

BUTKEVICH, G.V., doktor tekhn. nauk, prof. (Moskva); CHERNYSHEV, N.M., kand.
tekhn. nauk (Moskva)

Present-day problems in designing and testing high-voltage switches.
Elektrichestvo no.7:22-30 J1 '65. (MIRA 18:7)

CHERNYSHEV, N.S.

Extending the sides of gondola cars for beet transport.
Zhel. dor. transp. 38 no.11:72 N '56. (MLRA 9:12)

1. Zamestitel' nachal'nika gruzovoy sluzhby dorogi, Odessa.
(Railroads--Cars)

CHERNYSHEV, N. T.

1273. Vsestoronneye razvitiye obshchestvesnogo khozyaysrva i rost oposhchestvennogo bogatsua kolkhozov. Pyatigorsk. 1954. 19s. 20sm. (Rost.) N. D. gos. un-t. im. V. M. Molotova. kafedra pour. ekonomii). 106 ekz. B. ts.--[54-54158].

SO: Knizhnaya Letopis, Vol. 1, 1955

BORISOV, Yevgeniy Filippovich; BROVER, Izrail' Moiseyevich, prof.;
LARINA, Raisa Yefimovna; MADYANOV, Aleksandr Stepanovich;
SAMOYLENKO, Ivan Ivanovich; CHERNYSHEV, Nikolay Tikhonovich

[Reader in economics; precommunist means of production] Khrestomatia po politicheskoi ekonomii; dokommunisticheskie sposoby proizvodstva. Pod red. I.M. Brovera. Moskva, Gos. izd-vo "Vysshaya shkola," 1963. 378 p. (MIRA 16:7)

1. Prepodavateli kafedry politicheskoy ekonomii Volgogradskogo pedagogicheskogo instituta (for Brover, Larina, Madyanov, Samoylenko, Chernyshev). 2. Vsesoyuznyy zaochnyy finansovo-ekonomicheskii institut (for Borisov).
(Economics)

CHERNYSHEV, O.A.

Cold deep drawing of nonferrous metals on hydraulic presses. Stan.
i instr. 26 no.8:31 Ag'55. (MLRA 8:12)
(Deep drawing (Metal work))

CHERNYSHEV, O. B.

27868. CHERNYSHEV, O. B. -- Opyt vyrashchivaniya osetrovoy molodi v nizov'nykh R. Kury v prudovykh usloviyakh. Trudy laboratorii osnov ryboudstva, T. II, 1949, S. 262-75. --Bibliogr: 8 Nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

CHEERNYSHEV, OLEG L.

ARKHANGORODSKIY, Aleksandr Grigor'yevich, kandidat tekhnicheskikh nauk;
CHEERNYSHEV, Oleg Leont'evich, inzhener; BELEN'KIY, Leonid
Mikheylovich, inzhener; BRYANTSEVA, V.P., inzhener, vedushchiy
redaktor; ZAYTSEV, G.Z., inzhener, redaktor; PONOMAREV, V.A.,
tekhnicheskiiy redaktor

[Instruments for disclosing static indeterminateness of girders]
Pribory dlia raskrytiia staticheskoi neopredelennosti balok. Moskva,
Akad.nauk SSSR, 1956. 13 p. (Pribory i steny. Tema 2, no.P-56-525)
(Testing machines) (Girders) (HLIA 10:10)

CHERNYSHEV O.L.

SOV/124-58-7-8103

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 113 (USSR)

AUTHORS: Arkhangorodskiy, A. G., Chernyshev, O. L.

TITLE: Mechanical Calculation of Statically Indeterminate Beams
(Mekhanicheskii raschet staticheskii neopredelimykh balok)

PERIODICAL: Tr. Nikolayevskogo korablestroit. in-ta, 1956, Nr 8, pp
3-24

ABSTRACT: A description is given of an instrument for the mechanical calculation of continuous beams resting on independent elastic supports. To determine the support moments and the amount of sag which the supports undergo, the span loading is replaced by a concentrated force the magnitude and distribution of which are so selected that the angles of rotation of the support sections are the same as those produced by the actual span loading. Additional concentrated forces are applied to the elastic supports, such that the pressure of each span on the elastic supports is the same as it would be in the presence of the actual load. With the load thus transformed, the bending moments and amount of sag remain unchanged. The instrument in question is a uniform continuous beam subjected to

Card 1/2

SOV/124-58-7-8103

Mechanical Calculation of Statically Indeterminate Beams

concentrated force loads along its spans and at its points of support. When a stepped variable-section beam is calculated, the spans are made to vary accordingly. All necessary formulae are given for determining: a) the concentrated forces needed to replace a given load, b) the requisite analog span lengths, and c) the requisite stiffness of the analog's elastic supports. The bending moment in the support sections of the analog is expressed by the curvature (measured with a curvature meter); the displacement of the supports is determined with an indicator. Formulae are included for translation of the analog data into data applicable to full-scale conditions. A description of the instrument is given, and a photograph of it is shown. There are examples of calculations.

A.A. Kurdyumov

1. Beams--Mechanical properties
2. Beams--Mathematical analysis

Card 2/2

SOV/124-58-5-5922

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 140 (USSR)

AUTHORS: Arkhangorodskiy, A.G., Belen'kiy, L.M., Chernyshev, O.L.

TITLE: A Device for Design Calculation of Beams on Flexible Supports on a Continuous Flexible Foundation (Pribor dlya rascheta balok, lezhashchikh na uprugikh oporakh i sploshnom uprugom osnovanii)

PERIODICAL: V sb.: Issledovaniya po teorii sooruzheniy. Nr 7. Moscow, Gosstroyizdat, 1957, pp 575-586

ABSTRACT: Description of a device serving for the mechanical calculation of statically indeterminate beams lying on free flexible supports. The basic idea of the calculation with the aid of this device consists in the following: The original beam is replaced by a similar model; the loads and the coefficient of the rigidity of the supports k_i are simulated; the sagging of the supports f_i is measured, and their reaction is calculated on the basis of measurements thereon by the formula $R_i = k_i f_i$. Then the results obtained from the model beam are extrapolated for the original beam. A continuous flexible foundation can be simulated by the simple device of increasing the number of flexible

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SOV/124-58-5-5922

A Device for Design Calculation of Beams (cont.)

supports. Examples of calculation are given and the possibility of extended field application of the described device is commented upon.

P.I. Klubin

1. Beams--Design
2. Beams--Testing equipment
3. Mathematics

Card 2/2

CHERNYSHEV, O. N. and BUGAYEV, V. A.

"Thermobaric Field of the Troposphere Over Moving Anticyclones", Tr.
Inst. Matem. i Mekhan AN Uzbek SSR, No 12, 1953, pp 71-75.

Qualitative analysis of peculiarities in the evolution and motion of
near ground anticyclones is processed with respect to the mean troposphere
pressure and temperature. A total of 36 cases of anticyclone motion in
European USSR is analyzed and conclusions made for the forecasting of
motion and development of anticyclones. (RZhFiz, No 1, 1955)
SO: Sum. No. 443, 5 Apr. 55

KOCHERZHEVSKIY, G.N.; GOLDOVANSKIY, P.N.; ZHURBENKO, E.M.; CHERNYSHEV, O.V.

Logarithmic antennas for shortwave operation. Elektrosviaz' 17 no.12:
58-67 D '63. (MIRA 17:2)

ACCESSION NR: AP4041000

S/0106/64/000/006/0012/0018

AUTHOR: Kocherzhevskiy, G. N.; Goldovanskiy, P. N.; Zhurbenko, E. M.; Cherny*shev, O. V.

TITLE: Input impedance of short-wave log-periodic antennas

SOURCE: Elektrosvyaz', no. 6, 1964, 12-18

TOPIC TAGS: antenna, short wave antenna, log periodic antenna, antenna input impedance, radio communication

ABSTRACT: The results of an experimental investigation of the input impedance of some spatial and planar log-periodic antennas are reported. Input-resistance vs. frequency curves are presented on the basis of measurements in the 200-1,000-mc band; a spatial antenna with a trapezoidal radiator and $\alpha = 14^\circ$, $\tau = 0.86$, and $\psi = 20^\circ$ was tested. Similar curves are reported for two other antennas having triangular radiators and $\alpha = 30^\circ$, $\tau = 0.9$, and $\psi = 20^\circ$ and 40° .

Card 1/2

ACCESSION NR: AP4041000

The results of experiments intended to raise the antenna input impedance by raising the characteristic impedance of the distribution feeder are also presented. A formula and graphs are offered for calculating the input impedance of log-periodic antennas. Orig. art. has: 13 figures, 4 formulas, and 1 table.

ASSOCIATION: MEIS (Moscow Electrotechnical Institute of Communications)

SUBMITTED: 21Sep63

ENCL: 00

SUB CODE: EC

NO REF SOV: 002

OTHER: 003

Card 2/2

CHERNYSHEV, P.

Work of voluntary inspectors. Avt. transp. 43 no.1:5 Ja '55.
(MIRA 18:3)

CHERNYSHEV, P.

The first thousand. NTO no.5:59 My '60.

(MIRA 14:5)

1. Predsedatel' Buryatskogo oblastnogo pravleniya nauchno-
tekhnicheskogo obshchestva stroitel'noy industrii, g. Ulan-Ude.
(Buryat-Mongolia—Technical societies)

CHERNYSHEV, P., Geroy Sotsialisticheskogo Truda

On the duty and honor of the Soviet engineer. Sots. trud 8 no.9:
3-11 S '63. (MIRA 16:10)

1. Glavnyy inzh. Leningradskogo metallicheskogo zavoda im.
XXII s"yezda Kommunisticheskoy partii Sovetskogo Soyuza.

CHEERNYSHEV, P.A.; OGIYENKO, S.I., red.; RADNAYEV, A.N., tekhn.red.

