

AFANAS'YEV, A.F.; PROKOF'YEV, V.V., dotsent, red.

[Screw thread and threaded parts; manual on mechanical drawing
for students of the Moscow Chemical and Technological Institute]
Rez'ba i rez'bovye izdeliia; posobie po mashinostroitel'nomu
chercheniiu dlia studentov MKhTI im. D.I.Mendeleeva. Moskva, Mosk.
khimiko-tekhnolog. in-t im. D.I.Mendeleeva, 1962. 38 p.
(MIRA 16:1)

(Screw threads) (Mechanical drawing)

AFANAS'YEV, A.F., inzh.; KOP'YEV, S.F., doktor tekhn.nauk; ROMIN,
M.M., inzh.

Increase in the efficiency of large industrial thermal electric
power plants. Teploenergetika 11 no. 1:85-91 Ja '64.
(MIRA 17:5)

1. Moskovskiy inzhenerno-stroitel'nyy institut i Vsesoyuznyy
gosudarstvennyy proyektnyy institut stroitel'stva elektrostantsiy.

AFANAS'YEV, A.F., inzh.; KERTSELLI, Yu.I., inzh.

Increase in the efficiency of medium sized industrial heat
and electric power plants. Teploenergetika 12 no.6:41-46
Je '65, (MIRA 18:9)

1. Gosudarstvennyy proizvodstvennyy komitet po energetike i
elektrifikatsii SSSR i Gosudarstvennyy soyuznyy proyektnyy
institut po proyektirovaniyu stroitel'stva promyshlennykh
teploelektrotsentral'nykh dlya energosnabzheniya promyshlennykh
predpriyatiy vseh otrasley narodnogo khozyaystva.

AFANAS'YEV, A.F.; PROKOF'YEV, V.V., eds., red.

[Screw threads and threaded articles; manual on mechanical drawing for students of the D.I.Mendeleev Chemical and Technological Institute] Rez'by i rez'bovye izdeliia; posobie po mashinostroitel'nomu chercheniiu dlia studentov MKhTI im. D.I.Mendeleeva. Moskva, Mosk. khimiko-tekhnolog. in-t, 1965. 41 p. (MIRA 19:1)

L 24093-00

ACC NR: AP6015828

SOURCE CODE: UR/0096/65/000/006/0041/0046

AUTHOR: Afanas'yev, A. F. (Engineer); Kertselli, Yu. L. (Engineer)

45
B

ORG: State Industrial Commission for Power and Electrification SSSR (Gosudarstvennyy proizvodstvennyy komitet po energetike i elektrifikatsii SSSR); Promenergoprojekt

TITLE: Increasing the effectiveness of middle-power industrial heating heat-power stations

SOURCE: Teploenergetika, no. 6, 1965, 41-46

TOPIC TAGS: electric power plant, steam boiler, turbine, steam power plant

ABSTRACT: An analysis of the question of increasing the single-unit power of heat-power station equipment in order to reduce capital investment and increase economy. Three plans are presented, involving the usage of peak-reserve boilers to avoid a closed reserves situation and allow low pressure cross-connection, reduction of power aggregates to one per station to reduce investment in cases where commercial power is available, with or without a full-power steam reserve to continue operation of the power operation in case of boiler shutdown. It is concluded that such stations should be constructed for heat usage as well as when there is a requirement for a large power application; that the number of turbines should be reduced to the minimum at each station; that turbines of less than 50 Mw power should not be supplied with

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UDC: 621.186.2.004.15

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ACC NR: AP6015828

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condensation equipment, as a rule; that peak-reserve boilers should be used at 50 Mw and higher stations; that low pressure gas-fuel oil boilers to 50-100 G cal/hr capacity should be constructed at such stations to increase flexibility of operation; that the PT-60/75-130-13 power unit with two peak-reserve boilers should be used in many such stations; that intermediate heating should be used in this boiler only for a heating steam flow and when the steam can be directed to intermediate heating with a pressure of about 25 atm.; that gas-fuel oil type fuel should be set aside for heat-power stations in cities and industrial areas. Orig. art. has: 6 figures and 2 tables. [JPRS]

SUB CODE: 10, 13 / SUBM DATE: none / ORIG REF: 009 / OTH REF: 001

Cord 2/2 FW

AFANAS'YEV, A.G.

Continuously improve flying technique. Kryl.rod. 2 no.2:
16 F '51.

(MLRA 10:2)

1. Letchik-instruktor Tsentral'nogo aerokluba SSSR imeni
V.P. Chkalova.

(Aeronautics--Study and teaching)

AFANAS'YEV, A.I.

Instrument for winding pipe fittings. [Suggested by: A.I. Afanas'ev].
Rats. i izobr. predl. v stroi. no.142:17-19 '56. (MIRA 10:4)
(Pipe bending)

ГУСЕЧИН, Иван Васильевич; АФАНАСИЙКОВ, Алексей Иванович; СТЕБАКОВА, Л.Н.,
редактор; БОДАНОВА, А.П., технический редактор

[Chukchi National Area; a brief sketch of its history and geography]
Chukotskii natsional'nyi okrug; kratkii istoriko-geograficheskii
ocherk. Magadan, Obl.knizhnoe izd-vo, 1956. 96 p. (MLMA 10:8)
(Chukchi National Area)

KAZANSKIY, B.A.; DOROGOCHINSKIY, A.Z.; ROZENGART, H.I.; LYUTER, A.V.;
MITROFANOV, M.G.; BRESHCHENKO, Ye.M.; KALITA, L.A.; GOL'DSHTEYN,
Yu.A.; AFANAS'YEV, A.I.; MAKAR'YEV, S.V.; ZAMANGV, V.V.

Dehydrocyclization of normal hexane. Trudy GrozNII no. 15:
254-264 '63. (MIRA 16:5)

AFANASYEV, A. I.

Afanas'yev, A. I.

"Investigation of the formation and a prognosis of the run-off of the river Danube." Main Administration of the Hydrometeorological Service, Council of Ministers USSR. Central Inst of Weather Forecasting. Moscow, 1956. (Dissertation for the Degree of Candidate in Geographical Sciences).

Knizhnaya letopis'
No. 21, 1956. Moscow.

AFANAS'YEV, A.I.

Forecasting the flowoff of the Danube River by the water reserve in
the river-bed system. Trudy TSIP no. 59:73-84 '57. (MIRA 11:4)
(Danube River--Runoff)

АФАНАС'ЯВ, А.И.

Taking into consideration the transformation of the flood wave in hydrological forecasts based on the water reserve in the river-bed system; e.g. Danube River. Trudy TSIP no. 59:85-94 '57.
(Danube River--Floods) (MIRA 11:4)

AFANAS'YEV, A.I.

- Transactions of the Laboratory (Cent.) of Aeromethods, AS USSR SOV/3815
 V.7, Materials of 7th AU Interdept Conf. Aerial Survey (Dec 56), Moscow, 1959, 331pp.
- Kudritskiy, D.M. [Leningradskiy gidrometeorologicheskyy institut - Leningrad Hydrometeorological Institute].
 Photogrammetric Methods in Hydrology and Hydrography 208
- Popov, I.V. [Gosudarstvennyy gidrologicheskiy institut - State Hydrological Institute].
 Use of Aerial Photographs in Investigating River-Bed Processes 209
- Valeshko, G.I. [Gidroenergoprojekt - All Union Association for Hydroelectric Developments].
 Aerial Photographs Applied to the Study of Hydrological Conditions in Rivers During Ice-Gang 212
- Afanas'yev, A.I. [Tsentral'nyy institut prognozov - Central Institute of Weather Forecasting].
 Use of Aerial Photographs of Snow Cover for Hydrological Computations 217
- Vendrov, S.L. [Giprorrechtrans - State Institute of Inland-Waters Transport Planning and Scheduling].
 Application of Aerial Photography to Exploration Programs Administered
- Card 9/ 15

AFANASYEV, H.

