

VOLODIN, P.I.,  
A. N. FILARETOV, Russ. 39,097, Oct. 31, 1934.

BUDNIKOV, P.P.; VOLODIN, P.L.; TRESVIYATSKIY, S.G.

Review of data on the system:  $\text{CaCl}_2$  --  $\text{BaCl}_2$ . Ukr.khim.zhur.22  
no.3:292-294 '56. (MIRA 9:9)  
(Chlorides)

BUDNIKOV, P.P.; VOLODIN, P.L.; TRISVIATSKIY, S.G.

Investigating the clinkering and recrystallization of pure magnesium  
oxide. Ogneupory 25 no.2:70-73 '60. (MIRA 13:10)  
(Magnesium oxide) (Crystallization) (Clinker brick)

TRESVIATSKIY, S.G.; GRIKOV, V.V.; VOLODIN, P.L.; SEROV, K.M.

High-temperature vacuum kilns for calcinating high-strength  
refractories. Ogneupory 25 no.7:313-316 '60. (MIRA 13:8)  
(Refractory materials) (Kilns)

VOLOBIN, R. (Sungait)

~~Building Sungait, Za rul. 16 no.9:11-12 S '58. (MIRA 11:10)~~  
(Sungait--Automobile drivers)

VOLODIN, R.

Taming atomic explosions. Znan. sila 33 no.8:7 Ag '58.  
(United States--Nuclear reactors)

(MIRA 11:11)

VCEODIN, R.

Driving an armored motortruck, 2a rul. 16 no.2:8 7 '58. (MIRA 11:3)  
(Transportation, Military)

BAKUN, N.N.; VOLODIN, R.H.; KRENDELEV, F.P.

Geological structure of the Udokan copper sand deposit and prospects for its further investigation. *Izv.vys.ucheb.zav.; geol. i razv.* 1 no.5:67-83 My '58. (MIRA 12:2)

1. Moskovskiy geologorazvedochnyy institut imeni S. Ordzhonikidze, Kafedra petrografii osadochnykh porod, kafedra poleznykh iskopayemykh, kafedra metodiki poiskov i razvedki.  
(Udokan Range--Sand)



VOLODIN R.N.

Molybdenum in ores of the Udokan copper sandstone deposit (north-eastern Transbaikalia). Izv.vys.ucheb.sav.; geol. i razv. 1 no.11: 49-50 N '58. (MIRA 12:11)

1. Moskovskiy geologorazvedochnyy institut im. S. Ordzhonikidze (Udokan region (Transbaikalia)--Molybdenum)

BAKUN, N.N.; VOLODIN, R.N.; KRENDELEV, F.P.

Genesis of the cuprous sandstones of the Udokan deposit. Lit. 1 pol.  
iskop. no.3:89-193 My-Je '64. (MIRA 17:11)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

FELIKHOV, Aleksey Alekseyevich; VOLODIN, Sergey Vasil'yevich;  
AVTOMONOVA, Kaleriya Mikhaylovna; ZAGORSKIY, G., red.;  
YAKOVLEVA, Ye., tekhn. red.

[Over-all mechanization of hay harvesting] Kompleksnaia me-  
khanizatsiia uborki sena. Moskva, Mosk. rabochii. 1960. 85 p.  
(MIRA 14:12)

1. Rabotniki Podol'skoy mashinoispytatel'noy stantsii (Pelikhov,  
Volodin, Avtomonova).

(Hay—Harvesting)

MIKHAYLOV, V.N., kand. tekhn. nauk; VOLODIN, S.A., inzh.

Determining frictional resistance of a reinforced concrete  
ship. Sudostroenie 27 no.2:5-10 F '61. (MIRA 16:7)

(Ships, Concrete)  
(Frictional resistance(Hydrodynamics))

VOLODIN, T. (Frunze)

"Intergel'po." Prom.koop. no.11:12-13 N 157.  
(Frunze--Cooperative societies)

(MIRA 10:12)

VOLODIN, T.

Read these books ("From the pages of stone chronicles" by S.D. Sher.  
Reviewed by T. Volodin). IUn. nat. no.9:26 S '59.

(MIRA 13:1)

(Geology) (Sher, S.D.)

SHLYAPIN, A., zootekhnik; VOLGDIN, V., zootekhnik

Advanced methods for fattening swines. NTO 5 no.8:21-24 Ag '63.  
(MIRA 16:10)

VOLODIN, S., KALANTROV, D.

Radio -Bibliography

Radio engineering literature in 1952. Radio, 20, no. 1, 1952

Monthly List of Russian Accessions, Library of Congress, April 1952. Unclassified.



TASHKINOV, A. (Perm'); KNYAZEV, V.; SYCHEV, B., shofer; TELITSYN, A., shofer; SHIRMANOV, Yu., shofer; GORSHKOV, G., shofer; FEDOTOV, G. (Penza); RYBIN, H. (Krasnodarskiy kray); ZYRYANOV, T., bukhgalter pozharnoy chasti (Kamensk-Ural'skiy, Sverdlovskaya obl.); KRIVOSHAPOV, I. (Sverdlovsk); VOLODIN, V. (Rostov-na-Donu)

Readers' letters. Pozh.delo 8 no.8:30 Ag '62. (MIRA 15:8)

1. Nachal'nik dobrovol'noy pozharnoy druzhiny kolkhoza "Rossiya", Kalininskaya obl. (for Knyazev). 2. Bol'shaya-Murashkinskaya rayonnaya pozharnaya komanda Gor'kovskoy oblasti (for Sychev, Telitsyn, Shirmanov, Gorshkov).

(Fire prevention)

VOLODIN, V., insh.

Controlling corrosion of construction elements in nonferrous  
metallurgical shops. Nov. tekhn. i pered. op. v stroi. 20 no.4:  
6-10 Ap '58. (MIRA 11:3)

(Corrosion and anticorrosives)

VOLODIN, Valentin

Scientist at Popov Union Company

Scientific radio and communication organization.

Soviet Source: P: Neve Zurcher Zeitung No. 320 1948 Switzerland

Abstracted in USAF "Treasure Island" Report No. 2584, on file in Library of Congress, Air Information Division.

WOLCOW, V.

Sewing

progressive sewing methods. folkh. prosv. 12 no. 4 (1952)

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

*VOLODIN, V.*  
VOLODIN, V.; SHVAYKOVSKIY, V.

On short tracks. Za rul. no.12:8-9 D '57.  
(Rastorguevo--Motorcycle racing)

(MIRA 11:1)

VOLODIN, V.

Workdays of a student body. Prof.-tekh. obr. 14 no.4:27-28 Ap '57.  
(Technical education) (MIRA 10:4)

*VOLODIN, V.*

SUBJECT: USSR/Labor Unions 27-12/19  
AUTHOR: Volodin, V.  
TITLE: Apprentices' Week-Day Activity (Budni uchenicheskogo aktiva)  
PERIODICAL: Professional'no - Tekhnicheskoye Obrazovaniye, April 1957,  
# 4 (143), pp 27-28 (USSR)  
ABSTRACT: Every trade school has an Apprentices' Labor Union which in conjunction with the Komsomol organizations assist the school-masters in establishing discipline and obtaining a greater efficiency of the students' work. The article enumerates a number of Labor Reserve Schools at which the Labor Unions have arranged cultural entertainments, the purchase of musical instruments, TV sets, sports kits, discussions on questions of discipline, etc. However, the Labor Unions have to cope also with such abnormal situations as hooliganism, use of bad language, drunkenness and disgraceful behaviour.

Card 1/1

ASSOCIATION:  
PRESENTED BY:  
SUBMITTED:  
AVAILABLE: At the Library of Congress

AUTHOR: Volodin, V.

SOV-27-58-10-9/31

TITLE: Practical Training of Students (Trudovoye vospitaniye  
uchashchikhsya)

PERIODICAL: Professional'no-tekhnicheskoye obrazovaniye, 1958, Nr 10,  
pp 14-15 (USSR)

ABSTRACT: The author describes different methods used to occupy the  
students' free time. Various competitive expositions,  
talks and so on are organized by different schools to fill  
the time left free of studies and practical work.

1. Personnel--Training

Card 1/1



22 (1)  
AUTHOR:

VOLODIN, V.

