

YUDIN, V. A.; ROL'MAN-IVANOV, YE. YE.

Compressors

Problems concerning the precision of the mechanism of a compressor., Trudy Mosk. inst. khim. mash., No. 2, 1950.

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

YUDIN, V. A.

Mekhanizmy priborov; spavochnik. Moskva, Mashgiz, 1949- diagrs.

Bibliography: v.1, p. 295-(296)

The mechanisms of instruments; handbook.

DLC: TJ1313.I8

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

YUDIN, V.A., prof., doktor tekhn. nauk; DOBROGURSKIY, S.O., prof.,
retsensent; IL'IN, V.B., inzh., red.; CHERNYAGIN, B.M., inzh.,
red.; TIKHONOV, A.Ya., tekhn. red.

[Mechanisms of instruments] Mekhanizmy priborov; spravochnik.
Moskva, Mashgiz, 1952. 487 p. (MIRA 16:8)
(Mechanisms) (Instruments)

25(2)

Yudin, V.A.

PHASE I BOOK EXPLOITATION

SOV/2095

Konferentsiya po voprosam rascheta, konstruirovaniya i issledovaniy zubchatykh peredach i peredach gibkoy svyaz'yu. Odessa, 1957

Raschet, konstruirovaniye i issledovaniye peredach; trudy konferentsii, [t.] 1 (Design, Construction and Analysis of Transmissions; Transactions of the Conference on Problems in Design, Construction and Analysis of Gear and Flexible Transmissions, Vol 1) [Odessa] Odesskiy politekh in-t, 1958. 199 p. 5,000 copies printed.

Sponsoring Agencies: Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti, Odesskoye oblastnoye pravleniye, and Odesskiy politekhnicheskii institut.

Ed.: I.P. Nikiforov, Engineer; Tech. Ed.: A. R. Komissarenko; Editorial Board: L.S. Borovich, Candidate of Technical Sciences, M.S. Belyayev, Engineer, M.D. Genkin, Candidate of Technical Sciences, K. I. Zablonskiy, Candidate of Technical Sciences (Resp. Ed.), P. S. Zak, Candidate of Technical Sciences, Ya.G. Kist'yan, Candidate of Technical Sciences, V. N. Kudryavtsev, Doctor of Technical Sciences, V.F. Mal'tsev, Candidate of Technical Sciences, M. S. Polotskiy,

Card 1/8

Design, Construction and Analysis of (Cont.)

SOV/2095

Candidate of Technical Sciences, and L.B. Erlikh, Candidate of Technical Sciences.

COVERAGE: This book is the first of three volumes dealing with the transactions of the conference. This first volume contains articles on the design and construction of gearings and worm gearings. The second volume treats flexible transmissions, and the third, theoretical and experimental analysis of transmissions. References follow several of the articles.

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Kudryavtsev, V.N., Ways of Decreasing the Outer Dimensions and Weight of Gear Transmissions

5

The author discusses the system of gearing designed by M.L. Novikov. He claims that it is the most efficient way of increasing load capacity while minimizing tooth chipping. Various other methods of increasing the load capacity of a gearing are also discussed.

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Design, Construction and Analysis of (Cont.)

SOV/2095

Diker, Ya. I., Design of Internal Straight Involute Gearing With a Small Difference in the Number of Teeth of [Meshing Gears]

15

A method of design based on use of the rack-type form for the generating cutter gear is presented.

Pavlov, Z.P., Effect of the Tooth Hardness of Meshing Gears on the Load Capacity of a Gearing

31

The author presents results of tests on a gearing and underlines the importance of the difference in hardness of pinion and wheel. He states that hardness is not a measure for allowable contact stresses and durability.

Zak, P.S., Friction in Worm Gearing Trains

45

The friction in various periods of gearing life (running-in, regular operation) is analyzed, and fluid friction in gearing and coefficients of friction are discussed.

Yudin, V.A., Some Problems of the Geometry of Planetary Speed Reducers With Out-of-centrode Involute Gearing

57

Card 3/8

Design, Construction and Analysis of (Cont.)

SOV/2095

The geometric basis of design of toothed reducers and the general theory of out-of-centrode involute gearing are presented, and the selection of geometric parameters for gear trains of planetary speed reducers is discussed.

Pyatnitskiy, A.A., Weight Characteristics of Toothed Gears and Gear Trains 67

The author derives equations for coefficients which can be used as criteria for "Weight quality" of gears and gear trains. He also compares steel gears with nonmetallic ones, and straight-tooth gears with gears with helical teeth.

Zablonskiy, K.I. Investigation of Load Concentration Along Tooth Bearings of Gears 77

The essentials of tooth loading, deformation, and design are analyzed. The author concludes that in order to obtain a correct solution for load concentration, the local rigidity of teeth should be considered.

Beloborodov, V.A. The Problem of Developing Mechanical Marine Transmissions 87

The use of gear trains in marine drives is discussed, and the construction of a reversible speed reducer is described.

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Design, Construction and Analysis of (Cont.)

SOV/2095

Bolotovskiy, I.A., Rational Selection of Displacement Coefficients and Distribution of Displacements Between Gears at Angular Correction With the Use of Limiting-contour Diagrams

95

The article discusses correction of involute gears by displacing the profile (angular correction) for obtaining the maximum contact strength, bending strength, and wear resistance with the aid of limiting-contour diagrams.

Smirnov, V.E. Limiting-contour Diagrams and Methods of Their Construction. Change in Contour Form Due to a Change in Certain Geometrical Parameters

103

Components of nonlimiting-contour diagrams, such as interference, overlapping coefficient, radial clearance, and changes of tooth height, and corner radii of the hob tooth are discussed.

Belyanin, A.I. Investigation of the Load Capacity of Helical Gears

111

Theoretical investigation, and data from experiments show that the load capacity of helical gears can be 50 percent greater than that of straight gears.

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Design, Construction and Analysis of (Cont.)

SOV/2095

Krivenko, I.S. Basic Results of a Theoretical and Experimental Investigation of New Types of Worm Gear Trains

119

The use of worms with concave profiles is discussed. The results of the investigation show the advantages of worm gears of this type.

Pedyakin, R.V. M.L. Novikov's Gearing System

129

A brief synopsis of Novikov's system of gearing for spur gears, including construction of profiles for concave and convex teeth, is presented. The author claims that this system has a load capacity 2 to 3 times greater than standard involute gearing systems. He further states that this fact has been confirmed by exhaustive tests at various plants.

Solov'yev, A.I. Theoretical Fundamentals of the Friction Analysis of Automobile Transmissions and Experimental Methods of Investigating Friction in Automobile Mechanisms

141

The efficiency of gearings, universals and the whole transmission is analyzed. Friction in roller contact bearings and in the differential, friction losses in the transmission during unsteady motion, and experimental methods of investigating friction losses in automobile mechanisms are discussed.

Card 6/8

Design, Construction and Analysis of (Cont.)

SOV/2095

Sigov, I.V. Some Problems in the Organization of Centralized Production of Speed Reducers and Gear Drives

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Tsfas, B.S. Design for Strength of a Solid Toothed Gear, Weakened by Key or Spline Slots

Formulas are derived for forces and moments acting on sections of a gear weakened by spline (6 slots) and key (one slot) joints.

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Blokh, O.T. Increase in the Accuracy of Kinematic Worm Gear Trains Used for Reading Mechanisms of Instruments

The author analyzes the accuracy of cylindrical worms and wheels for high-precision instruments. He makes recommendations for reducing the margin of error in the gear trains in order to reduce the total margin of error of the mechanism.

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Belyayev, M.S., and K. I. Zablonskiy. Consideration of Simultaneous Engagement of Two Pairs of Teeth in Gearing Design

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Card 7/8

Design, Construction and Analysis of (Cont.)

