

1. KRETOVICH, V. L. - TOKAREVA, R. R. - PETROVA, I. S. - DROZDOVA, T. V.
KUL'MAN, A. G. BRANOPOL'SKAYA, R. A. - AUYERMAN, L. YA. - SMOLINA, N. I.

2. USSR (600)

4. Wheat

7. Biochemical, colloid-chemical, and technological studies of the
maturing of what. Biokhim. zerna no. 1, 1952

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

SHCHERBATENKO, V.V., inzhener; SMOLINA, N.I., kandidat tekhnicheskikh nauk; MIKULINSKAYA, L.R., kandidat tekhnicheskikh nauk; BROVKIN, S.I., inzhener

Methods of reducing loss in bakery product output. Standartizatsiia no. 3:58-63 My-Je '55. (MIRA 8:10)
(Baking)

SARYCHEV, Boris Georgiyevich, dotsent, kand.tekhn.nauk [deceased]. Primali
uchastiye SHKVARKINA, T.I., kand.tekhn.nauk; SMOLINA, N.I., kand.
tekhn.nauk; FUKS, V.K., red.; SOKOLOVA, I.A., tekhn.red.

[Technology and technochemical control in the baking industry]
Tekhnologiya i tekhnokhimicheskii kontrol' khlebopekarnogo proizvodstva.
Izd.2., dop. i perer. Moskva, Pishchepromizdat, 1960. 395 p.

(MIRA 13:11)

(Bakers and bakeries)

(Production control)

GORYACHEVA, A.F.; SHCHERBATENKO, V.V.; SHOLINA, N.I.; GOGOBERIDZE, N.I.

Relationship between increased intensity and time of dough mixing
and the improvement of bread quality. Trudy TSNIKHP no.8:78-85
'60. (MIRA 15:8)

(Bread)

SMOLINA, N.I.; SHCHERBATENKO, V.V.; STRELKOV, V.A.

Industrial testing of the method of briquet rusk manufacture.
Trudy TSNIKHP no.8:89 '60. (MIRA 15:8)
(Baking)

SMOLINA, N.M. inzhener; KHAZHIN, G.I., inzhener.

Using protectors with the MTR-77 relay in networks with large
capacitance currents. Elek. sta. 28 no.5:81-82 My '57. (MIRA 10:6)
(Electric relays)

Smolina, N. E.

Chem

1,1'-Diphenyl-2,2'-dihalodiethyl ethers, and their di-nitro derivatives. M. I. Dorokhova, V. A. Mikhalev, and N. E. Smolina. U.S.S.R. 104,154, Nov. 25, 1950. The corresponding styrene halohydrins are dehydrated by heating with Fe, Fe₂O₃, Fe salts, or other dehydrating agents, such as H₂SO₄ or sulfonic acids, and the resulting 1,1'-diphenyl-2,2'-dihalodiethyl ethers are nitrated with concd. HNO₃ in the usual manner. M. Hosh

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pm mji

MIKHALEV, V.A.; DOROKHOVA, M.I.; SMOLINA, N.Ye.; ZHELOKHVOTSEVA, A.M.; IVANOV, A.I.; ARENDARUK, A.P.; GALCHENKO, M.I.; SKORODUMOV, V.A.; SMOLIN, D.D.

Styrene as raw material for the production of synthomycin and levomycetin. Part 1: Synthesis of p-nitro- α -acylaminoacetophenones. Antibiotiki, 4 no.2:21-24 Mr-Ap '59. (MIRA 12:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (for Mikhalev, Dorokhova, Smolina, Zhelokhovtseva). 2. Institut farmakologii i khimioterapii AMN SSSR (for Skoldinov, Ivanov, Arendaruk, Galchenko, Skorodumov, Smolin).

(CHLORAMPHENICOL, prep. of.

synthesis from styrene through p-nitro- α -acylaminoacetophenones (Rus))

(VINYL COMPOUNDS

styrene, use in chloramphenicol synthesis through p-nitro- α -acylaminoacetophenones (Rus))

(KETONES

p-nitro- α -acylaminoacetophenones, intermediate in chloramphenicol synthesis from styrene (Rus))

MIKHALEV, V.A.; DOROKHOVA, M.I.; SMOLINA, N.Ye.; ZHELOKHOVTSEVA, A.M.;
TIKHONOVA, O.Ya.; SKOLDINOV, A.P.; ARENDARUK, A.P.; SMOLIN, D.D.;
GOLOVKINA, T.V.; SLOHOVA, L.A.

Styrene as an initial product for synthomycetin and levomycetin
production. Part 2: Synthesis of p-nitroacetophenone and
p-nitro- α -bromacetophenone. Antibiotiki 4 no.4:21-24 J1-Ag
'59. (MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S.Ordzhonikidze (for Mikhalev, Dorokhova, Smolina,
Zhelokhovtseva, Tikhonova). 2. Institut farmakologii i khimio-
terapii AMN SSSR (for Skoldinov, Arendaruk, Smolin, Golovkina,
Slonova).

(CHLORAMPHENICOL chem)
(KETONES chem)

MIKHALEV, V.A.; DOROKHOVA, M.I.; SMOLINA, N.Ye.

Mechanism of conversions of α -acylamino- β -oxypropiofenones into the corresponding benzoyl acetyls. Part 2: Synthesis and cleavage of α -benzenesulfamidoacrylophenones. Zhur. ob. khim. 30 no.11:3714-3718 N'60. (MIRA 13:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni. S. Ordzhonikidze.
(Acrylophenone)

MIKHALEV, V.A.; DOROKHOVA, M.I.; SMOLINA, N.Ye.; TIKHONOVA, O.Ya.

β -Haloalkyl amines and products of their transformations.

Part 1: Reaction of bis(β -chloroethyl)amine with α -oxides.
Zhur. ob. khim. 34 no.11:3716-3719 N '64 (MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.

L 41024-65

ACCESSION NO: AP5008582

2c
S/0286/65/000/006/0130/0130

AUTHORS: Mikhalev, V. A.; Vlascv, A. S.; Dorokhova, M. I.; Moskalik, Ye. K.;
Smolina, N. Ye.; Tikhonova, O. Ya.; Shagalov, L. B. ³B

TITLE: A method of preparing 3,4-bis-(n)-diethylaminoethoxy-(phenyl)-hexane.
Class 30, No. 152540

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 6, 1965, 130

TOPIC TAGS: hexane, chloride, pharmacology

ABSTRACT: This Author Certificate presents a method of producing 3,4-bis-(n)-diethylaminoethoxy-(phenyl)-hexane by interaction between synestrol and diethylaminoethyl chloride in alcohol in the presence of alkali agents with subsequent distillation of the alcohol, addition of water, and extraction by an organic solvent such as ether. In order to increase the yield of the desired product and to suppress the by-products of the reaction, diethylaminoethyl chloride and the alkali agent are introduced gradually, in several doses, either in solid form or in alcohol solutions. Production of the pharmaceutical preparation is effected by widely accepted methods. In order to reduce danger and to facilitate

Card 1/2

L 41024-65

ACCESSION NR: AP5008582

the process, a diethylaminoethyl chloride salt is used, such as chlorhydrate. The process is also facilitated and simplified by using caustic potash or caustic soda as the alkali agent. To prevent excessive dilution of the reaction mass, the excess solvent is distilled simultaneously with introduction of the alcohol solutions of the reaction products. For all the synestrol to react, 150-170% of the theoretically computed diethylaminoethyl chloride required is used.

ASSOCIATION: none

SUBMITTED: 13Nov61

ENCL: 00

SUB CODE: OC, LS

NO REF SOV: 000

OTHER: 000

llc
Card 2/2

MIKHALEV, V.A.; DOROKHOVA, M.I.; SMOLINA, N.Ye.; TIKHONOVA, O.Ya.

Alkyl amines and their transformation products. Part 2:
Derivatives of N', N''-dispirotripiperazinium. Zhur.org.khim.
1 no.3:460-464. Mr '65. (MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut im. S.Ordzhenikidze.

SHILINA, T.

