"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

S/138/59/[illegible]

An Investigation Into the Properties of Filled Nitrile Rubbers. Communication 1. The Properties of Filled Silicate-Nitrile Rubbers

silicate-nitrile rubbers presents little difficulty in spite of the high values of hardness according to Defoe due to the weakening of the secondary rubber-filler bonds and due to an increase in the fluidity of the mixture caused by an increase in the mixing temperature. The rupture-wear resistance and the elasticity of the rubbers filled in the latex is higher than those filled on the rollers. The former also have a better roadability. The thermal-resistance is the same. Tables [illegible] and [illegible] give the comparative figures of the various properties. At elevated temperatures the rubbers filled in the latex retain their strength better than those filled on the rollers, they have better resistance to thermal aging. The aging was carried out at 100, 110, 120 and 13 °C lasting from [illegible] hours [illegible]. The high resistance to aging of the vulcanizates is explained by [illegible] filler blocking the double bonds of the hydrocarbon rubber, which [illegible] the reactivity of the rubbers, inhibiting the development of the oxidizing processes (Ref. 5). Long-lasting storage does not change the properties of the silicate-nitrile vulcanizates, which is of practical significance in the mass production of this rubber in the form of chunks. [illegible] with [illegible] weight parts of calcium silicate and filled in the latex [illegible]

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S/138/59/000/[illegible]

An Investigation Into the Properties of Filled Nitrile Rubbers.
Communication 1. The Properties of Filled Silicate-Nitrile Rubbers

dissolve to only 16.5% in a 75% chlorobenzene and 25% n-dichlorobenzene system, whereas without the filler it would dissolve completely. The vulcanizate with a silicate-nitrile base has a high resistance to swelling, corresponding to the swelling observed in the SKN-26-based rubbers. Rubbers produced from silicate-nitrile raw material have better properties than those produced from nitrile rubbers, where the filler is introduced on the rollers, and are very valuable for the production of various oil-resistant commercial articles.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific-Research Institute of the Rubber Industry)

Card 4/4

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59447
S/069/60/022/02/015/024
B034/B002

15.9200

AUTHORS: Shvetsov, V.A., Pisarenko, A.I., Shtarkh, E.V., Novikov, A.S.

TITLE: An Electron Microscopic Study of the Structures of Reinforced Rubbers

PERIODICAL: Kolloidnyy zhurnal, 1960, Vol XXII, Nr 2, pp 234-236 (USSR)

ABSTRACT: The authors report on the results of an electron microscopic study of the structuration of silicate and aluminate fillers in rubbers of the type SKN-18 and SKN-26. The silicate fillers were obtained from sodium silicate and calcium chloride silicate, the aluminate fillers - from the carbonates of sodium and aluminum sulfate. The study, which was carried out with an electron microscope of the type EM-7 (magnification - 7500), showed in the rubber solutions

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69467
S/069/60/022/02/015/024
D034/D002

An Electron Microscopic Study of the Structures of Reinforced Rubbers

the presence of sol and gel rubber fractions and of loose coagulation structures of the fillers (see electron microscopic photographs on insert). The dispersity of the elementary particles of aluminate fillers is more pronounced than the dispersity of silicate fillers; the visibility of the particles is near the limit of the resolving capacity of the electron microscope. On the whole it could be shown that high dispersity, low aggregation tendencies and the ability to form loose network and chain coagulation structures on the part of the fillers are highly important factors in the reinforcement of rubbers. The authors mention B. Dogadkin and collaborators [Ref. 2], who showed that the main reinforcing action of hydrocarbon blacks consists in the formation of chain and network structures in the

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69447
S/063/60/022/02/015/034
D034/D002

An Electron Microscopic Study of the Structures of Reinforced Rubbers

rubber mixtures. A.F. Pisarenko and collaborators [Ref 5] (in agreement with P.A. Rebinder and his school) showed that the participation of surface--active substances (additives) in the formation of mineral fillers determines basic characteristics of the fillers, as high dispersity and the ability to form chain and network structures. The authors' investigation was carried out on the lines of the results obtained by these scientists. There are 5 electron microscopic photographs on a centerfold and 9 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi, Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti;

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29467

S/054/60/022/02/015/024
D034/D002

An Electron Microscopic Study of the Structures of Reinforced Rubbers

Moskva (Scientific Research Institute of Film Materials and Synthetic Leather, Scientific Research Institute of the Rubber Industry; Moscow)

SUBMITTED: February 7, 1959

Card 4/4

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

AL'BAM, M.A., inzh.; PISARENKO, A.P., prof.

Basic factors making possible the manufacture of lightweight molded microporous soles. Izv.vys.ucheb.zav.; tekh.leg. prom. no.3:25-39 '59. (MIRA 12:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi (for Al'bam). 2. Vsesoyuznyy zaochnyy institut sovetskoy torgovli (for Pisarenko). Rekomendovana kafedroy khimii Vsesoyuznogo zaochnogo instituta sovetskoy torgovli (VSIST).
(Vulcanization) (Boots and shoes, Rubber)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

S/069/60/022/01/0010/025
D034/D003

~~56~~ 15.1125

AUTHORS: Pisarenko, A. I., Shapovalova, A. I., Voyutskiy, S.S.

TITLE: Adhesion of High Polymers
4. The Effect of Mechanical Factors on High Polymer Adhesion

PERIODICAL: Kolloidnyy zhurnal, 1960, Vol XXII, Nr 1, pp [illegible]

ABSTRACT: The authors report on a study of the effect of mechanical adhesion on the strength of attachment of high polymers such as natural rubber, butadiene acrylonitrile copolymer SKN-40 (with 37,7% acrylic acid nitrile), butadiene styrene copolymer SKS-50 (50% styrene), etc. The adhesives were applied to substrata in the form of solutions prepared with solvents as benzine, benzene and dichloroethane. As substratum the authors used a model of cellulose fiber - cellophane with variously roughened surface, and also different tissues of cellu-

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65704

S/069/60/022/01/010/034
D034/D003

Adhesion of High Polymers. 4. The Effect of Mechanical Factors on Adhesive Polymer Adhesion

lose fiber. The investigation has shown that the strength of attachment of polymers with low specific adhesion increases tens and hundreds of times with increase in mechanical disruption of the surface, in its porosity and in the elementary fibers projecting from the surface of the fabric. In the presence of mechanical adhesion the bonding strength ordinarily depends on the cohesive strength of the adhesive. The cohesive strength is particularly effective in those cases, where the uneven parts of the substratum (e.g. tissues fibers) penetrate into the adhesive layer and firmly combine with it. In previously published papers [Ref. 1-3] it was found that with the diminution of the molecular weight of polyisobutylene its specific adhesion changes along a curve with a maximum at a mole-

Card 2/3

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58704

S/069/60/022/01/010/[illegible]
D034/D003

Adhesion of High Polymers. 4. The Effect of Mechanical Factors on High Polymer Adhesion.

cular weight of 20,000. The present study has shown that in the presence of mechanical adhesion the bonding strength is maximum for polyisobutylene with a molecular weight of 200,000, and minimum for polyisobutylene with a molecular weight of 20,000. There are 5 tables and 4 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennoy kozhi (VNIIK), Moskva (All-Union Synthetic Leather Scientific Research Institut - VNIIK), Moscow)

SUBMITTED: September 2[illegible], 1958

Card 3/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, A.P.

