

BULGARIA/Chemical Technology. Chemical Products and Their Application, Part 3. - Fats and Oils. Waxes. Soaps. Detergents. Flotation Agents. H

Abs Jour: Referat. Zhurnal Khimiya, No 21, 1958, 72080.

Author : G. Rankov, A. Yovchev, N. Goranov.
Inst : Chemical Institute of Academy of Sciences of Bulgaria.
Title : Elaidination with Sulfur Containing Compounds.
1. Elaidination with Sodium Metabisulfite and Ammonium Pentasulfide.

Orig Pub: Izv. khim. in-t, B"lg. AN, 1957, 5, 143-158.

Abstract: It was found that at the elaidination of oleic and erucic acids, olive oil, joint mixture of fatty acids of rapeseed and olive oils(220°, from 3 to 20 hours) in the presence of 1 to 6% of alkali or

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BULGARIA/Chemical Technology. Chemical Products and Their Application, Part 3. - Fats and Oils. Waxes. Soaps. Detergents. Flotation Agents. H

Abs Jour: Referat. Zhurnal Khimiya, No 21, 1958, 72080.

alkali-earth metabisulfites (corresponding to 1% of ammonium pentasulfide), the process catalyst is the elementary S separating at the thermal dissociation of the above mentioned products. Elaidination with the elementary S has the following advantages: the process is carried out in an open vessel (without pressure), its duration can be limited by 3 hours, the final product does not acquire any dark color and, consequently, does not require washing with water.

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BULGARIA/Chemical Technology. Chemical Products and Their Applications. Fats and Oils. Waxes. Soaps and Detergents. Flotation Agents.

II

Abs Jour: Ref Zhur-Khin., No 8, 1959, 29135.

Author : Rankov, G., Yovtchev, I., and Goranov, N.

Inst : Bulgarian Academy of Sciences.

Title : Note on the Elaidinization of Unsaturated Fatty Acids.

Orig Pub: Doklady Bulgar Akad Nauk, 10, No 2, 129-132 (1957)
(in German with a Russian summary)

Abstract: Contrary to the claim which has been made (West German patent No 894559; RZhKhin, 1955, 57083) that under given conditions of elaidinization with metabisulfites the possibility of free sulfur formation has been eliminated and that the metabisulfites therefore represent a completely new type of elaidinization

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BULGARIA/Chemical Technology. Chemical Products and Their
Applications. Fats and Oils. Waxes. Soaps and
Detergents. Flotation Agents.

II

Abs Jour: Ref Zhur-Khim., No 8, 1959, 29135.

catalyst, the authors of the article have shown that
under the conditions indicated in the patent, the
metabisulfite decomposes with the formation of free
sulfur. Thus under the conditions indicated the cata-
lyst promoting the claidinization is not the meta bi-
sulfite but the free sulfur formed by its decompo-
sition. -- I. Milovanova.

Card : 2/2

GRIGOROV, Kharalampi; SHALICHEV, IAKim; GORANOV, Nikolai

Ratio of fats and proteins in sheep's milk during the milking
period. Selskostop nauka [2] no. 2: 227-233 '63.

GORANOV, Vasil

Composition and properties of the milk of the Red Sadovo, Kula, Sofia Brown breeds and the crossbreeds of Red Sadovo breed and Burclatvian and Red Danish bulls. Izv Zhivotn nauki 1 no.3:77-85 '64.

1. Institute of Animal Husbandry, Kostinbrod.

TANEV, Iv.; SHTEREV, P.; SHUBAROV, K.; GORANOVA, N.

On diagnosis of the anicteric form of epidemic hepatitis.
Suvr. med. 14 no.3:31-39 '63.

(HEPATITIS, INFECTIOUS) (ALANINE AMINOTRANSFERASES)
(ASPARTATE AMINOTRANSFERASE) (LIVER FUNCTION TESTS)
(BILIRUBIN) (BLOOD PROTEIN ELECTROPHORESIS)
(JAUNDICE) (DIAGNOSIS, DIFFERENTIAL)
(ENZYME TESTS)

GORANOV, Z.

BULGARIA/Diseases of Farm Animals. Diseases Caused by Bacteria
and Fungi R

Abs Jour: Ref Zhur-Biol, No 5, 1958, 21629.

Author : Iliyev, T., Goranov, Z., Prokopanov An., Arsov, R.,
Yovchev, M., Khubenov, M., Girginov, G.

Inst : Higher Veterinary Medical Institute.

Title : On the Problem of Clinical Measures and Treatment
of Gangrenous Mastitis in Sheep and Goats.

Orig Pub: Nauchn. tr. Vissh. Veterinarmed. in-t, 1956, 4, 109-128.

Abstract: Gangrenous mastitis infections in sheep and goats were more frequently observed during the lactation period. The course of the disease took hyperacute, acute, subacute and chronic forms. Only one half of the udder was affected. In severe cases of infection, intoxication and septicemia were observed, resulting in death

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GORANOV, Prof Zakhari; NEYCHEV, Dr Onufri; and KOYCHEV, Dr Krum /affiliations not given/.

"The Treatment of Abdominal and Ruminant Wounds in Cattle."

Sofia, Veterinarna Sbirka, Vol 60, No 10, 1963, pp 15-19.

Abstract: The authors first describe the three most common instances of such wounds, viz., a fresh wound with a small linear opening in the abdominal wall and rumen (i.e., little rumen content), a fresh wound with a large opening in the rumen allowing much of its content to flow into the abdominal cavity, and an old wound accompanied by complications. The authors term erroneous the two methods most commonly applied in such cases, viz., the local or general application of antiseptics and antibiotics and operative treatment in the form of laparotomy, incomplete elimination of rumen content, and hermetic sealing of the rumen and abdominal wall. The authors recommend instead first radical operative revision in the form of a widening of the abdominal wound to permit the removal of the necrotic tissues. More preventive measures are also urged.

No references.

GURANOVA, N.

"From the Experience of the Permanent Commission for Public Health and Social Welfare
p. 38" (ZDRANNO DELO) Vol. 6, No. 3, June 1952, Sofiya, Bulgaria.

SO: Monthly List of East European Accessions L.C. Vol. 2, No. 11, Nov. 1953, Undl.

GORANOVA N.
BULGARIA

TAMBEV, Iv., P. BICHEREV, K. SHUBAROV, and N. GORANOVA,
Department of Infectious Diseases (Katedra po Infek-
tiozni Bolesti), Higher Medical Institute (Visshi
Meditsinski Institut), Sofia.

"Diagnosis of the Anicteric Forms of Epidemic Hepatitis."
Sofia, Sovremenna Meditsina, Vol 14, No 3, 1963, pp 31-39.

