viktor Pavlovich, kand. tekhn. nauk; YUREVICH, Petr  
Platonovich [Iurevych, P.P.]; YEVERSKIY, V.Y. [IEvers'kyi,  
V.I.], kand. fiz.-mat. nauk, retsenzent; KROSHKIN, M.G.  
[Kroshkin, M.H.], kand. fiz.-mat. nauk, retsenzent; GAVRILOV, V.M.  
[Havrylov, V.M.] red. izd-va; BEREZOVYY, V.M. [Berezovyi, V.M.],  
tekh. red.

[Conquest of space] Osvoeniennia Kosmosu. Kyiv, Derzhtekhvydav  
URSR, 1963. 168 p. (MIRA 17:3)

... issledovaniye kosmicheskogo prostranstva, no. 4, 1964, Abu. 4 62.1

AUTHOR: Krochkin, M.G., Samarin, V.G.

... the years of Soviet space investigations

b

... Dyd. Meshdved. gosin. kom. i m. Otdel. nauch. AN SSSR, no. 13, 1963, 88-93

... artificial earth satellite, space rocket, interplanetary station, Vostoik  
... series

... This is a concise review of the fundamental stages in the space investiga-  
... the Soviet Union. The point is made that the advantages of space  
... USSR have been, and are being, fully utilized. The field of re-  
... atmosphere, outer space and the planets of the solar system.  
... research in space. The authors also discuss the possibilities  
... the future of space exploration.  
... the purposes and mission of the Soviet interplanetary  
... orbital parameters, and will be of interest to all who are  
... interested in the development of space exploration.

100-1-5  
ACCESSION NR: AR4044987

of all sources (TASS releases and others). The launches are grouped in the tables according to the purpose of the vehicles (artificial earth satellite, etc.).

ENCLOSURE

KONDRAT'YEV, K.Ya., doktor fiz.-mat. nauk, prof.; KACSHKIN, M.G.,  
kand. fiz.-mat. nauk; MORACHEVSKIY, V.G., kand. fi-  
mat. nauk; FEDOROV, Ye.K., akademik, red., VETLOV, I.P.,  
kand. fiz.-mat. nauk, otv. red.; BOYKOVA, A.G., red.

[Our planet from space; an album of photographs] Nasha  
planeta iz kosmosa; al'bom fotografii. Leningrad, Gidro-  
meteozdat, 1964. 50 p. (MIRA 18:2)

SMAGIN, Boris Ivanovich; KROSHKIN, M.G., kand. fiz.-matem.nauk,  
red.; KILLEROG, N.M.; red.

[Space and science] Kosmos i nauka. Kiev, Naukova dumka,  
1964. 97 p. (MIRA 17:10)

... (ZEMLYA) / EWPA... (RECH...)

BOOK EXPLANATION

NP

24-1

Author: Mikhail Galaktionovich

Earth needs in space (Zemlya nachinyetsya v kosmose) Moscow, Izd-vo Sovetskaya  
1964, 210 p., illus., biblio. 34,000 copies printed

... earth planet, cosmic ray, upper atmosphere, artificial satellite,  
... astrophysics, meteorology

NOTE: This book is intended for general use by a large number of  
... to denote these...

1. The sky above the planet is not blue - - 5

2. The earth needs satellites - - 13

3. ... became closer - - 24

and 2

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2.

- cosmic radiation "warns" of danger - - 33
- can they affect weather? - - 35
- what is known about cosmic rays - - 39
- The possibility of studying solar plasma streams - - 44
- captured by magnetic field - -
- will depend upon the radiation belt - - 56
- upper atmosphere of the Earth - - 70
- upper atmosphere is very dynamic - - 77
- structure of the planet - - 8
- all stars look down - - 9
- satellites photograph cloudiness - - 25
- what the orbits ought to be like - - 105
- satellites and the insides of the Earth - - 112
- precision determination of the planet's form - - 115
- artificial satellites and their orbits - - 125
- lines of the solar system - -
- what of interest there is to learn about the Moon - - 126
- how to study the Moon - - 137
- large physics laboratory - - 147
- Einstein's theory of gravitation - - 153

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Approved

How to verify the theory of relativity - - 161

of the universe - for the life on earth - - 117

of the neighboring planets - - 117

is possible in other forms - - 117

How mechanism be transferred from one planet to another planet

of the space - - 117

of the first planet - - 117

of the first planet - - 117

of the first planet - - 117

Card 3/3



AUTHOR: Kroshkin, M. G.

TITLE: The earth begins in space

CITED SOURCE: Sov. Rossiya, 1964, 213 str.

Keywords: space exploration, earth, sun, universe

Card 1/1

VASIL'CHIKOV, S.A., inzh.; KROSHKIN, M.I., inzh.

Investigating the packing capacity of light packing in a  
flange joint. Khim. i nef. mashinostr. no.5217-18 N 64  
(MIRA 18:2)

KROSHKIN, M. P.

Method of designing liquid level indicators in vessels. Izv.  
vys. ucheb. zav.; khim. i khim. tekhn. 5 no.5:840-844 '62.  
(MIRA 16:1)

1. Ivanovskiy khimiko-tekhnologicheskii institut, kafedra  
khimicheskogo mashinostroyeniya.

(Liquid level indicators)

KROSHKIN, M.P.

Basic design of hydraulic ring screw compressors. Izv. vys. ucheb. zav.; khim. i khim. tekhn. 8 no.1:155-159 '65. (MIRA 18:6)

1. Ivanovskiy khimiko-tekhnologicheskii Institut, kafedra khimicheskogo mashinostroyeniya.

L 412 6-56 INT(m)  
ACC NR: AP6013729

(A)

SOURCE CODE: UR/0089/66/020/004/0342/0342

AUTHOR: Nefedov, V. N.; Kroshkin, N. I.; Kharin, V. P.; Mel'nikov, A. K.