Mbr., Inst. Organic Chemistry, Dept. Chem. Sci., Acad. Sci., -1948-. "Effect of Structural Factors in the Phenomena of Conjugation. II. Mobility of Hydrogen Atoms in Acetylacetonate and in Acetylacetonates of Cobalt and Aluminum," Izv. Ak. Nauk SSSR, Otdel. Khim. Nauk, 6, 1949.

NESMEYANOV, A.N., KURBANOV, D.N., SMOLINA, T.A., PARNES, E.N.

Chemical Structure

Effect of structural factors on conjugation phenomena. Part 2. Mobility of hydrogen atoms in acetyl acetone and in cobalt and aluminum acetyl-acetonates. Uch. zap. Mosk. un., no. 132, '50.

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

SHIMIZU, T.

Lab., Inst. Organic Chemistry, Dept. Chem. Ed., Natl. Inst., Tokyo, Japan. Effect of
structural factors in the phenomena of configuration. II. Stability of hydrogen atoms
in acetylacetonate and in acetylacetonates of cobalt and manganese, J. In. Org. Chem. USSR,
Oct. 1949, No. 6, 1949.

NESMEZYANOV, A.N., NERDANOV, D.N., SMOLINA, T.A., PARNES, T.N.

Chemical Structure

Effect of structural factors on conjugation phenomena. Part 2. Mobility of hydrogen atoms in acetyl acetone and in cobalt and aluminum acetyl-acetonates. Uch. zap. Mosk. un., no. 132, '50.

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

1957, V. I. I., ISKININ, E. I., U Yan-Tsuy, GABINA, T. A. et al. (New State University Ia. S. A. Leningrad)

"The Use of Radioactivity Mercury Hg for Studying the Exchange Reactions at a Carbon Atom." p. 29

Isotopes and Radiation in Chemistry, Collection of papers of
2nd All-Union Sci. Tech. Conf. on Use of Radioactive and Stable Isotopes and
Radiation in National Economy and Science, Moscow, Izd-vo AN SSSR, 1958, 380pp.

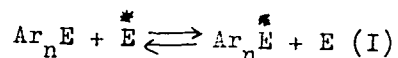
This volume published the reports of the Chemistry Section of the
2nd AU Sci Tech Conf on Use of Radioactive and Stable Isotopes and Radiation
in Science and the National Economy, sponsored by Acad Sci USSR and Main
Admin for Utilization of Atomic Energy under Council of Ministers USSR
Moscow 4-12 Apr 1957.

AUTHORS: Reutov, O. A., Ptitsyna, O. A., SOV/156-58-1-27/46
Karpov, T. P., Smolina, T. A.

TITLE: On the Reaction of the Isotope Exchange Between Tri-Aryl-
Stibines and Radioactive Antimony Sb¹²⁴ (O reaktsii izotopnogo
obmena mezhdur triarilstibinami i radioaktivnoy sur'moy Sb¹²⁴)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya
tekhnologiya, 1958, Nr 1, pp. 115 - 116 (USSR)

ABSTRACT: The authors recently investigated the reactions of the type



(in which case E - is an n-valent element and $\overset{*}{\text{E}}$ - its radio-
active isotope). These reactions are the most simple models for
reactions between metalorganic compounds and free metals (as
well as some non-metals); they are the basis of one of the most
important methods of synthesis of the metalorganic compounds
(Ref 1): $m\text{Ar}_n\text{Me} + n\text{E} \rightarrow n\text{Ar}_n + m\text{Me}$ (II) (in which case Me - is
an n-valent metal and E - an m-valent metal). Naturally, the
rules which were determined with the exchange-reactions of the
type (I) may be of considerable importance for the further
development of the method of synthesis according to scheme (II).

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On the Reaction of the Isotope Exchange Between Tri-
Aryl-Stibines and Radioactive Antimony Sb¹²⁴

SOV/156-58-1-27/46

The exchange reaction $\text{Ar}_3\tilde{\text{Sb}} + \text{Sb}^* \rightleftharpoons \text{Ar}_3\text{Sb}^* + \tilde{\text{Sb}}$ referred to in the title, takes place under rather severe conditions. Only when boiling a tetralin solution of triphenyl-stibine (at 207°) with a radioactive antimony powder, a 17% exchange took place within 5 hours. The petroleum fraction with a boiling temperature of from 190 to 200° was used as indifferent solvent in further tests. Tri-p-tolyl stibine was used as test material. Considerable divergences were observed in spite of several parallel tests: the equilibrium was established once at a 15%, once at a 30% and another time at an 80% exchange. Since the surface area of the metallic antimony forms one of the most important factors of the exchange. These diverging results indicate that this surface is in any way changed in the course of the reaction. Apparently, a recrystallization of the antimony powder takes place during its heating in petroleum at from 190 to 200° which is ended within approximately 30 hours. The estimation of surface area of a "reprepared" and a not re-prepared radioactive antimony powder shows 1,44 m²/g and 6,9 m²/g, respectively. The interaction of the "reprepared" radio-

Card 2/3

On the Reaction of the Isotope Exchange Between Tri-
Aryl-Stibines and Radioactive Antimony Sb¹²⁴

SOV/156-58-1-27/46

active antimony with tri-p-tolyl stibine in parallel tests lead to a conforming equilibrium exchange (15 to 16%) within 80 to 100 hours. There are 3 references, 2 of which are Soviet.

ASSOCIATION: Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo universiteta im.M.V.Lomonosova (Chair of Organic Chemistry at the Moscow State University imeni M.V.Lomonosov)

SUBMITTED: October 26, 1957

Card 3/3

AUTHORS: Reutov, O. A., ~~Smolina, T. A.~~, SOV/156-58-2-30/48
Wu Yang-ch'i, Bubnov, Yu. N.

TITLE: Isotopic Exchange of Several Organomercury Salts and
Mercury Haloid Labelled by Hg²⁰³ (Izotopnyy obmen nekotorykh
rtutnoorganicheskikh soley s galoidnoy rtut'yu, mechennoy Hg²⁰³)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya
tekhnologiya, 1958, Nr 2, pp. 324 - 327 (USSR)

ABSTRACT: In continuation of previous papers the authors investigated
the interaction between the mercury mentioned in the title
and: α -mercury bromo-cyclohexane, the ethyl- and 1-methyl-
ether of the α -mercury bromo-phenyl acetic acid, 3-mercury
bromo-camphor, 3-benzyl-3-mercury bromo camphor, 1-mercury
chloro-camphenylon, 2-mercury bromo camplane, and n.butyl-
mercury bromide. The organomercury salts which are (except
1-mercury chloro-camphenylon) exo-compounds, react under
mild conditions with mercury haloid. From the results (Table 1)
appears that the reactivity of the investigated organomercury
salts is reduced with respect to mercury haloid in a certain
order (scheme given). 1-mercury bromo-camphenylon, 2-mercury

Card 1/3

Isotopic Exchange of Several Organomercury Salts and
Mercury Haloid Labelled by Hg^{203}

SOV/156-58-2-30/48

bromo camphane, and n.butyl-mercury bromide do not enter into the reaction of the isotopic exchange under these conditions. When the authors compared the results obtained by the reactions in benzene and dioxane to those in acetone they found that admixtures are contained in acetone which are not removed in the case of a normal dehydration. They are assumed to be responsible for the considerable fluctuations of the rate of reaction observed in acetone. The authors were able to prove that the reaction of the isotopic exchange is considerably accelerated by acids as well as by bases. It is possible that the bases lead to a solvation of the mercury atom and thus weaken the C—Hg bond. The influence of acids is probably specific only for the cases of the α -mercurized oxo-compounds. The hydrogen of the acid probably influences the oxygen of the carbonyl group. This weakens the C—Hg bond. Apparently the isotopic exchange in question is a bimolecular reaction of the electrophilic substitution at the saturated carbon atom ($S_E 2$). Further investigations in this respect are necessary. An experimental part follows. There are 1 table

Card 2/3

Isotopic Exchange of Several Organomercury Salts and
Mercury Haloid Labelled by Hg^{205}

SOV/156-58-2-30/48

and 1 reference, which is Soviet.