Abstract: /Authors' English summary modified/ The authors
observed 80 patients suffering from the anicteric form of
epidemic hepatitis, assuming that a very slight subicter-
us of the sclera should be classified as an anicteric
form of the infection. Symptoms such as exhaustion and
lack of appetite are important for diagnosis. Darkening
of the urine is particularly important, with an increased
amount of urobilinogen and often a positive reaction to
bilirubin. Hepatomegaly was noted in 92.5 percent of
the cases, splenomegaly in 27.5 percent. The Weltmann
coagulation band is more often extended in the initial
1/2 stage of the disease than the McLaughlin test, which

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Sofia, Suvremenna Meditsina, Vol 14, No 3, 1963, pp 31-39
(continued). 70

was later positive in more than half of the cases while the Weltmann coagulation band was often shortened to less than six test tubes. There was an increase in beta-lipoproteins in 70 percent of the cases. The enzymic tests (SGOT and SCEPT) were positive and depend on the stage of the disease. The proteingram, aldolase activity, and cholesterol level rarely yield data useful for the diagnosis. Blood bilirubin is most often in the vicinity of 0.5 mg%--up to 1.5 in exceptional cases. The authors are of the opinion that complex testing in dynamic form assists in the determination of the diagnosis of the anicteric forms of epidemic hepatitis.

More than 20 references of recent date, divided equally among Soviet-bloc and Western sources.

2/2

GORANOVA, St. (Sofia)

Teaching on the theme "Energy" in the 9th grade. Mat i fiz
Bulg 7 no.5:25-28 '64.

GORANOVA, V.

GORANOVA, V. Estonian Donetz Coal Field. p. 16.

Vol. 5, no. 8, 1955

GEOGRAFIIA

Sofiya, Bulgaria

So: Eastern European Accession Vol. 5 No. 4 April 1956

BARANOVSKIY, M.A., kand.tekhn.nauk; GORANSKIY, G., red.; TRUKHANOVA, A.,
tekhn.red.

[Handbook for a sheet-metal worker foreman] Spravochnik masters-
shtampovshchika. Minsk, Gos.izd-vo BSSR, 1953. 247 p.
(MIRA 13:1)

(Sheet-metal work)

GORANSKIY, G.K., kandidat tekhnicheskikh nauk; MOLOTOV, A., redaktor;
~~MOLOTOVA, A., tekhnicheskij redaktor~~

[Sharpening and finishing high-speed cutting tools] Zatochka i
dovodka instrumentov dlia skorostnogo rezaniia. Minsk, Gos. izd-
vo BSSR, red. nauchno-tekhn. lit-ry, 1953. 285 p. [Microfilm].
(Cutting tools) (MLRA 8:7)

DMITROVICH, A.M.; GORANSKIY, G.^{K.}, redaktor; TRUKHANOVA, tekhredaktor

[Basic principles for metal workshop practice] Osnovnye svedeniia
po slesarnoi obrabotke metallov. Minsk, Gos.isd-vo BSSR red.
nauchno-tekhn. lit-ry, 1954. 136 p. (MIRA 8:4)
(Machine-shop practice)

YAKOVLEV, G.M.; GORANSKIY, G.K., redaktor; TRUKHANOVA, A., tekhnicheskii redaktor.

[Drilling, countersinking and reaming] Sverlenie, senkerovanie, rasvertyvanie. Pod red. G.K.Goranskogo. Minsk, Gos. izd-vo BSSR. Red. nauchno-tekhn. lit-ry, 1954. 163 p.[Microfilm] (MLRA 8:2)
(Drilling and boring)

YURKSHTOVICH, N.A.; GORANSKIY, G.K., redaktor; TRUKHANOVA, A., tekhnicheskiiy redaktor.

[Modern lathes and their operation] Sovremennye tokarnye stanki i rabota na nikh. Pod red. G.K.Goranskogo. Minak, Gos. izd-vo BSSR, Red. nauchno-tekhn. lit-ry, 1954. 186 p. [Microfilm]
(Lathes) (MLRA 8:2)

BARANOVSKIY, M.A.; GORANSKIY, G., redaktor; TRUKHANOVA, A., tekhnicheskiy
redaktor

[Fundamentals of blacksmithing] Osnovy kuznechnogo dela. Minsk,
Gos. izd-vo BSSR, Red. nauchno-tekhn. lit-ry, 1954. 217 p.
(Blacksmithing) (MIRA 8:7)

GORANSKIY, G.K.; PIKUS, M., redaktor; TRUKHANOVA, A., tekhnicheskiy re-
~~aktuz.~~

[High production tools; cutters] Vysokoproizvoditel'nyi instrument;
restay. Minsk, Gos. izd-vo BSSR, Red. nauchno-tekhn. lit-ry, 1954.
221 p. [Microfilm] (MLRA 8:2)
(Cutting tools)

YAKOVLEV, G.M.; GORANSKIY, G., redaktor; TRUKHANOVA, A., tekhnicheskii
redaktor

[Milling; manual for the operators of milling machines] Frezerovaniye; spravochnoe posobie dlia frezerovshchika. Minsk, Gos. izd-vo BSSR, Red. nauchno-tekhn. lit-ry, 1954. 268 p. (MLRA 8:7)
(Milling machines)

ALESHKEVICH, I.L., inzhener; GORANSKIY, G.K., kandidat tekhnicheskikh nauk, redaktor; TRUKHANOVA, A., tekhnicheskii redaktor.

[Experiment in introducing a system of high-speed metal cutting at the Minsk Tractor Plant] Opyt vnedreniia skorostnykh reshimov rezaniia metallov na Minskom traktornom zavode. Pod red. G.K.Goranskogo, Minsk, gos. izd-vo BSSR, redaktsiia nauchno-tekhn. lit-ry, 1955. 101 p. (MLRA 8:12)
(Minsk--Metal cutting)

GORZKO, P.A., inshener; GORANSKIY, G., redaktor; TRUKHANOVA, A., tekhnicheskii redaktor

[At high speed; work practice of the Minsk auto plant in high-speed metal cutting] Na vysokikh skorostiakh; opyt raboty Minskogo avtozavoda po skorostnomu rezaniyu metallov. Gos.izd-vo BSSR, 1955. 105 p.
(Minsk--Metal cutting) (MLRA 9:1)

PIKUS, M. Yu.; GORANSKIY, G., redaktor; TRUKHANOVA, A., tekhnicheskiy redaktor

[Cutting screw threads] Narezanie rez'by. Minsk, Gos. izd-vo BSSR, 1955. 145 p. (Screw cutting) (MLRA 9:2)

GORANSKIY, G.K.; YAKOVLEV, G., redaktor; TRUKHANOVA, A., tekhnicheskiy
redaktor

[Metal cutting; fundamentals on metal cutting processes] Rezanie
metallov; osnovnye poniatia o protsessakh rezaniia metallovo.
Minsk, Gos.izd-vo BSSR, 1955. 187 p. (MLRA 9:1)
(Metal cutting)

GORANSKIY, G.K., kandidat tekhnicheskikh nauk; PIKUS, M., redaktor;
TRUKHANOVA, A., tekhnicheskiiy redaktor.