15(6)

AUTHOR: Rebinder, P. A., Academician SOV/30-59-1-5/57

TITLE: New Trends of Colloid Chemistry (Novyye puti razvitiya kolloidnoy khimii)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 1, pp 44-51 (USSR)

ABSTRACT: At present, colloid chemistry plays an especially important part in political economy as it is a physical-chemical science concerning substances of modern engineering. It is of great practical importance that at present it is possible to carry on uninterrupted transitions from lyophobic to lyophilic systems. Thus, it is possible to obtain technically important substances with the required structural-mechanical properties. The theory of highly molecular substances and their solutions has developed into an independent branch of colloid chemistry. The vitality of modern colloid chemistry is proved by the fact that it produces many new independent branches of science. Further, the author describes the course of the 4th All-Union Conference of Colloid Chemistry which took place in Tbilisi on May 13-16, 1958. It was organized by the Otdeleniye khimicheskiy [illegible] S. S. Voyutskiy, A. P. Pisarenko and collaborators examined the process of the influence of active fillers on the processes of structural formation of polymers.

A. V. [illegible] with his school, A. A. Trapeznikov, G. V. Vinogradov and collaborators examined the properties of soap solutions in connection with their structural peculiarities and the theory of consistent lubricants.

The reports on questions of dispersion systems in polymers showed the utility of a combination of problems of colloid chemistry and the physical chemistry of polymers. The results of the Conference indicate that, besides limited consultations on individual scientific problems, comprehensive congresses are also useful and necessary, uniting the investigators and comprising the results of achievements in wide fields of science. There is 1 Soviet reference.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

SOV/138-59-4-3/2

AUTHORS: Al'bam, L.A. and Pisarenko, A.P.

TITLE: Study of the Decomposition of a Blowing Agent in Rubber Stocks (Izucheniye kinetiki protsessa razlozheniya poro-obrazovatelya v rezinovykh smesyakh)

PERIODICAL: Kauchuk i Rezina, 1959, Nr 4, pp8-12 (USSR)

ABSTRACT: Up to now insufficient attention has been paid to theoretical study of pore-formation in vulcanising micro-porous rubbers. The work here described was devoted to studying the process of decomposition of a blowing agent in normal rubber stocks. Since decomposition of the blowing agent and the resulting formation of gaseous products is an important factor in the process of pore-formation. The authors worked out methods for studying the pore-formation during vulcanisation of micro-porous rubber soles by means of a mould specially built for this purpose (Figure 1). A specimen of rubber stock containing a known quantity of blowing agent was heated to vulcanisation temperature between plates of a laboratory vulcanisation press. The gas evolved during the process was measured after completion of the vulcanisation process. In addition to nitrogen and water the gases were found to contain CO_2 and up to 1% hydrogen sulphide. No gaseous hydrocarbons were detected.

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SOV/138-59-4-3/26

Study of the Decomposition of a Blowing Agent in Rubber Stocks

The obtained results were utilized for plotting curves of gas formation in rubber stocks containing blowing agents of a volume and composition corresponding to actual conditions of pre-vulcanisation. Furthermore, the absorption coefficients of these gases in a rubber stock at vulcanisation temperature have been determined. On the basis of the obtained data it is possible to determine the quantity of gas formed at any instant during the process of vulcanisation for any conditions of vulcanisation of a rubber stock and these data can be used for studying the characteristics of pore-formation as well as for determining the internal pressures in a rubber stock during vulcanisation. Simultaneous determination of the gas discharged from and the expansion of the rubber stock permits determining the change in internal pressure during vulcanisation. This in turn enables elaboration of vulcanisation conditions by means of which micro-porous moulded rubber articles can be produced,

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SOV/138-59-4-3/26

Study of the Decomposition of a Blowing Agent in Rubber Stocks

which do not change their dimensions when discharged from the mould and do not contract during storage. Compared with current methods of producing such articles a 30% saving of material can be obtained.
There are 4 figures and 3 references

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennoy kozhi (All-Union Scientific Research Institute for Synthetic Leather)

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, A.P.; YEMEL'YANOVA, A.P.; ZAKHARCHENKO, P.I.

Properties of synthetic "silicate" rubbers. Kauch. i rez. 16 no.2:6-13 F '57. (MIRA 12:3)

1. Nauchno-issledovatel'skiy institut kozhzamenitelej.
(Rubber, Synthetic)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

MATVEYEV, V.V.; PISARENKO, A.P.; ALEKSEYENKO, V.I.

"MPS" and "MPA" semiautomatic presses for vulcanization of rubber goods. Kauch. i rez. 17 no.12:17-20 D '58. (MIRA 12:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennoy kozhi.

(Hydraulic presses) (Vulcanization)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

AL'BAM, M.A.; PISARENKO, A.P.

Investigating the process of pore formation during the vulcanization of microporous rubber soles. Leg.prom. 18 no.10:30-32 O '58. (MIRA 11:11)
(Foam rubber)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

SOV/13 [illegible]-5-3/[illegible]

AUTHORS: [illegible], A.P., [illegible], [illegible]

TITLE: Investigations of the Micro-Heterogeneity of Synthetic Rubbers ([illegible] microgeterogennosti sintetiche[illegible] [illegible])

PERIODICAL: Kauchuk i Rezina, 195[illegible], Nr 5, pp 10-13 (USSR)

ABSTRACT: Sodium butadiene rubbers are polymer homologues which have varying molecular weight (Refs.1 and 2). The molecular weight and the distribution curve of the molecular weight cannot characterize fully the properties of the rubbers as they do not show the length of their molecular chains. Various methods for processing and treatment of SKB are quoted (Refs.3-[illegible]). A.P.[illegible] and others (Refs.6 and 7) showed that it was possible to observe in SKB solutions sol-gel fractions with the aid of an electron microscope (Fig.1[illegible]). An electron microscope was also used during the investigations of the micro-heterogeneity of rubber solutions (sodium butadiene, natural [illegible] butadiene-nitrile rubber, nitro cellulose [illegible] and some types of polyamides). By varying the concentration

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SOV/[illegible]

Investigations on the Micro-Heterogeneity of Synthetic Rubber

of solutions it was possible to change the thickness of the samples from 200 - 800 Å. Electron-microscopic investigations of solutions of sodium butadiene, [illegible] and butadiene-nitrile rubbers gave results which do not agree with literature data (Refs.6 and 7). The shapes and configurations for natural rubber (Fig. [illegible]) can be explained by the globular nature of this rubber. This can be confirmed by comparing micro-photographs of these rubbers and natural latex (Fig.3A-C). Fig.4A-C: micro-photographs for sodium butadiene rubber. The heterogeneity of butadiene-nitrile rubber solutions is shown in Fig.5A-C for SKN-1[illegible], Fig.6A-C for SKN-26, Fig.7A-C for SKN-40. A Yurzhenko (Ref.9) showed that during the [illegible] emulsion polymerization the size of the rubber globules is very much smaller than those of the [illegible] droplets of the monomer. Electron-micrographs of nitrocellulose solution: Fig.8A and of various polyamide solutions: Fig.[illegible] and C. The micro-heterogeneity [illegible] to a large degree the

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[illegible]

[illegible] properties of synthetic textiles made from [illegible] [illegible] of various coatings made from [illegible]. The electron [illegible], therefore, [illegible] for the [illegible] [illegible] materials. There are [illegible] figures and [illegible] Soviet references.