SOV/2095

The distribution of load between two pairs of meshing teeth is basically determined by the rigidity of teeth and by the errors in engagement, chiefly the accumulated error of the circular pitch, causing the cyclic character of stresses. The author states that for a pair of gears of a given type the characteristic diagram for distribution of errors can be determined. He further states that this determination has been confirmed by inspection of several lots of gears manufactured by different methods.

Resolution of the Conference on the Problems of Design, Construction, and Analysis of Transmissions

195

The resolution stresses both the progress made and the deficiencies noted in design, construction, and manufacture of gearings and worm gear trains, and in the fields of continuous speed control, chain drives, and flexible shafts.

AVAILABLE: Library of Congress

GO/fal
8-9-59

Card 8/8

BARANOV, Georgiy Georgiyevich; RESHETOV, L.N., prof., doktor tekhn. nauk, retsenzent; YUDIN, V.A., doktor tekhn. nauk, retsenzent; STUPIN, A.K., red. izd-va; KORABEVA, R.M., red. izd-va; MODEL', B.I., tekhn. red.

[Theory of mechanisms and machinery] Kurs teorii mekhanizmov i mashin. Izd. 2., perer. i sokrashchennoe. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 488 p. (MIRA 11:9)

1. Zavednyushchiy kafedroy teorii mekhanizmov i mashin Moskovskogo vysshego tekhnicheskogo uchilishcha imeni Baumana (for Reshetov).
(Machinery, Kinematics of)

YUDIN, V. A.
AUTHOR:

Solov'yev, A.I., Dotsent, Candidate of Technical Sciences

TITLE:

Conference on Transmissions (Konferentsiya po peredacham)

PERIODICAL:

Vestnik Vysshey Shkoly, 1958, # 2, pp 76 - 77 (USSR)

ABSTRACT:

In September 1957, an All-Union Conference on Transmissions, convened by Odesskoye oblastnoye pravleniye nauchno-tekhnicheskogo obshchestva mashinostroiteley (Odessa Oblast' Administration of the Scientific-Technical Society of Mechanical Engineers) and the Odesskiy politekhnicheskiy institut (Odessa Polytechnic Institute) took place in Odessa. The conference was attended by 270 delegates from different plants, and scientific and educational institutions.

Professor, Doctor of Technical Sciences V.N. Kudryavtsev delivered a lecture on "Methods of Reducing the Size and Weight of Gear Transmission" in which he explained how this reduction is achieved and the industrial importance of it.

Candidate of Technical Sciences Ya.G. Kistyan (TsNIITMash) reported on the results of Experiments in gear couplings.

A lecture on the best selection of designs and geometry of planetary reducers with an evolvent out-of-pole coupling was delivered by Professor, Doctor of Technical Sciences

V.A. Yudin.

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Conference on Transmissions

3-58-2-23/33

The conference planned out a calculation method for gear transmissions in respect to contact and bending strength.

A report submitted by I.A. Boltovskiy referred to questions of a rational choice of coefficients of shifts and distribution of shifts among the wheels when the angle correction by means of blocking contours is used.

Dotsent K.I. Zablonkiy of Odesskiy politekhnicheskii institut (Odessa Polytechnic Institute) discussed in his lecture the problem of testing gear transmissions, Candidate of Technical Sciences Z.P. Pavlov (TsNIITMAASh) reported on the device "Uragan".

Much interest was caused by a roller machine with an original method of imitating the teeth sliding; it was manufactured at the Odesskiy tekhnologicheskii institut (Odessa Technological Institute). Engineer Kh.M. Crekov demonstrated it.

Dotsent G.I. Kogan-Vol'man's first report treated the questions of terminology, classification and normalization of transmissions with flexible shafts, while the second report dealt with the fundamentals of constructing flexible-shaft transmissions.

Taganrogskiy radiotekhnicheskii institut (Taganrog Radiotechnical Institute)
Library of Congress

ASSOCIATION:

AVAILABLE:
Card 2/2

BARANOV, Georgiy Georgiyevich; YUDIN, V.A., doktor tekhn.nauk, retsenzent;
MONEL', B.I., tekhn.red.

[Course of the theory of mechanisms and machines] Kurs teorii
mekhanizmov i mashin. Izd.3., ispr. Moskva, Gos.nauchno-tekhn.
izd-vo mashinostroit.lit-ry, 1959. 488 p. (MIRA 12:8)
(Mechanical engineering)

YUDIN, Vladimir Andreyevich, prof.; PETHOKAS, Leonid Venediktovich,
prof.; RABINOVICH, Ye.Z., red.; GAVRILOV, S.S., tekhn.red.

[Laboratory practical manual on the theory of mechanisms and
machinery] Laboratornyi praktikum po teorii mekhanizmov i
mashin. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1960. 170 p.
(MIRA 14:4)

(Mechanical engineering--Study and teaching)
(Engineering laboratories)

YUDIN, Vladimir Andreyevich, prof.; PETROKAS, Leonid Venediktovich,
prof.; RABINOVICH, Ye.Z., red.; KOLESNIKOVA, A.P., tekhn.
red.

[Laboratory manual on the theory of mechanisms and machines]
Laboratornyi praktikum po teorii mekhanizmov i mashin. Moskva,
Fizmatgiz, 1962. 171 p. (MIRA 16:6)
(Mechanisms) (Machinery)

YUDIN, V. A.

Method for determining the efficiency of mechanisms with higher
rolling pairs. Trudy MIKHM 24:155-174 '62. (MIRA 18:3)

YUDIN, Vladimir Andreyevich; SAMORODOV, B.P., red.; REZNIK, A.L.,
tekh. red.

[Design of kinematic systems of mechanisms] Proektirovanie
kinematicheskikh skhem mekhanizmov; kratkoe rukovodstvo k
proektirovaniu po kursu teorii mekhanizmov i mashin. Mo-
skva, Izd-vo "Iskusstvo," 1963. 215 p. (MIRA 16:10)
(Mechanisms)

YUDIN, V.A.; BARASOV, G.A.; FUFAYEVA, G.I., red.; CHIZHEVSKIY,
E.M., tekhn. red.

[Collection of problems and examples in the theory of
mechanisms and machines] Sbornik zadach i primerov po teo-
rii mekhanizmov i mashin. [n.p.] Rosvuzizdat, 1963. 282 p.
(MIRA 16:10)

(Mechanical engineering--Problems, exercises, etc.)

ACCESSION NO: AP4044677

components. Its small size makes it portable.
of the magnet. The device has been used for
the surface resistance of metals, and for
it has been operated satisfactorily in the
Orig. art. has: 5 figures and 1 table.

ASSOCIATION: Institut fizicheskikh problem
fizicheskikh problem, AN SSSR

SUBMITTED: 1971-03 ENCL: 00

NO REF SOV: 004 OTHER: 001

ARG 100

ARTOBOLEVSKIY, Sergey Ivanovich, prof. [deceased]; YUDIN, V.A.,
prof., reisenzent; ZINGV'YEV, Vyach., prof., reisenzent;
GRIGOR'YEV, A. M., reisenzent; KOZINTSOV, B.P., rad.

[Theory of mechanisms and machines] Teoriia mekhanizmov i
mashin. Moskva, Vysshaya shkola, 1965. 367 p.
(MIRA 18:9)

GORELIK, R.B.; KLEPIKOV, N.P.; YUDIN, V.A.

Unitary description of reactions with the formation of several
nonrelativistic particles. IAD. fiz. 1 no.1:152-159 Ja '65. (MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet.