[Profiling] Fasennoe tochenie. Minsk, Gos.izd-vo BSSR, 1955.
283 p. (Metal cutting) (MIRA 9:1)

YURESHTOVICH, N.A.; GORANSKIY, G.K., redaktor; KALECHITS, G., tekhnicheskiy redaktor.

[Planing machines and their operation] Strogal'nye stanki i rabota na nikh. Pod red. G.K.Goranskogo. Minsk, Gos. izd-vo BSSR, 1956.
91 p. (Planing machines) (MLBA 9:5)

GORANSKIY, G.

PHASE I BOOK EXPLOITATION

366

Yakovlev, G.M.

Kachestvo poverkhnosti i tochnost' obrabotki na metallorazhushchikh stankakh (Surface Quality and Precision in Machining Metals) Minsk, Gos. izd-vo BSSR, 1956. 113 p. (Bibliotekha rabocheho mashinostroitelya) 3,000 copies printed.

Sponsoring Agency: NTO Belmashprom respublikanskiy dom tekhniki

Ed.: Goranskiy, G.; Tech. Ed.: Stapanova, N.

PURPOSE: The book is intended for fourth-to-seventh class machinists, and it may be useful to machine shop foremen, MTS mechanics, and students in trade and technical schools.

COVERAGE: The author acquaints skilled workers with the physical and mechanical properties of the surface layer, smoothness of machined surfaces, and precision of machining, as well as with contemporary finish machining methods. Data on surface-

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Surface Quality and Precision in Machining Metals 366

layer forming processes during machining operations and control (standardization) of the degree of surface finish are included. There are no references.

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AVAILABLE: Library of Congress (TJ1185.I37)
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JAG/ksv
6-20-58

DMITROVICH, A.M.; GORANSKIY, G., redaktor; STEPANOVA, N., tekhnicheskiy
redaktor.

[Metals in machine building] Metally v mashinostrdenii. Minsk,
Gos.isd-ve BSSR, 1956. 166 p. (MLRA 9:6)
(Metals) (Machinery industry)

JOSEVANSKY, V.

PIKUS, Mikhail Yuriyevich, kand.tekhn.nauk; GORANSKIY, G., red.; TRUKHANOVA, A.
tekhn.red.; KALECHITS, G., tekhn.red.

[Gear cutting] *Manufacture subchetykh kolez.* Minsk, Gos. izd-vo BSSR,
1957. 179 p. (MIRA 11:2)

(Gear-cutting machines)

GORANSKIY, GEORGIY KONSTANTINOVICH

N/5 602.2 .06

Novyye puti Avtomatizatsii Proizvodstva (New ways of automation in production) Minsk, 1958.

35 p. Illus., Diagr.

At head of title: Obshchestvo Po Rasprostraneniyu Politicheskikh; I Nauchnykh Znanii Belorusskoy SSR, No. 13.

25(7)

PHASE I BOOK EXPLOITATION SOV/3129

Goranskiy, G.K.

Vysokoproizvoditel'nyy instrument; instrument dlya obrabotki otverstiy
(High-efficiency Tools; Tools for Machining Holes) Minsk, 1959. 258 p.
(Series: Bibliotekha rabocheho mashinostroytelya) Errata slip inserted.
3,000 copies printed.

Ed.: F. Kashtanov; Tech. Ed.: N. Stepanova.

PURPOSE: This book is intended for designers, process engineers, and workers in repair shops and machine-building plants.

COVERAGE: Information on high-speed cutting tools, carbide-tipped drills, and reamers for roughing and finishing is presented. The book is a systematic summary of Soviet literature in these fields. Material from GOST and other official standards is included. Reference data for designing tools and processes for machining holes are given. No personalities are mentioned. There are 23 references, all Soviet.

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High-efficiency Tools; Tools for Machining Holes

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AVAILABLE: Library of Congress

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VK/gap
3-25-60

VLADIMIROV, Yevgeniy Vladimirovich, inzh.; DNEPROVSKIY, Yevgeniy Vasil'ye-
vich, inzh. Prinsipal uchastiye GORANSKIY, G.K., kand.tekhn.nauk;
POL'SKIY, S., red.; STEPANOVA, N., tekhn.Ped.

[Effective and automatic checking of machined parts on automatic
machine tools and automatic lines] Aktivnyi i avtomaticheskii
kontrol' detalei na stankakh-avtomatakh i avtomaticheskikh liniyakh.
Minsk, Gos.isd-vo BSSR. Red.nauchno-tekhn.lit-ry, 1960. 138 p.

(MIRA 13:10)

(Machinery, Automatic)

(Machine-shop practice)

GRIGOR'YEV, Sergey Sergeyevich, inzh.; LEBEDEV, Anatoliy Maksimovich, inzh.;
Prinimal uchastiye GORANSKIY, G.K., kand.tekhn.nauk. KASHTANOV, F.,
red.; STEPANOVA, N., tekhn.red.

[Automatic adjustment and readjustment of machine tools and cutting
tools in automatic production lines and automatic machines] Avto-
maticheskaia naladka i podnaladka stankov i instrumentov v avtomati-
cheskikh liniyakh i stankakh-avtomatakh. Minsk, Gos.isd-vo BSSR.
Red.nauchno-tekhn.lit-ry, 1960. 178 p. (MIRA 13:10)
(Machinery, Automatic--Maintenance and repair)

PHASE I BOOK EXPLOITATION SOV/5584

Goranskiy, Georgiy Konstantinovich

Ratsional'noye ispol'zovaniye metallorezhushchikh stankov
(Rational Use of Metal-Cutting Machine Tools) Minsk, Gosizdat
BSSR, 1960. 226 p. 3,000 copies printed.

Ed.: S. Pol'skiy; Tech. Ed.: N. Stepanova.

PURPOSE : This book is intended for technical personnel, department supervisors, economists, shop foremen, and workers in machine-building enterprises.

COVERAGE: A number of problems concerning the more efficient utilization of metal-cutting machine tools are reviewed. Detailed investigations are made of possible unused machine-tool capacities which may allow for an increase in output, and of various methods of decreasing cycle time, setup time, and other time allowances encountered in the operation, setup, and repair of machine tools. Basic trends and problems in the modernization of machine tools are discussed; all such problems are illustrated with examples taken from Soviet plant practice. Necessary design formu-

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Rational Use of Metal-Cutting (Cont.)

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las and tables are also given. No personalities are mentioned. There are 12 references, all Soviet.