SOV/27-59-2-6/30

TITLE:

The Followers of Good Initiative  
(Posledovateli slavnogo pochina)

PERIODICAL:

Professional'no-tehnicheskoye obrazovaniye, 1959, Nr 2,  
p 11 (USSR)

ABSTRACT:

Students and workers of Moscow Labor Reserve schools met recently in the Labor Reserves Central House of Culture. The meeting was informed of the initiative shown by the personnel of the Diesel Locomotive Repair Shop of the Depo Moskva-Sortirovochnaya (Moscow Marshalling Yard), Moscow-Ryazan' Railroad, who organized the Communist Labor Brigade competition. The meeting was opened by Z.I. Solodkaya, Chief of the Moskovskoye gorodskoye upravleniye trudovykh rezervov (Moscow City Administration of Labor Reserves). The author lists the achievements of the Tekhnicheskoye uchilishche Nr 3 students (Technical School Nr 3), Moscow, in their endeavors to be considered a Group of Communist Labor. Students of the school made 600 visual aids for the training workshops, designed and manufactured a

Card 1/2

The Followers of Good Initiative

SOV/27-59-2-6/30

machine tool, etc. Among the persons mentioned in the article is A.F. Bordadyn, Deputy Chief of Glavnoye upravleniye trudovykh rezervov (Main Administration of Labor Reserves).

Card 2/2

VOIODIN, V.

~~Two free days a week. Sov.profsoiuzy 7 no.9:28-29 My '59.~~  
(MIRA 12'8)

(Dolgoprudnyy--Labor productivity)

VOLODIN, V.

"Application of the technology of high frequencies and electronics to industry."

So. Radio, Vol. 5, p. 6, 1952

VOLODIN, V.

"Polyelectrode Automatic Electric Arc Welding," *Novosti Naft. Tekhniki, Str-vo i Montazh.* No 5, pp 17-22, 1953

Developed a method of automatic electric arc welding using polyelectrodes not requiring special equipment. Method consists of subjecting several wire electrodes to the arc zone, with the arc jumping from one electrode to another. (*RZhKhim*, No 22, 1954)

SUM. No. 681, 7 Oct 55

VOLODIN, V.

The new five-year plan of "Dinamo" workers. Sov. profsoiuzy  
3 no.10:24-26 0 '55. (MLRA 9:1)  
(Moscow--Electric industries)

1. VOLODIN, V.
2. USSR (600)
4. Tillage
7. Great attention to new cultivation practices, No. 5, 1953.

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

1. VOLODIN, V.
2. USSR 600
4. Plowing
7. We are plowing deeper, Kolkh, proizv, 13, No. 1, 1953.

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



S/029/60/000/009/002/008  
B013/B060

AUTHOR: Volodin, V., Chief Expert for Welding Production

TITLE: Free Path for Welding

PERIODICAL: Tekhnika molodezhi, 1960, No. 9, pp. 8-9, 22

TEXT: The author reports on problems of welding engineering. By way of introduction he gives a brief historical survey of the development of this branch in Russia. It is then pointed out that one of the main problems is connected with high-frequency welding which can be applied to the production of cable sheathings (Fig. p.8, above) from aluminum, and to a number of other industrial branches. Another important problem is the introduction of a new thermal source. It is the so-called plasma arc which attains temperatures of 15,000°C and more, and whose technical properties are controllable within a wide range. In order to minimize transportation costs in the laying of pipelines, the author suggests that pipes be manufactured on the spot. The productivity of arc welding can be augmented by employing several electrodes instead of the customary single electrode. A. A. Ulesov, twofold Hero of Socialist Work (Fig.p.8,

Card 1/3

Free Path for Welding

S/029/60/000/009/002/008  
B013/B060

below left) has worked out a multiple-electrode welding device. Large investments are hardly ever required for conversion to this new procedure. Cold-press welding, which is still in its initial stage of development, is believed to have great possibilities of application in the electro-technical and radio industry, in the production of aluminum table-plate, ship and airplane furniture, and also in the packing technique. A. N. Chudikov, turner and innovator, worked out a welding method using friction in 1956. This method is a variant of press welding and differs from other techniques by the fact that the heat produced by friction is utilized for metal heating. Metal cutting equipment, which is often used for welding by friction is modernized from time to time. Special equipment is required to augment the productivity of this method and to achieve better joints. One of the main tasks of the welding branch is the compliance with directions adopted by the Plenum of the TsK KPSS (June, 1959), which provide for an overall mechanization and automation of production. There are 3 figures.

Card 2/3

Free Path for Welding

S/029/60/000/009/002/008  
B013/B060

ASSOCIATION: Gosudarstvennyy komitet Soveta Ministrov SSR po  
avtomatizatsii i mashinostroyeniyu (State Committee on  
Automation and Machine Construction of the Council of  
Ministers USSR)



Card 3/3

VOLODIN, V.

Another world record. Sov.shakht. 11 no.6:16-17 Jo '62. (MIRA 15:6)  
(Kuznetsk Basin--Coal mines and mining)

VOLODIN, V., kand. tekhn. nauk

Building-up by welding should be used in production. NTO 5  
no.8:43-44 Ag '63. (MIRA 16:10)

1. Glavnyy spetsialist po svarochnomu proizvodstvu Gosudarstvennogo  
komiteta po mashinostroyeniyu pri Gosplane SSSR.

VoLODIN, V. A.

AID P - 1154

Subject : USSR/Electricity  
Card 1/1 Pub. 29 - 7/31  
Authors : Volodin, V. A., foreman and Markovskiy, V. V., Eng.  
Title : ~~Improvement of performance of condensate pumps~~  
Periodical : Energetik, 11, 16-17, N 1954  
Abstract : The authors briefly describe faults occurring in the KD-76 type pumps, and the improvements they introduced by a better method of hydraulically compacting the pump gaskets.  
Institution : None  
Submitted : No date

*VOLODIN, V.A.*

ANTONOV, I.A., kand.tekhn.nauk; ANTOSHIN, Ye.V., inzh.; ASINOVSKAYA, G.A., inzh.; VASIL'YEV, K.V., kand.tekhn.nauk; GUZOV, S.G., inzh.; DEYKUN, V.K., inzh.; ZAYTSEVA, V.P., inzh.; KAZBEKOV, P.P., inzh.; KARAM, Yu.B., inzh.; KOLFUNOV, P.S., kand.tekhn.nauk; KOROVIN, A.I., inzh.; KRZHECHKOVSKIY, A.K., inzh.; KUZNETSOVA, Ye.I., inzh.; MATVEYEV, N.N., tekhnik; MOROZOV, M.Ye., inzh.; NEKRASOV, Yu.I., inzh.; NECHAYEV, V.D., kand.tekhn.nauk; NINBURG, A.K., kand.tekhn.nauk; SPEKTOR, O.Sh., inzh.; STRIZHEVSKIY, I.I., kand.khim.nauk; TESMENITSKIY, D.I., inzh.; KHRONOVA, TS.S., inzh.; TSEUNEL', A.K., inzh.; SHASHKOV, A.N., kand.tekhn.nauk, dots.; SHELECHNIK, M.M., inzh.; SHUKHMAN, D.Ya., inzh.; KDEL'SON, A.M., inzh.; VOLODIN, V.A., red.; UVAROVA, A.F., tekhn.red.

[Machines and apparatuses designed by the All-Union Institute of Autogenous Working of Metals] Mashiny i apparaty konstruktssii VNIIAvtogen. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1957. 173 p. (Moscow. Vsesoyuznyi nauchno-issledovatel'skii institut avtoennoi obrabotki metallov, no.9)  
(Gas welding and cutting--Equipment and supplies)

VOLODIN, V.A.; KAPYRIN, Yu.V.; TESLYUK, Ye.V.

Studying the vertical profile of the output and flow rates of fluids  
in producing and injection wells. Nauch.-tekh. sbor. po dob. nefti  
no.20:66-71 '63. (MIRA 17:6)



L 18150-66 ETC(m)-6 WM

SOURCE CODE: UR/0286/65/000/023/0056/0056

ACC NR: AP6002559

AUTHORS: Madoyan, A. A.; Maksimova, V. I.; Metil', Zh. P.; Volodin, V. A.