ASSOCIATION: [illegible] (The [illegible]-Union Scientific-Research Institute for Artificial Leather)

Card [illegible]

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

SHTARKH, B.V.; PISARENKO, A.P.

Electron microscopic study of the plasticization process vinyl chloride and vinylidine chloride copolymer dispersions [with summary in English]. Koll. zhur. 20 no.3:395-396 '58.(MIRA 11:8)

1. TSentral'nyy nauchno-issledovatel'skiy institut promyshlennosti zameniteley kozhi, Moskva.
(Polymers) (Electron microscopy)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, A. P., and KUZ'MINSKIY, A. S.,

"The properties of rubber and resin solutions."

report presented at the Fourth All-Union Conference on Colloidal Chemistry, Tbilisi, Georgian SSR, 12-16 May 1958 (Koll zhur, 20,5, p.677-9, '58, Taubman, A.B)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, A.P.; SHTARKH, B.V.

Microheterogeneity of synthetic rubbers. Kauch. i rez. 17 no. 5:10-13 My '58. (MIRA 11:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennoy kozhi.

(Rubber, Synthetic)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

AUTHORS: Shterkn, E.V.; Pisarenko, A.P.

TITLE: Electron-Microscopic Investigation of the Plasticization Process of Dispersion of Vinyl Chloride and Vinylidene Chloride Copolymer (Elektronno-mikroskopicheskoye issledovaniye protsessa plastifikatsii dispersii sopolimera khlористого винила i винилиденхлорида)

PERIODICAL: Kolloidnyy zhurnal, 1958, vol XX, Nr 3, pp [illegible]

ABSTRACT: In the production of artificial leather and other [illegible], different water dispersions of high polymers are used. Many other substances are added to these dispersions, e.g. plasticizers. A vinyl chloride and vinylidene chloride copolymer dispersion, with dibutylphthalate as plasticizer, has been studied by means of the electron microscope EM-[illegible], the magnification being [illegible] diameters. The different stages of interaction between the employed substances is shown in the photos. [illegible] is the control test. In [illegible] shows the droplets with their split [illegible]. The [illegible] the effect of the plasticizer after [illegible] thermal processing of the samples. Plasticization over a long period or a short heating increases the effect of the low-molecular plasticizer dibutylphthalate.

Card 1/2

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Electron-microscopic investigation of the plasticization process of a dispersion of Vinyl Chloride and Vinylidene Chloride Copolymer

There are 1[illegible] photos and [illegible] references, [illegible] of which are [illegible] and 1 English

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut promyshlennosti zameniteley kozhi, Moskva (Central Scientific Research Institute of the Industry of Leather Substitutes, Moscow)

SUBMITTED: August 16, 1957

Card 2/2 1. Compounds—Applications 2. Electronmicroscope—Applications 3. Water—Dispersion 4. Plasticisers—Applications

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

NARINSKAYA, A.R.; PISARENKO, A.P.

Fillers and plasticizers for latex coating used in the manufacture of oilcloth. Leg. prom. 18 no.2:24-26 F '58. (MIRA 1[illegible])
(Oilcloth) (Latex)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

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AL'BAM, M.A.; PISARENKO, A.P.

Role of pressure and proportioning of pore forming agents in the production of molded microporous parts. Kozh.-obuv.prom. no.7:28-33 Jl '59. (MIRA 12:11)
(Vulcanization) (Boots and shoes, Rubber)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

SOV/138-58-12-6/17

AUTHORS: V.V. Matveyev, A.P. Pisarenko, B.I. Alekseyenko

TITLE: Semi-Automatic Presses Type "MPS" and "MPA" for Vulcanisation of Rubber Components (Press-poluavtomat "MPS" i "MPA" dlya vulkanizatsii rezinovykh izdeliy)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 12, pp 17-21 (USSR)

ABSTRACT: The article illustrates and describes an 18 press-station turntable machine for moulding components such as rubber soles. The MPA machine is an improved version of the earlier MPS machine designed by the authors at the "Institute of Artificial Leather" and built by the Medvedev factory at Orel. The 18 mould plattens are heated by steam with pressure up to 175 psi available; the area of the heated plattens is 510 x 345 mm. Pressure is applied hydraulically, and two-stage pressure is available for dealing with micro-porous material. Maximum available pressure on the plattens is 80,000 Kg. The speed of the turntable can be controlled between 4 and 15 revolutions per hour giving vulcanization cycles from 4 to 16 minutes. Vulcanizing time, temperature, and pressure are all automatically

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Semi-Automatic Presses Type 'MPS' and 'MPA' for Vulcanization of Rubber Components

controlled. The moulds are loaded and unloaded at one station (seen on the left hand side of the sectional diagram in Fig 2). At this station a cam operates the valves in the distribution box below each of the moulding presses, the top platten is raised, and the mould withdrawn in a radial direction by a hydraulic ram. A feature of the machine is the multiplication of hydraulic pressure by differential areas of the rams of the presses, so that some stations working at low pressure can provide a high pressure supply for other stations. This automatic plant mechanizes 10 of the 12 operations normally carried out by hand in conventional moulding plant, gives a much more consistent product, higher

Card 2/3

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SOV/138-58-12-6/17

Semi-Automatic Presses Type 'MPS' and 'MPA' for Vulcanization of Rubber Components

output (2½ times conventional output per man-hour moulding micro-porous soles), and economizes floor space.

There are 2 figures and 16 references (10 Soviet, 6 English)

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennoy kozhi (All-Union Scientific Research Institute of Artificial Leather)

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, E., inzh.-mayor

Repair of static electricity dischargers. Av.i kosm. 45 no.3: 85 Mr '63. (MIRA 16:3)

(Airplanes--Electric equipment)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

S/075/62/017/005/006/007
I033/I233

AUTHORS: Lebedeva, A.I. and Lisarenko, E.S.

TITLE: Functional analysis of high molecular weight compounds. Communication 1: Microdetermination of methoxy groups in copolymers and polymers

PERIODICAL: Zhurnal analiticheskoy khimii, v.17, no. 5, 1962, 636-638

TEXT: The applicability of Vibek's method for microdetermination of methoxy groups in polymers was investigated. Complete formation of methyl iodide was reached by dissolution of the polymer in phenol containing a small amount of red phosphorus, followed by treatment with HI. This is the only change. Determination was carried out in an apparatus similar to that described by

Card 1/2

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S/075/62/017/005/006/007
I033/I233

functional analysis....

Heron, A.E., Reed, R.H., Stagg, H.E. and Watson, H., Analyst 79, 671 (1954). The error of determination does not exceed 4%. There is 1 figure and 1 table.

ASSOCIATION: Institut vysokomolekulyarnykh soyedneniy AN SSSR (Institute of High-Molecular Weight Compounds, AS USSR) Leningrad

SUBMITTED: August 3, 1961

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

[illegible]DEV, [illegible] SAR NYC, [illegible]

[illegible] of [illegible] methyl cellulose, Zhur[illegible] [illegible], 20 no. 5 [illegible]. (MIRA [illegible])

[illegible] Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad. Submitted March 23, 1964.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

LEBEDEVA, A.I.; PISARENKO, E.S.

Functional analysis of macromolecular compounds. Report No.1: Microdetermination of methoxy groups in copolymers and polymers. Zhur.anal.khim. 17 no.5:636-638 Ag '62. (MIRA 16:3)

1. Institute of High Molecular Weight Compounds, Academy of Sciences, U.S.S.R., Leningrad.
(Methoxy group) (Polymers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

TISHKENKO, E. S.