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GORBATSEVICH, Aleksandr Feliksovich [Horbatssevich, A.F.]; KUZNETSOV,
Vladimir Petrovich; GORANSKIY, G.K., kand. tekhn. nauk, red.;
TIMOFEYEV, L., red. izd-va; TURTSEVICH, L., tekhn. red.

[Automatic lines for manufacturing gear wheels] Avtomaticheskie
linii dlia proizvodstva zubchatykh koles. Minsk, Izd-vo Akad.
nauk BSSR, 1961. * 132 p. (MIRA 15:1)
(Gear-shaping machines) (Automation)
(Gear-cutting machines)

GORANSKIY, G.K.; VLADIMIROV, Ye.V.

Analysis of technical and economic indices of the performance
of automatic lines manufacturing ball and roller bearings at
the First State Bearing Plant. Sbor.trud, Inst. mash. i avtom. AN BSSR
no.1:9-18 '61. (MIRA 16:5)
(Moscow—Bearing industry) (Automation)

GORANSKIY, Georgiy Konstantinovich; BLOKH, A.Sh., kand. fiziko-matem. nauk, red.; BEL'ZATSKAYA, L., red. izd-va; SIDERKO, N., tekhn. red.

[Theory of the automation of engineering work; using algorithms in designing machine tools] K teorii avtomatizatsii inzhenernogo truda; algoritimizatsiia proektirovaniia metallovezhushchikh stankov. Minsk, Izd-vo Akad. nauk BSSR, 1962. 214 p. (MIRA 16;3)
(Machine tools--Design and construction) (Algorism)

S/271/63/000/003/048/049
A060/A126

AUTHOR: Goranskiy, G.K.

TITLE: Use of digital electronic computers for calculating optimal cutting schedules

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 3, 1963, 83, abstract 3B489 (In collection "O proizvoditel'nosti avtomat. mashin", Minsk, AN BSSR, 1962, 88 - 98)

TEXT: Methods are proposed for determining the optimal cutting schedules on various metal cutting machine tools using mass-produced digital computers. The optimality criterion of the selected cutting schedule is taken to be the unit cost of the operation; however, also other criteria may be adopted (productivity, tool wear, etc.). For the selection of an optimal schedule various equations are set up, characterizing all the possible laws of the metal cutting processes, and also the dependences between the kinematics and dynamics of the machine tool, the cutting capacities of the tool, the organization of tool economy and the economics of production, the specified productivity, and other fac-

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Use of digital electronic computers for

S/271/63/000/003/048/049
A060/A126

tors influencing the selection of the cutting schedules. The obtained system of equations is optimized by the methods of linear programming. A simplified method is proposed in accordance with which algorithms are developed for solving the following problems using a digital computer: Optimal one-tool processing in one pass; one-tool processing in several passes, and multi-tool processing. Also auxiliary programs have been developed for determining the cost per 2 min of operation of the machine tool, the economic cost of the tool and the cost at greatest productivity. As an illustration a method is considered for optimizing a system of equations and inequalities for a single-tool processing in several passes. It is noted that if under the technical limitations it is impossible to attain the required productivity then the digital computer in accordance with its program will indicate the possible productivity. There is 1 figure.

A. S.

[Abstracter's note: Complete translation]

Card 2/2

GORANSKIY, G.K., inzh.

Using electronic digital computers in the automation of design and construction work. Mekh. i avtom. proizvod. 16 no.6:45-50 Je '62.

(MIRA 15:6)

(Electronic digital computers) (Automation)
(Machinery—Design)

GORANSKIY, G.K.; SHEVCHENKO, V.S.

Determining optimum structural parameters for the pumping units
of gear pumps (engines) using the methods of linear programming.
Nauka - proizv. no.1:80-89 '63. (MIRA 18:3)

GORANSKIY, Georgiy Konstantinovich; KASPER, M., red.; YERMOLENKO, V.,
tekh. red.

[Using electronic computers in calculating cutting conditions]
Raschet rezhimov rezaniya pri pomoshchi elektronno-vychislitel'nykh mashin. Minsk, Gos.izd-vo BSSR, 1963. 191 p.

(MIRA 16:8)

(Metal cutting)

(Electronic digital computers)

ZAK, Grigoriy Gavrilovich; RUBINSHTEYN, Lev Iosifovich; GORANSKIY, G.K., kand. tekhn. nauk, red.; BARABANOVA, Ye., red. izd.-va; VOLOKHANOVICH, I., tekhn. red.

[Machinery designer's handbook] Spravochnik konstruktora (mashinostroitelia). Minsk, Izd-vo Akad. nauk BSSR, 1963. 567 p. (MIRA 16:5)
(Machinery--Design and construction)

GORANSKIY, Mikhail Nikolayevich, kand.ekon.nauk; PSHONIK, B.M.,
starshiy red., otv. za vypusk; KOVAL', A.Ye., red.; ZIMA,
Ye.G., tekhn. red.

[The 22d Congress of the CPSU on the consolidation of the
economic and defensive power of the U.S.S.R.] XXII s"ezd
KPSS ob ukrepleni ekonomicheskogo i oboronnogo mogushche-
stva SSSR. Minsk, 1962. 27 p. (Obshchestvo po raspro-
straneniuiu politicheskikh i nauchnykh znani Belorusskoi
SSR, no.10) (MIRA 15:10)
(Russia--Economic policy) (Russia--Defenses)

GORANSKIY, VLADIMIR ALEKSANDROVICH

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1961/I

1955

SEE ILC

MECHANICAL ENGINEERING

AUTHORS: Goranskiy, V.V., Malkina, Kh.E. and Pukhov, A.P. SOV/138-58-11-4/14

TITLE: Preheating Tyre Casings Before Moulding and Vulcanisation
(Nagrev pokryshek pered formovaniyem i vulkanizatsiyey)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 11, pp 11 - 17 (USSR)

ABSTRACT: Preheating improves the strength of bond between the parts of the tyre by increasing the interaction between rubber mixes at the interfaces between layers, as a result of higher plasticity and dispersibility. It gives increased adhesiveness at these surfaces through diffusion of sulphur into the rubber mass away from the surfaces and reduction of stresses in the casing at different stages of the manufacturing processes. With preheating before moulding or before vulcanisation, tyres show increased lives on rig test and considerable decrease in scatter between greatest and least lives on test. Best results are obtained where tyres have been preheated by high-frequency current and are subsequently pressed and moulded without intermediate cooling, as shown in Table 1. Figure 1 shows the plasticity of different mixes used in the tyre against temperature. A sufficient degree of plasticity for satisfactory moulding is attained in the breaker and carcass mixes at 60 - 70 °C, whereas

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SOV/138-58-11-4/14

Preheating Tyre Casings Before Moulding and Vulcanisation

the tread mix is much less plasticised at this temperature. Equilibrium between the solubility of sulphur and the content of sulphur in the mix occurs at about these temperatures. Experiment shows that preheating to this temperature gives least relaxation and greatest improvement in tyre quality. Higher temperatures can lead to porosity and pre-vulcanisation. Average breaker rubber mix is subject to pore formation at 73 °C and in natural rubber tyres the breaker mix is the most sensitive to pre-vulcanisation. Tyres may remain in a pre-heated condition for 40 - 50 min if their temperature does not exceed 70 - 80 °C.