32  
B

ORG: none

TITLE: Device for measuring flow rate. <sup>WM</sup> Class 42, No. 176709

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 56

TOPIC TAGS: flow meter, pressure measurement

ABSTRACT: This Author Certificate presents a device for measuring flow rate. The apparatus contains a detector for sampling the dynamic and the static pressure and a measuring device. To exclude the effect of dust content of the medium on the instrument reading, the detector is in the form of a nozzle placed along the current and two pneumometric tubes placed at an angle to the nozzle and concentric with each other (see Fig. 1). The inner tube for sampling the static pressure is connected to a hole in the nozzle perpendicular to the moving current. The outer tube for sampling the dynamic pressure is made with an expanded

UDC: 681.121.843

Card 1/2

2

L 18150-66

ACC NR: AP6002559

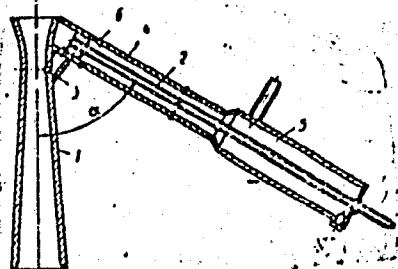


Fig. 1. 1 - nozzle; 2 - inner tube; 3 - hole for sampling static pressure; 4 - outer tube; 5 - dust collector; 6 - hole for sampling dynamic pressure.

portion for collecting dust and with a hole placed toward the current. Orig. art. has: 1 diagram.

SUB CODE: 20, 14/ SUBM DATE: 01Jul64/

Card 2/2 7/95

ACC NR: AP7001932

SOURCE CODE: UR/0120/66/000/006/0022/0025

AUTHOR: Vagin, V. A.; Volodin, V. D.; Plyashkevich, N. N.; Sayenko, A. P.;  
Semenyushkin, I. N.; Stepanyuk, V. L.

ORG: Joint Institute of Nuclear Research, Dubna (Ob"yedinennyy institut yadernykh  
issledovaniy)

TITLE: System for multiple acceleration of an electrodynamic separator of high-  
energy particles

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1966, 22-25

TOPIC TAGS: particle beam, proton accelerator

ABSTRACT: A system for multiple acceleration of high-energy particles is described. The system recaptures protons in multiple frequency ( $q = 100$ ) acceleration conditions previously accelerated to maximal energy and continues their acceleration for 15—20  $\mu$ sec. The system consists of a coaxial resonator, hf units, a pulse modulator, and a synchronizer. The frequency of the multiple acceleration is 149.520 mc and the pulse duration is 15—20  $\mu$ sec. A 70% coefficient of proton recapture at beam energy  $E = 10$  Gev, energetic spread  $\Delta E = \pm 1.7$  Mev, and amplitude of the accelerating voltage in the resonator  $V_r = 70$  kv was obtained during testing

Card 1/2

UDC: 539.1.076:621.384.6

ACC NR: AP7001932

of the system on a proton synchrotron at the Joint Institute of Nuclear Research. Orig. art. has: 4 figures and 2 formulas.

SUB CODE: 20/ SUBM DATE: 12Nov65/ ORIG REF: 005/ ATD PRESS: 5111

Card - 2/2

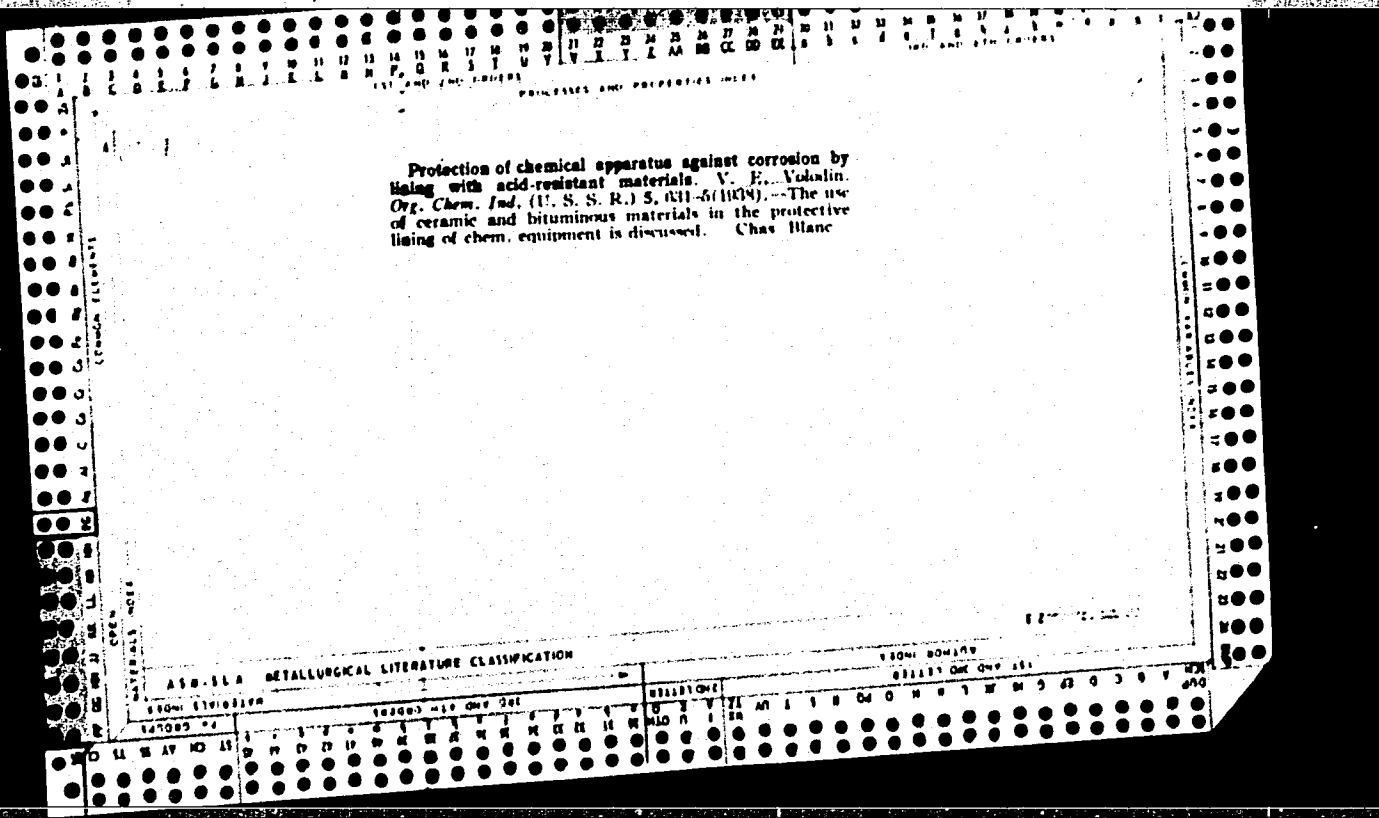
PROCESSES AND PROPERTIES INDEX

Chemically resistant asphaltic bituminous materials  
 V. B. Vokalin, *Korr. u. Korrosionsschutz* (U. S. S. R.) 7, 397-403 (1960); *Res. Current Ind. Paint, Colour, Varnish & Allied Ind.* 12, 121; *J. C. I.* 31, 7218.

Petroleum bitumens, coal-tar pitches or sulfurized or chlorinated products derived therefrom are used in the chemical plant either in the form of lacquers or combined with fillers such as C, kaolin, silica, asbestos, cement, etc. Asphalt-lacquer coatings are suitable for Ni-plating baths up to 100° and are resistant to dil. acids and to fairly concd. acids up to 80°, but are not resistant to concd.

HDAc or alkalies, org. materials or chromic acid.  
 George Ayers

ASAC-SEA METALLOGICAL LITERATURE CLASSIFICATION



*ca*

*13*

Acid resistant coatings for iron containers V. K. Volodin, K. N. Volodin, M. N. Rekhoshadt and V. A. Rekhoshadt. Russ. 40,241, March 31, 1950. Acid-resistant coatings are prepd. from vegetable oils and sulfur dichloride in addn. to MgO and barite, or MgO and acid-resistant cement.

ASB-554 METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND SERIALS		3RD AND 4TH SERIALS	
PROCESSES AND PROPERTIES INDEX			
CA			
Nonmetallic materials for chemical apparatus. V. R. Volodin and I. Ya. Klimov. <i>Khem. Mashinostroyeniye</i> 1960, No. 7, 31-3. - A brief review is given on the progress made in the Soviet Union during the last 10 yrs. in the development and use of nonmetallic materials for chem. app. The topics include acid-resistant ceramics, diatom, fused quartz, glass, concrete, cements with water glass, S cements, aluminum mastics, rubber coatings, plastics, enamels and wood. Fifteen references. B. Z. Kamich			
ASB-ILA METALLURGICAL LITERATURE CLASSIFICATION			
1ST AND 2ND SERIALS		3RD AND 4TH SERIALS	
1ST AND 2ND SERIALS		3RD AND 4TH SERIALS	
1ST AND 2ND SERIALS		3RD AND 4TH SERIALS	



VOLODIN, V. G.