[New building materials and components made of local raw materials] Novye stroitel'nye materialy i izdeliia iz mestnogo syr'ia. Ulan-Ude, Buriatskoe knizhnoe izd-vo, 1960. 58 p.
(MIRA 14:3)

(Building materials)

(Building blocks)

CHERNYSHEV, P.F.

Soluble starch. Tekstil.Prom. 10, No.1, 38-9 '50.
(CA 47 no.15:7802 '53)

(MLBA 2:12)

84 34 48 69 78 84 84

CHERNYSHEV, P.F.

IVANOVA, M.N.; VLASOV, P.V., ~~CHERNYSHEV, P.F.~~; VYATKIN, A.I., retsenznet;
KUPRIYANOVA, F.S., redaktor; GUSEVA, Ye.M., redaktor; NEKRASOVA, O.I.,
tekhnicheskii redaktor

[Work organization for assistant foremen servicing automatic cotton
looms (AT-100, ATS-5 and N)] Organizatsiia truda pomoshchnikov
mastera, obsluzhivaniushchikh avtomaticheskie tkatskie stanki v
khlopchatobumashnoi promyshlennosti (AT-100, ATS-5 i N) Pod red.
F.S.Kupriianova. Moskva, Gos. nauchno-tekhn. izd-vo Ministerstva
promyshl. tovarov shirokogo potrebleniia SSSR, 1954. 166 p.
(Looms) (MIRA 8:4)

CHERNYSHEV, P. G.

Handbook for estimating the cost of railroad construction 2. perer. izd. Moskva,
Gos. transp. zhel-dor. izd-vo, 1948. 245 p. (49-54252)

TF193.C5 1948

CHERNYSHEV, P.G.; VASIL'YEV, N.P., inzhener, redaktor; YUDZON, D.M.,
tehnicheskiiy redaktor.

[Handbook on estimating in railroad construction] Rukovodstvo po
sostavleniiu smet na zheleznodorozhnoe stroitel'stvo. 3-e perer.
izd. Moskva, Gos. transport. zheleznodorozh. izd-vo, 1952. 231 p.
[Microfilm] (MLRA 7:11)
(Railroads--Economics of construction)

~~CHERNYSHEV, Petr Georgiyevich; FILIMONOV, Semen Yevgen'yevich; RUSANOV,
Nikolay Vasil'yevich [deceased]; BABKIN, Aleksandr Rodionovich;~~
KRISHTAL', L.I., red.; BOBROVA, Ye.N., tekhn.red.

[Estimates, bookkeeping, and technical records in construction
and track management] Smety, uchët i tekhnicheskaja otchetnost'
v stroitel'stve i putevom khoziaistve. Pod obshchei red. P.G.
Chernysheva. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 235 p.
(MIRA 12:9)

(Railroads--Accounts, bookkeeping, etc.)

CHERNYSHEV, P. K.

USSR -/ General and Special Zoology. Insects

P

Abs Jour: Ref Zhur-Biol., No 1, 1958, 2355

Author : Chernyshev P. K.

Inst :

Title : The Control of Granary Pests in the Stavropol Area

Orig Pub: Zashchita rast. ot vredit. i bolezney, 1956, No 4,
30-32

Abstract: In the dry steppes of Stavropol, the rice weevil [Calandra oryzae] and the Rhopalocera cockchafer [Tenebrionidae] greatly harm the humid grain in the granaries. The cleaning of the grain on clear winter days, at a temperature of below 0°, destroys these and other pests. In mounds of grain, the top layer of 10-15 centimeters infested by the Plodidia inter-puntella Hb, should be removed and cleaned through sorting, while the waste should be disinfected.

Card 1/2

27

COUNTRY : USSR
 CATEGORY : General and Specialized Zoology. Insects. F
 Harmful Insects and Acarids.
 ABS. JOUR. : Entomol., No. 23, 1958, No. 135094
 AUTHOR : Chernyshev, P. A.
 INST. : ~~USSR Academy of Sciences, Institute of Zoology and Animal Ecology~~
 TITLE : Harmful granary insects in the zone of arid steppes of Stavropol'sye.
 ORIG. JOUR. : Materialy po izuch. Stavropol'sk. kraya. Vyp. 3, 1956, 73-84
 ABSTRACT : According to the data for 1951-1955, in the course of which both wet or dry summer and mild or severe winter were represented, most harmful economically are: granary and rice weevil, southern granary snout moth, rhopalocerous and rice weevil, southern granary snout moth, rhopalocerous beetle and Mauritian gnat. Connected ecologically with the sites of the warming of the grain are: rice weevil, short-horned meal beetle, corn beetle (recorded here for the first time) and "akhsvarus" (not recorded previously in northern Caucasus). Less harmful are: dark beetle and

Card: 1/2

COUNTRY : USSR
CATEGORY : General and Specialized Zoology. Insects. P
 : harmful insects and acarids.
 : Zhenitz., No. 13, 1958, No. 100301
YEAR :
TITLE :
ORIG. PUB. :
ABSTRACT : 1. Harmlessly weevil beetle (sometimes propagates in large numbers), amblyda beetle, granary moth, snout beetle, wide-proboscis weevil (previously not recorded in USSR), black carpet beetle (Attagenus albicus) and mill snout moth (the last two species damage the processed grain products). The least harmful and seldom encountered are: the large flour and pitch-brown (Leptitobius pictus) beetle (in heated buildings), the small and red beetle (conspicuous to insects), weevil beetles, weevils beetle (Leptitobius bifasciatus) and others. Not shown are the cereal and grain moths (Tinea miscella), grain beetle and confused beetle. -- A. P. Adnjanov

Card: 1/1

SOLODOVNIKOV, V.G., glav. red.; KHRAMELASHVILI, V.N., zam. glav. red.;
GOLANSKIY, M.M., red.; DIKANSKIY, M.G., red.; KAMUSHER, K.G.,
red.; LITVIN, Z.V., red.; FITUNI, L.A., red.; CHERNYSHEV, P.M.,
red.; SHAPIRO, A.I., red.; SHEVCHENKO, G.N., tekhn. red.;
GUSEVA, A.P., tekhn. red.

[International economic organizations; handbook] Mezhdunarod-
nye ekonomicheskie organizatsii; spravochnik. 2., dop. izd.
Moskva, Izd-vo Akad. nauk SSSR, 1962. 1108 p. (MIRA 15:2)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhduna-
rodnykh otnosheniy.

(International agencies--Handbooks, manuals, etc.)

CHERNYSHEV, P.N., inzh.

Transition of repair shops to gas fuel. Zhel. dor. transp. 41
no.10:68 0 '59. (MIRA 13:2)

1. Nachal'nik tekhnologicheskogo otdela proyektno-konstruktorskogo
byuro Glavnogo upravleniya po remontu podvishnogo sostava i proizvodstvu
zapasnykh chastei.
(Railroads--Repair shops)

BEZTSENNYI, Viktor Ivanovich, inzh.; PETROV, Vasiliy Afanas'yevich, kand. tekhn. nauk; SAKHAROV, Mikhail Borisovich, inzh.; TUROVTSEV, Vasiliy Ivanovich, kand. tekhn. nauk. Prinsipal uchastiye CHERNYSEV, P.N., inzh.; KHUDOKORMOV, V.I., inzh., retsenzent; EVIN, G.D., inzh., retsenzent; DERGACH, Ye.S., inzh., retsenzent; GROKHOL'SKIY, N.F., kand. tekhn. nauk, retsenzent; NIKOLAYEV, K.I., kand. tekhn. nauk, retsenzent; SMARAGDOV, G.I., kand. tekhn. nauk, retsenzent; ZOLOTNIKOV, I.M., kand. tekhn. nauk, retsenzent; VISHNYAKOV, B.I., aspirant, retsenzent; ARSHINOV, I.M., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Car repairing at factories] Remont vagonov na zavodakh. By V.I. Beztsennyi i dr. Moskva, Vses.izdatel'sko-poligr. ob"edinenie M-va putei soobshchenia, 1961. 363 p. (MIRA 14:12)

1. Kafedra "Vagony i vagonnye khozyaystvo" Leningradskogo instituta inzhenerov zheleznodorozhnogo transporta (for Grokhol'skiy, Nikolayev, SmaragdoV, Zolotnikov)
(Railroads--Cars--Maintenance and repair)

CHERNYSHEV, P.N., inzh.; CHURSIN, Yu.G., inzh.

Mechanization of external washing and cleaning of tank cars.
Mekh.i avtom. proizv. 15 no.6:34-37 Je '61. (MIRA 14:6)
(Tank cars--Cleaning)

CHERNYSHEV, Pavel Nikolayevich; SOROKA, Arsentiy Kirillovich; NALIVAYKO, Petr Nikolayevich; MERKEL', Ya.P., inzh., retsenzent; BRAYLOVSKIY, N.G., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Repair of cars on a conveyor; the experience of Kanash, Darnitsa, Borisoglebsk, and Nizhnedneprovsk car repair shops] Remont vagonov na konveyere; opyt Kanashskogo, Darnitskogo, Borisoglebskogo i Nizhnedneprovskogo vagonoremontnykh zavodov. Moskva, Transzheldorizdat, 1962. 155 p. (MIRA 16:1)

(Railroads--Repair shops)
(Assembly-line methods)

CHERNYSHEV, P.P.

Remote results of surgery of peripheral nerves necessitated by gunshot
wounds. Vop.neurokhir. 17 no.2:46-53 Mr-Apr '53. (MLRA 6:5)
(Nerves--Surgery)

CHERNYSHEV, P.S.