PHASE I BOOK EXPLOITATION

SOV/4158

Moscow. Tsentral'nyy institut prognozov

Voprosy prognozov stoka rek (Forecasting River Flow) Moscow, Gidrometeoizdat
(Otd-niye)., 1960. 125 p. Errata slip inserted. 1,000 copies printed.
(Series: Its: Trudy, vyp. 96)

Additional Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy
sluzhby.

Ed. (Title page): A.N. Vazhnov; Ed. (Inside book): M.I. Sorokina; Tech.Ed.:
I.M. Zarkh.

PURPOSE: This publication is intended for hydrologists and hydroelectric
engineers.

COVERAGE: This issue of the Transactions of the Central Institute of Fore-
casting contains 6 articles on problems in forecasting river discharge.

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Forecasting River Flow

SOV/4158

Kharshan, Sh.A., and A.I. Rimashevskiy. Observations of Snow Cover Over
the Oyskiy Range (Western Sayan)

76

Zhidikov, A.P. Calculation of the Unstabilized Movement of Water in the
Tailrace of the Rybinskaya Hydroelectric Power Plant Under Daily Regulation
Conditions, According to the Method of G.P. Kalinin and P.I. Milyukov

85

AVAILABLE: Library of Congress

Card 3/3

JA/dwm/gmp
9-7-60

AFANAS'YEV, A.I.

Theoretical and empirical snow distribution curves. Trudy
TSIP no.96:24-34 '60. (MIRA 13:6)
(Snow)

AFANAS'YEV, A.I.

Organizing aerial photographic surveys of the melting of the
snow cover. Trudy TSIP no.105:3-8 '60. (MIRA 1:1)
(Snow surveys) (Photography, Aerial)

AFANAS'YEV, A.I.

Some characteristics of calculating the transformation of a
flood wave on a modeling device. Trudy TSIP no.141:90-97 '65.
(MIRA 18:9)

L 22373-66 EWP(j)/EWT(18) RM
ACC NR: AP6007940 (A) SOURCE CODE: UR/0318/66/000/001/0039/0041

AUTHOR: Afanas'yev, A. I.; Dorogochinskiy, A. Z.; Vol'pova, Ye. G.

ORG: GrozNII

TITLE: Investigation of isomerization of normal paraffinic hydrocarbons in the presence of platinum loaded synthetic zeolites 1

SOURCE: Neftepererabotka i neftekhimiya, no. 1, 1966, 39-41

TOPIC TAGS: zeolite, heterogeneous catalysis, catalytic reforming, isomerization, gas chromatography, isopentane, pentane

ABSTRACT: Catalytic isomerization of normal pentane was studied with 0.7% Pt on NaX zeolite and 0.7% Pt on CaY zeolite at 280°-400°C and 0-30 atm total pressure. The catalyst was prepared by impregnating zeolites with alcohol solution of chloroplatinic acid, drying, compression into 3 x 3 mm pellets, and reduction with hydrogen for 16 hours at 475°C. The autoclave was charged with 0.5 l normal pentane and 10 g catalyst. The H₂/n-pentane molar ratio was 5:1 and the reaction duration was 180 minutes. The reaction products were collected in a dry ice trap and analyzed on a KhT-2M gas chromatograph. Maximum yield (55%) of isopentane was obtained with 0.7% Pt on CaY catalyst at 375°C, 30 atm H₂/C₅H₁₂ = 5:1, and 180 min test duration. At 400°C the yield of isopentane was smaller due to hydrocracking. Reduction of pressure from 30 to 15

Card 1/2

UDC: 665.656.2 : 541.124

L 22373-66

ACC NR: AP6007940

atm resulted in initial increase in isopentane yield but the catalyst suffered from activity decline due to rapid coke deposition. In general, Pt on CaY zeolite catalysts are more active for isomerization of n-pentane than Pt on CaX zeolite catalysts. Orig. art. has: 1 figure, 1 table.

SUB CODE: 07/

SUBM DATE: 00/

ORIG REF: 006/

OTH REF: 005

Card 2/2 nst

AFANAS'YEV, Arseniy Khristoforovich; ZABOTIN, K.P., kand. khim.
nauk, red.; KNYAZEV, V.V., red.

[Chemistry in everyday life] Khimia v bytu. Gor'kii, Gor'-
kovskoe knizhnoe izd-vo, 1961. 154 p. (MIRA 17:12)

AFANAS'YEV, A.M.

Water balance of Lake Baikal. Trudy Baik. limnol. sta. 18:155-241
'60. (MIRA 14:1)

(Baikal, Lake--Hydrology)

AFANAS'YEV, A.M., inzh.

Two-side cutters with notch markers. Kozh.-obuv.prom. 4 no.4:
31-32 Ap '62. (MIRA 15:5)
(Shoe manufacture--Equipment and supplies)

OSTROVITYANOV, E.M., kand.tekhn.nauk; AFANAS'YEV, A.M., inzh.

Stiffness of shoe upper materials. Izv.vys.ucheb.zav.;
tekh.leg.prom. 3:66-73 '62. (MIRA 15:6)

1. Moskovskiy tekhnologicheskii institut legkoy promyshlennosti.
Rekomendcvana kafedroy tekhnologii obuvnogo proizvodstva.
(Shoe manufacture)
(Leather)

AFANAS'YEV, A.M., aspirant

Effect of radiation on the properties of polymers. Nauch.
trudy MTILP 25:159-179 '62. (MIRA 16:8)

1. Kafedra tekhnologii iskusstvennoy kozhi i plenochnykh
materialov Moskovskogo tekhnologicheskogo instituta legkoy
promyshlennosti.

AFANAS'YEV, A.M., inzh.; OSTROVITYANOV, E.M. , kand.tekhn.nauk, dotsent

Strength of the vamp of footwear. Izv.vys.ucheb.zav.; tekhn.prom.
no.1:108-114 '63. (MIRA 16:3)

1. Moskovskiy tekhnologicheskoy institut legkoy promyshlennosti.
Rekomendovana kafedroy tekhnologii izdeliy iz kozhi.
(Shoe manufacture)

AFANASYEV, A. K.

O raschete kryla monoblok na stepennoe kruchenie. (Moscow. Voennaya vozdukhnaia akademiia Krasnoi Armii. Nauchno-tekhnicheskaya konferentsiia, 1944 g. Trudy, 1945, v. 2: Samoletnaia sektsiia, no. 2, p. 97-118, tables, diagrs.)

Title tr.: Design of a continuous wing under torsional stress.

UG630.M67 v. 2, no. 2

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

AFANAS'EV, A. M., N. G. KALININ and V. A. MAR'IN

Osnovy stroitel'noi mekhaniki, Moskva, Oborongiz, 1951. 523.p. illus.

Bibliography: p. 520

Fundamentals of structural mechanics.

DLC: TG260.A455

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

KORCHINSKIY, I.L., doktor tekhnicheskikh nauk; AFANAS'YEV, A.M., kandidat tekhnicheskikh nauk, redaktor; BERDICHEVSKIY, G.I., kandidat tekhnicheskikh nauk, redaktor; MEDVEDEV, L.Ya., tekhnicheskiy redaktor.

Vibrations in tall buildings. Nauchnoe soobshchenie Tsentral'nogo nauchno-issledovatel'skogo instituta promyshlennykh sooruzhenii no.11:3-43 '53. (MIRA 8:7)
(Building) (Vibration)

RZHANITSYN, A.R., professor, doktor tekhnicheskikh nauk; redaktor; ~~AFANAS'YEV, A.M.,~~ kandidat tekhnicheskikh nauk nauchnyy redaktor; TUMARKIN, D.M., inzhener, redaktor; MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Studies on structural mechanics; collection of articles] Issledovaniya po stroitel'noi mekhanike; sbornik statei. Pod red. A.R.Rzhanitsyna. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1954. 197 p.

(MIRA 8:3)

1. Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut promyshlennykh sooruzheniy.

(Mechanics, Applied)

RZHANITSYN, Aleksey Rufeovich; AFANAS'YEV, A.M., kandidat tekhnicheskikh nauk, redakter; BERDICHEVSKIY, G.I., kandidat tekhnicheskikh nauk, redakter; DAKHNOV, V.S., tekhnicheskij redakter; TOKER, A.M., tekhnicheskij redakter.