VOLODIN, V. G.: "A study of the biological properties of the blossoming and  
pollenation of wheat". Minsk, 1955. Belorussian State U imeni V. I. Lenin.  
(Dissertations for the degree of Candidate of Biological Sciences.)

SO: Knishnaya Letopis' No. 50 10 December 1955. Moscow.

TURBIN, N.V.; VOLODIN, V.G.

On the biology of wheat flowering. Dokl.AN SSSR 107 no.4:601-603  
Ap '56. (MIRA 9:7)

1.Akademik AN BSSR (for Turbin).2.Institut biologii Akademii  
nauk BSSR.  
(Wheat) (Plants, Flowering of)

USSR/Cultivated Plants. Grains.

ii

Abs Jour : Ref Zhur-Biol., No 15, 1953, 68096

Author : Turbin, N. V., Volodin, V. G.  
Inst : AS Bel SSR Institute of Biology.  
Title : Supplementary Artificial Pollination of Rye  
with an Airplane.

Orig Pub : Byul. In-ta biol. AN BSSR, 1956 (1957), No 2,  
199-202

Abstract : In 1956, in a kolkhoz of Minsk Oblast' an area  
of 50 hectare was planted with Partizanskaya  
winter rye and given supplementary pollination  
by using a PO-2 type airplane. The yield on  
these areas was higher than on control areas.  
-- O. A. Gorbunova

Card : 1/1

VOLODIN, V.G.; SAMUSENKO, S.S., kand. biol. nauk

Intensity of flowering in wheat and rye in the day-by-day course  
of flowering and during a 24-hour period. Uch. zap. BGU no. 37:  
151-160 '57. (MIRA 12:1)  
(Plants, Flowering of) (Wheat) (Rye)

VOLODIN, V.G.

Increasing the intensity of flowering in wheat. Biol. Inst. biol.  
(MIRA 11:2)  
AN BSSR no.2:203-207 '57.  
(Wheat) (Plants, Flowering of)

USSR/General Biology. Genetics

B

Abs Jour : Dokl. Akad. Nauk SSSR, No 15, 1957, 57188

Author : ~~Voledin V. G.~~  
Inst : Institute of Biology, Academy of Sciences Belorussian SSR  
Title : Investigation of the activity of Invertase in the Ovaries of Wheat in Different Variants of Pollination

Orig Pub : Byul. In-ta biol., AN BSSR, 1956, (1957), VYP 2, 226-229

Abstract : The activity of invertase in two-day old ovaries of Lyutscens 052 spring wheat in different methods of pollination was studied. It was determined that the castration of the flower considerably lowers the activity of the enzyme. No definite differences were found at the same

Card 1/2

USSR / Cultivated Plants. Cereals Crops.

M-3

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58528

Author : Volodin, V. G.

Inst : Acad. Sci. BSSR

Title : Contribution to the Problem of Increasing the Intensity of Wheat Blossoming

Orig Pub : Byul. In-ta biol. AN BSSR, 1956 (1957), vyp 2, 203-207

Abstract : The spraying of ears of wheat with water showed the dependence of the blossoming process on the change of temperature and on the humidity of the air. Frequent sprayings of ears of wheat with water increase the intensity of the blossoming and create better conditions for conducting artificial supplementary pollination of wheat (the presence of a great number of opened flowers). They also shorten the blossoming period of the sprayed

Card 1/2

USSR / Cultivated Plants. Cereal Crops.

M-3

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58528

variety. Flowers, which open during spraying, are ready  
for fertilization. -- O. V. Yakushkina

Card 2/2

30



USSR/Cultivated Plants - Grains.

M-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91620

The hot period (from 10 to 13 hours) is characterized by almost complete absence of open blooming. Rye usually has only one morning peak (from 7 to 10) with a gradual decrease in the rate of flowering during the following hours of the day. With wheat as well as with rye the maximum number of flowers blossom on the second day after the beginning of floescence. Flowering in both crops practically ends after 3 - 4 days. -- Yu. L. Guzhev.

Card 2/2

- 28 -

TURBIN, N.V., akademik, otv. red.; VOLODIN, V.G., kand. biol.  
nauk, red.; PALILOVA, A.H., red.; KHOTYLEVA, L.V.,  
red.

[Genetics of heterosis] Genetika geterozisa. Minsk, Izd-  
vo "Nauka i tekhnika," 1964. 74 p. (MIRA 18:12)

1. Akademiya navuk BSSR, Minsk. Otdel genetiki i tsitologii.
2. Akademiya nauk Belorusskoy SSR (for Turbin).

VOLODIN, V.G.

Effect of the enzyme diastase on the germination of corn  
seeds. Bot.; issl.Bel.otd.VBO no.7:5-10 '65.

(MIRA 18:12)

VOLODIN, V.I.

Effect of gibberellin on seed germination of some farm crops. Bot.  
zhur. 45 no.12:1787-1791 D '60. (MIRA 13:12)

1. Laboratorii Vsesoyuznogo instituta rasteniyevodstva, g. Pushkin.  
(Gibberellins) (Germination)

ZELENIINA, Ye.V.; VOLODIN, V.I.; ANTONOV, B.I., red.

[Machinery for the coal industry] Mashiny dlia ugol'noi  
promyshlennosti. Moskva, Nedra, 1964. 299 p.  
(MIRA 17:12)

18

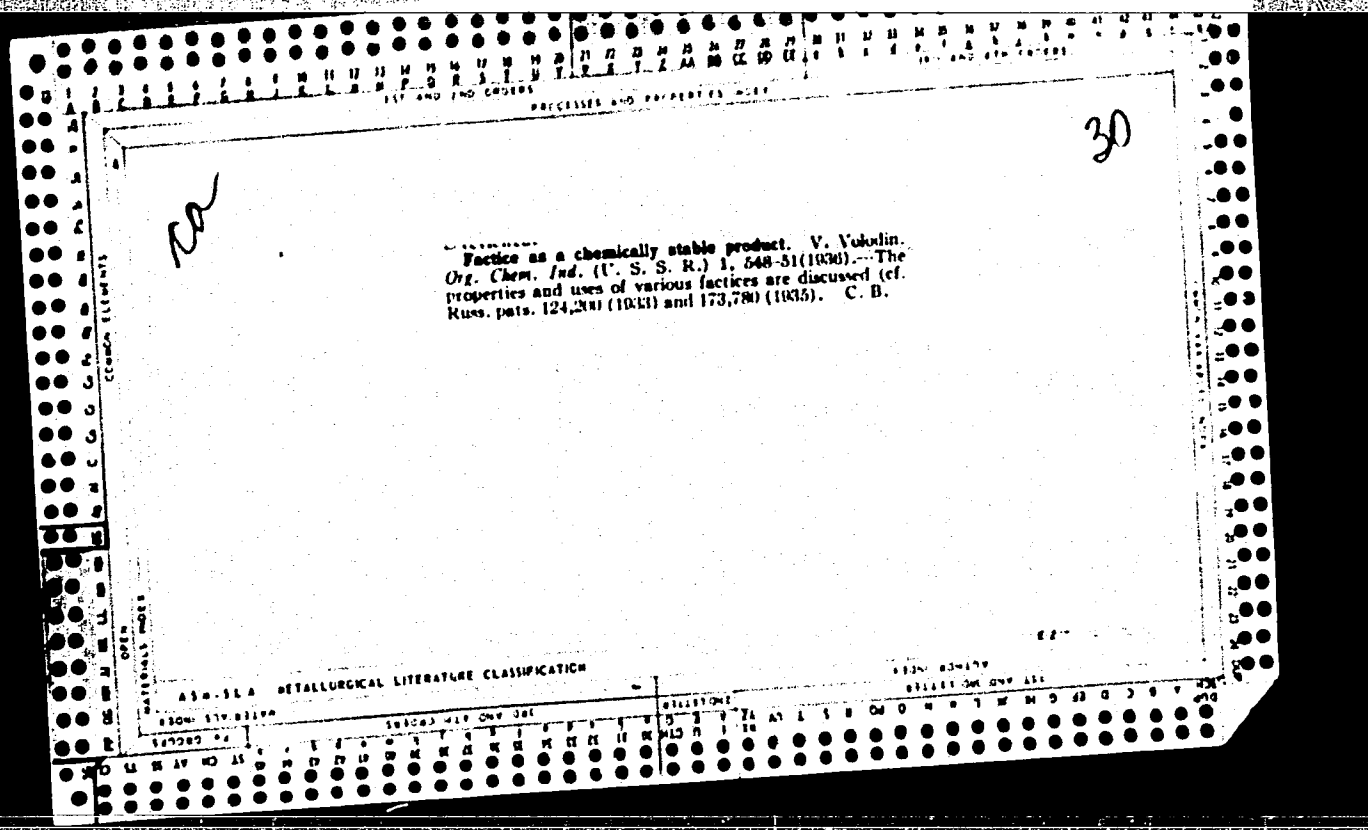
Utilization of by-products in the inorganic chemical industry. V. I. Volodin. *Trans. VI Mendeleev Congr. Theoret. Applied Chem.* 1932 2, Pt. 1, 509-04 (1935). - Utilization of P in the superphosphate industry, of phosphogypsum, of slurry from the production of Al<sub>2</sub>O<sub>3</sub>, of by-products (slag and CO) from the thermal sublimation of P and As from pyrite roasting and of slime from H<sub>2</sub>SO<sub>4</sub>. E. B. Stefanovsky chambers, is discussed.