IRUZHINSKIY, I.A., laureat Stalinskoy premii; CHERNYSHEV, P.S., inzhener, ~~retsensent~~; LOMACHENKOV, S.Ye., inzhener, redaktor; PETERSON, M.M., ~~retsenziy~~ tekhnicheskiiy redaktor.

[Methods of machining complex surfaces on machine tools] Metody obrabotki slozhnykh poverkhnostei na metallorazhushchikh stankakh. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1955. 315 p. [Microfilm] (MIRA 8:5)
(Metal cutting) (Surfaces (Technology))

CHERNYSHEV, P.S., inzhener.

Weldments in steam, gas, and hydraulic turbine manufacture at the
Leningrad Metallurgical Plant. Energomashinostreenie no.4:19-23
Ap '56. (Leningrad--Turbines--Welding) (MIRA 9:7)

ARAKCHEYEV, A.A.; HERZIN, S.P.; BELYAVSKIY, V.A.; KOLOTILOV, A.N.;
MOLOKANOV, S.I.; NEKRASOV, A.M.; LAVRENEKO, K.D.; POLENTSEV, M.K.;
ROZHDESTVENSKIY, A.P.; SATANOVSKIY, A.Ye.; SIRIY, P.O.; SPIRIDONOV,
K.A.; CHERNYSHOV, P.S.; SHUBENKO-SHUBIN, L.A.

Savva Mikhailovich Zherbin; obituary. Elek, sta. 30 no.2:96 F
'59. (MIRA 12:3)

(Zherbin, Savva Mikhailovich, 1903-1958)

KHIZHENYAK, P.D., glavnyy red.; GLAZOV, G.A., zam.glavnogo red.; BLYUMBERG, V.A., red.; VASIL'KOV, B.A., red.; GLUSHKOV, A.T., red.; ZHOLOBOV, V.V., red.; KAMNEV, P.V., red.; KANTIYEV, N.M., red.; KISELEV, M.I., red.; KOSTYGOV, I.N., red.; MOISEYEV, A.A., red.; NOVIKOV, A.P., red.; SIMIN, S.A., red.; CHEBENYSHEV, P.S., red.; SHAGURIN, K.A., red.; SHUB, I.Ye., red.; DEMENT'YEVA, I.K., red.; SEMENOVA, A.V., tekhn.red.

[Experience of mechanical engineers; technical information publication] Opyt mashinostroitelei; informatsionno-tekhnicheskiy sbornik. Leningrad, Sovet nar.khoz.Leningr.ekon.administrativnogo raiona. TSentr.biuro tekhn.informatsii, 1960. 88 p.

(MIRA 13:11)

(Mechanical engineering)

CHERNYSHEV, P.S., Geroy Sotsialisticheskogo Truda

Soviet engineer is a high title. NTO 4 no.12:2-5 D '62.

(MIRA 16:1)

1. Predsedatel' soveta pervichnoy organizatsii Nauchno-
tekhnicheskikh obshchestv, glavnyy inzh. Leningradskogo
Metallicheskogo zavoda imeni XXII s" yezda Kommunisticheskoy
partii Sovetskogo Soyuza.

(Engineers)

CHERNYSHEV, P.S., Geroy Sotsialisticheskogo Truda

Visible features of communism. NTO 5 no.6:5-6 Je '63.

(MIRA 16:9)

1. Predsedatel' soveta Nauchno-tekhnicheskogo obshchestva i glavnyy inzh. Leningradskogo metallicheskogo zavoda imeni XXII s'yezda Kommunisticheskoy partii Sovetskogo Soyuza.

I 45215-65

ACCESSION NR: AP5014914

UR/0096/64/000/012/0032/0036

AUTHOR: Chernyshev, P.S. (Engineer); Polishchuk, L. (Engineer)

TITLE: Selection of a promising type of high-power steam-gas turbine

SOURCE: Teploenergetika, no. 12, 1964, 32-36

TOPIC TAGS: electric power engineering, steam turbine, gas turbine engine, electric power production

ABSTRACT: Several compounded steam-gas turbines are compared. The 500 megawatt K-500-163 steam turbine designed and currently being manufactured by the

Metals Plant (LMP) promises to find extensive application in Siberia. These turbines in large power stations will produce more power with cheaper fuel. Even so, they are less economical than comparable west European and US machines. The 1980 goal of 2700 to 3000 billion kWh in additional electric power output from the national enterprises. Cost savings can be achieved by using these turbines in cycles, as indicated by the general trend

tion.

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L 45215-65

ACCESSION NR: AP5014914

The LMP is presently building highly efficient 100 megawatt GT-100-750, the largest gas turbine in the world. Without a regenerative heat exchanger, the efficiency is 30-35%. The specific weight of the turbine, including auxiliary equipment, is 4 kg/kw.

Owing to the efficiency of the cooling system, no extra austenitic steel is required. Because of its exceptional strength, it is suited for peak load and long-term load operation. The heating raises the coefficient of fuel economy. The machine is fully automated and has a control system of the 10 and 60 megawatt models of the 750 series. Components of the 60 and 100 megawatt models are interchangeable with the 100-750.

The steam-gas cycle appears as one of the most advanced and efficient turbines have been developed. The efficiency of the steam-gas turbine is 40-45%. It is more efficient than the A-300-24 steam turbine. It has control and regulation problems and restr

Card 2/3

L 45215-65

ACCESSION NR: AP5014914

fuel), it will not be put into use in the near future. Lacking adequate experience with this type of turbine, immediate attention should be turned to a design in which the gas turbine exhaust gases are dumped into the furnace. Advantages are enumerated and characteristics of this type of turbine are analyzed. Examples of various turbine combinations are given in table.

ASSOCIATION: Leningradskiy Metallichekiy zavod (Leningrad Metals Plant)

SUBMITTED: 00

ENCL: 00

SUB CODE: EE

NO REF SOV: 000

OTHER: 000

JPRS

Card

3/3

1 21/727-66 EWP(m)/EWP(y)/EWP(j)/T IIP(a) WW/RM
ACC NR AP6005403 (A) SOURCE CODE: UR/0323/65/000/005/0039/0046

AUTHOR: Marchenko, L. N. (Engineer); Kotov, M. P. (Professor); Sorokina, N. S. (Candidate of technical sciences); Chernysheva, T. Ye. (Candidate of chemical sciences)

ORG: Kiev Technological Institute of Light Industry (Kiyevskiy tekhnologicheskii institut legkoy promyshlennosti)

TITLE: Investigation of the physical and mechanical properties of cements with polyamide, polyester, and phenolformaldehyde resin bases

SOURCE: IVUZ. Tekhnologiya legkoy promyshlennosti, no. 5, 1965, 39-46

TOPIC TAGS: cement, polyamide resin, phenolformaldehyde resin, polyester, elasticity, adhesive, adhesion

ABSTRACT: New thermoplastic, rapid-setting, and elastic adhesive resins have been obtained with polyamide, polyester, and phenol-formaldehyde resin bases. These cement compositions (KTILOL) can be used for obtaining an adhesive-reinforcing seam for mechanized adhesive joining of parts of footwear and clothing. The effect was studied of the phenolformaldehyde resins on the properties of KTILOL cement. The effects of various polyester resins on the strength and

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L 24727-66

ACC NR: AP6005403

elasticity of adhesive joints was analyzed. Compositions based on polyether resins having a 1:1 molar ratio of anhydride and alcohol with the acid number before the moment of gelatinization have greater adhesive-joint strength and less adhesive-seam thickness. Orig. art. has: 5 figures and 4 tables. [Based on author's conclusions] [NT]

SUB CODE: 11/ SUBM DATE: 18Jan65/ ORIG REF: 010/ OTH REF: 003/

Card 2/2 *MGS*

L 26596-66 EWT(d)/EWT(m)/EWP(f)/T-2/EWP(h)/ETC(m)-6/EWP(v) WW/JT

ACC NR: AP6013385

SOURCE CODE: UR/0096/66/000/005/0002/0007

AUTHOR: Polishchuk, V.L.(Engineer); Chernyshev, P.S.(Engineer)

ORG: Ministry of Heavy, Power, and Transport Machine Building-LMZ im. XXII Congress of the CPSU (Ministerstvo tyazhelogo, energeticheskogo i transportnogo mashinostroyeniya)

TITLE: Present status and future trends in the development of power gas turbine building

SOURCE: Teploenergetika, no. 5, 1966, 2-7

TOPIC TAGS: gas turbine, turbine compressor, turbine cooling, thermoelectric power plant, steam turbine, turbine blade

ABSTRACT: Extensive effort is being made to develop gas turbine units with combined steam-gas cycles to improve thermal power plant economy. The Central Boiler and Turbine Institute (TsKTI), together with several boiler and turbine plants, are engaged in developing steam-gas units with high pressure steam generators. Two of these units, with capacities of 40 and 14 Mw, have already been built and are being tested. Preliminary work is under way to build a similar 200,000 kw steam-gas unit.

Construction has been completed and operational tests are presently being conducted on several conventional gas turbine units: these include a 25 Mw unit, built by the Leningrad Metal Plant (LMP); a 50 Mw unit, by

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UDC: 621.438.(048)

I 26596-66

ACC NR: AP6013385

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the Khar'kov Turbine Plant (KhTP); a 12 Mw unit, by the Nevsk Plant (NP); and also a 4 and a 1.5 Mw unit built by the Kaluga Turbine Plant and the Leningrad plant "Economizer". Despite the development of these gas turbine units, it is noted that the Soviet gas turbine building industry has not yet accumulated sufficient experience to produce highly efficient and operationally reliable power gas turbines demanded by the power engineering industry. Soviet industry is furthest advanced in gas turbine technology in the field of compressor drives for gas pipelines. The Soviets are presently mass producing 4--10,000 kw turbocompressors for pumping natural gas. Considerable operational experience has been accumulated with 4--5,000 kw units especially at the Nevsk machine building plant. The operational reliability of gas turbine drives is presently 98%. The intensive research and development work now being conducted is expected to yield new improved prototypes of high-power gas turbines and their subsequent mass production.