ACC NR: AR7001766 (1,1) SOURCE CODE: UR/0285/66/000/010/0024/0024
AUTHOR: Yudin, V. A.

TITLE: Effect of lag on the control dynamics of gas-turbine engines operating in parallel

SOURCE: Ref. zh. Turbostroyeniye, Abs. 10.49.117

REF SOURCE: Sb. Vopr. proyektir., tekhnol. i kontrolya v mashinostr., Omsk, 1965, 185-193

TOPIC TAGS: gas turbine engine, twin shaft turbine, oscillation, lag, ignition lag

ABSTRACT: An analysis was made using the effect of lag on the control dynamics of twin-shaft gas-turbine engines operating in parallel as an example. It is shown that a combination of nonlinear system elements and lag produce favorable conditions for the origination of self-oscillations, which is inadmissible for the systems investigated. [Translation of abstract] [NT]

SUB CODE: 13/

Card 1/1

UDC: 621.438-55

YUDIN V. A.

YUDIN, V. A. - Inzh. i BARKOVA, YE. A. - Kand. tekhn. nauk

Akademiya kommunal'nogo khozyaystva im. K. D. Pamfilova

Propusknaya sposobnost' elementov ulichnoy seti Page 78

SO: Collection of Annotations of Scientific Research Work on Construction,
completed in 1950,
Moscow, 1951

YUDIN, V. A., Engineer

"Effect of Many-Lane Traffic on the Traffic Capacity of Streets." Sub 25 Dec 51,
Moscow Automobile and Road Inst ineni V. M. Molotov

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

YUDIN, VASILY ALEKSANDROVICH

BLATNOV, Mikhail Davydovich; YUDIN, Vasily Aleksandrovich; MARKOVNIKOV, V.L.,
red.; OTOCHEVA, M.A., red.izdatel'stva; KONYASHINA, A.D., tekhn.red.

[Organization of streetcar and trolleybus transportation] Organizatsiia
tramvainykh i trolleibusnykh perevozok. Moskva, Izd-vo M-va kommun.
khoz.RSFSR, 1957. 214 p. (MIRA 10:12)
(Trolley buses) (Street railways)

YUDIN, V.A.

SOSYANTS, V.G.; YUDIN, V.A., red.; RACHEVSKAYA, M.I., red. izd-va; GUROVA,
O.A., tekhn. red.

[Street railway tracks and streets] Gorodskie rel'sovye puti i dorogi.
Moskva, Izd-vo M-va kommun. khoz. RSFSR, 1957. 303 p. (MIRA 11:7)
(Street railways--Track) (Streets)

MEHKULOV, Yefim Afanas'yevich; PETROV, Vyacheslav Konstantinovich [deceased];
SOSYANTS, Vasiliiy Georgiyevich; YUDIN, Vasilii Aleksandrovich;
Prinimali uchastiye: DUBROVIN, Ye.N., SLAVUTSKIY, A.K.; BARKOVA,
Ye.A.; BLATNOV, M.D.; KUDRYAVTSEV, O.I.; SAMOYLOV, D.S.; FRIDLYAND,
A.G.. BRONSHTEYN, L.A., red.; RACHEVSKAYA, M.I., red.izd-va;
LELYUKHIN, A.A., tekhn.red.

[Urban transportation and street construction] Gorodskoi transport
i dorozhno-mostovoe khoziaistvo. Moskva, Izd-vo M-va kommun.khoz.
BSFSR, 1959. 473 p. (MIRA 12:8)

1. Sotrudniki Akademii kommunal'nogo khozyaystva im. K.D.Pamfilova
(for Barkova, Blatnov, Kudryavtsev, Samoylov, Fridlyand).
(Transportation) (Streets)

OVETCHNIKOV, Yevgeniy Vasil'yevich; SOSYANTS, Vasil'y Georgiyevich;
YUDIN, V.A., red.; VINOKUROVA, Ye.B., red.izd-va; LELYUKHIN,
A.A., tekhn.red.

[Streetcar and interfactory railroad tracks] Rel'sovye puti
tramvaev i vnutrizavodskikh zheleznykh dorog. Moskva, Izd-vo
M-va kommun.khoz.RSPSR, 1959. 482 p. (MIRA 13:1)
(Railroads, Industrial--Track)
(Street railways--Track)

SOSYANTS, Vasilii Georgiyevich; FILIPPOV, Valentin Aleksandrovich; YUDIN, Vasilii Aleksandrovich; DUBROVIN, G.A., red.; RACHEVSKAYA, M.I., red, izd-vs; LELYUKHIN, A.A., tekhn.red.

[Traffic organization, signaling, and block systems] Organizatsiia dvizheniia, signalizatsiia i blokirovka. Moskva, Izd-vo M-va kommun.khoz.RSFSR, 1960. 211 p.

(MIRA 13:11)

(Rapid transit)

(Traffic engineering)

(Street railways--Signaling--Block systems)

STRAMENOV, Andrey Yevgen'yevich; SOSTAEVS, Vasil'y Georgiyevich;
FISHKEL'SON, Mikhail Semenovich; TUDIN, Y.A., red.; ZAMYSHLYAYEVA,
I.M., red.izd-va; LELYUKHIN, A.A., tekhn.red.

[City transportation and traffic engineering] Gorodskoi transport
i organizatsiia dvizheniia. Moskva, Izd-vo M-va kommun.khoz.RSFSR,
1960. 351 p. (MIRA 13:8)
(Traffic engineering) (Local transit)

MERKULOV, Yefim Afanas'yevich, dots., kand. tekhn. nauk; DUBROVIN,
Yevgeniy Nikolayevich, dots., kand. tekhn. nauk; TURCHIKHIN,
Emmanuil Yakovlevich, dots., kand. tekhn. nauk; YUDIN, Vasilii
Aleksandrovich, dots., kand. tekhn. nauk; Prinimali uchastiye:
SLAVUTSKIY, A.K., dots., kand. tekhn. nauk; ZAYTSEV, L.K., inzh.;
ZAMAKHAYEV, M.S., red.; OVSYANNIKOVA, Z.G., red. izd-va

[Examples of the design of roads and public transportation systems
in cities] Primery proektirovaniia dorog i setei passazhirskego
transporta v gorodakh. [By] E.A.Merkulov i dr. Moskva, Gos. izd-
vo "Vysshiaia shkola," 1962. 265 p. (MIRA 16:2)
(Road construction) (Rapid transit)

DUBROVIN, Yevgeniy Nikolayevich; TURCHIKHIN, Emmanuil Yakovlevich;
YUDIN, Vasilii Aleksandrovich; LANTSEBERG, Yu.S., red.;
OVSYANNIKOVA, Z.G., red.izd-va; GRIGORCHUK, L.A., tekhn.
red.

[Organization of the construction and operation of urban
roads] Organizatsiia stroitel'stva i ekspluatatsii gorod-
skikh dorog. Moskva, Vysshaya shkola, 1963. 305 p.

(MIRA 16:8)

(Road construction) (Streets)

SOSYANTS, V.G., inzh.; YUDIN, V.A., kand. tekhn.nauk; KNORRE, V.E., inzh.; LANTSEBERG, Yu.S., inzh.; DAVIDYANTS, N.M., inzh.; GEZENTSVEY, L.P., kand. tekhn. nauk; YEGOROV, P.A., inzh.; FAYNBERG, E.S., inzh.; BAGDASARYAN, S.M., inzh.; GUREVICH, I.V., kand. tekhn. nauk; CHERNYSHOV, B.G., inzh.; GALZHINSKIY, T.G., inzh.; ZASOV, I.A., kand. tekhn.nauk; BALOVNEV, V.I., kand. tekhn.nauk; GIBSHMAN, Ye.Ye., prof., red.; DZHUNKOVSKIY, N.N., prof., red.; BELYUKHINA, A.V., red. izd-va; LELYUKHIN, A.A., tekhn. red.