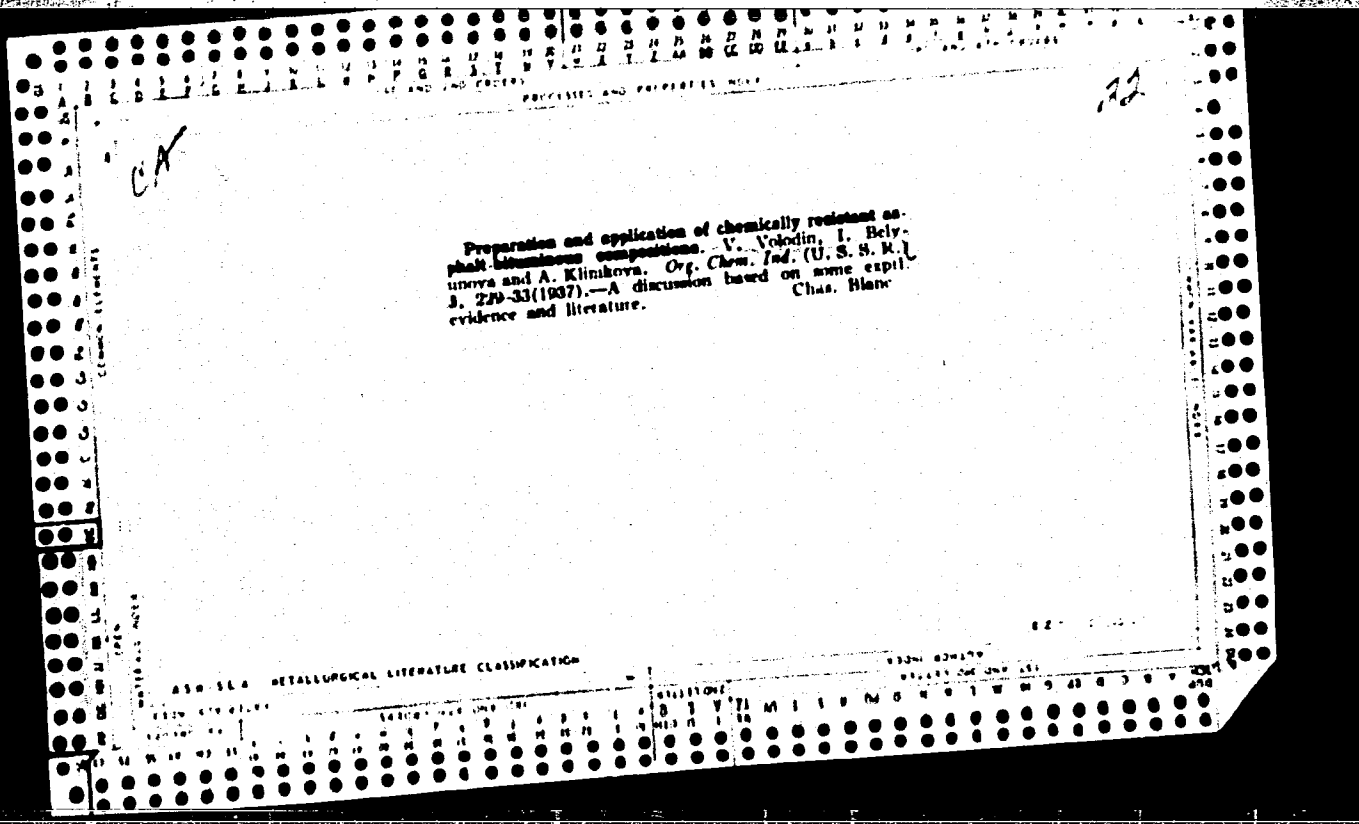
AS-514 METALLURGICAL LITERATURE CLASSIFICATION

1951

GROUPS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100







VOLODIN, V.L.

KIRNOSOV, Vladimir Ivanovich; YANOVSKIY, Il'ya Iosifovich; KIRSHENSHTREYN,  
Ye.L., inzhener, rotsenzent; GLUSHKOV, G.S., professor, doktor  
tekhnicheskikh nauk, redaktor; VOLODIN, V.L., redaktor izdatel'stva;  
ZL'KIND, V.D., tekhnicheskiiy redaktor

[Machines and instruments for testing materials] Mashiny i pribory  
dlya ispytaniya materialov. Moskva, Gos.nauchno-tekhn. izd-vo  
mashinostroit. lit-ry, 1957. 300 p. (MLPA 10:10)  
(Testing machines)

VOLODIN, V.M.

Development and oxygen consumption of fall-spawning Baltic herring embryos. Vop. ikht. no. 7:123-133 '56. (MIRA 10:3)

1. Kafedra ikhtiologii Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.  
(Baltic Sea--Herring) (Embryology--Fishes)  
(Respiration)

VOLODIN, V.M.

Parthenogenetic development of burbot eggs. Vop. ikht. no.13:130-133  
'59. (MIRA 13:3)

1. Institut biologii vodokhranilishch AN SSSR.  
(Parthenogenesis (Animals)) (Embryology--Fishes) (Burbot)

VOLODIN, V.M.

Effect of temperature on the embryonic development of the pike, the  
zope (*Abramis ballerus* L.), and the white bream (*Blicca bjoerkna* L.)  
Trudy Inst. biol. vodokhran. no.3:231-237 '60. (MIRA 14:3)  
(Embryology--Fishes) (Temperature--Physiological effect)

VOLODIN, V.M., student 6 kursa

Mechanical suture of the soft tissues carried out experimentally  
with tantalum clamps. Zdrav. Delor. 6 no. 7:45-47 Je '60.  
(MIRA 13:8)

1. Rukovoditel' nauchnogo studencheskogo kruzha kafedry  
operativnoy khirurgii professor - V.V. Babuk, rukovoditel'  
temy - A.A. Chevlytko, Minskiy medinstitut.  
(SUTURES) (TANTALUM)

VOLODIN, V.M.

Embryonic development of the burbot. Trudy Inst. biol. vodokhran.  
no.3:227-230 '60. (MIRA 14:3)  
(Burbot) (Embryology—Fishes)

VOLODIN, V.M.

Heterogeneity of eggs and sperm of the bream in Rybinsk Reservoir.  
Biul.Inst.biol.vodokhran. no.11:28-32 '61. (MIRA 15:8)

1. Institut biologii vodokhranilishch AN SSSR.  
(RYBINSK RESERVOIR--BREAM) (REPRODUCTION)

VOLODIN, V.M.

Fecundity of roach (*Rutilus rutilus* (L.)) in Rybinsk Reservoir.  
Vop. ikht. 3 no.2:266-274 '63. (MIRA 16:7)

1. Institut biologii vnutrennikh vod AN SSSR, pochtovoye  
otdeleniya Borok, Nekouzskogo rayona, Yaroslavskoy oblasti.  
(Rybinsk Reservoir—Roach (Fish))



ACCESSION NR: AP4003131

S/0241/63/008/011/0050/0055

AUTHOR: Volodin, V. M.