[Structural calculations, taking into account the plastic properties of materials] Raschet sooruzhenii s uchtem plasticheskikh sveistr materialov. Izd. 2-o, perer. Moskva, Gos.izd-ve lit-ry po stroitel'stvu i arkhitekture, 1954. 286 p. (MIRA 8:5)

(Structures, Theory of)

AFANAS'YEV, A.M.

UMANSKIY, A.A.; AFANAS'YEV, A.M.; VOL'MIR, A.S.; GRIGOR'YEV, Yu.P.;
KODANEV, A.I.; MAR'IN, V.A.; PRIGOROVSKIY, N.I.; SNITKO, I.K.,
redaktor; AKHLAMOV, S.N., tekhnicheskiy redaktor.

[Collection of problems on the strength of materials] Sbornik
zadach po soprotivleniyu materialov. Moskva, Gos. izd-vo tekhn.-
teoret. lit-ry, 1954. 480 p. (MLRA 7:12)
(Strength of materials)

SOROKIN, Ye.S., kandidat tekhnicheskikh nauk; ~~AFANAS'YEV, A.M.~~, kandidat tekhnicheskikh nauk, nauchnyy redaktor; ~~ROSTOV'TSEVA, M.P.~~, redaktor; TOKER, A.M., tekhnicheskiiy redaktor.

On the problem of inelastic resistance of building materials subjected to vibrations. Nauchnoe soobshchenie Tsentral'nogo nauchno-issledovatel'skogo instituta promyshlennykh sooruzhenii. no.15: 3-72 '54. (MIRA 8:2)

(Vibration)(Strength of materials)(Building materials--
Testing)

DAVYDOV, V.V., professor, doktor tekhnicheskikh nauk; AFANAS'YEV, A.M.
redaktor; SEGAL', A.I., retsenzent; MASYAGIN, A.V., retsenzent;
VITASHKINA, S.A., redaktor; KRASNAYA, A.K., tekhnicheskiiy redaktor.

[Resistance of ship's hull to torsion] Prochnost' korpusa sudna
pri skruchivani. Moskva, Izd-vo "Rechnoi transport," 1955. 242 p.
(Torsion) (MLRA 9:1)

SOROKIN, Yevgeniy Semenovich; ~~AFANAS'YEV, A.M.~~ kandidat tekhnicheskikh nauk, nauchnyy redaktor; YEGOROVA, N.O., redaktor izdatel'stva; BOROVNEV, N.K., tekhnicheskii redaktor; MEDVEDEV, L.Ya., tekhnicheskii redaktor

[Dynamic calculation of bearing elements of buildings] Dinamicheski
raschet nesushchikh konstruktsii zdaniy. Moskva, Gos. izd-vo lit-ry
po stroit. i arkhitekture, 1956. 339 p. (MLRA 10:1)
(Structural frames)

POPOV, Aleksey Aleksandrovich, doktor tekhnicheskikh nauk, professor;
NIKOL'SKIY, L.N., doktor tekhnicheskikh nauk, retsenzent; RUBININ,
M.V., kandidat tekhnicheskikh nauk, retsenzent; AFANAS'YEV, A.M.,
kandidat tekhnicheskikh nauk, redaktor; MATVEYEVA, Ye.N., tekhnicheskii redaktor

[Strength of materials; theory and practice] Soprotivlenie materialov;
teoriia i zadachi. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit.
lit-ry, 1956. 475 p. (MLRA 10:2)
(Strength of materials)

BYCHKOV, Dmitriy Vasil'yevich, professor, doktor tekhnicheskikh nauk;
~~AFANASIYEV, A.M.~~, kandidat tekhnicheskikh nauk, nauchnyy redaktor;
~~YEGOROVA, N.O.~~, redaktor izdatel'stva; TOKER, A.M., tekhnicheskiy
redaktor

[Formulas and diagrams for designing frames] Formuly i grafiki dlia
rascheta ram. Izd. 3-e, perer. i dop. Moskva, Gos.izd-vo lit-ry po
stroit. i arkhit., 1957. 193 p. (MLRA 10:10)

(Structural frames)

KORNEV, B.G., prof., doktor tekhn. nauk, red.; AFANAS'YEV, A.M., kand. tekhn. nauk, nauchnyy red.; GORYACHEVA, T.V., red. izd-va.; EL'KINA, E.M., tekhn.red.

[Calculating elastically based plates; collection of articles] Voprosy rascheta plit na uprugom osnovanii; sbornik statei. Pod red. B.G. Korneva, Moskva, Gos. izd-vo lit-ry po stroit., arkhitekt. i stroit. materialam, 1958. 119 p. (NIRA 11:10)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut stroitel'nykh konstruktsii.

(Elastic plates and shells)
(Concrete slabs)

KALMANOK, A.S., kand. tekhn. nauk, red.; ~~AFANAS'YEV, A.M., kand. tekhn. nauk,~~
glavnyy red.; BORODINA, I.S., red. izd-va.; PERSON, M.H., tekhn. red.

[Structural design of apartment houses and public buildings with
precast construction elements] Voprosy rascheta konstruktsii
zhilykh i obshchestvennykh zdaniy so sbernymi elementami; sbornik
statei. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekt., 1958. 232 p.
(MIRA 11:11)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut stroitel'nyy
tekhniki.

(Precast concrete construction)
(Architecture--Designs and plans)

BYCHKOV, Dmitriy Vasil'yevich, prof., doktor tekhn.nauk; KLEYN, Georgiy Konstantinovich, prof.; AFANAS'YEV, Aleksandr Milent'yevich, dotsent, kand.tekhn.nauk; ~~LOKKEBERG, Lidiya Konstantinovna, dotsent~~; PORTAYEV, Lev Petrovich, kand.tekhn.nauk; CHELBAYEVA, Yevgeniya Mikhaylovna, assistant; GUSEV, Boris Mikhaylovich, aspirant; SMIRNOV, A.F., prof.; VILKOV, G.N., red.izd-va; GILENSON, P.G., tekhn.red.

[Guide to practical studies in structural mechanics] *Rukovodstvo k prakticheskim zaniatiyam po stroitel'noi mekhanike. Pod obshchei red. D.V.Bychkova. Moskva, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.materialam, 1959. 327 p.* (MIRA 12:10)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Smirnov). (Structures, Theory of)

SEGAL' Aleksandr Iosifovich; FILIN, A.P., prof., doktor tekhn. nauk,
retsenzent; AFANAS'YEV, A.M., kand. tekhn. nauk, dots.,
nauchnyy red.; SOSIPATROV, O.A., red.; FRUMKIN, P.S., tekhn.
red.

[Applied theory of elasticity] Prikladnaia teoriia uprugosti.
Izd.2., dop. i ispr. Leningrad, Gos.soiuznos izd-vo sudostroit.
promyshl., 1961. 267 p. (MIRA 15:1)
(Elasticity)

UMANSKIY, A.A.; AFANAS'YEV, A.M.; VOL'MIR, A.S.; GRIGOR'YEV Vn.P.;
KODANEV, A.I.; MAR'IN, V.A.; NOVITSKIY, V.V.; TIKHOMIROV,
Ye.N., retsenzent; SNITKO, I.K., red.

[Collection of problems on the strength of materials]
Sbornik zadach po soprotivleniiu materialov. Izd.2.,
perer. i dop. Moskva, Nauka, 1964. 550 p. (MIRA 18:1)

AFANAS'YEV, A.M.; YERMOLENKO, V.A.; KISELEV, V.A., zasl. deyatel'
nauki i tekhniki RSFSR, doktor tekhn. nauk, prof.;
MEDNIKOV, I.A.; OVSYANNIKOVA, M.V.; SLOBODCHIKOV, A.Ya.;
TYAZHELOV, N.N.; FEDOROV, Yu.P.; TSVEY, I.Yu.; DARKOV,
A.V., doktor tekhn.nauk, prof., retsenzent; FEDOROV, Yu.P.,
kand. tekhn. nauk, nauchn. red.