ASSOCIATION: Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo
universiteta im.M.V.Lomonosova (Chair of Organic Chemistry
of the Moscow State University imeni M.V.Lomonosov)

SUBMITTED: October 28, 1957

Card 3/3

LENSHINA, N.Ya.; IVANOVA, V.S.; IVANOV, V.I.; REUTOV, O.A.; SMOLINA, T.A.;
KHU KHUN-VEN [Hu Hung-wen]

Production of new carboxylic derivatives of cellulose. Izv.
AN SSSR.Otd.khim.nauk. no.3:559-560 Mr '59. (MIRA 12:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR
(for Lenshina, Ivanova, Ivanov). 2. Moskovskiy gosudarstven-
nyy universitet im. M.V. Lomonosova (for Reutov, Smolina, Khu
Khun-ven).

(Cellulose)

REUTOV, O.A.; KHU KHUN-VEN, BELETSKAYA, I.P.; SMOLINA, T.A. (Moscow)

Isotope exchange kinetics of ethyl α -bromomercuriphenylacetate
with Hg²⁰³-tagged phenyl mercury bromide. Zhur.fiz.khim. 35
no.11:2424-2428 N '61. (MIRA 14:12)

(Acetic acid)
(Mercury--Isotopes)
(Mercury compounds)

REUTOV, O.A.; SMOLINA, T.A.; KALYAVIN, V.A.

Isotopic exchange reaction between substituted benzylmercury bromides and mercuric bromide tagged with the Hg^{203} radioactive isotope. Dokl. AN SSSR 139 no.2:389-392 J1 '61. (MIRA 14:7)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova i Institut elementoorganicheskikh soedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Reutov).
(Mercury bromide) (Mercury--Isotopes)

REUTOV, O.A.; SMOLINA, T.A.; KALIYAVIN, V.A.

Isotopic exchange reaction of benzylmercury bromide with Hg^{203}
-tagged mercuric bromide. Zhur. fiz. khim. 36 no.1:119-
123 Ja '62. (MIRA 16:8)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova i
Institut elementoorganicheskikh soyedineniy AN SSSR.
(Mercury---Isotopes) (Mercury organic compounds)

SMOLINA, T.A.; KALYAVIN, V.A.; REUTOV, O.A.

Isotope exchange between allyl mercury bromide and cinnamyl
mercury bromide. Izv. AN SSSR. Ser. khim. no.12:2235 D '63.
(MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova
i Institut elementoorganicheskikh soyedineniy AN SSSR.

KALYAVIN, V.A.; NEOLINA, T.A.; REUTOV, G.A.

Mechanism of isotopic exchange between organomercury salts and mercury halide. Dokl. AN SSSR 155 no. 3:596-599 Mr '64.
(MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova i institut elementorganicheskikh soyedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Reutov).

KALYAVIN, V. A.; SMOLINA, T. A.; REUTOV, O. A.

Monomolecular mechanism of isotopic exchange between benzylmercuri halides and radioactive mercury halides. Dokl. AN SSSR 156 no. 1:95-98 My '64. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova i Institut elementoorganicheskikh soyedineniy AN SSSR.
2. Chlen-korrespondent AN SSSR (for Reutov).

KALYAVIN, V.A.; SMOLINA, T.A.; REUTOV, O.A.

Bromine anion catalysis of the monomolecular isotope exchange
of benzyl mercury halides with mercury halide. Dokl. AN SSSR
157 no.4:919-921 Ag '64 (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova
i Institut elementoorganicheskikh soyedineniy AN SSSR. 2. Chlen-
korrespondent AN SSSR (for Reutov).

SHULYATEVA, I.P.; SEMINA, F.M.; ST-PANOVA, A.I.

Effect of preparations derived from some Far Eastern and Siberian medicinal plants on the appetite of experimental animals. Mat. k izuch. zhen'. i drug. lek. rast. Dal'. Vest. no.5:253-256 '63. (MIRA 17:8)

1. Blagovistchenskiy meditsinskiy institut.

NAUGOL'NYKH, E.Z.; SMOLINA, T.N.; BABINTSEVA, N.P.

Dynamics of bilirubin in the blood during hemolytic disease
in newborn infants and its clinical significance. Vop. okhr.
materin. dets. 8 no.1:31-33 '63 (MIRA 17:2)

1. Iz biokhimicheskoy laboratorii (rukovoditel' - kand. med.
nauk K.A. Sogrina) i pediatricheskogo otdela (rukovoditel'
dotsent R.Ye. Leyenson) Sverdlovskogo nauchno-issledovatel'-
skogo instituta okhrany materinstva i mladenchestva (dir. -
kand. med. nauk R.A.Malysheva).

Callbage

Sewing of callbage leads Sec 1. No. 3, 1952.

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

SMOLINA, T.V.

Direct seeding of cabbage. Politekh.obuch. no.5:50-56 My '59.
(MIRA 12:7)

1. Gribovskaya ovoshchnaya selektsionnaya opytnaya stantsiya.
(Cabbage)

L3314

S/776/62/000/024/005/007
E021/E483

18 2300
AUTHORS:

Smolina, V.I., Zoteyev, V.S.

TITLE:

Study of the structure of alloys subjected to deformation at different rates and temperatures

SOURCE:

Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no.24. 1962. Novyye metody ispytaniy metallov. 370-379

TEXT: The temperature-dependence of UTS, elongation and reduction of area was determined for Armco iron and a Ni-based alloy EI 598 (EI598) tested at both normal (1.7 mm/sec) and very fast (65 m/sec) strain rates. The macro- and microstructure of fractured test pieces was also examined. The temperature range covered was 20 to 1200°C for iron and 600 to 1200°C for the EI598 alloy; only the results for the latter being reported in detail in the present paper. The first evident changes in the structure of this alloy, tested at the slow rate of strain, were observed after deformation at 700°C; they included grain-boundary precipitation of the strengthening phases, broadening of the grain-boundaries and deformation of the grains. Specimens tested at 800°C had a finely-crystalline structure with a larger quantity of the grain-boundary precipitates

S/776/62/000/024/005/007
E021/E483

Study of the structure ...

and more pronounced broadening of the grain boundaries. Deformation at 900 to 1000°C brought about marked elongation of large crystals in the direction of the applied load (indicating that the mechanism of slip was predominant) and the appearance of both intra- and intergranular cracks. Specimens tested at 1200°C had equi-axial grains and failed by intergranular fracture. All the specimens, tested at 700 to 1200°C at the slow strain rate, had macroscopic surface cracks. Specimens, tested at 600 to 1000°C at the fast rate of strain, deformed mainly by slip in the interior of the grains; the precipitation of the strengthening phases along the slip planes (but not at the grain boundaries) did not become evident below 900°C; no broadening of the grain-boundaries and no macroscopic surface cracks were observed in specimens deformed under these conditions. In alloy deformed at 1000°C, side by side with markedly elongated grains, new, small, equi-axial grains were observed which indicated that under these conditions deformation and recrystallization took place concurrently. Specimens, tested at 1200°C at the fast strain rate, failed by intracrystalline fracture. The structural changes

Card 2/4

Study of the structure ...

S/776/62/000/024/005/007
E021/E483

of the alloy. Increasing the strain rate at high temperatures inhibits recrystallization which, in turn, causes an increase in strength and a decrease in plasticity. There are 18 figures.

X

Card 4/4

S/776/62/000/024/006/007
E193/E383

AUTHOR: Smolina, V.I.