TITLE: Characteristics of the course of acute coronary insufficiency in radiation sickness caused by polonium ( $Po^{210}$ ), x-irradiation, or local irradiation of the heart region

SOURCE: Meditsinskaya radiologiya, v. 8, no. 11, 1963, 50-55

TOPIC TAGS: acute coronary insufficiency, radiation sickness, irradiated heart region, x irradiation, radioactive polonium, myocardium hypoxia, pituitrin, irradiation induced coronary insufficiency, heart irradiation, radiation heart damage

ABSTRACT: Male chinchilla rabbits irradiated under different conditions were investigated to determine the characteristics of acute coronary insufficiency induced by pituitrin. 22 rabbits were exposed to total X-irradiation of 800 r, 12 rabbits were injected subcutaneously with  $Po^{210}$  (0.1 and 0.05 microcuries/kg), and 7 rabbits were exposed to local irradiation of the heart with 3000 r dose. Pituitrin (1-1.5 active units/kg) was injected intravenously at different

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ACCESSION NR: AP4003131

periods depending on radiation conditions. Electrocardiograms were recorded by a 4-PDF-7 unit. In rabbits X-irradiated with an 800 r dose, coronary insufficiency induced by pituitrin is intensified 24 hrs after irradiation and at the height of radiation sickness. In several cases animals died after pituitrin was injected. In rabbits with larger  $Po^{210}$  doses (0.1 microcurie/kg) myocardial hypoxia increases at the height of radiation sickness and with small  $Po^{210}$  doses (.05 microcurie/kg) coronary insufficiency increases slightly between 14-25th days of radiation sickness. In rabbits with local irradiation (3000 r) of the heart, EKG ischemic changes increase 3-7 mos. In the terminal phase of radiation sickness, the reactions of the cardiovascular system to pituitrin decreases regardless of radiation type. Coronary insufficiency changes induced by pituitrin may be attributed to myocardial metabolic disorders and hemodynamic shifts caused by irradiation. Orig. art. has: 1 figure.

ASSOCIATION: None

SUBMITTED: 24Apr63

DATE ACQ: 20Dec63

ENCL: 00

SUB CODE: AM

NO REF SOV: 014

OTHER: 003

Card 2/2

SMIRNOVA, N.P.; VOLODIN, V.M.

Characteristics of the hypothalamic region in the regulation of  
venous blood circulation in irradiated animals. Radiobiologia  
(MIRA 17:11)  
4 no.4:521-527 '64.

ACC NR: AP6019802

SOURCE CODE: UR/0239/65/051/004/0487/0494

AUTHOR: Smirnova, N. P. (Moscow); Volodin, V. M. (Moscow)

19  
B

ORG: none

TITLE: Study of hypothalamic influences on coronary blood circulation

SOURCE: Fiziologicheskij zhurnal SSSR, v. 51, no. 4, 1965, 487-494

22

TOPIC TAGS: cat, electrophysiology, hormone, brain, pharmacology, vasopressin

ABSTRACT: The hypothalamus of anesthetized cats was irritated by means of an electric current; the tonus of coronary blood vessels was then determined by the resistography method. The reaction to the irritation most frequently consisted of contraction of the vessels, but vasodilation and two-phase reactions were also observed. Reactions of different types were obtained on irritation of the same points in the hypothalamus. Increasing the intensity of the irritation or intravenous administration of dihydroergotoxin, hexonium, or aminazine often changed the nature of the reaction upon irritation of the same point. After application of aminazine or hexonium, a pre-dominance of pressor reactions was observed. The effect of the hypothalamus on coronary vessels was not eliminated after exclusion of the influence of vascular innervation by section of the spinal cord or of the midbrain or application of pharmacological agents. This indicated that the effect of

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UDC: 612.826+612.172.1

L 29369-66

ACC NR: AP6019802

0

the hypothalamus involved a vasopressor mechanism, which was presumably activated by the release of hormones following irritation of the hypothalamus. Hexonium and aminazine apparently sensitized the walls of the blood vessels to endogenous vasopressin. The changes in systemic blood pressure usually corresponded to the reactions of the coronary vessels; i.e., the blood vessels of the general system of circulation reacted to irritations of the hypothalamus in the same manner as the coronary vessels. Orig. art. has: 4 figures.

[JPRS]

SUB CODE: 06 / SUBM DATE: 08Aug63 / ORIG REF: 009 / OTH REF: 015

Card 2/2 CC

VOLODIN, V.M.; PETROVINA, Ye.N.

Role of catechol amines in the mechanism of pituitrinic coronary  
deficiency in normal and irradiated rabbits. Radiobiologia 4  
no.5:703-707 '64. (MIRA 18:4)

OYVIN, I.A., prof.; VOLODIN, V.M.

Shwartzman phenomenon and its importance in pathology. Pat. fiziol.  
i eksp. terap. 9 no.4:14-26 J1-Ag '65. (MIRA 18:9)

1. Otdel radiatsionnoy patofiziologii Instituta meditsinskoy radio-  
logii AMN SSSR, Obninsk.

ACC NR: AT6029238

SOURCE CODE: UR/0000/66/000/006/0255/0258

AUTHOR: Volodin, V. M.

ORG: none

TITLE: Use of an analog-digital computer system in investigating an adaptive algorithm of a close to optimal control system

SOURCE: Vsesoyuznaya konferentsiya-seminar po teorii i metodam matematicheskogo modelirovaniya. 4th, Kiev, 1964. Vychislitel'naya tekhnika v upravlenii (Computer technology in control engineering); trudy konferentsii. Moscow, Izd-vo Nauka, 1966, 255-258

TOPIC TAGS: self adaptive control, analog digital computer, algorithm, second order differential equation / MN7 analog computer

ABSTRACT: An adaptive algorithm is defined as an algorithm for obtaining a change-over circuit for optimum speed control. This method is used in second-order systems where the object to be controlled is defined by a system of differential equations of the type

$$\begin{aligned}\dot{x}_1(t) &= x_2(t); \\ \dot{x}_2(t) &= ku(t) - ax_1(t) - bx_2(t),\end{aligned}$$

Here,  $x_1(t)$  and  $x_2(t)$  are system coordinates;  $u(t)$  is the manipulated variable with the

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ACC NR: AT6029238

restriction  $|u(t)| \leq 1;$

and  $k$ ,  $a$ , and  $b$  are both positive and variable, with  $a^2 > 4b$ . Several approximations in a generalized form result in Chebyshev's polynomials, which can be calculated. A detailed analysis of an adaptive system is best performed on an analog-digital computer; the manipulated variable defined by a second-order differential equation is modeled on the analog and the digital components are used for modeling the controlling elements of the system. In the investigation, a combination of the Ural digital computer and the MN-7 analog computer with analog-to-digital converters was used. Orig. art. has: 1 figure.

SUB CODE: 09, <sup>13</sup>/<sub>2</sub>

SUBM DATE: 12Feb66/

ORIG REF: 003

Card 2/2

VOLODIN, V. P.

VOLODIN, V. P. -- "Measuring the Dynamic Mechanical Properties of Rubber (within) a Range of Sound Frequency." Min Higher Education USSR, Leningrad Polytechnical Institute imeni K. U. Kalinin, Leningrad, 1956. (Dissertation for the Degree of Candidate of Physicomathematical Sciences)

SO: Knizhnaya Letopis' No 44, October 1956, Moscow

SOV/124-58-4-4920D

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 4, p 170 (USSR)

AUTHOR: Volodin, V. P.

TITLE: Measurement of Dynamic-mechanical Characteristics of Various Types of Rubber in the Audio-frequency Range (Izmereniye dinamicheskikh mekhanicheskikh kharakteristik rezin v zvukovom diapazone chastot)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Physical-Mathematical Sciences, presented to the Leningr. politekhn. in-t (Leningrad Polytechnic Institute), Leningrad, 1957

ASSOCIATION: Leningr. politekhn. in-t (Leningrad Polytechnic Institute), Leningrad

1. Rubber--Mechanical properties    2. Measurement    3. Sound  
--Application

Card 1/1

NO L C D I N, V. P.

120-2-26/37

AUTHOR: Volodin, V. P., and Kuvshinskiy, Ye. V.

TITLE: Measurement of the Mechanical Dynamic Characteristics of Rubbers. (Izmereniye Mekhanicheskikh Dinamicheskikh Kharakteristik Rezin.)