The Leningrad Metal Plant, the largest Soviet supplier of steam turbines, is doing most of the current research work. At the end of 1960, this plant completed a 25,000 kw gas turbine prototype. The principal design feature of this turbine is the effective cooling of the rotor and blades making it possible to use rotors made of perlite chrome-molybdenum steel at inlet temperatures up to 700°C. During the design and manufacture of the basic model of this turbine, a great deal of experimental research work was carried out jointly by the TsKTI, the Kiev Polytechnic Institute, the VTI, and others. Among the most

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ACC NR: APG013385

important research problems were: 1) The development and aerodynamic testing of the air compressor flow-through sections. full scale testing of compressors at maximum rpm, and measuring the dynamic stresses in the compressor blades; 2) aerodynamic and vibrational testing of the turbine stages; 3) testing and refinement of the combustion chamber and its components, and 4) the testing of the turbine cooling system. At the time the first turbine prototype was completed, there were no facilities for running "hot" tests, and, therefore, a large portion of the experimental testing was conducted under actual operating conditions. As a result of these experimental operations, new types of flame tubes and burners were developed making it possible, at a 700°C gas temperature, to ensure that the variation in the temperature field before the turbine is less than 30°C and that the maximal flame tube temperature does not exceed 600°C. The major difficulty encountered during testing was the temperature monitoring of the rotor and blade roots. This problem was solved by designing a special multipoint switch which was mounted in the axial boring of the turbine rotor. The test results are being used to make necessary design modifications in the construction of a series of similar turbine units for the Yakutsk power station.

The Leningrad Metal Plant has recently completed the design and experimental testing and has started on the construction of a 100,000 kw gas turbine unit. The high compression ratio and interstage cooling will make it possible to achieve an efficiency of 27--28%.

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ACC NR: AP6013385

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To determine the dynamic stresses in turbine blades, the Leningrad Electrotechnical Institute has developed a contactless method of transmitting signals from strain-gage pickups. This method makes it possible to measure stresses at 58 different points on rotating parts.

In recent years, work has been conducted on the introduction of electrohydraulic control systems for steam and gas turbines.

The intensive experimental research currently being conducted in the USSR to develop highly efficient systems for air and liquid cooling of rotor blades and other gas turbine components and to find new heat resistant materials will make it possible to develop gas turbines with much higher gas inlet temperatures. This would increase their efficiency and expand their field of application. Orig. art. has: 7 figures and 1 table.

[ATD PRESS: 4240-F]

SUB CODE: 10 / SUBM DATE: none

Cord

4/4

B.L.G.

L 23133-66 EWA(h)/FCC/EWT(1) GW
ACC NR: AP6006670

SOURCE CODE: UR/0203/66/006/001/0143/0146

AUTHORS: Chavdarov, S. S.; Chernyshova, S. P.; Shatkhin, Kh. Z.

ORG: Rostov-on-Don State University (Rostovskiy-na-Donu gosudarstvennyy universitet)

TITLE: Stability of reflections from the sporadic E layer and solar activity

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 1, 1966, 143-146

TOPIC TAGS: solar activity, E layer, sunspot, solar cycle, electromagnetic wave reflection

ABSTRACT: The authors point out the contradictions in the literature concerning the dependence of E-layer reflections on phases of the solar cycle. They consider the following parameters characterizing stability of reflection from E_s (parameters that they previously introduced into the literature): τ - duration of continuous reflections, $(pE_s) \tau \gg \tau_0$ - probability of the appearance of E_s during certain hours of the day with a given duration of uninterrupted reflections (hereafter called P), θ - the stability coefficient, characterizing the rate of decrease in

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UDC: 550.388.2:523.745

L 23133-66
AGC NR: AP6006670

probability P with increase in τ . A number of observational data are examined, particularly ionospheric data from Rostov-on-Don for 1960--64 in conjunction with 1958--59 data. Graphs of probability for these periods have been plotted. From an examination of the results it appears that P and θ are the best parameters for detailed definition of the E_s layer. The normal probability of the E_s layer has no detectable connection with the cycle of solar activity. The probability of the layer with a given duration as τ increases shows a notable reciprocal correlation with the sunspot number. A reciprocal dependence on phase of the solar cycle is clearly manifested in changes in duration of reflections and in the stability coefficient. The reciprocal dependence of P and θ on the sunspot number may be explained to some extent by the fact that in a year of maximal solar activity the processes at work in the ionosphere are more sharply manifested, and these lead to an increase in amount of reflection of short duration. Orig. art. has: 3 figures.

SUB CODE: 04, 03 SUBM DATE: 24May65/ ORIG REF: 007/ OTH REF: 003

Card 2/2

RB

CHERNYSHEV, R., inzh.

A d.c. millivoltmeter. Radio no.5:57-60 My '65.

(MIRA 18:5)

CHERNYSHEV, S.

First results of the work of the Ukrainian Agricultural
Transportation Center. Avt.transp. 42 no.3:7-8 Mr '64.
(MIRA 17:4)

1. Zamestitel' ministra avtotransporta i shosseynykh dorog
UkrSSR.

CHERNYSHEV, S.

Consolidation of automot've transportation units and the
centralization of servicing and repairing. Avt. transp.
43 no.4:34-35 Ap '65. (MIRA 18:5)

1. Zamestitel' ministra avtomobil'nogo transporta i shosseynykh
dorog UkrSSR.

CHERNYSHEV, S. (Moscow)

"Synthese und Eigenschaften Silicium enthaltender Styrole."

paper submitted for the Symposium on Organic and Non-Siliceous Silicon Chemistry,
Dresden, 12-14 May 1958.

CHERNYSHEV, S.

Mechanize loading and unloading operations more rapidly. Avt.transp.
38 no.11:10-12 N '60. (MIRA 13:11)

1. Zamestitel' ministra avtomobil'nogo transporta i shosseynykh
dorog USSR.

(Loading and unloading--Technological innovations)

CHERNYSHEV, S.

Care of man. Avt. transp. 43 no.12:6-7 D '65. (MIRA 18:12)

1. Zamestitel' ministra avtomobil'nogo transporta i shosseynykh dorog UkrSSR.

CHERNYSHEV, S. F.

CHERNYSHEV, S. F.: "Basic problems of assembling multistory skeleton-panel dwelling houses". Khar'kov, 1955. Min Higher Education Ukrainian SSR. Khar'kov Construction Engineering Inst. (Dissertations for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya letopis', No. 52, 24 December, 1955. Moscow.

CHERNYSHEV, Sergey Fedorovich; KOMENDANT, K.P., red.; BABIL'CHANOVA,
G.A., tekhn. red.

[Alignment in the assembly of structural elements] Vyverka
pri montazhe stroitel'nykh konstruksii. Kiev, Gosstroi-
izdat USSR, 1962. 97 p. (MIRA 15:7)
(Precast concrete construction)

SHVIDENKO, Valentin Iosifovich, prof.; MATOKHIN, Vladimir Pavlovich, dots., kand. tekhn. nauk; SMIRNOV, Aleksey Mikhaylovich, dots., kand. tekhn.nauk; FOKOV, Rostislav Ivanovich, kand. tekhn. nauk; CHERNYSHEV, Sergey Fedorovich, dots.kand.tekhn. nauk; YAKIMENKO, L.I., red.

[Assembly of multistory industrial buildings] Montazh mnogo-etazhnykh promyshlennykh zdaniy. Khar'kov, Izd-vo Khar'kovskogo univ., 1964. 142 p. (MIRA 18:3)

L 31326-66 EWT(1)/EWT(m)/EWP(j)/T/ETC(m)-6 IJP(c) WW/JW/RM

ACCESSION NR: AP5025984

UR/0294/65/003/005/0700/0707 23
547.211+547:212:532.13+533.21 22

AUTHOR: Kessel'man, P. M.; Chernyshev, S. K. B

TITLE: Thermophysical characteristics of some hydrocarbons at high temperatures

SOURCE: Teplofizika vysokikh temperatur, v. 3, no. 5, 1965, 700-707

TOPIC TAGS: hydrocarbon, ethylene, ethane, methane, gas properties, equation of state, *heat property, high temperature research*

ABSTRACT: The object of the work was the simultaneous determination of the transport properties and the second and third virial coefficients of methane and ethylene and ethane over a wide temperature interval including the high temperature region. The theoretical treatment is based on the following averaged potential function for intermolecular interaction:

$$u = 4\epsilon(T) \left\{ \left[\frac{\sigma(T)}{r} \right]^{12} - \left[\frac{\sigma(T)}{r} \right]^6 \right\}, \quad (1)$$

in which the potential parameters $\sigma(T)$ and $\epsilon(T)$ are not constants but are some
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ACCESSION NR: AP5025984

functions of the temperature. Based on data from the literature, calculated values of the viscosity and the second and third virial coefficients for methane, ethane, and ethylene are tabulated for temperatures from 300 to 3000 K. Values of the viscosity, calculated by this method, are found to agree with experimental data within 1-2%. However, at high temperatures where experimental data on compressibility are not available, the use of the potential parameters for a spherical potential found from the second virial coefficient leads to unsatisfactory results; the deviation in this case between theoretical and experimental values reaches 10-15%. This is attributed to insufficiently realistic values of the spherical potential for describing the interaction of nonspherical molecules. A comparison of calculated and experimental values of thermal conductivity shows a deviation within the experimental error (from 1-3%, and only reaching 5-6% at low temperatures). Orig. art. has: 7 formulas, 4 figures, and 4 tables

ASSOCIATION: Odesskiy tekhnologicheskii institut im. M. V. Lomonosova
(Odessa Institute of Technology)

SUBMITTED: 24Jul64

ENCL: 00

SUB CODE: 07, 20

NR REF SOV: 007

OTHER: 015

Card 2/2 0.2

FOMKIN, K.V.; CHERNYSHEV, S.M.