TITLE: The effect of static and alternating loads and the loading rate on hardening and fracture of steel and high-temperature alloys at elevated temperatures

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov. no. 24. 1962. Novyye metody ispytaniy metallov. 381 - 391

TEXT: If tensile tests at relatively low (2-4 mm/min) strain rates are conducted on steels at various temperatures, the resultant temperature-dependence of UTS has a maximum in the 200 - 300 °C range. This effect has been attributed to grain-boundary precipitation of carbides and nitrides. The primary object of the present investigation was to check whether this maximum could be eliminated by subjecting the steel to a preliminary ageing treatment designed to bring about complete precipitation of all the strengthening phases. Tensile tests were conducted on steel 45, either normalized at 860 - 880 °C or normalized and aged for 500 h at 300 °C. Since the curves representing the temperature-dependence

Card 1/3

The effect of

S/776/62/000/024/006/007
E193/E385

of UTS of both aged and unaged steels tested were practically identical, further tensile, creep and fatigue tests were conducted on steel 45, steel 30 and Ni and Fe-base high-temperature alloys to study the effect of the strain rate and temperature on the UTS, fatigue limit and creep strength and to elucidate the nature of the phenomenon leading to an increase in mechanical properties at certain temperatures. The mechanical tests were supplemented by phase-analysis and metallurgical examination. Conclusions:

1) similarity (i.e. the presence of a maximum) of the temperature-dependence of UTS and fatigue limit is due to the fact that the deformation of the alloys studied under both static and alternating loads takes place by the mechanism of intragranular slip. This view is supported by the results of metallographic analysis and by the fact that the fatigue limit/UTS ratio of about 0.45 remains constant in the 20 - 900 °C temperature interval. 2) The intragranular slip during deformation at elevated temperatures brings about grain-boundary precipitation of dispersed strengthening phases, which leads to the appearance of maxima on the curves representing the temperature-dependence of the UTS and fatigue limit; the higher the rate of strain, the higher is the temperature

Card 2/3

ACCESSION NR: AT4001247

S/2776/63/000/032/0155/0163

AUTHORS: Timoshuk, L. T.; Smolina, V. I.

TITLE: Method of investigating effect of vibration and vibration frequency on the rupture strength of a heat resistant alloy

SOURCE: Moscow. Tsentral'ny*y nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 32, 1963, 155-163

TOPIC TAGS: stress rupture test, heat resistant alloy, rupture strength, vibration static stress rupture test, combined fatigue stress rupture test

ABSTRACT: Various procedures and results are reported on long-run static loading tests of heat-resistant alloys, with combined axial and vibration loading of different frequency. Such conditions are encountered in gas turbines. A constant decrease in the resistance of the alloy to failure was observed with increasing total duration

Card 1/12

ACCESSION NR: AT4001247

of the test (up to 1,000--3,000 hours). The superposition of vibration on a long-run static load decreases the durability of the sample and this effect increases with increasing applied frequency. It is recommended that in view of the complexity of the vibrations of gas turbine blade that their durability be estimated not in terms of number of cycles to destruction but in length of time to destruction, since the two definitions are not equivalent. Some high-temperature alloys (EI727 and EI827) exhibit an increased sensitivity when the test time is lengthened. Arguments are advanced in favor of applying the described procedures to investigations of fatigue strength of alloys subject to vibration at high temperatures. Orig. art. has: 5 figures and 3 formulas.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metalurgii (Central Scientific-Research Institute of Ferrous Metallurgy)

Card 2/3

SMOLINA, Ye.I.

Some aspects of the course of the postpartum period in puerperas
suffering from hemorrhage in labor. Akush.i gin. 35 no.4:27-31
Jl-Ag '59. (MIRA 12:11)

1. Iz 1-go akusherskogo otdela (zav. - prof. S.M. Bekker) i kliniko-
diagnosticheskoy laboratorii (zav. - kand.med.nauk N.L. Vasilevskaya)
Instituta akusherstva i ginekologii AMN SSSR (dir. - prof. P.A. Belo-
shapko).

(HEMORRHAGE, POSTPARTUM)

MIRONENKO, A.V., kandidat biologicheskikh nauk; SMOLINA, Ye.S.

Provitamin A (carotene) content of certain leguminous grasses. Sbor.
nauch.trud.Inst.biol.AN BSSR no.2:225-231 '51. (MLRA 9:1)

(Carotene) (Legumes)

MIROMENKO, A.V.; SMOLINA, Ye.S.

Application of granulated superphosphate to forage lupine. Sber. nauch.
trud. Inst. biol. AN BSSR no. 3:25-29 '52. (MLRA 9:2)
(Lupine) (Plants; Effect of phosphates on)

ZELINSKIY, V.M., kand. tekhn. nauk; RUKMAN, G.L., inzh.; FEL'DMAN, G.B., inzh.;
DENISENKO, S.A., inzh.; SMOLINA, Z.K., inzh.; KOSTOGRYZ, P.L., inzh.;
IOFFE, I.M., teknik

Experience in introducing remote control of pumps in drainage boreholes
at the S.M.Kirov mine. Shakht. strol. 9 no.10:27-28 0 '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii i
mekhanizatsii shakhtnogo stroitel'stva (for Zelinskiy, Rukman,
Fel'dman). 2. Institut Avtomatuglerudprom zavoda "Krasnyy metal-
list" (for Denisenko, Smolina, Kostogryz) 3. Yakovlevskoye stroitel'no-
montazhnoye upravleniye tresta Soyuzshakhtoosusheniye (for Ioffe).

SMOLING, Kalman

Heating time determination in heat treatment and forging.
Gepgyartastechn 2 no.11:415-419 N '62.

1. Forgacsolo Szerszamok Gyara.

SMOLING, Kalman

An account of a conference on heat treatment held in Eisenach.
Gepgyartastechn 4 no. 3:126-127 Mr '64.

SMOLINSCHI, M.; DUPONT, M.; SANDULESCU, M.

Hexachlorocyclohexane crystals for the destruction of larvae. p. 485.
Academia Republicii Populare Romine. COMUNICARILE. Bucuresti. Vol. 6,
no. 3, Mar. 1956.

SOURCE: East European Accessions List (EEAL) Library of Congress,
Vol. 5, no. 9, Sept. 1955

SMOLINSKA, Jadwiga

POLSKA

Ability of the two methyl groups of the quaternary base of 3,5-dimethylisoxazole to couple with aldehydes. Wiktor Lampe and Jadwiga Smolinska. *Roczniki Chem.* 28, 163-8 (1954) (German summary). CH_3CO , 20 g., 21 g. H_2NOH , HCl , and 21 g. K_2CO_3 refluxed for 4 hrs. give 3,5-dimethylisoxazole (I), bp 50-7°. I warmed with MeI at 100° for 14 hrs. gives the methiodide (II). $p\text{-Me}_2\text{NC}_6\text{H}_4\text{CHO}$ (0.82 g.), 0.5 g. II, and 0.2 g. $\text{C}_6\text{H}_5\text{N}$ in 10 ml. EtOH are refluxed for 1 hr. to give 3,5-bis(*p*-dimethylaminostyryl)isoxazole methiodide (III), m. 248°. II (0.3 g.), 0.7 g. *p*-acetamidobenzaldehyde and 0.4 g. $\text{C}_6\text{H}_5\text{N}$ in 5 ml. EtOH are warmed at 90° giving 0.6 g. 3,5-bis(*p*-acetamidostyryl)isoxazole methiodide, m. 240°. Similarly were prepd. The following 8-substituted 6-phenylisoxazole ethiodides (substituent, m.p. given): methyl, 170° (free base 67-8°); $p\text{-Me}_2\text{NC}_6\text{H}_4\text{CH}_2\text{CH}_3$, 202-4°; $p\text{-AcNHC}_6\text{H}_4\text{CH}_2\text{CH}_3$, 228°; 3,4-MeO(HO) $\text{C}_6\text{H}_3\text{CH}_2\text{CH}_3$, 205°; $p\text{-Me}_2\text{NC}_6\text{H}_4\text{CH}_2\text{CH}(\text{CH}_3)\text{CH}_3$, 184°. Chester Place

SMOLINSKA, J.