[Structural mechanics in examples and problems] Stroitel'-
naia mekhanika v primerakh i zadachakh. Moskva, Stroi-
izdat, 1964. 341 p. (MIRA 18:1)

SOV/112-57-6-122

Translation from: Referativnyy zhurnal. Elektrotekhnik, 1957, Nr 6, p 85 (USSR)
AUTHOR: Afanas'yev, A. M.

TITLE: Method of Quality Control of Electric-Brush Billets According to Their Resistivity (A Suggestion by G. G. Yarmol'chuk, G. A. Rakoyed, A. M. Afanas'yev) (Metod kontrolya zagotovok elektroshchetok po udel'nomu soprotivleniyu. Predlozheniye G. G. Yarmol'chuka, G. A. Rakoyeda, A. M. Afanas'yeva)

PERIODICAL: Sb. rats. predlozh. M-vo elektrotekh. prom-sti SSSR, 1956, Nr 7 (65), pp 3-4

ABSTRACT: A method is suggested of mass quality control of an electric-brush semiproduct according to its resistivity. The device depends for its action on the resonant-voltage phenomenon in an oscillatory circuit. The device comprises a self-excited high-frequency oscillator, a bridge consisting of two oscillatory circuits, a power source, a coupling capacitor, and a compensation resistor. A non-resonant output transformer and voltmeter are connected in

KAGAN, Yp.; AFANAS'YEV, A.M.

Kinetic theory of a gas with rotational degrees of freedom.
Zhur. eksp. i teor. fiz. 41 no.5:1536-1545 N '61. (MIRA 14:12)
(Molecular rotation)
(Gases, Kinetic theory of)

24.7160

11137
S/056/62/043/004/043/061
B125/B186

AUTHORS: Afanas'yev, A. M., Kagan, Yu.

TITLE: Peculiarities in the phonon dispersion law related to electron-phonon interaction

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 4(10), 1962, 1456-1463

TEXT: It is shown that the peculiarities in the dispersion law are of such a nature that the shape of the Fermi surface is essentially related to them. The electron-phonon system is investigated at $T = 0$ by the method of the two-time Green's functions. The Dyson equation for the usual Hamiltonian of this system contains the polarization operator $\Pi(\vec{q}, \omega)$. $G(\vec{p}, \omega)$ is the Green function for the electrons and

$\Gamma(\vec{p}, \epsilon; \vec{q}, \omega)$ is the vertex part. The Green function is used alone when electron-photon interaction is absent. The polarization operator for nearly cylindrical Fermi surfaces reads as

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Peculiarities in the phonon ...

S/056/62/043/004/043/061
B125/B186

$$\operatorname{Re} \Pi(q, \omega) = \frac{m^* p_{10}}{2\pi^2} \operatorname{Re} \left\{ 1 - \frac{1}{2} \left(1 - \frac{4p_0^2}{q_1^2} - \frac{4m\omega}{q_1^2} \right)^{1/2} - \frac{1}{2} \left(1 - \frac{4p_0^2}{q_1^2} + \frac{4m\omega}{q_1^2} \right)^{1/2} \right\}, \quad (8).$$

$$\operatorname{Im} \Pi(q, \omega) = \frac{m^* p_{10}}{4\pi^2} \operatorname{Im} \left\{ \left(1 - \frac{4p_0^2}{q_1^2} - \frac{4m\omega}{q_1^2} \right)^{1/2} - \left(1 - \frac{4p_0^2}{q_1^2} + \frac{4m\omega}{q_1^2} \right)^{1/2} \right\}.$$

The following expressions hold for the dispersion and for the attenuation of the phonon branch of excitation:

$$\begin{aligned} \omega_q^2 &= (\omega_q^0)^2 - 2\omega_q^0 A_q^2 \operatorname{Re} \Pi(q, \omega_q), \\ \gamma_q &= \frac{\omega_q^0}{\omega_q} \operatorname{Im} \Pi(q, \omega_q) \left/ \left[1 + \frac{\omega_q^0}{\omega_q} \frac{\partial \operatorname{Re} \Pi(q, \omega_q)}{\partial \omega_q} \right] \right. \end{aligned} \quad (9),$$

where $\omega = \omega_{\vec{q}} - i\gamma_{\vec{q}}$. It is assumed that $\gamma_{\vec{q}}/\omega_{\vec{q}} \ll 1$. If, in the neighborhood of a certain point, the series expansion begins with a power greater than two, then a root type singularity is obtained and the

Card 2/3

KISELEV, V.A.; AFANAS'YEV, A.M., nauchn. red.; TITOVA, V.A., red.;
BARANOV, Yu.V., tekhn. red.

[Theory of external and internal forces in a bar] Teoriia
vneshnikh i vnutrennikh sil brusa. IАroslav', Rosvuzizdat,
1963. 66 p. (MIRA 16:12)

(Beams and girders)

AFANAS'YEV, A.M.; KAGAN, Yu.

Theory of the hyperfine structure of the Mossbauer line in
paramagnetic substances. Zhur. eksp. i teor. fiz. 45 no.5:
1660-1677 N '63. (MIRA 17:1)

L 11010-65 EWT(1)/EEC(t) IJP(c)/AS(mp)-2/APWL/SSD/AEDC(a)/ASD(a)-5/ESD(gs)/
ESD(t) S/0056/64/047/003/1108/1122
ACCESSION NR: AP4046431

AUTHORS: Kagan, Yu.; Afanas'yev, A. M.

TITLE: Broadening and shift of nuclear line (Mossbauer line) in a ferromagnet ²¹ (B)

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 3, 1964, 1108-1122

TOPIC TAGS: Mossbauer effect, ferromagnet, line broadening, line shift, electron spin, spin wave, temperature dependence

ABSTRACT: A general diagram technique previously developed by the authors (ZhETF v. 45, 1660, 1963) is used to find the broadening and shift of the individual components of the Mossbauer line, which result from fluctuations of the effective magnetic field at the nucleus. It is found that ... a definite broadening at zero temperature ... of the z-compo

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L 11010-65

ACCESSION NR: AP4046431

ment of the electron spin (z -- directional magnetization). The earlier method of the authors is generalized to include not only one particle processes, but two-particle processes which play a decisive role in this case. The method makes it possible to make a consistent summation of the graphs and to determine explicitly the correlation functions which give the shape of the Mossbauer line in a ferromagnet. It is shown that the effects can be determined to a large extent by the low-frequency excitation of the electron spin system (i.e., by the dispersion law for the low-momentum spin waves). A numerical computation shows that the width of the components of the hyperfine structure can change noticeably with temperature, especially for nuclei of the rare earth elements. An additional broadening mechanism, due to the indirect interaction of the nuclei via the electron-spin system, is also considered, and the broadening of the Mossbauer line because of the indirect interaction is determined by the method of moments. It is shown that the broadenings obtained by the two mechanisms, while commensurate, are not equivalent.

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L 11010-65
ACCESSION NR: AP4046431

lent. "The authors thank G. A. Kharadze who called their attention to the papers of Suhl and Nakamura." Orig. art. has: 4 figures and 53 formulas.

ASSOCIATION: None

REMITTED: 11Jun64

ENCL: 00

Card 3/3

DOCUMENT ID: A100000
SECTION NR: APPROVED

Author: M. A. ...

TITLE: Suppression of inelastic resonance in the case of neutron scattering in crystals

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1964, No. 1, p. 100-104.

INDEX TAGS: inelastic scattering, resonant scattering, neutron scattering, Mossbauer effect, phonon scattering

The inelastic resonance scattering of neutrons in crystals is investigated with a low lying level of the nucleus. It is shown that the resonance scattering is suppressed in the case of a completely non-elastic scattering. An analysis of the effect of the vibration of the nuclei in the lattice shows that in the case of a completely non-elastic scattering the resonance scattering is suppressed in the case of other nuclei.

oscillations have practically no effect. In the case of horizontal the oscillations of the magnetic field... The... resonant scattering of gamma quanta in the presence of internal conversion, under the assumption that the gamma quanta are... quanta with one polarization, the described effect occurs under Bragg scattering from any crystal plane. For other... The possibility of... primarily with the... which degree of... mostly observing the effect...