[Manual for the design, construction, and maintenance of urban roads, bridges, and hydrotechnical structures]
Spravochnik po proektirovaniyu, stroitel'stvu i ekspluatatsii gorodskikh dorog, mostov i gidrotekhnicheskikh sooruzhenii. Red. kol. E.E. Gibshman, N.N. Dzhunkovskii, P.A. Egorov. Moskva, Izd-vo M-va kommun.khoz. RSFSR, Vol.3.
[Roads] Dorogi. 1963. 814 p. (MIRA 16:7)
(Roads)

YUDIN, D.L., kand. tekhn. nauk, dotsent; PORKHACHEV, M.A., inzh.; STATNIKOV, R.B.,
inzh.; YUDIN, V.A., inzh.

Methodology for the testing of locomotive gear transmissions on a
special stand. Trudy MIIT no.200:105-115 '64.

(MIRA 18:8)

TRUSH, D.N.; YUDIN, V.A.; TRUSH, Ye.Ya.

Refractory kiln equipment using a burning-out organic liquid.
Stek. 1 ker. 22 no.11:37-38 N '65. (MIRA 18:11)

VARCHEVSKIY, I.S.; LOKHOV, P.F.; KLYUSHIN, G.A.; YUDIN, V.F.

Brief reports. Zav.lab. 25 no.2:243-244 ' 59. (MIRA 12:3)

1. Institut geologii poleznykh iskopayemykh AN USSR (for Varchevskiy).
 2. Chelyabinskiy metallurgicheskiy zavod (for Lokhov, Klyushin).
 3. Tsentral'naya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo instituta transportnogo stroitel'stva (for Yudin).
- (Metallurgical laboratories--Equipment and supplies)

37959

S/137/62/000/005/001/150

A006/A101

18.7540
AUTHORS:

Korol'kov, A. M., Yudin, V. G.

TITLE:

On the connection between viscosity of liquid metals with their atomic volume and entropy

PERIODICAL:

Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 7, abstract 5A43
(V sb. "Fiz.-khim. osnovy proiz-va stali", Moscow, AN SSSR, 1961, 347-353)

TEXT:

The value of kinematic viscosity ν of a number of metals near the melting point can be established from equation $\nu = K (1/V)$, where K is a constant, equal to 4 - 5, V is the specific volume. Values ν of a number of metals, calculated from this equation, are in a satisfactory agreement with experimental data. In such a manner, the resistance to displacement of some liquid metal particles in respect to adjacent ones, is the lesser, the higher the distances between their centers. Alkaline metals and Mg are exceptions; their experimental ν values exceed the calculated ones; this is due to the structure or greater oxidizability of these metals which cannot be overcome during the experiments. It is shown that the higher ν , the lower the magnitude of entropy, i.e.

Card 1/2

On the connection between viscosity ...

S/137/62/000/005/001/150
A006/A101

the weaker the disordering of atoms during heating. It is experimentally shown that on composition-viscosity diagrams for systems Al-Cu, Al-Si, Al-Fe, Al-Mn, and Zn-Sn, a η minimum is characteristic for the eutectic point. It is assumed that the reduced η value for eutectics is connected with the prevalence of bonds between similar, but not between dissimilar atoms. It is possible that the atomic volume of eutectics is greater than that of adjacent alloys, due to the minimum melting point of eutectics. This phenomenon is also explained by changes in entropy, since entropy values of melting eutectics will always be higher than those of components and adjacent alloys, due to the minimum melting point of eutectics.

P. Arsent'yev

[Abstracter's note: Complete translation]

Card 2/2

YUDIN, V. F.

YUDIN, V. F. -- "Investigation of the Processes of Interaction between Water Vapor and Carbon." Min Heavy Machine Building USSR. Central Sci Res Boiler and Turbine Inst imeni I. I. Polzunov (TsKTI). Leningrad, 1955. (Dissertation for the Degree of Candidate of Technical Sciences.)

SO: Knizhnaya letopis', No. 4, Moscow, 1956

Yudin, V. F.

PAKYEYEV, I.I.; YUDIN, V.F.

Reaction of water vapor and fuel carbon. Gaz.prom. no.5:10-16 My
'57. (MIRA 10:5)
(Steam) (Coal gasification)

YUDIN, V.E.

PALEYEV, I.I.; YUDIN, V.P.

Effect of the injection of steam into the air blast on the fuel
temperature in a gas generator. Gaz.prom. no.9:9-11 S '57.

(MIRA 10:10)

(Coal gasification) (Gas producers)

POLYATSKIN, M.A.; YUDIN, V.F.

Studying the gasification of anthracite and coke dust with
steam and air injection. Gaz. prom. no.8:8-12 Ag '58.

(MIRA 11:8)

(Coal gasification) (Coke)

POLYATSKIN, M.A.; YUDIN, V.F.

Inertness of the process of solid fuel gasification in a bed. Gaz. prom.
no.10:18-21 0 '58. (MIRA 11:11)
(Coal gasification)

VORONIN, N.I., doktor tekhn.nauk; KRASOTKINA, N.I., kand.khimicheskikh nauk; YUDIN, V.F., kand.tekhn.nauk

Fireproof electric insulation coating for steel pipe in heating devices. Stek,i ker. 20 no.2:32-34 F '63. (MIRA 16:2)

1. Vsesoyuznyy institut ogneporov (for Voronin, Krasotkina).
2. Tsentral'nyy nauchno-issledovatel'skiy i proyektno-konstruktor'skiy kotloturbinnyy institut imeni Polzunova (for Yudin).
(Ceramics) (Protective coating)
(Electric heating)

ACCESSION NR: AP4014408

S/0114/64/000/001/0011/0013

AUTHOR: Yudin, V. F. (Candidate of technical sciences); Tokhtarova, L. S. (Engineer)

TITLE: Heat transfer and resistance of staggered and corridor-type finned tube banks

SOURCE: Energomashinostroyeniye, no. 1, 1964, 11-13

TOPIC TAGS: heat transfer, heat engineering, tube bank, finned tube bank, staggered tube bank, corridor type tube bank, heat exchange tube bank

ABSTRACT: Results of a comparative study of staggered and corridor-type tube banks are reported. The banks were assembled from machined carbon-steel tubes integral with helical rectangular-section fins. Dimensions: tube diameter, 32x3 mm; fin height, 9 mm; fin thickness, 1.3 mm; fin spacing, 6 mm; coefficient of finning, 5.1. Heat transfer and aerodynamic resistance were determined

Card 1/2

ACCESSION NR: AP4014408

in an open wind tunnel by a method of local thermal simulation. In this method, only one measuring tube was heated; all other tubes remained cold. The electric sheeting method was used in the calorimeter, wall-to-gas direction of the heat flow was explored; 7-row banks were investigated. The test object was placed at a distance of 2.4 m from the entrance into a 300 x 400 mm, 6-m long wind tunnel. The corridor-type bank yielded the poorest and the staggered-type bank the best thermal characteristics of the 17 banks tested. A staggered bank with spacings $s_1 = 3d$ and $s_2 = 1, 2d$ was found to be optimum as far as thermal and weight characteristics were concerned. "The heat transfer and resistance experiments were conducted by Senior technicians Ye. K. Belyayeva and V. P. Voynova." Orig. art. has: 6 formulas and 1 table.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: PR

NO REF SOV: 005

OTHER: 000

Card 2/2

L 35052-45 EAT(1)/ENT(m)/ENT(w)/ENT(c)/ENT(n)-2/ENT
ENT(1)/ENT(k)/ENT(c)-2/ENT(t)/ENT(c)/ENT(1) 11-113
ACCESSION NR: A95002226 SP1114/

AUTHOR: Yudin, V. F. (Candidate of technical sciences)
(Engineer)

TITLE: Investigation of heat transfer and pressure losses in tube banks with various fin shapes

SOURCE: Energiomashinstroitel'stvo, 1977, No. 11, p. 11-14, 11 figs.