"Proste obliczenia chemiczne" (Simple chemical calculations), by J. Smolinska. Reported in New Books (Nowe Ksiazki), No. 14, July 15, 1955

SMOLINSKA, JADWIGA

✓ Ability of the two methyl groups of the quaternary base of
 3,5-dimethylisoxazole to couple. II. Wiktor Lampe and
 Jadwiga Smolińska (Univ. Warsaw). Roczniki Chem. 29,
 6 (1955) (German summary); cf. C.A. 49, 8922c.
 Isoxazole dyes with greater chromophore nos. were prepd.
 3,5-Dimethylisoxazole (3 g.) and 5 g. EtI heated 24 hrs. at
 100° gave 60% 3,5-dimethylisoxazole-EtI (I), m. 94°. Also
 1.33 g. 2-methylthiobenzothiazole-EtI, 0.75 g. I, and 0.15
 g. Et₃N in 5 ml. abs. EtOH heated 1 hr. at 90° gave, after
 standing 24 hrs., 15% 3,5-bis(3-ethyl-3-benzothiazolinylidene-
 methyl)isoxazole ethiodide, m. 213-14° (from MeOH).
 Finally, 0.5 g. I and 0.7 g. p-Mc.NC₆H₄.CH:CHCHO, con-
 densed by heating 30 min. at 90° in the presence of 0.1 g.
 piperidine and 10 ml. abs. EtOH gave, after standing 24
 hrs. and cooling, 20% 3,5-bis[4-(p-dimethylaminophenyl)-
 1,3-butadien-1-yl]isoxazole ethiodide (II), m. 176-7° (from
 BuOH), absorption at 4650 Å.

Chem 2 6

PM 2/11

Janczewska, J.

Research on the reactivity of the derivatives of the thiazole group. W. Lampe and J. Smolińska (Univ. Warsaw). *Bull. acad. polon. sci., Class. III*, 5, 835-8 (1957) (in English).—2,4-Dimethylthiazole-MeI (I) (0.5 g.) was boiled 15 min. with 0.3 g. *p*-acetamidobenzaldehyde, 0.1 g. piperidine (II), and 30 ml. abs. EtOH and the soln. filtered after 24 hrs. yielding 0.52 g. orange 2-*p*-acetamidostyryl-4-methylthiazole-MeI (III), m. 285° (decomp.) (MeOH). I (0.5 g.) with *p*-dimethylaminocinnamaldehyde, 0.1 g. II, and 40 ml. abs. EtOH, boiled 5 min., and left aside 24 hrs. gave 0.37 g. dark red 2-[4-*p*-dimethylaminophenyl]-1,3-butadien-1-yl]-4-methylthiazole-MeI, m. 243° (MeOH), λ 5330 Å. I (0.5 g.), 0.66 g. 2-methylmercaptobenzothiazole-EtI, 0.1 g. triethylamine, and 30 ml. abs. EtOH boiled 10 min. yielded after 24 hrs. 0.32 g. orange 2-[2-(4-methylthiazolyl)methylene]-3-ethylbenzothiazoline-MeI (IV), m. 276° (MeOH). I (0.5 g.), 0.69 g. 2-methylmercaptobenzoselenazole-EtI, 0.1 g. triethylamine, and 50 ml. abs. EtOH boiled 45 min. yielded after 8 days 0.19 g. yellow benzoselenazole analog of (IV); prisms, m. 273° (MeOH). The Me group at position 4 failed to condense with aldehydes. All compds. are feeble sensitizers of photographic plates.

J. Stecki

LAMPE, W.; SMOLINSKA, J.

Conjugating tendency of both methyl groups of 3,5-dimethyl-
isoxazole quaternary base. III. *Bul Ac Pol chim.* 6 no.8:481-486.
'58. (KFAI 9:6)

1. Department of Organic Chemistry, Warsaw University. Laboratory
of Organic Synthesis, Polish Academy of Sciences. Presented by
W. Lampe.

(Methyl group) (Dimethylisoxazole)
(Quaternary compounds)

LAMPE, W.; SMOLINSKA, J.

Coupling ability of both methyl groups in the quaternary base derived from 3,5-dimethylisoxazole. Pt.4. Biul chim PAN 11 no.2:49-53 '63.

1. Department of Organic Chemistry, University, Warsaw, and Institute of Organic Synthesis, Polish Academy of Sciences, Warsaw. Presented by O. Achmatowicz.

L 21434-66 E" T(j) RM

ACC NR: AT6009279

SOURCE CODE: PO/2516/65/000/041/0065/0083 29

AUTHOR: Smolinska, B. 38
B+1

ORG: Department "B" of General Physics (Katedra Fizyki Ogolnej "B")*

TITLE: Losses in aromatic crystalline and macromolecular organic compounds

SOURCE: *Warsaw. Politechnika. Zeszyty naukowe, no. 116, 1965. Elektryka, no. 41, 65-83

TOPIC TAGS: organic semiconductor, aromatic compound, amorphous macromolecular compound, temperature effect

ABSTRACT: The author has investigated the effect of temperature upon the losses of organic semiconductors. Measurements have been taken on polycrystalline samples for a number of crystals of aromatic compounds and on a few amorphous macromolecular compounds within the frequency range of 10^5 cps to 10^7 cps. For typical organic semiconductors, such as aromatic crystals, losses have been found to grow exponentially with temperature. This has been recognized as a feature which is characteristic for semiconductors but does not result directly from the process of electronic conduction. An exponential growth of losses with temperature has also been observed for mixture of macromolecular

Card 1/2

PIEKARA, A.; STANKOWSKI, J.; SMOLINSKA, S.; GALICA, J.

The ammonia maser of the Poznan Center. Postepy fizyki 15
no.5:565-568 '64.

1. Department of Dielectrics, Institute of Physics, Polish
Academy of Sciences, Poznan, and Department of Experimental
Physics, A. Mickiewicz University, Poznan.

SMOLINSKA, Urszula, mgr inż

Preliminary petrographic studies on the spontaneous combustion
of coal in the Upper Silesian Basin. Przegl gorn 20 no.6:
Supplement: Biul glow inst gorn 14 no.2:16-19 Je '64

L 14018-65 EWP(e)/EWT(m)/EPF(c)/EWP(b) Pr-4 AFETR/SSD/AFWL/ASD(a)-5/BSO/
 AFTC(b)/RAEM(a)/ESD(c)/RAEM(c)/ESD(gs)/ESD(t) JD/WH
 ACCESSION NR: AP4049593 P/0019/64/013/003/0713/0714

AUTHOR: Gothé, K. H.; Smolinaki, A. B

TITLE: Maser effect in ruby at liquid hydrogen temperature

SOURCE: Archiwum elektrotechniki, v. 13, no. 3, 1964, 713-714

TOPIC TAGS: maser effect, ruby, liquid hydrogen temperature, x band, bandwidth, amplification, signal frequency, push pull pumping scheme, pumping frequency

ABSTRACT: The experiment was carried out with a single crystal ruby possessing quite high internal stresses and a chromium concentration of about 0.2%. The push-pull pumping system was tilted at an angle of 54.7° between the trigonal axis of the ruby and the permanent magnetic field. The operating point was set at signal frequency $f_s \approx 9400$ Mc/s, pumping frequency $f_p \approx 23480$ Mc/s, and permanent magnetic field strength $H_0 = 4000$ Oe. A cavity entirely filled with ruby served as the resonator. The ruby resonator was a rectangle of $7.35 \times 7.35 \times 3.08$ mm and silver coated. The preliminary results show that in the push-pull pumping scheme the product of the bandwidth divided by the square root of power amplification is about 20 Mc/s. This value is lower than that obtained at liquid helium or nitrogen

Card 1/2

Mech. & Elec. Engineering

P. T. A.

524

021.395.68

Smoliński A Diagrams of Directly Coupled Amplifiers Drawn on a Tension Scale.

„Schematy wzmacniaczy o sprzężeniu bezpośrednim rysowane w skali napięciowej”. Przegląd Telekomunikacyjny No. 2-3, 1950, pp 59-61, 9 figs

The author shows a method of drawing diagrams of directly coupled amplifiers, with such a layout of the different points of the diagram on corresponding heights with respect to the zero line, that the working conditions of the amplifier are easy to understand from a glance at the diagram.

Telephone copy.