PERIODICAL: Priroda i Tekhnika Eksperimenta, 1957, No.2, pp. 94 - 98 (USSR).

ABSTRACT: The authors give the description of an instrument similar to that proposed by Marvin, Fitzgerald and Ferry (Ref. 4), but more simple in construction and operation. It can be used to determine, in three independent ways, the dynamic modulus of elasticity and the angle of mechanical losses of rubbers in the frequency range 20-300c/s and in the temperature range -20 to 150°C under the conditions of deformation in axial compression and decompression. The instrument, a cross-section of which is given in Figure 1, uses a vibration generator type GMK-1 (ГМК-1), the necessary temperature being obtained by forcing either water or ethyl alcohol through the envelope for temperature range -10°C to 100°C. An electrical oven was used for temperatures above 100°C and the instrument was cooled by liquid nitrogen below -10°C. The temperature of the sample was measured by a constantan copper thermocouple with accuracy of 0.5°C. Differing from the

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120-2-26/37

Measurement of the Mechanical Dynamic Characteristics of Rubbers.

installation proposed by Marvin, Fitzgerald and Ferry, two simpler bridge configurations were used (Figures 2 and 3). The determination of the mechanical properties of the material as based on the Kelvin-Voigt model is also discussed. The cross sections of the instrument, two circuit diagrams of the two bridges, three graphs, two tables of numerical results and the equivalent electrical circuit diagram of the Kelvin-Voigt model are given. There are five references, two of which are Slavic.

SUBMITTED: November, 23, 1956.

ASSOCIATION: Leningrad Polytechnic Institute imeni M.I. Kalinin.  
(Leningradskiy Politeknicheskii Institut im. M.I.Kalinina)

AVAILABLE: Library of Congress.

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15(6)

SOV/112-59-2-2382

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 2, p 14 (USSR)

AUTHOR: Volodin, V. P.

TITLE: Measuring Mechanical Dynamic Characteristics of Rubber at Audio Frequencies (Izmereniye mekhanicheskikh dinamicheskikh kharakteristik rezin v zvukovom diapazone chastot)

PERIODICAL: Nauchno-tekhn. inform. byul. Leningr. politekhn. in-ta, 1957, Nr 4, pp 3-20

ABSTRACT: Schemes of 3 outfits for measuring mechanical dynamic characteristics of rubbers are considered. The best and most convenient outfit allows testing the rubbers within the widest frequency band, 80-4,000 cps. The upper frequency limit depends primarily on the toughness of samples; the lower frequency limit is determined by the phasemeter operating frequency. Bibliography: 19 items.

I. M. M.

Card 1/1

. Volodin, V. P.

AUTHORS: Volodin, V.P., and Kuvshinskiy, Ye.V.

120-5-21/35

TITLE: Determination of the Dynamic Mechanical Characteristics of Rubbers at Acoustic Frequencies (Opredeleniye mekhanicheskikh dinamicheskikh kharakteristik rezin v zvukovom diapazone chastot)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No. 5, pp. 86 - 91 (USSR).

ABSTRACT: An installation has been developed for measuring the dynamic modulus of elasticity and mechanical loss angle within the frequency range 80 - 4 000 c.p.s. at temperatures from -20 to +120 °C under conditions of small displacement. Fig. 1 shows the main features in a block diagram, viz., the use of a capacitive pickoff for measuring displacement, the measurement of current in the moving coil as an indication of force, the use of a phasemeter to measure the angle between force and displacement. Fig. 2 is a cross-section through the complete assembly. The material to be tested is fabricated as a number of isolators supporting a former made from walrus ivory (s.g. 1.95;  $E = 1.3 \times 10^{11}$  dynes/cm<sup>2</sup>) in the gap of a large electromagnet. The former carries an exciting coil fed from an audio-oscillator type 3Г-10. A micrometer enables a capacitive pick-off to be positioned under the moving system. The circuit which

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120-5-21/35

Determination of the Dynamic Mechanical Characteristics of Rubbers  
at Acoustic Frequencies.

converts the changes in capacitance into voltage has been described in principle (Ref.5) and also a practical version of the same (Ref.6). The conversion is linear with an error of less than 3% and gives a sensitivity (including the pre-amplifier) of  $10^5$  V/mm when the gap between the plates of the capacitor is 0.1 mm. The phasemeter is of the switching type described by Eorman (Ref.9). It works best with an input in each channel of 20 V, a deviation of  $\pm 3$  V producing an error of less than 0.1%. The use of voltmeters at the appropriate points in the circuit guarantees a deviation of less than  $\pm 1$  V. The supply voltages are stabilized by ferro-resonant and electronic stabilizers. The main electro-magnet supply is separately stabilized at  $76 \pm 0.1$  mA. It is shown from the theory of the measurement that unless the size of the sample is chosen appropriately to the frequency and material constants, appreciable corrections are required. For example, when the magnitude of the elastic modulus is  $5 \times 10^7$  dynes/cm<sup>2</sup>, the frequency is 4 kc/s and the thickness of the sample is 0.1 cm, the correction is almost 15%. The experimentally determined relation between phase (force-displacement) and frequency differs from theory as noted by

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Determination of the Dynamic Mechanical Characteristics of Rubbers  
at Acoustic Frequencies.

nearly all other authors using electro-dynamic methods. This topic is to be the subject of a separate article. Measurements were discontinued whenever the error exceeded 10%. Fig. 4 shows the variation of modulus and angle of loss ( $\tan \delta$ ) with frequency for a natural rubber at temperatures of  $-10^{\circ}\text{C}$  and  $75^{\circ}\text{C}$ . The shape factor of the sample,  $D$  (thickness divided by cross-sectional area) was  $1/40\text{ cm}^{-1}$ . The error in measuring the modulus and loss angle reached 25% at twice the frequency of mechanical resonance. Measurements were made on CKC-30A sulphur-vulcanized rubber by the present method and by two other methods; the "travelling-wave" and "force and velocity" methods. The table and Fig. 5 show that the agreement is quite satisfactory. The maximum force exerted by the vibrator was  $5 \times 10^7$  dynes at a coil current of 0.5 A. The flux density in the gap was 11 000 gauss and the moving mass was 13.8 g. The minimum recorded displacement was  $10^{-7}$  cm and the minimum angle between force and displacement  $1^{\circ}$ . The least measured  $\tan \delta$  was 0.02. The upper limit of hardness was  $2 \times 10^9$  dynes/cm. The lower limit of frequency was set by the phasemeter and card 3/4 could be reduced to 0.01 c.p.s. by using an H $\Phi$ -2 in conjunction

120-5-21/35  
. Determination of the Dynamic Mechanical Characteristics of Rubbers  
at Acoustic Frequencies.

with an HF-2 oscillator. A.P. Rudakov and L.L. Sul'zhenko  
took part in the work. There are 5 figures, 1 table and  
10 references, 5 of which are Slavic.

ASSOCIATION: Leningrad Polytechnical Institute imeni M.I.Kalinin  
(Leningradskiy politekhnicheskii institut im.  
M.I. Kalinina)

SUBMITTED: March 18, 1957.

AVAILABLE: Library of Congress  
Card 4/4

AUTHORS: Volodin, V. P., Kuvshinskiy, Ye. V. SOV/57-23-7-10/35

TITLE: The Influence of Vulcanization on the Dielectric Properties of Rubbers on the Basis of SKS-30A Rubber (Vliyaniye vulkanizatsii na dielektricheskiye svoystva rezin na osnove kauchuka CKC-30A)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1958, Vol. 28, Nr 7, pp. 1424 - 1427 (USSR)

ABSTRACT: The variation of the dielectric properties on the basis of the divinyl styrene rubber SKS-30A during the sulfur vulcanization in the presence of the accelerator diphenyl guanidine was observed. For this purpose a series of vulcanizers were investigated which differed according to their sulfur content and vulcanization time. The amount of the conditional-equilibrium-modulus  $E_{y-p}$  was assumed to be characteristic for the vulcanization depth. It is determined according to the stress which remains after the relaxation for one hour at 60°C. The possibility of using this amount for this purpose was proved already earlier by the authors (Ref 1). The investigation of the dielectric properties of the vulcanizers was carried out by means of an audio-frequency bridge. It is shown that with the increase of the

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The Influence of Vulcanization on the Dielectric  
Properties of Rubbers on the Basis of SKS-30A Rubber