REF ID: A66000
 SUBJECT: INSULID* ENCL: 10 SUP CODE: NP
 REF SOV: 005 OTHER: 10

I 31752-65 EWA(k)/EWT(1)/EPA(s)-2/EEC(k)-2/EEC(t)/T/EWP(t)/EEC(b)-2/EWP(k)/
EWP(b)/EWA(π)-2/EWT(π)

ADMISSION NO. APR 1965

AUTHOR: Afanas'yev, A. M., Moscow, U.S.S.R.

TITLE: Generation of light harmonics in semiconductors and dielectrics near the absorption band edge

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 2, 1965, 483-487

TOPIC TAGS: semiconductor, laser, stimulated emission, semiconductor laser, second harmonic, nonlinear optics, cadmium sulfide

ABSTRACT: Second harmonic generation in a CdS crystal, which was observed recently in a sample excited by laser emission, is analyzed. The intensity of the second harmonic is determined by two competing processes: an increase in the absorption coefficient and a sharp increase in the refractive part of the coefficient near the edge of the absorption band. The results show the dependence of the intensity of the second harmonic at the temperature $T = 300^\circ K$, when CdS is transparent to the second harmonic, and $T = 200^\circ K$, when CdS absorbs it strongly, is determined by the properties of the medium. Calculations of the required coefficients for a CdS crystal are very difficult, an analogous problem in which the medium is gas and in which exact expressions can be obtained for the coefficient 1/2

L 31752-65

ACCESSION NR: AP5006496

lients, was analyzed and the results applied to the CdS crystal. Absorption and second harmonic generation are shown to have a similar frequency dependence. Therefore, the resulting second harmonic intensity does not change significantly with temperature, not even near $T = T_c$. A similar analysis was conducted for generation of the third harmonic in a gas. Orig. art. has: 20 formulas. [CS]

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Engineering Physics Institute)

SUBMITTED: 03Mar64

ENCL: 00

SUB CODE: SS, EC

NO REF 30V: 000

OTHER: 005

ATD PRESS: 3199

Card 2/2

1-36320-65 EWT(1)/EEG(4)/EEG(b)-2 P1-4 IJP(c) s/0056/65/048/003/0931/0938
ACCESSION NR: AP5008753

AUTHOR: Manykin, E. A.; Afanas'yev, A. M.

TITLE: Resonance effects in nonlinear optics

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 3, 1965, 931-938

TOPIC TAGS: nonlinear optics, harmonic generation, second harmonic, third harmonic, laser effect, second harmonic generation, nonlinear polarization

ABSTRACT: The interaction of light waves in a continuous medium with resonance when the harmonic frequency is close to the intrinsic frequency (intrinsic absorption edge) of the medium is investigated, and generation of third harmonics in the passage of monochromatic radiation through a medium which is resonant to the second harmonic is considered. Conditions favorable for the generation of high-intensity third harmonics are derived. It is shown that in the presence of a strong monochromatic beam in an anisotropic medium transparent to the first and the third harmonics and resonant to the second harmonic the maximum intensity of the third harmonic that can be generated is about 30% of the incident light intensity. In a strong field when

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L 36320-65
ACCESSION NR: AP5008753

$\bar{k}(3\omega) = 3k(\omega)$, where \bar{k} is the wave vector of the incident radiation, nonlinear absorption (in particular, two-photon absorption) approaches zero. Orig. art. has: 30 formulas and 2 figures. 0.
[CS]

ASSOCIATION: none

SUBMITTED: 21Sep64

ENCL: 1

SUB CODE: EC,OP

NO REF SOV: 004

OTHER: 006

ATD PRESS: 3219

Card 2/2 bs

AFANAS'YEV, A.M.; KAGAN, Yu.

Radiation from a system of excited nuclei in a crystal. Pis'.
v red. Zhur. eksper. i teoret.fiz. 2 no.3:130-134 Ag '65.
(MIRA 18:12)

1. Submitted June 12, 1965.

AFANAS'YEV, A.M.; PAVLOV, S.A.; ZVEREV, B.I.; KARTOV, V.I.

X-ray diffraction study of irradiated polyamides. *Plast. massy*
no.1:33-36 '65. (MIRA 18:4)

L 23228-66 EWT(m)/EPF(n)-2/EWP(j)/T/EWA(h)/EWA(l) IJP(c) GO/RM
ACC NR: AP6Q13597 SOURCE CODE: UR/0191/65/000/002/0032/0034

AUTHOR: Afanas'yev, A. M.; Pavlov, S. A.; Karpov, V. L.; Zverev, B. I. 78

ORG: none B

TITLE: Roentgenographic investigation of modified polyamides 1544-52

SOURCE: Plasticheskiye massy, no. 2, 1965, 32-34

TOPIC TAGS: polyamide, polymer, irradiation resistance, radiation shielding, nuclear shielding, boron, lead, epoxide, polyurethane, chromium compound

ABSTRACT: The modification of polymers with mineral substances has great importance to the preparation of materials resistant to nuclear radiation. Materials are known which are dispersions of compounds of boron and lead in epoxide, polyurethane, and silicone bonds which are not inferior to boron and lead in ability to deflect slow neutrons and gamma rays. Coverings based on these dispersions are more effective than covering made from other materials for protection from nuclear radiation. These materials can be used for making special protective clothing, for enclosing x-ray installation, etc. Upon considering the value of the effect caused in mixed polyamide compounds of trivalent chromium, the authors studied the effect of various doses of ionizing radiation on the structure of polyamide AK 50/50, (obtained by the polycondensation of AG-salt and E-caprolactum in a 1:1 ratio) modified with chromium chloride. Radiation was conducted at 20° C in the presence of air on the "K-20000", an installation for radiation-chemical investigations, which has a source of gamma radiation from Co-60 with an activity of 20000 gram-equivalents of Ra. Polyamide S-6 obtained

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UDC: 678.675.01:543.422.8 2

L 23228-66

ACC NR: AP6013597

on the basis of AG-salt-SG-salt and epsilon-caprolactum in a 1:1:1 ratio, was also used in the study. It was concluded that the introduction of considerable quantities of trivalent chromium salts into a solution of mixed polyamides results in the loss of crystallinity of the film material obtained. The action of gamma radiation up to 200 milliroentgen doses does not cause substantial changes in structure. Further, when the content of the chromium chloride in the polyamide is insignificant its action is expressed in the fixation of the structure formed; when the content is high, it is expressed in the opening of the chains and blocks of macromolecules and in the disturbance of their ordering. Finally, the introduction of glycerine accelerates the loss of crystallinity of the polyamide S-6 during radiation but at a lower rate than the radiation-caused changes of the mechanical and other properties of this polyamide. The structure of polyamides AK 50/50 and S-6, even after addition of a plasticizer, exhibits considerable stability in the action of radiation in the dose range up to 500 milliroentgen dose. Orig. art. has: 2 figures and 3 tables. [JPRS]

SUB CODE: 11, 18 / SUBM DATE: none / ORIG REF: 009

Cord 2/2

L 47339-65
ACCESSION NR: AP5009323

and x-ray studies were made. The radiation dose for each test, the refraction angle, half-width of peak, and peak intensity are tabulated in the paper. For AK 50/50 the peak half-width and intensity, characterizing ordered structure, remained practically unchanged at low doses as compared with calculated relations. Change became noticeable at doses of 100 mrd, but considerable disordering was found to take place only at 500 mrd. For S- the relations proved to be different. Increase in radiation dose caused decrease in peak intensity, increased ordering of the macromolecules in the film. The authors discuss possible causes of these phenomena as well as some other properties, such as oxidizability, viscosity, and loss of transparency. 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: 00, 0P

NO REF SOY: 006

OTHER: 000

Card 2/2 00

L 60046-65 EWT(m)/EPF(c)/EPF(n)-2/EWF(5)

ACCESSION NR: AP5018039

UR/0191 65/000/007/0039/0043
07-872-415.01536.495:66.085.5

AUTHOR: Afanas'yev, A. M.; Pavlov, S. A.