S. A.

Sect. 6

621.395.645
2246. The calculation of RC-coupled amplifiers with
low-frequency compensation. A. SZCZEPAN. *Przeegl.
Telekomun., No. 1, 9-18 (Jan., 1951) in Polish.*
Design formulas are derived for the case of a
shunt R-C circuit in the anode load or in the cathode
load and limitations discussed. A. SZCZEPAN

SMOLINSKI, A.

Electrical Engineering Abst.
Vol. 57 No. 676
Apr. 1954
Electrical Engineering

① physics, met
621.318.13.013

1535. Effect of initial magnetization upon permeability. A. SMOLINSKI. Arch. elektrotech. (Warsaw) 1, No. 1, 67-77 (1952) in Polish.

Magnetically soft materials, such as silicon steel and permalloys, demagnetized by annealing (i.e. by heating above the Curie point), show in the region of small and medium fields lower values of permeability, than those demagnetized by magnetic field. In order to prevent measurement errors, which may reach 20%, the tested material should be magnetized and demagnetized magnetically prior to measurements.

R. SYSKI

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M. Casimiro

*S. A.
Set B*

621.317.39 : 669.14

3258. Electrical method of determining the silicon content of silicon steel. A. SZYMANSKI. *Przept. Elektrotech.*, 28, 107-8 (No. 3, 1952) in Polish.

In steels containing up to 4% Si resistivity depends on the Si content. Resistance of small samples (standard width and length) is measured using a low resistance bridge. Cross-section dimensions of smooth surfaced samples is measured using a micrometer and then resistivity and Si content are calculated. Rough surfaced samples are weighed, and from weight and resistance of standard size samples the % Si is calculated using simple formulae.

J. LUKASZEWICZ

SMOLINSKI, A

2

P O L .

621.314.2.042.2 : 669.187

1482. Method of obtaining silicon steel transformer cores with special properties. A. SMOLINSKI. *Arch. Elektrotech. (Warsaw)* 2, No. 3-4, 205-25 (1953) In Polish, with summary (3 pp.) in English.

Instead of melting in a vacuum furnace, the silicon steel is melted in an arc furnace and given a final refining treatment in a furnace with a hydrogen atmosphere at above 200°C. To relieve the shortage of sufficiently high quality sheet for telecommunication purposes the author investigated the variation in quality of 0.35 mm transformer sheet with 1.3 W/kg loss at $B = 10\ 000$ gauss, and found permeability variations between 200 and 1000 gauss/Oersted; on the average, the investigated batches of sheet contained 3% of sheets with a permeability of 700 gauss/Oersted. The high permeability values are considerably reduced by the internal stresses caused by punching and stamping. These stresses are removed by heat treatment at $650 \pm 20^\circ\text{C}$ in a muffle furnace for 4 hr. For this purpose the stampings are placed in steel boxes and protected against oxidation by well-compressed aluminium oxide and gluing the

cover to the box by kaolin mixed with water-glass. The very small quantity of oxygen penetrating into the box has a positive effect because it neutralizes the impurities emerging out of the walls of the box and burns to a certain extent the impurities occluded in the stampings.

E. GROS

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SMOLINSKI, A.

"The heat treatment demagnetization of magnetically soft materials." p.335.
(ARCHIWUM ELEKTROTECHNIKI Vol. 2, No. 3/4. 1953. Warszawa, Poland.)

SO: Monthly List of East European Accessions. (SEAL). LC. Vol. 4. No. 4.
April 1955. Uncl.

SMOLINSKI, A.

"Production of Transformer Cores With Particular Properties From Silicate Steel," Byull. Polskoy akad. nauk, Ser. IV, No 3, pp 113-124, 1953

Because adequate vacuum furnaces are not available, Polish metallurgy devised original methods of treatment by selecting the transformer sheet iron with 4% Si content and submitting them to forging and annealing. (RzhFiz, No 6, 1955)

Sun. No. 681, 7 Oct 55

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621.375.2 : 621.372.54

1682. Some applications of the theory of electric filters for wide-band low-pass amplifiers. A. SMO-
LINSKI. Arch. elektrotech., [Warsaw] 3, No. 1, 31-68
(1954) In Polish.

The resistance amplifier is compensated by a low-pass filter by-passing the stray capacitance and matched to the resistive load by the additional half-element. The resulting two-terminal compensating circuits double the frequency bandwidth as compared with the amplifier working in an extreme case of perfect matching. The formula for the amplification is obtained and calculations show good results in the case of more complicated circuits; a circuit is shown which utilizes 95% of the theoretical bandwidth. Dividing the stray capacitance into the anode and grid components, and using these as filter elements, allows a further doubling of the frequency bandwidth. The resulting quadripole compensating circuits possess gain characteristics which closely approach the ideal. The limiting value of the relative phase angle is -270° , so this method of compensation is impossible for circuits with negative feedback. Finally, the analytical method for the determination of the values of circuit elements necessary to produce the uniform amplification characteristics is described. The decrease in frequency band due to losses in the elements is mentioned.

R. SYSKI

68 2/11

SMOLINSKI A.

P O L .

621.318.322

3291

Smolinski A. Obtaining Optimum Properties of Permalloys with High Nickel Content.

„Uzyskiwanie optymalnych własności permalloyów o dużej zawartości niklu”. (Prace Przem. Inst. Telekom. No. 11), Warszawa, 1954, PWT, 10 pp., 17 figs., 5 tabs.

Permalloys with high nickel content can be divided — according to composition and heat treatment — into two classes: permalloys with high initial permeability and those with high maximum permeability and low coercive force. The paper describes research work carried out with a view to setting up conditions for heat treatment in order to obtain optimum magnetic properties of permalloys, both imported and of home production. As a result, it has been shown that two kinds of home produced permalloys fulfil the requirements imposed, viz. molybdenum permalloy as a material with high maximum permeability and permalloy C as a material with high initial permeability.

A 68

SMOLINSKI, H.

3518

021.5123 (031.314.81.046.8

Smolinski A. Obtaining Class A₁ Transformer Cores.
„Udoskonalenie rdzeni transformatorowych klasy A₁”. (Prace Przem.
Inst. Telekom. No. 12), Warszawa, 1954, PWT, 12 pp., 27 figs.

POL. A

Three methods of obtaining class A₁ transformer cores of high permeability kept within close tolerances, and small increment of such permeability. One of the methods developed at the Industrial Telecommunication Institute (PIT) involves cold rolling of relatively pure raw sheets 0.35 mm thick, class A₁, down to approximately 0.15 mm. Core laminations punched out of this material are then heat treated without protecting medium. This method has been adopted by one of the factories in Poland.

BY [signature]

SMOLINSKI, A.

3894

621.318.323.2 : 621.314.2.042.14

Smoliński A., Zawadzki A., Zbikowski M. Fundamental Properties of Class A5 and A7 Transformer Cores.

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„Podstawowe właściwości rdzeni klas A5 i A7”. (Prace Przem. Inst. Telekom. No. 13—14), Warszawa, 1954, PWT, 7 pp., 13 figs., 3 tabs.

This paper summarises the basic properties of class A5 and A7 transformer laminations, having μ_{20} equal to 600 ± 100 Gs/Oe and 400 ± 100 Gs/Oe respectively. Cores of this kind are obtained from class A3 and A5

steel sheets without heat treatment. Static and dynamic properties are also specified. The latter include permeability as a function of A.C. flux density and of D.C. field intensity at 50 c/s, as well as power dissipation of low magnetising field values, in a wide frequency range. These data make it possible to plot curves of complex permeability and to draw up a balance sheet of losses.

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SMOLINSKI, A.

25
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L-8354. SYNTHESIS OF AMPLIFIERS WITH TRIPLE-TUNED COUPLED CIRCUITS ²A. Smolinski.
Arch. elektrotech. (Warsaw), Vol. 4, No. 1, 35-64 (1956). In Polish, with summaries (1 p.) in Russian and (1 p.) in English.
Conditions for optimum coupling between triple-tuned circuits in the anode-grid circuit of an amplifier are critically examined. The uniformly wavy response is obtained by identifying the square of the magnitude of the transfer admittance with the Chebyshev function of the sixth order. Universal amplification curves and various nomograms which are given permit rapid evaluation of individual circuits. Multistage triple-tuned amplifiers having a three-topped response and those with a uniformly wavy response are synthesized.
Z.F. Voyner.