ORG: none

TITLE: The mean neutron spectra from double or triple  $U^{235}$  fission by thermal neutrons  
79

SOURCE: Atomnaya energiya, v. 20, no. 4, 1966, 342

TOPIC TAGS: nuclear fission, uranium, neutron spectrum, thermal neutron

ABSTRACT: Using the time-of-flight method (40 cm of distance) the authors measured the spectrum of prompt neutrons during double and triple fission of  $U^{235}$  nuclei by thermal neutron (see Fig. 1) from the SM-2 reactor. The uranyl nitrate target was 20 mm in diameter and ~2 mg/cm thick. An analysis of the results shows that triple fission is accompanied by ~6.0-6.5  $\gamma$ -quanta. The  $\gamma$ -spectrum of the triple fission is somewhat harder than the one from double fission. Orig. art. has: 1 figure.

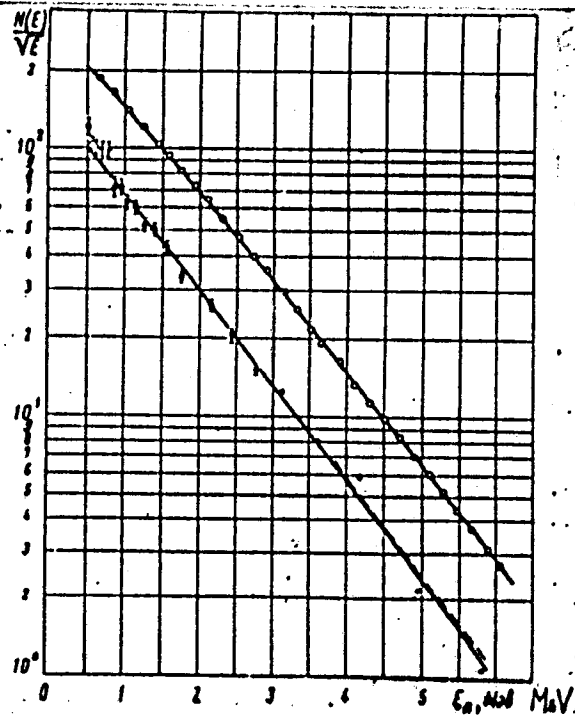
Card 1/2

UDC: 539.173.84.539.121.64

L 41224-66

ACC NR: AP6013729

Fig. 1 The spectrum of fission neutrons in the laboratory system of coordinates.  
 O - double fission; ● - triple fission;  
 - - - Maxwell distribution ( $T = 1.2$  MeV);  
 — — — Watt's distribution (for double fission  $T = 0.965$  MeV,  $E_f = 0.533$  MeV,  $E = 1.98$  MeV; for triple fission  $T = 0.9$  MeV,  $E_f = 0.5$  MeV,  $E = 1.8$  MeV).



SUB CODE: 18/ SUBM DATE: 07Dec65/ ORIG REF: 001/ OTH REF: 000

KROSHKIN, V.

USSR/Miscellaneous

Card 1/1            Pub. 89 - 7/28

Authors            :    Kroshkin, V.

Title                :    In a collective radio station

Periodical         :    Radio 4, page 11, Apr. 1955

Abstract            :    Radio amateur activities of the Kuybyshev radio club are briefly described, and some complaints are listed concerning the poor quality of instructions and consultations extended by instructors of the above mentioned club.

Institution        :    .....

Submitted          :    .....

~~KROSHKIN, Y.~~

Winding high quality circuit coils. Radio no.11:29 M '56.  
(Electric coils) (MLRA 9:12)



06448

SOV/107-59-5-43/51

9(1)

AUTHOR:

Kroshkin, V.

TITLE:

TV Antennas for Twelve Channels

PERIODICAL:

Radio, 1959, Nr 5, pp 57 - 58 and p 3 of the cover  
(USSR)

ABSTRACT:

The Nauchno-issledovatel'skiy institut svyazi (Scientific Research Institute of Communications) developed a new type of twelve-channel TV antenna under the supervision of V.D. Kuznetsov. This work was conducted under consideration of the future development of Soviet TV. Although a reconstruction of the TV receiver system is not to be expected during the next 10 or 15 years, this research is of importance for the future. Anticipating a considerable increase in the number of TV sets in Soviet homes, these multi-channel antennas may eliminate a number of problems. Installing a large number of TV antennas on the roofs of apartment buildings is not possible, not only because of the deterioration of the external appearance of the building, but

Card 1/2

TV Antennas for Twelve Channels

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also because of the interference between the different TV antennas. For this reason group antennas are required, facilitating reception in different TV channels. The twelve-channel TV antenna developed by the aforementioned Institute will meet these requirements. Besides a group antenna for the future, it may be used for single TV sets at the present time, wherever reception of more than one TV station is possible. On page 3 of the cover, the constructional details of such an antenna are shown. There are 4 diagrams and 1 Soviet reference.

Card 2/2

KROSHKIN, V.

Elimination of a shortcoming in the "Oktava" radio-phonograph.  
Radio no. 11:27 N '60. (MIRA 14:1)  
(Radio) (Phonograph)

KROSHKIN, V.

"Key to the sun" by E.Borisov and I.Platnova. Reviewed by  
V.Kroshkin. Radio no.6:64, Je '61. (MIRA 14:10)  
(Semiconductors) (Borisov, E.) (Platnova, I.)

KUZMAK, Ye.M.; KROSHKIN, V.A.

Long-term durability of 12MKh and 12Kh1MF tempered steel and  
welded joints. Trudy MINKHIGP 46:150-163 '64. (MIRA 17:6)