TOPIC TAGS: heat transfer; heat exchange; [1]

ABSTRACT: Results are reported of an experimental investigation of heat transfer and pressure losses in tube banks with the following disk, studs, and fin shapes: (1) disk, (2) stud, (3) fin. The fins were made from conventional material and from copper. The fins were attached to the tubes by brazing or rolled with the tube. Seven banks with one, two, and three rows of fins were tested. (1) The heat transfer coefficients were measured for the tubes with the fins. The results are presented in the form of graphs and tables. (2) The pressure losses were measured for the tubes with the fins. The results are presented in the form of graphs and tables. (3) The results of the investigation are presented in the form of graphs and tables.

L 2505: 45

ACCESSION NR: AF500227

heat exchange process, hence manufacturing reliability should be the governing criteria for the exchanger. [3] The heat transfer from fins is increased by providing a rough surface to the fins, resulting in higher Re numbers. "Experiments were conducted by Orligova." Orig. art. has: 2 figures, 6 refs.

ASSOCIATION: Theoretical & Laboratory
(Central Boiler-and-Turbine Institute)

STROUD, J. P. 1973. 30

ENCLOSURE

BGRZOV, N.N.; FAYN, G.M.; YUDIN, V.F.

Method for calculating the optimal torques for screwing sockets
onto drilling pipes made of light alloys. Trudy VNIIBT no.12:
62-67 '64. (MIRA 18:4)

1. The first of these is the

the second is the

the third is the

the fourth is the

the fifth is the

the sixth is the

1. The first part of the article discusses the results of the experiments conducted by the author and his colleagues in the field of the study of the properties of the human eye.

2. The second part of the article discusses the results of the experiments conducted by the author and his colleagues in the field of the study of the properties of the human eye. The third part of the article discusses the results of the experiments conducted by the author and his colleagues in the field of the study of the properties of the human eye. The fourth part of the article discusses the results of the experiments conducted by the author and his colleagues in the field of the study of the properties of the human eye. The fifth part of the article discusses the results of the experiments conducted by the author and his colleagues in the field of the study of the properties of the human eye. The sixth part of the article discusses the results of the experiments conducted by the author and his colleagues in the field of the study of the properties of the human eye. The seventh part of the article discusses the results of the experiments conducted by the author and his colleagues in the field of the study of the properties of the human eye. The eighth part of the article discusses the results of the experiments conducted by the author and his colleagues in the field of the study of the properties of the human eye. The ninth part of the article discusses the results of the experiments conducted by the author and his colleagues in the field of the study of the properties of the human eye. The tenth part of the article discusses the results of the experiments conducted by the author and his colleagues in the field of the study of the properties of the human eye.

3. The first part of the article discusses the results of the experiments conducted by the author and his colleagues in the field of the study of the properties of the human eye.

YUDIN, V.F., kand. tekhn. nauk; TOKHTAROVA, L.S., inzh.

Study of the heat emission and resistance of ribbed checkered
pipe clusters with different configurations of the ribs.

Energomashinostroenie 10 no.12:20-23 D '64.

(MIRA 18:2)

ALIMOV, O.D.; BASOV, I.G.; ZELINGER, F.F.; YUDIN, V.G.

Trenching in frozen ground with earthcutting machines
and excavators. Stroi, truboprov. 8 no.8:18-19 Ag '63.
(MIRA 16:11)

1. Tomskiy politakhnicheskii institut.

YUDIN, V.G.

Biology of the germination of maple seeds. Trudy Bot. inst. Ser. 4:
351-369 '56. (MLRA 9:9)
(Maple) (Germination)

SMETANNIKOVA, A.I.; YUDIN, V.G.

Comparative ecologophysiological study of perennial grasses in pure and mixed stands. Report no.11: Changes in the carbohydrate metabolism of some perennial grasses depending on their percentage in the mixture. Trudy Bot.inst.Ser.4 no.11:7-46 '56. (MLRA 9-9)
(Grasses) (Carbohydrate metabolism)

YUDIN, V. G. Cand Biol Sci -- (diss) "Certain ecological and physiological
peculiarities
characteristics of the germination of maple seeds." Len, 1957. 20 pp 22 cm.
(Acad Sci USSR. Botanical Inst in V. L. Komarov), 100 copies (KL, 24-57, 117)

TUDIN, V.G.

Specific anatomical and morphological features of fruit development
in certain species of maple (*Acer* spp.) Bot.zhur. 42 no.2:260-272
P. 157. (MIRA 10:3)

1. Botanicheskiy institut im. V.I. Komarova Akademii nauk SSSR,
Leningrad. (Maple) (Fruit--Anatomy)

COUNTRY : USSR K
 CATEGORY : Forestry. Forest Cultures
 ABS. JOUR. : RZhBiol., No. 2, 1959, No. 6176
 AUTHOR : Yudin, V.G.
 INST. : Botanical Inst. AS USSR
 TITLE : Influence of Boron and Hydrogen Peroxide on Seed Germination of Woody Plants.
 ORIG. PUB. : Tr. Botan. in-ta, AN SSSR, 1958, ser. 4, vyp. 12, 290-298
 ABSTRACT : It is noted that dormancy of box-elder seed is related to the presence of seed pods and vessels in them. The best stratifying substrate to expedite destruction of the coverings is sand with humus in a ratio of 3:1. It was established by experiments (1954) that a 10-day treatment before sowing of the box-elder seed with boric acid solution at room temperature in a concentration of 20 gram/liter raises the germination
 CARD: 1 / 3

COUNTRY :
 CATEGORY :
 ABS. JOUR. : RZhBiol., No. 2, 1959, No. 6176
 AUTHOR :
 INST. :
 TITLE :
 ORIG. PUB. :
 ABSTRACT : of the seed more than 5 times as compared with the control. Seed with the seed vessel removed and with the pod damaged after treatment with solution B began to germinate earlier than the controls, and their germination proceeded considerably more vigorously. Hydrogen peroxide exhibited an analogous effect on the seed germination. Solution B demonstrated a more stimulatory action on seeds without pods and with the impaired
 CARD: 2 / 3

COUNTRY	:	
CATEGORY	:	
ABS. JOUR.	:	EZhBiol., No. 2, 1959, No. 6176
AUTHOR	:	
INST.	:	
TITLE	:	
ORIG. PUB.	:	
ABSTRACT	:	pod of Semenov maple, the Amur and Tatarian, and also for whole seeds of the Semenov maple but it was not manifested on whole seeds of the two latter maples. Treatment of the seeds with B did not evoke a positive influence on the growth and development of the seedlings. -- N.Ye. Skripitsyna
CARD:		3 / 3

YUDIN, V.G.

Physiological investigation of seed ripening in some maple species.
Bot. zhur. 44 no.4:559-562 Ap '59. (MIRA 12:10)

1. Botanicheskiy institut im. V.I. Komarova Akademii nauk SSSR,
Leningrad.

(Maple)

(Seeds)

YUDIN, V.G.

Relation between the depth of dormancy and the ripeness degree of
seeds in some maple (Acer L.) species. Bot.zhur. 44 no.12:
1748-1753 D '59. (MIRA 13:4)

1. Botanicheskiy institut im. V.L.Komarova Akademii nauk SSSR,
Leningrad.
(Maple) (Germination)

NIKOLAYEVA, M.G.; KOZLOVA, L.M.; YUDIN, V.G.