6

3 M. A. YOUTZ
2 copies

Study of poly(vinyl acetate) fractions by the methods of osmometry and viscometry. K. Z. Fattakhov, E. S. [illegible], and L. N. Verkhotina (Inst. [illegible] Chem. [illegible], U.S.S.R., Leningrad). Kolloid. Zhur. 18, 101-6 (1956); cf. C.A. 50, 3037e.—Three poly(vinyl acetate) (I) samples were fractionated by pptg. their solns. in acetone with H_2O. Their osmotic mol. wts. M were detd. with cellophane membranes from the rate of movement of the meniscus at different pressures; the M at infinite diln. were identical in acetone and $CHCl_3$. The specific viscosity η/c of the solns. agreed with the equation $(\eta/c) = [\eta] + k[\eta]^2c$; c = polymer concn. in g. per 100 cc., $[\eta]$ is the characteristic viscosity, and k a const. The values of $[\eta]$ and k depended little on the solvent, e.g. $[\eta]$ was 3.3, 2.3, 2.2, and 2.1, and k was 0.36, 0.32, 0.35, and 0.38 in $CHCl_3$, C_6H_6, EtOAc, and acetone, resp. In acetone, $[\eta] = 0.000174M^{0.70}$ and in $CHCl_3$ $[\eta] = 0.000158M^{0.74}$. The dependence of η on M was identical with that described in the literature, including solns. of I in EtOAc (cf. Bosworth, et al., C.A. 47, 3610i), and agreed with that expected for a linear polymer; there was no need to assume branching. From all data available, $[\eta] = 0.000209M^{0.68}$ between $M = 3 \times 10^4$ and $M = 10^6$. In the solvents in which the increase of η/c (η = osmotic pressure) with c was rapid, k was small.

I. J. Bikerman

Chem

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

FATTAKHOV, K.Z.; PISARENKO, E.S.; VERHOTINA, L.N.

Osmometric and viscometric studies of polyvinyl acetate fractions [with English summary in insert]. Koll.zhur. 18 no.1:101-106 Ja-F '56. (MLRA 9:6)

1.Institut vysokomolekulyarnykh soyedineniy AN SSSR, Leningrad. (Acetic acid)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

LEBEDEVA, A.I., PISARENKO, E.S.

Microdetermination of methoxy groups in certain polyfunctional derivatives of xylitol and sorbitol. Zhur.anal.khim. 18 no. 7: 892-894 Jl '63. (MIRA 16:11)

1. Institute of High Molecular Weight Compounds, Academy of Sciences, U.S.S.R., Leningrad.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, F.S.

PROCESSES AND PROPERTIES INDEX

A method for the determination of hydrogen sulfide in food products. F. S. Pisarenko. *Lab Prakt* (U. S. S. R.) **1930**, No. 6, 20-1. For the detn. of the degree of freshness of meat, fish and of their products the amt. of NH_3 and of H_2S must be detd. A modified method of Hodagyan (cf. *C. A.* 27, 2735) for the detn. of H_2S in food products is described. A glass resembling a wine glass, and having a hollow stem to which a piece of rubber tubing is attached, is used. The glass is filled with the finely chopped product, covered with a glass cover having a hole in the middle through which a drop of a basic soln. of $Pb(C_2H_3O_2)_2$ is placed on the paper. Air is then forced through the glass. In the presence of H_2S the drop darkens owing to the formation of PbS. The time required is only several sec. instead of the 10-15 min. in the original method.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, F.S.; PISARENKO, V.I.

Dry bean hydrolysate medium with albumin for the cultivation of the causative agent of whooping cough. Zdrav. Tadzh. 8 no.4:43-44 Jl-Ag '61. (MIRA 14:10)

(BACTERIOLOGY—CULTURES AND CULTURE MEDIA)
(WHOOPING COUGH)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

USSR/Microbiology - General Microbiology. F-.

Abs Jour : Ref Zhur - Biol., No 3, 1958, 9308

Author : Pisarenko, F.S.

Inst :

Title : Chemical Nature of Dark Coloration of Bacterial Colonies which Form Hydrogen Sulfide When Grown on a Cholecitrate (sic) Medium.

Orig Pub : Zdravookhr. Tadzhikistana, 1956, No 6, 40-43

Abstract : As developed by the author, an elective nutrient "cholecitrate medium" (CCM) composed of bile salts and iron citrate, colors some colonies of microorganisms dark brown. Such a growth character was found in salmonella of group B, C and D, proteus, and Morgan bacteria. All these microorganisms produced H_2S, and the author established that the dark coloration depends on the formation of ferrous sulfide and is the result of interaction of H_2S and iron citrate.

Card 1/1

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PISARENKO, F. S. Cand Med Sci -- (diss) "Cholic-citrate medium for elective culture of dysentery and typhoid-paratyphoid bacteria." Stalinabad, 1957. 16 pp 22 cm. (Samarkand Med Inst im Academician I. P. Pavlov), 100 copies (KL, 13-57, 101)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, F.Yu. (Murmansk, ul. K.Marksa, d.4., kv. 19); BAYANDIN, L.P.

Perforation of the alimentary tract. Vest. khir. 91 no.7:80-81 Jl'63 (MIRA 16:12)

1. Iz khirurgicheskogo otdeleniya (zav. - I.S.Androsov) Murmanskoy oblastnoy bol'nitsy.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

ANDROSOV, N. S.; PISARENKO, F. Yu.; BAYANDIN, L. P.

Perforating ulcer of the stomach and duodenum. Vest. khir. n...: 15-19 '62. (MIRA 1[illegible]:4)

1. Iz khirurgicheskogo otdeleniya (zav. - N. S. Androsov) Murmanskoy oblastnoy bol'nitsy (gl. vrach - Z. V. Macharashvili).

(PEPTIC ULCER)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, F.Yu.

Repeated tamponade of the heart. Vest.khir. 89 no.7:102 Jl '62. (MIRA 15:8)

1. Iz khirurgicheskogo otdeleniya (zav. - N.S. Androsov) i otdeleniya grudnoy khirurgii (zav. - zasluzh. vrach RSFSR P.A. Bayandin) Murmanskoy oblastnoy bol'nitsy (gl. vrach - A.F. Pavlova).

(HEART—WOUNDS AND INJURIES)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

ANDROSOV, N.S. (Murmansk, Rybnyy proyezd, d.8, kv.56); PISARENKO, F.Yu.

Embolism of the large arterial blood vessels. Vest. khir. 89 no.1: 13-15 O '62. (MIRA 17:1)

1. Iz khirurgicheskogo otdeleniya (zav. - N.S. Androsov) Murmanskoy oblastnoy bol'nitsy (glavnyy vrach - I.V. Macharashvili).

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PISARENKO, G.A.

PROCESSES AND PROPERTIES INDEX

Investigation of the suitability for casting and the mechanical properties shown by titanium containing pig iron produced from iron bauxite. N. I. Blinov and G. A. Pisarenko. *Ural. Met.* 1937, No. [illegible] *Chem. Zentr.* 1938, II, 1474. The addn. of pig Fe produced from Fe bauxite and contg. C 4.53-5.13, Si 0.24-1.20, Mn 0.35-0.62, Ti 0.32-0.76 and P 0.28-0.4% to normal pig Fe makes possible a highly disperse graphite distribution. The addn. of 25-50% of the bauxite pig Fe to the charge of normal Fe increases the tenacity by 10-40%. The viscosity is also somewhat increased. The addn. of the bauxite Fe to normal cast Fe is recommended for the manuf. of thin-walled sectional tubing. M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

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PISARENKO, G.A.