Characteristics of the formation of the oil pools of the
Praskoveya-Achikulak Area of uplifts. Trudy MINKHiGP no.43:
75-81 '63. (MIRA 17:4)

VAGIN, S.B.; GORDINSKIY, G.Ye.; GRIBOVA, Ye.A.; DUBROVSKAYA, M.A.; ZHDANOV, M.A., prof. ; ZYUZINA, N.G.; KARTSEV, A.A.; KNYAZEV, V.S., dots.; LEONOVA, R.A.; POKROVSKAYA, L.V.; SUDARIKOV, Yu.A.; YUDIN, G.T., dots.; SOKOL'SKAYA, Z.V.; TOMKINA, A.V.; USPENSKAYA, N.Yu., prof.; FOMKIN, K.V., kand.geol-min.nauk; CHERNYSHEV, S.M.; YAVORCHUK, I.V.; BAKIROV, A.A., prof., red.; DEMENT'YEVA, T.A., ved. red.

[Geological conditions and basic characteristics of oil and gas accumulations in the limits of the Epi-Hercynian Platform in the south of the U.S.S.R.] Geologicheskie uslovia i osnovnye zakonomernosti razmeshcheniia skoplenii nefi i gaza v predelakh epigertsinskoj platformy iuga SSSR. Pod obshchei red. A.A.Bakirova. Moskva, Nedra. Vol.2. 1964. 306 p. (MIRA 17:12)

1. Moscow. Institut neftekhimicheskoy i gazovoy promyshlennosti.

CHERNYSHEV, S.M.; YUDIN, G.T.; PLOTNIKOV, M.S.; KONONOVA, I.B.

Recent data on the distribution of red-colored and magmatic rocks in the Kuma region of eastern Ciscaucasia. Izv. vys. ucheb. zav.; neft' i gaz 8 no.3:8,12 '65.

(MIRA 18:5)

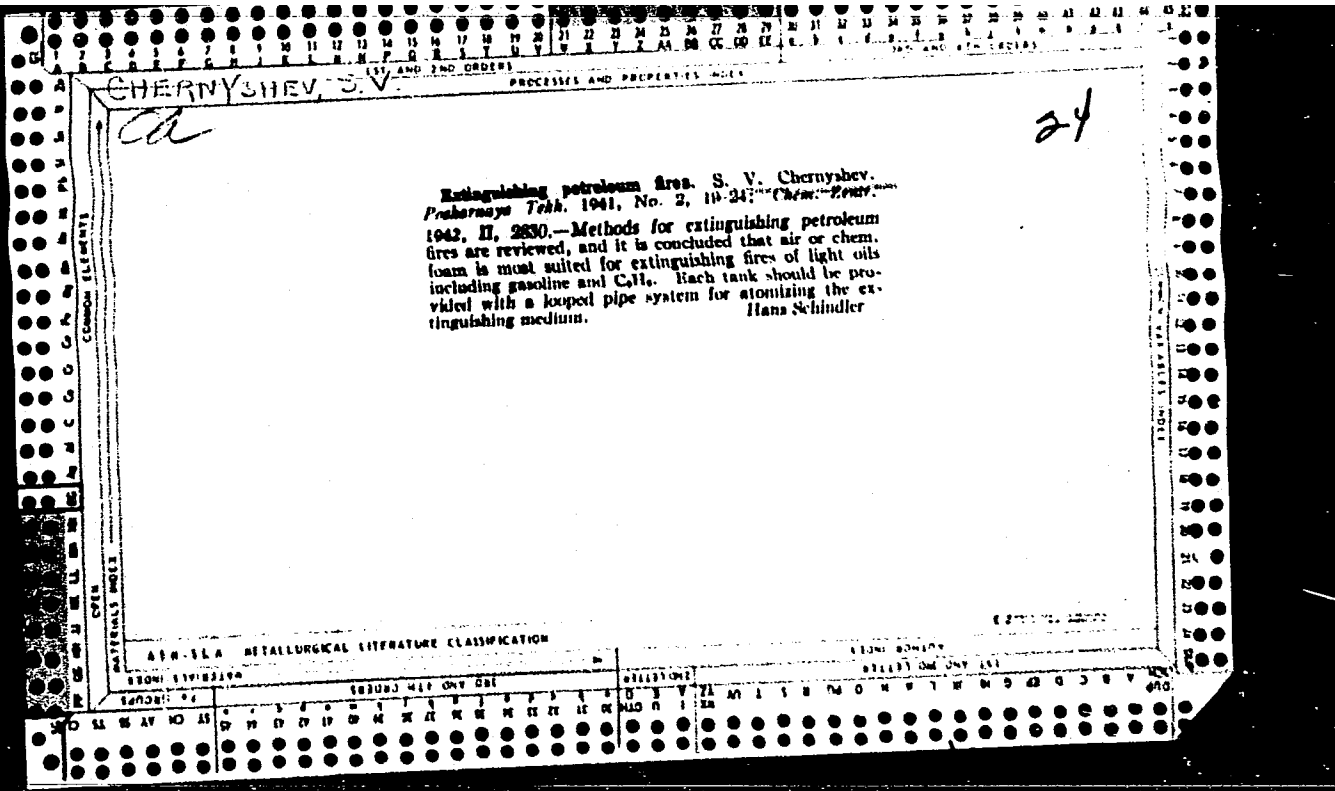
1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akademika Gubkina i trest "Stavropol'neftegazrazvedka".

CHERNYSHEV, S.N., aspirant

Exogenetic deformation of trap rocks in the Angara Valley.
Izv. vys. ucheb. zav.; geol. i razv. 8 no. 12:78-85 D '65
(MIRA 19:1)

1. Vsesoyuznyy ordena Lenina proyektno-izyskatel'skiy i
nauchno-issledovatel'skiy institut imeni Z. Ya. Zhuka.

3



CHERNYSHEV, S.V.

22623. CHERNYSHEV, S.V. Opyt bor'by s boleznyu ayeski porosyat. Veterinariya, 1949,
No. 7, S. 12-13

SO: LETOPIS' No. 20, 1949

CHERNYSHEV, S. YE.

1. RUDNEV, L. V.; CHERNYSHEV, S. YE.; ABROSIMOV, P. V., Arch.; KHRYAKOV, A.F., Arch.

2. USSR 600

4. Moscow University

7. 26-story building of Moscow State University, Gor. khoz. Mosk, 23, No. 7, 1949.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

14(10)

SOV/19-59-6-297/309

AUTHOR:

Skripko, V.L., and Chernyshev, V.P.

TITLE:

An Installation for Thermal Ground Reinforcement

PERIODICAL:

Byulleten' izobreteniy, 1959, Nr 6, p 60 (USSR)

ABSTRACT:

Class 84c, 1. Nr 118768 (598799 of 4 May 1958). 1)
An installation as in title, employing hot gases, obtained in the combustion process of liquid, gaseous, or pulverized fuels, which are introduced into the borehole already drilled in the ground. The installation is provided with a compressor mounted on a vertical shaft together with a gas turbine feeding the air necessary for the fuel combustion into the borehole, and with spray burners for the feeding and spraying of the fuel. To utilize the kinetic energy of the hot gases for driving the compressor, the installation is made in the form of a hollow cylinder being lowered into the borehole and containing the spray burners and the compressor with the turbine.

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An Installation for Thermal Ground Reinforcement

The turbine is installed in the lower part of the body and the spray burners - in the combustion chamber formed by the space between the compressor and the turbine. 2) Additional spray burners are installed in the lower part of the body to obtain a further increase of gas temperature. 3) Ring-shaped spray burners are used to simplify the design. 4) An electric motor is used to start the turbine and the compressor.

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5 (3)

AUTHORS:

Chernyshev, Ye. A., Dolgaya, M. Ye.

SOV/19-29-6-15/72

TITLE:

The Reactivity of α - β - and γ -Chloroalkyl-silane-chlorides in Friedel-Crafts' Reaction (Reaktsionnaya sposobnost' α - β - i γ -khloraalkilsilankhloridov v reaktsii Fridelya-Kraftsa)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 6, pp 1850 - 1853 (USSR)

ABSTRACT:

In the Friedel-Crafts reaction with different α - β - and γ -chloro-alkyl-silane-chlorides the authors showed the qualitatively different reactivity of these chlorides (Ref 1). It was found that the chlorides with β - and γ -positions of the chlorine atom have a considerably larger reactivity with respect to the silicon atom, than the α -chlorides; the substitution of an alkyl radical for the chlorine atom on the silicon atom in the chloro-alkyl-trichloro-silanes always increases the reactivity of the chloride (i.e. $\text{CH}_3\text{SiCl}_2\text{CH}_2\text{Cl}$ is more active than $\text{Cl}_3\text{SiCH}_2\text{Cl}$). In the present paper the quantitative comparison of the reactivity of the chlorides under review in the Friedel-Crafts reaction is described. The reaction rate of each chloride was determined by means of the evolution rate of the hydrogen

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The Reactivity of α - β - and γ -Chloroalkyl-silane-
chlorides in Friedel-Crafts' Reaction

SOV/79-29-6-15/72

chloride according to Lebedev (Ref 2). This experiment is dealt with in detail in the present paper. The negative induction effect (-I) of the groups Cl_3Si and RCl_2Si is shown to exert a considerable influence upon the reactivity of the bond C-Cl, in which connection the conjugation effect of the S-C and C-Cl bonds is added to the action of the induction effect in the case of the β -chlorides. The magnitude of the conjugation effect of the Si-C-bond with the C-Cl bond in the β -chlorides depends on the nature of the radicals or atoms linked with the silicon and decreases considerably on substitution of the chlorine atoms for the alkyl radicals. The results of the experiments are given in the tables. There are 2 tables and 2 Soviet references.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR (Institute of Organic Chemistry of the Academy of Sciences, USSR)

SUBMITTED: May 27, 1958

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5(3)

SOV/20-126-4-28/62

AUTHORS: Korshak, V. V., Corresponding Member AS USSR; Polyakova, A.M.; Sakharova, A. A.; Petrov, A. D., Corresponding Member AS USSR; Chernyshev, Yo. A.