TITLE: Effect of gamma radiation on the thermomechanical properties of polyamide films

SOURCE: Plasticheskiye massy, no. 7, 1965, 39-43

TOPIC TAGS: polyamide film, gamma radiation, polymer film strength, deformation curve

ABSTRACT: Changes occurring in polyamide films under the influence of integral radiation doses up to 500 mrad during heating from 25 to 300C were studied by a thermomechanical method. Mixed polyamides of type 1K... 1S were chosen for the study. The films were prepared from other polyamides under near-industrial conditions, subjected to Co60 gamma-radiation... curves were plotted after exposure to 50... about 100 mrad, the irradiated films did not melt at the melting point of the original samples; their deformability in the high-temperature range (150-300C) became limited and decreased with increasing dose. The properties of the irradiated films depend not only on the

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L 60046-65

ACCESSION NR: AP5018039

structure of the polymer and the integral dose, but also to a considerable extent on the
mechanism of formation of the films and by nature of the original structure. By
varying the optimum conditions of irradiation, it is possible to obtain a smaller
penditure of radiation energy.
valuable suggestions during the setting up of the experiments and for the
work." Orig. art. has: 5 figures and 1 table.

ASSOCIATION: None

ENCL: 00

SUB CODE: MT,RP

SUBMITTED: 00

NO REF SOV: 008

Card 2/2

L 17661-66 EWT(m) DIAAP

ACC NR: AP6003831

SOURCE CODE: UR/0386/65/002/003/0130/0134

AUTHORS: Afanas'yev, A. M.; Kagan, Yu.

ORG: none

TITLE: Radiation of a system of excited nuclei in a crystal

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 3, 1965, 130-134

TOPIC TAGS: excited state, gamma radiation, angular distribution, nuclear isomer

ABSTRACT: The authors show that excited states whose decay rates are many times larger or smaller than the rate of decay of a system of noncoherent radiators can exist in principle in a regular crystal (even when the wavelength is much smaller than the characteristic distance between particles). An equation is derived for the probability of emission of a gamma quantum from a crystal consisting of a number of identical nuclei with a low-lying isomer level, of which

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L 17661-66

ACC NR: AP6003831

one nucleus is excited. It is shown that under certain conditions there is a strong increase in the probability of gamma decay, accompanied by strong peaking of the radiation in the propagation direction. The possible existence of a state with anomalously large radiation rate occurring while the nuclei decay in a crystal (superradiating state) is discussed and conclusions obtained by I. H. Terhune and G. C. Baldwin (Phys. Rev. Letters v. 14, 589, 1965), that a superradiating state can be produced in a crystal only if the lattice and the nucleus are artificially chosen, is stated to be incorrect. The preliminary nature of the conclusions is emphasized. Orig. art. has: 6 formulas.

SUB CODE: 20/ SUEM DATE: 12Jun65/ ORIG REF: 002/ OTH REF: 002

Card

2/2 *all*

AFANAS'YEV, A.M.; MAN'KIN, E.A.

Generation of light harmonics in semiconductors and dielectrics
near the absorption band edge. Zhur. eksp. i teor. fiz. 48
no.2:483-487 F '65. (MIRA 18:11)

1. Moskovskiy inzhenerno-fizicheskiy institut.

L 15879-66 EWT(m)/T

ACC NR: AT6002493

SOURCE CODE: UR/3136/65/000/940/0001/0020

AUTHOR: Kagan, Yu.; Afanas'yev, A. M.

ORG: Institute of Atomic Energy im. I. V. Kurchatov (Institut atomnoy energii)

TITLE: Change in the resonance nuclear parameters in scattering on regular systems

SOURCE: Moscow. Institut atomnoy energii. Doklady, IAE-940, 1965. Ob izmenenii rezonansnykh yadernykh parametrov pri rasseyanii na regulyarnykh sistemakh, 1-20

TOPIC TAGS: nuclear scattering, phonon scattering, excited state, ground state, nuclear spin, resonance scattering, elastic scattering, inelastic scattering

ABSTRACT: The study deals with scattering on systems of nuclei with low resonance levels. It is shown that if the nuclei form a regular unidimensional chain or two-dimensional lattice, the elastic width Γ_1 and the position of the resonance level undergo substantial changes. The change of width is shown to be connected with the lifetime of the collective excited state of the system of nuclei. The lifetime of this state as well as the width can be both greater and smaller than the lifetime (width) of the isolated excited nucleus. In the case of a three-dimensional crystal, the elastic width disappears entirely, and

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2

L 15879-66

ACC NR: AT6002493

the energy dependence of the resonance interaction is determined solely by the inelastic width Γ_2 . In the presence of spin in the ground state of the nucleus, and when the role of inelastic phonon scattering is appreciable, the width takes on a value that is intermediate between Γ_2 and the total width. Authors are very grateful to A. I. Baz' for a useful discussion. Orig. art. has: 2 figures and 35 formulas.

SUB CODE: 18 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 002

Card 2/2 *af*

L 15666-66 EWT(n)/EPF(n)-2/EWA(h)

ACC NR: AP6000208

SOURCE CODE: UR/0056/65/049/005/1504/1517

AUTHORS: Kagan, Yu.; Afanas'yev, A. M.

ORG: none

TITLE: Suppression of inelastic channels in resonance scattering of neutrons in regular crystals

SOURCE: ^{19.74.55} Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965, 1504-1517

TOPIC TAGS: resonance scattering, inelastic scattering, neutron scattering, crystal lattice vibration, spin resonance, gamma quantum, neutron interaction

ABSTRACT: Following a theory previously developed by the authors (ZhETF v. 48, 327, 1965) for describing the results of resonance scattering of gamma quanta, the authors developed in this paper a dynamical theory which describes the motion of neutrons in a regular crystal when the interaction of the neutron with the individual nuclei is primarily resonant in character. Account is taken not only of the resonance character of the interaction but also of the presence of an

Card 1/2

L 15666-66

ACC NR: AP6000208

intense inelastic channel, as well as of the vibration of the nuclei in the crystal. In addition, the spin interaction of the neutrons with the nuclei is taken into account, and allowance is made for the appearance of an additional incoherent scattering channel (spin incoherence). Particular attention is paid to relation between the intensity and the spatial distribution of the nuclear reaction in the crystal and the parameters of the problem. A detailed analysis is made of the effect of suppression of the inelastic channels and of the distribution of the intensity of the nuclear reactions of the thickness of the crystal. Orig. art. has: 34 formulas.

SUB CODE: 20/ SUBM DATE: 26May65/ ORIG REF: 002/ OTH REF: 008

PC
Card 2/2

L 66346-67 EWP(j)/EWT(m) IJP(c) GG/RM/WW
ACC NR: AP6030324 (A,N) SOURCE CODE: UR/0153/66/009/003/0480/0485

AUTHOR: Afanas'yev, A. M.; Pavlov, S. A. 45
13

ORG: Department of Technology of Artificial Leather and Film Materials, Moscow Technological Institute of Light Industry (Kafedra tekhnologii iskusstvennoy kozhi i plenochnykh materialov, Moskovskiy tekhnologicheskii institut legkoy promyshlennosti)

TITLE: Thermomechanical properties of irradiated polyamides cross-linked with chromium chloride 15
19

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 9, no. 3, 1966, 480-485

TOPIC TAGS: chromium compound, chloride, polyamide, irradiation effect, gamma radiation, thermomechanical property

ABSTRACT: An attempt was made to determine the extent to which the addition of a cross-linking chromium complex (chromium chloride) followed by irradiation with Co⁶⁰ γ rays affects their thermomechanical properties of films of mixed-type polyamides. The film-forming polyamides were AK 50/50 and S-6.¹⁹ The results of thermomechanical tests confirmed x-ray diffraction data obtained earlier to the effect that the introduction of increased amounts of chromium chloride causes the structure of the film material to change from an amorphous-crystalline state to an amorphous one. At the same time, the thermal stability of the films increases, and the flowability disappears in the temperature range under consideration (25-300°). Under the influence of

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UDC: 678.01:53+678.028+541.15

L 06346-67

ACC NR: AP6030324

integral doses of γ radiation up to 500 Mrad, the cold flow of polyamide films with a high chromium chloride content increases, and at temperatures close to the fusion temperatures of the initial components, these polyamides change into a viscofluid state. It was found that even the formation of a weak radiation network of gel between the macromolecules in polyamide films which were first cross-linked with a salt of chromium (III) requires integral radiation doses that are at least one order of magnitude higher than the doses corresponding to gel formation in the initial polyamides. Orig. art. has: 3 figures and 1 table.