C

9

PROCESSES AND PROPERTIES INDEX

Chill molds made of blast-furnace and cupola furnace cast iron using charcoal and coke N. I. Blinov and G. A. Pisarenko. *Stal'* 3, No. 9/10, 55-63 (1943). A comparative study of the quality of chill molds made from variously derived cast iron. 4 kinds of molds were investigated. Cast iron molds of blast-furnace iron made with charcoal (I) and coke (II) and molds made of iron I and II but remelted in a cupola furnace (III and IV, resp.). The durability of molds I and III is greater than that of II and IV. The durability of I is greater by 6 and that of III by 16%. The durability of II is 8% greater than that of IV. The qualities of I and III are equal. The durability of molds made of blast-furnace iron having a pearlitic-ferritic structure is 10-20% higher than that of similar molds having a pearlitic structure. Since the cost of production of charcoal iron is 100% more than the cost of production of coke iron, and since the durability of chill molds made of charcoal iron is only 6-16% higher than that of coke iron, the use of molds I and III is not justified. Making high grade chill molds for steel ingots from blast-furnace iron made with coke is feasible and economical.

M. Hosch

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

[illegible], [illegible]

USSR/Metals - Cast Iron, Casting Aug 51

"Treatment of Molten Cast Iron With Magnesium in Ladles of Large Volume," Ya. [illegible] Ayzikovich, [illegible] Zivovskiy, G. [illegible] Pisarenko, Engineers, Ural Inst of Ferrous Metals Nizhniy-Tagil Metallurgical Plant

"Litey Proiz" No 8, pp 23, 24

Describes device for quick immersion of magnesium into cast iron and for expelling flame and gases to outside of foundry. Ladle is covered with lid and magnesium, placed in metal case, is dipped down to the bottom of ladle with the aid of heavy wt through a hole in lid. Gases are removed through another hole in lid to which a pipe is attached.

PA 197T77

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G. A.

USSR/Metals - Cast Iron, Casting Feb 52

"Application of Tellurium in Chilled Iron Castings," G.A. Pisarenko, Engr, Ural Sci Res Inst of Ferrous Metals

"Litey Proizvod" No 2, pp 20-22

Discusses property of tellurium to increase amt of combined carbon in cast iron. Increasing depth of completely chilled layer, tellurium simultaneously decreases width of transition zone. Controllable addns of tellurium and graphite into ladle represent dependable method for obtaining required depth of white iron layer in chilled iron castings.

207T89

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G. A.

Effect of certain factors on the formation of nodular graphite S. G. Guterman, G. A. Pisarenko, and E. F. Polikarpova. *Litejnoe Proizvodstvo* 1952, No. 5, 19-21. Specimens of cast iron alloyed with 0.4% of each Si and Mg were cast in sand molds and then quenched 15, 30, and 45 sec. after the beginning of eutectic transformation. All of them showed nodular graphite, which is formed in the eutectic C interval, with the exception of specimens contg. more than 0.06% S. The effect of Si, Mn, and P concn. on modulation is slight. Addn. of Mg increases the tendency of iron towards undercooling, while that of Si reduces it. Treatment with Mg lowers the graphitization rate as was shown by annealing chill cast specimens at 900° while recording their dimensional changes. After 30 min., Mg-treated iron showed 1.77% graphite and the untreated one 2.38%. J. D. Gat

Stalin Prize Winner.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

[illegible], [illegible].

Defended [illegible] Dissertation [illegible] Technical [illegible] technical Institute, [illegible]

Dissertation: "Investigation [illegible] Iron and the Technology of Fabrication [illegible] -Strength [illegible] -Rolling [illegible]"

SO: Referativnyy Zhurnal [illegible], [illegible], Oct. [illegible]

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G.A.

DOVGOPOL, V.I.; LUZIN, P.G.; PISARENKO, G.A., inzhener, retsenzent; DOBROTVORSKIY, M.M., professor, retsenzent; BELYESKIY, S.V., doktor tekhnicheskikh nauk, retsenzent; PYATNITSKIY, A.N. I. o. glavnogo redaktora; DUGINA, N.A., tekhnicheskiy redaktor.

[Casting chilled-rim cast-iron wheels] Otlivka koles iz otbelennogo chuguna; opyt Uralvagonzavoda. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. i sudostroit. lit-ry, 1953. 85 p. [Microfilm](MLRA 7:10)

1. Uralo-Sibirskoye otdeleniye Mashgiza (for Pyatnitskiy)
(Wheels) (Iron founding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G.A., kandidat tekhnicheskikh nauk; GUTERMAN, S.G., kandidat tekhnicheskikh nauk; KUZNETSOV, G.A., inzhener; AYZIKOVICH, Ya.I. YELOKHOV, P.D.

Molds made of magnesium cast iron. Metallurg no.12:16-19 D '56. (MLRA 10:1)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov (for Pisarenko, Guterman and Kuznetsov). 2. Nachal'nik liteynogo tsekha Nizhne-Tagil'skogo metallurgicheskogo zavoda imeni Kuybysheva (for Ayzikovich). 3. Nachal'nik liteynogo tsekha Lys'yenskogo metallurgicheskogo zavoda (for Yelokhov).

(Iron-Magnesium alloys) (Molding(Founding))

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G.A., kandidat tekhnicheskikh nauk; GUTERMAN, S.G., kandidat tekhnicheskikh nauk.

Effect of chemical composition, annealing conditions and thickness of castings on the mechanical properties of cast iron with spheroidal graphite. Trudy Ural. politekh. inst. no.60:89-96 '56.

(MLRA 9:10)

(Cast iron--Testing)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G. A.

[illegible]

Inst. im. S. M. Kirova 1956, No. 60, 97-107.—A study of the properties of cast-iron molds and the effects of addn. of different elements on these properties. A high-C content in the cast iron decreases its mech. properties, therefore, the optimum C content in the cast iron of molds was 3.2-3.6%. Plastic properties of the cast iron are improved with a decrease of the Mn and P contents, but the P content should not fall below 0.1% since otherwise the fluidity of the cast iron deteriorates. In the expts., cast iron contg. 0.7-0.8% Mn and 0.12-0.14% P from a Magnitogorsk plant was used. Cast iron for the casting of the molds was melted in cupola furnaces. Its temp. on discharge from the furnaces was 1300-40°. Sand forms were prepd. for casting the molds.

As a result of great vol. contraction of the cast iron treated with Mg, blisters formed in the corners of the upper part of the molds. In order to give the cast iron highly plastic properties, the molds were subjected to graphitizing annealing by heating to 910 ± 20° at a rate no greater than 150°/hr., leaving them at this temp. for 6 to 10 hrs., cooling to 650° at a rate no greater than 25°/hr., and cooling further with furnace to 100-50° at a rate no greater than 100°/hr. After annealing, the molds were cleaned and trimmed. Before annealing, the chief metallic bulk of the cast iron of the molds was perlite-ferritic, but after annealing it was ferrite-perlitic. After annealing the quantity of ferrite increased as a result of graphitization of cementite. Molds of cast iron with globular graphite were prepd. The durability of these molds was 2.0-2.5 times greater than that of the ordinary molds.