RAW

SMOLINSKI, A.

621.318.13
4093. FUNDAMENTAL PROPERTIES OF CLASS A1 TRANS-
FORMER LAMINATIONS. A. Smoliński and A. Zawadzki.
Prace P.I.T., No. 18, 7-10 (1955), in Polish.

Laminations of this kind are obtained from class-A3 steel sheets by means of special heat and plastic treatment. The data given comprise both static and dynamic properties. The latter include permeability as a function of d.c. and a.c. components of field strength at 50 c/s, together with losses at low values of flux density in a wide frequency range. These data make it possible to plot curves of complex permeability and to determine the balance of losses.
Polish Technical Abstracts.

Elect
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SMOLINSKI, A.

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621.375.152.4 : 621.372.57
6841. OPERATION OF A VALVE IN A GROUNDED-GRID
CIRCUIT CHARACTERISTICS AND EQUIVALENT CIRCUIT.
A. Smolinski.
Arch. elektrotech. (Warsaw), Vol. 5, No. 4, 621-44 (1958). In Polish.
A theoretical paper in which the operation of a valve in a
grounded-grid circuit is treated independently of the grounded-
cathode valve theory. Static characteristics of anode and cathode
currents in terms of grid-to-anode and grid-to-cathode voltages are
derived from the usual characteristics supplied in valve catalogues.
Mutual conductance, anode impedance and amplification factor are
defined and related to analogous parameters of grounded-cathode
valves. Equivalent circuits for the input and the output of the valve,
and finally an equivalent circuit of a grounded-grid stage, valid also
at very high frequencies, are developed. Equations are derived for
the stage as an active four-terminal network, as well as formulae
for input and output admittance and amplification. Detailed matha-
tical analysis is given in the appendix. A 3/4 page summary in
English is provided. J.M. Silberstein

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SMOLINSKI, A.

V4508 621.318.323.2; 621.314.2.042.14

Zawadzki A., Smolinski A. Fundamental Properties of Class A2 and A4 Transformer Laminations.

„Podstawowe właściwości rdzeni klas A2 i A4”. (Prace Przem. Inst. Telekom. No. 17/18), Warszawa, 1958, PWT, 6 pp., 12 figs., 4 tabl.

A specification of fundamental properties of class A2 and A4 transformer laminations. The static data of the former are: $\mu_{100} = 900 \pm 200$ Gs/Oe, $\delta_{100} \leq 10$ 1/Oe; and those of latter $\mu_{100} = 900 \pm 100$ Gs/Oe, $\delta_{100} \leq 10$ 1/Oe. Laminations of this kind are obtained by applying special heat treatment of class A3 and A6 transformer steel sheets. Dynamic properties also are specified, and include: dynamic permeability in a wide range of 50 c/s field at different values of constant field, and power losses at low field values in a wide frequency range. This gives sufficient data for plotting curves of complete permeability and for determining the balance of losses.

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5522

821.314.3:821.308.04

• Smoliński A. Principles of Amplification. Vol. 2. Band Pass Voltage Amplifiers.

„Zasady wzmacniania, t. 2. Pasmowe wzmacniacze napięciowe”.
Wyd. 2. Warszawa, 1958, PWT, 16°, 322 pp, figs., tabs.

This book is concerned with resistance amplifiers having capacitive and direct coupling, with choke-coupled and transformer amplifiers, and with various types of wide-band amplifiers including the chain amplifier.

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SMOLINSKI, A.

POLISH TECHNICAL ABSTRACTS

Vol. 26, Nr. 2, 1957

• Smolński A. The Principles of Amplification. Vol. 3.
„Zasady wzmacniania”. t. 3. Warszawa, 1956, PWT, 16”, 536 pp.,
117 figs., 179 tabs.
The third volume of a monograph on the amplification of electric
currents. It contains methods for the calculation, analysis and synthesis
of selective voltage amplifiers.

37

Distr: 4E2c

5661
Smolński A., Zbiczowski M. Magnetic After-Effect in Hot-Rolled Silicon Steel Sheets.

621.318.132:538.22/24

„Opóźnienie magnetyczne w stalach krzemowych gorąco walcowanych”. (Prace Inst. Tele- i Radiot. No. 3), Warszawa, 1957, Inst. Tele- i Radiotechn., 15 pp., 18 figs.

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Results of an investigation over magnetic after-effect in hot-rolled class A3 silicon steel sheets. Among many phenomena of magnetic after-effect, magnetic desaccommodation has been given particular consideration because of its important effect on the accuracy of magnetic measurements at low field intensity. The following were investigated: non-annealed specimens after stamping, specimens annealed at a temperature of about 800°C (without protecting atmosphere), and some specimens after heat treatment at a temperature of 1250°C. in a protective atmosphere of hydrogen. Conditions essential to the avoidance errors due to magnetic ageing when measuring silicon steel laminations, are specified, and a tentative explanation attempted of the phenomenon of magnetic ageing in terms of the modern theory of ferromagnetism. 21

DRP

SPOLINSKI, A.; ZBIKOWSKI, M.

Magnetic aftereffect in silicon steel subjected to heat-treatment. p.300.

(ARCHIWUM ELEKTROTECHNIKI. Vol. 6, No. 2, 1957. Warszawa, Poland)

SO: Monthly List of East European Accessions (EAL) 10. Vol. 6, No. 10, October 1957. Uncl.

SMOLINSKI, A.

POLAND/Magnetism - Ferromagnetism

F-2

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 1130
Author : Szezeniowski Szczepan, Smolinski Adam
Inst : -
Title : Physical Problems and Technical Applications of Ferromagnetic Materials.
Orig Pub : Zesz. probl. nauki polsk., 1957, No 8, 73-141; Dyskus., 389
Abstract : Survey. Bibliography, 138 titles.

Card 1/1

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18(7)

AUTHOR:

Smoliński, A., Kaczkowski, Z., and Żbikowski, M. POL/19-8-2-8/14

TITLE:

The Influence of Plastic Deformation^{2b} on the Time Decrease of Permeability in Transformer Steel \A

PERIODICAL:

Archiwum elektrotechniki, 1959, Vol 8, Nr 2, pp 333-339 (POL)

ABSTRACT:

The paper gives the results of measurements of the influence of plastic deformations on the time decrease of permeability in hot rolled transformer steel. Measurements were performed on samples rolled in a mill and on samples stretched on a tensile testing machine. It was found that plastic deformation have a definite influence on time decrease of permeability, which depends not only on the value of the deformations but also on their type. Measurements showed a drop of time decrease of permeability at large elongations while it reached maximum value at small elongations, with samples where deformation was achieved by rolling. Where plastic deformations were achieved by elongation, it was found that they

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influence time decrease of permeability in a somewhat different manner, leading to periodic changes from higher to lower values than the initial value (without deformation). It was also found that increase in reluctance varies basically in the same way as the time decrease in permeability. It must be stressed, however, that the increase in reluctance depends both on the extent of time decrease in permeability and on the value of permeability as finally established. This last value is significantly influenced in turn by the tensions produced by plastic deformation. Where small elongations are obtained by rolling, we have the phenomenon of increased permeability in the established state, connected with positive magnetic-striction. This phenomenon reappears periodically where samples are deformed by elongation (Figs 4 and 6). Tables 1, 2 and 3 give an analysis of time dependencies involved, according to Rathenau. His results show that

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the constants of relaxation increase and decrease similarly to the entire time decrease in permeability. On the basis of these considerations, the authors conclude that under certain conditions plastic deformations weaken and under other conditions promote the time decrease of permeability. This, according to the authors, is undoubtedly due to the lengthening or shortening of the paths of diffusion of impurities in the crystal lattice of the material under investigation, depending on the degree and type of deformation to which that lattice is subjected. There are 5 graphs, 3 tables and 11 references, 5 of which are Polish, 4 American and 2 German.