SUB CODE: 11/ SUBM DATE: 06Jun64/ ORIG REF: 007/ OTH REF: 001

Card 2/2 MKC

AFANAS'YEV, A.N. (Novosibirsk)

~~Report~~ Report on the activity of the Novosibirsk branch of the All-Union
Society of Urologists in 1954-1955. Urologia, 22 no.1:82 Ja-F '57
(MLRA 10:5)

(GENITOURINARY ORGANS--DISEASES)

НОВОСИБИРСКИЙ
AFANAS'YEV, A.N. (Novosibirsk)

Report on the activity of the Novosibirsk Urological Society in 1956.
Urologia 22 no.6:71-72 N-D '57. (MIRA 11:2)
(NOVOSIBIRSK--UROLOGY)

AFANS'YEV, A.N. (Novosibirsk)

Report on the activities of the Novosibirsk Urological Society in
1957. Urologia 23 no.4:76-77 J1-Ag '58 (MIRA 11:8)
(NOVOSIBIRSK--UROLOGY--SOCIETIES)

AFANAS'YEV, A. N.

Strains and Stresses

Concentration of stresses in a rod with a transverse opening. Zbir. prats' Inst. bud. mekh. no. 3, 1948

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED

AFANAS' YEV, A.N., kand.tekhn.nauk; BASOV, N.I., kand.tekhn.nauk; BELO-
VITSKIY, A.A., inzh.; VESELOVSKIY, V.S., doktor tekhn.nauk, prof.;
GOBELIK, B.I., kand.tekhn.nauk; DORONENKOV, I.M., inzh.; ZAK, D.L.,
inzh.; IVONIN, V.I., inzh. [deceased]; KLINOV, I.Ya., doktor tekhn.
nauk, prof.; LEVIN, A.N., doktor tekhn.nauk, prof.; LEVIN, S.N.,
kand.tekhn.nauk; LEPETOV, V.A., kand.tekhn.nauk; LEONT'YEV, N.L.,
doktor tekhn.nauk, prof.; LOKHINA, P.I., kand.tekhn.nauk; MATVEYEVA,
L.V., inzh.; MIKHAYLOV, A.N., doktor tekhn.nauk, prof.; MUDRIK, Kh.I.,
kand.tekhn.nauk; PERLIN, S.M., inzh.; SALAZKIN, K.A., kand.tekhn.nauk;
SIL'VESTROVICH, S.I., kand.tekhn.nauk; SOKOLOVSKAYA, S.I., kand.
tekhn.nauk; KHENKIN, A.A., inzh.; KHUKHRYANSKIY, P.N., doktor tekhn.
nauk, prof.; SHYDEMAN, I.Yu., kand.tekhn.nauk; YASHUNSKAYA, F.I.,
kand.tekhn.nauk; POGODIN-ALEKSEYEV, G.I., doktor tekhn.nauk, prof.,
red.; RYBAKOVA, V.I., inzh., red.izd-va; SOKOLOVA, T.F., tekhn.red.

[Handbook on materials used in the manufacture of machinery] Spra-
vochnik po mashinostroitel'nym materialam; v chetyrekh tomakh. Pod
red.G.I.Pogodina-Alekseeva. Moskva, Gos.nauchno-tekhn.izd-vo ma-
shinostroit.lit-ry. Vol.4. [Nonmetallic materials] Nemetalli-
cheskie materialy. Red.toma A.N.Levin. 1960. 723 p.

(MIRA 13:?)

(Machinery industry)

(Nonmetallic materials)

AFANAS'YEV, A.N., inzh. (Moskva)

Analysis of a transistorized stabilizer circuit. Elektrichestvo
no.8:39-42 Ag '60. (MIRA 13:8)

(Transistor circuits)
(Voltage regulation)

.22(0) **RESEARCH AND DEVELOPMENT** 807/150

Produktion-Entwicklungs abteilungen in der chemischen Industrie
Produktion-Entwicklungs abteilungen in der chemischen Industrie
Produktion-Entwicklungs abteilungen in der chemischen Industrie
Produktion-Entwicklungs abteilungen in der chemischen Industrie
Produktion-Entwicklungs abteilungen in der chemischen Industrie

Dr. A. H. Bueche, R. L. Spitzer, P. H. Bueche, R. L. Spitzer, R. L. Spitzer,
R. L. Spitzer, R. L. Spitzer, P. H. Bueche, R. L. Spitzer, R. L. Spitzer,
R. L. Spitzer, R. L. Spitzer, P. H. Bueche, R. L. Spitzer, R. L. Spitzer,
R. L. Spitzer, R. L. Spitzer, P. H. Bueche, R. L. Spitzer, R. L. Spitzer,
R. L. Spitzer, R. L. Spitzer, P. H. Bueche, R. L. Spitzer, R. L. Spitzer,

Produktion-Entwicklungs abteilungen in der chemischen Industrie
Produktion-Entwicklungs abteilungen in der chemischen Industrie
Produktion-Entwicklungs abteilungen in der chemischen Industrie
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28713
S/O35/61/000/008/017/022
A001/A101

3,1540 (1559)

AUTHOR: Afanas'yev, A.N.

TITLE: On one regularity in the double cycle of solar activity

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 8, 1961, 58, abstract 8A475 ("Solnechnyye dannyye", 1960, no. 4, 75 - 77)

TEXT: According to M.N. Gnevyshev and A.I. Ol', double cycles no. 4-5 deviate from the general regularity if the cycles are coupled using the rule of these authors. Taking reduced mean annual Wolf numbers $\Sigma W/T$ for the activity index, the present author arrives at the conclusion that cycle no. 4 can not be considered as anomalous in its intensity. From this standpoint he considers fluctuations of activity using the materials of two secular cycles. Beginning from the 11-year cycle no. 17, secular activity increases sharply.

G. N.

[Abstracter's note: Complete translation]

4X

Card 1/1

S/063/60/005/001/004/009

AUTHORS: Simulin, N. A., Afanas'yev, A. N.

TITLE: The Use of Coke Gas for Chemical Processing

PERIODICAL: Zhurnal vsesoyuznogo khimicheskogo obshchestva im. D. I. Mendeleyeva, 1960, Vol. 5, No. 1, pp. 78-81

TEXT: The output₃ of coke gas in the USSR will increase from 20.7 billion m³ in 1958 to 33 billion m³ in 1965. The content of hydrogen in the gas is most important for the chemical industry, because it is used for the synthesis of ammonia. The sulfur compounds contained in the gas can be processed to obtain elemental sulfur or sulfuric acid. The cost of ammonia synthesized from coke gas is compared to that produced from natural gas. There are two methods of producing ammonia from coke gas: the conversion of methane contained in the gas and the low-temperature separation of the gas. The latter method reduces the cost of ammonia by 10-12% and reduces the capital investment. The relative capital investments per 1 t of ammonia output are nearly the same for coke gas and natural gas as raw material, if the ammonia plant can cooperate with metallurgical works in decomposition of air into O and N, otherwise they are higher. In the case of the conversion of natural gas to ammonia without pressure the cost is

Card 1/2

S/035/62/000/005/054/098
A055/A101

AUTHOR: Afanas'yev, A. N.