Gladys S. Macy

4E2C-1

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G.A.; RADYA, V.S.; GEROTSKIY, V.A.; BLIKANOV, A.A.; [illegible] Ye. D.; YEFREMOV, P.N.; BORSHCHER, L.B.; YEFIMOV, I.Z.; [illegible] BATALOV, A.N.; TSEPOVA, M.N.

Casting magnesium cast iron into a chill with a metal core. [illegible] 24 no.7:607-610 Jl '64. (MIRA [illegible])

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh me[illegible], Lys'venskiy i Severskiy metallurgicheskiye zavody i Nizhne-[illegible] metallurgicheskiy kombinat.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

FOFANOV, A.A., kand.tekhn.nauk; LEYSOV, Ye.I., inzh.; YEL'KIN, S.A., inzh.; MILYAYEV, M.N., inzh.; PASTUKHOV, A.I., kand.tekhn.nauk; DZEMYAN, S.K., inzh.; KOSNAREV, A.S., inzh,; KLEYN, A.L., kand.tekhn.nauk; DANILOV, A.M., inzh.; FILIPPOV, A.S., kand.tekhn.nauk; SALTANOV, G.F., inzh.; VETROV, B.G., inzh.; PISARENKO, G.A., kand.tekhn.nauk; RADYA, V.S., inzh.; GEROTSKIY, V.A., inzh.

In the Ural Mountain Region Scientific Research Institute for Ferrous Metals. Stal' 22 no.10:892,916,938,953 O'62. (MIRA 15:10)
(Ural Mountain region—Metallurgical research)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

BLINOV, N.I.; PISARENKO, G.A.

Cast shot drill bits. Lit. proizv. no.9:41-42 S '61. (MIRA 14:9)

(Rock drills) (Founding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

GUTERMAN, S.G.; PISARENKO, G.A.

Effect of blowing nitrogen on magnesium consumption in the inoculation of cast iron. Lit. proizv. no. 5:6-7 My '61. (MIRA 14:5)
(Cast iron—Metallurgy)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

BLINOV, N.I.; PISARENKO, G.A.

Shot for exploratory hole boring in hard rock. Lit. proizv. no. 2:8-11 F '61. (MIRA 14:4)

(Iron founding) (Shot)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G.A., kand.tekhn.nauk; GUTERMAN, S.G., kand.tekhn.nauk; AYZIKOVICH, Ya.I., inzh.; YELOKHOV, P.D., inzh.

Effect of certain factors on the mechanical properties and the structure of magnesium cast iron for molding. Trudy Ural. politekh.inst. no.89:107-117 '59. (MIRA 12:8)
(Cast iron--Analysis) (Magnesium) (Phosphorus)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

18(5) PHASE I BOOK EXPLOITATION SOV/2048

Sverdlovsk. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova

Teoriya i praktika liteynogo proizvodstva (Theory and Practice in the Foundry Industry) Moscow, Mashgiz, 1959. 231 p and 32 p. (Series: Its: [Sbornik] vyp. 89) Errata slip inserted. 5,000 copies printed.

Ed.: A.A. Gorshkov, Corresponding Member, USSR Academy of Sciences, Doctor of Technical Sciences, Professor; Tech Ed: N.A Dugina; Exec. Ed. (Ural-Siberian Division, Mashgiz): A.V. Kaletina, Engineer.

PURPOSE: This book is intended for engineering and scientific workers of institutes and machine-building plants, as well as for students of advanced courses at vuzes.

COVERAGE: This collection consists of articles dealing with practical problems in foundry processes. The articles review the achievements of Ural foundry workers in the past 40 years and present aspects of a current study on the casting of nodular cast iron, its properties and casting methods. A description is given of artistic and architectural casting. Consideration is given to the problem of combatting gases in steel and aluminum. The structure of cast steel is discussed. A recent investigation of vacuum casting including its characteristic properties and new applications is also presented. There are 32 pages of photographs illustrations at the end of the book. No personalities are mentioned. References follow each article.

TABLE OF CONTENTS:

Theory and Practice in the Foundry Industry SOV/2048

Chernyshov, G.A., and S.G. Guterman [Candidates of Technical Sciences], Ye.I. Lyalkovich, and F.D. Yelokhov [Engineers]. Effect of Certain Factors on the Mechanical Properties and the Structure of Magnesium Cast Iron for Molds. 107

The authors discuss the effect of manganese with higher phosphorus content, and the effect of phosphorus at a higher manganese content, the effect of modification with ferrosilicon, the distribution of phosphorus in relation to the moldings cross section determined by the method of radioactive isotopes, and molds with higher phosphorus content in magnesium cast iron.

Chernokrovkin, V.P. [Candidate of Mechanical Sciences]. Radial Shrinkage of Cast Iron Rolls 117

The author presents a method for investigating radial shrinkage of cast iron rolls and gives the results obtained

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G.A.; GUTERMAN, S.G.; GURCHNVSKIY, P.V.

Blast furnace cast iron with speroidal graphite. Lit. proizv. no.1:12-13 Ja '59. (MIRA 12:1)
(Cast iron--Metallurgy)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G. A.

Permanent molds of magnesium-treated iron. G. A. Pisarenko, S. G. Guterman, G. A. Kurnetsov, Ya. I. [illegible], and P. D. Blokhov. Metallurg 1956, No. 12, 16-19.—Cast iron of the following compn.: C 3.2-3.6, Si 2.2-2.8, Mn 0.3-0.7, P 0.10-0.18, and S not more than 0.02% was alloyed in the ladle with sufficient Mg-Si alloy contg. 10-20% Mg to give 0.10-0.15% Mg in the metal. If metallic Mg is to be used, a 0.3-0.45% addn. must be made and the resultant iron modified with 0.3-0.5% of 75% ferrosilicon. After heat-treatment for spheroidal graphite, the molds lasted 2½ times as long as those of ordinary iron.

V. N. Bednarski

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

AUTHORS: [illegible] S. G. and Pisarenko, G. A. [illegible]

TITLE: Effect of Annealing Temperature on the Mechanical Properties of Cast Iron Containing Spheroidal [illegible] and on the Redistribution of Phosphorus (Vliyanie [illegible] temperatury otzhiga na mekhanicheskiye svoystva [illegible] sharovidnym grafitom i pereraspredelenie [illegible])

PERIODICAL: [illegible] Metallov i Metallovedeniye [illegible], Vol. [illegible] No. [illegible] (USSR)

ABSTRACT: M_g-treated cast iron, of composition [illegible] 0.53% Mn [illegible] 0.13% P and 0.01% S was cast as 30 mm wide half-round [illegible] and annealed at temperatures varying by steps of 50°C between 800 and 100[illegible] [illegible] followed by cooling to 600°C at [illegible] 10 mm diameter specimens 50 mm long were tested in extension; the impact viscosity was determined [illegible] 5[illegible] x 10 x 10 specimens. Fig. 1 illustrates the [illegible] Specimens of a cast iron of very similar composition were also labelled with P^{32} at 1 mC/kg and specimens [illegible]

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SOV/126-[illegible]-17/24

Effect of Annealing Temperature on the Mechanical Properties of Cast Iron Containing Spheroidal Graphite and on the Redistribution of Phosphorus

of the form shown in Fig.2 were used for autoradiographic [illegible] prints from the autoradiograms are shown in Fig.[illegible] (unannealed, annealed at 800°C and annealed at 950°C respectively). The Table summarizes data on the general density of the autoradiograms around the phosphorus-rich areas. The general behaviour of the phosphorus is compared to that of tin in copper-tin systems; if the phosphorus concentration is high enough to give phosphide eutectic under equilibrium conditions the actual amount formed is higher than corresponds to equilibrium. The effect of annealing is in fact to bring about a general homogenization.