Study of secondary dormancy in seeds. Trudy Bot. inst.

Ser. 4 no. 14:138-166 '60.

(MIRA 14:3)

(Seeds)

(Dormancy in plants)

NIKOLAYEVA, M.G.; KOZLOVA, L.M.; YUDIN, V.G.

Materials on the effect of plant growth conditions on the depth
of dormancy in seeds. Trudy Bot. inst. Ser. 4 no.15:133-147
'62. (MIRA 15:7)

(Seeds) (Dormancy in plants)

YUDIN, V.G.

Effect of the geographical origin on the depth of dormancy in
seeds of some maple species. Trudy Bot. inst. Ser. 4 no.15:
148-157 '62. (MIRA 15:7)
(Dormancy in plants) (Maple) (Seeds)

NIKOLAYEVA, M.G.; YUDIN, V.G.

Effect of gibberellin on the germination of seeds of woody plants. Dokl. AN SSSR 150 no.3:686-689 My '63.

(MIRA 16:6)

1. Botanicheskiy institut im. V.L. Komarova AN SSSR. Predstavleno akademikom A.L. Kursanovym.

(Gibberellin) (Woody plants)

(Germination)

NIKOLAYEVA, M. S.; YUDIN, V. G.; DALETSKAYA, T. V.

"The role of growth substances in seed dormancy."

report submitted for 10th Intl Botanical Cong, Edinburgh, 3-12 Aug 64.

AS USSR, Leningrad.

NILOVAEVA, M.G.; YUDIN, V.G.

Methods for accelerated presowing treatment of woody plant seeds. Trudy
Bot. inst. Ser. 4 no. 17: 5-23 '64. (MIRA 18:1)

YUDIN, V.G.

Effect of storage conditions on the germination of maple seeds.
Bot.zhur. 49 no.6:877-881 Je '64.

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR Leningrad.
(MIRA 17:10)

NIKOLAYEVA, N.G.; YUDIN, V.G.; INGE-VECHTOMOVA, N.I.; TSAR'KOVA, V.A.

Nature of the secondary dormancy of tree seeds. Bot. zhur. 49
no.12:1706-1724 D '64 (MIRA 18:2)

1. Botanicheskiy institut imeni Komarova AN SSSR, Leningrad.

ALIMOV, O.D., doktor tekhn.nauk; SADAKOV, Yu.P., inzh.; SHMIDT, A.A., inzh.:
YUDIN, V.G., inzh.

Cutting-bar machine with a hydromechanical reducing gear for working
frozen grounds. Stroi. 1 dor. mash. 9 no.12:4-5 D '64. (MIRA 18:3)

Yudin, V.I.

RUSSIAN BOOK EXPLANATION 08/19/55

Akademys nauk SSSR, Ural'skiy filial, Institut khimii.

Shorukh rebot laboratorii vysokomolekulyarnykh soedyneniy, No. 2. (Collected Papers of the Laboratory of High-Molecular Compounds, No. 2) Sverdlovsk, 1959. 53 p. (Soviet. Inst. Ind. Vys. 3) Krasnaya ally inserted. 1,000 copies printed.

Eds.: V.G. Plyusina, Doctor of Chemistry, and V.M. Kozlov, Doctor of Technical Sciences; Tech. Eds.: N.Y. Sverdlov.

REMARK: This collection of three articles is intended for chemists and technicians interested in the chemistry of high-molecular compounds and polymers.

CONTENTS: The first article of this collection discusses the expression of the activity factor in the Alfrey and Price equation by a constant which could be determined independently of equations

$$r_1 = \frac{Q_1}{Q_2} e^{-\rho_1(r_1 - r_2)}, \quad r_2 = \frac{Q_2}{Q_1} e^{-\rho_2(r_2 - r_1)}, \quad \text{where } r_1 \text{ and } r_2$$

are the copolymerization constants, Q_1 and Q_2 are the activity factors of the monomers, ρ_1 and ρ_2 are the polar factors of the monomers, and e is the base of the natural logarithm. The article explores the possibility of using the data obtained from the study of the kinetics of the copolymerization of monomers with r_1 and r_2 to determine the constants of the copolymerization of monomers with r_1 and r_2 . The second article reports on a study made of the copolymerization of polyethylene glycol fumarate and of poly-1,3-butylene glycol fumarate with styrene, methylmethacrylate, acrylonitrile and vinyl acetate to explain the peculiarities of the copolymerization reaction of unsaturated polyesters with vinyl monomers. The third article reports on a study of the behavior of nitrocellulose and polymers of various structure used as plasticizers. L.V. Glushko, I.D. Alkin, and S.S. Kozlov are mentioned. References accompany each article.

TITLE OF CONTENT:

- | | |
|---|----|
| Spanky, S.S., Individual Qualitative Characteristics of the Activity of Unsaturated Compounds in Copolymer Reactions | 5 |
| Spanky, S.S., A.V. Tolstov, M.A. Khilapova, A.I. Tarasov, I.Y. Molchanova, and N. Ye. Mat'kova. Copolymerization of Polyesters With Vinyl Monomers | 21 |
| Spanky, S.S., E.A. Golenchukova, L.A. Kovaleva, S.B. Ginzburg, and Ye. S. Tagil'tseva. Plasticizers for Polyester Resin-Bare Nitro Cellulose | 33 |
| Bibliography of Publications of the Institute Khimii Ural'skogo filiala AN SSSR (Institute of Chemistry of the Ural'skiy Branch of the Academy of Sciences USSR) for the years 1952 to 1956 | 43 |

ATTACHED: Library of Congress

Card 3/3

IN/rel/125
8-15-60

YUDIN, V. I.

12 44/4714

USSR/Academy of Sciences

Sec 12

Agricultural Science Imeni V. I. Lenin 148 a

"Veterinariya" No 9

The Council of Ministers USSR, in a decree of 15

S/138/62/000/001/008/009
A051/A126AUTHOR: Yudin, V.I.

TITLE: The use of HП-1 (NP-1) sulfanol in the rubber industry

PERIODICAL: Kauchuk i rezina, no. 1, 1962, 53

TEXT: The central laboratory of the Sverdlovsk PTM(RTI) Plant has investigated the possibility of replacing benzine in the removal of grease and lubricants from metal machine parts. Best results were obtained by using an aqueous solution with sulfanol NP-1 as the main emulsifier. The solution had the following composition, in g/l: caustic soda - 100; calcinated soda - 30; sulfanol NP-1 - 5 to 10. The latter, a product of oil-refining, is produced at the Krasnovodsk Oil Refinery. It contains 45 - 47% active sodium alkylbenzosulfonate and 5 - 7% sodium sulfate. No electrochemical grease removing is necessary after the sulfanol NP-1 chemical treatment. The new chemical method is being employed since August 1961. Further tests were made to use the sulfanol NP-1 instead of dry talc in non-molding technique shops to remove tackiness from the extruded parts. Best results were obtained with an 8 - 10% soap solution containing 6% sulfanol. The latter is also being introduced into industry.

Card 1/2

The use of NP-1 sulfanol in the rubber industry

S/138/62/000/001/008/009
A051/A126

ASSOCIATION: Sverdlovskiy zavod rezino-tekhnicheskikh izdeliy (Sverdlovsk Industrial Rubber Plant)

Card 2/2

2449-66 EWP(1)/EWT(m)/I/EWP(v) IJP(c) RM/WW
 ACC NR: AR6008642 SOURCE CODE: UR/0081/65/000/017/S088/S088

AUTHOR: Karlinskiy, L. Ye.; Chayskiy, V. Ya.; Buchkina, Z. A.;
Yudin, V. I.; Tartakovskaya, R. S.; Loskutnikova, T. G.