TITLE: Polymerization of Vinylaromatic Organosilicon Compounds (Polimerizatsiya vinilaromaticeskikh kremniyorganicheskikh soyedineniy). The Derivatives of α -Methylstyrene (Proizvodnyye α -metilstirola)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 4, pp 791-793 (USSR)

ABSTRACT: The authors already examined the polymerizability of the compounds mentioned in the title, containing silicium combined to the carbon of the benzene ring. In doing so, they produced glass like polymers and defined their properties. The compounds mentioned in the title are described in the present article in this regard, but they contain silicium which is combined with the benzene ring through methyl groups.

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SOV/20-126-4-28/62

Polymerization of Vinylaromatic Organosilicon Compounds. The Derivatives of α -Methylstyrene

Polymerization was carried out under an excess pressure of 6000, in the presence of initiators of the radical type: azo-isobutyric-acid-dinitryl (ADN) and the tertiary butyl peroxide (TBP). A comparison of the polymerization results with ADN and TBP being present, showed that the polymer develops more quickly in the presence of ADN (concentration 0.3 mol-% at 80°) than it does when TBP is used at 130°. In the first case the molecular weight of the polymers is higher (Table 1). The values of the viscosity characteristic of the α -methylstyrene-polymer and silicium-substituted α -methylstyrenes decrease in the transition from the polymer $C_6H_5C=CH_2$ to the polymer $(C_2H_5)_3SiC_6H_4C=CH_2$ and to the other

polymers $(C_2H_5)_3SiCH_2C_6H_4C=CH_2$ and $(C_2H_5)_3SiCH_2CH_2C_6H_4C=CH_2$.

The thermomechanical properties of the polymers change in the same sequence (Fig 2).

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SOV/20-126-4-28/62

Polymerization of Vinylaromatic Organosilicon Compounds. The Derivatives of α -Methylstyrene

There are 2 figures, 1 table, and 2 Soviet references.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
(Institute for Elemental Organic Compounds of the Academy of Sciences, USSR). Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute for Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: April 5, 1959

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5(2,3)

SOV/20-127-4-22/60

AUTHORS: ~~Chernyshev, Ye. A., Li Kuang-liang, Petrov, A. D., Corresponding~~
Member AS USSR

TITLE: A New Method of Synthesizing Aromatic Organosilicon Monomers

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 4, pp 808-811
(USSR)

ABSTRACT: The well-known and generally employed methods of the above synthesis are enumerated in the introductory (Refs 1-9). The data contained in two patents (Refs 6, 7) as well as references 8, 9 proved that the reaction $\text{HSiCl}_3 + \text{ClC}_6\text{H}_5 \rightarrow \text{Cl}_2\text{SiC}_6\text{H}_5 + \text{HCl}$ in principle is possible in the gaseous phase. Accordingly the authors found that - at a temperature rise of the reaction range to 550-700° - chlorine aryls readily condense with hydride silanes in the gaseous phase at atmospheric pressure (see reaction scheme, where R = aromatic radical, R' = CH₃ or C₂H₅, and n = 0.1). The condensate obtained was subjected to fractional distillation. Two methods were employed practically yielding the same results: the fraction 80-132° consisted of a mixture of benzene and chlorobenzene, the fraction 134-199° of

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A New Method of Synthesizing Aromatic Organosilicon
Monomers

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chlorobenzene and phenyl trichloro silane, while the fraction 199-202° corresponded to phenyl trichloro silane. For the purpose of producing phenyl trichloro silane the authors investigated the effect exercised by the temperature of the reaction range (Fig 1), the duration of contact, and the ratio of the initial reagents upon the degree of conversion of HSiCl_3 , and on the yields of condensation products. The main reaction is accompanied by a side reaction according to another scheme which is indicated by the occurrence of large quantities of SiCl_4 and benzene. However, the quantities of SiCl_4 are always greater than those of benzene, which shows that a third scheme is involved. The gaseous reaction products consisted almost entirely of HCl and H_2 , the molar quantities of H_2 corresponding to the molar excess of SiCl_4 with respect to benzene. This permits the assumption that SiCl_4 is a product of the reaction $4\text{HSiCl}_3 \rightarrow 3\text{SiCl}_4 + \text{Si} + \text{H}_2$. Hence the interactions between HSiCl_3 and $\text{C}_6\text{H}_5\text{Cl}$ are accompanied by pyrolysis of HSiCl_3 . At 700° , about 10% of the initial

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A New Method of Synthesizing Aromatic Organosilicon
Monomers

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trichlorosilane are subject to pyrolytic splitting. The pyrolysis of chlorobenzene is very slight. The influence exerted by the duration of contact on the complete conversion of trichlorosilane and on the yields of SiCl_4 and $\text{C}_6\text{H}_5\text{SiCl}_3$ is revealed by figure 2. Figure 3 indicates that the optimum ratio of chlorobenzene to trichlorosilane is 2 : 1. An increase of the latter up to 3 : 1 does not alter the yield of phenyl trichlorosilane, but increases the quantity of the resultant SiCl_4 . In principle, the inter-

action between chlorobenzene and methyl dichlorosilane proceeds according to the same scheme, including the above pyrolysis. The results are shown by figure 4. High-temperature condensation has several advantages over a condensation of hydride silanes with aromatic compounds in the liquid phase. It may also be applied to other chlorides. There are 4 figures and 10 references, 5 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: May 22, 1959
Card 3/3

LI GUAN-LIAN [Li Kuang-liang]; PETROV, A.D., nauchnyy rukovoditel'; CHER-
NYSHEV, Ye.A., kand. khim. nauk, nauchnyy rukovoditel';

[Investigation of the high-temperature reaction of silicon hydrides
with organic chlorides] Issledovanie vysokotemperaturnogo vzaimo-
deistviia kremnii-gidridov s organicheskimi khloridami. Avtoreferat
dissertatsii na soiskanie uchenoi stepeni kandidata khimicheskikh
nauk. Moskva, In-t organicheskoi khimii im. N.D.Zelinskogo, 1960.
13 p. (MIRA 14:10)

1.Chleny-korrespondenty AN SSSR (for Petrov, Chernyshev).
(Silicon hydride) (Chlorides)

5700.

75068
SOV/62-60-1-14/37

AUTHOR: Chernyshev, Ye. A.

TITLE: Radical Type Addition to α -, β -, γ -Alkenylsilanes

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, Nr 1, pp 80-83 (USSR)

ABSTRACT: The reactions of triethylvinylsilane, triethylallylsilane and diethylmethyl- γ -butenylsilane with butyric aldehyde, benzaldehyde, carbon tetrachloride, and chloroform were carried out in the presence of benzoyl peroxide with heating. The reaction of aldehydes with diethylmethyl- γ -butenylsilane yielded 3-methyl-3-ethyl-3-silanundecan-8-one, bp 127-128° (3.5 mm), n_D^{20} 1.4470; 3-methyl-3-ethyl-3-sila-8-phenyloctan-8-one, bp 163-164° (3.5 mm), n_D^{20} 1.5168. The reaction of CCl_4 and $CHCl_3$ with diethylmethyl- γ -butenylsilane yielded 1,1,1-trichloro-6-methyl-6-ethyl-6 silicooctane, bp 127-129° (3 mm); n_D^{20} 1.4647; 1,1,1,3-tetrachloro-6-methyl-6-ethyl-

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2

Radical Type Addition to α -, β -,
 γ -Alkenylsilanes

78068
SOV/62-60-1-14/37

-6-silicooctane, bp 128-130° (3.5 mm), n_D^{20} 1.4860.

The radical type addition reaction proceed readily in the case of vinyl- and γ -butenylsilanes and slowly in the case of allylsilanes. This indicates the presence of conjugation of Si - C with the double bond in β -position in respect to silicon atom. The possibility of the conjugation of Si - C bond is determined by the nature of other groups or atoms attached to silicon, which determine the electronic structure of the Si - C bond. There are 23 references, 17 Soviet, 5 U.S. and 1 Japanese. The 5 U.S. references are: Burkhard, C. A., Krieble, R. H., J. Am. Chem. Soc., 69, 2687 (1947); Seyferth D., Rochow, E. G., J. Org. Chem., 20, 250 (1953); Goodman L., Silverstein, R. M., Gould, C. W., J. Org. Chem., 22, 597 (1957); Gordon, A. P., Patent 2715113; Sommer L., Bailey D., Goldberg, et al., J. Am. Chem. Soc., 76, 1613 (1954).