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S V/12[illegible]

Effect of Annealing Temperature on the Mechanical Properties of Cast Iron Containing Spherical Graphite and on the Redistribution of Phosphorus

There are 3 figures, 1 table and 6 references, 3 of which are Soviet, 1 English, 1 German.

ASSOCIATION: Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov (Ural Scientific Research Institute for Ferrous Metals)

SUBMITTED: November [illegible], 1[illegible]

Card 3/3 1. Cast iron--Mechanical properties 2. Cast iron--Temperature factors 3. Graphite--Metallurgical effect 4. Phosphorus--Distribution

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

SOV/1[illegible]

AUTHORS: Pisarenko, G.A. Candidate of Technical Sciences, Guter an, S.G., Candidate of Technical Sciences, Ayzikovich Ya.I. and Yelokhov, P.D., Engineer

TITLE: Casting Ingot Moulds from Magnesium-inoculated Cast Iron into Metallic Moulds (Otlivka [illegible] chuguna v metallic eskiye formy)

PERIODICAL: Stal', 19[illegible], [illegible], pp [illegible] - [illegible] (USSR)

ABSTRACT: An experimental [illegible] of ingot moulds [illegible] inoculated cast iron into metal moulds [illegible] the preliminary experiments, the influence [illegible] moulds on the structure of iron before and after [illegible] ising heat treatment was investigated. It [illegible] specimens cast in metal moulds and subsequently [illegible] treated had a better structure and higher mechanical properties than those cast into sand moulds (T[illegible]). The improvement in mechanical properties [illegible] a finer primary structure, in particular, [illegible] phosphide eutectic, accompanied by a degree [illegible] structural non-uniformity of the cast iron. [illegible] weighing 630 and 690 [illegible] iron in the Lys'va and Nizhniy Tagil plants. The

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SOV/133-58-7-27/27

Casting Ingot Moulds from Magnesium-inoculated Cast Iron Into Metallic Moulds

composition of iron, the design of metallic moulds (Figures 4 and 5), method of casting, heat treatment and the microstructure obtained (Figures 6 and 7) are given. On average, the durability of ingot moulds cast from nodular iron into metal form was 2.6 times higher (Table 2) than that of moulds cast into sand from grey iron. At present, casting of such ingot moulds on an industrial scale is being carried out. There are 7 figures, 2 tables and 3 Soviet references.

ASSOCIATION: Ural'skiy institut metallov (Ural Institute of Metals), NTMK and Lys'venskiy zavod (Lys'va Plant)

Card 2/2

1. Molds--Materials 2. Molds--Casting 3. Cast iron--Applications 4. Magnesium--Applications

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G.A.

The effect of chemical composition, annealing rate, and thickness of casting on the mechanical properties of cast iron with spheroidal graphite. G. A. Pisarenko and S. G. Guterman. *Voprosy Teorii i Praktiki Lit'in. Proizvodstva* (Moscow-Sverdlovsk: Gosudarst. Nauch.-Tekh. Izdatel. Mashinostroitel. Lit.) *Sbornik* 1956, 89-90; *Referat. Zhur., Met.* 1957, Abstr. No. 3108.—For light-wt., thick-walled (~75 mm.) molds, annealing at 900° significantly improves plastic properties, the improvement being greater for lower cooling rates. While in cast iron, $\delta \sim 1\%$, it increases to 7-9% after annealing at a rate of 100°/hr. and to 12-15% after annealing at 30 and 15°/hr. Annealing at 720° increases plasticity with increasing retention time. After holding for 3 hrs., δ comprises ~1.3%, and after a 12-hr. retention it comprises 10%. The spheroidization of cementite on annealing at 700° appears to be more complete than on annealing at 900° with subsequent slow cooling. The reduction of C content appears to be one way to improve the mech. properties of cast iron with spheroidal graphite. It was noted that plasticity is reduced at Si contents >2%. To obtain the best plasticity, a Mn content of 0.28-0.49% is recommended. At a Mn content of 1.02%, δ is reduced almost by a factor of 2, but at Mn = 1.57%, δ approaches zero. With increasing P content, σ_B and δ are reduced. The phosphide eutectic clearly appears at P = 0.17%. With further increase in P there is an increase in grain size and in the quantity of phosphide eutectic which, owing to the low m.p., seps. at the boundaries of the primary grains and reduces the plasticity and strength of the cast iron.

C. H. Fuchsman

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PISARENKO, G. A.

27

High-temperature silicon iron of the type SiAl. E. M. Blesk and G. A. Pisarenko. U.S.S.R. 100,946, Feb. 28, 1956. The Si-Fe contains an addnl. 0.4-0.6% Mg.
M. Hosch

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, Grigoriy Andreyevich, ANAN'IN, A.A., inzh., retsenzent; VOLPYANSKIY, L.M., red.; SARAFANNIKOVA, V.A., tekhn.red.

[Cast iron with spheroidal graphite] Chugun s sharovidnym grafitom. Pod red. L.M.Volpianskogo. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1957. 47 p. (Nauchno-populiarnaia biblioteka rabochego-liteishchika, no.21) (MIRA 11:4)
(Cast iron)

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Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 9, pp 198 (USSR)

AUTHORS: Guterman, S.G., Pisarenko, G.A.

TITLE: The Effect of Chromium on Mechanical Properties and the Rate of Graphitization of Cast Iron With Spherical Graphite

PERIODICAL: Byul. Nauchno-tekhn. inform. Ural'skiy n.-i. in-t chern. metallov, 1958, Nr 4, pp 69 - 73

ABSTRACT: To establish admissible limits of Cr content in high-strength cast iron, the authors investigated its effect on the graphitization rate of carbides and mechanical properties and microstructure of annealed cast iron. It was proved that with higher Cr content the perlite amount in the base metal increases, beginning with a Cr content of 0.31% the amount of undecomposed initial carbides and of ledeburite also increases. In cast iron with 0.08 and 0.16% Cr primary carbides are not being observed, since Cr impedes graphitization process of primary carbides during holding at annealing temperatures and also separating out of graphite from austenite during cooling-

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The Effect of Chromium on Mechanical Properties and the Rate of Graphitization of Cast Iron With Spherical Graphite

off within the temperature range of Ar. In cast iron with spherical graphite subjected to graphitizing annealing, the Cr content must not exceed approximately 0.16%.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PHASE I BOOK EXPLOITATION SOV/3864

Pimarenko, Grigoriy Andreyevich, and Aleksandr Semenovich Filippov

Otlivki metallurgicheskogo oborudovaniya iz chuguna s sharovidnym grafitom (Castings of Metallurgical Equipment From Nodular Cast Iron) Sverdlovsk, Metallurgizdat, 1960. 200 p. Errata slip inserted. 2,150 copies printed.

Ed.: L. M. Volpyanskiy; Ed. of Publishing House: A. P. Skorobogacheva; Tech. Ed.: Ye. D. Turkina.

PURPOSE: This book is intended for technical personnel in the metallurgical and allied industries.