ASSOCIATION: Instytut podstawowych problemów techniki, Polskiej akademii nauk, zakład elektroniki (Institute of Basic Technical Problems of the Polish Academy of Sciences, Institute of Electronics)

SUBMITTED: January 5, 1959
Card 3/3

III

X III

P/022/60/000/004/002/003
A222/AC26

AUTHOR: Smoliński, Adam, Professor, Doctor of Engineering

TITLE: Capacitive Parametric Amplifiers

PERIODICAL: Przegląd Telekomunikacyjny, 1960, No. 4, pp. 101 - 107

TEXT: The article constitutes an elaborate report presented on October 21, 1959, at a seminar of the Katedra Podstaw Telekomunikacji (Department of Telecommunications Principles), Politechnika Warszawska (Warsaw Polytechnic), and is solely based on English-language references, 1883 through 1959 issues, nearly all of which are American. The author explains that a negatively polarized diode is the basic element of capacitive parametric amplifiers and illustrates the functional principles of pertinent circuits. Mention is made of Masers as the only gadgets with noise levels lower than that of diode amplifiers. There are 19 figures, 1 table and 31 English-language references. ✓

ASSOCIATIONS: Katedra Podstaw Telekomunikacji; Politechnika Warszawska (Department of Telecommunication Principles; Warsaw Polytechnic)

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SmOLINSKI, ADAM
FISCHER, F.A.

35

PHASE I BOOK EXPLOITATION FOL/5981

Symposium on Electroacoustic Transducers. Krynica, 1958

Proceedings of the Symposium on Electroacoustic Transducers [held in] Krynica, 17-26 September, 1958. Warsaw, Panstwowe Wydawnictwo Naukowe, 1961. 442 p. Errata slip inserted. 630 copies printed.

Sponsoring Agency: Polish Academy of Sciences. Institute of Basic Technical Problems.

Ed. in Chief: Janusz Kacprowski, Doctor of Sciences; Editing Committee: Ignacy Malecki, Professor, Doctor of Sciences; Wincenty Pajewski, Doctor; and Jerzy Wehr, Master of Sciences; Secretary: Juliusz Mierzejewski.

PURPOSE: This book is intended for physicists and acoustical engineers.

COVERAGE: The book is a collection of detailed research papers constituting the proceedings of a conference held in Krynica from 17 to 26 September 1958 under the auspices of the Institute of Technical Problems, Polish Academy of Sciences.

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Symposium on Electroacoustic Transducers

FCI/5981

The following basic problems are treated: 1) theoretical research on energy transformation processes; 2) experimental development of new types of transducers; 3) electroacoustic measurements; 4) technology of piezoelectric and magnetostrictive materials; 5) construction of transducers for technical needs; and 6) design of acoustical transducer systems. No personalities are mentioned. References (if any) follow the individual articles.

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- 11. Characteristic parameters of passive linear electromechanical transducers. Janusz Kacprowski 111
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D025/D109

New developments...

$\pm 0.05^\circ$. For measuring the width of the line of resonance the Stinson method was used. Work on microwave ferrite components was chiefly concentrated on isolators and circulators. Preparatory work was performed concerning the application of the ferromagnetic resonance in the millimeter wave range. Curves showing the properties of a field-shifting isolator equipped with a nickel-cadmium ferrite are shown in Fig. 6. Results of tests of the Faraday effect in Ferroxcube B 5 are discussed and a few technical data are given. There are 9 figures, 2 tables, and 32 references: 26 Soviet-bloc and 6 non-Soviet bloc. The four most recent references to English-language publications read as follows: Lewandowski, S.J. and Konopka, J.: On some problems in designing microwave Faraday rotation devices. IRE Trans. Microwave Theory and Techniques (1960), H.2, S. 249; Wadas, R.: Ferrimagnetic resonance in polycrystalline nickel-copper-zinc ferrites. Bulletin de l'Academie Polonaise des sciences, Serie des sciences techniques (1960), H.5, S.245; Wadas, R.: Line width and some magnetic properties of the System $\text{Ni}_{x-y}\text{Cu}_x\text{Co}_y\text{Fe}_2\text{O}_4$. Bulletin de l'Academie Polonaise des sciences, Serie des sciences techniques (1960), H.5, S. 241; and

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SMOLINSKI, Adam

Thin magnetic layers. Przegl elektroniki 2 no.3:250-256 J1 '61.

S/194/62/000/006/006/232.
D222/D309

AUTHORS: Lachowicz, Henryk and Smoliński, Adam

TITLE: Thin ferromagnetic films and their applications in mathematical machines

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, abstract 6-1-55 b (Przegl. elektron., 1961, 2, no. 4, 309-330)

TEXT: A thin magnetic film is a layer of ferromagnetic material of up to several angstroms thickness applied in a suitable way to a base of nonmagnetic, usually insulating, material. The investigation of thin films is of great importance, because these can be used as memory elements in digital computers. Two methods of preparing thin ferromagnetic films are described: evaporation in vacuum and electrolytic coating. Films for memory elements are usually made of Ni and Fe alloys, from 85 % Ni and 15 % Fe to 55 % Ni and 45 % Fe. The thickness of the layer can vary between 2000 - 3000 Å. The method of electrolytic coating is considerably simpler and does not require such complex apparatus as the method of vacuum evaporation.
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Thin ferromagnetic films and ...

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tion. Various investigations into, and methods of preparation of thin films not only of the usual materials, but also of precious metals (gold, platinum, silver, etc.) are described. The properties of thin magnetic films of different materials are described in detail. The relationship between the induction and the magnetic field intensity is discussed. The dynamic properties of thin films are of great importance when these are used in memory units (and also as switching elements). The essential parameter is the time taken for switching the film. This time interval is defined from the instant when the flux Φ reaches 10 % to the instant when it is 90 % of Φ_{max} under the influence of a fast rising impulse of switching field. Detailed investigations are carried out into these values for rectangular and cylindrical film spots. Investigations into the influence of mechanical stress and magnetizing field on the magnetic properties are described, and a number of examples are given for the use of thin films as memory elements. 16 figures and 44 references. [Abstracter's note: Complete translation.]

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SMOLINSKI, Adam, prof.

Electromechanical filters. Przegląd elektroniki 2 no.5/6:355-364 '61.

1. Redaktor działu "Przeglądu elektroniki."

SMOLINSKI, Adam, prof.

Electric filters with mechanical filtration; review of foreign literature. Przegl elektroniki 2 no.5/6:365-369 '61.

1. Redaktor dzialu "Przeglądu e.ektroniki."

CHODNIKIEWICZ, Teresa; SMOLINSKI, Adam, prof.

Experiments with electromechanical filters with disc elements vibrating longitudinally. Przegl elektroniki 2 no.5/6:380-382 '61.

1. Katedra Podstaw Telekomunikacji Politechniki Warszawskiej: redaktor dzialu "Przeglądu elektroniki" (for Smolinski).

SMOLINSKI, Adam, prof.

Summary of the conference in Section IV: electromechanical filters.
Przegl elektroniki 2 no.5/6:420 '61.

1. Redaktor dzialu "Przeglądu elektroniki."

SMOLINSKI, Adam

Electromechanical filters. Rozpr elektrotech 7 no.4:439-484 '61.

1. Instytut Podstawowych Problemow Techniki Polskiej Akademii Nauk,
Pracownia Materialow Magnetycznych.

(Electric filters)

SMOLINSKI, Adam

High-temperature masers. Przegl elektroniki 4 no.12:669-674
D '63.

1. Zaklad Magnetykow, Instytut Podstawowych Problemow Techniki,
Polska Akademia Nauk, Warszawa.

SMOLINSKI, Adam

Low-noise amplifiers. Rozpr elektrotech 9 no.3:343-371 '63.

1. Katedra Podstaw Telekomunikacji, Politechnika, Warszawa.

SMOLINSKI, A.; KACZEKOWSKI, Z.; SMIALKOWSKI, T.

Measuring system for highly selective filters using a Neuman type recording device. Archiw elektrotech 12 no. 4: 768-772 '63.

1. Zaklad Magnetykow, Instytut Podstawowych Problemow Techniki, Polska Akademia Nauk, Warszawa.