ASSOCIATION: N. D. Zelinskiy Institute of Organic Chemistry of the
Card 2/3
2
ACADEMY of Sciences, USSR

S/062/60/000/008/008/012
B004/B054

5.3700

AUTHORS:

Chernyshev, Ye. A., Dolgaya, M. Ye., and Petrov, A. D.

TITLE:

Nitration of Aromatic Silicon Hydrocarbons With Different
Position of the Aromatic Ring With Respect to the Silicon
Atom

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1960, No. 8, pp. 1424-1428

TEXT: In the introduction, the authors discuss the papers hitherto published on the nitration of phenyl silanes (Refs. 1-10), and mention a paper by B. N. Dolgov and O. K. Panina (Ref. 2). The authors attempted the nitration of the silicon hydrocarbons mixed with benzene $(\text{CH}_3)_3\text{Si}(\text{CH}_2)_n\text{C}_6\text{H}_5$ (n

= 1, 2, 3, 4) by means of "rival" reactions, and the determination of the relative activity of the o-, m-, and p-positions. The nitration was carried out by means of fuming nitric acid in acetic anhydride at 0°C. A formation of nitro-toluene, ethyl-nitro benzene, propyl-nitro benzene, or butyl-nitro benzene was not observed. Thus, the Si-C bond is not separated. Table 1 gives the yields in ortho- and para-nitro derivatives (meta-derivatives did not form). The high yield in ortho-derivatives in the case of tri-

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Nitration of Aromatic Silicon Hydrocarbons With S/062/60/000/008/008/012
Different Position of the Aromatic Ring With B004/B054
Respect to the Silicon Atom

methyl-benzyl silane is explained by the fact that the silicon hydrocarbon molecule forms a complex with the nitronium ion, in which Si is bound to the oxygen of the nitronium ion, which facilitates the attack on the ortho-position. According to C. K. Ingold (Ref. 11), the relative activity of the aromatic rings was determined in the series of compounds $(CH_3)_3Si(CH_2)_n C_6H_5$, while the activity of benzene was taken as unity. Table 2 shows that the compound $(CH_3)_3SiCH_2C_6H_5$ ($n = 1$), in which the benzene ring is in β -position to the silicon atom, has an extremely high activity, which cannot be explained either by steric factors or by the inductive effect of the substituent. A conjugation of the Si-C bond with the aromatic ring is assumed to be similar to the conjunctive effect of the Si-C bond with -C- or C-Cl. Structural formulas show the relative activities of the ortho-, meta-, and para-positions of the silicon hydrocarbons investigated and of some other benzene compounds (on the basis of Refs. 3, 16). There are 2 tables and 16 references: 5 Soviet, 5 US, 5 British, and 1 Czechoslovakian. ✓

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N.-D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: March 13, 1959
Card 2/2

KORSHAK, V.V.; POLYAKOVA, A.M.; SAKHAROVA, A.A.; MIRONOV, V.F.; CHERNYSHEV, Ye.A.

Polycondensation of haloalkyl (haloaryl)halosilanes under the influence of metallic sodium. Vysokom. soed. 2 no.9:1370-1374 S '60.

(MIRA 13:9)

1. Institut elementoorganicheskikh soedineniy AN SSSR i Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

(Silane)

(Sodium)

(Polymerization)

S/062/EO/000/009/007/021
B023/B064

AUTHORS: Chernyshev, Ye. A. and Tolstikova, N. G.

TITLE: Bromination of Some Aromatic Organosilicon Compounds and the Reactivity of the Bromides Obtained


PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 9, pp. 1595-1600

TEXT: This is a continuation of previous investigations and a study of the effect of the character of the silyl group (at a gradual exchange of the chlorine atoms in silicon for alkyl radicals) upon the rate and direction of the bromination reaction. A series of compounds $C_6H_5CH_2Si(R)_nCl_{3-n}$ was brominated at $n = 1 \div 3$. It was found that in the bromination of benzyl-ethyl dichloro silane just as in the case of benzyl trichloro silane the paraisomer alone is formed. When benzyl-diethyl chloro silane is brominated, chiefly the paraisomer forms and, to a very little extent, the metaisomer. Finally, in the case of benzyl-trimethyl silane para- and metaisomers form to about the same extent. In the series

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Bromination of Some Aromatic Organosilicon
Compounds and the Reactivity of the Bromides
Obtained

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B023/B064


$C_6H_5CH_2Si(C_2H_5)_nCl_{3-n}$ only para-isomers form at $n = 0 \div 3$, regardless of the number of chlorine atoms or alkyl radicals bound to silicon. In continuation of the studies of the reactivity, equimolar mixtures of benzyl trichloro silane, benzyl-trimethyl silane, benzyl trichloro silane, β -phenyl-ethyl trimethyl silane were brominated. Benzyl-trimethyl silane was found to be 28 times as active as benzyl trichloro silane, while β -phenyl-ethyl trimethyl silane is only 2.34 times as active. This increased reactivity of benzyl-trimethyl silane is explained by the conjugation of the Si - C bond with the aromatic cycle. Furthermore, the following pairs of compounds were brominated: phenyl trichloro silane and benzene, benzyl trichloro silane and benzene, as well as β -phenyl-ethyl trichloro silane and benzene. In the first case, only benzene was brominated, phenyl trichloro silane remained unchanged. Benzyl trichloro silane was 4.7 times, and β -phenyl-ethyl trichloro silane was 5.8 times more rapidly brominated than benzene. That means, that the reactivity of the series $Cl_3Si(CH_2)_n$  increases gradually with increasing n. Thus, in all cases only the

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Bromination of Some Aromatic Organosilicon
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induction effect of the trichloro silyl group appears, while the conjugation effect of the Si - C bond with aromatic cycle is completely suppressed in benzyl trichloro silane. The reactivity of the aromatic organosilicon

halides $R_3Si(CH_2)_n$  Br at $n = 0 \div 2$ was studied as compared to the action of nucleophilic reagents. Methods of V. N. Ufimtsev and M. M. Malafeyeva (Ref. 6) were applied. Two series of compounds were investi-



gated: $(CH_3)_3Si(CH_2)_n$  Br and $(C_2H_5)_3Si(CH_2)_n$  Br at $n = 0 \div 2$.

Table 2 shows the results. It was found that in the case of the aromatic bromides, α -bromides ($n = 0$) have a higher reactivity than γ -bromides ($n = 2$). β -bromides ($n = 1$) were least active. Thus, the existence of the conjugation effect of the Si - C bond with the aromatic cycle is confirmed in these compounds. If there were only the induction effect of the trialkyl-silyl group, the reactivity would have to decrease gradually: $\alpha > \beta > \gamma$. The authors thank Yu. P. Yegorov and I. Lifanova, who carried out the spectral analysis. There are 2 tables and 7 references: 6 Soviet and

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Bromination of Some Aromatic Organosilicon
Compounds and the Reactivity of the Bromides
Obtained

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1 British.

ASSOCIATION: Institut organicheskoy khimii im. N.D. Zelinskogo Akademii
nauk SSSR (Institute of Organic Chemistry imeni N. D.
Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: March 13, 1959

Card 4/4

87121

S/062/60/009/009/008/021
B023/B064

15.8114

AUTHORS: Chernyshev, Ye. A., Klyukina, E. N., and Petrov, A. D.

TITLE: Acylation of Silicon Hydrocarbons and Synthesis of the Silicon-containing Alpha Methyl Styrenes

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 9, pp. 1601-1606

TEXT: This paper continues previous investigations (Ref. 1). The authors aimed at improving the method of acylating the aromatic silicon hydrocarbons previously developed by I. A. Kulish (Ref. 3). At the same time they explained the problem of the reactivity of benzyl- and β -phenyl-ethyl trialkyl silanes in the acylation reaction. A method of competing reactions was applied to determine the relative reactivity of trimethyl-benzyl silane and β -phenyl-ethyl trimethyl silane. A mixture of one mole benzene with one mole β -phenyl-ethyl trimethyl silane or with one mole trimethyl-benzyl silane was acylated by one mole of the acid chloride of capronic acid with one mole aluminum chloride. Trimethyl-benzyl silane was found to be 24 times as active as benzene, while β -phenyl-ethyl trimethyl silane

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Acylation of Silicon Hydrocarbons and Synthesis of the Silicon-containing Alpha Methyl Styrenes

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was only 16 times as active in the same reaction. It is obvious that the increased reactivity of benzyl silane is due to the conjugation of the Si - C bond with the aromatic cycle. Organosilicon ketones were obtained in yields up to 70% when studying the competing reactions, while the maximum yields of the previous studies were 35%. The authors' assumption that the yield in organosilicon ketones would have to be higher if the reaction were carried out in benzene solutions, proved to be correct. At a molar ratio silicon-hydrocarbon : benzene equal to 1 : 2 to 1 : 4 in the solution, the yield increased considerably. Table 1 shows the comparative data on the yield when the old and the new method was used. All ketones were obtained with reaction in the benzene solution. Table 2 shows the formula, the yields, and properties of the ketones obtained. Corresponding alcohols were obtained from the parasubstituted acetophenones with the help of the Grignard reaction using CH_3MgCl ; the alcohols were dehydrated to styrenes. Partial dehydration of the forming alcohols took place already in the course of the reaction. Only in two of four cases alcohols were obtained in the pure state. Table 3 shows the formulas and properties. Alcohols and the fractions obtained in the course of distillation, which corresponded to the mixtures of styrenes with alcohols,

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Acylation of Silicon Hydrocarbons and Synthesis S/062/60/000/009/008/021
of the Silicon-containing Alpha Methyl Styrenes B023/B064

were dehydrated. Alcohols, with three silicon valences saturated with methyl radicals, were subject to dehydration already when boiled with KHSO_4 . Alcohols, in which three silicon valences were saturated with ethyl radicals, were only partially subject to dehydration with KHSO_4 . There are 3 tables and 8 references: 7 Soviet and 1 British.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii
 nauk SSSR (Institute of Organic Chemistry imeni
 N. D. Zelinskiy of the Academy of Sciences USSR) ✓

SUBMITTED: March 13, 1959

Card 3/3

87167

S/062/60/000/012/006/020
B013/B055

15.8116

AUTHORS: Chernyshav, Ye. A., Mironov, V. F., and Petrov, A. D.