COVERAGE: The book describes methods of casting nodular-iron open-hearth ingot molds and rolls for the rolling of sheet metal and shapes. Conditions for the industrial application of these products are discussed. Engineering and economic data are given. No personalities are mentioned. There are 114 references: 105 Soviet, 6 English, 1 German, 1 Rumanian, and 1 Japanese.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, Grigoriy Andreyevich; FILIPPOV, Aleksandr Semenovich; VOLPYANSKIY, L.M., red.; SKOROBOGACHEVA, A.P., red.izd-va; TURKINA, Ye.D., tekhn.red.

[Founding metallurgical equipment of cast iron with spheroidal graphite] Otlivki metallurgicheskogo oborudovaniia iz chuguna s sharovidnym grafitom. Sverdlovsk, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii. Sverdlovskoe otd-nie, 1960. 206 p. (MIRA 13:3)

(Iron founding)
(Metallurgical plants--Equipment and supplies)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

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[illegible] — ([illegible] "[illegible]

of the [illegible] of winter [illegible] under

[illegible] of the [illegible]

[illegible] Nal[illegible], [illegible] Min of

[illegible] R. Severo- [illegible] Agr [illegible]

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M

COUNTRY : USSR
CATEGORY : Cultivated plants. Cereals.

ABS. [illegible]

AUTHOR : Fiserenko, [illegible]
INST. : -
TITLE : Characteristics of winter wheat seed growing under the [illegible] of Vertical [illegible] Kabardino-Balkarsk [illegible]

[illegible]

ABSTRACT : Experiments were conducted with winter wheat varieties [illegible] and (Setinskaya) 3 in Kabardino-Balkarsk [illegible] the natural conditions of which have distinct features of vertical zonality. In comparison with the seeds grown in the conditions of moist climate, the seeds of steppe reproduction with greater protein content, [illegible] viable progeny (and resistance to the [illegible] of the soil and to diseases). Growing elite seeds of winter [illegible] in the steppe [illegible]

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PISARENKO, I

19

Analysis of glass and of its raw materials. V. I. Panasyuk and I. Pisarenko. *Ukrain. Khem. Zhur.* 7, Wiss. tech. Teil 1, 4(1932). For analysis not less than 50 g of glass should be used. SiO_2 is detd. by titrating the ppt. of K_2SiF_6; if this is thoroughly washed the results differ by not more than 0.04% from those obtained gravimetrically. B. C. A.

METALLURGICAL LITERATURE CLASSIFICATION

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PISARENKO, N

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Scattering of fast electrons by crystals. N. Pisarenko (Physikal. Z. Sovietunion, 1936, 7, 26—42).—Theoretical. It is shown that the inelastic scattering of fast electrons by a dielectric lattice is not influenced by the crystal structure. The influence of heat oscillations of the crystal atoms corresponds with only a small part of the background intensity of electron diffraction diagrams. R. S. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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PISARENKO, G. S.

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PISARENKO, G. S.

Pisarenko, G. S. The forced normal vibrations of built-in cantilever beams, taking account of hysteresis loss. Akad. Nauk SSSR. Inženernyi Sbornik 5, no. 1, 108-132 (1948). (Russian)

A cantilever beam of uniform rectangular cross-section is subjected to a forced vibration by a harmonic oscillation of the support. The material of the beam is assumed to exhibit hysteresis. On the assumption of small deviation from elastic behavior, first and second order approximations are determined for the equation of motion of the beam. It is shown that, for all practical purposes, the first approximation yields sufficiently accurate results. *H. L. Anoff*

Source: Mathematical Reviews, Vol 12 No. 3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, [illegible]

Pisarenko, [illegible]. "An experimental determination of the constants of a substance, characterizing the dissipation of energy in oscillations." Inform. materialy (Akad. nauk Ukr. SSR, In-T [illegible], Mekhaniki), [illegible], [illegible].

So: [illegible], [illegible], (Letopis [illegible], No. [illegible], [illegible].

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PROCESSES AND PROPERTIES INDEX

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6015. Application of the methods of non-linear mechanics to the calculation of the dissipation of energy in a material under oscillations. G. S. Pisarenko. *J. Tech. Phys., USSR*, 19, 1408-22 (Dec., 1949) *In Russian*.

An approximation method of non-linear mechanics is applied to the problem of finding the resonance curve of an oscillating elastic system, considering energy dissipation, i.e. damping. The energy dissipated per unit volume is assumed as a characteristic of the material, independent of its shape and dimensions. The method consists essentially in an expansion in terms of a small parameter. This is applied to the special case of a cantilever with an axial tensile force applied to its end. B. F. KRAUS

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G.S.

Determining parameters of the hysteresis loop by means of the logarithmic decrement of damping of natural vibrations. Sbor. trud. Inst. stroi. mekh. AN URSR no.15:121-127 '51. (MIRA 11:4)
(Hysteresis)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G.S.; VAYNBERG, D.V.; POPKOV, V.G., kandidat tekhnicheskikh nauk, redaktor.

[Mechanical vibrations] Mekhanicheskie kolebaniia. Kiev, Gos. izd-vo tekhn. lit-ry USSR., 1953. 139 p. (MLRA 7:8)
(Vibration)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G. S.

"Vacuum-Vibrating Equipment for Investigating the Dispersion of Energy in a Material".

Vopr. poroshkovoy metallurgii i prochnosti materialov, Kiev, Izd-vo AN USSR, No 1, pp 33-39, 1954

Describes equipment for study of energy dispersion in a material during vibrations, thus permitting the investigation of samples of materials under conditions approximating the character of a stressed state and a temperature approximating the conditions of operation of the blade of steam and gas turbines. Bibliography, eight references.
(RZhMekh, No 8, 1955)

SO: Sum No 812, 6 Feb 1956

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G.S.

PISARENKO, G.S.

Study of energy dissipation in the vibration of rod bundles.
Vop.por.met. i prochn.mat. no.1:40-47 '54. (MLRA 7:12)
(Elastic rods and wires--Vibration)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341020011-8

PISARENKO, G.S.

Distr: 4F1

★ Писаренко, Г.С. [Pisarenko, G.S.] Колебания упругих систем с учетом рассеяния энергии в материале. [Vibrations of elastic systems taking account of dissipation of energy in the material.] Izdat. Akad. Nauk Ukrain. SSR, Kiev, 1955. 238 pp. 12.50 rubles.

The book consists of two parts. Part I gives the theory, Part II describes experimental procedures. In Part I the author develops the theory of forced vibrations of elastic systems when the dissipation of energy in the medium is taken into account. He assumes that the dissipation is caused by local plastic deformations in the material and that these deformations increase with the increasing load, which means that they increase with the increasing amplitude. This assumption is based on experimental evidence. Consequently the differential equations controlling such vibrations are non-linear. Materials which are considered in this book have a narrow hysteresis loop, that is both branches of the hysteresis loop differ little from straight lines of Hocke's law; hence the author is justified in introducing a small parameter in his non-linear differential equations. He solves approximately these equations using the Krylov-Bogoliubov method of

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Pisarenko, G. S.

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asymptotic expansions in powers of the small parameter and introduces his own method for computing the resonance curves. By procedures described above the author solves several important problems of vibrations of turbine blades. A number of typical problems are solved numerically, which involve experimental constants characterizing deformation properties of the materials. In Part II the author describes in detail techniques of determining these constants. The book embraces a number of author's original researches which are listed in the bibliography. The book is written simply and clearly and it is very easy to understand with a background of advanced calculus.

T. Lester (Aberdeen, Md.)

1-AW

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