Different parts of a tyre have different electrical characteristics which leads to unequal temperature distribution in a high-frequency heating field. The simplest and most effective arrangement for HF heating is between parallel electrodes, as shown in Figure 2. Temperature differences in an un moulded synthetic rubber tyre preheated for 8 to 10 minutes in an HF field at 8 kV and 11 megacycles are shown in Table 2 and Figure 5. Dielectric constant times loss angle gives a lower loss factor for the tread part of the tyre than the internal parts, so,

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Preheating Tyre Casings Before Moulding and Vulcanisation

assuming that the specific heats of the different rubber mixes are similar, the carcass and breaker rubber will attain higher temperatures. This is a desirable state of affairs and is one of the advantages of HF heating as compared with preheating by hot air. Heat treatment may also be applied to moulded tyres before vulcanisation. In this case, temperature distributions are as shown in Table 4 and Figure 6. (Figures 5 and 6 show temperature distributions with HF heating and with hot-air heating.) Where a moulded tyre is preheated before vulcanisation, the scatter on life test is reduced if the tyre is subsequently cooled before vulcanisation. The curing bag attains a high temperature on account of water in the composition of the lubricating medium used on the surface of the bag. The authors suggest that the best effects of heat treatment are obtained with two-stage treatment before moulding and before vulcanisation; comparisons of rig test lives with HF heating at different stages of manufacture are given in Table 6. Heat treatment of vulcanised tyres is also beneficial, having an annealing effect upon stresses remaining in the

Card3/5

SOV/138-58-11-4/14

Preheating Tyre Casings Before Moulding and Vulcanisation

tyre after vulcanisation. Rig tests on tyres so treated show double life, on average, and great reduction in scatter.

Results of field tests on three different classes of road surface are shown in Table 7, and confirm that tyres subjected to HF heat treatment before moulding and vulcanisation have substantially better life than standard tyres, particularly on bad surfaces.

HF heating shortens vulcanising time, particularly as the curing bag is brought up to its operating temperature during preheating. Vulcanising time can be reduced from 110 minutes at 145 °C (with standard vulcanisation) to 76 minutes at 160 °C with HF preheating, with general improvement in bond strength between layers as is evidenced in Table 9. Table 10 compares rig test lives of tyres with standard vulcanisation for 110 minutes at 145 °C with lives of tyres vulcanised for shorter times at higher temperatures following HF heat treatment. Vulcanisation for 80 minutes at 155 °C following HF heating gave more than double life.

Card4/5 Figures 7 and 8 show plant for preheating tyres. The lower

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Preheating Tyre Casings Before Moulding and Vulcanisation

electrode is formed by a conveyor belt constructed from aluminium angle sections. The upper electrodes are aluminium plates which can be raised or lowered in hydraulic rams and which are brought close to but not in electrical contact with the tyres. Tyres are preheated in this plant after moulding, before vulcanisation, for 4 1/2 minutes at 8 kV and 17 megacycles. Power consumption per tyre is 3.5 to 4 kWh. The use of HF heating is not satisfactory with tyres containing electrically conductive material such as carbon black, as the presence of conductive particles on the surface of the tyre leads to instability in the heating process through short-circuiting. There are 8 figures and 10 tables.

ASSOCIATIONS: Moskovskiy shinnyy zavod (Moscow Tyre Factory)
Nauchno-issledovatel'skiy institut shinnoy promyshlennosti
(Research Institute for the Tyre Industry)

Card 5/5

GORANSKIY, V.V.; MESHKOVSKAYA, M., red.; KUZNETSOVA, A., tekhn.
red.

[We made durable tires] Delaem prochnye shiny. Moskva,
Mosk. rabochii, 1963. 47 p. (MIRA 16:7)

1. Glavnyy inzhener Moskovskogo sninnogo zavoda (for
Goranskiy).
(Tires, Rubber)

DZFUNIKOWSKI, Kazimierz, doc. mgr inz.; MARCHEWKA, Jan mgr inz.; GORASDZA,
Ginter

First industrial tests of using roof bolting in working thick
coal seams in their entire thickness. Glow Inst gorn prace no.
33811-15 '64.

1. Central Mining Institute, Katowice.

ACC NO: AT6028810

(N)

SOURCE CODE: UR/3222/65/000/008/0107/0116

AUTHOR: Kuznetsov, A. I. (Candidate of technical sciences); Gerashchenko, Z. A.
(Aspirant)

ORG: none

TITLE: A study of wave pressure of progressive waves on a vertical wall

SOURCE: Moscow. Gosudarstvennyy projektno-konstrukterskiy i nauchno-issledovatel'skiy institut morskogo transporta. Trudy, no. 8(14), 1965. Volnovyye issledovaniya; inzhenernyye isskaniya (Wave studies; engineering research), 107-116

TOPIC TAGS: ocean ^{tide} ~~study~~, ocean dynamics, spectrum analysis

ABSTRACT: The pressure exerted on a vertical wall by sliding progressive waves along the surface of the wall and change in pressure as a function of wave parameters is experimentally studied in shallow water zones. Sliding waves are formed along harbor sides of wavebreakers as a result of diffraction of incident waves from the sea side around the wavebreaker heads. This experimental study was made during 1963--1964 in Odessa. A pool 15.45 m long, 0.90 m wide, and 1.5 m high was used; waves 0.6 to 6 m long were artificially generated at water depths of 40 to 60 cm. The experimental results were compared with theoretical results. Although voluminous data were obtained, no clear relationship between the pressure due to progressive waves and wave para-

Card 1/2

...
meters was established. Orig. art. has: 7 formulas and 3 figures.