TITLE: New Method for the Preparation of Organosilicon Monomers by High-temperature Condensation of Alkenyl Chlorides, Aryls and Olefins With Hydrosilanes (Expression used to denote silanes in which the silicon contains at least one unsubstituted hydrogen)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1960, No. 12, pp. 2147-2156

TEXT: The present publication treats the investigation of high-temperature condensation as a method of preparing organosilicon monomers. A method for the synthesis of vinyl silane chlorides (the expression "silane chloride" is used by the author to denote that all available hydrogen atoms bound to silicon are replaced by chlorine) was developed at the laboratoriya khimii uglevodorodov Instituta organicheskoy khimii AN SSSR (Laboratory of Hydrocarbon Chemistry of the Institute of Organic Chemistry AS USSR). Its practical realization, however, meets with difficulties. For this reason

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New Method for the Preparation of Organosilicon S/062/60/000/012/006/020
Monomers by High-temperature Condensation of BO13/BO55
Alkenyl Chlorides, Aryls and Olefins With
Hydrosilanes

the authors at the same time investigated another method, the uncatalyzed high-temperature condensation, basing their study on publications by C. L. Agry (Refs. 4, 6). In this investigation, which was started in 1956, the authors tested the general validity of the reaction described by Agry and extended it to complicated hydrosilanes (Refs. 8, 10-17). The optimal conditions for this reaction were found to be 580-590°C and a contact time of 20-25 sec. The simplicity of the required apparatus, accessibility of materials, safety and high yields render this reaction one of the most convenient of the existing methods for synthesizing vinyl silane chlorides. The authors studied the high-temperature condensation with vinyl chloride of all the hydrosilanes of the series $\text{HSiR}_n\text{Cl}_{3-n}$ ($n = 0, 1, 2, \text{ and } 3$). Yields of up to 80% were obtained with trichloro silane ($n = 0$). Trialkyl silanes ($n=3$) gave no condensation reaction (Fig. 1). This compound gave a different reaction which the authors termed a reduction to distinguish it from the condensation: $\text{R}_3\text{SiH} + \text{ClCH}=\text{CH}_2 \rightarrow \text{R}_3\text{SiCl} + \text{CH}_2=\text{CH}_2$. The authors also discovered a new type of interaction between hydrosilanes and olefins (ethylene

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New Method for the Preparation of Organosilicon Monomers by High-temperature Condensation of Alkenyl Chlorides, Aryls and Olefins With Hydrosilanes

and propylene)(Fig. 2) which represents a novel reaction in the organic chemistry of silicon: $\text{CH}_2=\text{CH}_2 + \text{HSiCl}_3 \xrightarrow{600^\circ\text{C}} \text{CH}_2=\text{CHSiCl}_3 + \text{H}_2$. Basing on the investigation carried out the high-temperature condensation of hydrochloro silanes (HSiCl_3 , RSiCl_2H) with mono- and polychloro alkenyls may be claimed to constitute a new, generally applicable and convenient method of synthesizing unsaturated organosilicon monomers (Table 1). Fundamentally, the reaction is an entirely new way of forming Si - C bonds, and may be described as homolytic silylation. Apart from the three existing methods for the synthesis of aromatic organosilicon monomers, the authors suggest a fourth method, the reaction of hydrosilanes with aryl chlorides at high temperatures (550-700°C) and atmospheric pressure, i.e., in the gas phase (condensation): $\text{RCl} + \text{HSiR}'\text{Cl}_{3-n} \rightarrow \text{RR}'\text{SiCl}_{3-n} + \text{HCl}$; R = aryl, R' = CH_3 or C_2H_5 ; n = 0, 1. Some of the results were published earlier on (Refs. 13, 29-33). They are given in a generalized form in this work. Reactions of this type have been patented (Refs. 34, 35), the necessity of a catalyst being indicated in both publications. The authors, however, were able to show

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New Method for the Preparation of Organosilicon S/062/60/000/012/006/020
Monomers by High-temperature Condensation of B013/B055
Alkenyl Chlorides, Aryls and Olefins With
Hydrosilanes

that the condensation of aryl chlorides and hydrosilanes to aryl chloro silanes proceeds quite satisfactorily at 550^o-700^oC in the absence of a catalyst. The reaction was carried out in an empty heated quartz tube by passing through the aryl chloride/hydrosilane mixture at rates permitting contact times of 10 to 100 sec. This enables the reaction to be performed in a continuous process. The material of the tube is of principal importance. Yields of various aryl chloro silanes obtained in this manner are given in Table 2. The method can be applied for the preparation of arbitrary aryl chloro silanes with 2 or 3 chlorine atoms bonded to silicon. Monomer yields are about equal to and in some cases even higher than the yields obtained in the catalytic reaction of aromatic compounds with hydrosilanes. There are 3 figures, 2 tables, and 37 references: 28 Soviet, 7 US, 2 British, and 1 Czechoslovakian. ✓

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: June 27, 1959, supplemented September 24, 1960

Card 4/4

CHERNYSHEV, Ye. A.

High-temperature condensation of silanes with aryl chlorides; a method of preparing arylchlorosilanes. Coll Cz Chem 25 no.8: 2161-2166 Ag '60. (EEAI 10:9)

1. Institut organicheskoy khimii Akademiya nauk SSSR, Moskva.

(Silanes) (Aryl groups) (Chlorosilane) (Chlorides)

5.3700

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AUTHORS: Balandin, A. A., Petrov, A. D., Marukyan, G. K.,
~~Chernyshov, Ye. A., Brusov, L. I., Sadya-zade, S. I.,~~
~~Seymovich, R. G., Tolstikova, R. G.~~

TITLE: Synthesis of Aliphatic-Aromatic Silanes and Their
Dehydrogenation

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 36, No. 1, p. 87-
91 (USSR)

ABSTRACT: Catalytic dehydrogenation of diethylbenzene over a mixed
oxidic catalyst (A) at 600-625°, in the presence of steam,
yields divinylbenzene and ethylstyrene necessary for prep-
aration of silanes. To the mixture (200 g) of ethyl-
styrene (40%), divinylbenzene (20%), and diethylbenzene
(40%), 1 ml of 0.1 N H_2PtCl_6 in isopropyl alcohol is
added with stirring, followed by addition of 150 g of
methyldichlorosilane. The mixture was then slowly heated
to 65° for 2 hours. Distillation of the mixture produced
two fractions. The first fraction, 1-ethylphenyl-2-
methyldichlorosilylbenzene, $C_{12}H_{16}Cl_2SiCl_2$ (I),

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Synthesis of Aliphatic-Aromatic Silanes and
Their Dehydrogenation

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bp 87-89° (1 mm), n_D^{20} 1.5146, and the second fraction,
di- β -(methylchlorosilyl)ethyl]-benzene,
 $\text{CH}_2\text{Cl}_2\text{SiCH}_2\text{CH}_2\text{C}_6\text{H}_4\text{CH}_2\text{CH}_2\text{SiCl}_2\text{CH}_3$ (II), bp 140-141°
(1 mm), n_D^{20} 1.5220. Trimethylsilyl ethylbenzene,
 $(\text{CH}_3)_3\text{SiC}_6\text{H}_4\text{C}_2\text{H}_5$ (III), bp 205-208° (154 mm), n_D^{20}
1.4905, was prepared from the corresponding Grignard
reagent to which $(\text{CH}_3)_3\text{SiCl}$ (1.5 moles) was added in the
course of 45 minutes. After precipitation, the mixture
was heated for 4 hours and worked up as usual. Dehydro-
genation of (I) over a mixed oxide catalyst (A) yields
a mixture which on fractional distillation produces
several fractions. One of them was a mixture of com-
pound (I) and silicon-containing compound (IV),
 $\text{CH}_2=\text{CHC}_6\text{H}_4\text{CH}_2\text{CH}_2\text{SiCl}_2\text{CH}_3$, bp 141-143° (25 mm), n_D^{20} 1.5121.
The best yield of catalysis product over another catalyst
(Cu-Al, leached) was 38% at 445-450°, and it contained
24.8% of unsaturated compound. Dehydrogenation of

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Synthesis of Aliphatic-Aromatic Silanes and
Their Dehydrogenation

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di- β -(methyldichlorosilyl)ethyl]-benzene (II) failed to produce a liquid product of catalysis. Dehydrogenation of trimethylsilylethylbenzene over the same catalyst at 550-560° yielded 87% of a product, n_D^{20} 1.4975. Chromatographic analysis of the obtained gas indicated that it contains 39.2% methane and 53.7% hydrogen. Distillation of catalyzate produced three fractions: first, bp 28-68° (25 mm), n_D^{20} 1.4855; second, 69-100° (25 mm), n_D^{20} 1.5003; third, bp 102-106° (25 mm), n_D^{20} 1.4995. Distillation of the catalysis product and analysis of the obtained gas indicate that along with dehydrogenation a decomposition of (III) to by-products takes place. The experiments with compound (III) are being continued. Dehydrogenation of trichloroethylsilane, bp 97-98°, n_D^{20} 1.4230, over oxidic catalyst, prepared from cupric and ferric nitrate, at 425-574°, indicates that decomposition of this compound takes place with the formation of side

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