TITLE: Research on the possibility of using resin obtained from
 certain products of crude benzene processing in rubber mixtures

SOURCE: Ref. zh. Khimiya, Abs. 178534

REF SOURCE: Sb. Khim. produkty koksovaniya ugley Vost. SSSR, Vyp. 2.
 Sverdlovsk, 1964, 30-42

TOPIC TAGS: benzene, resin, petroleum residue, plastisizer, copolymer,
 pyrolysis

ABSTRACT: Dark coumarone resins (DCR), obtained from cube residue
 after rectification and cube residue of pyrolysis residue, their copo-
 lymeric, liquid polymers (LP) and formolites from solvent petroleum can
 be used as rubber ingredients. The (LP) and (DCR) from cube residues
 of crude benzene rectification have the highest plasticizing properties.
 The (LP)'s behavior in mixtures is not inferior to that of dibutyl-
 phthalate, except for its frost resistance. The (DCR)'s increase

Card 1/2

L 29939-66

ACC NRAR6008642

significantly the ¹⁶adhesion and strength characteristics of rubbers
of all types. According to author's conclusion.

SUB CODE: 1107/ SUBM DATE: none

Cord 2/2 CC

YUDIN, V.I.; TARTAKOVSKAYA, R.Z.; KRUSECHANSKAYA, D.Z.; FEDORISHCHEV, T.I.;
RYABININ, N.A.; KALGANOV, M.N.; Prinimale uchastiye BEREZINA, S.S.

Production of pine tar for the needs of the rubber industry based
on the utilization of waste resins from the Verkhnyaya Siniachikha
Wood Chemical Combine. Kauch.i rez. 21 no.8:49-51 Ag '62.

(MIRA 16:5)

1. Sverdlovskiy zavod rezino-tehnicheskikh izdeliy i Sverdlovskiy
nauchno-issledovatel'skiy institut pererabotki drevesiny (for all
except Berezina).

(Verkhnyaya Siniachikha—Wood-using industries—By-products)
(Wood tar)

YUDIN, V. K.

6685

FOMIN, B. P. and YUDIN, V. K. Pnevmaticheskiye Kusachki Novoy Konstruktsii.
(Iz Opyta Zavoda "Elektrosila" Imeni S.M. Kirova). L., 1954 8 s.s
Chert.; IL. Chert. 21 sm. (Vsesoyuz. O-vo Po Rasprostraneniuyu Polit. I
Navch. Znaniy. Leningr. Dom Navch.-Tekhn Propagandy, Listok Novatora.
No. 29 (268). 3.800 EKZ. 25 K.--Avt. Ukazany v Kontse Teksta.--
(54-15861 zh) 621.91.025-85)

SO: Knizhnaya Letopis' No. 6, 1955

YUDIN, V.K., inzh.

Constructing overhead pipelines. Biul. stroi. tekhn. 15 no.3:23-24
Mr '58. (MIRA 11:3)

1. Ukrefteproyekt.

(Pipelines)

YUDIN, V.K., inzh.

Determining the pressure on soil under eccentrically loaded cylindrical foundations. From. stroi. 36 no.12:19-21 D '58. (MIRA 12:1)
(Foundations)

YUDIN, V.K., inzh.

Advantages of one-story buildings of chemical enterprises.
Prom. stroi. 37 no.11:46-47 H '59. (MIRA 13:2)

1. Ukrnefteproyekt.

(Chemical plants)

YUDIN, Vasily Kliment'yevich; ZHESTKOV, S.V., kand. tekhn. nauk, dots.,
retsenzent; FLEYSHMAN, N.P., dots., retsenzent; SLIN'KO, B.I.,
red.; SERAFIN, V.T., tekhn. red.

[Design of three-dimensional frames] Raschet prostranstven-
nykh ram. Kiev, Gos. izd-vo lit-ry po stroit. i arkhitekt.
USSR, 1961. 141 p. (MIRA 15:3)

1. Leningradskiy inzhenerno-stroitel'niy institut (for Zhestkov).
2. L'vovskiy gosudarstvennyy universitet (for Fleyshman).
(Structural frames)

YUDIN, V.K., inzh.

Determining the bearing capacity of reinforced concrete
elements of rectangular cross section under the combined
effect of torsion and bending. Bet. 1 zhel.-bet. 8 no.6:265-268
Je '62. (MIRA 15:7)

(Precast concrete)
(Strains and stresses)

YUDIN, Vasilii Kliment'yevich; SOSNOVSKAYA, G.I., red.; YEREMINA,
I.A., tekhn. red.

[Overground pipe laying] Nadzemnaia prokladka truboprovodov.
Kiev, Gosstroizdat USSR, 1963. 117 p. (MIRA 16:7)
(Pipelines--Design and construction)

AGAFONOV, A.V.; YUDIN, V.L.; ALFIKOVA, Ye.A.; PAZHITOV, V.N.

Technology of the production of lubricating oils from secondary
raw distillates. Trudy VNIIP no.7:202-221 '58.

(MIRA 12:10)

(Petroleum Refining) (Lubrication and lubricants)

SOV/65-59-4-6/14

AUTHOR: Yudin, V.L. and Pazhitnov, V.N.

TITLE: Advantages of Catalytic Cracking of Residual Crudes,
One of the Main Processes of Petroleum Refineries
(O ekonomicheskoy tselesoobraznosti kataliticheskogo
krakinga ostatochnogo syr'ya, kak golovnogo protsesssa
neftepererabatyvayushchego zavoda)

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, Nr 4,
pp 31-34 (USSR)

ABSTRACT: The plant designed by Giproneftezavod and VNII NP makes
it possible to assess the economics of the catalytic
cracking processes, used in petroleum refineries and to
compare the process with the contact coking process
devised by GrozNII and Giprogrozneft. The calculations
were based on annual plant capacities of 7 million tons.
Processes involving the atmospheric-vacuum distillation,
contact coking of goudron, catalytic cracking of heavy
distillates and coke distillates, the hydro-purification
of diesel fuels etc were compared. Factors are discussed
which contribute to the considerable financial and
material economies achieved when using the plant designed

Card 1/2

SOV/65-59-4-6/14

Advantages of Catalytic Cracking of Residual Crudes, One of the Main Processes of Petroleum Refineries

by VNII NP and Giproftezavod. The plant, as mentioned in the article on pp 25-31 makes it possible to carry out fractional distillation of petroleum, catalytic cracking of residual crudes, rectification, the manufacture of stabilized cracking products, the desulphurisation of gases and the utilisation of the heat of regeneration. Investigations should be carried out into the further modification of the plant which would make it possible to increase its efficiency. There is 1 table.

Card 2/2

S/058/62/000/008/069/134
A061/A101

AUTHORS: Levitskiy, B. M., Rusakov, A. A., Yudin, V. M., Yal'tsev, V. N.