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 003

Card 3/3

ACC NR: AT6028811

(N)
APPROVED FOR RELEASE: 06/13/2000

SOVIET CODE: CIA-RDP86-00513R000516020013-3
REF ID: A65900/008/0216/0119

AUTHOR: Gorashchenko, Z. A. (Aspirant)

ORG: none

TITLE: Some results of laboratory studies of wave loading on bounding structures at oblique wave incidence

SOURCE: Moscow. Gosudarstvennyy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut morskogo transporta. Trudy, no. 8(14), 1965. Volnovyye issledovaniya; inzhenernyye izyskaniya (Wave studies; engineering research), 116-119

TOPIC TAGS: ocean ~~wave~~ ^{tide}, ocean dynamics, spectrum analysis

ABSTRACT: A laboratory study to determine the wave pressure on a vertical wall as a function of the wave incidence angle was made during 1962--1964. The study was made in a large pool with a constant depth of 40 cm. The bounding structure, a vertical wall, was made from wood and had the following dimensions: length, 5 m; and height, 75 cm. Wave pressure was measured at wave incidence angle intervals of 15 or 30° with respect to the wall by rotating the wall. The resultant wave pressure on the vertical wall, in shallow water zones, was found to be a function of three parameters: the incidence angle, the ratio of wall height and wavelength, and the ratio of waveheight and wavelength. Orig. art. has: 1 figure.

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 003

Card 1/1

VOLAROVICH, M.P.; GORAVSKIY, M.A. [Horawski, M.]; CHURAYEV, N.V.

Effect of the dispersion medium on filtration in peats. Koll.zhur.
26 no.1:22-27 Ja-F '64. (MIRA 17:4)

1. Kalininskiy torfyanoy institut i Vrotslavskaya shkola sel'skogo
khozyaystva, Pol'sha.

GORAYETSKIY, N. I. , Engineer

Mbr., ZIS (-1945-)

"Honing Hales and External Surfaces with Hydraulic Honers," Stanki I Instrument, 16, No. 12, 1945

BR-52059019

ED.

Russia

1 of 1

Abrasive Liquid Blasting

By N. I. GAYETSKI. (From *Stanki i Instrument*, Vol. 22, No. 7, 1951, pp. 27-31, 17 illustrations.)

Experimental work on metal removal by blasting with an abrasive liquid was carried out at the "Stahn" motor car factory. As a result of these experiments, a design of equipment for directing the abrasive jet onto the treated surface was evolved, utilizing compressed air from an ordinary industrial distribution system, and the influence of individual factors on the process of abrasive liquid blasting was studied.

The installation for carrying out the experiments consisted of a small working chamber with a gun for directing the abrasive jet on to the treated part and of a reservoir containing the abrasive liquid.

The working chamber was placed on the cross-slide of a lathe and could be displaced longitudinally and transversely either by hand or by means of the lead screw.

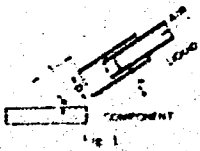


Fig. 1. The gun is secured to the wall of the working chamber by a bell joint which permits adjustment of the angle α (Fig. 1) between the direction of the jet and the surface to be treated. The limits of adjustment are between 0 and 90 degrees. The distance l between the nozzle lip and the treated surface could also be adjusted within the limits of 5 to 100 mm.

Movement of the cross-slide causes the gun to be displaced in relation to the treated component. When the treated surface is flat, the component is fastened to a holder fixed to the bed of the lathe.

If the treated surface is cylindrical, the component is mounted on the faceplate and rotates while being treated.

During the blasting of the component, the aperture of the chamber is tightly sealed by a cover and the air leaves the chamber through a large pipe.

The abrasive liquid in the reservoir is agitated by a mixer rotating at a speed of 100 rpm.

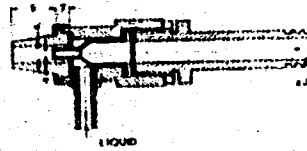


Fig. 2

(over)

GORAYTSKIY, N.I.

Research in the field of lapping holes by abrasive bricks at the
Likhachev Automobile Plant. Trudy Sem. po kach. poverkh. no.3:
153-172 '57. (Grinding and polishing) (Abrasives) (MLBA 10:11)

GORAYETSKIY, N. I., Candidate of Tech Sci (diss) -- "Investigation of the process of honing the openings in automobile parts and increasing its effectiveness". Moscow, 1959. 15 pp (Min Higher Educ USSR, Moscow Automotive Mech Inst), 110 copies (KL, No 22, 1959, 114)

GORAYETSKIY, N.I.

Honing holes in hardened pinion gears instead of grinding.
Avt.prom. no.8:30-32 Ag '60. (MIRA 13:8)

1. NIITavtoprom.
(Grinding and polishing)

GORAYETSKIY, N.I.

Increasing the efficiency of honing. Stan.i instr. 31 no.11:
12-14 N '60. (MIRA 13:11)
(Grinding and polishing)

GORAYETSKIY, N.I.

Modern finishing of surfaces with abrasive bars. Trudy Sem.po
kach.poverkh. no.5:308-314 '61. (MIRA 15:10)
(Grinding and polishing)

11100

S/122/60/000/011/015/020
A161/A127

AUTHOR: Gorayetskiy, N. I., Candidate of Technical Sciences

TITLE: Peculiarities of the hole honing process

PERIODICAL: Vestnik mashinostroyeniya, no. 11, 1960, 70 - 72

TEXT: Hole honing operations have been investigated; the study included oscillographing. Some peculiarities have been revealed, and the article contains information on a part of the observations that have been made. In honing with constant feed effort (spreading of the abrasive blocks) the cutting intensity rapidly drops during the first 10 - 40 sec (Figure 1) and the empirical dependence of the removed metal volume W and cutting intensity v_H from time T can be expressed in the equations:

$$W_M = C_M T^{n_M}$$

$$v_H = \frac{d W_M}{d T} = \frac{n_M C_M}{T^{1-n_M}}$$

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S/122/60/000/011/015/020
A161/A127

Peculiarities of the hole honing process

where C_m is a constant coefficient, and $n_m < 1$. The allowance removal rate drops more slowly than the cutting intensity, for at the beginning the allowance is less filled with metal. The initial roughness of the hole surface (H_u) is a most important factor, the surface fills with metal as roughness decreases, and ever more abrasive grains participate in cutting; the radial and tangential forces acting on the protruding grains decrease; the grains are dislodged and less intensively broken and gradually the cutting edges on the grains even out. The initial cutting intensity must be restored by honing a part with high initial roughness, but not too rough (this causes excessive wear, or crumbling). In the experiments, H_u raised from 1 to 3 micron, speeded up the wear of honing blocks 2.5 times. It was observed; 1) That no self-sharpening takes place in the conventional sense; 2) The cutting capacity can only be restored by replacement of the workpiece by one with proper roughness; 3) The metal volume that can be removed from one part is limited by dropping the cutting rate, the process cost, and the required finish; 4) The assumption is wrong that the process remains constant during the honing of one part. After working-in the mean cutting intensity for the cycle can drop further during a transition period (Figure 3); this happens when the initial cutting capacity of the blocks has not been fully restored. Prolonged honing intended