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vulcanization depth the vitrification temperature  $T_g$  rises which is confirmed by the immediate measurements of this quantity carried out at the VNIISK imeni Lebedev. The increase of the vulcanization depth leads to the increase of the maximum value for  $tg\delta$ . This effect is explained by the fact that the number of the adhesion places - of the polar sulfur bridges - rises with the increase of the vulcanization depth. It is shown that the "activation energy" of the dielectric relaxation process in the investigated temperature range is equal in the case of all vulcanizers ( $28 \pm 2$  kcal/mole), i.e. does not depend on the vulcanization depth. Maxima of  $tg\delta$  were detected as well in the range of high temperatures. These are especially visible and vanish in the case of rubbers which are to a small extent vulcanized. These maxima also shift with the frequency alteration according to the temperature scale. In order to detect this phenomenon measurements of  $tg\delta$  were carried out in the case of rubber mixtures with single ingredients which belong to the

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The Influence of Vulcanization on the Dielectric  
Properties of Rubbers on the Basis of SKS-30A Rubber

S07/57-23-7-10/35

dispensing of the vulcanizers (stearic acid, magnesium oxide, rubberax, diphenyl guanidine, sulfur). On this occasion it was found that the occurrence of a high maximum value of  $tg\delta$  in the range of positive temperatures is caused by the presence of diphenyl guanidine in rubber. The presence of other ingredients in rubber up to four parts by weight does not influence considerably the temperature dependence of  $tg\delta$ . The experiments showed that diphenyl guanidine has a high electric conductivity which is to a great extent dependent on the temperature. The presence of such a substance in the rubber in dispersed state is bound to lead to the development of the "unusual" temperature dependence, i.e. to the "Wagner" losses (Ref 3) which according to their nature are conduction losses. The vanishing of the "Wagner" losses with the increase of the vulcanization depth is connected with the progressive decomposition of the diphenyl guanidine. Thus the investigation of the dielectric properties of rubbers at different vulcanization stages offers the possibility of investigating the kinetics of the sulfur vulcanization process and to observe especially the consumption of the

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The Influence of Vulcanization on the Dielectric  
Properties of Rubbers on the Basis of SKS-30A Rubber

SOV/57-23-7-10/35

accelerator - the diphenyl guanidine. There are 4 figures,  
2 tables, and 3 Soviet references.

ASSOCIATION: Leningradskiy politekhnicheskii institut im. M.I. Kalinina  
(Leningrad Polytechnical Institute imeni M.I. Kalinin)

SUBMITTED: July 11, 1957

1. Rubber--Dielectric properties
2. Vulcanizates--Test results

Card 4/4

50757-23-7-16/35

**AUTHORS:** Volodin, V. P.; Kuvshinskiy, Ye. V.

**TITLE:** On the Effect of "Negative Friction" in Plants Using the "Method of Force and Velocity" and the Means for Its Elimination (Ob effekte "otritsatel'nogo treniya" v ustanovkakh, realizuyushchikh metod "sily i skorosti", i puti yego ustraneniya)

**PERIODICAL:** Zhurnal tekhnicheskoy fiziki, 1958, Vol. 28, Nr 7, pp.1452-1458 (USSR)

**ABSTRACT:** The range of working frequencies in plants using the "method of force and velocity" is limited at the high-frequency side by a number of phenomena. These lead to the fact that the measured effective part of impedance adopts an absurd negative value. The authors investigated the rules governing such an effect of negative friction as well as the causes for its development; viz. the causes connected with the electric phenomena in the electrodynamic transformer and with the mechanical properties. The following is shown: In order to prevent the "catching up" of the phase ( $\varphi_p \neq 0$ ) great demands have to be made on the construction of the

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SOV/57-28-7-16/35  
On the Effect of "Negative Friction" in Plants Using the "Method of Force and Velocity" and the Means for Its Elimination

moving system and of the apparatus itself: With small mass the coil support must be very rigid, the material of the support must be non-conductive, and no parts must exist in the body of the transformer that give way.  $\varphi_k$  denotes the additional phase shift dependent on the frequency. Based on the experimental investigation of the phase frequency dependence the following is found: 1) The difference between the experimental data and the predictions of theory, i.e. the deviation from formula (1) must mainly be attributed to the anomalous phase frequency dependence. 2) The anomaly of the phase frequency dependence consists of the superposition of the additional  $\varphi_k = f(\omega)$  on the basic phase frequency dependence.  $\omega$  denotes the angular frequency. 3) The linear dependence of  $\varphi_k$  on the frequency makes it possible to take  $\varphi_k$  into account in a simple way and to compensate for it; this again makes it possible to extend the working range of the apparatus using the method of force and velocity.  
The formula (!) reads:  $Z_M = KE.$

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307/57-23-7-16/35

On the Effect of "Negative Friction" in Plants Using the "Method of Force and Velocity" and the Means for Its Elimination

The direct measurement is based on the electric equivalent of the mechanical impedance  $E$  which by the formula (1) is connected with the mechanical impedance of the investigated system  $Z_M$ .

$K$  denotes the factor of the electromechanical coupling depending on the construction of the apparatus, which is experimentally determined. There are 2 figures, 1 table, and 9 references, 6 of which are Soviet.

ASSOCIATION: Leningradskiy politekhnicheskii institut imeni M. I. Kalinina  
(Leningrad Polytechnical Institute imeni M. I. Kalinin)

SUBMITTED: July 11, 1957

1. Electrical networks--Analysis    2. Industrial plants--Equipment

Card 3/3

L 00842-67 EWT(1) IJP(c)

ACC NR: AR6011093

SOURCE CODE: UR/0272/65/000/011/0072/0072

AUTHORS: Belousov, N. A.; Bondarenko, V. A.; Volodin, V. P.; Shlenskiy, Ye. M.

TITLE: Methods of increasing the operational characteristics of ultrasonic generators

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika, Abs. 11.32.608

REF SOURCE: Tr. N.-1, tekhnol. in-t, vyp. 8, 1964, 23-28

TOPIC TAGS: ultrasonic frequency, high frequency, electric transformer, ferrite, semiconductor rectifier, electron tube grid, ultrasonic generator/ UZG ultrasonic generator

ABSTRACT: A modernization of the ultrasonic vacuum-tube generators of the UZG series is reported. The efficiency of the ultrasonic generators is increased by using semiconductor diodes in the circuits of the plate rectifiers. Semiconductor diodes have a longer life than ion rectifiers. Losses in the high-frequency circuits can be considerably reduced by using transformer winding and ferrite cores. For the regulation of power, the most promising is a regulation circuit with the use of a power transformer with step regulation of voltage. The use of such a transformer in conjunction with smooth regulation in the grid circuit permits smooth regulation of power within the required limits without a substantial change in the efficiency of the ultrasonic generators. Circuits are given which permit reduction of plate

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UDC: 389:534-8.232.001.12

L 00842-67

ACC NR: AR6014093

losses and a corresponding increase in efficiency. The development of a circuit with automatic tuning of the frequency of the generator to the frequency of mechanical resonance of the converter is reported. Ultrasonic-generator systems are examined with the aim of improving their operational characteristics. 4 illustrations.  
Translation of abstract

SUB CODE: 09, 14

Card 2/2 pb

L 14038-66 EWT(m)/EWP(b)/EWP(t)

SOURCE CODE: UR/0081/65/000/012/R007

ACC NR: AR5020045

AUTHOR: Volodin, V.P.; Ozeryanaya, I.N.; Smirnov, M.V.

53  
B

ORG: none

TITLE: Corrosion of zirconium in a melt of alkaline-metal chloride

SOURCE: Ref. zh. Khimiya, Abs. 12K21  
55, 27

REF SOURCE: Tr. In-ta elektrokhimii. Ural'skiy fil. AN SSSR, vyp. 6, 1965, 87-91

TOPIC TAGS: zirconium, corrosion, corrosion rate, potassium chloride, sodium chloride

TRANSLATION: Data is given on studies of Zr corrosion in melted equimolar mixtures of K and Na chlorides, which had been carefully freed of all traces of oxygen and humidity in atmospheric Ar. The temperature dependence of Zr stationary potential was found, and it was shown that within the limitations of possible errors the speed of corrosion, as determined by the direct method, is in good agreement with computations made on the basis of stationary potentials and anode polarization curves. M. Drukarov.

SUB CODE: 07, 11

Card 1/1.20

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