TITLE: Device for diffraction microroentgenography

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 4, abstract 8E33
(In collection: "Metallurgiya i metalloved. chist. metallov",
no. 3, Moscow, Gosatomizdat, 1961, 277 - 283)

TEXT: Described are two universal chambers for diffraction microroentgenography, whereby substructural characteristics of individual metal grains can be obtained. A ДМРК-2 (DMRK-2) chamber is intended for the study of single crystals and polycrystals in the continuous spectrum, in characteristic or monochromatic X-radiation. The special holder design permits the precise reproduction of exposure conditions after a specimen has been replaced. The specimen is able to rotate about an axis coinciding with the monochromator rotation axis. The absolute turning angles are read with an accuracy of $\sim 3'$, and the relative ones with $\sim 6''$. The DMRK-3 chamber provides for the possibility of obtaining an X-ray beam with little divergence in one plane using a fine-focused tube, ✓

Card 1/2

Device for diffraction microroentgenography

S/058/62/000/008/069/134
A061/A101

and also the possibility of mounting a monochromator. The holder, which can be shifted in a horizontal plane in two mutually perpendicular directions, is able to rotate about an axis perpendicular to the primary beam. The absolute turning angles are determined with an accuracy of $\sim 3'$, and the relative ones with $\sim 8''$. ✓

Ye. Dukhovskaya

[Abstracter's note: Complete translation]

Card 2/2

15.2660

24.2200 (1144, 1147, 1137)

30075
S/048/61/025/011/021/031
B117/B102

AUTHORS: Smolenskiy, G. A., Polyakov, V. P., and Yudin, V. M.

TITLE: Magnetic properties of some ferrimagnetics with perovskite and garnet-type structure

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya. v. 25, no. 11, 1961, 1396-1398

TEXT: The earlier shown possibility (Ref. 1: Smolenskiy, G. A., Isupov, V. A., Kraynik, N. N., Agranovskaya, A. I., Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 11, 1961, 1333) of producing ferrimagnetics as solid solutions with perovskite structure by ions in the octahedral sublattice was checked on $\text{LaFeO}_3 - \text{Sr}(\text{Ni}_{0.5})\text{O}_3$ solid solutions. Polycrystalline specimens were prepared from the pulverized metal oxides by double annealing in air at 1100°C (2 hr) and 1350°C (1 hr). An X-ray structural analysis performed by A. G. Tutov showed that homogeneous solid solutions with perovskite structure will form in the examined system, with most of the compounds containing only little of the second phase. The magnetic moments were determined by the Faraday method
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using Mohr's salt as a standard. The inhomogeneous magnetic field had a sufficiently large region of constant gradient. Between the poles it reached 8000 oe. The specimens were pressed into spheres 1-3 mm in diameter, depending on the magnitude of the magnetic moment of the substance. The measurements were made in the temperature range between -196° and +850°C. $H = 0$ was found for magnetization by extrapolation according to the linear law of $m = f(H)$. The phase transitions were strongly diffuse in the examined solid solutions, and one must therefore speak of a Curie range instead of a Curie point. Magnetization was examined as a function of concentration of the second component. It was established that ions are not completely ordered if the content of the second component attains up to 55 mole%. If it is more than 55 mole%, it may be assumed that the statistical ion distribution curve in octahedral sublattices of the solid solutions is disturbed, or that there is a second phase. In addition, two series of garnet-structure solid solutions were examined:

- 1) $(1 - x) \left\{ Y_3 \right\} [Fe_2] (Fe_3) O_{12} - x \left\{ Ca_3^{2+} \right\} [Fe_2] (Si_3^{4+}) O_{12}$;
- 2) $(1 - x) \left\{ Y_3 \right\} [Fe_2] (Fe_3) O_{12} - x \left\{ YCa_3^{2+} \right\} [Fe_2] (Fe_2V^{5+}) O_{12}$.

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Calculations by M. A. Gilleo (Ref. 3, see below) for determining magnetic moments of mixed garnets were checked with these examples. The specimens were prepared from the metal oxides. The first system was pre-annealed at 1050°-1100°C (1 hr), and the second at 1000°C (1 hr). Final annealing took place at 1250°-1400°C in the first case, and at 1200°-1300°C in the second (1 hr each). A. G. Tutov controlled the formation of solid solutions by X-ray analysis. The lattice parameters became smaller with increasing content of the second component. A $\text{YCa}_2\text{Fe}_3\text{VO}_{12}$ composition was not

obtained as a single phase. In case of low concentrations of the second component, magnetization was calculated from the equation

$\sigma_{\text{ext.}} = \sigma_{\infty} (1 - a/H_{\text{int.}}^2)$, and at high concentrations, from

$\sigma_{\text{ext.}} = \sigma_0 + \chi H_{\text{int.}}$. The curves obtained showed a relatively good

agreement with experimental results. A greater divergence is observable in the first system around the minimum. Ye. S. Sher is thanked for having provided the specimens, and A. G. Tutov for having studied them. There are 4 figures and 3 references: 1 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: Fresia E. J., Katz Z., Ward, R., J. Amer. Chem. Soc., 81, 18, 4783 (1959); Ref. 3;

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Gilleo M. A., J. Phys. Chem. Solids, 13, 33 (1960).

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AUTHORS: Smolenskiy, G. A., Yudin, V. M., and Sher, Ye. S.

TITLE: A new group of antiferromagnetics with K_2NiF_4 -type structure

PERIODICAL: Fizika tverdogo tela, v. 4, no. 11, 1962, 3350-3351

TEXT: Compounds of the type $A_2^{3+}B^{2+}O_4$ ($A^{3+} = La^{3+}, Ce^{3+}, Pr^{3+}, Nd^{3+}; B^{2+} = Ni^{2+}, Co^{2+}$) are antiferromagnetic when either the ions B or both the ions B and A have magnetic moments. Crystals of this type are assumed to consist of perovskite-type layers mutually displaced. When only the B have magnetic moments, interaction will occur through one or two oxygen atoms (B-O-B or B-O-O-B). When also the ions A have magnetic moments, interaction may be indirect or direct (A-O-A, A-O-B, A-A). The temperature dependence of the magnetic susceptibility χ of the compounds La_2NiO_4 and Nd_2NiO_4 was examined over the range 77-1100°K. The specimens were obtained by solid-phase reaction at 1200°C of the materials La_2O_3 , Nd_2O_3 , and NiO. The temperature Θ , obtained by extrapolation of $1/\chi(T)$ from high-temperature

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regions, equals 500°K for La_2NiO_4 and 440°K for Nd_2NiO_4 . The effective magnetic moments as determined from the inclination of the $1/\chi(T)$ curve is 3.7 Bohr's magnetons for La_2NiO_4 and 7.5 Bohr's magnetons for Nd_2NiO_4 .

The dependence $\chi(T)$ is linear at high temperatures but tends to a maximum corresponding to phase transition on approaching the Neel point. This is characteristic of weak ferromagnetics. The antiferromagnetic behavior of the substances in question can be inferred from the negative sign of the temperature Θ ; however, a weak ferromagnetism may arise as the result of relativistic interactions. There are 2 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors, AS USSR, Leningrad)

SUBMITTED: July 26, 1962

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S/056/62/043/003/023/063
B102/B104

AUTHORS: Smolenskiy, G. A., Yudin, V. M., Sher, Ye. S., Stolypin, Yu. Ye.

TITLE: Antiferromagnetic properties of some perovskites

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 3(9), 1962, 877-880

TEXT: The authors studied the magnetic properties of polycrystalline single-phased LaCrO_3 and BiFeO_3 samples by measuring the temperature dependences of the magnetic susceptibility χ , of $1/\chi$ and of the spontaneous ferromagnetic moment m_0 . The $\chi(T)$ curves of both compounds showed sharp peaks at the Neel point, BiFeO_3 had no spontaneous ferromagnetic moment, and that of LaCrO_3 was very small but could be increased by thermomagnetic treatment. The weak ferromagnetism of these perovskites is assumed to be caused mainly by an anisotropic indirect exchange interaction. It is suggested that the exchange interaction is responsible also for the

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noncolinearity of the spin moments, which is assumed to be the cause of no ferromagnetic moment being observed in BiFeO_3 . There are 2 figures and 1 table. ✓

ASSOCIATION: Institut poluprovodnikov Akademii nauk SSSR (Institute of Semiconductors of the Academy of Sciences USSR)

SUBMITTED: April 24, 1962

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