Card 2/5

25097

Peculiarities of the hole honing process

S/122/60/000/011/015/020
AY61/A127

to remove a larger allowance (with other conditions maintained constant) may even lead to a contrary result, i.e., less metal will be removed because of the blunted abrasive blocks. The major mistake in practice is that blunted honing tools are used for hard metal (cast iron, steel, chromium); another mistake is to use too slightly blunted tools for finish honing of hard metal, and particularly of soft (brass, bronze, aluminum). The following must be also considered: blunting speeds up with the increasing relation of rotation to onward motion of the tool, reducing specific pressure, higher hardness of the abrasive, higher viscosity of cutting fluid (adding mineral oil to kerosene), and slowed-down spreading of the blocks for contact with the work surface. It is recommended to keep the honing time short. For instance, machining of holes of medium length (automotive industry) in steel will last 8 - 15 sec, and in cast iron 12 - 20 sec. If a higher finish is required an allowance of 0.005 - 0.01 mm is sufficient for finish honing, and if the honing blocks grain is "M28", 6 sec. are needed to produce finish class $\nabla 8$, about 12 sec. for finish $\nabla 9$, and 24 sec for $\nabla 10$. With such results, honing can and ought to replace grinding in many cases (such as in the making of gears, or ball bearing races). There are 4 figures.

Card 3/5

GORAYETSKIY, N.I.

Equipment for honing splined holes. Stan.1 instr. 33 no.3:1-4
Mr '62. (MIRA 15:2)

(Grinding and polishing)

GORAYETSKIY, M. I.

Honing slotted holes in hardened pinions. Avt. prom. 29 no.5:
40-43 My '63. (MIRA 16:4)

1. Nauchno-issledovatel'skiy institut avtomobil'noy promysh-
lennosti.

(Grinding and polishing)

GORAYKO, F.A., inzhener.

Most advantageous parameters for three-point speed graph for electric meters. Vest. elektrom. 28 no.3:56-59 Mr '57. (MIRA 10:4)

1. L'vovskiy politekhniicheskiy institut.
(Electric meters)

GORAYKO, F. A., Candidate of Tech Sci (diss) -- "Rational dynamic systems of electric drive". L'vov, 1959. 19 pp (Min Higher Educ Ukr SSR, L'vov Polytech Inst), 150 copies (KL, No 22, 1959, 114)

GORAYKO, F.A., kand.tekhn.nauk (L'vov)

Design of electric drives for repeated short time mode of operation
using the minimum installed capacity criterion. Elektrichestvo
no.9:70-73 S '63. (MIRA 16:10)

GORAYSKI, Kazimierz, USZYCKA, Krystyna

Late results of suturing for prevention of cervical rupture following labor. Gin.polska 29 no.1:15-18 Jan-Feb 58.

1. I Kliniki Poloznictwa i Chorob Kobietych A.M. w Warszawie.
Kierownik Kliniki; prof. dr med. A. Szyzewicz i z Oddzialu Polozniczo-
Ginekologicznego Instytutu Gruslicy w Warszawie. Kierownik Oddzialu:
prof.dr. M. Bulaka.

(CERVIX, UTERINE, rupt.

in labor, prev. by suturing, indic. & results (Pol))

(LABOR, compl.

cervical rupt., prev. by suturing, & results (Pol))

VOLAROVICH, M.P.; GORAZDOVSKIY, T.Ya.; PARKHOMENKO, E.I.

Study of thin pieces of rock under shearing by torsion and pressure from one side. (In: Soveshchanie po eksperimental'noi mineralogii i petrografii. 4th, Moscow, 1952. Trudy, Moskva, 1953. No.2, p.230-236.)

(MLRA 7:3)

1. Institut geofiziki Akademii nauk SSSR.

(Rocks)

GORAZDOVSKIY, T.Ya.

Theoretical prerequisites of the method used in forecasting
the disintegration of permanently frozen ground and ice fields.
Probl.Arkt. no.5:81-92 '58. (MIRA 13:5)
(Ice) (Frozen ground)

GORAZDOVSKIY, T.Ya.

Experience in measuring absolute stresses acting in a massif
of frozen grounds. Trudy Inst. merzl. AN SSSR 14:129-134 '58.
(MIRA 11:8)

(Measuring instruments)

(Frozen ground)

(Soil mechanics)

PA 45/49T48

GORAZDOVSKIY, T. YA.

USSR/Engineering
Worm Gears
Kinematics

Jan/Feb 49

"Use of X-Rays for Kinematic Analysis of the Movement of Dispersed Systems in Worm Gears," M. P. Volatovich, T. Ya. Gorazdovskiy, Chair of Phys., Moscow Pest Inst, 4 pp

"Kolloid Zhur" Vol XI, No 1

Gives analytical and synthetic projection of the screw-thread line. Shows that dispersed systems can fill the whole space between gear worms, and that it is possible to obtain a geometrical form that is possible to obtain a geometrical form.

45/49T48

USSR/Engineering (Contd) Jan/Feb 49

Representation for the coefficient of filling up. Models of gear worms can be used effectively in laboratory experiments to determine slip problems of various dispersed systems, and friction they create when acting with various materials.

45/49T48

CA

Apparatus for rheological determinations of
solid deformable consistent materials. T. No. 1000-7
Sovetskaya Fizika (Moscow Publ. Inst.). *Zhurnal Fiz. i Khim.* 18, 224-7
(1944).—An app. in which the material is placed between
2 ring-shaped disks with a central slit, with friction in the
slit being reduced to $1/\mu$ of the shearing force, and the
displacement magnified by a factor of from 1000 to 2700,
permits readings with an accuracy of $\pm 0.5\%$ and detn. of
the modulus of shear, the viscosity coeff., the relaxation
and retardation periods, and a series of rheological func-
tions. N. Thom

117 AND 7ND STORES
120 AND 4TH STORES
PROCESSES AND PROPERTIES INDEX
24

Concerning Article on Theory of Cracking of Ceramic Objects During the Drying Process. (In Russian.) Part I. I. M. Keller. Part II. T. Ya. Gorazdovskii. *Steklo i Keramika* (Glass and Ceramics), v. 7, June 1950, p. 14-21.

Refers to papers by Chizhskii and by Lykov (Oct and Dec, 1949). Experimental investigation of the causes of crack formation in bricks confirms the theories of Lykov based on deformation by shear. Method of investigation is described in detail. Data are charted and tabulated. In Part II, the correct theoretical bases of Chizhskii's experiment are established, leading to a theory of total disintegration of a piece of dried clay of infinite dimensions. Numerous diagrams.