TITLE: On the problem of the formation of secular cycles of solar activity

PERIODICAL: Referativnyy zhurnal, *Astronomiya i Geodeziya*, no. 5, 1962, 58,
abstract 5A425 ("*Solnechnyye dannyye*", 1961, no. 5, 62 - 65)

TEXT: For the period extending from 1700 to 1960, the author examines the variation of the annual values of Wolf numbers W and of the average annual values of Wolf numbers for the 11-year cycle $\Sigma W/T$. The variation of $\Sigma W/T$ permits a precise determination of the limits of secular cycles. The past two secular cycles were made up of an even number of 11-year cycles. On the secular cycle growth branches, relatively low 11-year cycles were followed by relatively high cycles; the reverse is true for the droop branches. On the growth branch of the secular solar cycles, the double cycles are thus composed of odd, relatively low 11-year cycles and even, relatively high 11-year cycles, the reverse being true for the droop branch. This is confirmed, in a particularly clear manner, by the examination of the relation between the odd and even values of $\Sigma W/T$. The

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average power of the current 20th cycle is expected to be equal to 75. The supersecular variation of the solar activity level towards its increase (variation already ascertained by A.I. Ol') is confirmed. An attempt is made to predict the current secular solar cycle, i.e. to predict the number of double cycles it will contain. There are 8 references. ✓

T. Mandrykina

[Abstracter's note: Complete translation]

Card 2/2

AFANAS^oYEV, A.N. (Moskva)

Calculation of thermal conditions in transistors [with summary in English]. Avtom. i telem. 22 no. 5: 611-647 My '61. (MIRA 14:6)
(Transistors-- Thermal properties)

AFANAS'YEV, A.N.

Natural gas as a raw stock for the production of mineral
fertilizers. Gaz. prom. 9 no.3:1-3 '64.

(MIRA 17:9)

TYKCHINSKIY, I. D.; ~~ANAS'YEV~~. A. N.

Glass Manufacture - Chemistry

Rapid determination of the moisture content in the raw materials of a glass melting charge by thermal analysis., Stek. i ker., 9, no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May ¹⁹⁵²~~1953~~, Uncl.

AFANAS'YEV, A. N.--"The Effect of Fluorides on the Course of the Reaction of Silicate-and Glass-Formation in Four-Component Batch." Min Construction Materials Industry USSR. All-Union Sci Res Inst of Glass. Moscow, 1955. (Dissertation for the Degree of Candidate in Technical Science).

SO Knizhanay letopis'
No 2, 1956

USSR/Chemical Technology -- Chemical Products and Their Application. Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1584

Author: Afanas'yev, A. N., Pototskaya, G. V., and Shatokhin, I. S.

Institution: None

Title: The Utilization of Graphite Molds in the Production of Blown
Glassware

Original

Periodical: Steklo i keramika, 1956, No 5, 28-29

Abstract: The production of cast iron molds in the manufacture of small batches of glassware increases production costs. It is proposed to use graphite molds (GM) in the place of cast iron molds. Over a period of one year GM have been used in the production of jackets for glass tubing; no change in the dimensions of the GM was observed after the production of some 8,000 units. GM offer a number of advantages over wooden and cast iron molds: because of their high heat conductivity, they do not require lubrication, give a high-quality surface, and

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USSR/Chemical Technology -- Chemical Products and Their Application. Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1584

Abstract: their low friction coefficient facilitates the work of the glass-
blowers; in addition, the production of GM is many times cheaper
than that of cast iron molds.

Card 2/2

Afanas'yev, A.N.
USSR/Chemical Technology - Chemical Products and Their
Application. Ceramics. Glass. Binders. Concrete.

H-7

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 2044
Author : Frolova Ye.G., Pototskaya G.V., Shapiro I.Ye., Afanas'yev
A.N.
Inst : -
Title : Welding of Glass Pipes and Shaped Pipe Fittings.
Orig Pub : Steklo i keramika, 1957, No 5, 24-27

Abstract : For the welding of glass pipe fittings use was made at first of the horizontal-welding machine of A320-A1 type, which is used at plants of the radic industry for welding of glass apparatus. The machine can be used to weld glass pipe of up to 80 mm outside diameter and of any length, and pipe of larger diameter in lengths up to 1000 mm. At the experimental glass plant a disk-machine was designed which makes it possible to weld pipe of any diameter in lengths up to 4-5 m, and to weld

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USSR/Chemical Technology - Chemical Products and Their
Application. Ceramics. Glass. Binders. Concrete.

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Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2044

adapters to them. A description is given of the process of making T-joints. Welding experiments were carried out with borosilicate and low-alkali glass. Knowhow has been acquired in welding of pipe of low-alkali glass of up to 122 mm outside diameter and welding of T-joints of up to 68 mm outside diameter. In addition to pipe, the welding procedure can be used to produce various complex chemical equipment, hydrocyclones and other articles. On the basis of the completed work the authors propose to plan and build special welding shops, for which all-purpose welding machines and auxiliary equipment must be designed and produced. It is appropriate to conduct tests on glass welding by means of high frequency current.

Card 2/2

15(6)

SOV/72-59-2-12/21

AUTHORS:

Afanas'yev, A. N., Pototskaya, G. V., Andreyev, S. I.,
Surovtsev, V. P.

TITLE:

Tank Furnaces for the Melting of Glass Poor in Alkali (Van-
naya pech' dlya varki maloshchelchnogo stekla)

PERIODICAL:

Steklo i keramika, 1959, Nr 2, pp 37-39 (USSR)

ABSTRACT:

Low alkali content glass of the trade-mark 13v was melted in the years from 1956 to 1958 in the test glass works. The furnace with passage and horsehoe-shaped flame is depicted in figura 1. Experiments carried out by the laboratoriya ogneporov Instituta stekla (Glass Institute Laboratory of Refractories) showed that quartz beams are to be regarded as the most stable refractory for the 13v glass. To test their performance under factory working conditions the melting section of the furnace basin as well as the furnace passage were lined with quartz beams of the dimensions 900x250x90±100 mm. The furnace bottom and the basin walls of the furnace processing section were lined with fire-clay beams. The furnace front wall was experimentally built of dinas slabs SD-7. The longitudinal walls of the basin melting section were equipped with water coolers (Fig 2) and the front

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Tank Furnaces for the Melting of Glass Poor in Alkali

wall with air-cooling under the burners. The furnace melting section temperature amounted to $1470+10^{\circ}$ and $1280-1320^{\circ}$ in the processing section. The furnace was shut down after a campaign of 20 months. The quartz beams were in good conditions (Fig 3) and so was the furnace passage (Fig 4). The wear of the dinas slabs in the furnace front wall was negligible (Fig 5). The furnace floor with the SSh-1 beams was considerably damaged by 2 campaigns (Fig 6). Conclusions: quartz products are regarded as the best refractories for the melting of 13v glass. Dinas in the form of large blocks is suitable for the basin walling. It would be useful to experimentally build the furnace bottom of dinas, so as to eliminate fire-clay entirely. There are 6 figures.

ASSOCIATION: Opytnyy zavod Instituta stekla (Glass Institute Experimental Factory)

Card 2/2

AFANASIYEV, A.N.

PLEASE I BOOK EXPLORE/TEXTOR 80V/AM19

Spravochnik po mashinostroyitel'nykh materialam, tom 4: Spetsializatsionnyye materialy (Handbook on Machine-Building Materials, Vol. 4: Specialized Materials) Moscow, Mashinist, 1960. 125 p. Knyta slyp insered. 25,000 copies printed.

Ed.: G.I. Popovitskiy, Doctor of Technical Sciences, Professor; Ed. of this volume: M. Levin, Doctor of Technical Sciences, Professor; Head of Publishing House: V.I. Rybakov, Engineer; Tech. Ed.: I.F. Sokolov; Head of Ed. for Information Literature (Mashinist): I.M. Menastyrskiy, Engineer.

PURPOSE: This book is intended for machine-building and construction engineers, architects, and other persons interested in the properties of building materials.

CONTENTS: This is the fourth of a 4-volume Handbook on Machine-Building Materials, which covers: 1. Metals; 2. Nonmetals; 3. Composites; 4. Specialized materials. Volume 4 discusses: 1. Properties of materials; 2. Applications of materials; 3. Data on materials; 4. Other materials and treatments of the materials are reviewed. References are given to other materials and mechanical properties are listed. No personal files are sent to the author. References follow individual chapters.

C

Handbook on Machine-Building Materials (Cont.)

SOV/4419

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SIMULIN, N.A.; AFANAS'YEV, A.N.

Use of coke gas for chemical processing. Zhur. VKHO 5 no.1:78-
81 '60. (MIRA 14:4)

(Coke-oven gas)