118-51A METALLURGICAL LITERATURE CLASSIFICATION
120M BOWMAN
121122 ONE ONE 121

120M BOWMAN
121122 ONE ONE 121

120M BOWMAN
121122 ONE ONE 121

SA

A 53
FF

539.501
 6887. Theory of an instrument for rheological investigation by deformation of the material between two conical rings. T. YA. (JIMAZDANUKI, J. Tech. Phys., USSR, 20, 1107-10 (Sept., 1951) In Russian.
 A new principle of construction for an instrument for absolute rheological measurements of easily deformable consistent materials under homogeneous deformation between conical rings is presented. Formulae for calculating the elastic modulus in displacement and coefficient of viscosity for materials tested are given.
 B. P. ARATY

ASH-51A METALLURGICAL LITERATURE CLASSIFICATION

GORAZDOVSKIY, T. YA.

USSR/Chemistry - Deformation of Colloidal Systems Mar/Apr 52

"The Theory of X-Ray Cinematic Analysis of the Trajectories of Motion of Easily Deformable Colloids and of Coarsely Dispersed Systems," T. Ya. Gorazdovskiy, S. A. Rejter, Chair of Phys, Moscow Inst of Chem Machinery B10g

"Kolloid Zhur" Vol XIV, No 2, pp 85-92

Analytic theory for obtaining trajectories of motion of particles of media being deformed is shown by a 3-dimensional curve corresponding to 2 central projections obtained in the form of X-ray pictures. Projections can be obtained by

216710

2 methods: displacing the X-ray tube or displacing the object being studied. Explains the methods and their theory. Gives formulas for determining the coordinates and eqs of the curve in 2 adjacent central projections. The 2 above methods are not equiv, and sep formulas are given for each case. Indicates physical and mathematical methods of finding unique solns.

216710

Свойства теста

Chemical Abst.
Vol: 48 No: 8
Apr. 25, 1954
Foods

①
Rheological properties of bakery dough. T. Ya. Gorz-
dovskii. *Colloid J. (U.S.S.R.)* 14, 443-8(1952)(Engl.
translation).—See *Col.* 47, 316f.
H. L. H.

GORAZDOVSKIY, T. YA.

USSR/Physical Chemistry - Liquids and Amorphous Bodies. Gases, B-6

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 307

Author: Gorazdovskiy, T. Ya., and Regirer, S. A.

Institution: None

Title: Motion of a Newtonian Liquid Between Two Rotating Coaxial Cylinders in the Presence of Internal Heat Processes Affecting the Viscous Properties

Original
Periodical: Zh. tekhn. fiziki, 1956, Vol 26, No 7, 1532-1541

Abstract: It was found that during the investigation of the viscosity of liquids with the rotational viscosimeter strong initial heating of the liquid could be observed; this heating altered the rheological properties of the liquid under investigation. Starting with the basic differential equations describing the motion of a viscous liquid, the authors have solved the problem of the flow and heat exchange in a viscous layer between 2 rotating coaxial cylinders of infinite length, taking into account the dissipation of energy, heat conductivity, and the

Card 1/2

USSR/Physical Chemistry - Liquids and Amorphous Bodies. Gases, B-6

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 307

Abstract: dependence of the viscosity on the temperature during steady-state conditions. The indicated method of partial solutions is applicable to the treatment of viscosimetry experiments and to the determination of the temperature variation of the viscosity in the neighborhood of the given temperature. A comparison of the method with isothermal theory is given and the applicability of such methods to viscosity studies, particularly of structured systems.

Card 2/2

GORAZDOVSKIY, T. Ya.

Pneumatic transducers used in precise measurements in the wide range
of linear measures. Iss. tekhn. no. 3:22-23 My-Je '57. (MLRA 10:8)
(Gauges)

GORAZDOVSKIY, T.Ya.; PALAD'KO, V.V.

Modernising pneumatic length meters. Iss. tekhn. no.3:24-26 My-Je
'57. (MLRA 10:8)

(Length measurement)

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AUTHORS: Rubtsov, V.K., and Gorazdovskiy, T.Ya.

TITLE: A high-temperature X-ray chamber

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TEXT: The chamber described is type PPK \exists (RVKE), for high-speed X-ray photography of polycrystals and intended mainly for physical-technical investigation of high-temperature steels. Chamber type PPK \exists (RKKE) is a development of chamber type PK \exists T -600 (RKET-600); it can produce X-ray photographs at temperatures between room and +1000°. The actual chamber is on three levelling screws; a frame carries a film holder, and an electric motor oscillates the specimen. A heater, a magnetic coupling, and a mechanism for setting the angle of focusing are provided. The frame of the chamber is a soldered brass box (with lid) consisting of two side pieces whose front ends are milled into a cylinder. The front part of the chamber is soldered to
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the ends with a slot which is the screen for the film holder. The slot, 7 mm wide, is covered on the outside with aluminium foil secured by adhesive. In addition, the foil is pressed on by a special additional sector (with slot) which also covers the film holder. Two terminals bring connections through the rear wall of the chamber to the heater and thermocouples. Windows are cut in the side wall for fixing on the one hand the bosses of the magnetic coupling and on the other bosses for fixing a small wheel with a dial by which the heater can be turned to the required angle. A union for extracting air is built into the chamber and there is an inlet in its roof. The film holder, located below the primary beam, is designed for 7 frames (each 7 mm wide) and can record angles of 88 to 60°. A handle brought out below the base is used to move the film holder in guides to change frame. A resistive heater within the chamber can be set at the necessary angle of focus by a mechanism brought to the outside, and can be oscillated by 180° around an axis perpendicular to the plane of the specimen by an electric motor type C Д-2 (SD-2) operating through a magnetic coupling. The temperature on the specimen is maintained by an electric thermostat of the customary

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contact-millivoltmeter type. X-rays direct from the tube focus reach the plane of the specimen surface in a broad band and on reflection from the atomic planes of the crystals are focused on the photo film which is arranged on the arc of a circle whose center lies on the surface of investigation of the specimen. Focusing is ensured by making the investigated plane surface of the specimen a tangent to the cylindrical surface which passes through the focus of the tube, the specimen, and the line recorded on the film. The breadth of the X-ray line is approximately 0.3 - 0.4 mm. The exposure is several minutes. The parameters of the instrument are: distance from center of specimen to film 114.59 mm; distance from tube focus to center of specimen 174.59 mm; distance from tube focus to film 60 mm. Stability, uniformity and measurement of temperature are discussed, also the thermal insulation of the specimen and heater. Diagrams are given of the X-ray optical circuit and of displacement of the specimen. The conditions of focusing are calculated. Preliminary tests on the chamber showed that it operated reliably. 6 figures.

[Abstractor's note: Complete translation.]

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izd-va; LARIONOV, G.Ye., tekhn. red.

[Flaw detection in materials] Defektoskopia materialov. Izd.2.,
perer. Moskva, Gos. energ. izd-vo, 1961. 326 p. (MIRA 15:3)
(Nondestructive testing)